

# United Kingdom

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for United Kingdom. For a category and indicator-level summary, please see the Country Profile for United Kingdom.

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## Category 1: Preventing the emergence or release of pathogens with potential for international concern

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

#### 1.1.1 AMR surveillance, detection, and reporting

##### 1.1.1a

**Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?**

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

**Current Year Score: 2**

The United Kingdom has a national antimicrobial resistance (AMR) plan for the surveillance, detection, and reporting of priority AMR pathogens. The UK has a five-year action plan, "Tackling antimicrobial resistance 2019–2024." The plan was developed across government departments, in consultation with multi-sector stakeholders, and the devolved administrations (DAs) in Scotland, Wales, and Northern Ireland. Improving detection and surveillance is among the plan's 'content areas,' including stronger laboratory capacity and surveillance of AMR in both humans and animals. The plan states that the UK works to ensure AMR surveillance data are consistent with other countries' data by participating in a number of regional and global surveillance systems, such as the World Health Organization's Global Antimicrobial Resistance Surveillance System (GLASS). The plan also states that "[a]cross the UK, the [National Health Service] collects a wealth of data and has many reporting guidelines in place to support surveillance." [1] The Global Health Security Agenda Pilot Assessment of the UK describes the national AMR surveillance program, the 'English Surveillance Programme for Antimicrobial Utilisation and Resistance' (ESPAUR), which is operated by Public Health England (PHE). [2] The UK 5-year action plan supports the UK 20-year vision for AMR, and both of these build on the UK 5-year AMR strategy 2013-2018. [3] Annual reports have been published on ESPAUR since 2014, summarising data from and improvements to the surveillance system, as well as future actions. [4, 5] Northern Ireland published a 5-year AMR action plan—prepared in conjunction with the UK's 20-year Vision and five-year plan, with actions under these national documents specific to Northern Ireland—as a living document, most recently updated in March 2019 for 2019-2024. [6] The 'Scottish management of antimicrobial resistance action plan 2014-18' (ScotMARAP 2) implements the UK 5-year AMR strategy 2013-2018 strategy in Scotland, including surveillance, and there is no evidence of an updated plan specific to Scotland since 2018. [7] In 2016, Wales published its implementation plan for the UK 5-year AMR strategy. [8] While there is also no evidence of an updated plan specific to Wales, the Welsh Government published its AMR and healthcare associated infections (HCAI) Improvement Goals for 2019-20 in July 2019, which mentions that Wales is "fully signed up to" the UK 2019-2024 action plan and 20-year vision. [9] All three DA plans call for improvements to existing AMR surveillance, detection and reporting systems. [6, 7, 8]

[1] UK Department of Health and Social Care. 24 January 2019. "Tackling antimicrobial resistance 2019–2024: The UK's five-year national action plan."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/784894/UK\\_AMR\\_5\\_year\\_national\\_action\\_plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784894/UK_AMR_5_year_national_action_plan.pdf)]. Accessed 16 January 2021.

[2] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 16 January 2021.

[3] UK Department of Health and Social Care. 24 January 2019. "UK 20-year vision for antimicrobial resistance."

[<https://www.gov.uk/government/publications/uk-20-year-vision-for-antimicrobial-resistance>]. Accessed 16 January 2021.

[4] Public Health England (PHE). 2020. "English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report." [<https://www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report>]. Accessed 16 January 2021.

[5] Public Health England (PHE). Nov 2020. "English surveillance programme for antimicrobial utilisation and resistance (ESPAUR): Report 2019 to 2020."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/936199/ESPAUR\\_Report\\_2019-20.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936199/ESPAUR_Report_2019-20.pdf)]. Accessed 16 January 2021.

[6] Department of Health, Agriculture, Environment and Rural Affairs, and Food Standards Agency of Northern Ireland. Mar 2019. "Changing the Culture 2019-2024: One Health Tackling Antimicrobial Resistance in Northern Ireland: A Five-Year Action Plan." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/one-health-antimicrobial.pdf>]. Accessed 16 January 2021.

[7] Scottish Government. 29 Jul 2014. "Scottish Management of Antimicrobial resistance Action Plan 2014-18 (ScotMARAP 2)." [<https://www.gov.scot/publications/scottish-management-antimicrobial-resistance-action-plan-2014-18-scotmarap2/>]. Accessed 16 January 2021.

[8] Welsh Government. 2016. "Together for health: Tackling antimicrobial resistance and improving antibiotic prescribing." [<http://www.wales.nhs.uk/sitesplus/documents/888/Antimicrobial%20Resistance%20Delivery%20Plan.pdf>]. Accessed 16 January 2021.

[9] Welsh Government. 8 July 2019. "Antimicrobial resistance (AMR) and healthcare associated infections (HCAI) Improvement Goals for 2019-20." [<https://gov.wales/sites/default/files/publications/2019-07/amr-hcai-improvement-goals-for-2019-20.pdf>]. Accessed 16 January 2021.

### 1.1.1b

#### Is there a national laboratory/laboratory system which tests for priority AMR pathogens?

All 7 + 1 priority pathogens = 2 , Yes, but not all 7+1 pathogens = 1 , No = 0

**Current Year Score: 2**

The United Kingdom has a national antimicrobial resistance (AMR) reference laboratory and a system which tests for priority AMR pathogens. Most public health microbiology laboratories in England and Wales (covering 89% of the population) test for all 7+1 priority AMR pathogens, with enhanced surveillance for carbapenemase-producing Gram-negative bacteria. In Northern Ireland and Scotland, evidence suggests that public health laboratories test for at least 7 of the priority pathogens. The Antimicrobial resistance and healthcare associated infections (AMRHAI) reference unit under Public Health England (PHE)'s Bacteria reference department (BRD) is the national AMR reference laboratory, and undertakes laboratory-based surveillance. [1, 2] Under the English surveillance programme for antimicrobial utilisation and resistance (ESPAUR), 5 of the WHO priority pathogens are among those identified as UK priorities: *E. coli*, *K. pneumoniae*, *S. aureus*, *S. pneumoniae* and *N. gonorrhoeae*. [3] However, England's Second Generation Surveillance System (SGSS), launched in 2014, covers all 7+1 pathogens, and AMR data is routinely reported as part of this. [4] The 2019 ESPAUR report also mentions that the next phase of the UK's data submission to the World Health Organization's Global Antimicrobial Resistance Surveillance System (GLASS) plans to include *Shigella* spp. and *Salmonella* spp. [3] PHE's Gastrointestinal Bacteria Reference Unit (GBRU), under the BRD, undertakes AMR surveillance of *Salmonella* Typhi and *Salmonella* Paratyphi in England and Wales; in Scotland this is done by the Scottish *Salmonella* Reference Service; in Northern Ireland testing takes place in local laboratories but AMR isolates are sent to the GBRU. [5, 6, 7] *Shigella* spp. surveillance in England, Wales and Scotland is also reported to GBRU under the European system. [8] In 2015, PHE launched a programme for enhanced surveillance of carbapenemase-producing Gram-negative bacteria using an electronic reporting system, enabling referral of isolates to AMRHAI for full characterisation and involving an expanded dataset for each case. However, the National Health Service (NHS) laboratory user guide document for this electronic reporting system is marked as "Withdrawn April 2019." [9] In Northern Ireland, Health and Social Care (HSC,

equivalent to the NHS) laboratories report on the following AMR pathogens to the Public Health Agency: E.coli, K. pneumonia, S. aureus, S. pneumoniae; while AMR N. gonorrhoeae pathogens are reported to the European Gonococcal Antimicrobial Surveillance Programme (Euro-GASP) from just one hospital. [10] As mentioned above, AMR Salmonella spp. is reported to England’s GBRU. [5, 6, 7] AMR TB pathogens are reported through a system of enhanced TB surveillance. [11] No evidence can be found of AMR Shigella spp. reporting in Northern Ireland. In Scotland, there is a Scottish Satellite AMR Reference Laboratory and NHS microbiology laboratories report on the following AMR pathogens: E. coli, K. pneumonia, S. aureus, S. pneumoniae, Salmonella spp., Shigella spp and N. gonorrhoeae. [2, 12] AMR surveillance for TB does not appear to take place at present in Scotland, but there are plans to improve the TB surveillance system to include information on drug resistance in the 5 years from 2018. [12, 13] In Wales, laboratories report on the following AMR pathogens: E. coli, K. pneumonia, S. aureus, S. pneumoniae and N. gonorrhoeae. [14] As mentioned above, Salmonella spp. and Shigella spp. pathogens are reported to the England’s GBRU. [5, 6, 7, 8] AMR TB pathogens are reported through a system of enhanced TB surveillance. [15, 16]

[1] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 16 January 2021.

[2] Public Health England (PHE). 14 May 2020. “AMRHAI reference unit: reference and diagnostic services.”

[<https://www.gov.uk/guidance/amrhai-reference-unit-reference-and-diagnostic-services>]. Accessed 16 January 2021.

[3] Public Health England (PHE). 18 November 2020. “English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report 2019.” [<https://www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report>]. Accessed 16 January 2021.

[4] Public Health England (PHE). October 2020. “Laboratory reporting to Public Health England: A guide for diagnostic laboratories.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/739854/PHE\\_Laboratory\\_Reporting\\_Guidelines.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739854/PHE_Laboratory_Reporting_Guidelines.pdf)]. Accessed 16 January 2021.

[5] Public Health England, Health Protection Scotland, Public Health Wales and HSC Public Health Agency. 15 Dec 2017. “UK Public Health Resistance Alert: Salmonella Typhi resistant to third-generation cephalosporins isolated in England from a traveller returning from Pakistan.” Health Protection Report, Volume 11, Number 45.

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/715430/hpr4517\\_slmll-typhi\\_ARA.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/715430/hpr4517_slmll-typhi_ARA.pdf)]. Accessed 16 January 2021.

[6] Public Health England. 14 May 2020. “GBRU: reference and diagnostic services.” [<https://www.gov.uk/guidance/gbru-reference-and-diagnostic-services>]. Accessed 16 January 2021.

[7] Public Health England. October 2020. “Bacteriology reference department user manual.” Version 13.

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/711407/CTAD\\_specification\\_and\\_technical\\_guidance.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/711407/CTAD_specification_and_technical_guidance.pdf)]. Accessed 16 January 2021.

[8] Public Health England. Jan 2019. “Multi-drug resistant Shigella sonnei cluster (CTX-M-27) probably associated with MSM.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/769163/SHGLL-SONN\\_2018275.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/769163/SHGLL-SONN_2018275.pdf)]. Accessed 16 January 2021.

[9] Public Health England. 2016. “Electronic Reporting System: Enhanced surveillance of carbapenemase-producing Gram-negative bacteria – NHS trust and microbiology laboratory user guide.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/656134/electronic\\_reporting\\_system\\_ERS\\_user\\_guide\\_trust\\_micro.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/656134/electronic_reporting_system_ERS_user_guide_trust_micro.pdf)]. Accessed 16 January 2021.

[10] Public Health Agency, Northern Ireland. 29 October 2020. “Surveillance of antimicrobial use and resistance in Northern Ireland, annual report, 2019.” [<https://www.publichealth.hscni.net/publications/surveillance-antimicrobial-use-and-resistance-northern-ireland-annual-reports>]. Accessed 16 January 2021.

[11] Public Health Agency, Northern Ireland. N.d. “Tuberculosis.” [<https://www.publichealth.hscni.net/directorate-public>

health/health-protection/tuberculosis]. Accessed 16 January 2021.

[12] Health Protection Scotland. 17 November 2020. "Scottish one health antimicrobial use and antimicrobial resistance report in 2019." [https://www.hps.scot.nhs.uk/web-resources-container/scottish-one-health-antimicrobial-use-and-antimicrobial-resistance-in-2019/]. Accessed 16 January 2021.

[13] Health Protection Scotland. 24 May 2018. "TB framework for Scotland." [https://www.hps.scot.nhs.uk/resourcedocument.aspx?resourceid=3376]. Accessed 16 January 2021.

[14] Public Health Wales. 1 Jun 2018. "Antibacterial resistance in Wales 2008-2017." [http://www.wales.nhs.uk/sitesplus/documents/888/Antimicrobial%20Resistance%20in%20Wales%202008%2D2017%20v1.pdf]. Accessed 16 January 2021.

[15] Public Health Wales. 9 September 2019. "Tuberculosis: Data and reports for Wales." [http://www.wales.nhs.uk/sitesplus/888/page/91231]. Accessed 16 January 2021.

[16] Public Health Wales. 2 September 2019. "Tuberculosis in Wales annual report 2019." [http://www.wales.nhs.uk/sitesplus/documents/888/Wales2018AnnualTBReport\_KeyTrends\_v1.pdf]. Accessed 16 January 2021.

### 1.1.1c

**Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that the United Kingdom conducts environmental detection or surveillance activities for antimicrobial residues in surface water in the UK, but there is no evidence of detection or surveillance activities for antimicrobial resistance (AMR) organisms. In 2015, the European Commission (EC) issued Decision (EU) 2015/495 establishing a Watch List of substances for European Union (EU) states to monitor at least once annually in surface water and report (once) to the EC. This included 3 antibiotics. [1, 2] The Watch List is revised approximately every 2 years and in 2018 was revised through Decision (EU) 2018/840 to add 2 more antibiotics. [1] Monitoring of the first Watch List was implemented by the UK's Environment Agency (under the Department for Environment, Food and Rural Affairs (Defra)) and its equivalents in the devolved administrations (DA) of Northern Ireland, Scotland and Wales. Results were reported to the EC by 20th December 2016. [3, 4] After Brexit, the UK plans to retain the text of Decision (EU) 2018/840 in domestic legislation with only minor alterations. [5] There is no evidence of a surveillance system for AMR organisms in the environment. In the 2019-2020 Antimicrobial Resistance Country Self Assessment, the UK indicates that, regarding a national surveillance for AMR in food (animal and plant origin), question 7.5(c), "Priority food borne pathogenic/ indicator bacterial species have been identified for surveillance. Data systematically collected and reported on levels of resistance in at least one of those bacterial species, involving a laboratory that follows quality management processes, e.g. proficiency testing." However, there is no detail specific to AMR surveillance in soil and waterways. [6] The UK's 'Tackling antimicrobial resistance 2019–2024: The UK's five-year national action plan' supports a One Health approach and states that the UK is committed to maintaining EU environmental quality standards, including monitoring and referring to the EC EU 2015/495 Watch List. [7] However, there is no additional information regarding environmental detection or surveillance activities in the national action plan or UK 20-year vision for AMR. [7, 8] The same goes for the AMR action plans and recent update reports from England, Northern Ireland, and Wales. [9, 10, 11, 12] The 'Scottish Management of Antimicrobial resistance Action Plan 2014-18 (ScotMARAP 2)' also does not detail environmental detection or surveillance activities. [13] However, the 2019 Scottish one health AMR report describes data collected on "E. coli cefotaxime resistance in human bacteraemia isolates, healthy animal isolates and bathing water isolates," and stated that Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland will continue to work with the Scottish Environmental Protection Agency (SEPA) to monitor AMR in E. coli bathing water isolates. [14] The Defra Antimicrobial Resistance Coordination (DARC) Group does not currently address AMR surveillance in the

environment; nor is there evidence of an initiative to do so from Defra’s website. [15, 16] Parliamentary briefing papers published in 2013 and 2017 recognise the issue of AMR residues in the environment but do not cite any environmental AMR surveillance when reviewing current activities. [17, 18]

- [1] European Commission. 3 Jul 2018. “Updated surface water Watch List adopted by the Commission.” [https://ec.europa.eu/jrc/en/science-update/updated-surface-water-watch-list-adopted-commission]. Accessed 16 January 2021.
- [2] European Commission. 20 Mar 2015. “Commission Implementing Decision (EU) 2015/495 of 20 March 2015 establishing a watch list of substances for Union-wide monitoring in the field of water policy pursuant to Directive 2008/105/EC of the European Parliament and of the Council.” [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32015D0495&from=EN]. Accessed 16 January 2021.
- [3] Shardlow, M. Dec 2017. “Neonicotinoid insecticides in British freshwaters: 2016 Water Framework Directive Watch List monitoring results and recommendations.” (Appendix 1 contains the UK’s methodology submission to the European Commission in December 2016.) [https://www.boerenlandvogels.nl/sites/default/files/2017-12/Buglife%20Neonicotinoids%20in%20water%20in%20the%20UK\_0.pdf]. Accessed 16 January 2021.
- [4] European Environment Agency. 2016. “EIONET Central Data Repository”. Results for United Kingdom in 2016. [http://cdr.eionet.europa.eu/ReportekEngine/searchdataflow?dataflow\_uris=http%3A%2F%2Frod.eionet.europa.eu%2Fobligations%2F714&years%3Aint%3Aignore\_empty=2016&partofyear=&reportingdate\_start%3Adate%3Aignore\_empty=&reportingdate\_end%3Adate%3Aignore\_empty=&country=http%3A%2F%2Frod.eionet.europa.eu%2Fspatial%2F40&release\_status=released&sort\_on=reportingdate&sort\_order=reverse&batch\_size]. Accessed 16 January 2021.
- [5] Government of the United Kingdom. 2019. “The Floods and Water (Amendment etc.) (EU Exit) Regulations 2019”. [http://www.legislation.gov.uk/ukdsi/2019/9780111176283]. Accessed 16 January 2021.
- [6] World Health Organisation (WHO). 2020. “Global database for antimicrobial resistance country self assessment 2019-2020, United Kingdom.” [http://amrcountryprogress.org/]. Accessed 16 January 2021.
- [7] UK Department of Health and Social Care. 24 January 2019. “Tackling antimicrobial resistance 2019–2024: The UK’s five-year national action plan.” [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/784894/UK\_AMR\_5\_year\_national\_action\_plan.pdf]. Accessed 16 January 2021.
- [8] UK Department of Health and Social Care. 24 January 2019. “UK 20-year vision for antimicrobial resistance.” [https://www.gov.uk/government/publications/uk-20-year-vision-for-antimicrobial-resistance]. Accessed 16 January 2021.
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- [10] Department of Health, Agriculture, Environment and Rural Affairs, and Food Standards Agency of Northern Ireland. Mar 2019. “Changing the Culture 2019-2024: One Health Tackling Antimicrobial Resistance in Northern Ireland: A Five-Year Action Plan.” [https://www.health-ni.gov.uk/sites/default/files/publications/health/one-health-antimicrobial.pdf]. Accessed 16 January 2021.
- [11] Welsh Government. 2016. “Together for health: Tackling antimicrobial resistance and improving antibiotic prescribing.” [http://www.wales.nhs.uk/sitesplus/documents/888/Antimicrobial%20Resistance%20Delivery%20Plan.pdf]. Accessed 16 January 2021.
- [12] Welsh Government. 2019. “Antibiotic resistance: AMR programme reports.” [http://www.wales.nhs.uk/sitesplus/888/page/94136]. Accessed 16 January 2021.
- [13] Scottish Government. 29 Jul 2014. “Scottish Management of Antimicrobial resistance Action Plan 2014-18 (ScotMARAP 2).” [https://www.gov.scot/publications/scottish-management-antimicrobial-resistance-action-plan-2014-18-scotmarap2/]. Accessed 16 January 2021.
- [14] Health Protection Scotland. 17 November 2020. “Scottish one health antimicrobial use and antimicrobial resistance

report in 2019." [https://www.hps.scot.nhs.uk/web-resources-container/scottish-one-health-antimicrobial-use-and-antimicrobial-resistance-in-2019/]. Accessed 16 January 2021.

[15] Department for Environment, Food and Rural Affairs (Defra). 2019. "Defra Antimicrobial Resistance Coordination (DARC) Group." [https://www.gov.uk/government/groups/defra-antimicrobial-resistance-coordination-darc-group]. Accessed 16 January 2021.

[16] Department for Environment, Food and Rural Affairs (Defra). 2019. Official website.

[https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs]. Accessed 16 January 2021.

[17] The Parliamentary Office of Science and Technology. Oct 2013. "Antibiotic resistance in the environment." POSTnote number 446. [https://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-446]. Accessed 16 January 2021.

[18] Barber, S and Swaden-Lewis, K. 15 Nov 2017. "Antimicrobial resistance." House of Commons Library, Briefing Paper CBP 8141. [https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8141]. Accessed 16 January 2021.

## 1.1.2 Antimicrobial control

### 1.1.2a

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?**

Yes = 2, Yes, but there is evidence of gaps in enforcement = 1, No = 0

**Current Year Score: 1**

The United Kingdom has national regulations requiring prescriptions for antibiotic use for humans, however, there is evidence that points to sale of antibiotics without a prescription for use by humans. The existence of a legal requirement for a prescription for antibiotics for human use is confirmed by the UK's antimicrobial resistance (AMR) self-assessment submitted to the World Health Organisation (WHO) for 2019-2020 (question 5.4: "Country legislations on antimicrobial use [Country has laws or regulations on prescription and sale of antimicrobials, for human use.]", and on the National Health Service (NHS) website. [1, 2] The legal basis is provided by 'The Human Medicines Regulations 2012', which assigns responsibility to the British Pharmacopoeia Commission for publishing classifications of medicines as prescription only or otherwise, and by 'The Prescription Only Medicines (Human Use) Order 1997', which includes a schedule of medicinal products which are prescription only. The schedule does not call for prescriptions for antibiotics as a category, but all the antibiotics commonly used in the UK are categorised as requiring a prescription. [3, 4] A cross-sectional study of online pharmacies selling antibiotics to the UK public, published in 2017, found nine online pharmacies did not require a prescription prior to purchase, and a 2019 editorial in the British Journal of General Practice reviewed some of the current evidence that points to "novel routes to obtaining antibiotics" that are likely to increase inappropriate use. [5, 6]

[1] World Health Organisation (WHO). 2020. "Global database for antimicrobial resistance country self assessment 2019-2020, United Kingdom." [http://amrcountryprogress.org/]. Accessed 16 January 2021.

[2] National Health Service (NHS). 2019. "Medicines information." [https://www.nhs.uk/conditions/medicines-information/]. Accessed 16 January 2021.

[3] Government of the United Kingdom. 2012. "The Human Medicines Regulations 2012." [https://www.legislation.gov.uk/uksi/2012/1916/contents]. Accessed 16 January 2021.

[4] Government of the United Kingdom. 1997. "The Prescription Only Medicines (Human Use) Order 1997." [https://www.legislation.gov.uk/uksi/1997/1830/contents/made]. Accessed 16 January 2021.

[5] Boyd, Sara Elizabeth, et al. 2017. "Obtaining antibiotics online from within the UK: a cross-sectional study." Journal of Antimicrobial Chemotherapy 72.5: 1521-1528. [https://academic.oup.com/jac/article/72/5/1521/2986804]. Accessed 16 January 2021.

[6] Hayhoe, Benedict, Geva Greenfield, and Azeem Majeed. 2019. "Is it getting easier to obtain antibiotics in the UK?." British

Journal of General Practice, 69(679): 54-55. [<https://bjgp.org/content/69/679/54.short>]. Accessed 16 January 2021.

### 1.1.2b

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has national regulations requiring prescriptions for antibiotic use for animals, and there is evidence of gaps in enforcement. According to 'The Veterinary Medicines Regulations 2006', the Secretary of State classifies products as requiring a prescription or not when granting marketing authorisation. The Regulations do not specifically mention antibiotics, but state that all medicinal products for use by food-producing animals must be prescribed by a veterinarian, pharmacist or suitably qualified person. [1] Exceptions to the rule on medicinal products for food-producing animals must meet a number of criteria, including that there be "no risk to human or animal health as regards the development of resistance to antimicrobials". [2] The 'Code of Practice on the responsible use of animal medicines on the farm', issued by the Veterinary Medicines Directorate (VMD) in 2014, states that: "All antibiotics, including those administered in-feed, must be prescribed by the veterinary surgeon responsible for the animals to which the treatment will be administered." [3] A search of the VMD's database of authorised veterinary medicines confirms that antibiotics are categorised as for prescription by a veterinarian only. [4] The existence of a legal requirement for a prescription for antibiotics for animal use is also indicated on the UK's antimicrobial resistance (AMR) self-assessment submitted to the World Health Organisation (WHO) for 2019-2020 (question 5.4: "Country legislations on antimicrobial use [Country has laws or regulations on prescription and sale of antimicrobials for animal use.]") [5] A 2020 study—"the first to document the availability of antibiotics on websites for veterinary use"—used English and Spanish search terms and found that "veterinary antibiotics are easily available for purchase online without a prescription." Of the vendors found using English search terms, 7 percent were from the UK and 55 percent did not require a prescription; also of the searches carried out in English, 43 percent had sales restricted to national delivers, though it was not indicated what percentage of vendors delivered to the UK. [6]

[1] Government of the United Kingdom. 2006. "The Veterinary Medicines Regulations 2006."

[<https://www.legislation.gov.uk/ukxi/2006/2407/schedule/3/made>]. Accessed 16 January 2021.

[2] Veterinary Medicines Directorate. 11 Jul 2018. "Legal controls on veterinary medicines."

[<https://www.gov.uk/guidance/legal-controls-on-veterinary-medicines>]. Accessed 16 January 2021.

[3] Veterinary Medicines Directorate. Dec 2014. "Code of Practice on the responsible use of animal medicines on the farm."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/424685/Responsible\\_use\\_COP\\_April\\_2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/424685/Responsible_use_COP_April_2015.pdf)]. Accessed 16 January 2021.

[4] Veterinary Medicines Directorate. 2019. "Product information database."

[<https://www.vmd.defra.gov.uk/ProductInformationDatabase/>]. Accessed 16 January 2021.

[5] World Health Organisation (WHO). 2020. "Global database for antimicrobial resistance country self assessment 2019-2020, United Kingdom." [<http://amrcountryprogress.org/>]. Accessed 16 January 2021.

[6] Garcia, J.F., Diez, M.J., et al. 2020. "The online sale of antibiotics for veterinary use." *Animals* 10.3: 503.

[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7143797/pdf/animals-10-00503.pdf>]. Accessed 26 January 2021.

## 1.2 ZOOBOTIC DISEASE

### 1.2.1 National planning for zoonotic diseases/pathogens

#### 1.2.1a

Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has a suite of national and sub-national legislation and guidance documents on zoonotic diseases. The Animal Health Act 1981 includes some zoonoses in its list of specified diseases subject to control measures under the Act, and has a section on control of zoonoses which enables ministers to designate additional diseases as posing a risk to human health, bringing them under the Act. [1] This was done through ministerial orders in 1988 and 1989, which gave powers to veterinary inspectors to investigate and implement control measures for bovine spongiform encephalopathy and organisms of the salmonella and brucella genera. [2, 3] European regulations on region-wide monitoring of zoonoses were introduced in 2003 and transposed into zoonoses monitoring regulations specific to England and the devolved administrations (DA) of Northern Ireland, Scotland and Wales in 2007-8. [4, 5, 6, 7, 8] New regulations have been drafted to ensure continued participation in the system after Brexit. [9] Guidelines on zoonoses have been prepared for England and Wales, and Scotland, explaining the roles and responsibilities of the entities involved in handling outbreaks, and providing details of surveillance systems. [10, 11] There are not publicly-available guidelines or plans for Northern Ireland, though a surveillance system is in place. [12, 13] Annual (UK-wide) zoonoses reports are published by Public Health England, which summarise national and sub-national strategies and surveillance systems (as well as latest data). [14] There are also a number of disease-specific regulations and guidance documents. [15, 16]

[1] Government of the United Kingdom. 1981. "Animal Health Act 1981."

[<https://www.legislation.gov.uk/ukpga/1981/22/contents>]. Accessed 17 January 2021.

[2] Government of the United Kingdom. 1988. "The Zoonoses Order 1988."

[<http://www.legislation.gov.uk/uksi/1988/2264/contents/made>]. Accessed 17 January 2021.

[3] Government of the United Kingdom. 1989. "The Zoonoses Order 1989."

[<http://www.legislation.gov.uk/uksi/1989/285/made>]. Accessed 17 January 2021.

[4] European Parliament and Council. 17 Nov 2003. "Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC and repealing Council Directive 92/117/EEC." [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0099&from=en>]. Accessed 17 January 2021.

[5] Government of the United Kingdom. 1 Oct 2007. "The Zoonoses (Monitoring) (England) Regulations 2007."

[<https://www.legislation.gov.uk/uksi/2007/2399/regulation/2>]. Accessed 17 January 2021.

[6] Government of Northern Ireland. 31 Aug 2008. "The Zoonoses (Monitoring) Regulations (Northern Ireland) 2008."

[<https://www.legislation.gov.uk/nisr/2008/340/contents/made>]. Accessed 17 January 2021.

[7] Scottish Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Scotland) Regulations 2007."

[<https://www.legislation.gov.uk/ssi/2007/420/contents/made>]. Accessed 17 January 2021.

[8] Welsh Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Wales) Regulations 2007."

[<https://www.legislation.gov.uk/wsi/2007/2459/made>]. Accessed 17 January 2021.

[9] Government of the United Kingdom. 2018. "The Zoonotic Disease Eradication and Control (Amendment) (EU Exit) Regulations 2018 (draft)."

[[https://assets.publishing.service.gov.uk/media/5bf4343a40f0b607695eaa0b/the\\_Zoonotic\\_Disease\\_Eradication\\_and\\_Control\\_Amendment\\_\\_EU\\_Exit\\_Regulations\\_2018\\_-\\_SI.pdf](https://assets.publishing.service.gov.uk/media/5bf4343a40f0b607695eaa0b/the_Zoonotic_Disease_Eradication_and_Control_Amendment__EU_Exit_Regulations_2018_-_SI.pdf)]. Accessed 17 January 2021.

- [10] Government of the United Kingdom. Jul 2016. “Guidelines for the investigation of zoonotic disease (non-foodborne) in England and Wales.”  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/535155/Guidelines\\_for\\_Investigation\\_of\\_Zoonotic\\_Disease.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/535155/Guidelines_for_Investigation_of_Zoonotic_Disease.pdf)]. Accessed 17 January 2021.
- [11] Health Protection Scotland. May 2014. “Guidelines on the roles and responsibilities of agencies involved in the Investigation and Management of Zoonotic Disease in Scotland.”  
[<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=1190>]. Accessed 17 January 2021.
- [12] Northern Ireland Public Health Agency. 2021. “Zoonoses (Infections acquired from animals).”  
[<http://www.publichealth.hscni.net/directorate-public-health/health-protection/zoonoses-infections-acquired-animals>]. Accessed 17 January 2021.
- [13] Northern Ireland Department of Agriculture, Environment and Rural Affairs. 2021. “Zoonotic diseases.”  
[<https://www.daera-ni.gov.uk/articles/zoonotic-diseases>]. Accessed 17 January 2021.
- [14] Department for Environment, Food & Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 19 Dec 2018. “Zoonoses: UK annual reports.” [<https://www.gov.uk/government/publications/zoonoses-uk-annual-reports>]. Accessed 17 January 2021.
- [15] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.”  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 17 January 2021.
- [16] Department for Environment, Food & Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 14 March 2019. “Notifiable diseases in animals.” [<https://www.gov.uk/government/collections/notifiable-diseases-in-animals>]. Accessed 17 January 2021.

### 1.2.1b

**Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that there is national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans in the United Kingdom. According to the 2015 Global Health Security Agenda pilot assessment of the UK, the country has implemented policies—including a number of disease-specific regulations and guidance documents—with the purpose of reducing spillover of zoonotic disease into human populations. However, there is no singular document or series of documents that identifies pathways for transmission of zoonotic diseases from animals to humans, and how the relevant agencies are taking steps to address these spillover risks. [1] The Animal Health Act 1981 includes some zoonoses in its list of specified diseases subject to control measures under the Act, and has a section on control of zoonoses which enables ministers to designate additional diseases as posing a risk to human health, bringing them under the Act. [2] European Union (EU) regulations on region-wide monitoring of zoonoses were introduced in 2003 and transposed into zoonoses monitoring regulations specific to England and the devolved administrations (DA) of Northern Ireland, Scotland and Wales in 2007-8. [3, 4, 5, 6, 7] New regulations were established in 2019 to ensure the EU regulations would continue to be operable after the UK leaves the EU. [8] However, there is no evidence that these legislation and regulations include measures for risk identification and reduction for zoonotic disease spillover events. According to a 2020 report from Policy Exchange on zoonotic outbreaks and spillovers, the UK lacks strategy and co-ordination when it comes to preparing for zoonotic disease spillover events, and there is no central co-ordinating body on zoonotic outbreak risks in the country. [9] Guidelines on zoonoses have been prepared for England and Wales, and Scotland, explaining the roles and responsibilities of the entities involved in handling outbreaks, and

providing details of surveillance systems. [10, 11] There are not publicly-available guidelines or plans for Northern Ireland, though a surveillance system is in place. [12, 13] Annual (UK-wide) zoonoses reports are published by Public Health England, which summarise national and sub-national strategies and surveillance systems (as well as latest data). [14]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 6 February 2021.
- [2] Government of the United Kingdom. 1981. "Animal Health Act 1981."  
[<https://www.legislation.gov.uk/ukpga/1981/22/contents>]. Accessed 6 February 2021.
- [3] European Parliament and Council. 17 Nov 2003. "Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC and repealing Council Directive 92/117/EEC." [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0099&from=en>]. Accessed 6 February 2021.
- [4] Government of the United Kingdom. 1 Oct 2007. "The Zoonoses (Monitoring) (England) Regulations 2007."  
[<https://www.legislation.gov.uk/uksi/2007/2399/regulation/2>]. Accessed 6 February 2021.
- [5] Government of Northern Ireland. 31 Aug 2008. "The Zoonoses (Monitoring) Regulations (Northern Ireland) 2008."  
[<https://www.legislation.gov.uk/nisr/2008/340/contents/made>]. Accessed 6 February 2021.
- [6] Scottish Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Scotland) Regulations 2007."  
[<https://www.legislation.gov.uk/ssi/2007/420/contents/made>]. Accessed 6 February 2021.
- [7] Welsh Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Wales) Regulations 2007."  
[<https://www.legislation.gov.uk/wsi/2007/2459/made>]. Accessed 6 February 2021.
- [8] Government of the United Kingdom. 2019. "The Zoonotic Disease Eradication and Control (Amendment) (EU Exit) Regulations 2019." [<https://www.legislation.gov.uk/uksi/2019/740/contents/made>]. Accessed 6 February 2021.
- [9] McAleenan, Benedict and Nicolle, Will. 2020. "Outbreaks and Spillovers: How the UK and international community can lower the risks of zoonotic disease." Policy Exchange. [<https://policyexchange.org.uk/wp-content/uploads/Outbreaks-and-Spillovers.pdf>]. Accessed 6 February 2021.
- [10] Government of the United Kingdom. Jul 2016. "Guidelines for the investigation of zoonotic disease (non-foodborne) in England and Wales."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/535155/Guidelines\\_for\\_Investigation\\_of\\_Zoonotic\\_Disease.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/535155/Guidelines_for_Investigation_of_Zoonotic_Disease.pdf)]. Accessed 6 February 2021.
- [11] Health Protection Scotland. May 2014. "Guidelines on the roles and responsibilities of agencies involved in the Investigation and Management of Zoonotic Disease in Scotland."  
[<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=1190>]. Accessed 6 February 2021.
- [12] Northern Ireland Public Health Agency. 2021. "Zoonoses (Infections acquired from animals)."  
[<http://www.publichealth.hscni.net/directorate-public-health/health-protection/zoonoses-infections-acquired-animals>]. Accessed 6 February 2021.
- [13] Northern Ireland Department of Agriculture, Environment and Rural Affairs. 2021. "Zoonotic diseases."  
[<https://www.daera-ni.gov.uk/articles/zoonotic-diseases>]. Accessed 6 February 2021.
- [14] Department for Environment, Food & Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 19 Dec 2018. "Zoonoses: UK annual reports." [<https://www.gov.uk/government/publications/zoonoses-uk-annual-reports>]. Accessed 6 February 2021.

### 1.2.1c

Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has a suite of national and sub-national legislation and guidance, accounting for the surveillance and control of multiple zoonotic pathogens of public health concern. The Animal Health Act 1981 includes some zoonoses in its list of specified diseases subject to control measures under the Act, and has a section on control of zoonoses which enables ministers to designate additional diseases as posing a risk to human health, bringing them under the Act. Control measures enabled under the act include, among other measures, inspections by a veterinary officer, enforcement of compulsory biosecurity guidance, regulation of the movement of animals, laws on separation of infected animals and disease notification, and powers to order slaughter of infected animals. [1] This was done through ministerial orders in 1988 and 1989, which gave powers to veterinary inspectors to investigate and implement control measures for bovine spongiform encephalopathy and organisms of the salmonella and brucella genera. [2, 3] European regulations on region-wide monitoring of zoonoses were introduced in 2003 and transposed into regulations specific to England and the devolved administrations (DA) of Northern Ireland, Scotland and Wales in 2007-8. These require surveillance of, at a minimum, brucellosis, campylobacteriosis, echinococcosis, listeriosis, salmonellosis, trichinellosis, tuberculosis and E. coli. [4, 5, 6, 7, 8] New regulations have been drafted to ensure continued participation in the system after Brexit. [9] Guidelines on zoonoses have been prepared for England and Wales, and Scotland, explaining the roles and responsibilities of the entities involved in handling outbreaks, and providing details of surveillance systems. These include lists of zoonoses to monitor which go beyond the European list. [10, 11] There are not publicly-available guidelines or plans for Northern Ireland, though a surveillance system is in place. [12, 13] There are also a number of disease-specific regulations and guidance documents addressing surveillance and control, and contingency plans for exotic notifiable animal diseases (including zoonoses) exist at the level of the UK and each DA. [14, 15, 16]

[1] Government of the United Kingdom. 1981. "Animal Health Act 1981."

[<https://www.legislation.gov.uk/ukpga/1981/22/contents>]. Accessed 17 January 2021.

[2] Government of the United Kingdom. 1988. "The Zoonoses Order 1988."

[<http://www.legislation.gov.uk/uksi/1988/2264/contents/made>]. Accessed 17 January 2021.

[3] Government of the United Kingdom. 1989. "The Zoonoses Order 1989."

[<http://www.legislation.gov.uk/uksi/1989/285/made>]. Accessed 17 January 2021.

[4] European Parliament and Council. 17 Nov 2003. "Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC and repealing Council Directive 92/117/EEC." [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0099&from=en>]. Accessed 17 January 2021.

[5] Government of the United Kingdom. 1 Oct 2007. "The Zoonoses (Monitoring) (England) Regulations 2007."

[<https://www.legislation.gov.uk/uksi/2007/2399/regulation/2>]. Accessed 17 January 2021.

[6] Government of Northern Ireland. 31 Aug 2008. "The Zoonoses (Monitoring) Regulations (Northern Ireland) 2008."

[<https://www.legislation.gov.uk/nisr/2008/340/contents/made>]. Accessed 17 January 2021.

[7] Scottish Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Scotland) Regulations 2007."

[<https://www.legislation.gov.uk/ssi/2007/420/contents/made>]. Accessed 17 January 2021.

[8] Welsh Government. 1 Oct 2007. "The Zoonoses (Monitoring) (Wales) Regulations 2007."

[<https://www.legislation.gov.uk/wsi/2007/2459/made>]. Accessed 17 January 2021.

[9] Government of the United Kingdom. 2018. "The Zoonotic Disease Eradication and Control (Amendment) (EU Exit) Regulations 2018 (draft)."

[[https://assets.publishing.service.gov.uk/media/5bf4343a40f0b607695eaa0b/the\\_Zoonotic\\_Disease\\_Eradication\\_and\\_Control\\_\\_Amendment\\_\\_EU\\_Exit\\_\\_Regulations\\_2018\\_-\\_SI.pdf](https://assets.publishing.service.gov.uk/media/5bf4343a40f0b607695eaa0b/the_Zoonotic_Disease_Eradication_and_Control__Amendment__EU_Exit__Regulations_2018_-_SI.pdf)]. Accessed 17 January 2021.

[10] Government of the United Kingdom. Jul 2016. "Guidelines for the investigation of zoonotic disease (non-foodborne) in England and Wales."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/535155/Guidelines\\_for\\_investigation\\_of\\_zoonotic\\_disease.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/535155/Guidelines_for_investigation_of_zoonotic_disease.pdf)]. Accessed 17 January 2021.

[11] Health Protection Scotland. May 2014. "Guidelines on the roles and responsibilities of agencies involved in the Investigation and Management of Zoonotic Disease in Scotland."

[<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=1190>]. Accessed 17 January 2021.

[12] Northern Ireland Public Health Agency. 2021. "Zoonoses (Infections acquired from animals)."

[<http://www.publichealth.hscni.net/directorate-public-health/health-protection/zoonoses-infections-acquired-animals>].

Accessed 17 January 2021.

[13] Northern Ireland Department of Agriculture, Environment and Rural Affairs. 2021. "Zoonotic diseases."

[<https://www.daera-ni.gov.uk/articles/zoonotic-diseases>]. Accessed 17 January 2021.

[14] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 17 January 2021.

[15] Department for Environment, Food & Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 19 Dec 2018. "Zoonoses: UK annual reports." [<https://www.gov.uk/government/publications/zoonoses-uk-annual-reports>]. Accessed 17 January 2021.

[16] Government of the United Kingdom. Mar 2015. "United Kingdom contingency plan for exotic notifiable diseases of animals."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/411162/pb14239-animal-disease-plan-2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411162/pb14239-animal-disease-plan-2015.pdf)]. Accessed 17 January 2021.

### 1.2.1d

**Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom has a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries. However, the UK does have cross-ministerial groups dedicated to zoonoses in general and specific diseases, which meet regularly and as needed. The UK has two groups focused on zoonoses which function across departments (equivalent to ministries): the Human Animal Infections and Risk Surveillance Group (HAIRS) and the UK Zoonoses, Animal Diseases and Infections (UKZADI) Group. HAIRS is a multi-agency and cross-disciplinary horizon scanning group, currently chaired by the Department for Environment, Food and Rural Affairs. It is the main forum for member organisations to identify and discuss infections with potential for interspecies transfer, particularly zoonotic infections. The group meets formally monthly with regular contact on an ad hoc basis, and publishes annual reports as well as threat-specific risk assessments as required. It includes members from human, animal, environmental and food health authorities, and from all 3 devolved administrations (DA) of Northern Ireland, Scotland and Wales. Members are employed by their respective organisations, and there is no evidence that HAIRS has dedicated staff and funding. [1, 2] UKZADI is an independent committee made up of experts from the agricultural, public health and food standards departments and from all 3 DAs, which meets quarterly. It advises the human, animal and food health authorities on important trends and observations which impact on animal and public health, including preventative and remedial action. It also provides a strategic overview to ensure overall co-ordination of public health action at the UK, national and local level with regard to existing and emerging zoonotic infections and trends in antimicrobial resistance. [1, 3] In addition, there are a number of cross-departmental groups focused on particular diseases and topics. [1]

[1] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 17 January 2021.

[2] Public Health England (PHE). 11 November 2020. “Human animal infections and risk surveillance group (HAIRS).”

[<https://www.gov.uk/government/collections/human-animal-infections-and-risk-surveillance-group-hairs>]. Accessed 17 January 2021.

[3] Government of the United Kingdom. 2021. “UK Zoonoses, Animal Diseases and Infections Group.”

[<https://www.gov.uk/government/groups/uk-zoonoses-animal-diseases-and-infections-group>]. Accessed 17 January 2021.

## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

**Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has a mandatory national mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency. The UK and the devolved administrations (DA) of Scotland and Wales maintain lists of notifiable animal diseases, of which animal owners are legally obliged to report suspected and confirmed cases to the Animal and Plant Health Agency (APHA). APHA is “an executive agency, sponsored by the Department for Environment, Food & Rural Affairs, the Welsh Government and The Scottish Government.” APHA guidance instructs owners to report diseases immediately via telephone helpline, with separate numbers for England, Wales and Scotland. APHA veterinarians then investigate, usually by visiting the premises. [1] In Northern Ireland, diseases must be reported to the Department of Agriculture, Environment and Rural Affairs (DAERA) helpline. [2, 3] The legal requirement in all jurisdictions stems from the Animal Health Act 1981 and related ministerial orders, though over time the system has changed from reporting to local police (as stipulated in the 1981 Act) to reporting to the animal health authorities. Once a disease has been confirmed, APHA must notify the following organisations: Local authorities, the European Commission, and the World Animal Health Organisation (OIE). [4, 5]

[1] Department for Environment, Food & Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 14 March 2019. “Notifiable diseases in animals.” [<https://www.gov.uk/government/collections/notifiable-diseases-in-animals>]. Accessed 17 January 2021.

[2] Northern Ireland Department of Agriculture, Environment and Rural Affairs. 2021. “Notifiable diseases in Northern Ireland.” [<https://www.daera-ni.gov.uk/articles/notifiable-diseases-northern-ireland>]. Accessed 17 January 2021.

[3] Northern Ireland Department of Agriculture, Environment and Rural Affairs. 2019. “Bluetongue.” [<https://www.daera-ni.gov.uk/articles/bluetongue>]. Accessed 17 January 2021.

[4] Animal and Plant Health Agency (APHA). April 2017. “Notifiable diseases: A guide for official veterinarians.” [[http://apha.defra.gov.uk/external-operations-admin/library/documents/essential\\_skills/ES01.pdf](http://apha.defra.gov.uk/external-operations-admin/library/documents/essential_skills/ES01.pdf)]. Accessed 17 January 2021.

[5] Government of the United Kingdom. 1981 “The Animal Health Act 1981.”

[<https://www.legislation.gov.uk/ukpga/1981/22>]. Accessed 17 January 2021.

### 1.2.2b

**Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is legislation in the United Kingdom that safeguards the confidentiality of information generated through surveillance activities for animals (for owners). The Data Protection Act 2018 implements the European Union (EU)'s General Data Protection Regulation) that provides safeguards applicable to information generated through animal disease surveillance, sufficient to ensure confidentiality of personal identifying data of livestock owners. A government department, such as the Animal and Plant Health Agency (APHA) in the case of animal disease surveillance, can collect personal identifying information with or without consent in order to carry out its functions in the public interest. However, it must comply with the principle that data processed must be relevant and limited to what is necessary in relation to the purposes for which they are processed. Given that the definition of data processing includes "disclosure by transmission, dissemination or otherwise making available", this means that data cannot be shared beyond those in the government department who need it to carry out their functions. [1, 2, 3, 4] When the UK leaves the EU, the GDPR will be incorporated into the UK's domestic law under the European Union (Withdrawal) Bill. [2] The Animal Health Act 1981 does not contain provisions on the confidentiality of data generated in disease surveillance. [5] APHA has published the 'APHA privacy notice for exotic, notifiable and reportable diseases', which states: "Where required to by law, data may be published on UK Government or EU websites. Data may also be used for research purposes when compliant with GDPR. ... Personal data may be made available to local authorities and other public bodies in the UK and EU to meet legal requirements. ... We will not allow any unwarranted breach of confidentiality and we will not act in contravention of our obligations under UK data protection legislation." [6] Official guidelines for the investigation of zoonotic disease in England and Wales state: "Confidential or identifiable information may be exchanged between those who have a legitimate need if the situation requires this. The decision to exchange such information is a professional responsibility and will depend on the nature and risk of disease to the public", and "if there is an immediate and serious danger to public health by a particular incident, the need to share information with other agencies on a 'need to know' basis overrides the confidentiality principle. [7]

[1] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018."

[http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted]. Accessed 17 January 2021.

[2] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018: Policy background."

[http://www.legislation.gov.uk/ukpga/2018/12/notes/division/3/index.htm]. Accessed 17 January 2021.

[3] European Commission. N.d. "EU data protection rules." [https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules\_en]. Accessed 17 January 2021.

[4] European Commission. 27 Apr 2016. "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)". [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN]. Accessed 17 January 2021.

[5] Government of the United Kingdom. 1981 "The Animal Health Act 1981."

[https://www.legislation.gov.uk/ukpga/1981/22]. Accessed 17 January 2021.

[6] Animal and Plant Health Agency (APHA). April 2020. "APHA privacy notice for exotic, notifiable and reportable diseases."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/741431/apha-privacy-notice-exotic-notifiable.pdf]. Accessed 17 January 2021.

[7] Government of the United Kingdom. Jul 2016. "Guidelines for the investigation of zoonotic disease (non-foodborne) in England and Wales."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/535155/Guidelines\_for

\_Investigation\_of\_Zoonotic\_Disease.pdf]. Accessed 17 January 2021.

### 1.2.2c

**Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom conducts surveillance of zoonotic disease in wildlife. The UK's Animal and Plant Health Agency (APHA) conducts surveillance in wildlife. While most evidence of wildlife surveillance is for passive surveillance, there is evidence of active surveillance scheme is in place for avian influenza among wetland birds. [1, 2] The APHA Diseases of Wildlife Scheme (APHA DoWS) has conducted surveillance for wildlife disease in England and Wales since 1998. The Scheme investigates all types of infectious and non-infectious disease in vertebrate wild species, and asks members of the public to report "mass mortality of wildlife (more than three dead animals together), nervous disease in wildlife or unusual deaths in wildlife". In 2009, surveillance for vertebrate (apart from cetaceans) wildlife disease became the responsibility of the Great Britain Wildlife Disease Surveillance Partnership, under the Chair of the APHA DoWS and involving agencies concerned with different aspects of wildlife and environmental conservation in England, Wales and Scotland. APHA's guidance asks members of the public to report any mass mortalities of wildlife to APHA's Wildlife Expert Group (WEG); and to report any suspected cases of notifiable diseases (which includes zoonoses) to APHA immediately. The WEG compiles quarterly wildlife disease surveillance and emerging threats reports. [3] These are available online and cover England, Wales and Scotland, and in some cases Northern Ireland (such as wild bird disease surveillance by the Institute of Zoology). Examples of wildlife diseases reported include avian botulism in water birds, avian influenza in wild birds and lyssaviruses in bats. [1, 2]

[1] Animal and Plant Health Agency (APHA). 5 January 2021. "Wildlife: GB disease surveillance and emerging threats reports." [https://www.gov.uk/government/publications/wildlife-gb-disease-surveillance-and-emerging-threats-reports]. Accessed 17 January 2021.

[2] Animal and Plant Health Agency (APHA). 5 January 2021. "Quarterly GB wildlife disease surveillance and emerging threats report: July to September 2020." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/738916/pub-survrep-w0418.pdf]. Accessed 17 January 2021.

[3] Animal and Plant Health Agency (APHA). N.d. "Wildlife disease surveillance." [http://apha.defra.gov.uk/vet-gateway/surveillance/seg/wildlife.htm]. Accessed 17 January 2021.

### 1.2.3 International reporting of animal disease outbreaks

#### 1.2.3a

**Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?**

Yes = 1 , No = 0

**Current Year Score: 0**

2019

OIE WAHIS database

## 1.2.4 Animal health workforce

### 1.2.4a

**Number of veterinarians per 100,000 people**

Input number

**Current Year Score: 65.82**

2018

OIE WAHIS database

### 1.2.4b

**Number of veterinary para-professionals per 100,000 people**

Input number

**Current Year Score: 1.86**

2018

OIE WAHIS database

## 1.2.5 Private sector and zoonotic

### 1.2.5a

**Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom's national plans on zoonoses include mechanisms for working with the private sector in controlling and responding to zoonoses. According to the guidelines for the investigation of zoonotic disease for a) England and Wales and b) Scotland, there are some limited mechanisms for working with the private sector in controlling zoonoses. Multi-disciplinary Zoonoses Liaison Groups (ZLGs) exist at the sub-national level. They meet to discuss local zoonotic issues and to promote joint working. Individuals from private organisations may attend these. Private veterinary services may be involved in investigations by the Animal and Plant Health Agency (APHA) into suspected animal disease, for instance in sample collection. APHA also contracts private-sector surveillance providers to assist with animal disease surveillance. [1, 2] As for response, the UK's contingency plan for exotic notifiable diseases of animals, which includes some zoonoses, notes that stakeholder meetings are held by the Department for Environment, Food and Rural Affairs (Defra) during outbreaks, which can include private partners such as veterinary services and stakeholders representing agricultural and rural interests, food supply, consumer organisations and other organisations. Defra also has contractual arrangements with private partners to provide emergency animal vaccination services. [3]

[1] Government of the United Kingdom. Jul 2016. "Guidelines for the investigation of zoonotic disease (non-foodborne) in England and Wales."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/535155/Guidelines\\_for\\_Investigation\\_of\\_Zoonotic\\_Disease.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/535155/Guidelines_for_Investigation_of_Zoonotic_Disease.pdf)]. Accessed 18 January 2021.

[2] Health Protection Scotland. May 2014. "Guidelines on the roles and responsibilities of agencies involved in the Investigation and Management of Zoonotic Disease in Scotland."

[<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=1190>]. Accessed 18 January 2021.

[3] Government of the United Kingdom. Mar 2015. "United Kingdom contingency plan for exotic notifiable diseases of animals."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/411162/pb14239-animal-disease-plan-2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411162/pb14239-animal-disease-plan-2015.pdf)]. Accessed 18 January 2021.

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

**Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that United Kingdom has in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities. In the UK, facilities in which especially dangerous pathogens and toxins are stored or processed are required to register with the Home Office, receive police visits prior to receiving authorisation and once a year thereafter, and must provide details of inventories, security controls and personnel to the police. It is deduced that the Home Office has a record of all such facilities updated within the past five years. The Anti-terrorism, Crime and Security Act (ATCSA) 2001, Schedule 5, lists especially dangerous pathogens and toxins which could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. [1] Under ATCSA, Facilities wishing to hold Schedule 5 substances must notify the Home Office, and a Counter Terrorism Security Advisor (CTSA) from the local police conducts a visit and provides security advice. Qualifying sites must be able to demonstrate that they are operating securely before they are granted authority by the National Counter Terrorism Security Office (NaCTSO) on behalf of the Home Office. [1, 2] NaCTSO provides detailed biosecurity guidance in its document 'Security requirements for pathogens and toxins', which has a restricted circulation. According to secondary guidance on compliance with NaCTSO requirements, "There must be security controls for work involving Schedule 5 pathogens and toxins including site, building and laboratory security and robust controls for acquisition, information, storage, use and destruction. An inventory of all relevant materials and authorised users must be supplied on request to the Police. All Schedule 5 materials must be kept securely locked, access must be restricted to authorised users only and detailed records must be kept." [3] This indicates the information collected by CTSA's on behalf of the Home Office. Premises holding Schedule 5 substances are inspected once a year by a CTSA to ensure the appropriate security measures are in place and provide advice. [4] It is a criminal offence for an occupier of relevant premises to fail to comply with any duty or action arising out of ATCSA. [5] In addition, the UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports do not contain information on inventories, but do provide information on facilities capable of handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [6]

- [1] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001." [https://www.legislation.gov.uk/ukpga/2001/24/contents]. Accessed 6 February 2021.
- [2] National Counter Terrorism Security Office. 24 Nov 2014. "Secure hazardous materials to help prevent terrorism." [https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials]. Accessed 6 February 2021.
- [3] Health and Safety Department, the University of Edinburgh. 15 Sep 2016. "Biological security for pathogens and toxins." [http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio\_security/bio\_security\_path\_toxins.pdf]. Accessed 6 February 2021.
- [4] Home Office. 29 Oct 2011. "Amendments to Schedule 5 of the Anti Terrorism, Crime and Security Act (2001): Impact assessment." [https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia\_20110488\_en.pdf]. Accessed 6 February 2021.
- [5] Home Office. 2007. "Explanatory memorandum to the Schedule 5 to the Anti-Terrorism, Crime and Security Act 2001 (Amendment) Order 2007." [http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem\_9780110756585\_en.pdf]. Accessed 6 February 2021.
- [6] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland]. Accessed 6 February 2021.

### 1.3.1b

**Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has legislation related to biosecurity which addresses requirements such as physical containment, operation practices and information control of facilities in which especially dangerous pathogens and toxins are stored or processed. The main law on biosecurity is the Anti-terrorism, Crime and Security Act (ATCSA) 2001. [1, 2] ATCSA Part 7 addresses "Security of pathogens and toxins", and applies to a list of especially dangerous substances provided in Schedule 5. Substances can only be added to Schedule 5 if they could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, if they could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. ATCSA requires facilities wishing to hold Schedule 5 substances to notify the Home Office, and gives the police the right to ask for information and to instruct the facility occupier to take measures to ensure the security of the substances. [2] When a facility notifies the Home Office, a Counter Terrorism Security Advisor (CTSA) from the local police conducts a visit and provides security advice. Qualifying sites must be able to demonstrate that they are operating securely before they are granted authority by the National Counter Terrorism Security Office (NaCTSO) on behalf of the Home Office. [2, 3] NaCTSO provides detailed biosecurity guidance in its document 'Security requirements for pathogens and toxins', which has a restricted circulation. According to secondary guidance on compliance with NaCTSO requirements, "There must be security controls for work involving Schedule 5 pathogens and toxins including site, building and laboratory security and robust controls for acquisition, information, storage, use and destruction. An inventory of all relevant materials and authorised users must be supplied on request to the Police. All Schedule 5 materials must be kept securely locked, access must be restricted to authorised users only and detailed records must be kept." [4] It is a criminal offence for an occupier of relevant premises to fail to comply with any duty or action arising out of ATCSA. [5] In addition, the UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention which the UK ratified in 1975. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of

pathogens stored and processed. [6]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 18 January 2021.
- [2] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."  
[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 18 January 2021.
- [3] National Counter Terrorism Security Office. 17 September 2020. "Secure hazardous materials to help prevent terrorism."  
[<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 18 January 2021.
- [4] Health and Safety Department, the University of Edinburgh. 15 Sep 2016. "Biological security for pathogens and toxins."  
[[http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio\\_security/bio\\_security\\_path\\_toxins.pdf](http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio_security/bio_security_path_toxins.pdf)]. Accessed 18 January 2021.
- [5] Home Office. 2007. "Explanatory memorandum to the Schedule 5 to the Anti-Terrorism, Crime and Security Act 2001 (Amendment) Order 2007."  
[[http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem\\_9780110756585\\_en.pdf](http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem_9780110756585_en.pdf)]. Accessed 18 January 2021.
- [6] United Nations Office at Geneva (UNOG). 2020. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 18 January 2021.

### 1.3.1c

**Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has an established agency responsible for the enforcement of biosecurity legislation and regulations: the National Counter Terrorism Security Office (NaCTSO). The main law on biosecurity is the Anti-terrorism, Crime and Security Act (ATCSA) 2001. [1, 2] ATCSA Part 7 addresses "Security of pathogens and toxins", and applies to a list of especially dangerous substances provided in Schedule 5. Substances can only be added to Schedule 5 if they could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, if they could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. ATCSA requires facilities wishing to hold Schedule 5 substances to notify the Home Office, and gives the police the right to ask for information and to instruct the facility occupier to take measures to ensure the security of the substances. [2] This is implemented by the National Counter Terrorism Security Office (NaCTSO) on behalf of the Home Office. NaCTSO is a police unit, which supports a network of about 190 counter terrorism security advisors (CTSAs) who work within local police forces. [3] When a facility notifies the Home Office of its intention to hold a Schedule 5 substance, a CTSA conducts a visit and provides security advice. Facilities must be able to demonstrate that they are operating securely before they are granted authority by NaCTSO. [4, 5] NaCTSO provides detailed biosecurity guidance in its document 'Security requirements for pathogens and toxins', which has a restricted circulation. [5] Premises holding Schedule 5 substances are inspected once a year by a CTSA to ensure the appropriate security measures are in place and provide advice, and compliance with this advice is mandatory, as it is a criminal offence for a facility occupier to fail to comply with any duty or action arising out of ATCSA. [6, 7] In addition, the UK's Counter Proliferation and Arms Control Centre reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and

the types of pathogens stored and processed. [8]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 18 January 2021.
- [2] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."  
[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 18 January 2021.
- [3] National Counter Terrorism Security Office (NaCTSO). N.d. "About us."  
[<https://www.gov.uk/government/organisations/national-counter-terrorism-security-office/about>]. Accessed 18 January 2021.
- [4] National Counter Terrorism Security Office. 17 September 2020. "Secure hazardous materials to help prevent terrorism."  
[<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 18 January 2021.
- [5] Health and Safety Department, the University of Edinburgh. 15 Sep 2016. "Biological security for pathogens and toxins."  
[[http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio\\_security/bio\\_security\\_path\\_toxins.pdf](http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio_security/bio_security_path_toxins.pdf)]. Accessed 18 January 2021.
- [6] Home Office. 29 Oct 2011. "Amendments to Schedule 5 of the Anti Terrorism, Crime and Security Act (2001): Impact assessment."  
[[https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia\\_20110488\\_en.pdf](https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia_20110488_en.pdf)]. Accessed 18 January 2021.
- [7] Home Office. 2007. "Explanatory memorandum to the Schedule 5 to the Anti-Terrorism, Crime and Security Act 2001 (Amendment) Order 2007."  
[[http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem\\_9780110756585\\_en.pdf](http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem_9780110756585_en.pdf)]. Accessed 18 January 2021.
- [8] United Nations Office at Geneva (UNOG). 2020. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland."  
[<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 18 January 2021.

### 1.3.1d

**Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that the United Kingdom has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. Especially dangerous pathogens and toxins are defined and regulated in the Anti-terrorism, Crime and Security Act (ATCSA) 2001. [1, 2] ATCSA Part 7 addresses "Security of pathogens and toxins", and applies to a list of especially dangerous substances provided in Schedule 5. Substances can only be added to Schedule 5 if they could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, if they could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. ATCSA requires facilities wishing to hold Schedule 5 substances to notify the Home Office and authorises the police to oversee such facilities. It does not contain provisions related to consolidating inventories of Schedule 5 substances. [2] ATCSA is implemented by the National Counter Terrorism Security Office (NaCTSO) on behalf of the Home Office. [3] There is no evidence that action has been taken to consolidate inventories from the websites of NaCTSO or the Home Office (responsible for public security); the Ministry of Defence; the Department of Health and Social Care or Public Health England; the Department for Environment, Food and Rural Affairs or the Animal and Plant Health Agency; or from the 2015 Global Health Security Agenda pilot assessment. [1, 4, 5, 6, 7, 8, 9, 10] Looking at the devolved administrations of Northern Ireland, Scotland and Wales, there is no evidence of action to consolidate inventories from their respective health

departments/agencies. [11, 12, 13, 14, 15] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. There is no indication in the last two years' reports of efforts to consolidate inventories. [16] Finally, no evidence was found via the VERTIC BWC legislation database. [17]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 6 February 2021.
- [2] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."  
[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 6 February 2021.
- [3] National Counter Terrorism Security Office (NaCTSO). 17 September 2020. "Secure hazardous materials to help prevent terrorism." [<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 6 February 2021.
- [4] National Counter Terrorism Security Office (NaCTSO). 2021. Official Website.  
[<https://www.gov.uk/government/organisations/national-counter-terrorism-security-office>]. Keyword search. Accessed 6 February 2021.
- [5] Home Office. 2021. [<https://www.gov.uk/government/organisations/home-office>]. Keyword search. Accessed 6 February 2021.
- [6] Ministry of Defence. 2021. Official Website. [<https://www.gov.uk/government/organisations/ministry-of-defence>]. Keyword search. Accessed 6 February 2021.
- [7] Department of Health and Social Care. 2021. Official Website.  
[<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 6 February 2021.
- [8] Public Health England. 2021. Official Website. [<https://www.gov.uk/government/organisations/public-health-england>]. Keyword search. Accessed 6 February 2021.
- [9] Department for Environment, Food and Rural Affairs (Defra). 2021. Official Website.  
[<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>]. Keyword search. Accessed 6 February 2021.
- [10] Animal and Plant Health Agency (APHA). 2021. Official Website. [<https://www.gov.uk/government/organisations/animal-and-plant-health-agency>]. Keyword search. Accessed 6 February 2021.
- [11] Department of Health, Northern Ireland. 2021. Official Website. [<https://www.health-ni.gov.uk/>]. Keyword search. Accessed 6 February 2021.
- [12] Public Health Agency (PHA), Northern Ireland. 2021. Official Website. [<http://www.publichealth.hscni.net/>]. Keyword search. Accessed 6 February 2021.
- [13] National Health Service (NHS) Scotland. 2021. Official Website. [<https://www.scot.nhs.uk/>]. Keyword search. Accessed 6 February 2021.
- [14] Health Protection Scotland. 2021. Official Website. [<https://www.hps.scot.nhs.uk/>]. Accessed 6 February 2021.
- [15] Public Health Wales. 2021. Official Website. [<http://www.wales.nhs.uk/sitesplus/888/home>]. Keyword search. Accessed 6 February 2021.
- [16] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 6 February 2021.
- [17] VERTIC BWC legislation database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc->

legislation-database/u/] Accessed 14 March 2021.

### 1.3.1e

**Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)–based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is public evidence that the United Kingdom has in-country capacity to conduct Polymerase Chain Reaction (PCR)–based diagnostic testing for anthrax and Ebola, which would preclude culturing a live pathogen. The UK’s Rare and Imported Pathogens Laboratory (RIPL), part of Public Health England (PHE), can conduct polymerase chain reaction (PCR)-based diagnostic testing for anthrax and Ebola. RIPL provides laboratory services to the National Health Service (NHS) and other public- and private-sector clients. [1, 2, 3] It can perform real-time PCR testing for anthrax and Ebola. [1, 3] RIPL, formerly known as the Special Pathogens Reference Unit (SPRU), was created to provide a clinical diagnostic service for rare and/or imported pathogens such as pathogenic arboviruses, haemorrhagic fever viruses and a number of dangerous bacterial pathogens. It also provides an environmental detection service for investigation and identification of anthrax. It is the core component of the WHO Collaborating Centre for Virus Reference and Research (Special Pathogens) at PHE Porton Down. [3] The Bacteriology Reference Department (BRD, PHE Colindale) provides confirmatory testing for various pathogens on referral from RIPL. [2] However, the BRD’s list of services does not include PCR testing for anthrax or Ebola. [4]

[1] Public Health England (PHE). 8 September 2020. “Specialist and reference microbiology: laboratory tests and services.” [https://www.gov.uk/guidance/specialist-and-reference-microbiology-laboratory-tests-and-services]. Accessed 18 January 2021.

[2] Public Health England (PHE). 28 Jul 2016. “Rare and Imported Pathogens Laboratory (RIPL).”

[https://www.gov.uk/government/collections/rare-and-imported-pathogens-laboratory-ripl]. Accessed 18 January 2021.

[3] Rare and Imported Pathogens Laboratory, Public Health England. April 2020. “Rare and Imported Pathogens Laboratory (RIPL): Specimen referral guidelines and service user manual.” Version 24.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/880003/RIPL\_User\_Manual.pdf]. Accessed 18 January 2021.

[4] Public Health England (PHE). October 2020. “National Infection Service Reference Laboratories Colindale: Bacteriology Reference Department user manual.” Version 13.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/711407/CTAD\_\_specification\_and\_technical\_guidance.pdf]. Accessed 18 January 2021.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

**Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

The United Kingdom does not require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially

dangerous pathogens, toxins, or biological materials with pandemic potential. However, security procedures in the UK are inspected annually to ensure compliance with mandatory biosecurity standards. According to the 2015 Global Health Security Agenda pilot assessment, "Each institution/laboratory is responsible for training their biosecurity staff to meet the requirements of ATCSA [the Anti-terrorism, Crime and Security Act ATCSA 2001] with respect to personnel security. Training is not mandatory under ATCSA but the security procedures of each institution/laboratory are scrutinised by CTAs [Counter Terrorism Security Advisors] when they are reviewed annually." [1] The National Counter Terrorism Security Office (NaCTSO) is responsible for the enforcement of ATCSA. [1, 2] ATCSA Part 7 addresses "Security of pathogens and toxins", and applies to a list of especially dangerous substances provided in Schedule 5. Substances can only be added to Schedule 5 if they could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, if they could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. ATCSA requires facilities wishing to hold Schedule 5 substances to notify the Home Office. [2] When a facility notifies the Home Office of its intention to hold a Schedule 5 substance, a CTA visits and provides security advice. Facilities must be able to demonstrate that they are operating securely before they are granted authority by NaCTSO. [3, 4] NaCTSO provides detailed biosecurity guidance in its document 'Security requirements for pathogens and toxins', which has a restricted circulation. [4] Premises holding Schedule 5 substances are inspected once a year by a CTA to ensure the appropriate security measures are in place. [1, 5] There is no evidence of a requirement for biosecurity training from the websites of NaCTSO or the Home Office (responsible for public security); the Ministry of Defence; the Department of Health and Social Care or Public Health England; the Department for Environment, Food and Rural Affairs or the Animal and Plant Health Agency or from the health departments/agencies of the devolved administrations of Northern Ireland, Scotland and Wales. [6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on training requirements. [18] Finally, no evidence was found via the VERTIC BWC legislation database. [19]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 31 January 2021.

[2] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."

[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 31 January 2021.

[3] National Counter Terrorism Security Office. 17 September 2020. "Secure hazardous materials to help prevent terrorism."

[<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 31 January 2021.

[4] Health and Safety Department, the University of Edinburgh. 15 Sep 2016. "Biological security for pathogens and toxins."

[[http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio\\_security/bio\\_security\\_path\\_toxins.pdf](http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio_security/bio_security_path_toxins.pdf)]. Accessed 31 January 2021.

[5] Home Office. 29 Oct 2011. "Amendments to Schedule 5 of the Anti Terrorism, Crime and Security Act (2001): Impact assessment." [[https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia\\_20110488\\_en.pdf](https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia_20110488_en.pdf)]. Accessed 31 January 2021.

[6] National Counter Terrorism Security Office (NaCTSO). 2021. Official website.

[<https://www.gov.uk/government/organisations/national-counter-terrorism-security-office>]. Accessed 31 January 2021.

[7] Home Office. 2019. Official website. [<https://www.gov.uk/government/organisations/home-office>]. Accessed 31 January 2021.

[8] Ministry of Defence. 2019. Official website. [<https://www.gov.uk/government/organisations/ministry-of-defence>].

Accessed 31 January 2021.

[9] Department of Health and Social Care. 2019. Official website.

[<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Accessed 31 January 2021.

- [10] Public Health England. 2019. Official website. [<https://www.gov.uk/government/organisations/public-health-england>]. Accessed 31 January 2021.
- [11] Department for Environment, Food and Rural Affairs (Defra). 2019. Official website. [<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>]. Accessed 31 January 2021.
- [12] Animal and Plant Health Agency (APHA). 2019. Official website. [<https://www.gov.uk/government/organisations/animal-and-plant-health-agency>]. Accessed 31 January 2021.
- [13] Department of Health, Northern Ireland. 2019. Official website. [<https://www.health-ni.gov.uk/>]. Accessed 31 January 2021.
- [14] Public Health Agency (PHA), Northern Ireland. 2019. Official website. [<http://www.publichealth.hscni.net/>]. Accessed 31 January 2021.
- [15] National Health Service (NHS) Scotland. 2019. Official website. [<https://www.scot.nhs.uk/>]. Accessed 31 January 2021.
- [16] Health Protection Scotland. 2019. Official website. [<https://www.hps.scot.nhs.uk/>]. Accessed 31 January 2021.
- [17] Public Health Wales. 2019. Official website. [<https://phw.nhs.wales/>]. Accessed 31 January 2021.
- [18] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 31 January 2021.
- [19] VERTIC BWC legislation database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>] Accessed 14 March 2021.

### 1.3.3 Personnel vetting: regulating access to sensitive locations

#### 1.3.3a

**Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?**

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0

**Current Year Score: 2**

Regulations in the United Kingdom specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: background checks and psychological or mental fitness checks. Questions are asked about drug use but there is no public evidence that drug tests take place. The National Counter Terrorism Security Office (NaCTSO) is responsible for the enforcement of biosecurity legislation, which mainly comprises the Anti-terrorism, Crime and Security Act (ATCSA) 2001. [1, 2] ATCSA Part 7 addresses "Security of pathogens and toxins", and applies to a list of especially dangerous substances provided in Schedule 5. Schedule 5 substances include those which could be used in an act of terrorism to endanger life or cause serious harm to human health. ATCSA requires facilities wishing to hold Schedule 5 substances to notify the Home Office. [2] Facilities must be able to demonstrate personnel security, conduct pre-employment screening, and provide information of personnel authorised to access the substance(s) to their local Counter Terrorism Security Advisor (CTSA). [3] According to secondary guidance on compliance with NaCTSO requirements, police "check authorised users against lists of persons known to have associations or contacts with terrorist organisations". [4] NaCTSO does not provide publicly-available information on what personnel security checks should entail, but refers to advice from the Centre for the Protection of National Infrastructure (CPNI). [3] The publicly-available resources from CPNI on personnel security and insider risk do not specify which types of checks are recommended. [5, 6] The Home Office provides a classified document, 'Personnel security standards for laboratories', to facilities. This contains advice on personnel security checks, including how to check identities, references, qualifications, employment history and criminal convictions (i.e. general background checks). Security procedures required by NaCTSA differ

according to containment level (CL). All personnel with access to CL 4 laboratories (handling substances causing diseases likely to spread and with no effective prophylaxis/treatment) must be granted official security clearance. CL 3 laboratories (handling substances causing diseases likely to spread but with effective prophylaxis/treatment available) are subject to security measures under ATCSA and receive CTSA advice regarding staff security. [7, 8, 9] To achieve security clearance, applicants must undergo multiple background checks, providing details of (among other topics) criminal convictions (which are checked against official records), medical and psychological problems (which are checked against medical records) and drug use (there is no information on whether drug tests are required), both on a form and during an interview. [10, 11] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on personnel security checks. [12]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 31 January 2021.

[2] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."

[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 31 January 2021.

[3] National Counter Terrorism Security Office. 17 September 2020. "Secure hazardous materials to help prevent terrorism."

[<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 31 January 2021.

[4] University of Glasgow. N.d. "Biological security for pathogens and toxins."

[<https://www.gla.ac.uk/myglasgow/seps/az/biological%20safety/pathogensandtoxins/biological%20security%20for%20pathogens%20and%20toxins/>]. Accessed 31 January 2021.

[5] Centre for the Protection of National Infrastructure. N.d. "Personnel and people security."

[<https://www.cpni.gov.uk/personnel-and-people-security>]. Accessed 31 January 2021.

[6] Centre for the Protection of National Infrastructure. N.d. "Reducing insider risk." [<https://www.cpni.gov.uk/reducing-insider-risk>]. Accessed 31 January 2021.

[7] House of Commons Innovation, Universities, Science and Skills Committee. 16 Jun 2008. "Biosecurity in UK research laboratories: Sixth Report of Session 2007–08."

[<https://publications.parliament.uk/pa/cm200708/cmselect/cmdius/360/360i.pdf>], p.47. Accessed 31 January 2021.

[8] Government of the United Kingdom. 2007. "Biosecurity in UK research laboratories: Memoranda of Evidence – Memorandum 1: Submission from the Government, submitted by the Department for Innovation, Universities and Skills."

[<https://publications.parliament.uk/pa/cm200708/cmselect/cmdius/memo/360/ucm01.pdf>], p.15. Accessed 31 January 2021.

[9] Advisory Committee on Dangerous Pathogens, Health and Safety Executive (HSE). 2013. "The Approved List of biological agents." [<http://www.hse.gov.uk/pubns/misc208.pdf>]. Accessed 31 January 2021.

[10] Ministry of Defence. Aug 2018. "Security Check (SC) / Counter Terrorist Check (CTC) Questionnaire."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/732844/20180515-Form\\_NSV001\\_v1.1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732844/20180515-Form_NSV001_v1.1.pdf)]. Accessed 31 January 2021.

[11] Ministry of Defence. 25 May 2018. "UKSV National Security Vetting: vetting information leaflets."

[<https://www.gov.uk/government/publications/uksv-national-security-vetting-vetting-information-leaflets>]. Accessed 31 January 2021.

[12] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 31

January 2021.

### 1.3.4 Transportation security

#### 1.3.4a

**Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has publicly available information on national regulations on the safe and secure transport of infectious substances (Categories A and B). A guidance document on transport of infectious substances in line with model UN regulations is available online, published by the Department for Transport (DfT), Maritime and Coastguard Agency (MCA), Civil Aviation Authority (CAA) and Health and Safety Executive Northern Ireland (HSENI). It lists relevant domestic and international legislation, and provides guidance specific to the transport of Categories A and B infectious substances. This includes definitions of Category A and B substances, a flow-chart to help with classification and an indicative list of Category A substances; example scenarios and information specific to avian influenza and swine flu; and guidance on packing requirements. In terms of the domestic legislation referred to in this guidance (all available online), the transport of dangerous goods by road and rail is covered by the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (CDG) Regulations 2009, which implement the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) and the Annex to the Regulation Concerning the International Carriage of Dangerous Goods by Rail (RID). [1, 2, 3, 4, 5, 6] The CDG regulations apply to Great Britain (England, Scotland, Wales), but similar regulations have been implemented in Northern Ireland. [1, 7] In air transport, the International Civil Aviation Authority (ICAO)'s Technical Instructions for the Safe Transport of Dangerous Goods by Air are implemented in the UK by the Air Navigation (Dangerous Goods) Regulations 2002. [1, 8] In shipping, the International Maritime Dangerous Goods Code (IMDG) is implemented by the Merchant Shipping (Dangerous Goods and Marine Pollutant) Regulations 1997. [1, 9] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on the safe and secure transport of infectious substances. [10]

[1] Department for Transport (DfT), Maritime and Coastguard Agency (MCA), Civil Aviation Authority (CAA) and Health and Safety Executive Northern Ireland (HSENI). 2013. "Guidance note no. 17/2012 [rev.7]: Transport of infectious substances UN2814, UN2900 AND UN3373."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/527069/dangerous-goods-guidance-note-17.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/527069/dangerous-goods-guidance-note-17.pdf)]. Accessed 31 January 2021.

[2] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 31 January 2021.

[3] Health and Safety Executive (HSE). N.d. "Carriage regulations." [<http://www.hse.gov.uk/cdg/regs.htm>]. Accessed 31 January 2021.

[4] Government of the United Kingdom. 2009. "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009." [<http://www.legislation.gov.uk/ukxi/2009/1348/contents/made>]. Accessed 31 January 2021.

[5] United Nations Economic Commission for Europe (UNECE). "ADR as applicable from 1 January 2017: European Agreement

Concerning the International Carriage of Dangerous Goods by Road.”

[[http://www.unece.org/fileadmin/DAM/trans/danger/publi/adr/adr2017/ADR2017E\\_web.pdf](http://www.unece.org/fileadmin/DAM/trans/danger/publi/adr/adr2017/ADR2017E_web.pdf)]. Accessed 31 January 2021.

[6] Intergovernmental Organisation for International Carriage by Rail (OTIF). 1 November 2020. “Convention concerning International Carriage by Rail (COTIF) Appendix C – Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID).” [[https://otif.org/fileadmin/new/3-Reference-Text/3B-RID/RID\\_2021\\_e\\_01\\_November\\_2020.pdf](https://otif.org/fileadmin/new/3-Reference-Text/3B-RID/RID_2021_e_01_November_2020.pdf)]. Accessed 31 January 2021.

[7] Health and Safety Executive (HSE). N.d. “Carriage of dangerous goods manual.”

[<http://www.hse.gov.uk/cdg/manual/index.htm>]. Accessed 31 January 2021.

[8] Government of the United Kingdom. 2002. “The Air Navigation (Dangerous Goods) Regulations 2002.”

[<http://www.legislation.gov.uk/ukxi/2002/2786/contents/made>]. Accessed 31 January 2021.

[9] Government of the United Kingdom. 1997. “The Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997.” [<http://www.legislation.gov.uk/ukxi/1997/2367/contents/made>]. Accessed 31 January 2021.

[10] United Nations Office at Geneva (UNOG). 2021. “Confidence building measures: United Kingdom of Great Britain and Northern Ireland.” [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 31 January 2021.

### 1.3.5 Cross-border transfer and end-user screening

#### 1.3.5a

**Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has national legislation and regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins and pathogens with pandemic potential. The Biological Weapons Act 1974 prohibits the transfer of any biological agent or toxin if the sender is aware that the end use is likely to not be peaceful, but does not provide further details. [1] The Export Control Order 2008 mandates controls on exports of dual-use goods (specified in control lists), and introduces an export licence system. [2] Section ML7 under the Military List of controlled items includes “biological agents”, defined as “pathogens or toxins, selected or modified ... to produce casualties in humans or animals, degrade equipment or damage crops or the environment”. [2, 3] For these, a Standard Individual Export Licence (SIEL) is needed from the Export Control Joint Unit (ECJU) regardless of destination. [4, 5] A SIEL relates to specific items, in specific quantities and values, going to specific consignees and end users. Applications must include an “End-user Undertakings (EUUs)” form, completed by the end-user company overseas. [6] The form asks for details of the consignee and end user, including whether they belong to a country’s armed forces; the specific location where the goods will be used or based; the quantity and description of the goods; and the purposes for which the goods are to be used. It also requires the end-user to sign a statement confirming their peaceful intent. [7] The government last stated its policy for assessing applications for export licences in 2014, noting that criteria “will not be applied mechanistically but on a case-by-case basis taking into account all relevant information available at the time”. Factors taken into account include (but are not limited to): respect for the UK’s international obligations and commitments; respect for human rights and fundamental freedoms in the country of final destination; the internal situation in the country of final destination; and the compatibility of the transfer with the technical and economic capacity of the recipient country. [8] The UK reports annually to the United Nations Office at Geneva for the “Confidence Building Measure Return”, a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on the cross-border transfer and

end-user screening of infectious substances. [9]

- [1] Government of the United Kingdom. 8 Feb 1974. “Biological Weapons Act 1974.” [https://www.legislation.gov.uk/ukpga/1974/6/contents]. Accessed 31 January 2021.
- [2] Government of the United Kingdom. “The Export Control Order 2008.” [http://www.legislation.gov.uk/uksi/2008/3231/contents/made]. Accessed 31 January 2021.
- [3] Department for International Trade. January 2021. “UK Strategic Export Control Lists: The consolidated list of strategic military and dual-use items that require export authorisation from Great Britain and Northern Ireland.” [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/948279/uk-strategic-export-control-list.pdf]. Accessed 31 January 2021.
- [4] Department for International Trade and Export Control Joint Unit. 13 August 2019. “Do I need an export licence?” [https://www.gov.uk/guidance/beginners-guide-to-export-controls#do-i-need-a-licence]. Accessed 31 January 2021.
- [5] Department for International Trade. N.d. “OGEL and Goods Checker Tool.” [https://www.ecochecker.trade.gov.uk/spirefox5live/fox/spire/]. Accessed 31 January 2021.
- [6] Export Control Joint Unit and Department for International Trade. 12 Sep 2012. “Standard Individual Export Licences.” [https://www.gov.uk/guidance/standard-individual-export-licences]. Accessed 31 January 2021.
- [7] Department for International Trade. 24 Jan 2017. “End user undertaking (EUU) form.” [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/674649/17-end-user-undertaking-form.pdf]. Accessed 31 January 2021.
- [8] The Secretary of State for Business, Innovation and Skills (Vince Cable). 25 Mar 2014. “Consolidated EU and National Arms Export Licensing Criteria.” [https://publications.parliament.uk/pa/cm201314/cmhansrd/cm140325/wmstext/140325m0001.htm]. Accessed 31 January 2021.
- [9] United Nations Office at Geneva (UNOG). 2019. “Confidence building measures: United Kingdom of Great Britain and Northern Ireland.” [https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland]. Accessed 31 January 2021.

## 1.4 BIOSAFETY

### 1.4.1 Whole-of-government biosafety systems

#### 1.4.1a

**Does the country have in place national biosafety legislation and/or regulations?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has national biosafety regulations in place. Work with pathogens is covered by three sets of biosafety regulations, the Genetically Modified Organisms (Contained Use) Regulations 2014 (GMO(CU)), the Control of Substances Hazardous to Health Regulations 2002 (COSHH) and the Specified Animal Pathogens Order 2008 (SAPO). [1] The GMO(CU), under the Health and Safety at Work etc Act 1974 (HSW Act) are available from the Health and Safety Executive (HSE) along with guidance. They aim to protect people and the environment from contained use of genetically modified micro-organisms and larger organisms, applying a definition of micro-organisms which includes bacteria, fungi and viruses. The definition of genetic modification is broad enough to include the alteration/creation of pathogens. The regulations and guidance address biosafety, including equipment, training, operations, storage, containment and emergency plans. [2] The Control of Substances Hazardous to Health Regulations 2002 (COSHH), also under the HSW Act, aim to protect people working with hazardous substances, and cover biological agents broadly defined as those capable of causing a hazard to human health.

They address risk assessments, containment, operating procedures, equipment, PPE, monitoring, training and emergencies. They also have provisions specific to biological agents. Schedule 3 classifies agents into 4 groups according to risk, with corresponding containment levels. Part II of Schedule 3 provides tables of containment measures to be applied according to the containment level. One is specific to facilities and laboratories working on human and animal health. [3] HSE guidance states that where there is overlap between the GMO(CU) and COSHH, both must be considered and if they differ, the more stringent control measure must be applied. [2] The GMO(CU) and COSHH apply to Great Britain and equivalent regulations exist in Northern Ireland. [4, 5] SAPO, under the Animal Health Act 1981, applies to England but equivalent legislation exists in Scotland, Wales and Northern Ireland. It requires licences for the possession or introduction into an animal of specified animal pathogens. HSE leads on licensing, inspection and enforcement under SAPO. The regulation does not address biosafety, but HSE provides mandatory biosafety guidance for those seeking a licence. This covers risk assessments, training, containment, operating procedures, and emergency arrangements; and provides tables of containment measures required according to containment level of the pathogen. [6, 7, 8, 9] To assist with implementing all three regulations, HSE provides a number of other guidance documents on the 'Biosafety and microbiological containment' section of its website. [10] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [11]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 31 January 2021.

[2] Health and Safety Executive (HSE). 2014. "The Genetically Modified Organisms (Contained Use) Regulations 2014." [<http://www.hse.gov.uk/pubns/priced/l29.pdf>]. Accessed 31 January 2021.

[3] Government of the United Kingdom. 21 Nov 2002. "The Control of Substances Hazardous to Health Regulations 2002." [<http://www.legislation.gov.uk/uksi/2002/2677/contents/made>]. Accessed 31 January 2021.

[4] Health and Safety Executive (HSE). N.d. "Who is responsible for the GMO (CU) Regulations?" [<http://www.hse.gov.uk/biosafety/gmo/whos-responsible.htm>]. Accessed 31 January 2021.

[5] Health and Safety Executive for Northern Ireland (HSENI). N.d. "COSHH." [<https://www.hseni.gov.uk/articles/coshh>]. Accessed 31 January 2021.

[6] Government of the United Kingdom. 2008. "The Specified Animal Pathogens Order 2008." [<http://www.legislation.gov.uk/uksi/2008/944/contents/made>]. Accessed 31 January 2021.

[7] Health and Safety Executive (HSE). N.d. "The regulation of specified animal pathogens." [<http://www.hse.gov.uk/biosafety/sapo.htm>]. Accessed 31 January 2021.

[8] Health and Safety Executive (HSE). Apr 2015. "Guidance for licence holders on the containment and control of specified animal pathogens." [<http://www.hse.gov.uk/pubns/priced/hsg280.pdf>]. Accessed 31 January 2021.

[9] Health and Safety Executive (HSE) and Health and Safety Executive for Northern Ireland (HSENI). May 2019. "Memorandum of Understanding: The Health and Safety Executive's advisory role to the Department of Agriculture, Environment and Rural Affairs, Northern Ireland for Statutory Inspections of laboratories holding or wishing to hold Specified Animal Pathogens in Northern Ireland." [<https://www.hse.gov.uk/aboutus/howwework/framework/mou/hseni-technical-support-2019.pdf>]. Accessed 31 January 2021.

[10] Health and Safety Executive (HSE). N.d. "Biosafety and microbiological containment." [<http://www.hse.gov.uk/biosafety/>]. Accessed 31 January 2021.

[11] United Nations Office at Geneva (UNOG). 2019. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 31 January 2021.

### 1.4.1b

Is there an established agency responsible for the enforcement of biosafety legislation and regulations?

Yes = 1 , No = 0

Current Year Score: 1

There is an established agency in the United Kingdom responsible for the enforcement of biosafety regulations. In the UK, the Health and Safety Executive (HSE) and the Health and Safety Executive for Northern Ireland (HSENI) are responsible for enforcing all biosafety regulations. Work with pathogens is covered by three sets of biosafety regulations, the Genetically Modified Organisms (Contained Use) Regulations 2014 (GMO(CU)), the Control of Substances Hazardous to Health Regulations 2002 (COSHH) and the Specified Animal Pathogens Order 2008 (SAPO). [1] HSE (or HSE NI in that devolved administration) is responsible for enforcing all three. [2, 3, 4, 5, 6, 7] The GMO(CU) and COSHH are both associated with the Health and Safety at Work Act 1974, under which HSE inspectors have extensive powers of inspection and enforcement. [2, 3] Previous versions of SAPO used to be enforced by animal health authorities, but since 2015 HSE has led on licensing, inspection and enforcement. [4, 5] HSE carries out an active programme of inspections of all facilities working with dangerous pathogens. [1] The UK's Counter Proliferation and Arms Control Centre reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [8]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/456984/IndependentReport\_GHS\_acc.pdf]. Accessed 31 January 2021.

[2] Health and Safety Executive (HSE). 2014. "The Genetically Modified Organisms (Contained Use) Regulations 2014." [http://www.hse.gov.uk/pubns/priced/l29.pdf]. Accessed 31 January 2021.

[3] Health and Safety Executive (HSE). N.d. "Who is responsible for the GMO (CU) Regulations?" [http://www.hse.gov.uk/biosafety/gmo/whos-responsible.htm]. Accessed 31 January 2021.

[4] Government of the United Kingdom. 21 Nov 2002. "The Control of Substances Hazardous to Health Regulations 2002." [http://www.legislation.gov.uk/ukSI/2002/2677/contents/made]. Accessed 31 January 2021.

[5] Government of the United Kingdom. 2008. "The Specified Animal Pathogens Order 2008." [http://www.legislation.gov.uk/ukSI/2008/944/contents/made]. Accessed 31 January 2021.

[6] Health and Safety Executive (HSE). N.d. "The regulation of specified animal pathogens." [http://www.hse.gov.uk/biosafety/sapo.htm]. Accessed 31 January 2021.

[7] Health and Safety Executive (HSE) and Health and Safety Executive for Northern Ireland (HSENI). May 2019. "Memorandum of Understanding: The Health and Safety Executive's advisory role to the Department of Agriculture, Environment and Rural Affairs, Northern Ireland for Statutory Inspections of laboratories holding or wishing to hold Specified Animal Pathogens in Northern Ireland." [https://www.hse.gov.uk/aboutus/howwework/framework/mou/hсени-technical-support-2019.pdf]. Accessed 31 January 2021.

[8] United Nations Office at Geneva (UNOG). 2019. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland]. Accessed 31 January 2021.

## 1.4.2 Biosafety training and practices

### 1.4.2a

**Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1, No = 0

**Current Year Score: 0**

The United Kingdom does not require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The UK's approach is outcome-oriented: facilities handling especially dangerous materials must be able to demonstrate to the Health and Safety Executive (HSE) that appropriate training (based on HSE guidance) has taken place. Work with pathogens is covered by three sets of biosafety regulations, the Genetically Modified Organisms (Contained Use) Regulations 2014 (GMO(CU)), the Control of Substances Hazardous to Health Regulations 2002 (COSHH) and the Specified Animal Pathogens Order 2008 (SAPO). HSE is responsible for enforcing all three (or HSE Northern Ireland (HSENI) in that devolved administration). [1, 2, 3, 4, 5, 6, 7] All three regulations and/or accompanying mandatory guidance require that users be given suitable and sufficient training appropriate to the level of risk and the complexity of the operations being undertaken. Training is based on the specific material and work in question, and should be linked to a risk assessment. Training records must be kept for those working at the highest hazard/containment levels. Detailed curricula are not provided, but guidance is provided on topics that training should cover. [2, 4, 5, 8, 9] For instance, HSE provides guidance on GMO biosafety requirements from the Scientific Advisory Committee on Genetic Modification. With regard to training, these state that at the highest containment level (which applies to especially dangerous pathogens), staff must be trained in use of microbiological safety cabinets, transport, storage, waste management and emergency procedures. [8, 9] COSHH requires training to cover the significant findings of the risk assessment, and the appropriate precautions and actions to be taken by the employee in order to safeguard him/herself and other employees. [4] HSE guidance on SAPO requires training to cover risk assessment findings, containment, management arrangements, safe work practices, use of personal protective equipment and emergency arrangements. [10] HSE provides additional guidance on biosafety for containment level 4 (CL4) facilities (suitable for housing especially dangerous pathogens), representing the standards against which facilities are checked. [11] The above regulations and guidance documents have a similar effect to a standardised curriculum, because HSE has to authorise, and conducts regular inspections (at least twice a year) of, facilities handling especially dangerous pathogens (Class/Containment Level 4 as defined in Schedule 3 of COSHH. [1, 11, 12, 13] There is no evidence of a standardised curriculum on biosafety for especially dangerous pathogens from HSE, the Department of Health and Social Care (DHSC) or Public Health England (PHE); the Department for Environment, Food and Rural Affairs (Defra) or the Animal and Plant Health Agency (APHA). [14, 15, 16, 17, 18] PHE offers training through the Novel and Dangerous Pathogen Training Team (NADP Training) to help laboratory workers to comply with legislation, but this is just one option for those seeking training, and at present it is not advertising any courses for CL4 biosafety. In August 2020, the Government created a new National Institute for Health Protection (NIHP), which brings together PHE and National Health Service (NHS) Test and Trace, and the Joint Biosecurity Centre (JBC) under a single leadership team. NIHP will be formalized and operational from spring 2021, and the NADP Training website notes that microbiology services currently provided by PHE will transfer into NIHP. [19, 20] The 2015 GHSA pilot assessment confirms that there is not one common standard of training across the UK. [1] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on training requirements. [21] Finally, no evidence was found via

the VERTIC BWC legislation database. [22]

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[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 15 January 2019.
- [2] Health and Safety Executive (HSE). 2014. "The Genetically Modified Organisms (Contained Use) Regulations 2014."  
[<http://www.hse.gov.uk/pubns/priced/l29.pdf>]. Accessed 6 February 2021.
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[<http://www.hse.gov.uk/biosafety/gmo/whos-responsible.htm>]. Accessed 6 February 2021.
- [4] Government of the United Kingdom. 21 Nov 2002. "The Control of Substances Hazardous to Health Regulations 2002."  
[<http://www.legislation.gov.uk/uksi/2002/2677/contents/made>]. Accessed 6 February 2021.
- [5] Government of the United Kingdom. 2008. "The Specified Animal Pathogens Order 2008."  
[<http://www.legislation.gov.uk/uksi/2008/944/contents/made>]. Accessed 6 February 2021.
- [6] Health and Safety Executive (HSE). N.d. "The regulation of specified animal pathogens."  
[<http://www.hse.gov.uk/biosafety/sapo.htm>]. Accessed 6 February 2021.
- [7] Health and Safety Executive (HSE) and Health and Safety Executive for Northern Ireland (HSENI). May 2019. "Memorandum of Understanding: The Health and Safety Executive's advisory role to the Department of Agriculture, Environment and Rural Affairs, Northern Ireland for Statutory Inspections of laboratories holding or wishing to hold Specified Animal Pathogens in Northern Ireland." [<https://www.hse.gov.uk/aboutus/howwework/framework/mou/hseni-technical-support-2019.pdf>]. Accessed 31 January 2021.
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[<http://www.hse.gov.uk/biosafety/gmo/acgm/acgmcomp/part3.pdf#page=1&zoom=auto,0,-271>]. Accessed 6 February 2021.
- [10] Health and Safety Executive (HSE). Apr 2015. "Guidance for licence holders on the containment and control of specified animal pathogens." [<http://www.hse.gov.uk/pubns/priced/hsg280.pdf>]. Accessed 6 February 2021.
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- [12] Health and Safety Executive (HSE). N.d. "How do I make my application?." [<http://www.hse.gov.uk/biosafety/how-do-i.htm#app-Q1>]. Accessed 6 February 2021.
- [13] Health and Safety Executive (HSE). N.d. "How do I notify?"  
[<http://www.hse.gov.uk/biosafety/gmo/notifications/process.htm>]. Accessed 6 February 2021.
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- [15] Department of Health and Social Care. 2021. Official website.  
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- [18] Animal and Plant Health Agency (APHA). 2021. Official website. [<https://www.gov.uk/government/organisations/animal-and-plant-health-agency>]. Accessed 6 February 2021.
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[20] Department of Health and Social Care and The Rt Hon Matt Hancock MP. 18 August 2020. "Government creates new National Institute for Health Protection." [https://www.gov.uk/government/news/government-creates-new-national-institute-for-health-protection]. Accessed 6 February 2021.

[21] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland]. Accessed 6 February 2021.

[22] VERTIC BWC legislation database. [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/] Accessed 14 March 2021.

## 1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

### 1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

#### 1.5.1a

**Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that the UK has conducted an assessment of ongoing research on especially dangerous pathogens and toxins and other dual-use research. Facilities holding/using a wider list of especially dangerous pathogens and toxins must register with the Health and Safety Executive. In addition to this government monitoring, some public and independent research funding bodies provide oversight of dual-use research. The Anti-terrorism, Crime and Security Act (ATCSA) 2001, Schedule 5, lists especially dangerous pathogens and toxins which could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. [1] Under ATCSA, Facilities wishing to hold Schedule 5 substances must notify the Home Office, and a Counter Terrorism Security Advisor (CTSA) from the local police conducts a visit and provides security advice. Qualifying sites must be able to demonstrate that they are operating securely before they are granted authority by the National Counter Terrorism Security Office (NaCTSO). [1, 2] Facilities must provide information on materials and users on request to the police. [3] Premises holding Schedule 5 substances are inspected once a year by a CTSA to ensure the appropriate security measures are in place. [4] It is a criminal offence for an occupier of relevant premises to fail to comply with any duty or action arising out of ATCSA. [5] For potential dual use research beyond the scope of ATCSA, biosafety regulations ensure government oversight. The Health and Safety Executive has to authorise, and conducts regular inspections (at least twice a year) of, facilities handling especially dangerous pathogens, including genetically modified organisms. [6, 7, 8, 9] The UK also relies on oversight of dual use research by research funding bodies and institutions. [10] Taking a lead on this are three organisations which fund biosciences research, the Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. BBSRC and MRC are both part of UK Research and Innovation (UKRI), a non-departmental public body; while the Wellcome Trust is an independent foundation. They have issued a joint policy statement addressing dual-use research, and introduced measures aimed at ensuring that research proposals consider risks of misuse and that funders and the authorities are notified of any dual use risks that arise during research. [11, 12] Other public bodies which guide oversight of the ethical conduct of research include UKRI and the UK Research Integrity Office (UKRIO). Both have issued guidelines on good research conduct, but neither specifically addresses dual-use research. [13, 14, 15] A number of leading research funding bodies have committed to upholding a Concordat to Support Research Integrity as a condition of funding. The Concordat does not specifically address dual-use research. [13, 16] The UK reports annually to the United Nations Office at Geneva for the

"Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [17] Finally, no evidence was found via the VERTIC BWC legislation database. [18]

- [1] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001." [https://www.legislation.gov.uk/ukpga/2001/24/contents]. Accessed 6 February 2021.
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- [4] Home Office. 29 Oct 2011. "Amendments to Schedule 5 of the Anti Terrorism, Crime and Security Act (2001): Impact assessment." [https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia\_20110488\_en.pdf]. Accessed 6 February 2021.
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- [8] Health and Safety Executive (HSE). N.d. "How do I make my application?." [http://www.hse.gov.uk/biosafety/how-do-i.htm#app-Q1]. Accessed 6 February 2021.
- [9] Health and Safety Executive (HSE). N.d. "How do I notify?." [http://www.hse.gov.uk/biosafety/gmo/notifications/process.htm]. Accessed 6 February 2021.
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- [11] Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. N.d. "Managing risks of research misuse: A joint Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust policy statement." [https://wellcome.ac.uk/funding/guidance/managing-risks-research-misuse]. Accessed 6 February 2021.
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- [13] UK Research and Innovation (UKRI). 2020. "Research integrity." [https://www.ukri.org/about-us/policies-and-standards/research-integrity/]. Accessed 6 February 2021.
- [14] UK Research and Innovation (UKRI, formerly RCUK). Feb 2013, Updated April 2017. "RCUK policy and guidelines on governance of good research conduct." [https://www.ukri.org/files/legacy/reviews/grc/rcuk-grp-policy-and-guidelines-updated-apr-17-2-pdf/]. Accessed 6 February 2021.
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[17] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 6 February 2021.

[18] VERTIC BWC legislation database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/u/>] Accessed 14 March 2021.

### 1.5.1b

**Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is legislation and regulation in the United Kingdom requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. In the UK, research facilities in which potential dual use pathogens and toxins are held/used are required to register with the Home Office, and receive regular police visits. Facilities holding/using a wider list of especially dangerous pathogens and toxins must register with the Health and Safety Executive (HSE). In addition to this government monitoring, some public and independent research funding bodies have issued policies requiring oversight of dual-use research. The Anti-terrorism, Crime and Security Act (ATCSA) 2001, Schedule 5, lists especially dangerous pathogens and toxins which could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. [1] Under ATCSA, Facilities wishing to hold Schedule 5 substances must notify the Home Office, and a Counter Terrorism Security Advisor (CTSA) from the local police conducts a visit and provides security advice. Qualifying sites must be able to demonstrate that they are operating securely before they are granted authority by the National Counter Terrorism Security Office (NaCTSO). [1, 2] Facilities must provide information on materials and users on request to the police. [3] Premises holding Schedule 5 substances are inspected once a year by a CTSA to ensure the appropriate security measures are in place. [4] It is a criminal offence for an occupier of relevant premises to fail to comply with any duty or action arising out of ATCSA. [5] For potential dual use research beyond the scope of ATCSA, biosafety regulations ensure government oversight. The HSE has to authorise, and conducts regular inspections (at least twice a year) of, facilities handling especially dangerous pathogens, including genetically modified organisms. [6, 7, 8, 9] The UK also relies on oversight of dual use research by research funding bodies and institutions. [10] Taking a lead on this are three organisations which fund biosciences research, the Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. BBSRC and MRC are both part of UK Research and Innovation (UKRI), a non-departmental public body; while the Wellcome Trust is an independent foundation. They have issued a joint policy statement addressing dual-use research, and introduced measures aimed at ensuring that research proposals consider risks of misuse and that funders and the authorities are notified of any dual use risks that arise during research. [11, 12] Other public bodies which guide oversight of the ethical conduct of research include UKRI and the UK Research Integrity Office (UKRIO). Both have issued guidelines on good research conduct, but neither specifically addresses dual-use research. [13, 14, 15] A number of leading research funding bodies have committed to upholding a Concordat to Support Research Integrity as a condition of funding. The Concordat does not specifically address dual-use research. [13, 16] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [17]

[1] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001." [<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 1 February 2021.

- [2] National Counter Terrorism Security Office. 24 Nov 2014. "Secure hazardous materials to help prevent terrorism." [<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 1 February 2021.
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### 1.5.1c

**Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1, No = 0

**Current Year Score: 1**

There is an agency in the United Kingdom responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. In the UK, research facilities in which potential dual use pathogens and toxins are held/used are overseen by the National Counter Terrorism Security Office (NaCTSO) on behalf of the Home Office. Facilities holding/using a wider list of especially dangerous pathogens and toxins are overseen by the Health and Safety Executive (HSE). In addition to this government monitoring, some public and independent research funding bodies provide oversight of dual-use research. The Anti-terrorism, Crime and Security Act (ATCSA) 2001, Schedule 5, lists especially dangerous pathogens and toxins which could be used in an act of terrorism to endanger life or cause serious harm to human health, or in the case of animal and plant pathogens, could cause widespread damage to property, significant disruption to the public, or significant alarm to the public. [1] Under ATCSA, Facilities wishing to hold Schedule 5 substances must notify the Home Office, and a Counter Terrorism Security Advisor (CTSA) from the local police conducts a visit and provides security advice. Qualifying sites must be able to demonstrate that they are operating securely before they are granted authority by NaCTSO. [1, 2] Facilities must provide information on materials and users on request to the police. [3] Premises holding Schedule 5 substances are inspected once a year by a CTSA to ensure the appropriate security measures are in place. [4] It is a criminal offence for an occupier of relevant premises to fail to comply with any duty or action arising out of ATCSA. [5] For potential dual use research beyond the scope of ATCSA, biosafety regulations ensure government oversight. The HSE has to authorise, and conducts regular inspections (at least twice a year) of, facilities handling especially dangerous pathogens, including genetically modified organisms. [6, 7, 8, 9] The UK also relies on oversight of dual use research by research funding bodies and institutions. [10] Taking a lead on this are three organisations which fund biosciences research, the Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. BBSRC and MRC are both part of UK Research and Innovation (UKRI), a non-departmental public body; while the Wellcome Trust is an independent foundation. They have issued a joint policy statement addressing dual-use research, and introduced measures aimed at ensuring that research proposals consider risks of misuse and that funders and the authorities are notified of any dual use risks that arise during research. [11, 12] Public bodies which guide oversight of the ethical conduct of research include UKRI and the UK Research Integrity Office (UKRIO). Both have issued guidelines on good research conduct, but neither specifically addresses dual-use research. [13, 14, 15] A number of leading research funding bodies have committed to upholding a Concordat to Support Research Integrity as a condition of funding. The Concordat does not specifically address dual-use research. [13, 16] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. [17]

[1] Government of the United Kingdom. 14 Dec 2001. "Anti-terrorism, Crime and Security Act 2001."

[<https://www.legislation.gov.uk/ukpga/2001/24/contents>]. Accessed 1 February 2021.

[2] National Counter Terrorism Security Office. 24 Nov 2014. "Secure hazardous materials to help prevent terrorism."

[<https://www.gov.uk/guidance/secure-hazardous-materials-to-help-prevent-terrorism#chemical-biological-and-radioactive-materials>]. Accessed 1 February 2021.

[3] Health and Safety Department, the University of Edinburgh. 15 Sep 2016. "Biological security for pathogens and toxins."

[[http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio\\_security/bio\\_security\\_path\\_toxins.pdf](http://www.docs.csg.ed.ac.uk/Safety/bio/guidance/bio_security/bio_security_path_toxins.pdf)]. Accessed 1 February 2021.

[4] Home Office. 29 Oct 2011. "Amendments to Schedule 5 of the Anti Terrorism, Crime and Security Act (2001): Impact

- assessment.” [[https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia\\_20110488\\_en.pdf](https://www.legislation.gov.uk/ukia/2011/488/pdfs/ukia_20110488_en.pdf)]. Accessed 1 February 2021.
- [5] Home Office. 2007. “Explanatory memorandum to the Schedule 5 to the Anti-Terrorism, Crime and Security Act 2001 (Amendment) Order 2007.” [[http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem\\_9780110756585\\_en.pdf](http://www.legislation.gov.uk/ukdsi/2007/9780110756585/pdfs/ukdsiem_9780110756585_en.pdf)]. Accessed 1 February 2021.
- [6] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 1 February 2021.
- [7] Health and Safety Executive (HSE). N.d. “Biological agents: The principles, design and operation of Containment Level 4 facilities.” [[www.hse.gov.uk/pubns/web09.pdf](http://www.hse.gov.uk/pubns/web09.pdf)]. Accessed 1 February 2021.
- [8] Health and Safety Executive (HSE). N.d. “How do I make my application?” [<http://www.hse.gov.uk/biosafety/how-do-i.htm#app-Q1>]. Accessed 1 February 2021.
- [9] Health and Safety Executive (HSE). N.d. “How do I notify?” [<http://www.hse.gov.uk/biosafety/gmo/notifications/process.htm>]. Accessed 1 February 2021.
- [10] Millett, P. 17 Jan 2017. “Gaps in the international governance of dual-use research of concern.” [[https://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga\\_176434.pdf](https://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_176434.pdf)]. Accessed 1 February 2021.
- [11] Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. N.d. “Managing risks of research misuse: A joint Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust policy statement.” [<https://wellcome.ac.uk/funding/guidance/managing-risks-research-misuse>]. Accessed 1 February 2021.
- [12] Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC) and Wellcome Trust. Jul 2015. [<https://wellcome.ac.uk/sites/default/files/wtp059491.pdf>]. Accessed 1 February 2021.
- [13] UK Research and Innovation (UKRI). N.d. “Research integrity.” [<https://www.ukri.org/about-us/policies-and-standards/research-integrity/>]. Accessed 1 February 2021.
- [14] UK Research and Innovation (UKRI, formerly RCUK). Feb 2013. “RCUK policy and guidelines on governance of good research conduct.” [<https://www.ukri.org/files/legacy/reviews/grc/rcuk-grp-policy-and-guidelines-updated-apr-17-2-pdf/>]. Accessed 1 February 2021.
- [15] UK Research Integrity Office (UKRIO). 2009. “Code of practice for research: Promoting good practice and preventing misconduct.” [<https://ukrio.org/wp-content/uploads/UKRIO-Code-of-Practice-for-Research.pdf>]. Accessed 1 February 2021.
- [16] Universities UK. November 2016. “The concordat to support research integrity: A progress report.” [<https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2016/concordat-research-integrity-progress-report.pdf#search=Search%2E%2E%2EThe%20concordat%20to%20support%20research%20integrity>]. Accessed 1 February 2021.
- [17] United Nations Office at Geneva (UNOG). 2019. “Confidence building measures: United Kingdom of Great Britain and Northern Ireland.” [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 1 February 2021.

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?

Yes = 1 , No = 0

Current Year Score: 0

The United Kingdom does not have national legislation or regulations requiring the screening of synthesized DNA before it is sold. The intentional release of genetically modified organisms (GMOs) from someone's control into the environment (either experimentally or marketed) is regulated by the Genetically Modified Organisms (Deliberate Release) Regulations (GMO(DR)) 2002 (for England, with equivalent legislation in the devolved administrations (DAs) of Northern Ireland, Scotland and Wales) and overseen by the Department for Environment, Food and Rural Affairs (DEFRA) in England (and by other bodies in the devolved administrations). [1, 2, 3, 4, 5, 6] The GMO(DR) modify the Environmental Protection Act (EPA) 1990 to align with European Commission (EC) regulations on GMOs and expand on the EPA's requirement to notify the government and seek consent where necessary before marketing GMOs. [3, 7] Their definition of GMOs includes synthesised DNA, for instance "recombinant nucleic acid techniques involving the formation of new combinations of genetic material by the insertion of nucleic acid molecules...". People wishing to market GMOs must apply for consent from the Secretary of State. There is no mention in the regulations, or in the information provided by HSE on the laws around GMOs, of a requirement to screen the DNA as part of the application process. [1, 2, 3] Schedules 2 and 3 of the GMO(DR) list information required in applications for consent to market GMOs other than higher plants. Information required includes (but is not limited to) details of characteristics of the organisms involved, conditions of release; information on monitoring, control and emergency response plans; and descriptions of how the product and the GMO are intended to be used, and of the intended users. The applicant must also provide an environmental risk assessment. The Secretary of State must inform the EC and competent authorities of other European Union member States about the application; must examine the application for conformity with the EPA and the GMO(DR); and must consult the Health and Safety Executive with regard to protection of human health before forwarding a favourable opinion to the EC. [3] The UK government has a 2020 regulatory amendment that enables the continued implementation of GMO marketing regulations broadly in line with European regulations after Brexit. [8] The UK reports annually to the United Nations Office at Geneva for the "Confidence Building Measure Return", a reporting mechanism set by the Biological Weapons Convention. The reports provide information on facilities handling dangerous pathogens (including a number of containment level 4 facilities suitable for especially dangerous pathogens), including containment level, location, floor area of the laboratory and the types of pathogens stored and processed. The latest reports do not provide information on the screening of synthesised DNA before it is sold. [9] Finally, no evidence was found via the VERTIC BWC legislation database. [10]

[1] Health and Safety Executive (HSE). 2014. "The Genetically Modified Organisms (Contained Use) Regulations 2014." [<http://www.hse.gov.uk/pubns/priced/l29.pdf>]. Accessed 6 February 2021.

[2] Health and Safety Executive (HSE). N.d. "GMOs and the law." [<http://www.hse.gov.uk/biosafety/gmo/law.htm>]. Accessed 6 February 2021.

[3] Government of the United Kingdom. 17 Oct 2002. "Genetically Modified Organisms (Deliberate Release) Regulations 2002." [<http://www.legislation.gov.uk/ukxi/2002/2443/contents/made>]. Accessed 6 February 2021.

[4] Government of Northern Ireland. 2003. "The Genetically Modified Organisms (Deliberate Release) Regulations (Northern Ireland) 2003." [<https://www.legislation.gov.uk/nisr/2003/167/contents/made>]. Accessed 6 February 2021.

[5] Scottish Government. 2002. "The Genetically Modified Organisms (Deliberate Release) (Scotland) Regulations 2002." [<http://www.legislation.gov.uk/ssi/2002/541/contents/made>]. Accessed 6 February 2021.

[6] Welsh Government. 2002. "The Genetically Modified Organisms (Deliberate Release) (Wales) Regulations 2002." [<http://www.legislation.gov.uk/wsi/2002/3188/contents/made>]. Accessed 6 February 2021.

[7] Environmental Protection Act 1990. [<https://www.legislation.gov.uk/ukpga/1990/43/contents>]. Accessed 6 February 2021.

[8] Government of the United Kingdom. 2018. "The Genetically Modified Organisms (Amendment) (EU Exit) Regulations 2020." [<https://www.legislation.gov.uk/ukdsi/2020/9780348213270/contents>]. Accessed 6 February 2021.

[9] United Nations Office at Geneva (UNOG). 2021. "Confidence building measures: United Kingdom of Great Britain and Northern Ireland." [<https://bwc-ecbm.unog.ch/state/united-kingdom-great-britain-and-northern-ireland>]. Accessed 6 February 2021.

[10] VERTIC BWC legislation database. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc->

legislation-database/u/] Accessed 14 March 2021.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

**Immunization rate (measles/MCV2)**

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0

**Current Year Score: 1**

2019

World Health Organization

#### 1.6.1b

**Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?**

Yes = 1, No = 0

**Current Year Score: 1**

2020

OIE WAHIS database

## Category 2: Early detection and reporting for epidemics of potential international concern

## 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

### 2.1.1 Laboratory testing for detection of priority diseases

#### 2.1.1a

**Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?**

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

**Current Year Score: 2**

The United Kingdom's national laboratory system, including national reference laboratories under Public Health England (PHE), has the capacity to conduct diagnostic tests for all 10 of the WHO-defined core tests. According to the 2015 Global

Health Security Agenda pilot assessment, the 4 locally-defined core tests are carbapenemase-producing enterobacteriaceae (CPE, using polymerase chain reaction (PCR) sometimes in conjunction with phenotypic assays), vero cytotoxin-producing E. coli (E. coli test), measles (PCR) and enterovirus 68 (culture). The national laboratory system can conduct all the above as well as PCR testing for Influenza virus; virus culture for poliovirus; serology for HIV; microscopy for mycobacterium tuberculosis; rapid diagnostic testing and microscopy for plasmodium spp. (malaria); and bacterial culture and serology for Salmonella enteritidis serotype Typhi. [1] Reference laboratory services are provided as follows: CPE (PCR) by the Antimicrobial resistance and healthcare associated infections (AMRHA) reference unit under the Bacteria Reference Department (BRD) (#1); VTEC (E. coli test) and bacterial culture for Salmonella enteritidis serotype Typhi by the BRD's Gastrointestinal bacteria reference unit (GBRU) (#2 and #3); measles (PCR), enterovirus 68 (test unspecified), PCR testing for Influenza virus, serology for HIV and virus culture for poliovirus by the Virus Reference Department (#4, #5, #6 and #7); rapid diagnostic testing for plasmodium spp. by the Malaria Reference Laboratory (#8); and microscopy for mycobacterium tuberculosis by the National Mycobacterium Reference Service – South (NMRS-South), under PHE's National Infection Service (#9). [2, 3, 4, 5]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 1 February 2021.

[2] Public Health England (PHE). October 2020. "National Infection Service Reference Laboratories Colindale: Bacteriology Reference Department user manual." Version 13.

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/926234/BRDW0078.13\\_BRD\\_User\\_Manual.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/926234/BRDW0078.13_BRD_User_Manual.pdf)]. Accessed 1 February 2021.

[3] Public Health England (PHE). November 2019. "National Infection Service Laboratories - Reference Colindale: Virus Reference Department User Manual." Version 15.

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/847656/VRD\\_user\\_manual\\_v15\\_VW0405.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/847656/VRD_user_manual_v15_VW0405.pdf)]. Accessed 1 February 2021.

[4] Public Health England (PHE). 8 March 2019. "Malaria reference laboratory: user handbook."

[<https://www.gov.uk/government/publications/malaria-reference-laboratory-mrl-user-handbook/malaria-reference-laboratory-user-handbook-august-2016>]. Accessed 1 February 2021.

[5] Public Health England (PHE). July 2019. "National Mycobacterium Reference Service - South (NMRS-South) user handbook."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/819632/nmrs\\_south\\_user\\_handbook.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819632/nmrs_south_user_handbook.pdf)]. Accessed 1 February 2021.

### 2.1.1b

**Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?**

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

**Current Year Score: 1**

There is evidence that there is a national plan, strategy or similar document for conducting testing during a public health emergency, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. In April 2020, the Department of Health and Social Care published Coronavirus (COVID-19): Scaling up our testing programmes, which outlines plans for mass national testing during the COVID-19 pandemic. However, this document does not mention applicability to other public health emergencies. [1] The 2014 Pandemic Influenza response

plan mentions that Public Health England (PHE) coordinates "with PHE regional laboratory and hospital laboratories to ensure testing arrangements are in place", but there is no more detailed information on a testing plan during a public health emergency. [2] Testing is mentioned in the PHE Infectious Diseases Strategy 2020-2025 under strategic priority 5—strengthen our response to major incidents and emergencies, including pandemic influenza—of the section on "prepare and respond to infectious disease threats" but there is indication of a national plan for testing during a public health emergency. [3] There is no mention of plans for testing during a public health emergency in the PHE's 2017 approach to surveillance guidance. [4] There is no additional evidence of a national plan or strategy for conducting and scaling testing during a public health emergency, including testing for novel pathogens, available through the Animal and Plant Health Agency or the National Health Service. [5, 6] There is also no evidence of a plan or strategy for conducting and scaling testing available from Northern Ireland's Public Health Agency, Public Health Scotland, or Public Health Wales. [7, 8, 9]

- [1] UK Department of Health and Social Care. 4 April 2020. "Coronavirus (COVID-19) Scaling up our testing programmes." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/878121/coronavirus-covid-19-testing-strategy.pdf]. Accessed 12 February 2021.
- [2] Public Health England (PHE). August 2014. "Pandemic influenza response plan 2014." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/344695/PI\_Response\_Plan\_13\_Aug.pdf]. Accessed 12 February 2021.
- [3] Public Health England (PHE). September 2019. "PHE Infectious Diseases Strategy 2020-2025: Addressing urgent threats in the 21st century." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/831439/PHE\_Infectious\_Diseases\_Strategy\_2020-2025.pdf]. Accessed 12 February 2021.
- [4] Public Health England (PHE). 13 December 2017. "Public Health England: approach to surveillance." [https://www.gov.uk/government/publications/public-health-england-approach-to-surveillance/public-health-england-approach-to-surveillance#:~:text=Surveillance%20is%20a%20core%20function,public%20health%20decisions%20and%20actions.]. Accessed 12 February 2021.
- [5] National Health Service (NHS). 2021. [https://www.nhs.uk/]. Keyword search. Accessed 12 February 2021.
- [6] Animal and Plant Health Agency. 2021. [https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about]. Keyword search. Accessed 12 February 2021.
- [7] Northern Ireland HSC Public Health Agency. 2021. [https://www.publichealth.hscni.net/]. Keyword search. Accessed 12 February 2021.
- [8] Public Health Scotland. 2021. [https://publichealthscotland.scot/]. Keyword search. Accessed 12 February 2021.
- [9] Public Health Wales. 2021. [https://phw.nhs.wales/]. Keyword search. Accessed 12 February 2021.

## 2.1.2 Laboratory quality systems

### 2.1.2a

**Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?**

Yes = 1, No = 0

**Current Year Score: 1**

The national reference laboratories in the United Kingdom are all accredited to ISO 15189:2012. According to the 2015 Global Health Security Agenda pilot assessment, all laboratories providing clinical microbiology results which impact on patient management operating in the UK must be accredited either to Clinical Pathology Accreditation standards (CPA) or to ISO 15189:2012. (From 2013, the UK began a transition from CPA standards to ISO 15189.) The main hub of national

reference laboratories covering priority infectious diseases is housed at Public Health England (PHE) Colindale. [1] All those relevant to priority infectious diseases – the Bacteriology Reference Department (BRD), the Virus Reference Department (VRD) and the National Mycobacteriology Reference Service South – have ISO 15189:2012 accreditation. [2, 3] The Malaria Reference Laboratory is based separately at the London School of Hygiene and Tropical Medicine (LSHTM). It was last issued ISO 15189:2012 accreditation in August 2020. [4, 5]

[1] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 19 January 2021.

[2] Public Health England (PHE). April 2019. “Quality at the Laboratories of Public Health England, Colindale: National Infection Service: NIS Laboratories.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/791982/quality\\_at\\_the\\_laboratories\\_of\\_public\\_health\\_england\\_colindale.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/791982/quality_at_the_laboratories_of_public_health_england_colindale.pdf)]. Accessed 19 January 2021.

[3] United Kingdom Accreditation Service (UKAS). 26 Sep 2018. “Schedule of accreditation issued by United Kingdom Accreditation Service: Public Health England, An Executive Agency of the Department of Health: National Mycobacterial Reference Service South.” [[https://www.ukas.com/wp-content/uploads/schedule\\_uploads/00007/10080%20Medical%20Single.pdf](https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/10080%20Medical%20Single.pdf)]. Accessed 19 January 2021.

[4] Public Health England (PHE). 8 March 2019. “Malaria reference laboratory: user handbook.”

[<https://www.gov.uk/government/publications/malaria-reference-laboratory-mrl-user-handbook/malaria-reference-laboratory-user-handbook-august-2016>]. Accessed 19 January 2021.

[5] United Kingdom Accreditation Service (UKAS). 18 August 2020. “Schedule of accreditation issued by United Kingdom Accreditation Service: London School of Hygiene and Tropical Medicine (PHE Malaria Reference Laboratory and Diagnostic Parasitology Laboratory).” [[https://www.ukas.com/wp-content/uploads/schedule\\_uploads/00007/9148%20Medical%20Single.pdf](https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/9148%20Medical%20Single.pdf)]. Accessed 19 January 2021.

### 2.1.2b

**Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom's national reference laboratories are subject to external quality assurance (EQA) review. The main hub of national reference laboratories covering priority infectious diseases is housed at Public Health England (PHE) Colindale, though the Malaria Reference Laboratory (MRL) is based separately at the London School of Hygiene and Tropical Medicine (LSHTM). [1, 2] All those at Colindale relevant to priority infectious diseases – the Bacteriology Reference Department (BRD), the Virus Reference Department (VRD) and the National Mycobacteriology Reference Service South – as well as the MRL have ISO 15189:2012 accreditation. [3, 4, 5] A requirement for EQA is contained in this accreditation standard. [1] PHE Colindale participates in a number of EQA schemes, including those organised by the UK National External Quality Assurance Scheme (NEQAS), Quality Control for Molecular Diagnostics (QCMD), the European Influenza Surveillance Network (EISN), the World Health Organisation (WHO) and the US Centers for Disease Control and Prevention (CDC), Atlanta. [3, 6, 7, 8] Where formal EQA schemes are not available (for specialised work), alternative procedures are arranged such as informal sample exchange schemes with international laboratories performing similar functions. [6] The MRL participates in NEQAS. [2]

[1] Global Health Security Agenda external mission team. Aug 2015. “Global Health Security Agenda pilot assessment of the United Kingdom.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentR](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentR)

eport\_GHS\_acc.pdf]. Accessed 19 January 2021.

[2] Public Health England (PHE). 8 March 2019. "Malaria reference laboratory: user handbook."

[https://www.gov.uk/government/publications/malaria-reference-laboratory-mrl-user-handbook/malaria-reference-laboratory-user-handbook-august-2016]. Accessed 19 January 2021.

[3] Public Health England (PHE). April 2019. "Quality at the Laboratories of Public Health England, Colindale: National Infection Service: NIS Laboratories."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/791982/quality\_at\_the\_laboratories\_of\_public\_health\_england\_colindale.pdf]. Accessed 19 January 2021.

[4] United Kingdom Accreditation Service (UKAS). 26 Sep 2018. "Schedule of accreditation issued by United Kingdom Accreditation Service: Public Health England, An Executive Agency of the Department of Health: National Mycobacterial Reference Service South." [https://www.ukas.com/wp-

content/uploads/schedule\_uploads/00007/10080%20Medical%20Single.pdf]. Accessed 19 January 2021.

[5] United Kingdom Accreditation Service (UKAS). 18 August 2020. "Schedule of accreditation issued by United Kingdom Accreditation Service: London School of Hygiene and Tropical Medicine (PHE Malaria Reference Laboratory and Diagnostic Parasitology Laboratory)." [https://www.ukas.com/wp-

content/uploads/schedule\_uploads/00007/9148%20Medical%20Single.pdf]. Accessed 19 January 2021.

[6] Public Health England (PHE). October 2020. "National Infection Service Reference Laboratories Colindale: Bacteriology Reference Department user manual." Version 13.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/711407/CTAD\_specification\_and\_technical\_guidance.pdf]. Accessed 19 January 2021.

[7] Public Health England (PHE). November 2019. "National Infection Service Laboratories - Reference Colindale: Virus Reference Department User Manual." Version 15.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/736201/VRD\_user\_manual\_v14\_VW0405.pdf]. Accessed 19 January 2021.

[8] Public Health England (PHE). July 2019. "National Infection Service - National Mycobacterium Reference Service - South (NMRS-South) user handbook."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/668479/National\_Mycobacterium\_Reference\_Service-South\_\_NMRS-South\_\_user\_manual.pdf]. Accessed 19 January 2021.

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

**Is there a nationwide specimen transport system?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has a nationwide specimen transport system. The system is based on guidelines from Public Health England (PHE) and with additional central support in the most urgent cases. According to the 2015 Global Health Security Agenda pilot assessment, the vast majority of routine clinical microbiology testing is done in clinical laboratories operated by the National Health Service (NHS). Specialist clinical microbiology tests are provided by a subset of 8 laboratories operated or commissioned by Public Health England (PHE), with 5 additional PHE laboratories providing food and water microbiology. All of these are supported by PHE-funded national reference laboratories, mostly housed at PHE Colindale. NHS Hospital Trusts are responsible for developing their own operating procedures to send specimens into these reference and national laboratories based on guidelines issued by PHE. All hospitals can call upon the services of a number of national and local

specialist healthcare couriers to transport urgent Category B samples to laboratories on an immediate collection basis. PHE provides a national mechanism to transport Category B samples overnight to its laboratories via a contract with a logistics company. PHE provides a national mechanism to transport Category A viral haemorrhagic fever samples to the relevant laboratory within 7 hours via a contract with two specialist couriers. PHE national and regional laboratories also have access to Category A couriers to move other Category A specimens. All samples are tracked. [1] Current handbooks published by PHE's specialist microbiology laboratories, as well as specimen transport guidance from an NHS Hospital Trust updated in 2017, confirm that this information is still correct. In cases when urgent testing is deemed necessary, the specialist PHE Public Health Laboratories can help to arrange and pay for courier transport using their approved couriers; and the PHE Rare and Imported Pathogens Laboratory (a national reference laboratory which handles most Category A infectious samples) has its own approved specialist couriers which hospitals must use when sending in samples, who help packing samples. [2, 3, 4, 5]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 19 January 2021.

[2] Public Health England (PHE). Feb 2016. "Specialist Microbiology Network Public Health Laboratory, East of England: Public health microbiology services user handbook."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/516117/PHE\\_EastofEngland\\_handbook\\_Feb2016.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/516117/PHE_EastofEngland_handbook_Feb2016.pdf)]. Accessed 19 January 2021.

[3] Public Health England (PHE). July 2019. "National Infection Service Specialist Microbiology Network, Public Health Laboratory London: Public health microbiology services user handbook."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/819589/PHL\\_London\\_Handbook.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819589/PHL_London_Handbook.pdf)]. Accessed 19 January 2021.

[4] Public Health England (PHE). Nov 2018. "National Infection Service Specialist Microbiology Network, Public Health Laboratory Manchester: Public health microbiology services user handbook."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/765286/Public\\_Health\\_Microbiology\\_Services\\_user\\_handbook.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765286/Public_Health_Microbiology_Services_user_handbook.pdf)]. Accessed 19 January 2021.

[5] The Newcastle upon Tyne NHS Foundation Trust. 31 October 2017. "Transport of Clinical Specimens."

[<https://www.newcastlelaboratories.com/wp-content/uploads/2018/10/TransportofClinicalSpecimensPolicy201710.pdf>]. Accessed 19 January 2021.

## 2.2.2 Laboratory cooperation and coordination

### 2.2.2a

**Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?**

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that there is a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. United Kingdom Accreditation Service (UKAS), appointed by the government, is the sole National Accreditation Body to assess and accredit organisations, including medical laboratories. There is no evidence that the UKAS has an expedited process to authorize laboratories during an outbreak. [1, 2] The first stage for private testing providers applying for UKAS accreditation is to self-declare as meeting minimum testing standards. The Department of Health and Social Care has guidance, last updated in November 2020, for private testing providers to self-declare as COVID-19 testing providers. However, there is no indication of a plan in place to

rapidly authorize or license. [3] According to the 2015 Global Health Security Agenda pilot assessment, the vast majority of routine clinical microbiology testing is done in clinical laboratories operated by the National Health Service (NHS). Specialist clinical microbiology tests are provided by a subset of 8 laboratories operated or commissioned by Public Health England (PHE), with 5 additional PHE laboratories providing food and water microbiology. All of these are supported by PHE-funded national reference laboratories, mostly housed at PHE Colindale. [4, 5]. There is no additional evidence of a national plan or strategy for conducting and scaling testing during , including testing for novel pathogens, available through the Animal and Plant Health Agency or the National Health Service. [6, 7]

[1] United Kingdom Accreditation Service (UKAS). 2021. "About us." [https://www.ukas.com/about-us/about-ukas/]. Accessed 12 February 2021.

[2] United Kingdom Accreditation Service (UKAS). 2021. [https://www.ukas.com/]. Keyword search. Accessed 12 February 2021.

[3] Department of Health and Social Care. 25 November 2020. "Self-declare as a private COVID-19 testing provider." [https://www.gov.uk/guidance/self-declare-as-a-private-sector-covid-19-testing-provider]. Accessed 12 February 2021.

[4] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/456984/IndependentReport\_GHS\_acc.pdf]. Accessed 12 February 2021.

[5] Public Health England. 31 July 2014. "Public Health Laboratories." [https://www.gov.uk/government/collections/public-health-laboratories]. Accessed 12 February 2021.

[6] National Health Service (NHS). 2021. [https://www.nhs.uk/]. Keyword search. Accessed 12 February 2021.

[7] Animal and Plan Health Agency. 2021. [https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about]. Keyword search. Accessed 12 February 2021.

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

### 2.3.1 Indicator and event-based surveillance and reporting systems

#### 2.3.1a

**Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?**

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,  
Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis = 1, No = 0

**Current Year Score: 2**

There is evidence that the United Kingdom is conducting ongoing event-based surveillance and analysis for infectious disease. In the UK, event-based surveillance is conducted and analysed on daily basis by Public Health England (PHE)'s Emerging Infections and Zoonoses team, and an event-based surveillance unit is established in the national public health emergency operations centre (PHEOC) when it is activated. The Emerging Infections and Zoonoses team, within PHE's National Infection Service, conducts epidemic intelligence activities to detect and assess potential emerging infectious disease threats to the UK, using multiple sources such as news and surveillance reports, scientific literature, open source aggregate websites and journals. "Approximately 100 publicly available online resources are manually reviewed each weekday by specialist epidemiologists." All relevant information is recorded within a dedicated epidemic intelligence database. If an incident is deemed to be of public health importance, it is reported to relevant groups and individuals within PHE and across government. [1, 2] According to the 2015 Global Health Security Agenda pilot assessment ("GHSA assessment"), event-based surveillance is also conducted by a network of local teams and coordinated across PHE for all

incidents, and forms part of a daily situation report. [2] In addition, event-based surveillance is conducted during public health emergencies by a cell within PHE's PHEOC. The PHEOC is the National Incident Co-ordination Centre (NICC). [3, 4] The NICC is kept operational between times of activation by the Corporate Resilience Team (CRT). [4] An official blog post during the 2015 Ebola outbreak described the work of an Epidemiology and Intelligence Cell (Epi Cell) within the NICC, which "provide[d] international intelligence, scanning for new outbreaks of Ebola (and other diseases), taking on data from the World Health Organisation and information from many sources, and keeping a record of the number of global cases." [5] Neither the NICC nor the CRT have an online presence and no further information is available about the Epi Cell.

[1] Public Health England (PHE). 22 Jan 2019. "Guidance: Epidemic intelligence scanning process."

[<https://www.gov.uk/government/publications/emerging-infections-and-zoonoses-epidemic-intelligence-scanning-procedures/epidemic-intelligence-scanning-process>]. Accessed 19 January 2021.

[2] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 19 January 2021.

[3] Public Health England (PHE). 26 November 2020. "Annual Report and Accounts 2019/20."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/725092/PHE\\_Annual\\_Report\\_2017\\_2018\\_print\\_ready\\_pdf.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725092/PHE_Annual_Report_2017_2018_print_ready_pdf.pdf)]. Accessed 19 January 2021.

[4] Public Health England (PHE). 3 Feb 2015. "Feature: PHE's Ebola response – the people behind the scenes."

[<https://publichealthmatters.blog.gov.uk/2015/02/03/feature-phes-ebola-response-the-people-behind-the-scenes/>]. Accessed 19 January 2021.

[5] Lloyd, J. 21 Feb 2018. "Disease Detectives: keeping track of new and emerging infectious diseases." Public Health Matters blog, Public Health England (PHE). [<https://publichealthmatters.blog.gov.uk/2018/02/21/disease-detectives-keeping-track-of-new-and-emerging-infectious-diseases/>]. Accessed 19 January 2021.

### 2.3.1b

**Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?**

Yes = 1, No = 0

**Current Year Score: 1**

There is publicly available evidence that the United Kingdom has reported a potential public health emergency of international concern (PHEIC) to the World Health Organization (WHO) within the last two years. In January 2019, the United Kingdom notified the WHO of two cases of drug resistant *N. gonorrhoeae*. [1] Following the declaration of SARS-CoV-2 as a PHEIC in January 2020, the UK reported over 1000 cases of a SARS-CoV-2 Variant in December 2020 that had been detected in the country, as evidenced in the WHO's Disease Outbreak News. [2, 3] The UK has also reported COVID-19 cases to the WHO, as evidenced by the data on the WHO Coronavirus Disease (COVID-19) Dashboard. [4] The UK government regularly updates its guidance and information and news and announcements related to the SARS-CoV-2 Variant on its website. [5]

[1] World Health Organisation (WHO). 2021. "Gonococcal infection – United Kingdom". [<https://www.who.int/csr/don/30-january-2019-gonococcal-infection-uk/en/>]. Accessed 5 February 2021.

[2] World Health Organisation (WHO). 2021. "Disease Outbreak News". [<https://www.who.int/csr/don/archive/year/en/>]. Accessed 5 February 2021.

[3] World Health Organisation (WHO). 21 December 2020. "SARS-CoV-2 Variant - United Kingdom of Great Britain and Northern Ireland." [<https://www.who.int/csr/don/21-december-2020-sars-cov2-variant-united-kingdom/en/>]. Accessed 5 February 2021.

[4] World Health Organization (WHO). "Coronavirus Disease (COVID-19) Dashboard - The United Kingdom."

[<https://covid19.who.int/region/euro/country/gb>]. Accessed 5 February 2021.

[5] Public Health England (PHE). 4 February 2021. "New COVID-19 (SARS-CoV-2) variants."

[<https://www.gov.uk/government/collections/new-sars-cov-2-variant>]. Accessed 5 February 2021.

## 2.3.2 Interoperable, interconnected, electronic real-time reporting systems

### 2.3.2a

**Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?**

Yes = 1, No = 0

**Current Year Score: 1**

The government in the United Kingdom operates an electronic reporting surveillance system at both the national and the sub-national level. Health is a devolved issue in the UK and the national governments of England, Scotland and Wales operate their own electronic reporting surveillance systems (from sub-national to national level). Northern Ireland does not, as it only has one level of reporting (i.e. no sub-national intermediary). All four regions produce data which is available to the UK's International Health Regulations (IHR) National Focal Point (NFP) in online report form rather than via a UK-wide electronic system. Public Health England (PHE), which covers around 84% of the UK's population, has a national electronic real-time syndromic surveillance service, encompassing data from general practice in hours and out of hours, telephone triage and emergency departments. Data is analysed and interpreted each day by the Real-time Syndromic Surveillance Team (ReSST), who also publish weekly surveillance reports. [1, 2, 3] For legally-required notifications of infectious diseases (NOIDs), there are two systems. First, medical practitioners must inform a local health officer or an officer at a local authority of suspected cases by phone if it is urgent (guidance on judging this is provided), or by sending in a form within 3 days. [4, 5] The Health Protection (Notification) Regulations 2010 require local officers receiving these notifications to forward the information to PHE (formerly the Health Protection Agency, HPA). [6] Second, all laboratories in England performing a primary diagnostic role must notify PHE on confirmation of a notifiable causative organism. This is done using an electronic reporting system, the Second Generation Surveillance System (SGSS). Data can be sent electronically to the SGSS from laboratory information systems or directly uploaded. [4, 7] PHE's Information Management section receives the data from medical practitioners and laboratories and issues separate weekly reports on NOIDs and NOIDs causative agents. [4, 8, 9] Northern Ireland's Public Health Agency (PHA), which covers around 3% of the UK population, similarly asks that urgent NOIDs be reported by telephone and other cases by post within 3 days, directly to itself as the national agency. As there is no intermediary reporting stage, there is no electronic reporting system. [2, 10, 11] Health Protection Scotland covers around 8% of the UK population. [2] For NOIDs, medical practitioners submit data electronically via the Scottish Care Information (SCI) Gateway (or by secure email or post to their local NHS Board for those without access). [12, 13] Diagnostic and reference laboratories routinely report all identifications of organisms, infection or microbiological intoxication, unless they are known to be of no clinical or public health importance, to the ECOSS (The Electronic Communication of Surveillance in Scotland) database. [14, 15] Public Health Wales, which covers around 5% of the population, has an electronic reporting system called the Information Bureau for Infectious Disease (IBID). With regard to NOIDs, it receives data from medical practitioners' reporting to local Health Protection Teams and from laboratory reporting of confirmed cases. Practitioners can report to local teams through electronic forms, secure emails or post at the local authority's discretion. [16, 17, 18] All the data is available for analysis by PHE, which is the IHR NFP and sends UK-wide data to European and international surveillance networks, but the national electronic reporting systems do not feed into one overarching electronic reporting system for the UK. [19, 20]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentR](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentR)

eport\_GHS\_acc.pdf]. Accessed 2 February 2021.

[2] Office for National Statistics (ONS). 24 June 2020. "Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland."

[<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>]. Accessed 2 February 2021.

[3] Public Health England (PHE). 27 January 2021. "Syndromic surveillance: systems and analyses."

[<https://www.gov.uk/government/collections/syndromic-surveillance-systems-and-analyses>]. Accessed 2 February 2021.

[4] Public Health England (PHE). 26 October 2020. "Guidance: Notifiable diseases and causative organisms: how to report."

[<https://www.gov.uk/guidance/notifiable-diseases-and-causative-organisms-how-to-report>]. Accessed 2 February 2021.

[5] Public Health England (PHE). N.d. "Statutory notification by registered medical practitioners of all hazards: infections, chemicals & radiation."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/773214/PHE\\_Notifiable\\_diseases\\_poster\\_NE\\_\\_\\_NCL\\_HPT.PDF](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/773214/PHE_Notifiable_diseases_poster_NE___NCL_HPT.PDF)]. Accessed 2 February 2021.

[6] Government of the United Kingdom. 6 Apr 2010. "The Health Protection (Notification) Regulations 2010."

[<http://www.legislation.gov.uk/uksi/2010/659/contents/made>]. Accessed 2 February 2021.

[7] Public Health England (PHE). October 2020. "Laboratory reporting to Public Health England: A guide for diagnostic laboratories."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/739854/PHE\\_Laboratory\\_Reporting\\_Guidelines.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739854/PHE_Laboratory_Reporting_Guidelines.pdf)]. Accessed 2 February 2021.

[8] Public Health England (PHE). 13 January 2021. "Notifiable diseases: weekly reports for 2021."

[<https://www.gov.uk/government/publications/notifiable-diseases-weekly-reports-for-2021>]. Accessed 2 February 2021.

[9] Public Health England (PHE). 1 February 2021. "Notifiable diseases: causative agents report for 2021."

[<https://www.gov.uk/government/publications/notifiable-diseases-causative-agents-report-for-2021>]. Accessed 2 February 2021.

[10] Public Health Agency (PHA), Northern Ireland. N.d. "Notifiable diseases."

[<https://www.niinfectioncontrolmanual.net/notifiable-diseases>]. Accessed 2 February 2021.

[11] Public Health Agency (PHA), Northern Ireland. N.d. "One for the records: Notifiable infectious diseases."

[<https://www.niinfectioncontrolmanual.net/sites/default/files/One%20for%20the%20records.pdf>]. Accessed 2 February 2021.

[12] Government of the United Kingdom. 2008. "The Public Health etc. (Scotland) Act 2008."

[<https://www.legislation.gov.uk/asp/2008/5/contents>]. Accessed 2 February 2021.

[13] National Health Service (NHS), National Services Scotland. N.d. "SCI Gateway product description."

[[https://www.sci.scot.nhs.uk/products/gateway/gate\\_desc.htm](https://www.sci.scot.nhs.uk/products/gateway/gate_desc.htm)]. Accessed 2 February 2021.

[14] Health Protection Scotland. 2021. "Data and Surveillance." [<https://www.hps.scot.nhs.uk/data/>]. Accessed 2 February 2021.

[15] National Health Service (NHS), National Services Scotland, Information Services Division. Jun 2014. "Infection Intelligence Platform (IIP): High level guide to IIP component datasets held by NHS National Services Scotland."

[<https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Infection-Intelligence-Platform/Data/June-2014-Guide-to-IIP-Data.pdf>].

[16] Public Health Wales. 10 Dec 2013. "All Wales system for communicable disease control goes live."

[<http://www.wales.nhs.uk/sitesplus/888/news/30529>]. Accessed 2 February 2021.

[17] Public Health Wales. 13 Apr 2018. "Monthly All-Wales Laboratory-Confirmed Infections and Notifications Reports."

[<https://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=27920>]. Accessed 2 February 2021.

[18] Public Health Wales. July 2010. "Health Protection Legislation (Wales): Guidance 2010."

[<https://gov.wales/sites/default/files/publications/2019-04/health-protection-guidance-2010.pdf>]. Accessed 2 February 2021.

[19] Public Health England (PHE). Dec 2017. "International Health Regulations: Activity of the UK National Focal Point from

2012 to 2016.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/672447/International\\_Health\\_Regulations.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672447/International_Health_Regulations.pdf)]. Accessed 2 February 2021.

[20] Parliamentary Office of Science and Technology. 26 Mar 2014. “Surveillance of infectious disease.” Postnote no. 462.

[<https://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-462#fullreport>]. Accessed 2 February 2021.

### 2.3.2b

#### Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?

Yes = 1 , No = 0

**Current Year Score: 1**

The electronic reporting surveillance system in the United Kingdom collects ongoing or real-time laboratory data. Health is a devolved issue and the national governments of England, Northern Ireland, Scotland and Wales operate their own electronic reporting surveillance systems for laboratory data. With the exception of Wales, electronic systems for data reported by medical practitioners and for data reported by laboratories are separate. For England and Wales (representing a large majority of the population), there is evidence that laboratory reporting is real-time. Public Health England (PHE), which covers around 84% of the UK’s population, has a national electronic real-time syndromic surveillance service, encompassing data from general practice in hours and out of hours, telephone triage and emergency departments. Data is analysed and interpreted each day by the Real-time Syndromic Surveillance Team (ReSST), who also publish weekly surveillance reports. [1, 2, 3] For legally-required notifications of infectious diseases (NOIDs), there are two systems. First, medical practitioners must inform a local officer of suspected cases by phone if it is urgent (guidance on judging this is provided), or by sending in a form within 3 days. [4, 5] The Health Protection (Notification) Regulations 2010 require local officers receiving these notifications to forward the information to PHE (formerly the Health Protection Agency, HPA). [6] Second, all laboratories in England performing a primary diagnostic role must notify PHE on confirmation of a notifiable causative organism. This is done using an electronic reporting system, the Second Generation Surveillance System (SGSS). Data can be sent electronically to the SGSS from laboratory information systems or directly uploaded. [4, 7] PHE’s Information Management section receives the data from medical practitioners and laboratories and issues separate weekly reports on NOIDs and NOIDs causative agents. [4, 8] Northern Ireland’s Public Health Agency (PHA), which covers around 3% of the UK population, similarly asks that urgent NOIDs be reported by telephone and other cases by post within 3 days, directly to itself as the national agency. There is no evidence of an electronic reporting system for medical practitioner data in this region. [2, 9, 10] The PHA does have an electronic laboratory reporting system, the CoSurv Information System, used by each local health trust’s microbiology and/or virology laboratories to report certain infections to the PHA. [11, 12, 13] Health Protection Scotland covers around 8% of the population. [2] For NOIDs, medical practitioners submit data electronically via the Scottish Care Information (SCI) Gateway (or by email or post to their local NHS Board for those without access). [14, 15] Diagnostic and reference laboratories routinely report all identifications of organisms, infection or microbiological intoxication, unless they are known to be of no clinical or public health importance, to the ECOSS (The Electronic Communication of Surveillance in Scotland) database. ECOSS is connected into a wider electronic system, the Infection Intelligence Platform, but not into the same system as SIDSS2. [16, 17] Public Health Wales, which covers around 5% of the population, has an electronic reporting system called the Information Bureau for Infectious Disease (IBID). With regard to NOIDs, it receives data from medical practitioners’ reporting to local Health Protection Teams and from automated laboratory reporting of confirmed cases. All findings in IBID become immediately available to the health protection teams in Public Health Wales. [18, 19, 20]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

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[<https://www.gov.uk/government/collections/syndromic-surveillance-systems-and-analyses>]. Accessed 2 February 2021.
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[<https://www.niinfectioncontrolmanual.net/sites/default/files/One%20for%20the%20records.pdf>]. Accessed 2 February 2021.
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## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

##### Are electronic health records commonly in use?

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

**Current Year Score: 2**

Electronic health records are commonly in use in the United Kingdom. The vast majority of health facilities in the UK use electronic health records (EHR), and the focus of development work is on improving interconnectivity between systems and introducing patient access. All UK residents have access to free healthcare provided by the National Health Service (NHS), referred to as Health and Social Care (HSC) in Northern Ireland. [1, 2] Nearly all make use of it: the number of patients registered with an NHS general practitioner (GP) in England in January 2021 (60.6m) exceeded the resident population (56.3m in mid-2019, the latest available population data). [3, 4] NHS patients may have several paper and electronic records stored in various healthcare settings, but in England by 2016, 94% of people had an electronic Summary Care Record (SCR) containing limited patient information (prescriptions, allergies and adverse reactions) which is shared between hospitals, general practitioner (GP) surgeries, walk-in centres and community pharmacists. Everyone who visits an NHS GP has an SCR unless they opt out. NHS England is working towards full interconnectivity of EHR across primary, secondary and social care by 2020. The aim is to make more complete health information available across areas and service types. Local areas can choose their own systems based on national standards. [5] The Northern Ireland Electronic Care Record (NIECR) contains patient information from existing electronic record systems from HSC facilities throughout the country, as well as some directly-recorded information. This includes: lab tests, x-rays, referrals, investigation requests, appointments, encounter and discharge letters. There is also an Emergency Care Summary Record (ECSR), similar to England's SCR, which only includes current medications and allergies. Unless a patient opts out of an ECSR, it is included on their NIECR. [6, 7] In Scotland, everyone registered with a GP (except for a very small percentage who opt out) has an electronic Emergency Care Summary (ECS), similar to England's SCRs. Scotland's latest eHealth strategy includes a national digital platform as a priority area, with a commitment to making real-time data and information from EHRs "available to those who need it, when they need it, wherever they are, in a secure and safe way." [8, 9, 10] The equivalent to the SCR in Wales is the Welsh GP Record (WGPR), now available via the Welsh Clinical Portal, a gateway which allows health practitioners to view relevant information from a variety of electronic health databases. Like the others, it includes all GP patients except those who opt out. [11, 12, 13, 14]

[1] National Health Service (NHS). 13 Apr 2016. "About the NHS." [https://www.england.nhs.uk/about/]. Accessed 2 February 2021.

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[<https://www.nidirect.gov.uk/articles/northern-ireland-electronic-care-record-niecr>]. Accessed 2 February 2021.

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[<https://www.nidirect.gov.uk/articles/emergency-care-summary-record>]. Accessed 2 February 2021.

[8] National Health Service (NHS) Scotland. N.d. “Electronic health records.”

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[[http://www.parliament.scot/S5\\_Public\\_Audit/Position\\_Statement\\_on\\_Electronic\\_Health\\_Records\\_in\\_Scotland.pdf](http://www.parliament.scot/S5_Public_Audit/Position_Statement_on_Electronic_Health_Records_in_Scotland.pdf)]; sourced from [<https://www.parliament.scot/parliamentarybusiness/CurrentCommittees/100243.aspx>]. Accessed 2 February 2021.

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[11] Auditor General for Wales. 11 Jan 2018. “Informatics systems in NHS Wales.”

[<http://senedd.assembly.wales/documents/s73101/PAC5-08-18%20P3%20-%20AGW%20Report%20-%20Informatics%20Systems%20in%20NHS%20Wales.pdf>]. Accessed 2 February 2021.

[12] National Health Service (NHS) Wales Informatics Service. 22 Jan 2018. “Portal provides access to clinical documents across Wales.” [<https://www.wales.nhs.uk/news/47381>]. Accessed 2 February 2021.

[13] National Health Service (NHS) Wales Informatics Service. 10 Apr 2018. “Welsh Clinical Portal.”

[<https://nwis.nhs.wales/systems-and-services/secondary-care/welsh-clinical-portal/>]. Accessed 2 February 2021.

[14] National Health Service (NHS) Wales. N.d. “Welsh GP records.” [<https://nwis.nhs.wales/news/latest-news/gps-given-access-to-the-welsh-clinical-portal/>]. Accessed 2 February 2021.

### 2.4.1b

**Does the national public health system have access to electronic health records of individuals in their country?**

Yes = 1 , No = 0

**Current Year Score: 1**

The national public health system in the United Kingdom – the National Health Service (NHS) – has access to electronic health records (EHR) of individuals in their country, though efforts are still underway to improve interconnectivity between different NHS services. All UK residents have access to free healthcare provided by the NHS, referred to as Health and Social Care (HSC) in Northern Ireland. [1, 2] Nearly all make use of it. [3, 4] In England by 2016, 94% of people had an electronic Summary Care Record (SCR) containing limited patient information (prescriptions, allergies and adverse reactions) which is shared between NHS hospitals, general practitioners (GPs), walk-in centres and community pharmacists. Everyone who visits an NHS GP has an SCR unless they opt out. NHS England is working towards full interconnectivity of EHR across primary, secondary and social care by 2020. Local areas can choose their own systems based on national standards. [5] NHS Digital collects, processes and publishes data and information from across the health and social care system in England, including that from SCRs. [6] The Northern Ireland Electronic Care Record (NIECR) contains patient information from existing electronic record systems from HSC facilities throughout the country, as well as some directly-recorded information. This includes: lab tests, x-rays, referrals, investigation requests, appointments, encounter and discharge letters. There is also an Emergency Care Summary Record (ECSR), similar to England’s SCR, which only includes current medications and allergies. Unless a patient opts out of an ECSR, it is included on their NIECR. These systems are managed by HSC and accessible to HSC staff who need it in relation to patient care. [7, 8] In Scotland, everyone registered with a GP has an electronic Emergency Care Summary

(ECS), similar to England’s SCRs, unless they opt out. This enables essential information to be shared across healthcare providers. According to Scotland’s health information service, the NHS holds different parts patient records—including EHR—and has guidelines about how long it should keep health records. [9, 10, 11] The equivalent to the SCR in Wales is the Welsh GP Record (WGPR), now available via the Welsh Clinical Portal, a gateway which allows NHS health practitioners to view relevant information from a variety of electronic health databases. Like the others, it includes all GP patients except those who opt out. [12, 13, 14, 15] There has been some concern that the right of patients to opt out of sharing their health records beyond their immediate care could limit availability of data for research, but the opt-out does not affect data which is anonymised or collected by the health authorities for disease surveillance. [16]

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- [2] Belfast Health and Social Care Trust. N.d. “Health service structure.” [https://belfasttrust.hscni.net/about/corporate-info/health-service-structure/]. Accessed 2 February 2021.
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- [8] NI Direct Government Services. N.d. “Emergency Care Summary Record.” [https://www.nidirect.gov.uk/articles/emergency-care-summary-record]. Accessed 2 February 2021.
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- [16] Piel, F. et al. 26 Mar 2018. “The challenge of opt-outs from NHS data: a small-area perspective”, in Journal of Public Health, 40
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### 2.4.1c

Are there data standards to ensure data is comparable (e.g., ISO standards)?

Yes = 1, No = 0

Current Year Score: 1

There are data standards in the United Kingdom to ensure EHR data is comparable. The health systems of England and each of the devolved administrations (DAs) use data standards to ensure data is comparable across electronic health record (EHR) systems as greater interconnectivity is introduced. Mandatory UK-wide standards are lacking, but UK-wide guidance on standards exists and the health authorities of England and each DA coordinate over these, ensuring a degree of interoperability. The vast majority of health facilities in the UK use electronic health records (EHR). All UK residents have access to free healthcare provided by the National Health Service (NHS), referred to as Health and Social Care (HSC) in Northern Ireland. [1, 2] Nearly all make use of it. [3, 4] In England by 2016, 94% of people had an electronic Summary Care Record (SCR) containing limited patient information which is shared between hospitals, general practitioners (GPs), walk-in centres and community pharmacists. NHS England is working towards full interconnectivity of EHR across primary, secondary and social care, by 2020. Local areas can choose their own systems based on national standards. Standards for interoperability are being developed by the Health and Social Care Information Centre (HSCIC), a public body. The HSCIC has published an 'Interoperability Handbook' to outline common specifications, frameworks and standards for medical software, and accredits systems which meet them. Standards include using open application program interfaces (APIs) and applying SNOMED CT for clinical terminology in EHRs. The Transfer of Care Initiative will create common standards for how medical records are transferred when a patient is admitted, discharged or referred. The Professional Record Standards Body has also been established (endorsed by HSCIC) to develop further standards for EHR structure and content. [5] Details on standards are available to developers on the NHS Digital website, "the national information and technology partner to the health and care system." [6] The NHS utilizes HL7, an international standards framework focused on systems implementation and interoperability, developed by Fast Healthcare Interoperability Resources (FHIR). FHIR UK Core is the UK-specific approach to this standard, initially developed as England-centric and published in November 2018. Since then, the NHS is applying FHIR UK Core as unified approach to interoperability across England, Scotland, Wales and Northern Ireland, to enable consistent information flows. [7] The Northern Ireland Electronic Care Record (NIECR) contains patient information from HSC facilities throughout the country, as well as some directly-recorded information. There is also a more basic Emergency Care Summary Record (ECSR), similar to England's SCR. [8, 9] In Scotland, the equivalent of the SCR is the Emergency Care Summary (ECS). Scotland's latest eHealth strategy includes a national digital platform as a priority area, with a commitment to making real-time data and information from EHRs "available to those who need it, when they need it, wherever they are, in a secure and safe way." [10, 11, 12] A dictionary of healthcare data standards, definitions, classifications and terminologies for EHRs and other healthcare data is provided by NHS Scotland's Information Services Division (ISD), which regularly liaises with the NHS in England, Wales and Northern Ireland with the objective of achieving UK standards where possible. [13, 14] The equivalent to the SCR in Wales is the Welsh GP Record (WGPR), now available via the Welsh Clinical Portal, a gateway which allows health practitioners to view relevant information from a variety of electronic health databases. [15, 16, 17, 18] The NHS Wales Informatics Service has set terminology and data standards for EHRs as part of its wider integrated digital platform, referred to as the national architecture. Data standards used include HL7, SOAP, REST and FHIR, while SNOMED is used for clinical terminology. [15, 19] There are not mandatory UK-wide data standards for EHRs, but UK-wide guidance has been issued to ensure a degree of interoperability. [20]

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[2] Belfast Health and Social Care Trust. N.d. "Health service structure." [https://belfasttrust.hscni.net/about/corporate-info/health-service-structure/]. Accessed 2 February 2021.

[3] National Health Service (NHS) Digital. 14 Jan 2021. "Patients Registered at a GP Practice - January 2021."

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- [6] National Health Service (NHS) Digital. 2021. "Developer hub: Connect to NHS Digital services through our APIs." [<https://digital.nhs.uk/developer/>]. Accessed 2 February 2021.
- [7] National Health Service (NHS) Digital. 20 March 2020. "FHIR UK Core." [<https://digital.nhs.uk/services/fhir-uk-core>]. Accessed 2 February 2021.
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- [12] Scottish Government and National Health Service (NHS) Scotland. 2021. "eHealth." [<https://www.ehealth.scot/>]. Accessed 2 February 2021.
- [13] Information Services Division (ISD), NHS National Services Scotland. N.d. "Definitions, Reference Files and Standards - Data Advice." [<https://www.isdscotland.org/Products-and-Services/Data-Definitions-and-References/>] Accessed 2 February 2021.
- [14] Information Services Division (ISD), NHS National Services Scotland. N.d. "Health and Social Care Data Dictionary." [<https://www.ndc.scot.nhs.uk/Dictionary-A-Z/>]. Accessed 2 February 2021.
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## 2.4.2 Data integration between human, animal, and environmental health sectors

### 2.4.2a

**Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?**

Yes = 1, No = 0

**Current Year Score: 1**

The UK has two groups focused on zoonoses which enable sharing and analysis of data from animal, human and wildlife surveillance; zoonoses reports are published based on combined analysis of multi-sector surveillance data; and alerts are sent to interested parties across different agencies/sectors when new data is released. The two groups are the Human Animal Infections and Risk Surveillance Group (HAIRS) and the UK Zoonoses, Animal Diseases and Infections (UKZADI) Group. HAIRS is a multi-agency and cross-disciplinary horizon scanning group, chaired by the Emerging Infections and Zoonoses section of Public Health England (PHE), which identifies and discusses infections with potential for interspecies transfer, particularly zoonotic infections. The group meets formally monthly with regular contact on an ad hoc basis. It includes members from human, animal, environmental and food health authorities, and from all 3 devolved administrations (DAs) of Northern Ireland, Scotland and Wales. [1, 2] Drawing on all available information, including the many publicly-available reports on zoonotic diseases, it publishes risk assessments drawing on human, animal and wildlife surveillance, for instance on tick-borne bacteria; [2, 3] and its annual reports summarise key threats detected in all sectors. [4] UKZADI is an independent committee made up of experts from the agricultural, public health and food standards departments and from all 3 DAs, which meets quarterly. It advises the human, animal and food health authorities on important trends which impact on animal and public health and provides a strategic overview to ensure overall co-ordination of public health action with regard to zoonotic infections and trends in antimicrobial resistance. [1, 5] In addition, there are a number of cross-departmental groups focused on particular diseases and topics. [1] Animal and human health authorities make human, animal and wildlife surveillance data publicly available in monthly, quarterly and annual reports, and alerts are sent to interested parties upon publication. [1, 6] Annual zoonoses reports combine information from surveillance of zoonoses in humans, livestock, pets, wild animals and food; the latest annual report was published in December 2018 for 2017. [6, 7]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 1 February 2021.

[2] Public Health England (PHE). 11 November 2020. "Human animal infections and risk surveillance group (HAIRS)."

[<https://www.gov.uk/government/collections/human-animal-infections-and-risk-surveillance-group-hairs>]. Accessed 1 February 2021.

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[4] Public Health England (PHE)/ Human Animal Infections and Risk Surveillance Group (HAIRS). Sep 2018. "The Human Animal Infections and Risk Surveillance (HAIRS) Group: 2017 report."

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[6] Public Health England (PHE). Dec 2018. "Zoonoses report: UK 2017."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/765111/UK\\_Zoonoses\\_report\\_2017.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765111/UK_Zoonoses_report_2017.pdf)]. Accessed 1 February 2021.

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## 2.4.3 Transparency of surveillance data

### 2.4.3a

**Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom makes de-identified health surveillance data on infectious diseases publicly available via reports on government websites. Public Health England (PHE) and the health agencies in the devolved administrations of Northern Ireland, Scotland and Wales make de-identified health surveillance data on disease outbreaks publicly available via a variety of reports. PHE publishes weekly reports on statutory notifications of infectious diseases (NOIDs) in England and Wales; on laboratory-confirmed causative agents of NOIDs in England; on syndromic surveillance in England; and on UK-wide influenza surveillance. [1, 2, 3, 4] The 2021 weekly surveillance reports on influenza also include COVID-19 surveillance. [5] The UK also publishes a range of other disease-specific surveillance reports on other infectious diseases, such as tuberculosis, at varying frequencies. All data are de-identified. [6] Health Protection Scotland's website provides several de-identified surveillance reports, including quarterly epidemiological data on *Clostridioides difficile* infection, *Escherichia coli* bacteraemia, *Staphylococcus aureus* bacteraemia and Surgical Site Infection; and less frequently, other disease- or category-specific reports, such as one on outbreaks of infectious intestinal disease believed to have been acquired abroad, and another on zoonoses. Up until May 2020, reports included weekly updates on respiratory infections (presenting trends rather than data). [7] Public Health Wales publishes up-to-date de-identified reports on NOIDs surveillance from real-time medical practitioner notification and laboratory confirmation data, via software called Tableau. [8] Northern Ireland's Public Health Agency publishes de-identified surveillance data on NOIDs, respiratory infections and other diseases via its website. [9, 10]

[1] Public Health England (PHE). 2 February 2021. "Notifiable diseases: weekly reports for 2021 - Analysis of data for statutory notifications of infectious diseases (NOIDs) in England and Wales in 2021."

[<https://www.gov.uk/government/publications/notifiable-diseases-weekly-reports-for-2021>]. Accessed 5 February 2021.

[2] Public Health England (PHE). 1 February 2021. [<https://www.gov.uk/government/publications/notifiable-diseases-causative-agents-report-for-2021>]. Accessed 5 February 2021.

[3] Public Health England (PHE). 4 February 2021. "Syndromic surveillance: weekly summaries for 2021."

[<https://www.gov.uk/government/publications/syndromic-surveillance-weekly-summaries-for-2021>]. Accessed 5 February 2021.

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[<https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports>]. Accessed 5 February 2021.

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[8] Public Health Wales. 2021. "Public Health Wales Health Protection."

[https://public.tableau.com/profile/public.health.wales.health.protection#!/]. Accessed 5 February 2021.

[9] Northern Ireland Public Health Agency (PHA). N.d. "Surveillance data." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/surveillance-data]. Accessed 5 February 2021.

[10] Northern Ireland Public Health Agency (PHA). N.d. "NOIDs archive." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/noids-archive]. Accessed 5 February 2021.

### 2.4.3b

**Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom makes de-identified COVID-19 surveillance data available via daily reports on government websites. The UK has a website dedicated to data and insights on Coronavirus (COVID-19), which includes daily updates on case counts, mortality rate, patients admitted to hospital, and testing conducted. [1] The Scottish Government makes daily updates to its de-identified COVID-19 data—including case counts, mortality rate, hospital admissions, and testing—available on its website. [2] Public Health Wales makes daily updates to its COVID-19 surveillance dashboard, which includes daily charts on confirmed cases and testing, mortality rates, hospital admissions, and schools surveillance. [3] Northern Ireland also maintains a daily dashboard that includes de-identified data on cases, testing, deaths, and hospital admissions, as well as care home outbreaks. [4] The data is also available via daily reports. [5]

[1] Government of the United Kingdom. 5 February 2021. "Daily Update - The official UK Government website for data and insights on Coronavirus (COVID-19)." [https://coronavirus.data.gov.uk/]. Accessed 5 February 2021.

[2] Scottish Government. 5 February 2021. "Coronavirus (COVID-19): daily data for Scotland." [https://www.gov.scot/publications/coronavirus-covid-19-daily-data-for-scotland/]. Accessed 5 February 2021.

[3] Public Health Wales. 5 February 2021. "Rapid COVID-19 Surveillance - Confirmed Case Data." [https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary]. Accessed 5 February 2021.

[4] Northern Ireland Department of Health. 5 February 2021. "COVID-19 Summary Daily Dashboard." [https://app.powerbi.com/view?r=eyJrjoiZGYxNjYzNmUtOTlmZS00ODAxLWE1YTEtMjA0NjZlMzlmN2JmliwidCI6IjJOWEzMGRLWQ4ZDctNGFhNC05NjAwLTriZTc2MjVmZjZjNSIsImMiOjh9]. Accessed 5 February 2021.

[5] Northern Ireland Department of Health. 5 February 2021. "Daily dashboard updates on COVID-19 - February 2021." [https://www.health-ni.gov.uk/publications/daily-dashboard-updates-covid-19-february-2021]. Accessed 5 February 2021.

## 2.4.4 Ethical considerations during surveillance

### 2.4.4a

**Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?**

Yes = 1, No = 0

**Current Year Score: 1**

There is legislation in the United Kingdom that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. The UK has data protection and health sector legislation which safeguards the confidentiality of all personal identifiable health information, and which is applicable to information

generated through health surveillance: the Data Protection Act (DPA) 2018, implementing the European Union (EU)'s General Data Protection Regulation, (GDPR); the Health and Social Care Act (HSCA) 2008, the National Health Service Act 2006, and the Health Service (Control of Patient Information) Regulations 2002 ("CPI Regulations"). Under these laws and regulations, a government agency can process personal identifying information without the patient's consent in order to carry out the agency's functions in the public interest, including for health surveillance. [1, 2, 3, 4, 5, 6, 7] However, under the GDPR and DPA, data processed (a term which includes the meaning "disclosed") must be relevant and limited to what is necessary in relation to a given purpose, so data cannot be shared beyond those who need it to carry out their functions, and the minimum necessary data is shared at any point in the surveillance system. [1, 2, 3, 4] According to the Policy Background section of the GDPR, the GDPR will be incorporated into domestic law under the European Union (Withdrawal) Bill when the UK leaves the EU. [2] The same principles of data protection are reflected in guidance documents issued by the National Health Service (NHS). These also apply the Caldicott Principles (developed during a 1996-7 review of patient information confidentiality) with regard to sharing confidential patient information, which include: Justify the purpose; don't use patient identifiable information unless it is absolutely necessary; use the minimum necessary information; and access to identifiable information should be on a strict need to know basis. [8, 9] Public Health England (PHE) affirms its commitment to complying with Caldicott Principles and DPA in its surveillance policy statement, and states: "All data that contains patient identifiable information ... should not be transferred unless necessary, that is, for a clinical response or direct public health action." [10] PHE's guidance to laboratories on disease surveillance specifies the reasons why some identifiable information should be reported, for example to identify duplicate reports. It undertakes to handle data in accordance with the DPA and Caldicott Principles, specifying measures such as: access controls to databases are restricted to named individuals with a need to know; patient identifying data are not transmitted to others outside PHE without the permission of the laboratory which reported them. [11]

[1] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018."

[<http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>]. Accessed 6 February 2021.

[2] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018: Policy background."

[<http://www.legislation.gov.uk/ukpga/2018/12/notes/division/3/index.htm>]. Accessed 6 February 2021.

[3] European Commission. N.d. "2018 reform of EU data protection rules."

[[https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules\\_en](https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en)]. Accessed 6 February 2021.

[4] European Commission. 27 April 2016. "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)". [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN>]. Accessed 6 February 2021.

[5] Government of the United Kingdom. 2008. "Health and Social Care Act 2008."

[<https://www.legislation.gov.uk/ukpga/2008/14/contents>]. Accessed 6 February 2021.

[6] Government of the United Kingdom. 2006. "National Health Service Act 2006 – Section 251: Control of patient information." [<https://www.legislation.gov.uk/ukpga/2006/41/section/251>]. Accessed 6 February 2021.

[7] Government of the United Kingdom. 2002. "The Health Service (Control of Patient Information) Regulations 2002 – Regulation 3: Communicable disease and other risks to public health."

[<https://www.legislation.gov.uk/uksi/2002/1438/regulation/3/made>]. Accessed 6 February 2021.

[8] Department of Health. November 2003. "Confidentiality: NHS code of practice."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/200146/Confidentiality\\_-\\_NHS\\_Code\\_of\\_Practice.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/200146/Confidentiality_-_NHS_Code_of_Practice.pdf)]. Accessed 6 February 2021.

[9] Health and Social Care Information Centre (Now called NHS Digital). 2013. "A guide to confidentiality in health and social care: references - Treating confidential information with respect."

[<https://digital.nhs.uk/binaries/content/assets/legacy/pdf/0/n/confidentiality-guide-2013-references.pdf>]. Accessed 6 February 2021.

[10] Public Health England (PHE). October 2020. "Laboratory reporting to Public Health England: A guide for diagnostic laboratories."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/739854/PHE\\_Laboratory\\_Reporting\\_Guidelines.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739854/PHE_Laboratory_Reporting_Guidelines.pdf)]. Accessed 6 February 2021.

[11] Public Health England (PHE). 13 December 2017. "Public Health England: approach to surveillance."

[<https://www.gov.uk/government/publications/public-health-england-approach-to-surveillance/public-health-england-approach-to-surveillance#:~:text=Surveillance%20is%20a%20core%20function,public%20health%20decisions%20and%20actions.>]. Accessed 6 February 2021.

#### 2.4.4b

**Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom's legislation and guidance on the confidentiality of personal identifiable health information in surveillance includes mention of protections from cyber attacks. Legislation includes the Data Protection Act (DPA) 2018, implementing the European Union (EU)'s General Data Protection Regulation, (GDPR); the Health and Social Care Act (HSCA) 2008, the National Health Service Act 2006, the Health Service (Control of Patient Information) Regulations 2002 ("CPI Regulations"); and the National Health Service (NHS) has also issued guidance on patient information confidentiality. Under this framework, a government agency can process personal identifying information without the patient's consent in order to carry out the agency's functions in the public interest, including for health surveillance, but must comply with principles established in the GDPR and the 1996-7 Caldicott Review. [1, 2, 3, 4, 5, 6, 7, 8, 9] The GDPR states that personal data shall be "processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures." [4] According to the Policy Background section of the GDPR, the GDPR will be incorporated into domestic law under the European Union (Withdrawal) Bill when the UK leaves the EU. [2] The CPI Regulations state: "Where a person is in possession of confidential patient information under these Regulations, ... he shall ... ensure that appropriate technical and organisational measures are taken to prevent unauthorised processing of that information". [10] The same principles of data protection are reflected in NHS guidance documents on confidential patient information. These state that legally processed patient information must be kept physically and electronically secure, and provide guidance on achieving this, with reference to the NHS code of practice on information security management. [8, 9] The latter provides guidance for NHS organisations on protecting health information from cyber attacks. [11] Public Health England (PHE)'s policy statement on surveillance states: "If [data containing patient identifiable information] needs to be transferred, this must be done using an appropriate secure method." [12] PHE's guidance to laboratories on disease surveillance states: "Data containing any personal identifiers being transmitted to PHE electronically should be encrypted." [13]

[1] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018."

[<http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>]. Accessed 6 February 2021.

[2] Government of the United Kingdom. 23 May 2018. "Data Protection Act 2018: Policy background."

[<http://www.legislation.gov.uk/ukpga/2018/12/notes/division/3/index.htm>]. Accessed 6 February 2021.

[3] European Commission. N.d. "2018 reform of EU data protection rules."

[[https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules\\_en](https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en)]. Accessed 6 February 2021.

- [4] European Commission. 27 April 2016. “Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)”. [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN>]. Accessed 6 February 2021.
- [5] Government of the United Kingdom. 2008. “Health and Social Care Act 2008.” [<https://www.legislation.gov.uk/ukpga/2008/14/contents>]. Accessed 6 February 2021.
- [6] Government of the United Kingdom. 2006. “National Health Service Act 2006 – Section 251: Control of patient information.” [<https://www.legislation.gov.uk/ukpga/2006/41/section/251>]. Accessed 6 February 2021.
- [7] Government of the United Kingdom. 2002. “The Health Service (Control of Patient Information) Regulations 2002 – Regulation 3: Communicable disease and other risks to public health.” [<https://www.legislation.gov.uk/uksi/2002/1438/regulation/3/made>]. Accessed 6 February 2021.
- [8] Department of Health. November 2003. “Confidentiality: NHS code of practice.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/200146/Confidentiality\\_-\\_NHS\\_Code\\_of\\_Practice.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/200146/Confidentiality_-_NHS_Code_of_Practice.pdf)]. Accessed 6 February 2021.
- [9] Health and Social Care Information Centre (Now called NHS Digital). 2013. “A guide to confidentiality in health and social care: references - Treating confidential information with respect.” [<https://digital.nhs.uk/binaries/content/assets/legacy/pdf/0/n/confidentiality-guide-2013-references.pdf>]. Accessed 6 February 2021.
- [10] Government of the United Kingdom. 2002. “The Health Service (Control of Patient Information) Regulations 2002 – Regulation 7: Restrictions and exclusions.” [<https://www.legislation.gov.uk/uksi/2002/1438/regulation/7/made>]. Accessed 6 February 2021.
- [11] Department of Health. 2007. “Information security management: NHS code of practice.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/200506/Information\\_Security\\_Management\\_-\\_NHS\\_Code\\_of\\_Practice.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/200506/Information_Security_Management_-_NHS_Code_of_Practice.pdf)]. Accessed 6 February 2021.
- [12] Public Health England (PHE). 13 December 2017. “Public Health England: approach to surveillance.” [<https://www.gov.uk/government/publications/public-health-england-approach-to-surveillance/public-health-england-approach-to-surveillance#:~:text=Surveillance%20is%20a%20core%20function,public%20health%20decisions%20and%20actions.>]. Accessed 6 February 2021.
- [13] Public Health England (PHE). October 2020. “Laboratory reporting to Public Health England: A guide for diagnostic laboratories.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/739854/PHE\\_Laboratory\\_Reporting\\_Guidelines.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739854/PHE_Laboratory_Reporting_Guidelines.pdf)]. Accessed 6 February 2021.

## 2.4.5 International data sharing

### 2.4.5a

**Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?**

Yes, commitments have been made to share data for more than one disease = 2, Yes, commitments have been made to share data only for one disease = 1, No = 0

**Current Year Score: 2**

There is evidence that the United Kingdom has made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data for more than one disease during a public health emergency with other countries in the region. Prior to Brexit, the UK committed to share surveillance data during a public health emergency with other European

Union (EU) countries through its participation in the European Centre for Disease Prevention and Control (ECDC). As a member of the European Union, the UK shared surveillance data during a public health emergency with other countries in the region. All EU and EEA countries are part of the European Centre for Disease Prevention and Control's Early Warning and Response System (EWRS). The EWRS is a platform to "allow exchange of information on risk assessment and risk management for more timely, efficient and coordinated public health action... The EWRS is used for notifications on outbreaks, exchanging information and decisions about the coordination of measures among Member States. Over the years, it has played an important role to support health crisis related to severe acute respiratory syndrome (SARS), Ebola virus disease, avian influenza in humans and other communicable diseases." [1] Article 9 of Chapter IV of the European Union (EU) Decision on Serious Cross-Border Threats to Health notes that the European Commission "shall make available to the national competent authorities through the EWRS any information that may be useful for coordinating the response...including information related to serious cross-border threats to health and public health measures related to serious cross-border threats to health transmitted through rapid alert and information systems established under other provisions of Union law or the Euratom Treaty." [2] Upon the UK leaving the EU, the Cooperation on health security section of the Trade and Cooperation Agreement between the EU and the UK states that when there is a serious cross-border threat to health, following a written request from the UK, the EU may grant the UK "ad hoc" access to the EWRS to exchange relevant information, assess public health risks, and coordinate public health measures. This exchange of information shall be on temporary basis for the period considered necessary for the relevant serious cross-border threat to health. Furthermore, the Cooperation on health security section states that the ECDC "shall cooperate on technical and scientific matters of mutual interest to the Parties and, to that end, may conclude a memorandum of understanding." [3]

[1] European Centre for Disease Prevention and Control. "Early Warning and Response System (EWRS)."

[<https://ecdc.europa.eu/en/early-warning-and-response-system-ewrs>]. Accessed 8 February 2021.

[2] Decision No 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on Serious Cross-Border Threats to Health and Repealing Decision No 2119/98/EC. Official Journal of the European Union.

[[https://ec.europa.eu/health/sites/health/files/preparedness\\_response/docs/decision\\_serious\\_crossborder\\_threats\\_22102013\\_en.pdf](https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/decision_serious_crossborder_threats_22102013_en.pdf)]. Accessed 8 February 2021.

[3] Government of the United Kingdom. 24 December 2020. "Trade and Cooperation Agreement Between the European Union and the European Atomic Energy Community, of the One Part, and the United Kingdom of Great Britain and Northern Ireland, of the Other Part - Part Four, Title 1: Health Security, Article HS.1: Cooperation on health security." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948119/EU-UK\\_Trade\\_and\\_Cooperation\\_Agreement\\_24.12.2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948119/EU-UK_Trade_and_Cooperation_Agreement_24.12.2020.pdf)]. Accessed 8 February 2021.

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

**Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?**

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

**Current Year Score: 1**

There is evidence that there is a national system in place in the United Kingdom to provide support at the sub-national level to conduct contact tracing in the event of a public health emergency, but only in response to active public health

emergencies. Existing evidence is limited to the measures adopted during COVID-19. The National Health Service (NHS) Test and Trace during the COVID-19 pandemic ensures testing for anyone who develops symptoms, as well as asymptomatic testing of NHS and social care staff and care home residents, and "helps trace close recent contacts of anyone who tests positive for coronavirus and, if necessary, notifies them that they must self-isolate at home to help stop the spread of the virus." [1] An August 2020 press release from the Department of Health and Social Care (DHSC) describes how NHS Test and Trace and Public Health England (PHE) will extend its partnership with local authorities towards an integrated national and local system. [2] The DHSC's COVID-19 'contain framework', which serves as guidance to local decision-makers and last updated in December 2020, describes local entities leading local outbreak planning with the support of NHS Test and Trace. [3] The government of Northern Ireland provides information about the Public Health Agency's contact tracing service, which uses text messaging from 'HSCtracing' to notify contacts to self-isolate. [4] Contact tracing in Scotland is delivered through NHS Scotland's Test and Protect system, which has been operating since May 2020. [5] Everyone who tests positive for coronavirus is put in touch with a NHS contact tracer, and individuals that person has had contact with are contacted and told to isolate. [6] In Wales, Public Health Wales (PHW) provides national coordination on contact tracing through Test, Trace, Protect, which is "delivered regionally with Local Health Boards and local authorities working in partnership along with other public services to deploy contact tracing teams who understand the local context." [7]

- [1] Department of Health and Social Care. 11 January 2021. "Guidance: NHS Test and Trace: how it works." [https://www.gov.uk/guidance/nhs-test-and-trace-how-it-works#how-nhs-test-and-trace-works]. Accessed 13 February 2021.
- [2] Department of Health and Social Care. 10 August 2020. "Press release: NHS Test and Trace service to strengthen regional contact tracing." [https://www.gov.uk/government/news/nhs-test-and-trace-service-to-strengthen-regional-contact-tracing]. Accessed 13 February 2021.
- [3] Department of Health and Social Care. 29 December 2020. "Guidance: COVID-19 contain framework: a guide for local decision-makers." [https://www.gov.uk/government/publications/containing-and-managing-local-coronavirus-covid-19-outbreaks/covid-19-contain-framework-a-guide-for-local-decision-makers]. Accessed 13 February 2021.
- [4] Northern Ireland Direct. N.d. "Coronavirus (COVID-19): testing and contact tracing." [https://www.nidirect.gov.uk/articles/coronavirus-covid-19-testing-and-contact-tracing]. Accessed 13 February 2021.
- [5] Scottish Government. 20 October 2020. "Coronavirus: how contact tracing works." [https://www.gov.scot/publications/coronavirus-covid-19-test-and-protect/]. Accessed 13 February 2021.
- [6] Scotland National Health Service (NHS) Inform. 5 January 2021. "Coronavirus (COVID-19): Contact tracing." [https://www.nhsinform.scot/illnesses-and-conditions/infections-and-poisoning/coronavirus-covid-19/test-and-protect/coronavirus-covid-19-contact-tracing]. Accessed 13 February 2021.
- [7] Welsh Government. 4 June 2020. "Test Trace Protect." [https://gov.wales/test-trace-protect-html#section-42072]. Accessed 13 February 2021.

### 2.5.1b

**Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?**

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

**Current Year Score: 0**

There is no evidence that the United Kingdom provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention. Existing evidence is limited to the COVID-19 pandemic. In response to impacts of the COVID-19 pandemic, in September 2020 the Prime Minister's Office announced a support payment of £500 "for those on lower incomes who cannot work from

home and have lost income as a result." [1] There is a number of criteria to be eligible for a support payment, such as being "unable to work from home and will lose income as a result of self-isolating," and the benefit must be claimed within 28 days of the first day of isolation. The guidance for claiming this financial support is indicated to apply to England only. [2, 3] A February 2021 article in The Guardian reported that around 30% of individuals who applied for the self-isolation support payments received it. [4] In Northern Ireland, individuals who are unable to work for more than seven days due to self-isolating can get an isolation note and may be eligible for Statutory Sick Pay (SSP). Those not eligible for SSP can make a claim for Universal Credit or Contributory Employment and Support Allowance. A Discretionary Support self-isolation grant may be available to individuals who live in Northern Ireland who have "an extreme, exceptional or crisis situation which places you or your immediate family's health, safety or wellbeing at significant risk" and meet a number of other criteria. [5, 6] Individuals in Scotland can apply for the self-isolation support grants. Eligibility for the grant includes being told by Test and Protect to self-isolate, being unable to work from home and lose income as a result of self-isolation, among a number of criteria. [7, 8] In Wales, users of the NHS Covid-19 app may be eligible for £500 self-isolation payment if they meet a number of criteria, including being notified as exposed to the virus and unable to work from home and lose income as a result of self-isolation. [9]

[1] Prime Minister's Office. 20 September 2020. "Press release: New package to support and enforce self-isolation."

[<https://www.gov.uk/government/news/new-package-to-support-and-enforce-self-isolation>]. Accessed 13 February 2021.

[2] Department of Health and Social Care. 25 January 2021. "Guidance: Claiming financial support under the Test and Trace Support Payment scheme." [<https://www.gov.uk/government/publications/test-and-trace-support-payment-scheme-claiming-financial-support/claiming-financial-support-under-the-test-and-trace-support-payment-scheme>]. Accessed 13 February 2021.

[3] UK Government. 2021. "Apply for a Test and Trace Support Payment." [<https://www.gov.uk/test-and-trace-support-payment?priority-taxon=5ebf285a-9165-476c-be90-66b9729f50da>]. Accessed 13 February 2021.

[4] Halliday, J. 2 February 2021. "Majority in England turned down for self-isolation support, data shows."

[<https://www.theguardian.com/world/2021/feb/02/majority-in-england-turned-down-for-self-isolation-support-data-shows>]. Accessed 13 February 2021.

[5] Northern Ireland Direct. N.d. "Coronavirus (COVID-19): advice for workers."

[<https://www.nidirect.gov.uk/articles/coronavirus-covid-19-advice-workers>]. Accessed 13 February 2021.

[6] Northern Ireland Direct. N.d. "Extra financial support." [<https://www.nidirect.gov.uk/articles/extra-financial-support#toc-2>]. Accessed 13 February 2021.

[7] Scottish Government. 13 October 2020. "Self-Isolation Support Grant now open." [<https://www.gov.scot/news/self-isolation-support-grant-now-open/>]. Accessed 13 February 2021.

[8] mygov.scot. 5 February 2021. "Self-Isolation Support Grants." [<https://www.mygov.scot/scottish-welfare-fund/self-isolation-support-grants/>]. Accessed 13 February 2021.

[9] Welsh Government. 1 February 2021. "Press Release: Users of the NHS Covid-19 App now eligible to apply for £500 self-isolation payment." [<https://gov.wales/users-nhs-covid-19-app-now-eligible-apply-ps500-self-isolation-payment>]. Accessed 13 February 2021.

### 2.5.1c

**Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom makes de-identified data on contact tracing efforts for COVID-19 available via daily reports on government websites. However, there is evidence that such data publicly available on a weekly basis. The National Health Service (NHS) Test and Trace during the COVID-19 pandemic ensures testing for anyone who develops symptoms, as well as asymptomatic testing of NHS and social care staff and care home residents, and "helps trace close recent contacts of anyone who tests positive for coronavirus and, if necessary, notifies them that they must self-isolate at home to help stop the spread of the virus." [1] An August 2020 press release from the Department of Health and Social Care (DHSC) describes how NHS Test and Trace and Public Health England (PHE) will extend its partnership with local authorities towards an integrated national and local system. [2] The weekly statistics for NHS Test and Trace (England) include data on contact tracing, including data on number positive cases transferred to the NHS Test and Trace and the number of close contacts of positive cases identified in a week. [3, 4, 5] The government of Northern Ireland provides information about the Public Health Agency's contact tracing service, which uses text messaging from 'HSCtracing' to notify contacts to self-isolate. [6] Northern Ireland post weekly reports on its Contract Tracing Service, which include data on number of positive cases where contract tracing has been completed, and the number of contacts identified and reached each week. [7] Contact tracing in Scotland is delivered through NHS Scotland's Test and Protect system, which has been operating since May 2020. [8] Everyone who tests positive for coronavirus is put in touch with a NHS contact tracer, and individuals that person has had contact with are contacted and told to isolate. [9] Contact tracing data is included in Public Health Scotland's weekly COVID-19 statistical reports. [10] In Wales, Public Health Wales (PHW) provides national coordination on contact tracing through Test, Trace, Protect, which is "delivered regionally with Local Health Boards and local authorities working in partnership along with other public services to deploy contact tracing teams who understand the local context." [11] Weekly Test, Trace, Protect data is published on the Welsh Government's website, including number of contacts identified and successfully contacts. [12]

[1] Department of Health and Social Care. 11 January 2021. "Guidance: NHS Test and Trace: how it works."

[<https://www.gov.uk/guidance/nhs-test-and-trace-how-it-works#how-nhs-test-and-trace-works>]. Accessed 14 February 2021.

[2] Department of Health and Social Care. 10 August 2020. "Press release: NHS Test and Trace service to strengthen regional contact tracing." [<https://www.gov.uk/government/news/nhs-test-and-trace-service-to-strengthen-regional-contact-tracing>]. Accessed 14 February 2021.

[3] Department of Health and Social Care. 13 August 2021. "Guidance Testing and contact tracing in the UK: summary of data." [<https://www.gov.uk/government/publications/testing-and-contact-tracing-in-the-uk-summary-of-data>]. Accessed 14 February 2021.

[4] Department of Health and Social Care. 17 December 2020. "Collection: Weekly statistics for NHS Test and Trace (England)." [<https://www.gov.uk/government/collections/nhs-test-and-trace-statistics-england-weekly-reports>]. Accessed 14 February 2021.

[5] Department of Health and Social Care. 11 February 2021. "Weekly statistics for NHS Test and Trace (England): 28 January to 3 February 2021." [<https://www.gov.uk/government/publications/nhs-test-and-trace-england-statistics-28-january-to-3-february-2021/weekly-statistics-for-nhs-test-and-trace-england-28-january-to-3-february-2021#tracing-england>]. Accessed 14 February 2021.

[6] Northern Ireland Direct. N.d. "Coronavirus (COVID-19): testing and contact tracing."

[<https://www.nidirect.gov.uk/articles/coronavirus-covid-19-testing-and-contact-tracing>]. Accessed 14 February 2021.

[7] Northern Ireland HSC Public Health Agency. 11 February 2021. "Contact Tracing Service - Management Information Update." [<https://www.publichealth.hscni.net/covid-19-coronavirus/testing-and-tracing-covid-19/contact-tracing-service-management-information>]. Accessed 14 February 2021.

[8] Scottish Government. 20 October 2020. "Coronavirus: how contact tracing works."

[<https://www.gov.scot/publications/coronavirus-covid-19-test-and-protect/>]. Accessed 14 February 2021.

[9] Scotland National Health Service (NHS) Inform. 5 January 2021. "Coronavirus (COVID-19): Contact tracing."

[<https://www.nhsinform.scot/illnesses-and-conditions/infections-and-poisoning/coronavirus-covid-19/test-and->

protect/coronavirus-covid-19-contact-tracing]. Accessed 14 February 2021.

[10] Public Health Scotland. 10 February 2021. "COVID-19 statistical report." [https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/covid-19-statistical-report/]. Accessed 14 February 2021.

[11] Welsh Government. 4 June 2020. "Test Trace Protect." [https://gov.wales/test-trace-protect-html#section-42072]. Accessed 13 February 2021."

[12] Welsh Government. 11 February 2021. "Test Trace Protect (contact tracing for coronavirus (COVID-19))." [https://gov.wales/test-trace-protect-contact-tracing-coronavirus-covid-19]. Accessed 13 February 2021."

## 2.5.2 Point of entry management

### 2.5.2a

**Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?**

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

**Current Year Score: 1**

There is evidence that the United Kingdom has a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active public health emergency, but only in response to an ongoing emergency.

As of February 2021, passengers arriving to the UK during the COVID-19 pandemic must complete a passenger locator form before checking in to boarding or travel. Information collected on the form is used to contact individuals who travelled with someone who develops coronavirus symptoms and may be used to check that an arriving traveler is self-isolating or quarantining. [1, 2] Border Force will undertake checks at the border and may refuse entry to any non-resident foreign nationals who refuses to comply with these regulations and isn't resident in the UK. Failure to complete the form is also punishable by a £100 fixed penalty notice. [3] The passenger locator form also applies to international travelers arriving in Northern Ireland, Scotland, and Wales. [4, 5, 6] However, there is no publicly available joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts or for other public health emergencies. No evidence of a plan is available through the Department of Health and Social Service, Border Control, the National Health Service, Northern Ireland's Public Health Agency, Public Health Scotland, or Public Health Wales. [7, 8, 9, 10, 11, 12]

[1] UK Government. 2021. "Fill in your passenger locator form." [https://www.gov.uk/provide-journey-contact-details-before-travel-uk]. Accessed 20 February 2021.

[2] UK Government. 2021. "Entering the UK." [https://www.gov.uk/uk-border-control]. Accessed 20 February 2021.

[3] UK Government. 2 June 2020. "News story: Public health border measures to come into force next week." [https://www.gov.uk/government/news/public-health-border-measures-to-come-into-force-next-week]. Accessed 20 February 2021.

[4] Northern Ireland Direct. 2021. "Coronavirus (COVID-19): international travel advice." [https://www.nidirect.gov.uk/articles/coronavirus-covid-19-international-travel-advice]. Accessed 20 February 2021.

[5] Scottish Government. 11 February 2021. "Coronavirus (COVID-19): guidance on travel and transport." [https://www.gov.scot/publications/coronavirus-covid-19-guidance-on-travel-and-transport/]. Accessed 20 February 2021.

[6] Welsh Government. 19 February 2021. "Arriving in Wales from overseas." [https://gov.wales/arriving-wales-overseas]. Accessed 20 February 2021.

[7] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 14 February 2021.

[8] UK Border Force. 2021. [<https://www.gov.uk/government/organisations/border-force>]. Keyword search. Accessed 20 February 2021.

[9] National Health Service. 2021. [<https://www.nhs.uk/>]. Keyword search. Accessed 20 February 2021.

[10] Northern Ireland HSC Public Health Agency. 2021. [<https://www.publichealth.hscni.net/>]. Keyword search. Accessed 20 February 2021.

[11] Public Health Scotland. 2021. [<https://publichealthscotland.scot/>]. Keyword search. Accessed 20 February 2021.

[12] Public Health Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 20 February 2021.

## 2.6 EPIDEMIOLOGY WORKFORCE

### 2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

#### 2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is a field epidemiology training programme (FETP) available in the United Kingdom. Public Health England (PHE) runs an FETP which takes the form of a 2-year fellowship that currently covers England, Wales and Northern Ireland. It provides training and experience to develop the competencies agreed for field epidemiologists in the European Union (EU). It is "aimed at medical, nursing, scientific, or veterinary staff who are, or whose future career may be, in a post involving field investigation and epidemiology and who want to further enhance their specialist skills." Fellows are based in one of the 12 FETP training sites for the 2 year fellowship. Training is provided on the job, but at least 10% of time is dedicated to formal training courses based in the UK or Europe. [1, 2, 3] Upon Brexit, the UK's exit from from the European Union, the UK also left the European Centre for Disease Prevention and Control (ECDC) and therefore its European Programme for Intervention Epidemiology Training (EPIET). [4, 5]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 3 February 2021.

[2] Public Health England (PHE). 23 March 2020. "Field Epidemiology Training Programme (FETP)."

[<https://www.gov.uk/guidance/field-epidemiology-training-programme-fetp>]. Accessed 3 February 2021.

[3] Public Health England (PHE). March 2020. "UK Field Epidemiology Training Programme Prospectus 2020."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/874555/UK\\_Field\\_Epidemiology\\_Training\\_Programme\\_Prospectus\\_2020\\_\\_1\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874555/UK_Field_Epidemiology_Training_Programme_Prospectus_2020__1_.pdf)]. Accessed 3 February 2021.

[4] The Kings Fund. 11 January 2021. "Brexit and the end of the transition period: what does it mean for the health and care system?" [<https://www.kingsfund.org.uk/publications/articles/brexit-end-of-transition-period-impact-health-care-system>].

Accessed 3 February 2021.

[5] European Centre for Disease Prevention and Control (ECDC). N.d. "Fellowship programme: EPIET/EUPHEM." [http://ecdc.europa.eu/en/epiet/Pages/HomeEpiet.aspx]. Accessed 3 February 2021.

### 2.6.1b

**Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The field epidemiology training programme (FETP) in the United Kingdom is explicitly inclusive of animal health professionals. Public Health England (PHE) runs an FETP which takes the form of a 2-year fellowship that currently covers England, Wales and Northern Ireland. It provides training and experience to develop the competencies agreed for field epidemiologists in the European Union (EU). It is "aimed at medical, nursing, scientific, or veterinary staff who are, or whose future career may be, in a post involving field investigation and epidemiology and who want to further enhance their specialist skills." Fellows are based in one of the 12 FETP training sites for the 2 year fellowship. Training is provided on the job, but at least 10% of time is dedicated to formal training courses based in the UK or Europe. [1, 2, 3] Upon Brexit, the UK's exit from from the European Union, the UK also left the European Centre for Disease Prevention and Control (ECDC) and therefore its European Programme for Intervention Epidemiology Training (EPIET). [4, 5]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/456984/IndependentReport\_GHS\_acc.pdf]. Accessed 3 February 2021.

[2] Public Health England (PHE). 23 March 2020. "Field Epidemiology Training Programme (FETP)."

[https://www.gov.uk/guidance/field-epidemiology-training-programme-fetp]. Accessed 3 February 2021.

[3] Public Health England (PHE). March 2020. "UK Field Epidemiology Training Programme Prospectus 2020."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/874555/UK\_Field\_Epidemiology\_Training\_Programme\_Prospectus\_2020\_\_1\_.pdf]. Accessed 3 February 2021.

[4] The Kings Fund. 11 January 2021. "Brexit and the end of the transition period: what does it mean for the health and care system?" [https://www.kingsfund.org.uk/publications/articles/brexit-end-of-transition-period-impact-health-care-system]. Accessed 3 February 2021.

[5] European Centre for Disease Prevention and Control (ECDC). N.d. "Fellowship programme: EPIET/EUPHEM." [http://ecdc.europa.eu/en/epiet/Pages/HomeEpiet.aspx]. Accessed 3 February 2021.

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

**Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?**

Yes = 1 , No = 0

**Current Year Score: 0**

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## Category 3: Rapid response to and mitigation of the spread of an epidemic

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

#### 3.1.1 National public health emergency preparedness and response plan

##### 3.1.1a

**Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?**

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

**Current Year Score: 2**

The United Kingdom has national public health emergency response plans for England and the devolved administrations of Northern Ireland, Scotland and Wales, which are publicly available and address general disease outbreak response, accompanied by separate disease-specific outbreak management guidance for multiple communicable diseases with pandemic potential. In England, national public health emergency response plans are provided by the National Health Service (NHS) England and Public Health England (PHE). [1, 2, 3] NHS England's 'Incident response plan (national)' (IRP(N)) covers all public health emergencies, including infectious disease outbreaks. It details roles and responsibilities, and addresses each phase of response as well as training and exercises. It does not plan for specific diseases. Operational details under the IRP(N) are provided in a set of standard operating procedures (SOPs), which are classified. [4, 5] PHE has an operational guidance document for communicable disease outbreaks, not specifically emergencies. Appendix 13 provides links to disease-specific guidance, addressing categories based on the location and type of outbreak (eg in hospitals; water or food specific; bioterrorism), as well as certain priority diseases. [6] Some links are outdated, but disease-specific documents addressing outbreak response can be found from the UK government website, gov.uk, including for pandemic influenza, Shiga toxin producing E. coli (STEC) and viral haemorrhagic fevers (VHFs) such as Ebola. [7, 8, 9, 10] In Northern Ireland, the DoH's emergency response plan provides strategic direction on health emergency planning, including for infectious diseases and biological threats. It states that DoH plays a key role in liaising with the rest of the UK and managing stockpiles of medical countermeasures in more serious emergencies, while the Public Health Agency (PHA), under Health and Social Care (HSC, the NHS in Northern Ireland), makes emergency response arrangements. The PHA's key document is a 'Joint response emergency plan', but it is not available online, either from the emergency planning sections of the DoH or PHA websites, or from a wider search. [11, 12, 13, 14] The PHA regularly updates an infectious disease incident/outbreak plan, which provides a template for developing disease-specific plans. It covers all infectious diseases and food poisoning, but refers to the 'Joint response emergency plan' for outbreaks escalated into emergencies. [15] The DoH has a response plan for pandemic influenza. [16] For other disease-specific guidance, PHA either provides links to PHE guidance (eg for VHFs), or refers to plans prepared by specialist teams, for instance the gastroenteritis and port health team's plans for zoonotic and gastrointestinal diseases, which are not available from PHA's website or a wider search. [17, 18] In Scotland, the NHS provides national guidance to support health boards, who must prepare local emergency response plans. [19, 20] The national guidance

document addresses procedures for responding to communicable diseases and other health threats. It contains links to disease-specific guidance from UK and Scottish government sources, eg on waterborne hazards, foodborne diseases, influenza and viral haemorrhagic fevers. [20] Health Protection Scotland (HPS), part of the NHS, provides disease-specific outbreak response guidance for other diseases including pandemic influenza. [21] HPS has also published a guidance document on management of public health incidents, covering coordination between NHS boards and local authorities in any public health incident (not just emergencies). In 2020 an interim revision was published to align with organisational changes since 2017, in response to the 2020 pandemic outbreak of COVID-19 infection. Specific information relating to the management of the COVID-19 pandemic is added to relevant sections in the interim update. [22, 23] Public Health Wales' emergency response plan covers all stages of emergency response, command and control, liaison with the rest of the UK, training and exercises, roles and responsibilities, for public health emergencies in general. It does not address specific diseases. [24] Infectious disease emergencies are addressed in more detail in the 'Wales framework for managing major infectious disease emergencies'. This is not available online from Public Health Wales or a wider search. Another document, 'The communicable disease outbreak plan for Wales' addresses outbreaks which are not serious enough to be classed as emergencies. [25]

- [1] Department of Health and Social Care/Cabinet Office. 8 May 2015. "2010 to 2015 government policy: health emergency planning." [<https://www.gov.uk/government/publications/2010-to-2015-government-policy-health-emergency-planning/2010-to-2015-government-policy-health-emergency-planning>]. Accessed 6 February 2021.
- [2] Public Health England, Cabinet Office, Department of Health and Social Care, Maritime and Coastguard Agency, and NHS England. N.d. "Emergency response: detailed information." [<https://www.gov.uk/topic/health-protection/emergency-response>]. Accessed 6 February 2021.
- [3] National Health Service (NHS) England. February 2019. "Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/ourwork/epr/>]. Accessed 6 February 2021.
- [4] National Health Service (NHS) England. March 2019. "Summary of Published Key Strategic Guidance for Health Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/wp-content/uploads/2017/12/epr-guidance-chart-v3.pdf>]. Accessed 6 February 2021.
- [5] National Health Service (NHS) England. 31 Jul 2017. "Incident response plan (national)." [<https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf>]. Accessed 6 February 2021.
- [6] Public Health England (PHE). August 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 6 February 2021.
- [7] Public Health England (PHE). August 2014. "Pandemic influenza response plan 2014." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 6 February 2021.
- [8] Public Health England (PHE). 17 October 2018. "Shiga toxin-producing Escherichia coli: guidance, data and analysis." [<https://www.gov.uk/government/collections/vero-cytotoxin-producing-escherichia-coli-vtec-guidance-data-and-analysis>]. Accessed 6 February 2021.
- [9] Public Health England (PHE). August 2018. "Interim Public Health Operational Guidance for Shiga toxin producing Escherichia coli (STEC)." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/732569/Interim\\_public\\_health\\_operational\\_guidance\\_for\\_STEC\\_PDF.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732569/Interim_public_health_operational_guidance_for_STEC_PDF.pdf)]. Accessed 6 February 2021.
- [10] Advisory Committee on Dangerous Pathogens, Department of Health/Health and Safety Executive. Nov 2015. "Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/534002/Management\\_of\\_VHF\\_A.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/534002/Management_of_VHF_A.pdf)]. Accessed 6 February 2021.
- [11] Department of Health, Northern Ireland. N.d. "Emergency planning and response." [<https://www.health-ni.gov.uk/articles/emergency-planning-and-response>]. Accessed 6 February 2021.

- [12] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf]. Accessed 6 February 2021.
- [13] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Emergency preparedness/environmental hazards." [https://www.publichealth.hscni.net/directorate-public-health/health-protection/emergency-preparednessenvironmental-hazards]. Accessed 6 February 2021.
- [14] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Priority areas." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/priority-areas]. Accessed 6 February 2021.
- [15] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\_0.pdf]. Accessed 6 February 2021.
- [16] Department of Health, Social Services and Public Safety (DHSSPS, now called "Department of Health"). Jan 2013. "Northern Ireland Health and Social Care influenza pandemic preparedness and response guidance." [https://www.health-ni.gov.uk/sites/default/files/publications/dhssps/pan-flu-ni-hsc-preparedness-response-2012.pdf]. Accessed 6 February 2021.
- [17] Public Health Agency (PHA), Health and Social Care (HSC). "Ebola." N.d. [http://www.publichealth.hscni.net/directorate-public-health/health-protection/ebola]. Accessed 6 February 2021.
- [18] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Gastrointestinal infections." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/gastrointestinal-infections-0]. Accessed 6 February 2021.
- [19] Ready Scotland. Jun 2016. "Preparing Scotland: Philosophy, Principles, Structure and Regulatory Duties." [https://ready.scot/sites/default/files/2020-09/preparing-scotland-hub-updated-published-version-may-2019-new-h-s-diagram.pdf]. Accessed 6 February 2021.
- [20] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf]. Accessed 6 February 2021.
- [21] Health Protection Scotland (HPS). "Pandemic Flu: Guidance for infection control in hospitals and primary care settings." [https://hps-beta.azurewebsites.net/web-resources-container/pandemic-flu-guidance-for-infection-control-in-hospitals-and-primary-care-settings/]. Accessed 6 February 2021.
- [22] Scottish Government/Health Protection Scotland (HPS). 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\_shpn-12-management-public-health-incident.pdf]. Accessed 6 February 2021.
- [23] Health Protection Scotland (HPS). 14 July 2020. "Management of Public Health Incidents: Guidance on the roles and responsibilities of NHS led incident management teams." [https://www.hps.scot.nhs.uk/web-resources-container/management-of-public-health-incident-guidance-on-the-roles-and-responsibilities-of-nhs-led-incident-management-teams/]. Accessed 6 February 2021.
- [24] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan." [http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf]. Accessed 6 February 2021.
- [25] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')." [https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/]. Accessed 6 February 2021.

### 3.1.1b

**If an overarching plan is in place, has it been updated in the last 3 years?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 0**

Most of the United Kingdom's national public health emergency response plans have not been updated in the past 3 years. In England, national public health emergency response plans are provided by National Health Service (NHS) England and Public Health England (PHE). [1, 2, 3] NHS England's Incident response plan (national) (IRP(N)) was last updated in July 2017. [4, 5] PHE has an operational guidance document for communicable disease outbreaks, not specifically emergencies. It was last updated in 2014. [6] Disease-specific documents addressing outbreak response can be found from the UK government website, gov.uk, including for pandemic influenza (last updated in 2014), Shiga toxin producing E. coli (STEC) (last updated in 2018), and viral haemorrhagic fevers such as Ebola (last updated in 2015). [7, 8, 9, 10] In Northern Ireland, the DoH's emergency response plan provides strategic direction on health emergency planning. It was last updated in 2013. [11, 12] The Public Health Agency (PHA), under Health and Social Care (HSC, the NHS in Northern Ireland), makes emergency response arrangements. The PHA's key document is a 'Joint response emergency plan', but it is not available online, either from the emergency planning sections of the DoH or PHA websites, or from a wider search. [11, 12, 13, 14] The PHA regularly updates an infectious disease incident/outbreak plan, which provides a template for developing disease-specific plans (not specifically for emergencies). It was last updated in September 2018. [15] The DoH has a response plan for pandemic influenza, last updated in 2019. [16] For other disease-specific guidance, PHA either provides links to PHE guidance or refers to plans prepared by specialist teams, though these are not available from PHA's website or a wider search. [17, 18] In Scotland, the NHS provides national guidance to support health boards, who must prepare local emergency response plans. The national guidance document addresses procedures for responding to communicable diseases and other health threats, and was last updated in 2013. [19, 20] Health Protection Scotland (HPS), part of the NHS, provides disease-specific outbreak response guidance for other diseases including that for pandemic influenza, last updated in 2008. [21] HPS also has a guidance document on management of public health incidents, covering coordination between NHS boards and local authorities in any public health incident (not just emergencies), last updated in June 2017, and an interim version with specific information relating to the management of the COVID-19 pandemic is added to relevant sections updated in July 2020. [22, 23] Public Health Wales' emergency response plan covers all stages of emergency response, command and control, liaison with the rest of the UK, training and exercises, roles and responsibilities, for public health emergencies in general. It was last updated in September 2018. [24] Infectious disease emergencies are addressed in more detail in the 'Wales framework for managing major infectious disease emergencies'. This is not available online from Public Health Wales or a wider search. Another document, 'The communicable disease outbreak plan for Wales' addresses outbreaks which are not serious enough to be classed as emergencies. It was last updated in 2020. [25]

[1] Department of Health and Social Care/Cabinet Office. 8 May 2015. "2010 to 2015 government policy: health emergency planning." [<https://www.gov.uk/government/publications/2010-to-2015-government-policy-health-emergency-planning/2010-to-2015-government-policy-health-emergency-planning>]. Accessed 6 February 2021.

[2] Public Health England, Cabinet Office, Department of Health and Social Care, Maritime and Coastguard Agency, and NHS England. N.d. "Emergency response: detailed information." [<https://www.gov.uk/topic/health-protection/emergency-response>]. Accessed 6 February 2021.

[3] National Health Service (NHS) England. February 2019. "Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/ourwork/eprr/>]. Accessed 6 February 2021.

[4] National Health Service (NHS) England. March 2019. "Summary of Published Key Strategic Guidance for Health Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/wp-content/uploads/2017/12/eprr-guidance-chart-v3.pdf>]. Accessed 6 February 2021.

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### 3.1.1c

**If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 0**

There is insufficient evidence that most of the national public health emergency response plans in the United Kingdom include considerations for pediatric and/or other vulnerable populations. The UK has national public health emergency response plans for England and the devolved administrations of Northern Ireland, Scotland and Wales. Among the available national plans, those for Scotland and Wales (covering just 13% of the UK population) address considerations for paediatric and other vulnerable populations; those for England and Northern Ireland do not. In England, national public health emergency response plans are provided by the National Health Service (NHS) England and Public Health England (PHE). [1, 2, 3] NHS England's Incident response plan (national) (IRP(N)), which covers all public health emergencies, does not mention considerations for children or other vulnerable populations. [4, 5] PHE has an operational guidance document for communicable disease outbreaks, not specifically emergencies. It does not mention considerations for children or other vulnerable populations. [6] Accompanying these, disease-specific documents addressing outbreak response can be found from the UK government website, gov.uk, including for pandemic influenza, Shiga toxin producing E. coli (STEC) and viral haemorrhagic fevers (VHFs) such as Ebola. The 'Pandemic influenza response plan' and operational guidance for STEC include consideration of children in terms of providing appropriate medical countermeasures, dealing with outbreaks in child care settings, and considering special risks to those aged 5 and under; the guidance on VHFs does not consider vulnerable groups. [7, 8, 9, 10] In Northern Ireland, the DoH's emergency response plan provides strategic direction on health emergency planning, including for infectious diseases and biological threats. It requires regional health command centres to identify and discuss the impact on vulnerable people at their first meeting during a public health emergency; and discussion of vulnerable people should be included in internal update reports. The Public Health Agency (PHA), under Health and Social Care (HSC, the NHS in Northern Ireland), has a 'Joint response emergency plan', but it is not available online. [11, 12, 13, 14] The PHA regularly updates an infectious disease incident/outbreak plan, which provides a template for developing disease-specific plans (not specifically for emergencies). It does not consider vulnerable populations. [15] The DoH has a response plan for

pandemic influenza, which considers the needs of children and other vulnerable groups in terms of outbreaks in child care settings, anticipated additional needs for intensive care places for young children, special supplies of medical countermeasures for children under 1 year, and additional strain on those providing mental health and care services for children and vulnerable adults. [16] For other disease-specific guidance, PHA either provides links to PHE guidance (eg for VHF), or refers to plans prepared by specialist teams, though these are not available from PHA's website or a wider search. [17, 18] In Scotland, the NHS provides national guidance to support health boards, who must prepare local emergency response plans. [19, 20] The national guidance document addresses procedures for responding to communicable diseases and other health threats. It mentions planning for the needs of children and other vulnerable people during emergencies, noting that the obligation to do so stems from the CCA. [21] Health Protection Scotland (HPS), part of the NHS, provides disease-specific outbreak response guidance for other diseases, including that for pandemic influenza which also considers the needs of children as a vulnerable group. [22] HPS has a guidance document on management of public health incidents, covering coordination between NHS boards and local authorities in any public health incident (not just emergencies). It mentions consideration of vulnerable groups such as women and the immune-compromised in risk communication. [23] Public Health Wales' emergency response plan has a section on vulnerable persons, including children and vulnerable adults and consideration of communication needs, and mentions that all emergency response plans should include this. [24] Infectious disease emergencies are addressed in more detail in the 'Wales framework for managing major infectious disease emergencies'. This is not available online from Public Health Wales or a wider search. Another document, 'The communicable disease outbreak plan for Wales' addresses outbreaks which are not serious enough to be classed as emergencies. It mentions the need to identify vulnerable groups during an outbreak. [25]

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### 3.1.1d

**Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?**

Yes = 1 , No = 0

**Current Year Score: 1**

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

## 3.1.2 Private sector involvement in response planning

### 3.1.2a

**Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response. These mechanisms exist notably in England and at the UK level, and to a more limited extent in the devolved administrations of Northern Ireland, Scotland and Wales. National Health Service (NHS) England’s ‘Emergency preparedness, resilience and response (EPRR) framework’ provides a framework for all NHS-funded organisations and private providers of NHS-funded services to be prepared for emergencies. It states that though private providers are not mentioned in the Civil Contingencies Act 2004, “NHS England guidance expects them to plan for and respond to emergencies ... in a manner which is relevant, necessary and proportionate to the scale and services provided”. The minimum requirements which providers must meet are set out in the NHS England ‘Core standards for EPRR’ and contracts require compliance. [1] The Health and Social Care Act 2012, Section 46 places a duty on relevant service providers to appoint an individual to be responsible for emergency response and gives NHS England powers to ensure a coordinated emergency response across service providers. [1, 2, 3, 4] There is no evidence that Northern Ireland has a separate mechanism for involving the private sector in outbreak emergency response from the Department of Health (DoH)’s ‘Emergency planning and response’ web page, its emergency response plan or its guidance on pandemic influenza response. [5, 6, 7] The Public Health Agency (PHA)’s joint response emergency plan is not available. [5, 8] Its infectious disease incident/outbreak plan notes the need to engage with private sector water companies in responding to waterborne outbreaks. [9] NHS Scotland’s public health emergency guidance identifies ways in which the NHS should engage the private sector in response to public health emergencies: identifying private health care capacity, and having plans in place to draw on extra capacity from voluntary sector and private ambulance services. [10] Guidance on pandemic influenza from Health Protection Scotland (HPS) does not mention mechanisms for engaging with the private sector; nor does official guidance on management of public health incidents. [11, 12] Public Health Wales’ emergency response plan does not mention mechanisms for engaging with the private sector. [13] Its more specific ‘Wales framework for managing major infectious disease emergencies’ is not available online. The ‘Communicable disease outbreak plan for Wales’ notes that Public Health Wales and local authorities should engage with private sector water

companies in responding to waterborne outbreaks; and that private contractors can be engaged to conduct sampling activities for Legionella. [14] At the UK level, Cabinet Office guidance on emergency preparedness and response notes the existence of a Media emergency forum (MEF), through which senior media editors, government representatives and representatives of local responders organise cooperation during emergencies (including outbreaks). [15] In addition, there is detailed government guidance on how businesses can participate in emergency preparedness and response, including a Corporate resilience strategy to support small businesses to increase resilience. [16, 17] The government maintains a National risk register, assessing the likelihood and potential impact of a range of risks, including infectious diseases, with links to guidance on how the private sector can mitigate them. [18] For instance, guidance on pandemic influenza is available specifically for small businesses and the hospitality industry, among others. [19]

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### 3.1.3 Non-pharmaceutical interventions planning

#### 3.1.3a

**Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?**

Yes, a policy, plan and/or guidelines are in place for more than one disease = 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom has in place a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic. Among the 2011 UK Pandemic Preparedness Strategy's key elements of pandemic response, the plan describes approaches to reduce the risk of transmission and infection, which include good hygiene advice and "appropriate behavioural interventions." [1] Public Health England's 2014 Pandemic Influenza response plan mentions providing information to the public on NPIs, such as social distancing messages and good hand and respiratory hygiene, as well as mention of school closures as a potential response to reduce "clinical attack rates." [2] There is no evidence of plans in place to implement NPIs during an epidemic or pandemic in Northern Ireland's 2019 Department of Health Emergency Response Plan. [3] There is also no evidence of plans in place to implement NPIs during an epidemic or pandemic in Scotland's Guidance for health boards in preparing for emergencies. [4] The Communicable Disease Outbreak Plan for Wales, last updated in 2020, includes guidance on cleaning and handwashing among actions to take in response to an outbreak of gastrointestinal (GI) infection, but there is no further evidence, and NPIs are not mentioned in Public Health Wales 2018 Emergency Response Plan. [5, 6] The UK's Scientific Advisory Group for Emergencies (SAGE) has published tables outlining the impacts of various NPIs in the context of the COVID-19 pandemic—most recently published in October 2020—but these do not serve as evidence of a plan for when and how NPIs are implemented. [7] There is no evidence of a policy, plan, or guidelines in place to implement NPIs during an epidemic or pandemic available through the UK government website, including the Department of Health and Social Care and Public Health England, the UK National Health Service, Northern Ireland's Public Health Service, Public Health Scotland, or Public

Health Wales. [8, 9, 10, 11, 12]

- [1] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 14 February 2021.
- [2] Public Health England. 2014. "Pandemic influenza response plan."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 14 February 2021.
- [3] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan."  
[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 14 February 2021.
- [4] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland."  
[<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 14 February 2021.
- [5] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')."  
[<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 14 February 2021.
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[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 14 February 2021.
- [7] Scientific Advisory Group for Emergencies. 12 October 2020. "Non-pharmaceutical interventions (NPIs) table, 21 September 2020." [<https://www.gov.uk/government/publications/npis-table-17-september-2020>]. Accessed 14 February 2021.
- [8] UK Government. 2021. Official Website. [<https://www.gov.uk/>]. Keyword search. Accessed 14 February 2021.
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- [12] Public Health Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 14 February 2021.

## 3.2 EXERCISING RESPONSE PLANS

### 3.2.1 Activating response plans

#### 3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?
- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is evidence that the United Kingdom has activated a national emergency response plan for an infectious disease outbreak in the past year, and there is no evidence that the country has completed a national-level biological threat-focused exercise in the past year. The Coronavirus Action Plan, which was published in March 2020 and covers all of the UK—including the devolved administrations of Northern Ireland, Scotland, and Wales—sets out the country's response plan to the coronavirus. The Coronavirus Action Plan refers to "contingency plans developed for pandemic influenza," citing the UK Influenza Pandemic Preparedness Strategy 2011 and indicates that the 2011 influenza plan served as a useful "starting point" and has been adapted to account for differences between COVID-19 and influenza. [1] The Coronavirus plan makes no mention of other existing plans for England—including the Department of Health and Social Care's (DHSC) policy on health emergency planning, the National Health Service's (NHS) plans on Emergency Preparedness, Resilience & Response (EPRR) or Incident response plan, or Public Health England (PHE) communicable disease outbreak management. [2, 3, 4, 5] The Coronavirus plan also does not mention Northern Ireland's response plans—the Department of Health's emergency response plan or plan for pandemic influenza, or the Public Health Agency (PHA) infectious disease incident/outbreak plan—Scotland's NHS emergency response plans or Health Protection Scotland (HPS) pandemic influenza outbreak response plan, or Public Health Wales' emergency response plan or 'The communicable disease outbreak plan for Wales'. [6, 7, 8, 9, 10, 11] A May 2020 editorial in the British Medical Journal describes the UK's Coronavirus action plan and describes the country's response as "not well prepared nor remotely adequate." [12] There is no evidence with the WHO that the UK has completed a national-level biological threat-focused exercise in the past year. [13]

[1] Department of Health and Social Care, Northern Ireland Department of Health, Scottish Government, and Welsh Government. 3 March 2020. "Coronavirus: action plan - A guide to what you can expect across the UK."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869827/Coronavirus\\_action\\_plan\\_-\\_a\\_guide\\_to\\_what\\_you\\_can\\_expect\\_across\\_the\\_UK.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869827/Coronavirus_action_plan_-_a_guide_to_what_you_can_expect_across_the_UK.pdf)]. Accessed 14 February 2021.

[2] Department of Health and Social Care/Cabinet Office. 8 May 2015. "2010 to 2015 government policy: health emergency planning." [<https://www.gov.uk/government/publications/2010-to-2015-government-policy-health-emergency-planning/2010-to-2015-government-policy-health-emergency-planning>]. Accessed 14 February 2021.

[3] National Health Service (NHS) England. February 2019. "Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/ourwork/epr/>]. Accessed 14 February 2021.

[4] National Health Service (NHS) England. 31 Jul 2017. "Incident response plan (national)." [<https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf>]. Accessed 14 February 2021.

[5] Public Health England (PHE). August 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 14 February 2021.

[6] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 14 February 2021.

[7] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [[http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\\_0.pdf](http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018_0.pdf)]. Accessed 14 February 2021.

[8] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 14 February 2021.

[9] Health Protection Scotland (HPS). "Pandemic Flu: Guidance for infection control in hospitals and primary care settings."

[https://hps-beta.azurewebsites.net/web-resources-container/pandemic-flu-guidance-for-infection-control-in-hospitals-and-primary-care-settings/]. Accessed 14 February 2021.

[10] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan."

[http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%2028Sep%202018%29.pdf]. Accessed 14 February 2021.

[11] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')."

[https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/]. Accessed 14 February 2021.

[12] Scally, G., Jacobson, B. and Abbasi, K. 15 May 2020. "The UK's public health response to covid-19."

[https://www.bmj.com/content/369/bmj.m1932]. British Medical Journal (BMJ). Accessed 14 February 2021.

[13] World Health Organization. 2021. "Simulation Exercise." [https://extranet.who.int/sph/simulation-exercise]. Accessed 14 February 2021.

### 3.2.1b

**Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?**

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

**Current Year Score: 0**

There is no evidence that the United Kingdom in the past year has identified a list of gaps and best practices in response and developed a plan to improve response capabilities. There is no evidence from the WHO that the UK has carried out a biological threat-focused IHR exercise with the WHO in recent years, or undergone an exercise to identify a list of gaps and best practices from such an exercise in the past year. [1, 2, 3] The WHO after action review page does not have any information on exercises with the UK. [4] The UK Biological Security Strategy 2018, which sets out an all-hazards approach towards linking cross-Government efforts on biological risks, mentions assessing gaps and best practices, but there is no detail on specific plans to identify such. [5] There is no evidence that the UK has identified a list of gaps and best practices in response to an infectious diseases response or a biological-threat focused exercise available through the Department of Health and Social Care. [6]

[1] World Health Organization. 2021. "Strategic Partnership for Health Security and Emergency Preparedness (SPH) Portal - United Kingdom Of Great Britain and Northern Ireland." [https://extranet.who.int/sph/country/united-kingdom-great-britain-and-northern-ireland]. Accessed 14 February 2021.

[2] World Health Organisation (WHO), Strategic Partnership for Health Security and Emergency Preparedness (SPH) Portal. 2021. "Health security calendar." [https://extranet.who.int/sph/calendar]. Accessed 14 February 2021.

[3] World Health Organisation (WHO). 2021. "United Kingdom of Great Britain and Northern Ireland." [https://www.who.int/countries/gbr/]. Accessed 14 February 2021.

[4] World Health Organization. 2021. "After Action Review." [https://extranet.who.int/sph/after-action-review]. Accessed 14 February 2021.

[5] HM Government. July 2018. "UK Biological Security Strategy."

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/730213/2018\_UK\_Biological\_Security\_Strategy.pdf]. Accessed 14 February 2021.

[6] UK Department of Health and Social Care. 2021. [https://www.gov.uk/government/organisations/department-of-health-and-social-care]. Keyword search. Accessed 14 February 2021.

### 3.2.2 Private sector engagement in exercises

#### 3.2.2a

**Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. England and the devolved administrations of Northern Ireland, Scotland and Wales have a number of general disease outbreak response plans, accompanied by separate disease-specific outbreak management guidance for multiple communicable diseases with pandemic potential. There is no mention of private sector representatives' involvement in national-level biological threat focused exercises in the Coronavirus action plan, which was published in March 2020 and covers all of the UK—including the devolved administrations of Northern Ireland, Scotland, and Wales. [1] The Department of Health and Social Care's (DHSC) policy on health emergency planning, the National Health Service's (NHS) plans on Emergency Preparedness, Resilience & Response (EPRR) or Incident response plan, or Public Health England (PHE) communicable disease outbreak management do not mention private sector involvement. [2, 3, 4, 5] There is also no mention of private sector involvement in biological threat-focused exercises in Northern Ireland's response plans—the Department of Health's emergency response plan or plan for pandemic influenza, or the Public Health Agency (PHA) infectious disease incident/outbreak plan—Scotland's NHS emergency response plans or Health Protection Scotland (HPS) pandemic influenza outbreak response plan, or Public Health Wales' emergency response plan or 'The communicable disease outbreak plan for Wales'. [6, 7, 8, 9, 10, 11] The UK Biological Security Strategy 2018, which sets out an all-hazards approach towards linking cross-Government efforts on biological risks, mentions response planning is "reinforced through a regular programme of training and exercises," but there is no detail on when exercises will take place and if they include private sector representatives. [12] There is no evidence of a national-level biological threat-focused exercise within the past year from the DHSC, PHE, NHS, World Health Organization (WHO), or media reporting. [13, 14, 15, 16] There is no evidence with the WHO that the UK has completed a national-level biological threat-focused exercise in the past year. [17, 18]

[1] Department of Health and Social Care, Northern Ireland Department of Health, Scottish Government, and Welsh Government. 3 March 2020. "Coronavirus: action plan - A guide to what you can expect across the UK."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869827/Coronavirus\\_action\\_plan\\_-\\_a\\_guide\\_to\\_what\\_you\\_can\\_expect\\_across\\_the\\_UK.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869827/Coronavirus_action_plan_-_a_guide_to_what_you_can_expect_across_the_UK.pdf)]. Accessed 15 February 2021.

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[3] National Health Service (NHS) England. February 2019. "Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/ourwork/epr/>]. Accessed 15 February 2021.

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[5] Public Health England (PHE). August 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 15 February 2021.

[6] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 15 February 2021.

[7] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease

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- [8] NHS Scotland Resilience. Aug 2013. “Preparing for emergencies: Guidance for health boards in Scotland.” [<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 15 February 2021.
- [9] Health Protection Scotland (HPS). “Pandemic Flu: Guidance for infection control in hospitals and primary care settings.” [<https://hps-beta.azurewebsites.net/web-resources-container/pandemic-flu-guidance-for-infection-control-in-hospitals-and-primary-care-settings/>]. Accessed 15 February 2021.
- [10] Public Health Wales. Sep 2018. “Public Health Wales emergency response plan.” [<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 15 February 2021.
- [11] Welsh Government. July 2020. “The Communicable Disease Outbreak Plan for Wales (‘The Wales Outbreak Plan’).” [<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 14 February 2021.
- [12] HM Government. July 2018. “UK Biological Security Strategy.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/730213/2018\\_UK\\_Biological\\_Security\\_Strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/730213/2018_UK_Biological_Security_Strategy.pdf)]. Accessed 15 February 2021.
- [13] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 15 February 2021.
- [14] Public Health England. 2021. [<https://www.gov.uk/government/organisations/public-health-england>]. Keyword search. Accessed 15 February 2021.
- [15] UK National Health Service. Official Website. [<https://www.nhs.uk/>]. Keyword search. Accessed 15 February 2021.
- [16] World Health Organisation (WHO). 2021. “United Kingdom of Great Britain and Northern Ireland.” [<https://www.who.int/countries/gbr/>]. Accessed 15 February 2021.
- [17] World Health Organisation (WHO), Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). 2018. “Health security calendar.” [<https://extranet.who.int/sph/calendar>]. Accessed 15 February 2021.
- [18] World Health Organization. 2021. “Simulation Exercise.” [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 15 February 2021.

## 3.3 EMERGENCY RESPONSE OPERATION

### 3.3.1 Emergency response operation

#### 3.3.1a

Does the country have in place an Emergency Operations Center (EOC)?

Yes = 1 , No = 0

Current Year Score: 1

The United Kingdom has public health emergency operations centres (PHEOCs) in England and the devolved administrations of Northern Ireland, Scotland and Wales. According to the 2015 Global Health Security Agenda pilot assessment, England’s PHEOC is Public Health England (PHE)’s National Incident Co-ordination Centre (NICC). It is activated during public health emergencies with cross-regional or national impact. The NICC is kept operational between times of activation by the Corporate Resilience Team (CRT). Neither the NICC nor the CRT have an online presence. PHE has 4 facilities which can

convert into the PHEOC: at PHE offices in central London; at the Colindale site, outer London; at the Centre for Radiation, Chemicals and Environment in Oxfordshire; and in the Emergency Response Department (ERD) at the Porton site in Wiltshire. The principal EOC is at that in central London, which houses the CRT. As health is devolved, Northern Ireland, Scotland and Wales have their own equivalents, and in crisis situations contact is maintained between public health bodies directly or, for more serious incidents, at Cabinet Office Briefing Rooms (COBR). [1, 2] In Northern Ireland, a PHEOC called the Regional Health Command Centre (RHCC) may be partially activated in significant emergencies and fully activated in serious and catastrophic emergencies. [3] The Scottish Government activates its own PHEOC, the Scottish Government Resilience Room (SGoRR) when national-level public health emergency coordination (within Scotland, and between Scotland and the rest of the UK) is required. [4, 5, 6] Public Health Wales activates its PHEOC, the Incident Coordination Centre, in public health emergencies. Coordination with the UK government (COBR) in some public health emergencies is done through the general EOC, the Emergency Coordinating Centre Wales (ECCW). [7]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 21 January 2021.
- [2] Public Health England (PHE). 12 Jul 2018. "Annual Report and Accounts 2017/18."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/725092/PHE\\_Annual\\_Report\\_2017\\_2018\\_print\\_ready\\_pdf.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725092/PHE_Annual_Report_2017_2018_print_ready_pdf.pdf)]. Accessed 21 January 2021.
- [3] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan."  
[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 21 January 2021.
- [4] Preparing Scotland. Jun 2016. "Preparing Scotland: Philosophy, Principles, Structure and Regulatory Duties."  
[<https://ready.scot/how-scotland-prepares/preparing-scotland-guidance/philosophy-principles-structure-and-regulatory>]. Accessed 21 January 2021.
- [5] NHSScotland Resilience. 24 September 2013. "Preparing for emergencies: Guidance for health boards in Scotland."  
[<https://www.gov.scot/publications/preparing-emergencies-guidance-health-boards-scotland/>]. Accessed 21 January 2021.
- [6] Scottish Government/Health Protection Scotland (HPS). 14 July 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incidents.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incidents.pdf)]. Accessed 21 January 2021.
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### 3.3.1b

**Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?**

Yes = 1, No = 0

**Current Year Score: 1**

The Emergency Operations Centers (EOCs) in the United Kingdom covering most of the country's population are required to conduct a drill for a public health emergency scenario at least once per year. The EOCs in England and the devolved administrations of Northern Ireland, Scotland and Wales are all required to conduct regular drills; there is evidence of a requirement for drills to take place at least once per year for those in England and Wales; and there are indications that the case may be the same for Northern Ireland and Scotland. According to the 2015 Global Health Security Agenda pilot

assessment, England's EOC is Public Health England (PHE)'s National Incident Co-ordination Centre (NICC). It is kept operational between times of activation by the Corporate Resilience Team (CRT), which ensures that the PHEOC is tested in a full-scale functional exercise annually. Every 3 years there is also a health-led cross government functional exercise where the PHE response is fully activated. As health is devolved, Northern Ireland, Scotland and Wales have their own equivalents. [1, 2] In Northern Ireland, the EOC has a robust training and exercise programme, but no information is available on the frequency of exercises. As an indication of practice in Northern Ireland, other bodies involved in public health emergency response, such as the Public Health Agency, are required to carry out "a six-monthly" communications test, a table top exercise annually and a live exercise at least every three years. [3, 4, 5] Scotland's EOC (the Scottish Government Resilience Room, SGoRR) is legally required to conduct regular exercises, as do all bodies involved in public health emergency response, but no specific information is available on frequency. [6, 7, 8, 9] However, Scottish health boards' major incident plans should be exercised in full at least every 3 years and tested through a table-top exercise every year and communicated/cascaded within the organisation and to partners every 6 months. [7] Wales' EOC (the Incident Coordination Centre) sits under Public Health Wales, which is a category 1 responder under the Civil Contingencies Act 2004. The NHS Wales 'Emergency planning core guidance' (2015) requires category 1 responders to meet a minimum requirement for a live exercise every 3 years, a table top exercise and physical setting-up of the control centre every year and a test of communications cascades every six months. [10]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 5 February 2021.

[2] Public Health England (PHE). 26 November 2020. "PHE Annual Report and Accounts: 2019 to 2020."

[<https://www.gov.uk/government/publications/phe-annual-report-and-accounts-2019-to-2020>]. Accessed 5 February 2021.

[3] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan."

[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 5 February 2021.

[4] Department of Health, Northern Ireland. N.d. "Emergency planning and response." [<https://www.health-ni.gov.uk/articles/emergency-planning-and-response>]. Accessed 5 February 2021.

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[<https://ready.scot/how-scotland-prepares/preparing-scotland-guidance/philosophy-principles-structure-and-regulatory>]. Accessed 5 February 2021.

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Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incidents.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incidents.pdf)]. Accessed 5 February 2021.

[9] Ready Scotland. Sep 2018. "Preparing Scotland exercise guidance."

[<https://www.readyscotland.org/media/1460/preparing-scotland-exercise-guidance-published-version-september-2018.pdf>]. Accessed 5 February 2021.

[10] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan."

[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%2028Sep%202018%29.pdf>]. Accessed 5 February 2021.

### 3.3.1c

**Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient public evidence to show that the Emergency Operations Centers (EOCs) in the United Kingdom covering most of the country's population have conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. There is insufficient evidence that England and Northern Ireland (together covering 87% of the population) have the capacity to activate within 120 minutes of a public health emergency being identified, and there is no evidence with regard to the activation times of the EOCs in Scotland and Wales. According to the 2015 Global Health Security Agenda pilot assessment, England's EOC is Public Health England (PHE)'s National Incident Co-ordination Centre (NICC). It is kept operational between times of activation by the Corporate Resilience Team (CRT). Its 4 locations can be rapidly converted, with partial activation within minutes and complete activation within 120 minutes. As health is devolved, Northern Ireland, Scotland and Wales have their own equivalents. [1, 2] According to Northern Ireland's 2019 Department of Health Emergency Response Plan, its EOC will be electronically operable within 90 minutes and fully staffed within 120 minutes following activation approval. [3] The Scottish Government activates its own EOC, the Scottish Government Resilience Room (SGoRR) when national-level public health emergency coordination (within Scotland, and between Scotland and the rest of the UK) is required. There is no evidence that the SGoRR can be, or has in the past year been, activated within 120 minutes of the identification of a public health emergency based on available Scottish public health documentation. [4, 5, 6, 7] Public Health Wales activates its EOC, the Incident Coordination Centre (ICC), in public health emergencies. The ICC's activation is guided by a concept of operations document, but this is not available online, nor is any information available from Public Health or a wider search with regard to ICC activation times. [8, 9]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 9 February 2021.

[2] Public Health England (PHE). 26 November 2020. "PHE Annual Report and Accounts: 2019 to 2020."

[<https://www.gov.uk/government/publications/phe-annual-report-and-accounts-2019-to-2020>]. Accessed 9 February 2021.

[3] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan."

[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 5 February 2021.

[4] Preparing Scotland. Jun 2016. "Preparing Scotland: Philosophy, Principles, Structure and Regulatory Duties."

[<https://ready.scot/how-scotland-prepares/preparing-scotland-guidance/philosophy-principles-structure-and-regulatory>]. Accessed 9 February 2021.

[5] NHS Scotland Resilience. 24 September 2013. "Preparing for emergencies: Guidance for health boards in Scotland."

[<https://www.gov.scot/publications/preparing-emergencies-guidance-health-boards-scotland/>]. Accessed 9 February 2021.

[6] Scottish Government/Health Protection Scotland (HPS). 14 July 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incidents.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incidents.pdf)]. Accessed 9 February 2021.

[7] Ready Scotland. Sep 2018. "Preparing Scotland exercise guidance."

[<https://www.readyscotland.org/media/1460/preparing-scotland-exercise-guidance-published-version-september-2018.pdf>].

Accessed 9 February 2021.

[8] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan."

[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%2028Sep%202018%29.pdf>]. Accessed 9 February 2021.

[9] Public Health Wales, NHS Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 9 February 2021.

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

### 3.4.1 Public health and security authorities are linked for rapid response during a biological event

#### 3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is public evidence that public health and national security authorities in the United Kingdom have carried out an exercise to respond to a potential deliberate biological event and there is publicly-available guidance on interoperability between public health and security (police) responders during a deliberate chemical, biological, radiological or nuclear (explosive) (CBRNe) event, though not specifically for a deliberate biological event. In January 2018, Public Health England (PHE) led a tabletop exercise on behalf of the European Commission (EC) and its Consumer, Health Agriculture and Food Executive Agency (CHAFEA). It involved a scenario in which a terrorist organisation caused a communicable disease outbreak through deliberate release and undertook concurrent cyber-attacks on critical infrastructure, including hospitals. The purpose of the exercise was to bring together experts from public health and civil protection/security sectors to consider the coordinated crisis response to threats facing European Union (EU) Member States, European Economic Area (EEA) and other countries, EU institutions and agencies as well as international organisations. The exercise tested cross-sectoral coordination within individual countries, within the EU and between the EU and NATO. [1] In 2012-2014, the UK's Joint Emergency Services Interoperability Principles (JESIP) programme developed practical guidance to improve multi-agency emergency response (primarily police, fire and rescue, and ambulance services). This guidance can be applied to any emergency requiring a multi-agency response. [2] Subsidiary to this, JESIP has also published specific guidance for joint responses to deliberate chemical, biological, radiological and nuclear (explosive) (CBRNe) incidents, though there is not a separate document specifically for biological incidents. [3, 4] Lessons learned from joint exercises and incidents are captured in a UK-wide online tool, Joint Organisational Learning (JOL) Online, available to emergency services and other security and public health responders across the UK. [5]

[1] European Commission. 2018. "Exercise Chimera: Report on the tabletop exercise on hybrid threats involving public health and civil protection/security authorities, 30-31 January 2018, Luxembourg."

[[https://ec.europa.eu/health/sites/health/files/preparedness\\_response/docs/2018\\_hybridthreatsexercise\\_en.pdf](https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/2018_hybridthreatsexercise_en.pdf)]. Accessed 9 February 2021.

[2] Joint Emergency Services Interoperability Principles (JESIP). 2021. "JESIP the programme."

[<https://www.jesip.org.uk/jesip-the-programme>]. Accessed 9 February 2021.

[3] Joint Emergency Services Interoperability Principles (JESIP). Jul 2016. “Joint doctrine: The interoperability framework – Edition 2.” [[https://www.jesip.org.uk/uploads/media/pdf/JESIP\\_Joint\\_Doctrine-The\\_Interoperability\\_Framework\\_%5bedition\\_2-July-2016%5d.pdf](https://www.jesip.org.uk/uploads/media/pdf/JESIP_Joint_Doctrine-The_Interoperability_Framework_%5bedition_2-July-2016%5d.pdf)]. Accessed 9 February 2021.

[4] Joint Emergency Services Interoperability Principles (JESIP). Sep 2016. “Responding to a CBRN(e) event: Joint operating principle for the emergency services.”

[[https://www.jesip.org.uk/uploads/media/pdf/CBRN%20JOPs/JESIP\\_CBRN\\_E\\_JOPS\\_Document\\_On.pdf](https://www.jesip.org.uk/uploads/media/pdf/CBRN%20JOPs/JESIP_CBRN_E_JOPS_Document_On.pdf)]. Accessed 9 February 2021.

[5] Joint Emergency Services Interoperability Principles (JESIP). 2021. “What is joint organisational learning?”

[<https://www.jesip.org.uk/what-is-jol>]. Accessed 9 February 2021.

## 3.5 RISK COMMUNICATIONS

### 3.5.1 Public communication

#### 3.5.1b

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom's guidance on national public health emergency response, and the guidance of the devolved administrations of Northern Ireland, Scotland and Wales, outline how messages will reach populations and sectors with different communication needs. In the UK's national communication strategy for pandemic influenza, the Department of Health (DH) commits to ensure that “all direct communications to the public are made available to people with disabilities, for example, by using Braille, audio, and Easy Read versions, and are translated into other languages”. [1] More generally, the Cabinet Office has published guidance for Category 1 responders (including the national bodies Public Health England (PHE), National Health Service (NHS) England and Public Health Wales, as well as regional NHS trusts/health boards) on fulfilling their duties to communicate with the public under the Civil Contingencies Act 2004 (CCA). This includes a section on reaching vulnerable people and those who have difficulty understanding the message, including the elderly and those who speak a minority language. Responders are urged to use a variety of communication methods to reach these groups, including different modes and languages. [2, 3] NHS England's ‘Incident response plan (national)’ (IRP(N)) references an NHS England emergency preparedness, resilience and response (EPRR) communications protocol, which is not available online. [4, 5, 6] NHS England also has an EPRR framework document, containing a section on communication, but it does not address how to reach people with different communication needs, and nor does PHE's document, ‘Communicable disease outbreak management: Operational guidance’. [7, 8] In Northern Ireland, the Department of Health (DoH)'s emergency response plan does not address how to reach people with different communication needs. [9] The Public Health Agency (PHA)'s infectious disease incident/outbreak plan states that special arrangements may need to be made for communicating with those who may not hear or understand the advice given, including ethnic minority groups. [10] NHS Scotland's national guidance on emergency planning states the need to use different types of messages and a variety of methods appropriate to the needs of the audience; and states that health boards should assess their communications plans against the Equality and Human Rights Acts. An example of a requirement under the Equality Act (which applies to England, Scotland and Wales) is for service providers (public/private) to take reasonable steps to ensure that information is provided in accessible formats for disabled persons, where disabled persons would otherwise be at a substantial disadvantage. [11, 12] Health Protection Scotland (HPS), part of the NHS, provides guidance on management of public health incidents. This states the need to consider the need for specific communications aimed at defined risk groups (eg people who are immuno-compromised, pregnant

women), those with literacy difficulties or sensory deficits, and those who speak different languages. [13] Public Health Wales' emergency response plan states that "consideration should be given to communicating with those who are identified as vulnerable, for example providing communications in different media and formats e.g. Braille for the visually impaired". [14] Infectious disease emergencies are addressed in more detail in the 'Wales framework for managing major infectious disease emergencies', but this is not available online. 'The communicable disease outbreak plan for Wales' does not address how to reach people with different communication needs. [15]

- [1] Department of Health. Dec 2012. "Department of Health, England and health departments of the devolved administrations of Scotland, Wales and Northern Ireland: UK pandemic influenza communications strategy 2012." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/213268/UK-Pandemic-Influenza-Communications-Strategy-2012.pdf]. Accessed 9 February 2021.
- [2] Government of the United Kingdom. 2004. "Civil Contingencies Act 2004." [https://www.legislation.gov.uk/ukpga/2004/36/contents]. Accessed 9 February 2021.
- [3] Cabinet Office. Mar 2012. "Civil Contingencies Act Enhancement Programme / Chapter 7: Communicating with the public." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/61030/Chapter-7-Communicating-with-the-Public\_18042012.pdf]. Accessed 9 February 2021.
- [4] Department of Health and Social Care/Cabinet Office. 8 May 2015. "2010 to 2015 government policy: health emergency planning." [https://www.gov.uk/government/publications/2010-to-2015-government-policy-health-emergency-planning/2010-to-2015-government-policy-health-emergency-planning]. Accessed 9 February 2021.
- [5] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf]. Accessed 9 February 2021.
- [6] National Health Service (NHS) England. 4 Aug 2017. "Emergency preparedness, resilience and response (EPRR)." [https://www.england.nhs.uk/ourwork/eprr/]. Accessed 9 February 2021.
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- [10] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\_0.pdf]. Accessed 9 February 2021.
- [11] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf]. Accessed 9 February 2021.
- [12] Equality and Human Rights Commission. 2011. "Services, public functions and associations: Statutory code of practice." Equality Act 2010 code of practice. [https://www.equalityhumanrights.com/sites/default/files/servicescode\_0.pdf]. Accessed 9 February 2021.
- [13] Scottish Government/Health Protection Scotland (HPS). 14 July 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [https://hspubsrepo.blob.core.windows.net/hps-

website/nss/1673/documents/1\_shpn-12-management-public-health-incidents.pdf]. Accessed 9 February 2021.

[14] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan."

[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 9 February 2021.

[15] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')."

[<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 9 February 2021.

### 3.5.1 Risk communication planning

#### 3.5.1a

**Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has a standalone national risk communication plan for pandemic influenza emergencies; and public health emergency plans for England and the devolved administrations of Northern Ireland, Scotland and Wales contain guidance on risk communication planning in varying degrees of detail. At the UK level, there is a national communication strategy for pandemic influenza, covering communications between entities involved in response and with the public. [1] More generally, the Cabinet Office has published guidance for Category 1 responders (including Public Health England (PHE), National Health Service (NHS) England and Public Health Wales, as well as regional NHS trusts/health boards) on fulfilling their duties to communicate with the public under the Civil Contingencies Act 2004 (CCA). Duties include advising the public of risks before an emergency, and warning/keeping it informed during an emergency. Communications strategies should be integrated into emergency plans. [2, 3] In England, NHS England's 'Incident response plan (national)' (IRP(N)) does not contain a risk communication plan for public health emergencies, but states it is to be read in conjunction with the NHS England emergency preparedness, resilience and response (EPRR) communications protocol, which is not available online. [4, 5, 6] NHS England also has an EPRR framework document, containing a section on communication. It is not a risk communication plan in itself but guidance on how local NHS organisations should approach communication. [7] PHE's document, 'Communicable disease outbreak management: Operational guidance' includes a section on communications and an appendix containing a media strategy. This states that risk communication should be linked to risk assessments, and provides guidance on information to include/exclude and channels to use. [8] In Northern Ireland, the Department of Health (DoH)'s emergency response plan contains guidance on communications, noting that the government's Executive Information Service offers help to the DoH with media strategy and coordination during public health emergencies. [9] The Public Health Agency (PHA) has a 'Joint response emergency plan', but it is not available online. [9, 10, 11] The PHA maintains an infectious disease incident/outbreak plan, which provides a template for developing disease-specific plans. This provides guidance on public risk communication. [12] There is no separate risk communication plan specific to public health emergencies, either from the DoH, the PHA or a wider search. [10, 11] NHS Scotland's national guidance on emergency planning advises health boards on developing a communications plan, as well as a communications strategy specific to each emergency. [13] Health Protection Scotland (HPS), part of the NHS, has also published a guidance document on management of public health incidents. This includes detailed guidance on risk communication and refers to a more detailed document on communicating with the public about health risks, also available online. [14, 15] Public Health Wales' emergency response plan only briefly mentions the need for a communication strategy. [16] Infectious disease emergencies are addressed in more detail in The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan'), which provides information on public communications, media relations, and how to make decisions with regard to releasing outbreak reports. [17] Wales

has no stand-alone guidance on public health risk communication. [18]

- [1] Department of Health. Dec 2012. "Department of Health, England and health departments of the devolved administrations of Scotland, Wales and Northern Ireland: UK pandemic influenza communications strategy 2012." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/213268/UK-Pandemic-Influenza-Communications-Strategy-2012.pdf]. Accessed 9 February 2021.
- [2] Government of the United Kingdom. 2004. "Civil Contingencies Act 2004." [https://www.legislation.gov.uk/ukpga/2004/36/contents]. Accessed 9 February 2021.
- [3] Cabinet Office. Mar 2012. "Civil Contingencies Act Enhancement Programme / Chapter 7: Communicating with the public." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/61030/Chapter-7-Communicating-with-the-Public\_18042012.pdf]. Accessed 9 February 2021.
- [4] Department of Health and Social Care/Cabinet Office. 8 May 2015. "2010 to 2015 government policy: health emergency planning." [https://www.gov.uk/government/publications/2010-to-2015-government-policy-health-emergency-planning/2010-to-2015-government-policy-health-emergency-planning]. Accessed 9 February 2021.
- [5] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf]. Accessed 9 February 2021.
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- [7] National Health Service (NHS) England. 10 Nov 2015. "NHS England emergency preparedness, resilience and response framework." [https://www.england.nhs.uk/wp-content/uploads/2015/11/eprr-framework.pdf]. Accessed 9 February 2021.
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- [10] Department of Health, Northern Ireland. N.d. "Emergency planning and response." [https://www.health-ni.gov.uk/articles/emergency-planning-and-response]. Accessed 9 February 2021.
- [11] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Emergency preparedness/environmental hazards." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/emergency-preparednessenvironmental-hazards]; and "Priority areas." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/priority-areas]. Accessed 9 February 2021.
- [12] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\_0.pdf]. Accessed 9 February 2021.
- [13] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf]. Accessed 9 February 2021.
- [14] Scottish Government/Health Protection Scotland (HPS). 14 July 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\_shpn-12-management-public-health-incidents.pdf]. Accessed 9 February 2021.
- [15] National Health Service (NHS) National Service Scotland. 2008. "Communicating with the public about health risks:

Health Protection Network Scottish guidance." [<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=5936>]. Accessed 9 February 2021.

[16] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan." [<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 9 February 2021.

[17] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')." [<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 9 February 2021.

[18] Public Health Wales. "Emergency preparedness, resilience & response: Documents & resources." [<http://www.wales.nhs.uk/sitesplus/888/page/88949>]. Accessed 9 February 2021.

### 3.5.1c

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 1**

There is evidence that the risk communication plans for the United Kingdom designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. At the UK level, there is a national communication strategy for pandemic influenza, covering communications between entities involved in response and with the public. The strategy describes "Chief Medical Officers, and other trusted health professional identified as the most effective spokespeople" during a pandemic. [1] More generally, the Cabinet Office has published guidance for Category 1 responders (including Public Health England (PHE), National Health Service (NHS) England and Public Health Wales, as well as regional NHS trusts/health boards) on fulfilling their duties to communicate with the public under the Civil Contingencies Act 2004 (CCA). Duties include advising the public of risks before an emergency, and warning/keeping it informed during an emergency. The guidance mentions designating and preparing spokespeople, including provision of "a lead spokesperson to work with the media," but there is no detail provided on a specific position within the government to serve in this role. [2, 3] In England, NHS England's EPRR framework document, which contains a section on communication, mentions supporting designated spokespeople but no further detail is provided. [4] In PHE's document, 'Communicable disease outbreak management: Operational guidance', among the roles and responsibilities of the Outbreak Control Team (OCT), the PHE communications lead is responsible for liaising with incident lead to establish an incident spokesperson, but there is no further information on what specific position within the government would serve in this role. [5] In Northern Ireland, the Department of Health (DoH)'s emergency response plan contains guidance on communications but does not mention spokesperson designation. [6] Northern Ireland's infectious disease incident/outbreak plan states that the incident/outbreak control team (ICT/OCT) will appoint a media spokesperson, but it does not detail a specific position within the government to serve in this role. [7] NHS Scotland's national guidance on emergency planning from 2013, which advises health boards on developing a communications plan, does not mention a designated spokesperson. [8] National Health Service (NHS) National Service Scotland's 2008 guidance to the Scottish Health Protection Network recommends designating a principal spokesperson or lead spokespeople to communicate with the public during an emergency. [9] Health Protection Scotland (HPS), part of the NHS, has also published a guidance document on management of public health incidents with an interim update published in July 2020 that includes detailed guidance on risk communication and states that the Incident Management Team (IMT) "has agreed a single press spokesperson and press officer who have regularly reported to the IMT on the tone and content of communications and responses to them." [10] Public Health Wales' emergency response plan only briefly mentions the need for a communication strategy and does not mention designating a spokesperson or spokespeople during a public health emergency. [11] The Communicable Disease Outbreak Plan for Wales ('The Wales

Outbreak Plan') states that as part of public communications, at its first meeting the OCT should "include a nominated spokesperson(s) and a process for arranging press conferences and releasing press statements and other public messages."  
[12]

- [1] Department of Health. Dec 2012. "Department of Health, England and health departments of the devolved administrations of Scotland, Wales and Northern Ireland: UK pandemic influenza communications strategy 2012." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/213268/UK-Pandemic-Influenza-Communications-Strategy-2012.pdf]. Accessed 15 February 2021.
- [2] Government of the United Kingdom. 2004. "Civil Contingencies Act 2004." [https://www.legislation.gov.uk/ukpga/2004/36/contents]. Accessed 15 February 2021.
- [3] Cabinet Office. Mar 2012. "Civil Contingencies Act Enhancement Programme / Chapter 7: Communicating with the public." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/61030/Chapter-7-Communicating-with-the-Public\_18042012.pdf]. Accessed 15 February 2021.
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- [6] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf]. Accessed 15 February 2021.
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- [8] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf]. Accessed 15 February 2021.
- [9] National Health Service (NHS) National Service Scotland. 2008. "Communicating with the public about health risks: Health Protection Network Scottish guidance." [https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=5936]. Accessed 15 February 2021.
- [10] Scottish Government/Health Protection Scotland (HPS). 14 July 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\_shpn-12-management-public-health-incidents.pdf]. Accessed 15 February 2021.
- [11] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan." [http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf]. Accessed 15 February 2021.
- [12] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')." [https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/]. Accessed 15 February 2021.

## 3.5.2 Public communication

### 3.5.2a

**In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?**

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

**Current Year Score: 2**

In the past year, there is evidence that the public health system in the United Kingdom has actively shared messages via online media platforms to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation and regularly shares information on health concerns. The governments of England, Northern Ireland, Scotland and Wales utilise media platforms including social media and official website updates to inform the public about public health emergencies. Public Health England (PHE) has in the past year posted on Facebook, Twitter and its own website to inform the public about ongoing public health concerns and dispel rumors, misinformation and disinformation. For instance in February 2021, PHE posted an article on facebook titled 'Don't let COVID variants distract from the facts - vaccines save lives,' a Twitter post includes a medical virologist explaining the importance of following national restrictions after receiving the COVID-19 vaccine, and the News section of gov.uk included a PHE statement on the SARS-CoV-2 variant. [1, 2, 3] Beyond COVID-19, there are examples of social media use for conveying regular public health information. For example, PHE's Twitter page tweeted about the country's salt reduction program, mentioning new targets and the latest progress report. In Northern Ireland, the Department of Health (DoH)'s website has a news page with public health announcements, such as urging the public to stick to health guidance even after COVID-19 vaccination. [4] The DoH also maintains active Twitter account and Northern Ireland's Public Health Agency has a Facebook account with recent messages informing the public about ongoing public health concerns. [5, 6] National Services Scotland (NSS) has an active Twitter account and NHS 24 has an active Twitter and Facebook accounts with recent updates to inform the public about ongoing public health concerns. [7, 8, 9] Public Health Wales releases public health news, including on outbreaks, via its own website and has active and Twitter and Facebook accounts with recent updates to inform the public about ongoing public health concerns. [10, 11, 12]

[1] Public Health England (PHE). 9 February 2021. Facebook post. [<https://en-gb.facebook.com/PublicHealthEngland/>]. Accessed 11 February 2021.

[2] Public Health England (PHE). 8 February 2021 Twitter post. [[https://twitter.com/PHE\\_uk/status/1358720011767074817](https://twitter.com/PHE_uk/status/1358720011767074817)]. Accessed 11 February 2021.

[3] Public Health England (PHE). 10 February 2021. "PHE statement on Variant of Concern and new Variant Under Investigation." [<https://www.gov.uk/government/news/phe-statement-on-variant-of-concern-and-new-variant-under-investigation>]. Accessed 11 February 2021.

[4] Department of Health (DoH), Northern Ireland. 2 February 2021. "Public urged to stick to health guidance - even after vaccination." [<https://www.health-ni.gov.uk/news/public-urged-stick-health-guidance-even-after-vaccination>]. Accessed 11 February 2021.

[5] Department of Health (DoH), Northern Ireland. 4 January 2021. Twitter post. [<https://twitter.com/roinnslainte/status/1346057832928571392>]. Accessed 11 February 2021.

[6] Public Health Agency, Northern Ireland. 9 February 2021. Facebook post. [<https://www.facebook.com/publichealthagency/photos/a.356834341017874/4026404164060855/>]. Accessed 11 February 2021.

[7] National Health Service Scotland. 10 February 2021. Twitter post, retweet from Scottish Government. [<https://twitter.com/scotgov/status/1359449582418149389>]. Accessed 11 February 2021.

- [8] NHS 24. 2021. Official Twitter feed. [<https://twitter.com/NHS24>]. Accessed 11 February 2021.
- [9] NHS 24. 2021. Facebook page. [<https://www.facebook.com/NHS24>]. Accessed 11 February 2021.
- [10] Public Health Wales. 2021. "News." [<https://phw.nhs.wales/news/>]. Accessed 11 February 2021.
- [11] Public Health Wales. 10 February 2021. Twitter post. [<https://twitter.com/PublicHealthW/status/1359411836416835584>]. Accessed 11 February 2021.
- [12] Public Health Wales. 2021. Facebook page. [<https://www.facebook.com/PublicHealthWales/>]. Accessed 11 February 2021.

### 3.5.2b

**Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?**

No = 1, Yes = 0

**Current Year Score: 1**

There is insufficient evidence that senior leaders in the United Kingdom have shared misinformation or disinformation on infectious diseases in the past two years. Government Ministers and Members of Parliament (MPs) have taken action during the COVID-19 pandemic, and in 2019 during a measles outbreak, to take action on the spread of misinformation—particularly misinformation spread via social media—regarding these infectious diseases. A December 2020 BBC News article describes the Prime Minister promising to take action to tackle disinformation via online platforms regarding the coronavirus vaccine. [1] Earlier in the year, the Minister for Digital and Culture was quoted saying the Government is “working closer than ever with platforms to make sure that information like that is addressed as quickly as possible and taken down” regarding misleading information about COVID-19 online and a specialist unit was set up in March 2020 by Ministers to “counter disinformation about coronavirus. [2, 3] In August 2019, the Prime Minister is reported to have called on social media companies to take action against the spread of misleading claims about vaccines in the context of a measles outbreak. [4] There is no evidence that senior leaders have shared misinformation or disinformation reported through main international and national news outlets, including BBC News, The Guardian, Reuters, and Associated Press. [5, 6, 7, 8]

[1] BBC News. 2 December 2020. Covid-19: Boris Johnson vows to combat vaccine 'disinformation'." [<https://www.bbc.com/news/uk-politics-55160246>]. Accessed 15 February 2021.

[2] Express & Star. 13 May 2020. "Spread of misinformation 'risks lives', ministers tell MPs." [<https://www.expressandstar.com/news/uk-news/2020/05/13/spread-of-misinformation-risks-lives-ministers-tell-mps/>]. Accessed 15 February 2021.

[3] BBC News. 9 March 2020. "Coronavirus: Unit set up to counter false claims." [<https://www.bbc.com/news/uk-politics-51800216>]. Accessed 15 February 2021.

[4] Postelnicu, L. 19 August 2019. "UK Prime Minister urges social media giants to limit spread of vaccine misinformation." [<https://www.mobihealthnews.com/news/emea/uk-prime-minister-urges-social-media-giants-limit-spread-vaccine-misinformation>]. Mobi Health News. Accessed 15 February 2021.

[5] BBC News. 2021. [<https://www.bbc.com/news>]. Keyword search. Accessed 15 February 2021.

[6] The Guardian. 2021. [<https://www.theguardian.com/>]. Keyword search. Accessed 15 February 2021.

[7] Reuters. 2021. [<https://www.reuters.com/>]. Keyword search. Accessed 15 February 2021.

[8] Associated Press News. 2021. [<https://apnews.com/>]. Keyword search. Accessed 15 February 2021.

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 92.52

2019

International Telecommunication Union (ITU)

### 3.6.2 Mobile subscribers

#### 3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

Current Year Score: 117.55

2019

International Telecommunication Union (ITU)

### 3.6.3 Female access to a mobile phone

#### 3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

### 3.6.4 Female access to the Internet

#### 3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

**In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?**

Yes = 0, No = 1

**Current Year Score: 0**

In the past year, the United Kingdom has issued a restriction on the export of medical goods due to an infectious disease outbreak, and there is insufficient evidence that this was done with international/bilateral support. In March 2020, the European Union (EU) Commission released temporary regulations subjecting exports of personal protective equipment (PPE) outside the EU to authorization requirements. The United Kingdom was exempted from this authorization requirement, and guidance was issued by the Commission that confirmed restrictions to do apply to trade with the UK. [1, 2] In April 2020, the UK issued guidance setting out export restrictions on PPE products during the COVID-19 outbreak. Exporting PPE "to areas outside the EU, European Free Trade Association member states (Iceland, Liechtenstein, Norway, Switzerland) and certain other territories will temporarily need a PPE export licence." The guidance was withdrawn in June 2020. [3, 4] According to a January 2021 article in Politico, the UK government has imposed controls on the export of over 170 medicines to other countries since March 2020. [5] A list of medicines that cannot be exported from the UK or "hoarded" is maintained on the UK government website. [6]

[1] Schork, T. 23 March 2020. "EU export authorizations for Coronavirus personal protective equipment (PPE)." [https://www.aeb.com/uk-en/magazine/articles/coronavirus-eu-export-restrictions-personal-protective-equipment.php]. AEB. Accessed 15 February 2021.

[2] Pinset Masons: Out-Law News. 31 March 2020. "EU confirms PPE export controls as UK secures medicines supply." [https://www.pinsentmasons.com/out-law/news/eu-ppe-export-controls-uk-medicines-supply]. Accessed 15 February 2021.

[3] Department of Health and Social Care. 5 May 2020. "Summary of Guidance: Personal protective equipment (PPE): export control process." [https://www.gov.uk/government/publications/personal-protective-equipment-ppe-export-control-process]. Accessed 15 February 2021.

[4] Department of Health and Social Care. 5 May 2020. "Guidance: Personal protective equipment (PPE): export control process." [https://www.gov.uk/government/publications/personal-protective-equipment-ppe-export-control-process/personal-protective-equipment-ppe-export-control-process]. Accessed 15 February 2021.

[5] Isaac, A. and Furlong, A. 27 January 2021. "UK restricts COVID medicine exports amid AstraZeneca vaccine fight." [https://www.politico.eu/article/uk-coronavirus-vaccine-astrazeneca-export-boris-johnson/]. Politico. Accessed 15 February 2021.

[6] Department of Health and Social Care and Medicines and Healthcare products Regulatory Agency. 22 December 2020. "Guidance: Medicines that you cannot export from the UK or hoard." [https://www.gov.uk/government/publications/medicines-that-cannot-be-parallel-exported-from-the-uk]. Accessed 15 February 2021.

### 3.7.1b

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?

Yes = 0, No = 1

**Current Year Score: 1**

There is no evidence that in the past year, the United Kingdom has issued a restriction, without international/bilateral support, on the export/import of non-medical goods due to an infectious disease outbreak. In April 2020, the news agency Reuters reported a list of countries that had applied for or were considering trade restrictions on food or agriculture products due to the coronavirus, and the list did not include the UK. [1] The International Trade Center maintains a list of COVID-19 Temporary Trade Measures that identifies what restrictions countries have imposed for medical and non-medical supplies due to the COVID-19 pandemic, and this list does not mention the UK posing any restrictions on the export/import of non-medical goods. [2] In the past year, the UK has continued to impose pre-existing bans on imports of poultry/poultry products from within disease control zones imposed around confirmed cases of avian flu in other EU countries. [3] There is no evidence that the UK has issued new restrictions on the import/export of non-medical goods from another country in the past year because of infectious disease risk, from the UK government information pages on bringing goods into the UK, from the customs agency (HM Revenue and Customs), from the Department for International Trade, from the Department of Health and Social Care, the Department for Environment, Farming and Rural Affairs (Defra), the Animal and Plant Health Agency (APHA) or from a search for media reports. [4, 5, 6, 7, 8, 9, 10] There is no evidence of restrictions on the the export/import of non-medical goods in the past year in the cases of diseases reported by the UK to the World Health Organisation (WHO)'s 'Disease outbreak news' or the World Organisation for Animal Health (OIE)'s 'Weekly disease information'. [11, 12, 13]

[1] Reuters Staff. 3 April 2020. "Trade restrictions on food exports due to the coronavirus pandemic." Reuters.

[<https://www.reuters.com/article/us-health-coronavirus-trade-food-factbox/trade-restrictions-on-food-exports-due-to-the-coronavirus-pandemic-idUSKBN21L332>]. Accessed 11 February 2021.

[2] International Trade Centre. 7 December 2020. "COVID-19 Temporary Trade Measures."

[<https://www.macmap.org/covid19>]. Accessed 11 February 2021.

[3] Department for Environment, Farming and Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 15 June 2020, Avian influenza section updated 21 December 2020. "Imports, exports and EU trade of animals and animal products: topical issues." [<https://www.gov.uk/guidance/imports-and-exports-of-animals-and-animal-products-topical-issues>]. Accessed 11 February 2021.

[4] Government of the United Kingdom. N.d. "Banned and restricted goods." [<https://www.gov.uk/duty-free-goods/banned-and-restricted-goods>]. Accessed 11 February 2021.

[5] HM Revenue and Customs. 11 May 2017. "UK Trade Tariff: import prohibitions and restrictions."

[<https://www.gov.uk/government/publications/uk-trade-tariff-import-prohibitions-and-restrictions/uk-trade-tariff-import-prohibitions-and-restrictions>]. Accessed 11 February 2021.

[6] Department for International Trade. 2021. [<https://www.gov.uk/government/organisations/department-for-international-trade>]. Keyword search. Accessed 11 February 2021.

[7] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 14 February 2021.

[8] Department for Environment, Farming and Rural Affairs (Defra). 2021.

[<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>]. Keyword search. Accessed 11 February 2021.

[9] Animal and Plant Health Agency (APHA). 2021. [<http://apha.defra.gov.uk/>]. Keyword search. Accessed 11 February 2021.

[10] Department for Environment, Farming and Rural Affairs (Defra) and Animal and Plant Health Agency (APHA). 12 January

2021. “Guidance on importing and exporting live animals or animal products.”

[<https://www.gov.uk/government/collections/guidance-on-importing-and-exporting-live-animals-or-animal-products>].

Accessed 11 February 2021.

[11] World Health Organisation. 2021. “Disease Outbreak News”. 2021 and 2020 pages.

[<https://www.who.int/csr/don/archive/year/en/>]. Accessed 11 February 2021.

[12] World Health Organisation (WHO). 21 December 2020. “SARS-CoV-2 Variant – United Kingdom of Great Britain and Northern Ireland.” [<https://www.who.int/csr/don/21-december-2020-sars-cov2-variant-united-kingdom/en/>]. Accessed 11 February 2021.

[13] World Organisation for Animal Health (OIE). 2021. “Weekly disease information.”

[[https://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/WI](https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI)]. Accessed 11 February 2021.

## 3.7.2 Travel restrictions

### 3.7.2a

**In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?**

Yes = 0 , No = 1

**Current Year Score: 0**

In the past year, the United Kingdom has implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. The UK has instituted 'red list' countries, from which entry to the UK is banned due to the COVID-19 pandemic. As of February 2021, this list included 33 countries, primarily South American and African countries. Travellers who have been in or through any of the red list countries in the previous 10 days will be refused entry to the UK, with the exception of British or Irish Nationals and those with residence rights in the UK. For those individuals, new testing, self-isolation and quarantine rules apply from 15 February 2021, and guidance on these rules are provided for each England, Northern Ireland, Scotland, and Wales. [1] There is no evidence of international/bilateral support on these travel bans. Travel advisories based on infectious disease risk are issued by the Foreign and Commonwealth Office (FCO) and published via the government website ([gov.uk](http://gov.uk)); the official travel health information website Travel Health Pro, commissioned by Public Health England (PHE); and the equivalent in Scotland, [fitfortravel](http://fitfortravel). Travel advice is localised to the sub-national level where possible. [1, 2, 3, 4] However, these entities provide information for nationals, residents, and travellers departing from the UK, rather than arriving travellers. The FCO does not issue outright travel bans as a matter of policy, it only advises against all travel or against all but essential travel, depending on risk level. [5]

[1] Department for Transport. 11 February 2021. “Coronavirus (COVID-19): travel bans to the UK.”

[<https://www.gov.uk/guidance/transport-measures-to-protect-the-uk-from-variant-strains-of-covid-19>]. Accessed 13 February 2021.

[2] Foreign and Commonwealth Office (FCO). 2019. “Foreign travel advice.” [<https://www.gov.uk/foreign-travel-advice>]. Accessed 13 February 2021.

[3] Travel Health Pro. 18 May 2018. “Ebola virus disease (EVD) in Democratic Republic of Congo.” [<https://travelhealthpro.org.uk/>]. Accessed 13 February 2021.

[4] Health Protection Scotland (HPS). 2019. “About [fitfortravel](http://fitfortravel).” [<https://www.fitfortravel.nhs.uk/using-fitfortravel/about-fitfortravel>]. Accessed 13 February 2021.

[5] Foreign and Commonwealth Office (FCO). 15 Feb 2017. “About Foreign and Commonwealth Office travel advice.” [<https://www.gov.uk/guidance/how-the-foreign-commonwealth-office-puts-together-travel-advice#when-we-advise-against-foreign-travel>]. Accessed 13 February 2021.

## Category 4: Sufficient and robust health sector to treat the sick and protect health workers

### 4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS

#### 4.1.1 Available human resources for the broader healthcare system

##### 4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 281.17

2018

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 817.23

2018

WHO; national sources

##### 4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1, No = 0

Current Year Score: 1

The United Kingdom has a health workforce strategy in place, updated in the past five years, to identify fields where there is an insufficient workforce and strategies to address these shortcomings. In England, the Department of Health (now Department of Health and Social Care, DHSC) published a public health workforce plan in 2013. [1] In December 2017, the National Health Service (NHS) published a system-wide draft workforce strategy for health and social care up to 2027. The undated webpage that includes information about the published draft strategy states that input into the draft will inform the Workforce Strategy that "will be published later this year." As of February 2021, there is no evidence that a final version has been published. The draft strategy projects future demand, identifies current/projected workforce shortages/needs and has strategies to address them. [2, 3] Northern Ireland's Department of Health (DoH) published a 'Health and social care workforce strategy 2026' in 2018, which includes the first of its implementation plans, for 2018-20. This identifies current/projected workforce shortages/needs and has strategies to address them. [4, 5] In December 2019, NHS Scotland

published 'An Integrated Health and Social Care Workforce Plan' for Scotland. The plan addresses planning workforce "supply"—skills and people—to meet demand, including considerations for vacancies and turnover and impact of potential EU withdrawal. [6] Wales published 'A Healthier Wales: Our Workforce Strategy for Health and Social Care' in October 2020. The stated purpose of Strategic Theme Two, Attraction and Recruitment, is to be proactive in targeting specific shortages and includes actions to establish a National Careers Service for health and social care and develop targeted schemes for significant shortages and under-represented groups. [7, 8]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 4 February 2021.

[2] National Health Service (NHS) Health Education England. N.d. "Workforce strategy." [<https://www.hee.nhs.uk/our-work/workforce-strategy>]. Accessed 4 February 2021.

[3] National Health Service (NHS) Health Education England and Public Health England (PHE). Dec 2017. "Facing the facts, shaping the future: A draft health and social care workforce strategy for England to 2027."

[<https://www.hee.nhs.uk/sites/default/files/documents/Facing%20the%20Facts%2C%20Shaping%20the%20Future%20%E2%80%93%20a%20draft%20health%20and%20care%20workforce%20strategy%20for%20England%20to%202027.pdf>].

Accessed 4 February 2021.

[4] Department of Health, Northern Ireland. 14 May 2018. "Department of Health launches Health and social care workforce strategy." [<https://www.health-ni.gov.uk/news/department-health-launches-health-and-social-care-workforce-strategy>].

Accessed 4 February 2021.

[5] Department of Health, Northern Ireland. 2018. "Health and social care workforce strategy 2026." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/hsc-workforce-strategy-2016.pdf>]. Accessed 4 February 2021.

[6] National Health Service (NHS) Scotland. December 2019. "An Integrated Health and Social Care Workforce Plan for Scotland." [<https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2019/12/national-health-social-care-integrated-workforce-plan/documents/integrated-health-social-care-workforce-plan-scotland/integrated-health-social-care-workforce-plan-scotland/govscot%3Adocument/integrated-health-social-care-workforce-plan-scotland.pdf>].

Accessed 4 February 2021.

[7] Health Education and Improvement Wales (HEIW). 22 October 2020. "A Healthier Wales: Our Workforce Strategy for Health and Social Care." [<https://heiw.nhs.wales/files/workforce-strategy-for-health-and-social-care1/>]. Accessed 4 February 2021.

[8] Social Care Wales. N.d. "Health & Social Care Workforce Strategy." [<https://heiw.nhs.wales/programmes/health-social-care-workforce-strategy/>]. Accessed 4 February 2021.

## 4.1.2 Facilities capacity

### 4.1.2a

#### Hospital beds per 100,000 people

Input number

**Current Year Score: 246**

2019

WHO/World Bank; national sources

#### 4.1.2b

**Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?**

Yes = 1 , No = 0

**Current Year Score: 1**

The United Kingdom has a number of hospitals with the capacity to isolate patients with highly communicable diseases in biocontainment units and patient isolation facilities located within the country. There are high-level isolation units (HLIU) for high-consequence infectious diseases (HCID) such as Ebola in two leading centres: the Royal Free London hospital in the south, and Newcastle Royal Victoria Infirmary in the north. [1, 2, 3] There are also patient isolation facilities suitable for HCLDs at the Royal Liverpool Hospital (limited available information indicates these are isolation wards) and the Royal Hallamshire Hospital, Sheffield (the in-patient ward in Sheffield has 33 dedicated beds of which more than half are single negative pressure isolation rooms with en-suite facilities). [1, 4, 5, 6] There are 4 airborne HCID treatment centres (adult and paediatric), in the above-mentioned hospitals in London, Newcastle and Liverpool, and in another London hospital, Guy's and St Thomas' (no further information is available on this facility). [1, 7] The devolved administrations do not have any HLIU but do have patient isolation facilities. Northern Ireland is served by the Infectious Disease Service at the Royal Victoria Hospital in Belfast, which has six negative pressure isolation rooms, one of which is a medium risk isolation facility. [8] According to a Scottish Government spokesman from a 2014 news article, on ebola, "Scotland has many isolation/negative pressure rooms..." [9] In Wales, the University Hospital of Wales (UHW) houses the regional Infectious Diseases Unit. The ward has several negative pressure rooms for patient isolation. [10]

[1] Public Health England (PHE). 17 June 2020. "High consequence infectious diseases (HCID)."

[<https://www.gov.uk/guidance/high-consequence-infectious-diseases-hcid>]. Accessed 10 February 2021.

[2] National Health Service (NHS) Royal Free London. N.d. "High level isolation unit."

[<https://www.royalfree.nhs.uk/services/services-a-z/infectious-diseases/high-level-isolation-unit/>]. Accessed 10 February 2021.

[3] National Health Service (NHS) / Newcastle Upon Tyne Hospitals NHS Foundation Trust. N.d. "Infectious and tropical medicine." [[http://www.newcastle-hospitals.org.uk/services/internal-medicine\\_services\\_infectious-and-tropical-medicine.aspx](http://www.newcastle-hospitals.org.uk/services/internal-medicine_services_infectious-and-tropical-medicine.aspx)]. Accessed 10 February 2021.

[4] The Royal Liverpool and Broadgreen University Hospitals. N.d. "Infection, prevention and control."

[<https://www.rlbuht.nhs.uk/departments/medical-specialisms/infection-and-immunology/infection-prevention-control/>]; and "Tropical and infectious diseases." [<https://www.rlbuht.nhs.uk/departments/medical-specialisms/infection-and-immunology/tropical-and-infectious-diseases/>]. Accessed 10 February 2021.

[5] National Health Service (NHS) / Royal Hallamshire Hospital. N.d. "Infectious diseases."

[<https://www.nhs.uk/Services/Hospitals/Services/Service/DefaultView.aspx?id=1357>]. Accessed 10 February 2021.

[6] Parveen, N. 7 Oct 2018. "Monkeypox cases put UK's tropical disease response to the test." The Guardian.

[<https://www.theguardian.com/society/2018/oct/07/monkeypox-cases-put-uks-tropical-disease-response-to-the-test>]. Accessed 10 February 2021.

[7] National Health Service (NHS) / Guys' and St Thomas' NHS Foundation Trust. N.d. "Infectious diseases."

[<https://www.guysandstthomas.nhs.uk/research/studies/infection.aspx>]. Accessed 10 February 2021.

[8] Health and Social Care (HSC) / Belfast Health and Social Care Trust. N.d. "Infectious Disease Service."

[<https://belfasttrust.hscni.net/service/infectious-disease-service/>]. Accessed 10 February 2021.

[9] Pauling, T. 9 October 2014. "NHS Highland poised to send any Ebola victims to England." The Press and Journal.

[<https://www.pressandjournal.co.uk/fp/news/scotland/368547/nhs-highland-poised-to-send-ebola-victims-to-specialist-unit-in-england/>]. Accessed 10 February 2021.

[10] National Health Service (NHS) Wales / Cardiff and Vale University Health Board. "Infectious diseases."

[<https://cavuhb.nhs.wales/our-services/infectious-diseases/>]. Accessed 10 February 2021.

#### 4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?

- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

**Current Year Score: 1**

There is evidence that the United Kingdom has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years and there is insufficient evidence that the United Kingdom has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years. In February 2021, the government established "quarantine hotels" for travelers arriving from "high-risk" countries to self-isolate for 10 days. [1] During the COVID-19 pandemic, the UK's National Health Service built field hospital sites across the country, including the temporary NHS Nightingale hospital, with space for 4,000 beds. [2] Additionally, there is evidence that NHS England also established an agreement with independent hospitals to expand available hospital beds (including critical care beds) and staff. [3] However, these agreements are not clear on if these additional beds have added to the country's isolation capacity during this time. No further evidence of expansion of isolation capacity through the UK Government website, the NHS, or Department of Health and Social Care. [4, 5, 6]

[1] BBC News. February 2020. "Covid-19: First travellers arrive in UK for hotel quarantine stay".

[<https://www.bbc.com/news/uk-56064759>]. Accessed 2 May 2021.

[2] BBC News. April 2020. "Coronavirus: How NHS Nightingale was built in just nine days."

[<https://www.bbc.com/news/health-52125059>]. Accessed 2 May 2021.

[3] NHS England. March 2020. "NHS strikes major deal to expand hospital capacity to battle coronavirus."

[<https://www.england.nhs.uk/2020/03/nhs-strikes-major-deal-to-expand-hospital-capacity-to-battle-coronavirus/>]. Accessed 2 May 2021.

[4] UK Government. Official Website. [<https://www.gov.uk/>]. Keyword search. Accessed 2 May 2021.

[5] UK National Health Service. 2021. [<https://www.nhs.uk/>]. Keyword search. Accessed 2 May 2021.

[6] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care/>]. Keyword search. Accessed 2 May 2021.

## 4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

### 4.2.1 Routine health care and laboratory system supply

#### 4.2.1a

Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

**Current Year Score: 2**

There is a national procurement protocol in place in the United Kingdom which can be utilized by the National Health Service (NHS), Public Health England, and the Department for Environment, Food, and Rural Affairs for the acquisition of laboratory supplies and medical supplies for routine needs. In the UK, the vast majority of routine clinical microbiology testing is done in clinical laboratories operated by the National Health Service (NHS). The NHS supply chain has a model that consists of eleven specialist buying functions, known as Category Towers, "delivering clinical consumables, capital medical equipment and non-medical products such as food and office solutions." [1] The Category Towers include Diagnostic, Pathology and Therapy Technologies and Services—encompassing laboratory supplies and a number of categories, including Ward Based Consumables and Infection Control and Wound Care, which encompass medical supplies for routine needs. [2, 3, 4] Most national reference laboratories are run by Public Health England (PHE), under the Department of Health and Social Care (though the devolved administrations of Northern Ireland, Scotland and Wales have their own reference laboratories). According to the 2015 Global Health Security Agenda pilot assessment, PHE has an internal production capability for specialised laboratory media, and framework contracts for standard/general use media. [5] In November 2020, PHE advertised a Public Health Microbiology Framework Agreement for diagnostic goods and services, to last 2 years with an option to extend for 2 years. The framework can be accessed by UK public sector bodies, including PHE, Public Health Wales, Public Health Scotland, Department for Health for Northern Ireland, and Health and Social Care Northern Ireland, among others. [6] The Department for Environment, Food, and Rural Affairs publicizes its procurements through its e-tendering site, the UK's Find a Tender Service, and the UK's public procurement e-notification system Contracts Finder. [7]

- [1] NHS Supply Chain. 2021. "About Us." [<https://www.supplychain.nhs.uk/about-us/>]. Accessed 7 February 2021.
- [2] NHS Supply Chain. 2021. "Diagnostic, Pathology and Therapy Technologies and Services." [<https://www.supplychain.nhs.uk/categories/diagnostic-equipment/>]. Accessed 7 February 2021.
- [3] NHS Supply Chain. 2021. "Ward Based Consumables." [<https://www.supplychain.nhs.uk/categories/ward-based/>]. Accessed 7 February 2021.
- [4] NHS Supply Chain. 2021. "Infection Control and Wound Care." [<https://www.supplychain.nhs.uk/categories/infection-control-wound-care/>]. Accessed 7 February 2021.
- [5] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 7 February 2021.
- [6] Government Online. 6 November 2020. "National Microbiology Framework - Public Health England." [<https://www.government-online.net/national-microbiology-framework-public-health-england/>]. Accessed 7 February 2021.
- [7] UK Department for Environment, Food, and Rural Affairs (Defra). N.D. "Procurement at Defra." [<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/procurement>]. Accessed 2 May 2021.

## 4.2.2 Stockpiling for emergencies

### 4.2.2a

**Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 2**

The United Kingdom has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. The UK's four health departments for England, Northern Ireland, Scotland and Wales established stockpiles of medical supplies for use during a public health emergency. The 2011 UK Influenza Pandemic Preparedness Strategy states that "the Government has in place stockpiles of facemasks and respirators for health and social care workers" but that "[i]n line with the scientific evidence, the Government will not stockpile facemasks for general use in the community." [1] The 2014 Pandemic Influenza Response Plan also refers to a national stockpile of personal protective equipment for use by health and social care workers, as well as stockpiles of countermeasures. [2] The UK also maintains stockpiles of MCM for use in an influenza pandemic. These include antivirals, antibiotics (for complications), vaccines and personal protective equipment (PPE) stocks for health personnel. The NHS has advance and "just-in-time" agreements in place with manufacturers of MCMs which can be activated once information is available on amounts of MCM needed and funding available. The existence of joint UK plans for pandemic influenza and of a four nations health group enables a coordinated UK-wide approach to decisions on MCM for pandemics. [1, 2, 3] According to the 2015 Global Health Security Agenda, the UK "maintains national stockpiles of medical countermeasures as part of its preparedness planning for an influenza pandemic and for chemical, biological, radiological and nuclear threats." [4] The UK's four health departments for England, Northern Ireland, Scotland and Wales established stockpiles of Chemical, Biological, Radiological and Nuclear (CBRN) MCM after the 2001 terrorist attacks in the US, located at strategic points around the four nations. These are referred to as the UK Reserve National Stock for Major Incidents. Stocks include antidotes/treatments for nerve agents, cyanide and botulism; antibiotics for post exposure prophylaxis for anthrax, plague or tularaemia; and treatments for radiation, thallium, caesium and opioid poisoning. These can be accessed via ambulance services or National Health Service (NHS) Emergency Preparedness, Resilience and Response (EPRR) contacts. [3, 5] All four health departments maintain MCM stockpiles, though England's Department of Health helps the devolved administrations to access additional supplies when necessary. [6] Ireland's Department of Health Emergency Response Plan refers to accessing stockpiles of "health and civil contingency countermeasures." [6] Scotland's National Health Service (NHS) National Services Scotland information webpage on supply and distribution states that PPE stockpiles are being distributed as part of Scotland's COVID-19 response and the government has expanded warehouse storage to ensure adequate quantities of stock, including PPE. [7] The Welsh Government information webpage on Coronavirus and personal protective equipment (PPE), last updated in May 2020, states that the country has enough PPE for frontline health and care workers in Wales, and high volumes of PPE supplies have been distributed from central and pandemic stocks during the course of the COVID-19 pandemic. [8] In September 2020, the Department of Health and Social Care (DHSC) released a Personal protective equipment (PPE) strategy, outlining the development of a strategic stockpile to respond to the COVID-19 pandemic as well as surges in the future and other types of pandemic threat. DHSC is consulting experts to determine the nature, composition and volume of a future pandemic stockpile. [9] An April 2020 BBC News article reported on stockpile shortages of PPE in the UK, and an investigation by BBC Panorama found that "vital items were left out of the stockpile when it was set up in 2009 and that the government subsequently ignored a warning from its own advisers to buy missing equipment." [10] A November 2020 article in the Evening Standard reported that "the UK spent £10 billion extra in inflated prices for personal protective equipment due to an 'inadequate' stockpile." [11]

[1] Public Health England. 2014. "Pandemic influenza response plan."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 11 February 2021.

[2] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 11 February 2021.

[3] Elbe, S, Roemer-Mahler, A and Long, C. 2015. "Medical countermeasures for national security: a new government role in the pharmaceuticalization of society", in *Social Science and Medicine*, 131. [<http://sro.sussex.ac.uk/48979/1/1-s2.0-S0277953614002664-main.pdf>]. Accessed 19 January 2021.

- [4] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 13 February 2021.
- [5] National Health Service (NHS) England / Pinto-Duschinsky, S. 27 Feb 2015. "EPRR: UK Reserve National Stock for Major Incidents - How to access stock in England." Public letter to NHS leaders. [<https://www.england.nhs.uk/wp-content/uploads/2015/03/epr-uk-reserv-stck-nat-incidt.pdf>]. Accessed 13 February 2021.
- [6] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan."  
[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 11 February 2021.
- [7] NHS National Services Scotland. N.d. "Supply and distribution." [<https://nhsns.org/services/our-covid-19-response/supply-and-distribution/>]. Accessed 11 February 2021.
- [8] Welsh Government. 19 May 2020 "Coronavirus and personal protective equipment (PPE)."  
[<https://gov.wales/coronavirus-and-personal-protective-equipment-ppe>]. Accessed 11 February 2021.
- [9] UK Department of Health & Social Care. 29 September 2020. "Personal protective equipment (PPE) strategy: stabilise and build resilience." [<https://www.gov.uk/government/publications/personal-protective-equipment-ppe-strategy-stabilise-and-build-resilience/personal-protective-equipment-ppe-strategy-stabilise-and-build-resilience>]. Accessed 11 February 2021.
- [10] BBC News. 28 April 2020. "Coronavirus: UK failed to stockpile crucial PPE." [<https://www.bbc.com/news/newsbeat-52440641>]. Accessed 11 February 2021.
- [11] Morrison, S. 24 November 2020. "UK spent £10bn extra on PPE due to 'inadequate' stockpile and surge in demand, report finds." [<https://www.standard.co.uk/news/uk/uk-spent-ps10bn-extra-on-ppe-due-to-inadequate-stockpile-and-surge-in-demand-report-finds-b78986.html>]. Accessed 11 February 2021.

#### 4.2.2b

**Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 0**

There is no evidence that the United Kingdom has a stockpile of laboratory supplies for national use during a public health emergency. The 2011 UK Pandemic Preparedness Strategy and Public Health England's (PHE) 2014 Pandemic Influenza Response Plan mention stockpiles of medical supplies and medical countermeasures (MCMs) but does not mention stockpile of laboratory supplies, such as reagents. [1, 2] Stockpile of laboratory supplies are not mentioned in Northern Ireland's Department of Health Emergency Response Plan (2019), Scotland's Preparing for Emergencies (2013) document, or Wales' Emergency Response Plan (2018) or Communicable Disease Outbreak Plan (2019). [3, 4, 5, 6] There is no additional information indicating the UK has a stockpile of laboratory supplies available through the UK government website, including the Ministry of Defence and the National Health Service. [7, 8] There is also no information on laboratory stockpiles available through Northern Ireland's Public Health Agency, Public Health Scotland, or Public Health Wales. [9, 10, 11] The 2015 Global Health Security Agenda for the UK mentions stockpiles of MCMs, but there is no mention of a national stockpile of laboratory supplies. [12]

[1] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 13 February 2021.

[2] Public Health England. 2014. "Pandemic influenza response plan."

- [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 13 February 2021.
- [3] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 13 February 2021.
- [4] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 13 February 2021.
- [5] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan." [<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 13 February 2021.
- [6] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')." [<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 13 February 2021.
- [7] UK Government. Official Website. [<https://www.gov.uk/>]. Keyword search. Accessed 13 February 2021.
- [8] UK National Health Service. Official Website. [<https://www.nhs.uk/>]. Keyword search. Accessed 13 February 2021.
- [9] Northern Ireland HSC Public Health Agency. 2021. [<https://www.publichealth.hscni.net/>]. Keyword search. Accessed 13 February 2021.
- [10] Public Health Scotland. 2021. [<https://publichealthscotland.scot/>]. Keyword search. Accessed 13 February 2021.
- [11] Public Health Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 13 February 2021.
- [12] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 13 February 2021.

#### 4.2.2c

**Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. According to the 2015 Global Health Security Agenda, the UK "maintains national stockpiles of medical countermeasures [MCM] as part of its preparedness planning for an influenza pandemic and for chemical, biological, radiological and nuclear threats," but there is no indication of how often reviews are conducted for stockpiles to be maintained. [1] Public Health England's (PHE) 2014 Pandemic Influenza Response Plan mentions reviewing stockpile levels during the recovery phase of a pandemic but does not indicate reviews are conducted at least annually. [2] The 2011 UK Pandemic Preparedness Strategy refers to maintaining stockpiles of medical supplies and PPE, but there is no indication of frequency of stockpile review. [3] There is no additional information indicating the UK conducts an annual review of stockpiles available through the UK government website, including the Ministry of Defence and the National Health Service. [4, 5] There is also no information on frequency of stockpile review available through Northern Ireland's Public Health Agency, Public Health Scotland, or Public Health Wales. [6, 7, 8]

- [1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 2 May 2021.
- [2] Public Health England. 2014. "Pandemic influenza response plan."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 2 May 2021.
- [3] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 2 May 2021.
- [4] UK Government. Official Website. [<https://www.gov.uk/>]. Keyword search. Accessed 2 May 2021.
- [5] UK National Health Service. Official Website. [<https://www.nhs.uk/>]. Keyword search. Accessed 2 May 2021.
- [6] Northern Ireland HSC Public Health Agency. 2021. [<https://www.publichealth.hscni.net/>]. Keyword search. Accessed 2 May 2021.
- [7] Public Health Scotland. 2021. [<https://publichealthscotland.scot/>]. Keyword search. Accessed 2 May 2021.
- [8] Public Health Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 2 May 2021.

## 4.2.3 Manufacturing and procurement for emergencies

### 4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?
- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that the United Kingdom has a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency and there evidence of a plan/mechanism to procure medical supplies for national use during a public health emergency. According to the 2015 Global Health Security Agenda for the UK "Governance and legislative arrangements are in place to enable the procurements [of medical countermeasures] to be completed on behalf of England and the Devolved Administrations to ensure consistency across the UK." [1] The UK's 2014 Pandemic Influenza Response Plan states that Public Health England's (PHE) Centre for Infectious Disease Surveillance and Control (CIDSC) in Colindale is responsible for supporting response to an influenza pandemic by securing the cost-effective procurement and supply of antivirals, antibiotics, vaccines and consumables. [2] Both the 2015 Global Health Security Agenda for the UK and the UK's 2014 Pandemic Influenza Response Plan refer the country's Advanced Purchase Agreement for vaccine and a number of "just in time" contracts with suppliers for the procurement of "additional medical consumables" to supplement stockpiles in the event of a pandemic. [1, 2] However, additional details on what the Advanced Purchase Agreement encompasses are not available and the document is not available online. The existence of joint UK plans for pandemic influenza and of a four nations health group enables a coordinated UK-wide approach to decisions on MCM for pandemics. [3, 4, 5] Evidence related to leveraging domestic capacity is specific to the COVID-19 pandemic. In June 2020, a press release from the Department of Health and Social Care (DHSC) describes the Government's scaling of international procurement and domestic manufacture of PPE and "contracts for billions of items of PPE" in response to the COVID-19 pandemic that were negotiated by the

procurement arm of the Ministry of Defence. [6] DHSC also publishes weekly reports on PPE delivery statistics for England, and similar statistics on PPE are published by the governments of Northern Ireland and Wales. [7, 8, 9] An April 2020 DHSC publication on a PPE Plan in response to COVID-19 describes a "brand new 'Make' strategy of encouraging UK manufacturers to produce PPE. There has been limited UK manufacture of PPE to date and so new supply channels for materials to make PPE have been sourced at pace in order to enable new manufacturing to commence." [10] In June 2020, the Department of Health and Social Care published guidance for the "Assessment and procurement of coronavirus (COVID-19) tests" as information to developers of COVID-19 on how the government assess offers of COVID-19 tests. [11]

[1] Global Health Security Agenda external mission team. Aug 2015. "Global Health Security Agenda pilot assessment of the United Kingdom."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456984/IndependentReport\\_GHS\\_acc.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf)]. Accessed 13 February 2021.

[2] Public Health England. 2014. "Pandemic influenza response plan."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 13 February 2021.

[3] Elbe, S, Roemer-Mahler, A and Long, C. 2015. "Medical countermeasures for national security: a new government role in the pharmaceuticalization of society", in *Social Science and Medicine*, 131. [<http://sro.sussex.ac.uk/48979/1/1-s2.0-S0277953614002664-main.pdf>]. Accessed 13 February 2021.

[4] National Health Service (NHS) England / Pinto-Duschinsky, S. 27 Feb 2015. "EPRR: UK Reserve National Stock for Major Incidents – How to access stock in England." Public letter to NHS leaders. [<https://www.england.nhs.uk/wp-content/uploads/2015/03/epr-uk-reserv-stck-nat-incidt.pdf>]. Accessed 13 February 2021.

[5] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/21377/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/21377/dh_131040.pdf)]. Accessed 13 February 2021.

[6] Department of Health and Social Care. 25 June 2020. "Press release: Major milestone hit as 2 billion items of PPE delivered." [<https://www.gov.uk/government/news/major-milestone-hit-as-2-billion-items-of-ppe-delivered>]. Accessed 13 February 2021.

[7] Department of Health and Social Care. 30 June 2020, reports published on this site dated 9 February 2021. "PPE deliveries statistics (England): weekly reports." [<https://www.gov.uk/government/collections/ppe-deliveries-statistics-england-weekly-reports>]. Accessed 13 February 2021.

[8] HSC Northern Ireland Business Service Organisation. 10 February 2021. "Procurement and Logistics Service (PaLS) PPE Statistics (COVID-19)." [<http://www.hscbusiness.hscni.net/services/3190.htm>]. Accessed 13 February 2021.

[9] Welsh Government. 11 February 2021. "Personal protective equipment items issued." [<https://gov.wales/personal-protective-equipment-items-issued>]. Accessed 13 February 2021.

[10] UK Department of Health and Social Care. 10 April 2020. "Covid-19: Personal Protective Equipment (PPE) Plan."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/922273/Coronavirus\\_COVID-19\\_-\\_personal\\_protective\\_equipment\\_PPE\\_plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/922273/Coronavirus_COVID-19_-_personal_protective_equipment_PPE_plan.pdf)]. Accessed 13 February 2021.

[11] Department of Health and Social Care. 3 February 2021. "Guidance: Assessment and procurement of coronavirus (COVID-19) tests." [<https://www.gov.uk/government/publications/assessment-and-procurement-of-coronavirus-covid-19-tests>]. Accessed 13 February 2021.

### 4.2.3b

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is no evidence that the United Kingdom has a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies for national use during a public health emergency, nor of a plan/mechanism to procure laboratory supplies for national use during a public health emergency. According to the 2015 Global Health Security Agenda for the UK, regarding in-country production and/or procurement processes for acquiring media and reagents for core laboratory tests, "Public Health England (PHE) has an internal media production capability for specialised media and framework contracts for standard/general use media." However, there is no mention of plans or agreements for manufacturing or procurement of laboratory supplies during a public health emergency. [1] In June 2020, PHE published guidance for the "Assessment and procurement of coronavirus (COVID-19) tests," but this guidance does not specifically mention reagents, media, or other laboratory supplies. [2] There is no evidence of a plan to leverage domestic manufacture or procurement of laboratory supplies during a public health emergency available through the Department of Health and Social Services, National Health Service, Medicines & Healthcare products Regulatory Agency, or Ministry of Defence. [3, 4, 5, 6]

[1] Department of Health and Social Care. 3 February 2021. "Guidance: Assessment and procurement of coronavirus (COVID-19) tests." [<https://www.gov.uk/government/publications/assessment-and-procurement-of-coronavirus-covid-19-tests>]. Accessed 15 February 2021.

[2] Department of Health and Social Care. 3 February 2021. "Guidance: Assessment and procurement of coronavirus (COVID-19) tests." [<https://www.gov.uk/government/publications/assessment-and-procurement-of-coronavirus-covid-19-tests>]. Accessed 15 February 2021.

[3] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 15 February 2021.

[4] UK National Health Service. 2021. [<https://www.nhs.uk/>]. Keyword search. Accessed 15 February 2021.

[5] UK Medicines & Healthcare products Regulatory Agency. 2021. [<https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency>]. Keyword search. Accessed 15 February 2021.

[6] UK Ministry of Defence. 2021. [<https://www.gov.uk/government/organisations/ministry-of-defence>]. Keyword search. Accessed 15 February 2021.

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

### 4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

#### 4.3.1a

Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom country has regulations and plans in place for dispensing medical countermeasures (MCM) for national use during a public health emergency. According to UK-wide planning documents for pandemic influenza, the Centre for Infectious Disease Surveillance and Control (CIDSC) at Public Health England (PHE) Colindale is responsible for overseeing

distribution of MCMs in a pandemic. CIDSC provides instructions to the National Health Service (NHS) Business Services Authority for the mobilisation of the national stockpile of antivirals to be distributed to antiviral collection points (ACPs), where they are dispensed directly to the public. ACPs may be established where the pressure on primary care is high. [1, 2] This approach for rapidly dispensing MCMs was introduced during the 2009 H1N1 influenza pandemic, when the UK set up the National Pandemic Flu Service (NPFS) to distribute antivirals directly to the population. This enabled people to complete a self-assessment for influenza symptoms and then collect antiviral medication from a local ACP without seeing a medical professional. [3] The UK also has a reserve national stock of MCM for major chemical, biological, radiological and nuclear (CBRN) incidents, kept at strategic locations within England, Northern Ireland, Scotland, and Wales. Information is available for public health personnel on how to access these stocks but not how/where to dispense them. [4, 5] Applicable to both pandemics and CBRN emergencies, the UK has legislation and plans enabling the rapid dispensing of medications to large numbers of people during public health incidents. The mechanism used is a ‘patient group direction’ (PGD), which, when signed by an authorising organisation (such as a local health authority) and a doctor and a pharmacist, authorises the dispensing of specific medication to persons generally (barring specified exclusions). [6, 7] PHE has prepared PGD templates for some types of emergency, though others can be prepared when needed. Templates exist for CBRN incidents, covering MCMs for plague, anthrax and tularaemia; and for pandemic influenza, covering MCMs for avian influenza and for influenza outbreaks in care homes. [5, 8, 9]

[1] Public Health England. 2014. “Pandemic influenza response plan.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 11 February 2021.

[2] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. “The UK pandemic preparedness strategy 2011.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 11 February 2021.

[3] Elbe, S, Roemer-Mahler, A and Long, C. 2015. “Medical countermeasures for national security: a new government role in the pharmaceuticalization of society”, in *Social Science and Medicine*, 131. [<http://sro.sussex.ac.uk/48979/1/1-s2.0-S0277953614002664-main.pdf>]. Accessed 11 February 2021.

[4] National Health Service (NHS) England / Pinto-Duschinsky, S. 27 Feb 2015. “EPRR: UK Reserve National Stock for Major Incidents – How to access stock in England.” Public letter to NHS leaders. [<https://www.england.nhs.uk/wp-content/uploads/2015/03/epr-uk-reserv-stck-nat-incidt.pdf>]. Accessed 11 February 2021.

[5] National Health Service (NHS) England. 6 March 2019. “Hazardous Materials (HAZMAT) and Chemical, Biological, Radiological and Nuclear (CBRN).” [<https://www.england.nhs.uk/ourwork/epr/hm/>]. Accessed 11 February 2021.

[6] Government of the United Kingdom. 2012. “The Human Medicines Regulations 2012, Part 12, Chapter 1, Regulation 213.” [<http://www.legislation.gov.uk/uksi/2012/1916/regulation/213/made>]; and “The Human Medicines Regulations 2012, Part 12, Chapter 3, Regulation 229.” [<http://www.legislation.gov.uk/uksi/2012/1916/regulation/229/made>]. Accessed 11 February 2021.

[7] Medicines and Healthcare Products Regulatory Agency. 4 Dec 2017. “Patient group directions: who can use them.” [<https://www.gov.uk/government/publications/patient-group-directions-pgds/patient-group-directions-who-can-use-them>]. Accessed 11 February 2021.

[8] Public Health England (PHE). 22 January 2021. “Avian influenza: PGD templates.” [<https://www.gov.uk/government/publications/avian-influenza-pre-and-post-exposure-prophylaxis-pgd-template>]. Accessed 11 February 2021.

[9] Public Health England (PHE). 18 March 2019. “Influenza post exposure prophylaxis and treatment: PGD templates.” [<https://www.gov.uk/government/publications/influenza-post-exposure-prophylaxis-and-treatment-pgd-templates>]. Accessed 11 February 2021.

## 4.3.2 System for receiving foreign health personnel during a public health emergency

### 4.3.2a

Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that the United Kingdom has a public plan in place for receiving health personnel from other countries to respond to a public health emergency. The UK does not participate in the European Medical Corps, which enables personnel-sharing during public health emergencies affecting European Union (EU) member states. The Corps was set up in 2016, shortly before the UK voted for Brexit, to provide mutual support in responding to public health emergencies. The UK has not committed teams or equipment to its voluntary pool. [1] There is no evidence of a plan for receiving foreign health personnel during an emergency from the Department of Health and Social Care (DHSC), Public Health England (which includes the International Health Regulations focal point, and is responsible for international liaison over infectious diseases) or NHS England, either in an NHS document summarising all emergency response plans; within existing emergency response frameworks and plans; on their websites or from a search of the overarching government website, gov.uk. [2, 3, 4, 5, 6, 7, 8, 9] The devolved administrations' health departments and emergency response plans are not considered here, as England's health authorities play a leading role in international liaison. Under the National Health Service (NHS) England 'Emergency preparedness, resilience and response' framework, there is a concept of operations document for dealing with mass casualties, which states that: "Where capacity is exceeded in the NHS in England and the Devolved Administrations, NHS England may request support internationally via the Department of Health." However, this document explicitly excludes casualties as a result of infectious diseases. [10] A March 2019 article in BBC News reported that the UK NHS would begin "a major campaign to recruit health workers from other countries to meet growing staff shortages." However, there is no detail specific to this campaign addressing or preparing for a public health emergency. [11] The British Medical Association issued guidance for international doctors during the COVID-19 pandemic. [12] In December 2020, GP Online—an online information service intended for healthcare professionals—reported that the General Medical Council (GMC) granted emergency registrations to around 30,000 doctors during the pandemic. [13] However, these sources do not mention a plan to receive health personnel from other countries during COVID-19 or any other public health emergency.

[1] European Commission. 8 January 2021. "European Medical Corps." [[https://ec.europa.eu/echo/what-we-do/civil-protection/european-medical-corps\\_en](https://ec.europa.eu/echo/what-we-do/civil-protection/european-medical-corps_en)]. Accessed 14 February 2021.

[4] National Health Service (NHS) England. March 2019. "Summary of Published Key Strategic Guidance for Health Emergency Preparedness, Resilience & Response (EPRR)." [<https://www.england.nhs.uk/wp-content/uploads/2017/12/eprp-guidance-chart-v3.pdf>]. Accessed 6 February 2021.

[3] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [<https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf>]. Accessed 14 February 2021.

[4] Public Health England (PHE). 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 14 February 2021.

[5] Department of Health and Social Care. 2021. Official website.

[<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Accessed 14 February 2021.

[6] Public Health England. 2021. Official website. [<https://www.gov.uk/government/organisations/public-health-england>]. Accessed 14 February 2021.

[7] National Health Service (NHS) England. February 2019. "Emergency preparedness, resilience and response (EPRR)." [<https://www.england.nhs.uk/ourwork/eprp/>]. Accessed 14 February 2021.

[8] Public Health England (PHE). Aug 2014. "Pandemic influenza response plan 2014."

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 14 February 2021.

[9] Government of the United Kingdom. 2019. Official website. [<https://www.gov.uk/>]. Accessed 14 February 2021.

[10] National Health Service (NHS) England. Nov 2017. "Concept of operations for managing mass casualties." [<https://www.england.nhs.uk/wp-content/uploads/2018/03/concept-operations-management-mass-casualties.pdf>]. Accessed 14 February 2021.

[11] BBC News. 12 May 2019. "NHS staff shortage: How many doctors and nurses come from abroad?" [<https://www.bbc.com/news/world-48205445>]. Accessed 14 February 2021.

[12] British Medical Association. 8 February 2021. "COVID-19: guidance for international doctors." [<https://www.bma.org.uk/advice-and-support/covid-19/immigration/covid-19-guidance-for-international-doctors>]. Accessed 14 February 2021.

[13] Haynes, L. 3 December 2021. "NHS must keep doctors who returned in pandemic as overseas supply dries up, says GMC." [<https://www.gponline.com/nhs-keep-doctors-returned-pandemic-overseas-supply-dries-up-says-gmc/article/1701641>]. GP Online. Accessed 14 February 2021.

## 4.4 HEALTHCARE ACCESS

### 4.4.1 Access to healthcare

#### 4.4.1a

**Does the constitution explicitly guarantee citizens' right to medical care?**

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

**Current Year Score: 0**

2020

World Policy Analysis Center

#### 4.4.1b

**Access to skilled birth attendants (% of population)**

Input number

**Current Year Score: 99**

2011

WHO/World Bank/United Nations Children's Fund (UNICEF)

#### 4.4.1c

**Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)**

Input number

**Current Year Score: 692.27**

2017

WHO Global Health Expenditure database

## 4.4.2 Paid medical leave

### 4.4.2a

**Are workers guaranteed paid sick leave?**

Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

**Current Year Score: 2**

2020

World Policy Analysis Center

## 4.4.3 Healthcare worker access to healthcare

### 4.4.3a

**Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

The government in the United Kingdom has not issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency. A situation-specific, risk-based approach is taken to protecting healthcare workers. The UK-wide Civil Contingencies Act 2004 (CCA) does not contain any requirement to prioritise treatment of healthcare workers responding to an emergency. [1] In England, neither the National Health Service (NHS) England's 'Incident response plan (national)' nor Public Health England (PHE)'s guidance document for communicable disease outbreaks contains such a commitment. [2, 3] Among England's disease-specific documents on outbreak response, the pandemic influenza response plan calls for "prompt recognition (and treatment) of staff with influenza", but not prioritised treatment. The advice on viral haemorrhagic fevers (VHF) states: "procedures must be in place to deal with any accidental exposure of staff to blood or body fluids from high possibility or confirmed cases of VHF" and notes that staff exposed to bodily fluids/laboratory specimens of confirmed cases must be treated as a Category 3 (high risk) contact, monitored and if appropriate given antivirals. They are not prioritised over non-healthcare staff who fall into Category 3. [4, 5, 6, 7] In Northern Ireland, prioritized treatment of healthcare workers is not mentioned in the Department of Health (DoH)'s emergency response plan or the Public Health Agency (PHA)'s infectious disease incident/outbreak plan, and the PHA's main emergency response plan is not available. [8, 9, 10, 11] The DoH has a response plan for pandemic influenza, which notes that frontline health workers, including volunteers, should be offered priority vaccinations in a pandemic. [12] In Scotland, the NHS' national guidance document on preparing for emergencies does not contain a relevant commitment; nor does the guidance from Health Protection Scotland (HPS, part of the NHS) on pandemic influenza or management of public health incidents. [13, 14, 15] In Wales, neither Public Health Wales' emergency response plan nor its communicable disease outbreak plan contains a relevant commitment, and the document 'Wales framework for managing major infectious disease emergencies' is not available online. [16, 17] Health and safety legislation and guidance, and a code of practice under the Health and Social Care Act, do result in duties for employers of healthcare workers who become infected in the course of their work (in emergency and non-emergency situations). The

Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1999 and the Control of Substances Hazardous to Health (COSHH) 2002 place a duty on the employer to assess risks and use appropriate control measures to protect employees. According to the Code of Practice on the Prevention and Control of Health Care Associated Infections and Related Guidance, issued under the Health and Social Care Act, decisions to screen or treat staff must be evidence-based, drawing on outbreak-specific risk assessments and national guidance. Owing to the situation-specific approach, there is no overarching rule that healthcare workers must receive priority treatment. [18] There is no commitment to provide prioritised treatment of healthcare staff infected while responding to an emergency in the NHS Act 2006 or the Health and Social Care Act 2012; on the websites of the Department of Health and Social Care, PHE, DoH or PHA (Northern Ireland), NHS Scotland or HPS (Scotland), or Public Health Wales. [19, 20, 21, 22, 23, 24, 25, 26, 27]

- [1] Government of the United Kingdom. 2004. "Civil Contingencies Act 2004." [https://www.legislation.gov.uk/ukpga/2004/36/contents]. Accessed 16 February 2021.
- [2] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf]. Accessed 16 February 2021.
- [3] Public Health England (PHE). 2014. "Communicable disease outbreak management: Operational guidance." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/343723/12\_8\_2014\_CD\_Outbreak\_Guidance\_REandCT\_2\_\_2\_.pdf]. Accessed 16 February 2021.
- [4] Public Health England (PHE). Aug 2014. "Pandemic influenza response plan 2014." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/344695/PI\_Response\_Plan\_13\_Aug.pdf]. Accessed 16 February 2021.
- [5] Public Health England (PHE). 17 Oct 2018. "Shiga toxin-producing Escherichia coli: guidance, data and analysis." [https://www.gov.uk/government/collections/vero-cytotoxin-producing-escherichia-coli-vtec-guidance-data-and-analysis]. Accessed 16 February 2021.
- [6] Public Health England (PHE). Aug 2018. "Interim Public Health Operational Guidance for Shiga toxin producing Escherichia coli (STEC)." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/732569/Interim\_public\_health\_operational\_guidance\_for\_STEC\_PDF.pdf]. Accessed 16 February 2021.
- [7] Advisory Committee on Dangerous Pathogens, Department of Health/Health and Safety Executive. Nov 2015. "Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/534002/Management\_of\_VHF\_A.pdf]. Accessed 16 February 2021.
- [8] Department of Health, Northern Ireland. N.d. "Emergency planning and response." [https://www.health-ni.gov.uk/articles/emergency-planning-and-response]. Accessed 16 February 2021.
- [9] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf]. Accessed 16 February 2021.
- [10] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Emergency preparedness/environmental hazards." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/emergency-preparednessenvironmental-hazards]; and "Priority areas." [http://www.publichealth.hscni.net/directorate-public-health/health-protection/priority-areas]. Accessed 16 February 2021.
- [11] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\_0.pdf]. Accessed 16 February 2021.
- [12] Department of Health, Social Services and Public Safety (DHSSPS, now called "Department of Health"). Jan 2013. "Northern Ireland Health and Social Care influenza pandemic preparedness and response guidance." [https://www.health-ni.gov.uk/sites/default/files/publications/dhssps/pan-flu-ni-hsc-preparedness-response-2012.pdf]. Accessed 16 February 2021.

2021.

- [13] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland."  
[<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 9 February 2021.
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[<https://hps-beta.azurewebsites.net/web-resources-container/pandemic-flu-guidance-for-infection-control-in-hospitals-and-primary-care-settings/>]. Accessed 16 February 2021.
- [10] Scottish Government/Health Protection Scotland (HPS). 2020. "Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams." Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incident.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incident.pdf)]. Accessed 16 February 2021.
- [16] Public Health Wales. Sep 2018. "Public Health Wales emergency response plan."  
[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 16 February 2021.
- [17] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')."  
[<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 16 February 2021.
- [18] British Medical Association (BMA). 8 September 2020. "Staff screening and treatment after infection outbreaks."  
[<https://www.bma.org.uk/advice/employment/occupational-health/infection-outbreaks>]. Accessed 16 February 2021.
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- [27] Public Health Wales. 2021. Official website. [<https://phw.nhs.wales/>]. Keyword search. Accessed 16 February 2021.

## 4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

**Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 1**

There is a system in place in the United Kingdom for public health officials and healthcare workers to communicate during a public health emergency. In the UK, the vast majority of healthcare is provided by the National Health Service (NHS). [1] Public health officials are defined as including NHS management as well as employees of public health agencies/departments. In England, NHS England's emergency planning documents discuss communication within the NHS and with partner organisations such as Public Health England (PHE) and the Department of Health (DH), requiring six-monthly communications exercises and assigning liaison roles. [2, 3] PHE's guidance document for communicable disease outbreaks states that outbreak control teams (OCTs) include representatives of the NHS-funded healthcare provider (eg a consultant epidemiologist, consultant physician and/or general practitioner) and of PHE. This provides a mechanism for communication during outbreaks. [4] In Northern Ireland, the Department of Health (DoH)'s emergency response plan states that two-way communications flow from the DoH crisis management team via Health and Social Care (HSC, NHS equivalent) Boards to HSC Trusts and other front-line health providers. [5, 6] The Public Health Agency (PHA)'s infectious disease incident/outbreak plan also assigns a key role to OCTs for deciding how information will be communicated internally to healthcare staff. [7] The PHA's main emergency response plan is not available. [8] In Scotland, the NHS places a responsibility on local health boards to set up communications systems linking boards, hospitals and divisions during emergencies, to include a designated functional space, personnel and standard operating procedures. It also calls for internal communications protocols for disseminating information to healthcare staff. [9] According to Health Protection Scotland (HPS), part of the NHS, health boards are responsible for briefing the Scottish Government, HPS, local health care staff, and partners in local and national agencies during incidents, noting that systems should be in place to enable the rapid transfer of information. [10] In Wales, Public Health Wales' emergency response plan calls for clear lines of internal and external communication. It describes a 'tactical incident manager' role, responsible for communicating response arrangements to affected services and staff. [11] Its communicable disease outbreak plan assigns a key role to OCTs in facilitating communication and calls for direct communication between the OCT and the manager of any organisation/premises involved in the outbreak. [12]

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[2] National Health Service (NHS) England. "Emergency preparedness, resilience and response framework." [https://www.england.nhs.uk/wp-content/uploads/2015/11/epr-framework.pdf]. Accessed 15 February 2021.

[3] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf]. Accessed 15 February 2021.

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[<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 15 February 2021.

[7] Public Health Agency (PHA), Health and Social Care (HSC), Northern Ireland. Sep 2018. “Northern Ireland infectious disease incident/outbreak plan.” [[http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\\_0.pdf](http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018_0.pdf)]. Accessed 15 February 2021.

[8] Public Health Agency (PHA), Health and Social Care (HSC). N.d. “Emergency preparedness/environmental hazards.” [<http://www.publichealth.hscni.net/directorate-public-health/health-protection/emergency-preparednessenvironmental-hazards>]; and “Priority areas.” [<http://www.publichealth.hscni.net/directorate-public-health/health-protection/priority-areas>]. Accessed 15 February 2021.

[9] NHS Scotland Resilience. Aug 2013. “Preparing for emergencies: Guidance for health boards in Scotland.” [<https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf>]. Accessed 15 February 2021.

[10] Scottish Government/Health Protection Scotland (HPS). 2020. “Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams.” Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incident.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incident.pdf)]. Accessed 15 February 2021.

[11] Public Health Wales. Sep 2018. “Public Health Wales emergency response plan.” [<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%20%28Sep%202018%29.pdf>]. Accessed 15 February 2021.

[12] Welsh Government. July 2020. “The Communicable Disease Outbreak Plan for Wales (‘The Wales Outbreak Plan’).” [<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 15 February 2021.

#### 4.5.1b

**Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that the system for public health officials and healthcare workers to communicate during an emergency encompasses healthcare workers in the private sector. While some private health providers exist, the UK’s National Health Service (NHS) has around 100% uptake by the population as well as the capacity and mandate to take on full responsibility for public health emergencies. All UK residents have access to free healthcare provided by the NHS, referred to as Health and Social Care (HSC) in Northern Ireland, and approximately 100% of residents make use of it. [1, 2, 3, 4] In England, NHS England’s emergency planning documents discuss communication within the NHS and with partner organisations such as Public Health England (PHE) and the Department of Health (DH), requiring six-monthly communications exercises and assigning liaison roles. [5, 6] PHE’s guidance document for communicable disease outbreaks states that outbreak control teams (OCT) include representatives of the NHS-funded healthcare provider (eg a consultant epidemiologist, consultant physician and/or general practitioner) and of PHE. This provides a mechanism for ongoing communication during outbreaks. [7] Neither document encompasses communication with private healthcare providers. [6, 7] In Northern Ireland, the Department of Health (DoH)’s emergency response plan states that two-way communications flow from the DoH crisis management team via HSC Boards to HSC Trusts and other front-line health providers. [8, 9] The Public Health Agency (PHA)’s infectious disease incident/outbreak plan also assigns a key role to OCTs for deciding how

information will be communicated internally to healthcare staff. [10] Neither document encompasses communication with private healthcare providers. [9, 10] The PHA's main emergency response plan is not available. [11] In Scotland, the NHS places a responsibility on local health boards to set up communications systems linking boards, hospitals and divisions during emergencies, to include a designated functional space, personnel and standard operating procedures. It also calls for internal communications protocols for disseminating information to healthcare staff. [12] According to Health Protection Scotland (HPS), part of the NHS, health boards are responsible for briefing the Scottish Government, HPS, local health care staff, and partners in local and national agencies during incidents, noting that systems should be in place to enable the rapid transfer of information. [13] Neither document encompasses communication with private healthcare providers. [12, 13] In Wales, Public Health Wales' emergency response plan calls for clear lines of internal and external communication. It describes a 'tactical incident manager' role, responsible for communicating response arrangements to affected services and staff. [14] Its communicable disease outbreak plan assigns a key role to OCTs in facilitating communication and calls for direct communication between the OCT and the manager of any organisation/premises involved in the outbreak. [15] Neither document encompasses communication with private healthcare providers. [14, 15]

- [1] National Health Service (NHS). 2021. "About the NHS." [<https://www.england.nhs.uk/about/about-nhs-england/>]. Accessed 16 February 2021.
- [2] Belfast Health and Social Care Trust. N.d. "Health service structure." [<https://belfasttrust.hscni.net/about/corporate-info/health-service-structure/>]. Accessed 16 February 2021.
- [3] National Health Service (NHS) Digital. 11 February 2021. "Patients Registered at a GP Practice February 2021 - Official Statistics." [<https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice/february-2021>]. Accessed 16 February 2021.
- [4] Office for National Statistics. N.d. "Population estimates." [<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>]. Accessed 16 February 2021.
- [5] National Health Service (NHS) England. 10 November 2015. "Emergency preparedness, resilience and response framework." [<https://www.england.nhs.uk/wp-content/uploads/2015/11/epr-framework.pdf>]. Accessed 16 February 2021.
- [6] National Health Service (NHS) England. 21 Jul 2017. "Incident response plan (national)." [<https://www.england.nhs.uk/wp-content/uploads/2017/07/NHS-england-incident-response-plan-v3-0.pdf>]. Accessed 16 February 2021.
- [7] Public Health England (PHE). 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 16 February 2021.
- [8] Department of Health, Northern Ireland. N.d. "Emergency planning and response." [<https://www.health-ni.gov.uk/articles/emergency-planning-and-response>]. Accessed 16 February 2021.
- [9] Northern Ireland Department of Health. January 2019. "Department of Health Emergency Response Plan." [<https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-jan-2019.pdf>]. Accessed 16 February 2021.
- [10] Public Health Agency (PHA), Health and Social Care (HSC). Sep 2018. "Northern Ireland infectious disease incident/outbreak plan." [[http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018\\_0.pdf](http://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018_0.pdf)]. Accessed 16 February 2021.
- [11] Public Health Agency (PHA), Health and Social Care (HSC). N.d. "Emergency preparedness/environmental hazards." [<http://www.publichealth.hscni.net/directorate-public-health/health-protection/emergency-preparednessenvironmental-hazards>]; and "Priority areas." [<http://www.publichealth.hscni.net/directorate-public-health/health-protection/priority-areas>]. Accessed 16 February 2021.
- [12] NHS Scotland Resilience. Aug 2013. "Preparing for emergencies: Guidance for health boards in Scotland." [[https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-](https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/09/preparing-emergencies-guidance-health-boards-scotland/documents/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland)

boards-scotland/nhsscotland-resilience-preparing-emergencies-guidance-health-boards-scotland/govscot%3Adocument/00434687.pdf]. Accessed 16 February 2021.

[13] Scottish Government/Health Protection Scotland (HPS). 2020. “Management of public health incidents: Guidance on the roles and responsibilities of NHS led incident management teams.” Scottish Health Protection Network, Scottish Guidance No. 12.1 interim update (2020). [[https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1\\_shpn-12-management-public-health-incident.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/1673/documents/1_shpn-12-management-public-health-incident.pdf)]. Accessed 16 February 2021.

[14] Public Health Wales. Sep 2018. “Public Health Wales emergency response plan.”

[<http://www.wales.nhs.uk/sitesplus/documents/888/Public%20Health%20Wales%20Emergency%20Response%20Plan%2028Sep%202018%29.pdf>]. Accessed 16 February 2021.

[15] Welsh Government. July 2020. “The Communicable Disease Outbreak Plan for Wales (‘The Wales Outbreak Plan’).”

[<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/>]. Accessed 16 February 2021.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

**Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that the national public health system in the United Kingdom is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities. There is evidence that the national public health systems in England, Northern Ireland, Scotland and Wales are all monitoring for and tracking HCAI. Public Health England (PHE) monitors HCAI through routine mandatory and voluntary surveillance programmes, with mandatory programmes covering Bacteraemia, Gram-negative bacteria, Clostridium difficile infection (CDI), E. coli, Pseudomonas aeruginosa, Klebsiella species, S. aureus and surgical site infection (SSI). [1, 2] Northern Ireland’s Public Health Agency states that it conducts HCAI surveillance covering CDI, S. aureus—with the latest quarterly reports published in December 2019—and SSI, though data on SSI has not been published since 2009. [3] The National Health Service (NHS) National Services Scotland monitors HCAI through surveillance systems covering CDI, E. coli, S. aureus, SSI, HCAI in intensive care units, and norovirus. [4] Quarterly surveillance reports are published covering CDI, E. coli, S. aureus and SSI. [5] Public Health Wales monitors HCAI through mandatory surveillance programmes covering blood stream (bacteraemia) infection, S. aureus, top ten bacteraemia infection, CDI and Clostridium difficile ribotype, critical care infection, hospital outbreak and SSI. [6, 7]

[1] Public Health England (PHE). 22 Oct 2018. “Healthcare associated infections (HCAI): guidance, data and analysis.”

[<https://www.gov.uk/government/collections/healthcare-associated-infections-hcai-guidance-data-and-analysis>]. Accessed 5 February 2021.

[2] Public Health England (PHE). 4 January 2021. “Mandatory healthcare associated infection (HCAI) surveillance: data quality statement.” [<https://www.gov.uk/government/publications/mandatory-healthcare-associated-infection-hcai-surveillance-data-quality-statement>]. Accessed 5 February 2021.

[3] Public Health Agency, Northern Ireland. N.d. [<http://www.publichealth.hscni.net/directorate-public-health/health-protection/healthcare-associated-infections>]. Accessed 5 February 2021.

[4] NHS National Service Scotland. N.d. “Scottish surveillance of healthcare associated infection.”

[<https://nhs.uk/services/antimicrobial-resistance-and-healthcare-associated-infection-arhai/scottish-surveillance-of-healthcare-associated-infection/>]. Accessed 5 February 2021.

[5] Health Protection Scotland. 2021. "Data and Surveillance." [<https://www.hps.scot.nhs.uk/data/>]. Accessed 5 February 2021.

[6] Public Health Wales. N.d. "Healthcare Associated Infection & Antimicrobial Resistance Programme (HARP)." [<https://phw.nhs.wales/services-and-teams/harp/>]. Accessed 5 February 2021.

[7] Public Health Wales. N.d. "Healthcare associated infections (HCAI)." [<https://phw.nhs.wales/services-and-teams/harp/healthcare-associated-infections-hcai/>]. Accessed 5 February 2021.

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

**Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is a national requirement in the United Kingdom for ethical review from a research ethics committee (REC) before beginning a clinical trial. This is mandated by the UK-wide Medicines for Human Use (Clinical Trials) Regulations 2004. The regulations require every clinical trial to have one or more sponsors who is established in the European Union. The sponsor(s) must apply for approval from an ethics committee (according to Part 3, Regulation 12). [1] The Care Act 2014 created the Health Research Authority (HRA), accountable to England's Department of Health (DH), which is responsible for approving the creation of RECs, setting ethical standards and issuing guidance on when approval by an REC is needed. The HRA is required to coordinate with its counterparts in the devolved administrations of Northern Ireland, Scotland and Wales to ensure standardisation and compatibility of ethical review requirements. [2, 3, 4]

[1] Government of the United Kingdom. 2004. "Medicines for Human Use (Clinical Trials) Regulations 2004." [<http://www.legislation.gov.uk/uksi/2004/1031/contents/made>]. Accessed 19 January 2021.

[2] Government of the United Kingdom. 2014. "Care Act 2014 – Part 3, Chapter 2: Health Research Authority." [<http://www.legislation.gov.uk/ukpga/2014/23/part/3/chapter/2/enacted>]. 19 January 2021.

[3] Health Research Authority (HRA). N.d. "What we do." [<https://www.hra.nhs.uk/about-us/what-we-do/>]. 19 January 2021.

[4] Health Research Authority (HRA). N.d. "Partnerships." [<https://www.hra.nhs.uk/about-us/partnerships/>]. 19 January 2021.

#### 4.7.1b

**Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?**

Yes = 1 , No = 0

**Current Year Score: 1**

The UK has an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. According to the Health Research Authority (HRA), which is responsible for establishing research ethics

committees and setting ethical standards: “In the event of a public health emergency, researchers may want to urgently set up clinical trials to test new treatments. The HRA can arrange to fast track approval in these exceptional circumstances and has done so in the past, for example, in relation to bird flu and Ebola.” [1] The UK Public Health Rapid Support Team (UK-PHRST), which deploys specialist experts to outbreaks of infectious diseases overseas to prevent them from becoming global threats, has a government-issued and funded mandate to conduct research related to outbreaks. Run with the participation of the London School of Hygiene and Tropical Medicine, it has played a role in fast-tracking clinical trials for vaccines and treatments during outbreaks. [2, 3, 4] In its four-year strategic framework for 2018-2022, UK-PHRST plans to develop generic but detailed research protocols designed for rapid implementation in the event of an outbreak. The protocols will be submitted for ethics committee approval at the relevant institutions both in the UK and in partner countries. It also plans to develop a standard operating procedure and checklist for rapid adaption and implementation of research once an outbreak is declared. This will include ethics committee review. These protocols will enable research to be carried out in the earliest stages of outbreaks. [4]

[1] Health Research Authority (HRA). 10 February 2020. “Research in emergency settings.”

[<https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/research-emergency-settings/>]. Accessed 21 January 2021.

[2] Public Health England and Department of Health and Social Care. 17 September 2019. “UK Public Health Rapid Support Team (UK-PHRST).” [<https://www.gov.uk/government/collections/uk-public-health-rapid-support-team-uk-phrst>]. Accessed 21 January 2021.

[3] London School of Hygiene and Tropical Medicine. N.d. “Responding to global health emergencies: research, education and action.” [<https://www.lshtm.ac.uk/research/research-action/responding-global-health-emergencies-research-education-and-action>]. Accessed 21 January 2021.

[4] Public Health England (PHE) and London School of Hygiene and Tropical Medicine. 6 Feb 2018. “UK Public Health Rapid Support Team: Four-year strategic framework.”

[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/756910/UK-PHRST\\_Strategic\\_Framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/756910/UK-PHRST_Strategic_Framework.pdf)]. Accessed 21 January 2021.

## 4.7.2 Regulatory process for approving medical countermeasures

### 4.7.2a

**Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?**

Yes = 1, No = 0

**Current Year Score: 1**

The United Kingdom has a government agency responsible for approving new medical countermeasures (MCMs) for humans. The Medicines and Healthcare products Regulatory Agency (MHRA), an executive agency of the Department of Health and Social Care, is the UK's standalone medicines and medical devices regulator. [1, 2] The requirement for a licensing authority to approve new medicinal products for humans stems from the Medicines Act 1968, which defines medicinal products as “(a) any substance or combination of substances presented as having properties of preventing or treating disease in human beings; or (b) any substance or combination of substances that may be used by or administered to human beings with a view to—(i) restoring, correcting or modifying a physiological function by exerting a pharmacological, immunological or metabolic action, or (ii) making a medical diagnosis.”. [3] The Human Medicines Regulations 2012 (HMRs)—amended by the Human Medicines (Amendment etc.) (EU Exit) Regulations 2019 and Human Medicines (Amendment etc.) (EU Exit) Regulations 2020—“set out a comprehensive regime for the authorisation of medicinal products for human use; for the manufacture, import, distribution, sale and supply of those products; for their labelling and advertising; and for pharmacovigilance.” [4, 5, 6, 7] “The amendments to the HMRs address the fact that the UK will no longer be part of the harmonised EU medicines

network following the end of transition period." However, the EU regulations will continue to apply in Northern Ireland in accordance with the Northern Ireland Protocol. [7] A licence is needed to manufacture, assemble or import medicinal products; and marketing authorisation is needed to sell or supply them. The MHRA acts as the licensing authority, and is responsible for issuing licences for manufacture, import and wholesale of medicinal products, and marketing authorisations. It is responsible for ensuring the safety, quality and effectiveness of medicines. [8, 9]

- [1] Medicines and Healthcare product Regulatory Agency (MHRA). N.d. "About us." [https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency/about]. Accessed 5 February 2021.
- [2] Medicines and Healthcare product Regulatory Agency (MHRA). 1 February 2021. "New guidance and information for industry from the MHRA: Guidance for industry and organisations to follow from 1 January 2021." [https://www.gov.uk/government/collections/mhra-guidance-and-publications-on-a-possible-no-deal-scenario#marketing-authorisations,-variations-and-licensing-guidance]. Accessed 5 February 2021.
- [3] Government of the United Kingdom. 1968. "Medicines Act 1968." [https://www.legislation.gov.uk/ukpga/1968/67/contents]. Accessed 5 February 2021.
- [4] Government of the United Kingdom. 2012. "The Human Medicines Regulations 2012." [https://www.legislation.gov.uk/uksi/2012/1916/contents]. Accessed 5 February 2021.
- [5] Government of the United Kingdom. 2019. "The Human Medicines (Amendment etc.) (EU Exit) Regulations 2019." [https://www.legislation.gov.uk/uksi/2019/775/contents/made]. Accessed 5 February 2021.
- [6] Government of the United Kingdom. 2020. "The Human Medicines (Amendment etc.) (EU Exit) Regulations 2020." [https://www.legislation.gov.uk/uksi/2020/1488/contents/made]. Accessed 5 February 2021.
- [7] Medicines and Healthcare product Regulatory Agency (MHRA). 30 December 2020. "EU guidance documents referred to in the Human Medicines Regulations 2012." [https://www.gov.uk/guidance/eu-guidance-documents-referred-to-in-the-human-medicines-regulations-2012]. Accessed 5 February 2021.
- [8] Medicines and Healthcare product Regulatory Agency (MHRA). 16 October 2020. "Apply for manufacturer or wholesaler of medicines licences." [https://www.gov.uk/guidance/apply-for-manufacturer-or-wholesaler-of-medicines-licences]. Accessed 5 February 2021.
- [9] Medicines and Healthcare product Regulatory Agency (MHRA). 25 January 2021. "Apply for a licence to market a medicine in the UK." [https://www.gov.uk/guidance/apply-for-a-licence-to-market-a-medicine-in-the-uk]. Accessed 5 February 2021.

#### 4.7.2b

**Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies in the United Kingdom. The Medicines and Healthcare products Regulatory Agency (MHRA), an executive agency of the Department of Health and Social Care, is the UK's standalone medicines and medical devices regulator. [1, 2] The requirement for a licensing authority to approve new medicinal products for humans stems from the Medicines Act 1968, which defines medicinal products as "(a) any substance or combination of substances presented as having properties of preventing or treating disease in human beings; or (b) any substance or combination of substances that may be used by or administered to human beings with a view to—(i) restoring, correcting or modifying a physiological function by exerting a pharmacological, immunological or metabolic action, or (ii) making a medical diagnosis." [3] The Human Medicines Regulations 2012 (HMRs)—amended by the Human Medicines (Amendment etc.) (EU Exit) Regulations 2019 and Human Medicines (Amendment etc.) (EU Exit) Regulations 2020—"set out a comprehensive regime for the authorisation of

medicinal products for human use; for the manufacture, import, distribution, sale and supply of those products; for their labelling and advertising; and for pharmacovigilance." [4, 5, 6, 7] According to the HMRS, a licence is needed to manufacture, assemble or import medicinal products; and marketing authorisation is needed to sell or supply them. There are exceptions that apply in public health emergencies. Article 174 of the HMRS states that the requirement for marketing authorisation does not apply where the sale or supply of a medicinal product is authorised by the licensing authority on a temporary basis in response to the suspected or confirmed spread of—(a) pathogenic agents; (b) toxins; (c) chemical agents; or (d) nuclear radiation, which may cause harm to human beings. [4, 8] The Medicines and Healthcare products Regulatory Agency (MHRA) acts as the licensing authority, and is responsible for issuing licences for manufacture, import and wholesale of medicinal products, and marketing authorisations. [1, 9, 10] Applications to MHRA for a license to market a medicine can be fast tracked "if there is compelling evidence of benefit in a public health emergency or if there is a shortage of supply of an essential medicine that has been verified by the Department of Health and Social Care (DHSC)." [10]

- [1] Medicines and Healthcare product Regulatory Agency (MHRA). N.d. "About us." [https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency/about]. Accessed 5 February 2021.
- [2] Medicines and Healthcare product Regulatory Agency (MHRA). 1 February 2021. "New guidance and information for industry from the MHRA: Guidance for industry and organisations to follow from 1 January 2021." [https://www.gov.uk/government/collections/mhra-guidance-and-publications-on-a-possible-no-deal-scenario#marketing-authorisations,-variations-and-licensing-guidance]. Accessed 5 February 2021.
- [3] Government of the United Kingdom. 1968. "Medicines Act 1968." [https://www.legislation.gov.uk/ukpga/1968/67/contents]. Accessed 5 February 2021.
- [4] Government of the United Kingdom. 2012. "The Human Medicines Regulations 2012." [https://www.legislation.gov.uk/uksi/2012/1916/contents]. Accessed 5 February 2021.
- [5] Government of the United Kingdom. 2019. "The Human Medicines (Amendment etc.) (EU Exit) Regulations 2019." [https://www.legislation.gov.uk/uksi/2019/775/contents/made]. Accessed 5 February 2021.
- [6] Government of the United Kingdom. 2020. "The Human Medicines (Amendment etc.) (EU Exit) Regulations 2020." [https://www.legislation.gov.uk/uksi/2020/1488/contents/made]. Accessed 5 February 2021.
- [7] Medicines and Healthcare product Regulatory Agency (MHRA). 30 December 2020. "EU guidance documents referred to in the Human Medicines Regulations 2012." [https://www.gov.uk/guidance/eu-guidance-documents-referred-to-in-the-human-medicines-regulations-2012]. Accessed 5 February 2021.
- [8] Government of the United Kingdom. 2012. "The Human Medicines Regulations 2012 – Part 10, Exceptions, Regulation 174: Supply in response to spread of pathogenic agents etc." [https://www.legislation.gov.uk/uksi/2012/1916/regulation/174]. Accessed 5 February 2021.
- [9] Medicines and Healthcare product Regulatory Agency (MHRA). 16 October 2020. "Apply for manufacturer or wholesaler of medicines licences." [https://www.gov.uk/guidance/apply-for-manufacturer-or-wholesaler-of-medicines-licences]. Accessed 5 February 2021.
- [10] Medicines and Healthcare product Regulatory Agency (MHRA). 25 January 2021. "Apply for a licence to market a medicine in the UK." [https://www.gov.uk/guidance/apply-for-a-licence-to-market-a-medicine-in-the-uk]. Accessed 5 February 2021.

## Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

### 5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

#### 5.1.1 Official IHR reporting

##### 5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

#### 5.1.2 Integration of health into disaster risk reduction

##### 5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1 , No = 0

Current Year Score: 1

In the United Kingdom, epidemics and pandemics are integrated into the national risk reduction strategy and there a standalone national disaster risk reduction strategy for pandemic influenza, which contains elements on risk reduction. Pandemics are integrated into the UK's national risk reduction strategy, the 'National Risk Register' (NRR); and pandemic preparedness documents exist for influenza, which contain elements on risk reduction. Public Health England (PHE) contributes to the NRR, which is a government assessment of the likelihood and potential impact of a range of civil emergency risks (not just health-related) that may affect the UK over the next five years, with information on risk reduction and response activities. The NRR covers human and animal diseases, and chemical, biological, radiological or nuclear (CBRN)-related terrorist threats. It provides a summary of how the UK government and local respondents, such as emergency services, prepare for these emergencies, and links to relevant disaster planning, resilience and response documents. [1, 2] PHE judges pandemic influenza to be the top national risk, and its 'Pandemic influenza response plan' contains information on risk management and mitigation, though this is related to PHE's business continuity rather than national risk reduction. [1, 3] There is also a UK pandemic preparedness strategy, jointly published by England's Department of Health and Social Care (DHSC) and the devolved health agencies for Northern Ireland, Scotland and Wales. This is not explicitly a risk reduction strategy, but does contain risk assessments, including of the economic impact of a pandemic, as well as planning assumptions and a strategic approach to pandemic preparedness. [4] No other general or pandemic-specific risk reduction strategy documents can be found from the official UK government search engine, which includes documents from the DHSC and PHE; or from the public health agencies of the devolved administrations; or from a wider search. [5, 6, 7, 8, 9, 10]

- [1] Public Health England (PHE). Jul 2017. "Public Health England and the Sendai Framework for Disaster Risk Reduction 2015-2030: A review."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/653164/PHE\\_and\\_the\\_Sendai\\_Framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/653164/PHE_and_the_Sendai_Framework.pdf)]. Accessed 5 February 2021.
- [2] Cabinet Office. December 2020. "National Risk Register, 2020 edition."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/952959/6.6920\\_CO\\_CC\\_S\\_s\\_National\\_Risk\\_Register\\_2020\\_11-1-21-FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/952959/6.6920_CO_CC_S_s_National_Risk_Register_2020_11-1-21-FINAL.pdf)]. Accessed 5 February 2021.
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[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/344695/PI\\_Response\\_Plan\\_13\\_Aug.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344695/PI_Response_Plan_13_Aug.pdf)]. Accessed 5 February 2021.
- [4] Department of Health (England), Department of Health, Social Services and Public Safety (Northern Ireland), Welsh Government and Scottish Government. 2011. "The UK pandemic preparedness strategy 2011."  
[[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213717/dh\\_131040.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf)]. Accessed 5 February 2021.
- [5] Government of the United Kingdom. 2021. [<https://www.gov.uk/>]. Keyword search. Accessed 5 February 2021.
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- [7] Public Health Agency (PHA), Health and Social Care (HSC), Northern Ireland. 2021. [<http://www.publichealth.hscni.net/>]. Keyword search. Accessed 5 February 2021.
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## 5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

### 5.2.1 Cross-border agreements

#### 5.2.1a

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom has cross-border agreements with neighboring countries with regards to public health emergencies.

Prior to Brexit, the UK had such agreements as part of the European Union (EU) regulations and its participation in the European Centre for Disease Prevention and Control (ECDC). The EU regulation, Decision No 1082/2013/EU on serious cross-border threats to health, notes that Article 168 of the Treaty on the Functioning of the EU calls for EU action to complement national policies on monitoring, early warning of, and combating serious cross-border threats to health. Decision No 1082/2013/EU establishes a framework for this, including coordination of preparedness planning and formalisation of the rules on response coordination. [1] The ECDC pre-dates this decision but has a role in implementing it. ECDC mechanisms include the Early Warning and Response System (EWRS), "a confidential system allowing Member States and the European Commission to share information about health events with potential EU-level impact"; the Epidemic Intelligence Information System (EPIS), "a secure web-based communication platform that allows for an international exchange of epidemiological

information"; and the European Surveillance System (TESSy), "a database system for collecting disease data", to which EU and European Economic Area countries regularly report data on infectious diseases. [2]

Upon Brexit, the UK's exit from the European Union, the UK also left the European Centre for Disease Prevention and Control (ECDC). [3] However, upon Brexit, the Cooperation on health security section of the Trade and Cooperation Agreement between the EU and the UK states that when there is a serious cross-border threat to health, following a written request from the UK, the EU may grant the UK "ad hoc" access to the EWRS to exchange relevant information, assess public health risks, and coordinate public health measures. This exchange of information shall be on temporary basis for the period considered necessary for the relevant serious cross-border threat to health. Furthermore, the Cooperation on health security section states that the ECDC "shall cooperate on technical and scientific matters of mutual interest to the Parties and, to that end, may conclude a memorandum of understanding." [4] The UK does not participate in the European Medical Corps, which enables personnel-sharing during public health emergencies affecting European Union (EU) member states. [5]

[1] The European Parliament and the Council of the European Union. 2013. "Decision No 1082/2013/EU on serious cross-border threats to health." [<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013D1082&from=EN>]. Accessed 16 February 2021.

[2] European Centre for Disease Prevention and Control (ECDC). 2018. "Achievements, challenges and major outputs 2017: Highlights from the Annual Report of the Director." [[https://www.ecdc.europa.eu/sites/portal/files/documents/annual-report-director-2017-highlights\\_0.pdf](https://www.ecdc.europa.eu/sites/portal/files/documents/annual-report-director-2017-highlights_0.pdf)]. Accessed 16 February 2021.

[3] The Kings Fund. 11 January 2021. "Brexit and the end of the transition period: what does it mean for the health and care system?" [<https://www.kingsfund.org.uk/publications/articles/brexit-end-of-transition-period-impact-health-care-system>]. Accessed 16 February 2021.

[4] Government of the United Kingdom. 24 December 2020. "Trade and Cooperation Agreement Between the European Union and the European Atomic Energy Community, of the One Part, and the United Kingdom of Great Britain and Northern Ireland, of the Other Part - Part Four, Title 1: Health Security, Article HS.1: Cooperation on health security." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948119/EU-UK\\_Trade\\_and\\_Cooperation\\_Agreement\\_24.12.2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948119/EU-UK_Trade_and_Cooperation_Agreement_24.12.2020.pdf)]. Accessed 16 February 2021.

[5] European Commission. 8 January 2021. "European Medical Corps." [[https://ec.europa.eu/echo/what-we-do/civil-protection/european-medical-corps\\_en](https://ec.europa.eu/echo/what-we-do/civil-protection/european-medical-corps_en)]. Accessed 16 February 2021.

### 5.2.1b

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the United Kingdom has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies. Prior to Brexit, as an EU member the UK was subject to an EU regulatory framework on animal disease control, under which many enforcement functions exist at EU level. EU legislation includes a range of measures aimed at preventing the spread of disease, including shared systems for surveillance, disease notification, movement controls and eradication. Many existing measures have been consolidated under a recent piece of legislation, the Regulation (EU) 2016/429 on transmissible animal diseases (referred to as the EU Animal Health Law), which is being phased in in EU countries between 2016-2021. It consists of "requirements for disease prevention and preparedness; disease awareness; biosecurity; traceability of animals and where necessary products thereof; intra-EU movements and entry into the EU of animals and animal products; surveillance; disease control and eradication; and emergency measures". [1] In October 2018, the House of Lords published a report on how Brexit may impact animal

biosecurity. It noted that it was unclear if or how this regulation would be implemented in the UK, and called on ministers for clarity. [2] A government response to the report in January 2019 stated with regard to the EU Animal Health Law: “We will wish to review the final legislation before committing to adopt it in full, taking into account our intention to maintain the highest standards of biosecurity in the UK in future.” [3] No further update is available on the status of the UK’s transition plans regarding cross-border agreements with regards to animal health emergencies. The Trade and Cooperation Agreement between the EU and the UK does not mention cross-border agreements, protocols, or MOUs with regards to animal health emergencies. [4] No additional information is available on cross-border agreements with regards to animal health emergencies available through the Department of Health and Social Care or Animal and Plant Health Agency. [5, 6]

[1] House of Lords European Union Committee. 24 Oct 2018. “Brexit: Plant and animal biosecurity.”

[<https://publications.parliament.uk/pa/ld201719/ldselect/ldeucom/191/191.pdf>]. Accessed 16 February 2021.

[2] European Commission. N.d. “Animal Disease Notification System (ADNS).” [[https://ec.europa.eu/food/animals/animal-diseases/not-system\\_en](https://ec.europa.eu/food/animals/animal-diseases/not-system_en)]. Accessed 16 February 2021.

[3] Government of the United Kingdom. 16 Jan 2019. “Government response: Brexit: plant and animal biosecurity.”

[[https://www.parliament.uk/documents/lords-committees/eu-energy-environment-subcommittee/Brexit-plants-and-animal-biosecurity/Government\\_Response\\_HoL\\_EU\\_Committee\\_Report\\_Brexit\\_Plant\\_Animal\\_Biosecurity.pdf](https://www.parliament.uk/documents/lords-committees/eu-energy-environment-subcommittee/Brexit-plants-and-animal-biosecurity/Government_Response_HoL_EU_Committee_Report_Brexit_Plant_Animal_Biosecurity.pdf)]. Accessed 16 February 2021.

[4] Government of the United Kingdom. 24 December 2020. “Trade and Cooperation Agreement Between the European Union and the European Atomic Energy Community, of the One Part, and the United Kingdom of Great Britain and Northern Ireland, of the Other Part - Part Four, Title 1: Health Security, Article HS.1: Cooperation on health security.” [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948119/EU-UK\\_Trade\\_and\\_Cooperation\\_Agreement\\_24.12.2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948119/EU-UK_Trade_and_Cooperation_Agreement_24.12.2020.pdf)]. Accessed 16 February 2021.

[5] UK Department of Health and Social Care. 2021. [<https://www.gov.uk/government/organisations/department-of-health-and-social-care>]. Keyword search. Accessed 16 February 2021.

[6] UK Animal & Plant Health Agency. 2021. [<https://www.gov.uk/government/organisations/animal-and-plant-health-agency>]. Keyword search. Accessed 16 February 2021.

## 5.3 INTERNATIONAL COMMITMENTS

### 5.3.1 Participation in international agreements

#### 5.3.1a

**Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?**

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

**Current Year Score: 2**

2021

Biological Weapons Convention

#### 5.3.1b

**Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?**

Yes = 1, No = 0

**Current Year Score: 1**

2021

Biological Weapons Convention

### 5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1, No = 0

Current Year Score: 1

2021

Biological Weapons Convention

### 5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

Current Year Score: 4

2021

Biological Weapons Convention

## 5.3.2 Voluntary memberships

### 5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

Current Year Score: 1

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

## 5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

### 5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

#### 5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

#### 5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1, No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

#### 5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that the United Kingdom has allocated national funds to improve capacity to address epidemic threats within the past three years. The UK Collaborative on Development Research (UKCDR), a UK-based collaborative of government and research funders working in international development, lists a commitment of £260 million by the UK government since January 2019 "for development of vaccines for COVID-19 and other infectious diseases to the Coalition for Epidemics Preparedness Innovation (CEPI)". [1] CEPI is a global partnership that was created to develop vaccines to stop future epidemics. [2] In August 2020, the Government announced the establishment of the National Institute for Health Protection (NIHP) in spring 2021—bringing together Public Health England (PHE) and NHS Test and Trace, as well as the analytical capability of the Joint Biosecurity Centre (JBC) under a single leadership team—that will be primarily focused on ensuring "the best capability to control infectious disease and deal with pandemics or health protection crises," with COVID-19 and beyond. [3, 4] However, there is insufficient evidence that the country has allocated new or additional funds for NIHP. PHE's Annual Report and Accounts for 2019 to 2020 refers to transfer of accounting responsibilities regarding the NIHP, but there is no information on new or additional national funds towards establishing the NIHP. [5] According to the Global Health Security Tracking Dashboard, from 2014-2020 the UK has committed USD9.91 million to improve capacity to address epidemic threats and USD11.4 million has been disbursed. [6]

[1] UK Collaborative on Development Research (UKCDR). 2021. "Epidemics Preparedness and Response Group." [https://www.ukcdr.org.uk/about-us/our-groups/epidemics-preparedness-and-response-group/]. Accessed 19 February 2021.

[2] Coalition for Epidemics Preparedness Innovation (CEPI). 2021. "About Us - Mission." [https://cepi.net/about/whyweexist/]. Accessed 19 February 2021.

[3] Public Health England (PHE). 26 November 2020. "PHE Annual Report and Accounts: 2019 to 2020." [https://www.gov.uk/government/publications/phe-annual-report-and-accounts-2019-to-2020]. Accessed 19 February 2021.

[4] Department of Health and Social Care and The Rt Hon Matt Hancock MP. 18 August 2020. "Press release: Government creates new National Institute for Health Protection." [https://www.gov.uk/government/news/government-creates-new-national-institute-for-health-protection]. Accessed 19 February 2021.

[5] Department of Health and Social Care. 15 September 2020. "Policy paper: The future of public health: the National Institute for Health Protection and other public health functions." [https://www.gov.uk/government/publications/the-future-of-public-health-the-nihp-and-other-public-health-functions/the-future-of-public-health-the-national-institute-for-health-protection-and-other-public-health-functions]. Accessed 19 February 2021.

[6] Talus Analytics and the Georgetown University Center for Global Health Science and Security. 2021. "Global Health

Security Tracking Dashboard: United Kingdom - Funder Profile." [<https://tracking.ghscosting.org/details/1075/funder>]. Accessed 19 February 2021.

## 5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

### 5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5.3 Financing for emergency response

### 5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?

Yes = 1 , No = 0

Current Year Score: 1

The UK has publicly-identified special emergency public funds which the country can access in the face of a public health emergency. The Civil Contingencies Act 2004 requires the UK Parliament to make funds available for health agencies to comply with the Act's requirements for emergency planning, but not for response. [1] Local authorities (LAs) are expected to set funds aside for local emergency response efforts (for all emergencies, including public health emergencies), and have no automatic entitlement to additional emergency funding. However, under section 155 of the Local Government and Housing Act 1989, ministers in England are empowered to activate a "Bellwin Scheme" of emergency financial assistance to an LA at their discretion, where LAs are taking immediate action to safeguard life or property. It applies only to response, not

preparation or recovery. This scheme is not specific to public health emergencies but is applicable to them. The Department for Communities and Local Government sets thresholds for applying for the scheme, based on the expenses incurred in emergency response relative to the annual budget of the LA. Similar schemes are run by the Scottish and Welsh governments, with slightly different arrangements for thresholds and reimbursement. In Wales it is called the Emergency Financial Assistance Scheme. Northern Ireland runs specific, more time-limited schemes rather than a single equivalent to the Bellwin scheme, enabled by regulation 26 of the Local Government (Miscellaneous Provisions) (Northern Ireland) Order 1992. [2, 3, 4, 5] In November 2016, the government launched a specialist team of health experts who are ready to deploy to tackle a health crisis anywhere in the world within 48 hours: the UK Public Health Rapid Support Team, run jointly by Public Health England (PHE) and the London School of Hygiene and Tropical Medicine. The government allocated £20 million to fund the team over five years. [6] There is no evidence of other special public funds specifically for use in a public health emergency, from the UK government’s guidance on emergency preparedness, the National Health Service (NHS) England’s information on the national health emergency preparedness framework, the health departments/agencies of the four national administrations or their respective public health emergency and outbreak response planning documents. [7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29]

- [1] Government of the United Kingdom. 2004. “Civil Contingencies Act 2004.” [https://www.legislation.gov.uk/ukpga/2004/36/contents]. Accessed 16 February 2021.
- [2] Government of the United Kingdom. 28 Oct 2013. “Emergency Response and Recovery: Non statutory guidance accompanying the Civil Contingencies Act 2004.” [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/253488/Emergency\_Response\_and\_Recovery\_5th\_edition\_October\_2013.pdf]. Accessed 16 February 2021.
- [3] Department for Communities and Local Government. 2017. “The Bellwin Scheme of Emergency Financial Assistance to Local Authorities: Guidance notes for claims 2017 to 2018.” [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/653402/Bellwin\_Scheme\_Guidance\_Notes\_2017-18.pdf]. Accessed 16 February 2021.
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- [10] Public Health England. 2021. Official website. [https://www.gov.uk/government/organisations/public-health-england]. Keyword search. Accessed 16 February 2021.
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- [13] National Health Service (NHS) Scotland. 2021. Official website. [<https://www.scot.nhs.uk/>]. Keyword search. Accessed 16 February 2021.
- [14] Health Protection Scotland (HPS). 2021. [<https://www.hps.scot.nhs.uk/>]. Keyword search. Accessed 16 February 2021.
- [15] Public Health Wales. 2021. [<https://phw.nhs.wales/>]. Keyword search. Accessed 16 February 2021.
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- [17] Public Health England (PHE). 2014. "Communicable disease outbreak management: Operational guidance." [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/343723/12\\_8\\_2014\\_CD\\_Outbreak\\_Guidance\\_REandCT\\_2\\_\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf)]. Accessed 16 February 2021.
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28Sep%202018%29.pdf]. Accessed 16 February 2021.

[29] Welsh Government. July 2020. "The Communicable Disease Outbreak Plan for Wales ('The Wales Outbreak Plan')." [https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/the-communicable-disease-outbreak-plan-for-wales/]. Accessed 16 February 2021.

## 5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

### 5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that senior leaders in the United Kingdom in the past three years have made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support. There is no evidence that senior leaders have made a public commitment to improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity. During 2018, the UK government made repeated commitments to support the Democratic Republic of Congo (DRC) and other countries in Africa to improve capacity to address Ebola and other epidemic threats during 2018. Most announcements were official press releases, but in November 2018 it was reported that the Africa minister, Harriett Baldwin, had announced the commitment of a further £20 million from the UK's central crisis reserve in 2018/19 to support Ebola response efforts in the DRC and neighbouring countries, in addition to the £25m previously committed. She stated "By supporting the WHO's Regional Preparedness Plan, UK aid will help to scale up preparedness to ensure sustainability. We are not just waiting for the next outbreak to come along, but are actively working in partnership with the WHO around the world to strengthen health systems. This is keeping us all safe from current and future global health emergencies." [1, 2, 3] In January 2019, the government and the Secretary of State for Health and Social Care, Matt Hancock, announced that the UK would contribute £10 million of aid funding to the Coalition for Epidemic Preparedness Innovations (CEPI) to help develop vaccines against emerging infectious diseases. Secretary Hancock stated, "Diseases like Ebola and Lassa fever tear communities and families apart, causing untold amounts of harm and suffering. As a global community, we must keep trying to find new ways to beat diseases like this and making them a thing of the past. We have a proud history of being at the forefront of tackling diseases around the world, such as the Ebola outbreak in 2014, and will continue to do so by backing this vital work with CEPI to help protect people everywhere." [4] In February 2020, Secretary Hancock announced the UK would contribute an additional £20 million of funding to CEPI. [5] There is no evidence that senior leaders have made a public commitment to improve the UK's own domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity in the past three years, from the health departments/agencies of England, Northern Ireland, Scotland and Wales; from the Foreign and Commonwealth Office; from a search of the UK government's official website; or from the WHO. [6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

[1] Department for International Development (DFID), Department of Health and Social Care (DHSC), Public Health England (PHE) and Penny Mordaunt. 23 May 2018. "UK pledges fresh support in fight against Ebola in the DRC."

[https://www.gov.uk/government/news/uk-pledges-fresh-support-in-fight-against-ebola-in-the-drc]. Accessed 19 February 2021.

[2] Department for International Development and Harriett Baldwin. 3 Jul 2018. "UK steps up fight against Ebola following

outbreak in Democratic Republic of Congo.” [https://www.gov.uk/government/news/uk-steps-up-fight-against-ebola-following-outbreak-in-democratic-republic-of-congo]. Accessed 19 February 2021.

[3] Express. 21 Nov 2018. “Ebola Congo: UK pledges £20m to combat ‘WORST in Congo’s history’ 326 cases - 216 dead.” [https://www.express.co.uk/news/world/1048536/ebola-outbreak-congo-2018-ebola-symptoms-vaccine-who-latest-uk-foreign-aid]. Accessed 18 March 2019.

[4] Department of Health and Social Care. 22 Jan 2019. “£10 million to develop vaccines against global infectious diseases.” [https://www.gov.uk/government/news/10-million-to-develop-vaccines-against-global-infectious-diseases]. Accessed 19 February 2021.

[5] Coalition for Epidemics Preparedness Innovation (CEPI). 3 February 2020. “UK Government supports CEPI with £20 million additional funding.” [https://cepi.net/news\_cepi/uk-government-supports-cepi-with-20-million-additional-funding/]. Accessed 19 February 2021.

[6] Department of Health and Social Care. 2021. Official website. [https://www.gov.uk/government/organisations/department-of-health-and-social-care]. Keyword search. Accessed 19 February 2021.

[7] Public Health England. 2021. Official website. [https://www.gov.uk/government/organisations/public-health-england]. Keyword search. Accessed 19 February 2021.

[8] Department of Health, Northern Ireland. 2021. Official website. [https://www.health-ni.gov.uk/]. Keyword search. Accessed 19 February 2021.

[9] Public Health Agency (PHA), Northern Ireland. 2021. Official website. [http://www.publichealth.hscni.net/]. Keyword search. Accessed 19 February 2021.

[10] National Health Service (NHS) Scotland. 2021. Official website. [https://www.scot.nhs.uk/]. Keyword search. Accessed 19 February 2021.

[11] Health Protection Scotland. 2021. Official website. [https://www.hps.scot.nhs.uk/]. Keyword search. Accessed 19 February 2021.

[12] Public Health Wales. 2021. Official website. [https://phw.nhs.wales/]. Keyword search. Accessed 19 February 2021.

[13] Foreign and Commonwealth Office. 2021. Official website. [https://www.gov.uk/government/organisations/foreign-commonwealth-office]. Keyword search. Accessed 19 February 2021.

[14] Government of the United Kingdom. 2021. Official website. [https://www.gov.uk/]. Keyword search. Accessed 19 February 2021.

[15] World Health Organisation (WHO) Regional Office for Europe. N.d. “United Kingdom of Great Britain and Northern Ireland: News.” [http://www.euro.who.int/en/countries/united-kingdom-of-great-britain-and-northern-ireland/news/news/news?root\_node\_selection=296695]. Accessed 19 February 2021.

### 5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?
- Requested financing or technical support from donors to improve the country’s domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that the United Kingdom has, in the past three years, provided other countries with financing or technical support to improve capacity to address epidemic threats; and there is evidence that the UK has requested financing or technical support from donors to improve the country’s domestic capacity to address epidemic threats. In May 2018, the UK pledged £5 million to help tackle the Ebola outbreak in the Democratic Republic of Congo (DRC). This support aimed to help the World Health Organisation (WHO) to monitor and stem the spread of the disease; and to strengthen the DRC’s own

health systems. It was provided immediately upon announcement. [1] In July 2018, a further £1 million was committed to the WHO’s Regional Preparedness Plan to support nine countries at high risk of receiving cases of Ebola from the DRC. This was provided immediately upon announcement. [2] In March 2018, the WHO announced that the UK had increased its overall commitment to the Contingency Fund for Emergencies, used to tackle outbreaks and humanitarian health crises, from USD10.5 million to USD16 million. [3] In January 2019, the UK government announced it would contribute £10 million of funding to the Coalition for Epidemic Preparedness Innovations (CEPI) to help develop vaccines against emerging infectious diseases. The £10 million funding is in addition to the UK’s investment of £120 million for the UK Vaccine Network (UKVN), which helps to develop vaccines for epidemic diseases. [4] This allocation is among the £260 million committed by the UK government since January 2019 "for development of vaccines for COVID-19 and other infectious diseases to the Coalition for Epidemics Preparedness Innovation (CEPI)". [5] CEPI is a global partnership that was created to develop vaccines to stop future epidemics. [6] In November 2016, the government launched a team of health experts who can deploy to tackle an outbreak anywhere in the world within 48 hours: the UK Public Health Rapid Support Team. In 2016, the government allocated £20 million from the budget to fund the team over five years. The team has been deployed abroad three times in the past three years. [7, 8, 9] According to the Global Health Security Tracking Dashboard, from 2014–2020 the UK has committed USD10.57 billion to improve capacity to address epidemic threats and USD11.96 billion has been disbursed—including USD96.82 million disbursed to the Foundation for Innovative New Diagnostics (FIND) 2017–2021 for the development of new diagnostic testing for epidemic diseases, diseases with emerging resistance and neglected diseases." [10, 11] As a recipient, USD67.9 million has been committed to the UK and USD125.15 million has been disbursed. [12]

[1] Department for International Development (DFID), Department of Health and Social Care (DHSC), Public Health England (PHE) and Penny Mordaunt. 23 May 2018. "UK pledges fresh support in fight against Ebola in the DRC."

[https://www.gov.uk/government/news/uk-pledges-fresh-support-in-fight-against-ebola-in-the-drc]. Accessed 19 February 2021.

[2] Department for International Development and Harriett Baldwin. 3 Jul 2018. "UK steps up fight against Ebola following outbreak in Democratic Republic of Congo." [https://www.gov.uk/government/news/uk-steps-up-fight-against-ebola-following-outbreak-in-democratic-republic-of-congo]. Accessed 19 February 2021.

[3] World Health Organisation (WHO). 27 Mar 2018. "Donors pledge over US\$ 15 million to WHO’s Contingency Fund for Emergencies." [https://www.who.int/mediacentre/news/releases/2018/contingency-fund-emergencies/en/]. Accessed 19 February 2021.

[4] Department of Health and Social Care. 22 Jan 2019. "£10 million to develop vaccines against global infectious diseases." [https://www.gov.uk/government/news/10-million-to-develop-vaccines-against-global-infectious-diseases]. Accessed 19 February 2021.

[5] UK Collaborative on Development Research (UKCDR). 2021. "Epidemics Preparedness and Response Group." [https://www.ukcdr.org.uk/about-us/our-groups/epidemics-preparedness-and-response-group/]. Accessed 19 February 2021.

[6] Coalition for Epidemics Preparedness Innovation (CEPI). 2021. "About Us - Mission." [https://cepi.net/about/whyweexist/]. Accessed 19 February 2021.

[5] Coalition for Epidemic Preparedness Innovations (CEPI). N.d. "News and stories." [https://cepi.net/news/]. Accessed 19 February 2021.

[7] Public Health England (PHE). 2017. "Annual report and accounts 2016/17." [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/629803/PHE\_annual\_report\_2016\_2017\_web\_version.pdf]. Accessed 19 February 2021.

[8] Public Health England (PHE). 4 Apr 2017. "UK Public Health Rapid Support Team appoints first director." [https://www.gov.uk/government/news/uk-public-health-rapid-support-team-appoints-first-director]. Accessed 19 February 2021.

[9] Department of Health and Social Care (DHSC) and Public Health England (PHE). 17 September 2019. "UK Public Health Rapid Support Team (UK-PHRST): News announcements." [https://www.gov.uk/government/collections/uk-public-health-

rapid-support-team-uk-phrst#news-announcements]. Accessed 19 February 2021.

[10] Talus Analytics and the Georgetown University Center for Global Health Science and Security. 2021. "Global Health Security Tracking Dashboard: United Kingdom - Funder Profile." [https://tracking.ghscosting.org/details/1075/funder]. Accessed 2 May 2021.

[11] Talus Analytics and the Georgetown University Center for Global Health Science and Security. 2021. "Global Health Security Tracking Dashboard: United Kingdom – Funder table." [https://tracking.ghscosting.org/table/1075/funder]. Accessed 2 May 2021.

[12] Talus Analytics and the Georgetown University Center for Global Health Science and Security. 2021. "Global Health Security Tracking Dashboard: United Kingdom – Recipient Profile." [https://tracking.ghscosting.org/details/1075/recipient]. Accessed 2 May 2021.

### 5.5.4c

**Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?**

Yes = 1 , No = 0

**Current Year Score: 1**

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## 5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

### 5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

#### 5.6.1a

**Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza. The UK is a member of the Global Health Security Initiative, which has developed a "voluntary agreement to facilitate the rapid sharing of non-influenza biological materials among GHSI members during a potential or actual public health emergency." [1, 2] Additionally, the UK shares surveillance data through the European Centre for Disease Prevention and Control (ECDC), but it is unclear if specimens or other genetic data is shared as well. [3, 4]

[1] Global Health Security Initiative. "GHSI Members." [http://ghsi.ca/ghsi-members/]. Accessed 21 January 2021.

[2] Global Health Security Initiative. "Ministerial Statements: Brussels, Belgium - February 24, 2017." [http://ghsi.ca/ministerial-statements/brussels-february-2017/]. Accessed 21 January 2021.

[3] European Centre for Disease Prevention and Control (ECDC). N.d. "Epidemic Intelligence Information System (EPIS)."

[<https://ecdc.europa.eu/en/publications-data/epidemic-intelligence-information-system-epis>]. Accessed 21 January 2021.

[4] British Medical Association (BMA). 29 Jan 2018. “Brexit briefing: Health protection and health security.”

[<https://www.bma.org.uk/media/1336/bma-brexit-briefing-health-protection-and-health-security-2018.pdf>]. Accessed 21 January 2021.

### 5.6.1b

**Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that the United Kingdom has not shared samples in accordance with the PIP framework in the past two years. There is no evidence on the World Health Organization (WHO) PIP Framework website that the UK has not shared samples in accordance with the framework in the past year, nor are there any media reports indicating this. [1]

[1] World Health Organisation. 2021. “Pandemic Influenza Preparedness (PIP) Framework.”

[<https://www.who.int/influenza/pip/en/>]. Accessed 5 February 2021.

### 5.6.1c

**Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that the United Kingdom has not shared pandemic pathogen samples during an outbreak in the past two years. In the cases of notifiable infectious disease outbreaks reported to the World Health Organisation (WHO) in the past two years, the WHO did not report any failure to share pathogen samples. [1] In December 2020, the UK reported over 1000 cases of a SARS-CoV-2 Variant had been detected in the country. [2] In the cases of outbreaks reported to the World Organisation for Animal Health (OIE) in the past two years, the OIE did not report any failure to share pathogen samples. [3] UK reports to the OIE in the past two years include highly pathogenic avian influenza virus. [4] There is no media reporting to suggest that the UK has failed to share pandemic pathogen samples during an outbreak in the past two years.

[1] World Health Organisation (WHO). 2021. “Disease Outbreak News”. [<https://www.who.int/csr/don/archive/year/en/>]. Accessed 5 February 2021.

[2] World Health Organisation (WHO). 21 December 2020. “SARS-CoV-2 Variant – United Kingdom of Great Britain and Northern Ireland.” [<https://www.who.int/csr/don/21-december-2020-sars-cov2-variant-united-kingdom/en/>]. Accessed 5 February 2021.

[3] World Organisation for Animal Health (OIE). 2021. “Weekly Disease Information”. Wahis Interface.

[[https://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/WI](https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI)];

[[https://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/reportarchive](https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/reportarchive)]. Accessed 5 February 2021.

[4] World Organisation for Animal Health (OIE). 29 January 2021. “Highly pathogenic avian influenza, United Kingdom”.

[[https://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=37917](https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=37917)]. Accessed 5 February 2021.

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

##### 6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

### 6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 77

2020

Transparency International

### 6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

### 6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

## 6.1.2 Orderly transfers of power

### 6.1.2a

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 4

2021

Economist Intelligence

### 6.1.3 Risk of social unrest

#### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 3**

2021

Economist Intelligence

### 6.1.4 Illicit activities by non-state actors

#### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

**Current Year Score: 3**

2021

Economist Intelligence

#### 6.1.4b

**What is the level of illicit arms flows within the country?**

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

**Current Year Score: 2**

2020

UN Office of Drugs and Crime (UNODC)

#### 6.1.4c

**How high is the risk of organized criminal activity to the government or businesses in the country?**

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

**Current Year Score: 3**

2021

Economist Intelligence

## 6.1.5 Armed conflict

### 6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.1.6 Government territorial control

### 6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.2 SOCIO-ECONOMIC RESILIENCE

### 6.2.1 Literacy

#### 6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 99.9

2008-2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);  
The Economist Intelligence Unit

## 6.2.2 Gender equality

### 6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

**Current Year Score: 0.88**

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

## 6.2.3 Social inclusion

### 6.2.3a

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

**Current Year Score: 0.1**

2016

World Bank; Economist Impact

### 6.2.3b

Share of employment in the informal sector

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

**Current Year Score: 0**

There is no clear measurement or reporting of the share of employment in the informal sector in the United Kingdom, but evidence from within the past ten years indicates that the share of employment in the informal sector in the UK is less than 25%. The UK Office for National Statistics publishes data on employment and the labour market in the country, with the most recent reports published in January 2021. [1, 2] However, these data do not capture share of employment in the informal sector. [3] A 2013 article in the Guardian reported on a recent publication by the Institute for Economic Affairs, which found paid work undeclared on taxes—referred to as the "shadow economy"—accounted for around 10% of national income in the UK in 2012. [4, 5] A 2017 article by a graduate student out of the London School of Economics' Department of International Development states that "over two million people work in the informal economy in the UK, over 12 percent of its GDP is in the informal sector, and all these numbers are steadily rising." [6] However, this statement is not cited and a source for this data could not be found. There is no information available for the UK from the International Labour Organization (ILOSTAT) for Sustainable Development Goal (SDG) indicator 8.3.1, "proportion of informal employment in total employment," and the World Bank does not have data for the UK on the percentage of informal employment in the UK. [7, 8]

- [1] UK Office for National Statistics. 2021. "Employment and Labour Market." [https://www.ons.gov.uk/employmentandlabourmarket]. Accessed 14 February 2021.
- [2] UK Office for National Statistics. January 2021. "Labour Market Overview UK: January 2021." [https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/january2021]. Accessed 14 February 2021.
- [3] UK Office for National Statistics. 26 January 2021. "Dataset: A01: Summary of labour market statistics." [https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/summaryoflabourmarketstatistics]. Accessed 14 February 2021.
- [4] Elliot, L. 3 Jun 2013. "UK shadow economy worth £150bn." [https://www.theguardian.com/business/2013/jun/04/uk-shadow-economy]. The Guardian. Accessed 14 February 2021.
- [5] Schneider, F. and Williams, C. 4 June 2013. "The Shadow Economy." [https://iea.org.uk/publications/research/the-shadow-economy]. Institute for Economic Affairs. Accessed 14 February 2021.
- [6] Gallien, Max. 2017. "A prize winning essay: Why it matters to understand the informal economy." [http://eprints.lse.ac.uk/76735/1/LSE%20International%20Development%20%E2%80%93%20A%20prize%20winning%20essay\_%20Why%20it%20matters%20to%20understand%20the%20informal%20economy.pdf]. Accessed 14 February 2021.
- [7] International Labour Organization (ILOSTAT). "Country Profiles". [https://ilostat.ilo.org/data/country-profiles/]. Accessed 14 February 2021.
- [8] The World Bank. "Informal employment (% of total non-agricultural employment)". [https://data.worldbank.org/indicator/SL.ISV.IFRM.ZS?locations=GB&name\_desc=true]. Accessed 41 February 2021.

### 6.2.3c

#### Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

**Current Year Score: 3**

2016, or latest available

World Bank; Economist Impact calculations

### 6.2.4 Public confidence in government

#### 6.2.4a

#### Level of confidence in public institutions

Input number

**Current Year Score: 1**

2021

Economist Intelligence Democracy Index

### 6.2.5 Local media and reporting

#### 6.2.5a

Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

**Current Year Score: 2**

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

**Gini coefficient**

Scored 0-1, where 0=best

**Current Year Score: 0.35**

Latest available.

World Bank; Economist Impact calculations

## 6.3 INFRASTRUCTURE ADEQUACY

### 6.3.1 Adequacy of road network

#### 6.3.1a

**What is the risk that the road network will prove inadequate to meet needs?**

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

**Current Year Score: 3**

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

**What is the risk that air transport will prove inadequate to meet needs?**

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

**Current Year Score: 2**

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 83.65

2019

World Bank

### 6.4.2 Land use

#### 6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: 0.56

2008-2018

World Bank; Economist Impact

### 6.4.3 Natural disaster risk

#### 6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 81.26

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)  
World Factbook

#### 6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 329.9

2019

WHO

#### 6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 18.51

2019

World Bank

#### 6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 19.2

2018

World Bank

### 6.5.1e

#### Prevalence of obesity among adults

Input number

Current Year Score: 27.8

2016

WHO

## 6.5.2 Access to potable water and sanitation

### 6.5.2a

#### Percentage of homes with access to at least basic water infrastructure

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

### 6.5.2b

#### Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

## 6.5.3 Public healthcare spending levels per capita

### 6.5.3a

#### Domestic general government health expenditure per capita, PPP (current international \$)

Input number

Current Year Score: 3631.16

2018

WHO Global Health Expenditure database

## 6.5.4 Trust in medical and health advice

### 6.5.4a

#### Trust medical and health advice from the government

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018

### 6.5.4b

#### Trust medical and health advice from medical workers

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018