Background Quality Report

COVID-19 in Defence: testing and positive cases

Introduction

1. This fortnightly official statistic provides information on the number of coronavirus tests undertaken by Defence personnel and the number of positive cases reported for the UK armed forces.

2. Coronaviruses are a family of viruses that cause disease in people and animals. COVID-19 refers to the "coronavirus disease 2019" and is a disease that can affect the lungs and airways. The World Health Organisation classified COVID-19 as a pandemic on 11 March 2020.

Background

3. Defence, in line with the rest of the country, entered lockdown on 23 March 2020, and continues to follow the rest of the country as these restrictions are eased.

4. Since the start of the pandemic, MOD has been following the COVID defence management plan which has several objectives including:

   - Deliver an accurate and timely picture of the impact of COVID-19 on Defence personnel and Defence outputs;

   - Enable delivery of any COVID-19-related Military Assistance to Civil Authorities (MACA) support;

   - Protect Defence personnel, as far as possible, from the impact of COVID-19;

   - Enable Defence to recover to normal levels of activity rapidly after the impact.

5. Personnel reporting, including testing for Defence personnel and reporting of positive cases in the UK armed forces is being used to monitor the effect that COVID-19 is having on Defence outputs.

6. In April 2020 the House of Commons Defence Committee (HCDC) requested that the MOD provide fortnightly updates on the numbers of Defence personnel tested and positive cases in the UK armed forces.
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Methodology

7. <u>COVID-19 Test Data</u>: As part of the National Testing Programme[1] MOD civilians, contractors and armed forces personnel are considered essential workers and thus eligible for priority testing.

8. Each weekly submission represents the total number of tests administered to personnel during that week. Top Level Budgets (TLBs) are responsible for the accuracy of their testing data.

9. The MOD does not receive any information from the National Testing Programme on the outcome of tests administered to MOD personnel.

10. <u>Positive Cases in the UK armed forces</u>: Data on positive cases for COVID-19 were extracted from the electronic patient medical record (DMICP) data warehouse and the Notification of Casualty (NOTICAS) reports.

11. DMICP is a live data source and subject to change. The rollout of DMICP commenced during 2007 and comprises an integrated primary Health Record (iHR) for clinical use and a pseudo-anonymised central data warehouse. Prior to this data warehouse, medical records were kept locally, at each individual medical centre. By 2010, DMICP was in place for the UK and the majority of Germany. Rollout to other overseas locations commenced in November 2011.

12. Notification of Casualty (or "NOTICAS") is the name for the formalised system of reporting casualties within the UK armed forces. A casualty notification is raised when a member of the UK armed forces is admitted to hospital for more than 72 hours and/or where there is serious risk to life.

13. Information presented relates to the number of positive cases for coronavirus or COVID-19. Individuals may have more than one positive test result recorded in DMICP and/or a NOTICAS for a hospital admission during the reporting period, but everyone has only been counted once in the numbers presented.

Relevance

Coverage

14. <u>Test data</u>: The report covers tests delivered to all Defence personnel including the UK armed forces and MOD civilians:

    - UK armed forces personnel include: all regular personnel (trained and untrained), activated reservists and full-time reserve service.

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[1] https://www.gov.uk/guidance/coronavirus-covid-19-getting-tested

- MOD civilians include: civil servants, civil servants and crown servants, other than members of the armed forces; and fixed defence contractors.

15. Although collected as part of the weekly returns, household persons (which are to include any persons living in the same household as military or civilian defence personnel) have not been included in the official statistic.

16. To be counted in the numbers requires the individual who has had the COVID-19 test informing their chain of command or line manager that they have attended either a regional test centre, mobile testing unit, in hospital or as home test kits.

17. <u>Positive Cases</u>: The positive case data includes all UK armed forces personnel, all regular personnel (trained and untrained), activated reservists and full-time reserve service.

18. It is the responsibility of UK armed forces personnel to inform their military GP of the outcome of their COVID-19 test. The information on positive test results are then documented in their military healthcare record by Defence Primary Health Care (DPHC).

19. Positive tests are identified using read codes from the data warehouse where the read code indicated a positive test for COVID-19 or coronavirus. Information entered using free text has not been included as the information is not held in the central data warehouse; therefore, the figures provided are a minimum.

20. The Chain of Command and the medical chain raise and complete a NOTICAS form when the criteria are met, in this case either where the individual was hospitalised for more than 72 hours or where there is a serious risk to life.

21. Inclusion in the numbers requires that the individual has had a NOTICAS raised and that they have written, as free text, that the individual had a positive test for either coronavirus or COVID-19.

22. For hospital admissions have not been included where there was reference to either coronavirus or COVID-19 but there was no mention of a positive test outcome or the report was annotated that the test was negative.

User Needs

23. The House of Commons Defence Committee (HCDC) requested fortnightly updates from the Secretary of State for Defence on the number of tests administered to Defence personnel and the number of positive cases. In addition, MOD continues to receive requests for information from the media and members of the public; publication of this official statistic is to meet this requirement, to support the MOD's commitment to

release information where possible and ensure that the public has equal access to the information.

Accuracy

24.　Test data: TLBs are responsible for the accuracy of their testing data.

25.　As the test data is based on aggregate counts supplied by the TLB on a weekly basis, it is not possible to link the aggregate counts with other data such as the military personnel record or the civilian personnel record including demographic information or other data such as the military medical record.

26.　Positive Cases: Individual MOD medical centres are responsible for ensuring the accuracy of clinical information in the electronic patient record. All coded (not free text) information is saved into the central data warehouse at regular intervals, usually every three days. The electronic patient record system is a large clinical and administrative database and is subject to the data quality issues of any large administrative system with data collated by many medical and administrative staff for clinical delivery purposes.

27.　As the formalised system of reporting casualties within the UK armed forces the quality of NOTICAS data is good. Enough information is provided within the NOTICAS to inform the individual's next of kin. However, the remarks field, which indicates the nature of the problem, is free text and on occasions, there is little, or no information provided including whether the admission was related to coronavirus or whether a test had been administered and the outcome of that test.

28.　The main sources of potential error in the COVID-19 official statistic are as follows:

- Individuals not informing the chain of command/line manager that they have had a coronavirus test administered.

- That the chain of command/line manager does not pass that information on as part of the weekly report.

- Incomplete or inaccurate data from the data warehouse or NOTICAS.

- Manual error during production of report.

- Data entered as free text are not available from the data warehouse.

29.　To ensure that potential errors are identified and resolved, Defence Statistics implement a series of data quality checks throughout the report production. When required, these checks involve close liaison with

personnel in DPHC headquarters who are responsible for providing service delivery, to ensure the accuracy of the figures published.

Timeliness and Punctuality

Timeliness

30.   Test data: The MOD require TLB to report on a weekly basis, with returns submitted by 12:00 every Friday, specifying the number of personnel who have had a COVID-19 test administered over the previous 7 days

31.   Positive Cases: Data are entered into the electronic patient record in real time and the data warehouse is updated every three days.

32.   NOTICAS reports are raised in real time with updates supplied when the status of the casualty changes.

33.   Defence Statistics extract data and publish COVID related data on a fortnightly basis.

34.   Figures are published two weeks in arrears. This is to enable late reporting to be captured and to allow time to produce the statistic.

Punctuality

35.   The official statistics reports have been published on time to meet preannounced release dates. A one-year release schedule outlining the following financial year's publication date is published on the Gov.UK website. Future publication dates will also be announced on the UK Statistics Authority hub at least one month in advance.

Accessibility and Clarity

Accessibility

36.   Coronavirus related statistics are published on the Gov.UK website. The publications are available from 09:30 hours on the day of release.

37.   24-hour pre-release access to the report is available to a limited distribution list within the MOD. The full list can be found in the pre-release access list available on the Gov.UK website.

Clarity

38.   Users with an interest in the key findings can read a short summary of main messages immediately on the front page.

Coherence and Comparability

Coherence

39.   The Office for National Statistics (ONS) and Public Health England (PHE) and their equivalents in the devolved administrations are regularly releasing information on coronavirus into the public domain, including lab confirmed tests, deaths and the impact on society: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases https://coronavirus.data.gov.uk/

Comparability Over Time

40.   Test data: overall totals are presented and a graph with the weekly counts showing the trend over time.

41.   Positive Cases: overall totals for the whole time period are presented.

42.   DMICP and NOTICAS are live data sources and subject to change due to late reporting. Therefore, the total number of new positive cases cannot simply be derived by subtracting the number of positive cases from the total presented in the previous fortnightly bulletin. If you require the total number of positive cases, use the figures reported in the most recent edition.

Trade-offs between output quality components

43.   Where possible, Defence Statistics minimise the cost to Government of producing these statistics by using data already collated for Defence tasks within MOD. The main source of data used for compiling these statistics are the COVID-19 management plan test data, the electronic patient medical record (DMICP) data warehouse and the notification of casualty reporting system (NOTICAS).

44.   Test data: As the test data is based on aggregate counts supplied by the TLB on a weekly basis, it is not possible to link the aggregate counts with other data such as the military personnel record or the civilian personnel record including demographic information or other data such as the military medical record.

45.   The MOD does not receive any information from the National Testing Programme on the outcome of tests administered to MOD personnel.

46.   Positive cases: DMICP and NOTICAS data was cross referenced with the MOD's Joint Personnel Administration (JPA) system to identify UK armed forces personnel and remove civilians. Both data systems are large administrative databases, and as such, data quality across fields is of varying quality and completeness.

Assessment of User Needs and Perceptions

47.   In reference to the UK Statistics Authority report, The Use Made of Official Statistics, the COVID-19 official statistic is used for:

   a.   Providing an accurate and timely picture of the impact of COVID-19 on Defence personnel.

   b.   Informing general public of the performance of government.

48.   External organisations such as the HCDC use the official statistic for monitoring the numbers of Defence personnel impacted by coronavirus.

Description of Users and Usage of Statistics

49.   The COVID-19 Official Statistic has been published in response to recommendations by the HCDC.

50.   The publication of the statistic also plays an important part in ensuring the department's accountability to the British public.

Strengths and Weaknesses in Relation to User Needs

51.   Users external to the MOD are encouraged to give feedback via the MOD website. The publication provides details of how to give feedback.

52.   Test data: The key strength of the COVID test data is that it has been reported through the chain of command/line manager and does not rely on the individual knowing how to report the fact that they had have had a coronavirus test administered.

53.   The key weakness is that the test data is collated as aggregate returns via the line management chain, thus it is not possible to link the data to other sources to confirm or validate the information.

54.   Positive cases: The key strength of the COVID positive case data is that the information forms part of the military medical record (DMICP) and the NOTICAS data is used to inform the chain of command and the next of kin. The timeliness of this data and the regular updates to the DMICP data model mean the most up to date information is available for analysis.

55.   The key weakness is that Defence Statistics have no control over the quality of the raw data in the DMICP data warehouse or NOTICAS reports that were used to collate the statistics. Information may have been recorded in a patient's medical record as free text which was not available in the DMICP data warehouse. It is possible that some patients had a positive test for COVID-19 but it was not entered into the medical record as coded information and therefore was not available for analysis. The NOTICAS data relies on the individual completing the form knowing the

medical reason for the individual's admission to hospital and the outcome of the coronavirus test and recording both events in the event summary.

Performance cost and respondent burden

Operational Cost

56. The production of the COVID-19 official statistic requires 0.5 FTE per year.

57. The COVID-19 official statistic uses administrative data sources already collected by the MOD. As such, there is no respondent burden, and the main operational cost to production of the statistics is for quality assurance.

Confidentiality, Transparency and Security

58. All Defence Statistics Health staff involved in the production of COVID-19 Official Statistic have signed a declaration that they have completed the government-wide Information Passport and they understand their responsibilities under the Data Protection Act and the Official Statistics Code of Practice. All staff involved in the production process have signed the Data Protection Act, and all MOD, Civil Service and data protection regulations are adhered to.

59. Defence Statistics Health also adhere to Joint Service Publication 200 (October 2017). Defence Statistics Health ensure that the positive case data is kept confidential by holding this data on a secure server. Only individuals who work on the reports have access to the data.

60. Defence Statistics Health adhere to the principles and protocols laid out in the Code of Practice for Official Statistics and comply with pre-release access arrangements. The Defence Statistics pre-release access lists are available on the Gov.UK website:

    https://www.gov.uk/government/statistics/defence-statistics-pre-release-access-list.