Assessment of compliance with the Code of Practice for Official Statistics

Statistics on Prescribing and Pharmaceutical Services in England
(produced by the NHS Information Centre for Health and Social Care)

Assessment Report 59
October 2010
About the UK Statistics Authority
The UK Statistics Authority is an independent body operating at arm’s length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the Statistics and Registration Service Act 2007.

The Authority’s overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:
1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users’ needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment Reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, Reports may point to such questions if the Authority believes that further research would be desirable.

Assessment Reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment Reports also describe aspects of the ways in which the producer addresses the ‘sound methods and assured quality’ principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to “seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews”.

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code’s* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

i. factual evidence and assurances by senior statisticians in the producer body;

ii. the views of users who we contact, or who contact us, and;

iii. our own review activity.

Should further information come to light subsequently which changes the Authority’s analysis, it may withdraw the Assessment Report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*. 
1 **Summary of findings**

1.1 **Introduction**

1.1.1 This is one of a series of reports\(^1\) prepared under the provisions of the *Statistics and Registration Service Act 2007*\(^2\). The Act requires all statistics currently designated as National Statistics to be assessed against the Code of Practice for Official Statistics\(^3\). The report covers *General Pharmaceutical Services*\(^4\), *Prescriptions Dispensed in the Community*\(^5\) and *Prescription Cost Analysis*\(^6\). These are annual releases from the NHS Information Centre for Health and Social Care (NHS IC).

1.1.2 This report was prepared by the Authority's Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 **Decision concerning designation as National Statistics**

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics confirms that the statistics listed in paragraph 1.1.1 are designated as National Statistics, subject to NHS IC implementing the enhancements listed in section 1.5 and reporting them to the Authority by March 2011.

1.3 **Summary of strengths and weaknesses**

1.3.1 Prescription statistics are a by-product of the administrative system used to reimburse pharmacies. As such, they are limited in scope but produced at little additional cost. They are of major importance in managing NHS resources and of great interest to researchers and pharmaceutical companies. The outputs considered here ensure that some of these data are made available to users outside the NHS, including the general public.

1.3.2 The statistics have certain limitations that are often associated with the use of administrative data for statistical purposes: NHS IC has less knowledge of data quality issues than would be the case if it collected the data itself; it can describe errors that come to light, but may not be able to correct them; and statistical considerations may not be a priority for the body collecting the data when it introduces changes to its systems.

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\(^{1}\)http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html
1.3.3 The statistics are accompanied by detailed and helpful explanatory material. However, they would benefit from more explanation of the major trends in prescribing, and from wider engagement with users.

1.4 Detailed recommendations

1.4.1 The Assessment team identified some areas where it felt that NHS IC could strengthen its compliance with the Code. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

1.5 Requirements for designation as National Statistics

**Requirement 1**

Take steps to develop a greater understanding of the use made of each set of statistics, the needs of current and potential users, and user views on the service provided. Publish the relevant information and assumptions and use them to better support the use of the statistics (para 3.2)

**Requirement 2**

Publish information on the quality and reliability of the data in each release, including sources of bias and other errors (para 3.8)

**Requirement 3**

Draw attention in each release to differences between the coverage, definitions and measures in the England data and the data collected in the devolved administrations (para 3.9)

**Requirement 4**

Review the commentary in *Prescriptions Dispensed in the Community* and *General Pharmaceutical Services*, with a view to providing more discussion of trends over time and the explanations for those trends, together with background information about the policy or operational context (para 3.15)

**Requirement 5**

Complete the Statement of Administrative Sources so that it covers all the administrative sources currently in use (para 3.25)
2 Subject of the assessment

2.1 General Pharmaceutical Services (GPS) covers the number of pharmacies and the services they provide, the total number of prescription items dispensed and the amount of fees received. Prescriptions Dispensed in the Community (PDC) provides data in broad therapeutic areas (for example, cardiovascular, gastrointestinal) and includes the net ingredient cost, whether the patient paid a prescription charge, and whether the drug that was prescribed and subsequently dispensed was a generic or branded version. Both publications provide information on trends, often over a ten year period. Prescription Cost Analysis (PCA) is confined to the latest year but is much more detailed, providing information on costs and quantities for around 12,700 preparations, dressings and appliances (all those for which 50 or more items were dispensed).

2.2 All three outputs were originally produced by the Department for Health (DH) and transferred to NHS IC when the latter was established in 2005. GPS has been produced since the mid 1990s and PDC since the late 1980s. We were told that PCA originated in 1998, following a request to DH to make the data publicly available.

Data collection

2.3 Prescriptions dispensed ‘in the community’ exclude private prescriptions and those dispensed in hospitals. The prescriber is usually a GP, but may be a dentist, nurse, other non-medical prescriber or hospital doctor (included in these data if the prescription is dispensed by a community pharmacist or appliance contractor). The statistics derive, in the vast majority of cases, from traditional paper prescription forms. These are sent to NHS Prescription Services, which is part of the NHS Business Services Authority. NHS Prescription Services is responsible for reimbursing pharmacies and dispensing doctors, and NHS IC downloads the data required for PCA and PDC from its system.

2.4 NHS Prescription Services makes its data available to NHS agencies through a service called Electronic Prescribing Analysis and Cost (ePACT). This provides monthly data on individual drugs, at prescriber, practice, primary care trust (PCT) and strategic health authority levels. The NHS IC outputs (GPS, PDC and PCA) provide annual, national data, although NHS IC also has a facility on its website called NHS iView, which allows registered users to download quarterly PCT-level data for groups of drugs.

2.5 Electronic prescribing is being introduced as part of the Connecting for Health programme and will eventually obviate the need for paper forms. NHS IC told us that it has not yet been informed whether this will increase the amount of information available – for example, whether prescriptions will in future include a unique reference number for each patient. Such extra information would make it possible to identify repeat prescriptions, and in the long run might offer the potential for linking to other kinds of health service data.

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7 The NHS IC data include prescriptions written in other parts of the UK but dispensed in England. Prescriptions written in England but dispensed elsewhere are excluded.
8 http://www.connectingforhealth.nhs.uk/
2.6 GPS includes information about pharmacies as well as prescriptions, using data from NHS IC’s omnibus data collection from PCTs, with additional data from NHS Prescription services and the NHS Litigation Authority. GPS is the only source of published statistics about pharmacy services at a national level. It used to cover both England and Wales, using data supplied by the Welsh Assembly Government. However, the regulations governing pharmacies in England were changed in 2005 and the data series for the two countries began to diverge. The Welsh Assembly Government took over responsibility for publishing its own statistics in 2008/09.

2.7 Use PCA and PDC are used for a variety of purposes within DH, including monitoring the uptake of cost-effective medicines in primary care, reviewing prescription charges and negotiating prices with the pharmaceutical industry. The latter uses the data for marketing purposes - for example, calculating market share and identifying gaps. The public and the media use the statistics when investigating issues such as drug safety, ‘postcode lotteries’ and the guidance issued by NICE (the National Institute for Health and Clinical Excellence). The statistics also support academic research into the use of medicines. PCTs and strategic health authorities need to monitor local prescribing and resource consumption, so tend to make more use of ePACT.

2.8 GPS allows DH to monitor access to pharmacy services and other issues covered by the pharmacy regulations. PCT-level data are available as an online annex. These data assist strategic health authorities and PCTs in monitoring implementation of the pharmacy contract (PCTs are responsible for granting contracts to dispense NHS prescriptions, which in practice determines the number and distribution of pharmacies).

2.9 Around a quarter of all expenditure in primary care is on drugs and the number of prescriptions dispensed per head of population increased by over 55 per cent between 1998 and 2008. The importance of monitoring prescribing patterns was illustrated in a report from the House of Commons Public Accounts Committee\(^9\), which in turn drew on a report from the National Audit Office\(^10\). NAO estimated that over £200m a year could be saved if more GPs prescribed lower cost versions of statins and three other groups of drugs, and it also pointed out that at least £100m a year is being lost through wastage of prescription medicines\(^11\). NAO recommended that the NHS Business Services Authority and NHS IC should be commissioned to develop benchmarking tools that incorporate local information on disease prevalence, in order to identify areas of potential over- or under-prescribing.

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\(^9\) Department of Health: Prescribing costs in primary care, Second Report of Session 2007-08, HC 173
\(^10\) Prescribing costs in primary care, Report by the Comptroller and Auditor General, May 2007
\(^11\) This figure only represents the value of drugs that are returned to pharmacies.
NHS IC estimates that the cost of producing PCA from the download supplied by NHS Prescription Services is around 5-10 person days. PDC (which includes commentary and charts) requires a further 15-20 days. We were told that the GPS data on pharmacies is currently more time-consuming to manipulate (because of variant spellings in text fields, for example) but that this will reduce with the introduction of a new software system.
3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

3.1 NHS IC has a form on its website so that users can comment on its outputs, but the prescribing team told us that it has had little feedback. The team uses its contacts with DH, NICE, the National Prescribing Centre and the prescribing community to increase its awareness of issues that may need to be discussed in the publications. Members of the team attend (and speak at) conferences and workshops. Apart from this, we did not find evidence of pro-active engagement with users, particularly those outside DH or the NHS.

3.2 NHS IC informed us that it does not currently publish information about users’ experiences of statistical services, data quality, and the format and timing of reports, but that it is considering how this can best be done. As part of the designation as National Statistics, NHS IC should take steps to develop a greater understanding of the use made of each set of statistics, the needs of current and potential users, and user views on the service provided. They should publish the relevant information and assumptions and use them to better support the use of the statistics\(^{12}\) (Requirement 1).

\(^{12}\) In relation to Principle 1, Practice 2 of the Code of Practice.
Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

3.3 All three sets of statistics are published in an orderly manner and in accordance with the rules on pre-release access (see Protocol 2). They are released free of charge on the internet and NHS IC has a clear pricing policy for supplementary data requests.

3.4 The statistics and the associated commentaries and explanations are objective and impartial, and draw attention to various changes in classifications that have been made over a period of time.
Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

3.5 No incidents of political pressures, abuses of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment Team. Several of the users we contacted commented positively on the fact that NHS IC is independent of DH.
Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

3.6 NHS IC checks its database against published tables from NHS Prescription Services and carries out standard validation and proof reading procedures on the prescribing and pharmaceutical services publications.

3.7 It is unlikely that many prescriptions are missed because pharmacies rely on NHS Prescription Services for reimbursement. The 2009 edition of PCA included a notice about the incorrect capture of data by NHS Prescription Services between late 2007 and early 2008, when a small number of drugs were entered into the database under the name of similar products. Although NHS Prescription Services corrects any errors in payments to dispensing contractors, they do not correct errors in the information on their database. The problems described in the 2009 edition of PCA are unlikely to have had much effect on the accuracy of the national data, but may have had more impact at disaggregated levels.

3.8 Although it draws attention to such errors, NHS IC does not routinely publish information on the quality and reliability of the prescribing and pharmaceutical services statistics. The prescribing team told us that it is considering what it can provide, and is trying to obtain more information from NHS Prescription Services. As part of the designation as National Statistics, NHS IC should publish information on the quality and reliability of the data in each release, including sources of bias and other errors (Requirement 2).

3.9 NHS IC informed us that there is no government requirement for UK-wide data, but that some pharmaceutical companies and the media would like to have such data. The statistical releases covered by this assessment do not provide the user with any information as to whether the equivalent data in other parts of the UK are comparable and whether they can be combined to produce UK figures. We understand that there are some differences in coverage and terminology. As part of the designation as National Statistics, NHS IC should draw attention to differences between the coverage, definitions and measures in its own data and those collected in the devolved administrations (Requirement 3). We also suggest that NHS IC should work with the relevant bodies in Wales, Scotland and Northern Ireland to investigate options for deriving comparable summary statistics across the four administrations, and should then signpost users to prescribing data for the UK and its constituent parts.

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13 The most recent edition of PDC is accompanied by a statement on data quality. This includes a helpful explanation of the difference in coverage between the NHS IC publications and the data that are available to NHS users from NHS Prescription Services, but it does not include any information on the quality and completeness of the original data.

14 In relation to Principle 4, Practice 2 and Principle 8, Practice 1 of the Code of Practice.

15 In relation to Principle 4 Practice 6 of the Code of Practice.
Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

3.10 The statistics on prescribing and pharmaceutical services do not contain information about individual pharmacies, GP practices or patients.

3.11 NHS IC’s arrangements for protecting confidentiality are summarised in its Statistical Governance Policy\(^\text{16}\). It has a published data access and information sharing policy, an information governance legal compliance policy (covering its duties under common law and data protection, freedom of information, health service and other legislation) and a ‘small numbers procedure’ (which describes the process it uses to manage the risk of disclosure of personal information). As an NHS organisation it also has a ‘Caldicott Guardian’ (a senior person responsible for protecting the confidentiality of patient and service user information and for enabling appropriate data sharing).

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

3.12 The collection of the prescriptions and pharmaceutical services data is reviewed annually through the Review of Central Returns (ROCR). The ROCR system seeks to minimise the burden of information demands on NHS bodies and to balance cost and the impact on frontline staff against benefits. We did not find any evidence of excessive burden on pharmacies, PCTs or NHS Prescription Services. Pharmacies have an incentive to submit information on prescriptions dispensed since they rely on this service for a considerable part of their income.
Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

3.13 The production of these statistics appears to be sufficiently resourced. NHS IC has introduced a time recording system to support its business planning and management of staff resources.

3.14 NHS IC follows Government Statistical Service recruitment processes and requires its staff to undertake continuing professional development.
Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

3.15 PDC and GPS use commentary, summary tables and charts to present an overview of the data. Each report provides statistics on trends over the past decade and is accompanied by Excel versions of the tables in order to support further analysis by users. The commentaries are factual and helpful but there is little explanation of the possible reasons behind the growth in prescribing and the changes in prescribing patterns. They also tend to focus on the change compared with the previous year and not examine the longer term trends. As part of the designation as National Statistics, NHS IC should review the commentary in PDC and GPS with a view to providing more discussion of trends over time and explanations for those trends (working if necessary with outside experts) and it should include more background information about the policy or operational context.17 (Requirement 4).

3.16 PDC gives an overview of the main patterns emerging from the detailed figures first published in PCA. The latter consists of detailed tables showing the number of prescriptions and associated costs at the level of individual drugs. NHS IC presents these statistics in both Excel and PDF format, with each version accompanied by a useful glossary that explains the measures and how to interpret the tables.

3.17 Some pharmaceutical companies would like to access more local data (e.g. at practice level) and/or obtain data at the level of individual drugs. NHS IC consulted about this in 2008 and decided not to provide access to non-NHS users at drug or practice level because of concerns about confidentiality, and also because it might increase sales pressure on GPs.

3.18 NHS IC sees DH as the primary user of the statistical series in the three reports, because NHS agencies use the more frequent, local and detailed data which they access via ePACT. However, the iView system does give registered users access to quarterly, PCT-level data for groups of drugs (e.g. those used to treat diabetes). The landing page for iView says that the service is for authorised users within the NHS, but the linked page about prescribing data in iView makes it clear that anyone can be given access to this particular area of data. Some non-NHS users who responded to us seemed to be unaware that quarterly prescribing data were readily available in this way. The web pages for PDC and PCA do not include links to iView or to each other. NHS IC told us that it will shortly be clarifying the information on the iView landing page. We suggest that it also improve the signposting between the prescribing products and iView.

3.19 Before 2008, PDC included statistics on the number of items dispensed to each category in the population that is exempt from prescription charges (for example, children and young people, the elderly, and those on low incomes); and the number of items recorded against pre-payment certificates. NHS IC was unable to warn users in advance when NHS Prescription Services stopped providing this information in 2008.

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17 In relation to Principal 8 Practice 2 of the Code of Practice.
3.20 We were told that the original problem was caused by the introduction of scanning equipment but that in investigating this problem, NHS Prescription Services concluded that the 5 per cent sample of forms it had been taking in order to supply information on exempt categories did not provide sufficiently accurate estimates. For its own purposes, NHS Prescription Services only needs to know whether or not a prescription charge has been collected and, although NHS IC told us that DH had asked NHS Prescription Services to find another method, the issue has yet to be resolved.

3.21 There is a continuing user requirement for this information: DH told us that it was used extensively for policy development and impact assessments. We suggest that NHS IC increases its efforts to discuss this problem with NHS Prescription Services and to reach a speedy resolution.
Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.22  The requirements for this Protocol are covered elsewhere in this report.
Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

3.23 NHS IC has a publication schedule for the forthcoming 12 months on its website\(^{18}\). It also pre-announces the release of the publications through the National Statistics Publication Hub.

3.24 NHS IC provides links to the pre-release access list for each series on the individual publication web page\(^{19, 20, 21}\). We were told that these lists have been restricted to essential recipients. NHS IC has published a statement of compliance with the Pre-release Access to Official Statistics Order 2008\(^{22}\).

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Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

3.25 NHS IC has published a Statement of Administrative Sources\(^23\). This is currently incomplete, although it does cover the sources relevant to GPS, PDC and PCA. As part of the designation as National Statistics, NHS IC should complete its Statement of Administrative Sources so that it covers all the sources currently in use\(^24\) (Requirement 5).

3.26 The Code of Practice requires that the Statement of Administrative Sources should ‘identify the procedures to be followed within the organisation to ensure that full account is taken of the implications for official statistics when changes to administrative systems are contemplated’. In this instance, the administrative data are supplied by another NHS organisation, but we suggest that NHS IC seek to agree how statistical needs will be taken into account when changes to the data collections are being considered. This might help to avoid a repetition of the problems that have been experienced with the data on exempt categories (paragraphs 3.19 to 3.21).


\(^24\) In relation to Protocol 3, Practice 5 of the Code of Practice.
Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to NHS IC’s *General Pharmaceutical Services, Prescriptions Dispensed in the Community* and *Prescription Cost Analysis*, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

**Suggestion 1**  
Work with the relevant bodies in Wales, Scotland and Northern Ireland to investigate options for deriving comparable summary statistics across the four administrations, and then signpost users to prescribing data for the UK and its constituent parts (para 3.9)

**Suggestion 2**  
Improve the signposting between PDC and PCA, and between these products and iView (para 3.18)

**Suggestion 3**  
Attempt to reach a speedy resolution with NHS Prescription Services so that *Prescriptions Dispensed in the Community* can include data on exempt categories (para 3.21)

**Suggestion 4**  
Seek to agree with NHS Prescription Services how statistical needs will be taken into account when changes to the data collections are being considered (para 3.26)
Annex 2: Summary of assessment process and users’ views

A2.1 This assessment was conducted from March to September 2010.

A2.2 The Assessment team – Jill Barelli and Penny Babb – agreed the scope of and timetable for this assessment with representatives of the NHS IC in March. The Written Evidence for Assessment was provided on 16 April 2010. The Assessment team subsequently met with the NHS IC during May to review compliance with the Code of Practice, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority’s website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users’ needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare assessment reports.

A2.4 The Assessment team received 18 responses from the user consultation. The respondents were grouped as follows:

- Central Government: 6
- NHS: 4
- Academia: 4
- Private sector: 2
- Media: 2

A2.5 Users were broadly satisfied that the data meet their needs. However some expressed interest in having more detailed data, such as information about patients, post code, diagnostic information and repeat dispensing. There was also interest in monthly and quarterly data release. Some users expressed concerns about aspects of data quality, such as pharmacy type, and the reliability of the cost analysis. There was also concern that information on exemptions from payment was no longer available. Users were positive about the quality of their engagement with the NHS IC. Several said that they would benefit from an email alert to notify them of new releases.

Key documents/links provided

Written Evidence for Assessment document

25 This information is not currently available from prescribing data. Some of it may become available in the future through the ‘Connecting for Health’ programme.