Breast Screening Programme
England, 2016-17

Publication Appendices

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This is a National Statistics publication

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority’s regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is NHS Digital’s responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.


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This report may be of interest to members of the public, policy officials and other stakeholders to make local and national comparisons and to monitor the quality and effectiveness of services.
Introduction

This document is designed to accompany the main publication document which can be found on the following link: http://digital.nhs.uk/pubs/brstscreen1617

It includes all of the appendices which are referenced throughout the report but is presented separately with the aim of keeping the main publication as succinct as possible. The appendices included are;

- Appendix A - Background
- Appendix B - Definitions
- Appendix C - Types of Invitation/Referral
- Appendix D – High-risk categories
- Appendix E – How are the Statistics used?
- Appendix F - Feedback from Users
- Appendix G - Data Validation and Data Quality
- Appendix H - Related Publications and Useful Web links

References related to the publication are also listed at the end of the document.
Appendices

Appendix A – Background

Breast Screening Policy

Under the NHS Breast Screening Programme, all eligible women aged 50-70 are invited for screening every three years. Screening is intended to detect breast cancer at an early stage when there is a better chance of successful treatment. Because the programme is a rolling one which invites women in a three year cycle, not every woman will receive an invitation as soon as she is 50. Every woman registered with a GP in England should however, receive her first invitation before her 53rd birthday.

Age extension

Screening policy changed in 2001. Prior to this only women aged 50-64 were invited for screening as part of the NHS Breast Screening Programme. In April 2001 the age range was extended to include women aged 65-70, and the last screening unit began inviting older women in April 2006.

Some women outside the 50-70 core age group are also screened as part of the NHS Breast Screening Programme, either through self or GP referral where appropriate, or as part of a research trial. Women who are over the upper age limit for routine invitations for breast screening are encouraged to make their own appointments at three yearly intervals. The NHSBSP is currently undertaking a randomised controlled trial on extending the programme to women aged 47-49 and 71-73. The trial started at selected pilot sites in 2009 and by the end of the 2016-17 collection year, 67 out of 80 breast screening units were taking part in the trial.

The randomisation trial means that all women aged 47 to 49 years and 71 to 73 years are randomised 50:50 to either receive a screening invitation (intervention group) or not invited (control group). The trial will allow the programme to assess the net benefit of extending the age range for breast screening to these age groups. Results showing the impact of breast screening on mortality are expected in the mid 2020s.

In order to get a significant result from the trial the programme will need to invite women in the extended age ranges for at least two more (three-year) screening rounds. If women aged 71-73 are in the control group they will be able to self-refer into the programme. Women aged 47-49 in the

1 See Appendix B for more information on the eligible population for Coverage.
2 More information on the trial can be found at [http://www.agex.uk/](http://www.agex.uk/)
trial control group can also request to be screened. The Screening Process section in this appendix has more information on self-referrals.

Further information on the randomised controlled trial can be found at:

http://www.isrctn.com/ISRCTN33292440
http://clinicaltrials.gov/ct2/show/NCT01081288

Screening higher risk women

There are also some women who are identified and assessed by a specialist in genetics or oncology as being at more risk of developing breast cancer than women in the general population. These women are also screened as part of the NHSBSP.

In January 2012, the Advisory Committee on Breast Cancer Screening (ACBCS) agreed practical guidance for the NHS on the surveillance of women of all ages assessed to be at a higher risk of breast cancer. The NHS Breast Cancer Screening Programme has started managing the surveillance of these higher risk women according to specified protocols. Higher risk became part of the specification for commissioning breast cancer screening through NHS England as part of the Section 7a agreement (Public health functions to be exercised by NHS England) with the Department of Health in 2013-14. The agreement was updated for 2016-17 – see link below:

NHS public health functions agreement 2016-17: Service Specification no.24: Breast Screening Programme

More information is given on the screening process for high-risk women in the Breast Screening process section below.

Data Sources

The statistics are derived from information that is routinely collected by NHS Cancer Screening Programmes for the operation of the screening programme, including for quality assurance and performance management purposes.

Information on the NHS Breast Screening Programme is supplied from the following NHS Digital central return data sets:

- KC62 – Information on invitations, uptake and outcomes from all 80 breast screening units across England.

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3 Surveillance screening: women at higher risk of developing breast cancer are offered breast screening at an earlier age than women from the general population.

4 For more information on the protocols see: https://www.gov.uk/guidance/breast-screening-programme-overview
Breast Screening Process

Introduction

Breast screening is a method of detecting breast cancer at a very early stage. Women may be invited to attend screening by the NHS Breast Screening Programme or may attend as a result of self or GP referral if they have not been screened within the last three years. Although no women over the age of 73 will be invited for screening, the programme encourages self/GP referrals from women over 70 at three-yearly intervals.

Invitations for breast screening are sent out by breast screening units to eligible women. Some women are first invited for screening whilst they are still 49 but in the calendar year of their 50th birthday. Where the randomised controlled trial is inviting women aged 47-49, women may receive their first invitation at 46 but in the calendar year of their 47th birthday.

A self-referral is where a woman contacts the screening programme, either without an invitation or more than six months after her last invitation, requesting to be screened. A GP referral is the same as a self-referral except that the initial contact with the screening programme is made by the GP on behalf of the woman.

Symptomatic referrals (i.e. where a woman is referred to a specialist breast clinic with recognised symptoms of breast cancer) are not part of the screening programme and so are not included in this publication.

At the screening unit

A visit to a screening unit for breast screening takes about half an hour. Breast screening uses mammograms (low dose x-rays) which can detect small changes in breast tissue which may indicate cancers. Mammograms are now all digital. Digital mammography uses computer imaging.

5 Details from the NHS Breast Screening Programme: https://www.gov.uk/topic/population-screening-programmes/breast
There are currently 80 breast screening units in England. Breast screening units can offer screening which is hospital based, mobile or in other convenient community locations (e.g. shopping centres).

**The results**

The mammograms are examined and the results sent to the woman and her GP within two weeks. A woman may be asked to go to an assessment clinic for further tests if a potential abnormality is detected at initial screening. Women may also be asked to go to an assessment clinic if their mammograms need repeating (e.g. if the x-ray was not clear enough).

**Further investigation**

At the assessment clinic more tests are carried out, following the triple assessment process. These may include clinical examination and patient history, additional imaging and pathology (fine-needle aspiration cytology or core biopsy). Core biopsy may be carried out where some of the breast tissue is removed using a wide-bore needle for analysis. Fine-needle aspiration cytology is where samples of breast cells or fluid are drawn off through a very fine needle for laboratory analysis. Where assessment clinic examinations do not give a definitive result, some women may need to go on for an open biopsy performed by a surgeon. An open biopsy is a minor operation to take one or more samples of tissue under general anaesthetic.

In a small minority of cases a definitive diagnosis cannot be made following the assessment process. Where this occurs, women may be recalled for a further assessment at an interval shorter than the normal screening interval of three years, these are known as short term recalls.

**High-risk women**

A woman can be referred by a GP or another relevant professional group for genetic or oncology assessment where her medical history or family history indicates a higher risk of developing breast cancer. At assessment, a full personal and family history is taken and for some families a blood sample may be taken for testing for specific known genetic abnormalities. Women identified as being at high risk of developing breast cancer may then be referred to the local breast screening unit for inclusion in high-risk screening, where she will have the opportunity to discuss the process and benefits with a healthcare professional.

Referrals into the NHSBSP should only be via:
• a genetics service
• a local family history service, situated in an oncology department
• an oncologist (in the case of women treated with supradiaphragmatic radiotherapy\textsuperscript{6})

Whilst some high-risk screening is performed using mammograms, others are performed using a Magnetic Resonance Imaging (MRI) scanner; a large tube surrounded by a strong magnetic field. A small injection of liquid contrast is given to help different areas of the breast tissue become visible on the scans. A visit for this type of screening usually takes between half an hour and an hour.

High-risk women are offered screening more regularly (usually annually) than those in the routine programme up until their 50th birthday. After this, some women will remain in high risk screening and some women will enter routine breast screening (i.e. every three years). Protocols for each risk category determine screening frequency\textsuperscript{7}.

\textsuperscript{6} Radiotherapy administered in the area of the chest.
\textsuperscript{7} For screening frequency protocols see: https://www.gov.uk/guidance/breast-screening-programme-overview
Appendix B – Definitions

The definitions below include formulae for the calculation of statistics from the KC62 central data return.

Coverage

Coverage is defined as the percentage of women in the population who are eligible for screening at a particular point in time (31 March 2017 in this instance), who have had a test with a recorded result at least once within the screening round, i.e. in the previous three years. Women are eligible for screening if they are in the screening age range and are not ineligible due to bilateral mastectomy.

Coverage is routinely reported only for the age range invited for screening. Currently coverage is best assessed using the 53-70 age group as women may be first called at any time between their 50th and 53rd birthdays.

National coverage is calculated from the KC63 central return dataset as follows:

\[
\frac{\text{Number of women screened in the last three years}}{\text{Number of women eligible for screening}} \times 100
\]

Coverage statistics in this report are calculated using data from the NHAIS (Exeter) system and include all women currently registered with an NHS GP practice and others who are not registered with a GP practice but who are otherwise known to the NHS. The total number of women who are not registered with a GP or otherwise known to the NHS is unknown and it is therefore not possible to estimate how overall coverage rates might be affected by this group.

NHAIS data supports many primary care services including the NHS Breast Screening Programme’s call and recall system for inviting women for screening. It is the only data source that can identify both the eligible population and those women who have been tested in the last three or five years.

Coverage is reported by LA in this publication, and is based on the postcode of residence for each woman in the eligible registered population. Some women who cannot be allocated to an LA are known to the NHS and are recorded on the NHAIS Open Exeter system but

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8 With the extension of the Breast Screening Programme, some women will now be invited before the age of 50. It is expected that coverage will continue to be calculated for the 53-70 age range until full rollout of the age expansion is completed.

9 A woman who is not registered with a GP may still be known to the NHS (e.g. through presentation at a breast screening unit or other hospital attendance).
not included in national figures. These women account for such a small proportion of the total resident population (less than 0.5%) aged 53-70 at 31 March 2017 that they do not have a significant impact on the national coverage figures.

The changes to the KC63 described in section 1.1 of the separate Quality Statement included a change to the definition of coverage to include short term recalls. In years previous to 2012-13, the number of women screened excluded women who had been invited under a short term recall invitation. Coverage figures and the numbers of women screened in Tables 1, 2, 2a, and 11 of the Data Tables are impacted by this change as is coverage in Figures 1, 2 and 3 of the Analysis and Commentary Section. The number of women invited under a short term recall is relatively small and these women will, by definition, already have been screened within the last three years, so this change is expected to have little or no impact on national coverage.

**Uptake**

Uptake is the percentage of women invited for screening in the year, who were screened adequately\(^{10}\) within 6 months of invitation. The uptake rate is calculated from the KC62 central return data set as follows:

\[
\frac{\text{Number of women screened adequately}}{\text{Number of women invited for screening}} \times 100
\]

NB: Uptake is based only on women invited for screening and excludes self/GP referrals and Short-Term Recalls.

**Cancer Detection Rate**

This is the number of women with cancer detected per 1,000 women screened and is calculated from the KC62 central return data set as follows:

\[
\frac{\text{Total number of women with cancer}}{\text{Total number of women screened adequately}} \times 1000
\]

\(^{10}\) A technically adequate screen is defined as one which gives sufficient detail to allow a decision to be made to refer for assessment or to return to a routine recall status.
Benign biopsy rate

The number of benign biopsies per 1,000 women screened. This measures the number of women per 1,000 women screened who had surgery which resulted in a diagnosis of benign breast disease (i.e. not cancer) or no breast disease. The NHS Breast Screening Programme aims to minimise the number of unnecessary operative procedures and so benign biopsy rates should be low. The rate is calculated as:

\[
\frac{\text{Number of women with a benign or normal result following an open biopsy}}{\text{Number of women with a technically adequate screen}} \times 1000
\]

Non-operative diagnosis rate (overall)

This is the number of women diagnosed without the need for surgery as a percentage of all women with cancer. The NHS Breast Screening Programme aims to ensure that the majority of cancers are diagnosed without the need for surgery. The rate is calculated as follows:

\[
\frac{\text{Women who attended for cytology and/or core biopsy (but not referred for open biopsy) who were diagnosed with breast cancer}}{\text{All women diagnosed with breast cancer}} \times 100
\]

The non-operative diagnosis rate (invasive) is the number of women diagnosed with invasive cancer without the need for surgery as a percentage of all women diagnosed with invasive cancer.

The non-operative diagnosis rate (non-invasive) is the number of women diagnosed with non-invasive cancer (including definitely micro-invasive and possibly micro-invasive) without the need for surgery as a percentage of all women diagnosed with non-invasive cancer.

11 A technically adequate screen is defined as one which gives sufficient detail to allow a decision to be made to refer for assessment or to return to a routine recall status.
Assessment rate

This is the percentage of women screened who were referred for assessment following their initial screen. Women are referred to an assessment clinic for further tests if a potential abnormality is detected at initial screening. The rate is calculated as follows:

\[
\frac{\text{Number of women referred for assessment}}{\text{Number of women with a technically adequate screen}} \times 100
\]

Small cancer detection rate

This is the number of women with invasive cancers smaller than 15mm in diameter detected per 1,000 women screened. The rate is calculated as follows:

\[
\frac{\text{Number of women with invasive breast cancer less than 15mm in diameter}}{\text{Number of women with a technically adequate screen}} \times 1000
\]

Standardised Detection Ratio (SDR)

This is the ratio of the observed number of invasive cancers to the expected number based on applying criteria from the Swedish Two County randomised controlled trial, which is used as a yardstick of performance. A Standardised Detection Ratio (SDR) of 1 equates to approximate parity with this trial. The SDR is calculated as:

\[
\frac{\text{Number of invasive cancers observed (i.e. the number of women with invasive cancers)}}{\text{Number of invasive cancers expected}}
\]

The number of invasive cancers expected is a count of the number of women in each age group in whom invasive cancers would be expected to be detected if the screening service were operating to the criteria of the Swedish Two County Study. The number should be given to 2 decimal places.

The expected number of cancers for each age group is calculated by applying the following rates (taken from the Swedish Two County study) to the number of women screened in each age band:
Expected rates of invasive cancers to be detected per 1,000 women screened

<table>
<thead>
<tr>
<th>Age band</th>
<th>Prevalent Screens</th>
<th>Incident screens</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;44</td>
<td>1.77</td>
<td>1.68</td>
</tr>
<tr>
<td>45 – 49</td>
<td>2.97</td>
<td>1.94</td>
</tr>
<tr>
<td>50 – 52</td>
<td>3.64</td>
<td>3.20</td>
</tr>
<tr>
<td>53 – 54</td>
<td>4.44</td>
<td>3.46</td>
</tr>
<tr>
<td>55 – 59</td>
<td>5.86</td>
<td>3.79</td>
</tr>
<tr>
<td>60 - 64</td>
<td>8.72</td>
<td>4.42</td>
</tr>
<tr>
<td>65 – 69</td>
<td>10.76</td>
<td>4.54</td>
</tr>
<tr>
<td>70</td>
<td>12.30</td>
<td>4.71</td>
</tr>
<tr>
<td>71 – 74</td>
<td>13.89</td>
<td>4.93</td>
</tr>
<tr>
<td>&gt;=75</td>
<td>15.74</td>
<td>5.21</td>
</tr>
</tbody>
</table>

Note that the rates differ according to whether women were part of prevalent or incident screening. Standardised Detection Ratios (SDRs) can be calculated only for prevalent invited episodes and routine incident invited episodes. The calculation for the expected number of cancers detected is as follows:

\[
\text{Number of women screened in the specific age group} \times \text{expected detection rate for that specific age group} \times \frac{1}{1000}
\]

The expected number of cancers detected in each age band is summed to give a total for the expected number of cancers in all ages.

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12 Prevalent screening refers to women being screened for the first time within the NHS Breast Screening Programme. In this statistical bulletin, prevalent screening figures relate to first invitations for routine screening and routine invitations to previous non-attendees. Incident screening refers to women previously screened within the NHS Breast Screening Programme. In this statistical bulletin, incident screening figures relate only to routine invitations to previous attendees last screened within five years.
Appendix C – Type of Invitation/Referral

Invitation Types

First Invitation for Routine Screening
This includes those women who were invited to attend for routine breast screening with:
  i) no previous invitation for NHS breast screening; and
  ii) no previous technically adequate screen within the NHS Breast Screening Programme as a self or GP referral.

NB: A technically adequate screen is defined as one which gives sufficient detail to allow a decision to be made to refer for assessment or to return to a routine recall status.

Routine Invitation to Previous Non-Attenders
This includes those women who were invited to attend for routine breast screening with:
  i) one or more previous invitations for NHS breast screening;
     and
  ii) no previous technically adequate screen within the NHS Breast Screening Programme.

Routine Invitation to Previous Attenders (Last screen within five years)
This includes those women who were invited to attend for routine breast screening with:
  i) any number of previous invitations for NHS breast screening;
     and
  ii) at least one previous technically adequate screen within the NHS Breast Screening Programme as a result of an invitation or a self/GP referral within the last five years (60 months).
Routine Invitation to Previous Attenders (Last screen more than five years previously)

This includes those women who were invited to attend for routine breast screening with:

i) any number of previous invitations for NHS breast screening;

and

ii) at least one previous technically adequate screen within the NHS Breast Screening Programme as a result of an invitation or a self/GP referral, the most recent of which was more than five years (60 months) ago.

Short term recalls

This includes those women who were invited to attend for non-routine breast screening with:

i) any number of previous invitations for NHS breast screening;

and

ii) a previous technically adequate screen within the NHS Breast Screening Programme as a result of an invitation or a self/GP referred episode within the last three years (36 months);

and

iii) the previous episode resulted in a recommendation for non-routine recall.

A non-routine recall is an intentional recall after less than the normal recall interval of three years (or other recall period followed by the programme).
Referral Types

Self or GP Referrals of Women Not Previously Screened
This includes those women who attended for routine breast screening as a result of a self or GP referral with:

i) any number of previous invitations for NHS breast screening;
   and

ii) no previous technically adequate screen within the NHS Breast Screening Programme.

Self or GP Referrals of Women Previously Screened (Last screen within five years)
This includes those women who attended for routine breast screening as a result of a self or GP referral with:

i) any number of previous invitations for NHS breast screening;
   and

ii) at least one previous technically adequate screen within the NHS Breast Screening Programme as a result of an invitation or a self/GP referral within the last five years (60 months).

Self or GP Referrals of Women Previously Screened (Last screen more than five years previously)
This includes those women who attended for routine breast screening as a result of a self or GP referral with:

i) any number of previous invitations for NHS breast screening;
   and

ii) at least one previous technically adequate screen within the NHS Breast Screening Programme as a result of an invitation or a self/GP referral, the most recent of which was more than five years (60 months) ago.
Appendix D – High-risk categories

Genetic/familial risk

Women with a strong family history of breast cancer are likely to have inherited a faulty gene or genes that predispose to breast cancer from one or other of their parents. Screening is undertaken for high risk women who have or are likely to have inherited a high risk fault in one of these uncommon genes.

BRCA1 – a gene that helps suppress cell growth

BRCA2 – a gene that helps suppress cell growth

Not tested, equivalent high risk (a strong family history that makes inheriting one of the known high risk genes likely but for one of a variety of reasons genetic testing has not been undertaken) – defined by a geneticist.

TP53 (Li-Fraumeni) – a protein which acts as a tumour suppressor

A-T homozygotes (ataxia-telangiectasia homozygotes) – rare severe disorder associated with DNA repair. Homozygotes are known to show increased incidence of cancers.

A-T heterozygotes (ataxia-telangiectasia heterozygotes) – rare severe disorder associated with DNA repair. Heterozygotes are known to show increased incidence of cancers.

Supradiaphragmatic radiotherapy – irradiated below age 30

Radiotherapy administered in the area of the chest to women under the age of 30 for the treatment of Hodgkin’s lymphoma\(^{13}\), a cancer of the lymphatic system.

\(^{13}\) NHS Choices: [http://www.nhs.uk/conditions/Hodgkins-lymphoma/Pages/Definition.aspx](http://www.nhs.uk/conditions/Hodgkins-lymphoma/Pages/Definition.aspx)
Appendix E – How are the Statistics used?

Users and Uses of the Report

Uses of Statistics by Known Users

This section details known users of the report and the purposes for which they use the statistics. All these users have found the information in the report useful for the purposes set out.

Department of Health (DH)

The Department of Health (DH) use the statistics from this publication to inform policy and to monitor the quality of screening services. The statistics in the report are also used by DH to respond to public and Parliamentary business.

NHS Cancer Screening Programmes (NHSCSP) – Public Health England

The NHS Cancer Screening Programmes (NHSCSP) uses the bulletin as a reference document to monitor the quality and effectiveness of the NHS Cancer Screening Programmes and progress against their key targets for screening the eligible population in England.

NHS England

NHS England use the statistics from this publication to monitor the quality of screening services commissioned against key performance indicators set out in the Section 7a agreement with the Department of Health.

Breast Screening Units (BSUs)

Breast screening units use the statistics for planning and performance monitoring purposes.

The Cancer Epidemiology Unit

The Cancer Epidemiology Unit, University of Oxford use the raw data supplied by NHS Digital and supplement it with additional data to provide a more evaluative analysis to improve the performance of the national screening programmes through peer reviewed research papers and the dissemination of such information through appropriate channels e.g. QA Directors.

Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis

The Policy Research Unit carries out research on changes to the screening programme and the effects of such changes on markers of screening quality, such as detection rates and recall rates.

Screening Quality Assurance Services (SQASs) NHSCSP

The Regional Senior (QA) Advisors use the report as part of their role in ensuring the screening process is achieving its primary targets across England.
Organisation for Economic Co-operation and Development (OECD)
The screening statistics are supplied to the OECD by NHS Digital and are used in the OECD Health Database and also for the Health Care Quality Indicator project.

Compendium of Population Health Indicators
Indicators from the publication are included in the Compendium of Population Health Indicators which is widely used within the NHS as well as outside it. See: http://content.digital.nhs.uk/article/1885/Compendium-of-Population-Health-Indicators

Annual Report of the Chief Medical Officer
Coverage from the publication, together with supplementary information provided by NHS Digital, was used to inform the Annual Report of the Chief Medical Officer.

The report draws attention to major health challenges requiring immediate action and details progress made in key areas identified in previous annual reports. Data from the KC63 on coverage by PCT for women aged 53-70 is used in Chapter 5 of this report. See: https://www.gov.uk/government/publications/cmo-annual-report-2011-volume-one-on-the-state-of-the-public-s-health

National Audit Office (NAO)
Outcome statistics for prevalent and incident screens were used to inform the NAO report, ‘Healthcare across the UK’.


Media
The data are used to underpin articles in newspapers, journals, etc. on matters of public interest.

Local Authorities
Local Authorities and NHS Clinical Commissioning Groups (CCGs) are required to prepare Joint Strategic Needs Assessments of Health and Wellbeing (JSNAs), which inform local commissioning of health and wellbeing services. Indicators from the publication form part of the Local Government Association's Joint Strategic Needs Assessment: Data Inventory (via the Compendium of Population Health Indicators).
Unknown Users

The breast screening publication is free to access via the NHS Digital website and therefore the majority of users will access the report without being known to NHS Digital. It is important to put mechanisms in place to try to understand how these additional users are using the statistics and also to gain feedback on how we can make the data more useful to them.

On the web page where the report is published, contact details are provided for users who wish to provide feedback. Any responses are passed to the team responsible for the report to consider.
Appendix F – Feedback from Users

NHS Digital publishes around 90 series of Official Statistics and National Statistics each year. Use of health and care statistics helps those involved to manage the system more effectively, commission better services, understand public health trends in more detail, develop new treatments and monitor the safety and effectiveness of care providers.

Our Strategy for 2015-2020 sets out that over the next few years we are committed to analysing and making openly available data, statistical information and insights about the health and social care sector in ways which better meet our users’ needs. However, these changes come at a time when spending on central services is being squeezed, and we must better prioritise our current services.

In our 2016 consultation on changes to statistics produced by NHS Digital, we proposed a series of changes over the next three years which will help us to better prioritise resources from our stretched budget while developing our statistical products to better meet the needs of our users. We are making the changes necessary to enable us to produce high quality statistics suited to support a modern health and care system and help Britain make better decisions.

In terms of the NHS Breast Screening Programme, England publication we proposed to reduce commentary and increase use of infographic/visual type presentation.

The responses received showed very good support for the proposal. In particular, the majority of respondents were in favour of moving towards an increased use of infographic type presentation as long as the underlying methodologies that are used in the data analysis are made available as a technical annex. The responses also highlighted the need to retain the annual data tables as these are regarded as crucial for performance monitoring, benchmarking and trend analysis, as well as contributing to JSNA updates. Some responses also highlighted the need to publish timely data at a more granular level, i.e. CCG/GP Practice level, in addition to LA level, as this will support the needs of commissioners.

As a result of the consultation, we have made the commentary within this report more concise, while also increasing the use of infographic/visual type presentation and making data available interactively to users via dashboards. This has been achieved via a phased approach and has involved close partnership working with colleagues within the Breast Screening Programme at PHE and other key stakeholders.
We will also continue to work with colleagues from the Breast Screening Programme to explore ways of making more frequent, timely and contemporaneous screening data at CCG/GP Practice level available in the public domain. In doing so, regular timely data releases will provide users with a more immediate source for local oversight and commissioning of screening services, and will also help those involved in managing the Breast Screening Programme make better informed and considered decisions.
Appendix G – Data Validation and Data Quality

Information on the NHS Breast Screening Programme is collected on the following central return data sets:

- KC63 – information on the population coverage of the programme is collected on all 152 Upper Tier Local Authorities (LAs).
- KC62 – information on invitations, uptake and outcomes from all 80 breast screening units across England.
- Data are submitted to a bespoke NHS Digital data collection system which performs a number of at-source validations. Once the data have passed through validation they are extracted as a single CSV file and further validations and quality assurance checks are carried out. These include:
  - population comparisons between the KC63 LA resident data with ONS LA resident data
  - comparisons with previous years’ data to ensure that any unusual trends are identified and explained
  - consistency checks between different parts of the returns
  - checks that totals equal the sums of parts
  - checks on the calculation of statistics
  - checking for outliers (figures that are particularly low or high compared to other areas)

Part of NHS Digital’s quality assurance procedure includes returning some data tables to the four Screening Quality Assurance Services (SQASs) for verification prior to publication. SQASs cover four regional areas; North, South, London and Midlands & East.

For 2016-17 returns were received on all 152 LAs and from all 80 breast screening units.

Data for nine breast screening units have been impacted in 2016-17 due to few women in the 50-52 age cohort.

This involves Gateshead, North and Eastern Devon, Cambridge and Huntingdon, East Suffolk, James Paget, Kings Lynn, Norfolk and Norwich, Peterborough and West Suffolk.

This particularly impacts the uptake rate for ‘first invitation for screening’. See Table 13 of the Excel data tables file for more information.
Appendix H – Related Publications and Useful Web Links

This bulletin can be found on the NHS Digital website at:

http://digital.nhs.uk/pubs/brstscreen1617

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https://www.gov.uk/topic/population-screening-programmes