Bron Brawf Cymru Breast Test Wales

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

Breast Test Wales Annual Statistical Report 2017-18

February 2019

Screening Division of Public Health Wales Official Statistics Publication

About us

Public Health Wales exists to protect and improve health and wellbeing and reduce health inequalities for people in Wales.

We are part of the NHS and report to the Minister for Health and Social Services in the Welsh Government.

Our vision is for a healthier, happier and fairer Wales. We work locally, nationally and, with partners, across communities in the following areas:

Health protection – providing information and advice and taking action to protect people from communicable disease and environmental hazards

Primary, community and integrated care – strengthening its public health impact through policy, commissioning, planning and service delivery

Microbiology – providing a network of microbiology services which support the diagnosis and management of infectious diseases

Safeguarding - providing expertise and strategic advice to help safeguard children and vulnerable adults

Screening – providing screening programmes which assist the early detection, prevention and treatment of disease

Health intelligence – providing public health data analysis, evidence finding and knowledge management

NHS quality improvement and patient safety – providing the NHS with information, advice and support to improve patient outcomes

Policy, research and international development – influencing policy, supporting research and contributing to international health development

Health improvement – working across agencies and providing population services to improve health and reduce health inequalities

Further information

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This report is a detailed summary of information on work undertaken by the Welsh Breast Screening Programme for the year April 2017 to the end of March 2018.

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Quality Assurance Statement

Screening data records are constantly updated. The databases used by Public Health Wales Screening Division are updated on a daily basis when records are added, changed or removed (archived). This might relate to when a person has been identified as needing screening; has had screening results that need to be recorded, or has a change of status and no longer needs screening respectively. Data is received from a large number of different sources with varying levels of accuracy and completeness. The Screening Division checks data for accuracy by comparing datasets – for example GP practice data – and corrects the coding data where possible. It should be noted that there are sometimes delays in data collection – for example a person might not immediately register with their GP if they move address. These delays will therefore affect the completeness of the data depending on individual circumstances. In addition, the reader should be aware that data is constantly updated and there might be slight readjustments in the numbers cited in this document year on year because of data refreshing.

Contents

Tables and Graphs

1 Introduction

The aim of the breast screening programme is to reduce mortality from breast cancer. Women aged 50 to 70 who are resident in Wales, and registered with a General Practitioner, are invited for a mammogram (X-ray of the breasts) every three years.

Breast Test Wales is divided into three geographical divisions with centres in Cardiff, Swansea, Llandudno and Wrexham. Eleven mobile units work across Wales to provide local screening to women who live some distance from a centre, visiting over 100 sites in every three year round of screening.

1.1 'Key messages' for women

- Breast screening reduces your risk of dying from breast cancer.
- Women aged 50 to 70 are invited for a breast X-ray every three years. Women over the age of 70 are not routinely invited as there is no evidence of a reduction in mortality from screening women in this age range.
- Screening can find cancers when they are too small to see or feel. Finding and treating cancer early gives you the best chance of survival.
- Breast screening is a free NHS test that is carried out at screening centres and accessible mobile units across Wales.
- If you notice a change in your breasts, visit your GP immediately.
- Screening will miss some cancers, and some cancers cannot be cured.
- Taking part in breast screening is your choice. Read the information leaflet carefully to help you make your decision.

1.2 Programme delivery

The Screening Division of Public Health Wales is responsible for managing, delivering and quality assuring the breast screening programme in Wales and has Director of Screening and Consultant in Public Health lead for the cancer screening programmes. Breast Test Wales employs a Head of Programme, Quality Assurance (QA) Surgeon, QA Radiologist, QA Pathologist and an All-Wales Administration Coordinator who leads an administration team, and there is medical secretarial support. There is a large specialist multidisciplinary clinical team, including clinic support, breast care nurses, clinic nurses, radiographers, breast clinicians, a breast surgeon and a consultant radiologist, who deliver the breast screening service.

Women aged 50-70 who are resident in Wales, and registered with a GP, are offered screening at either a mobile unit in their locality or at one of the centres in Llandudno, Wrexham, Swansea or Cardiff.

1.3 Screening pathway

Women aged between 50 and 70 are invited for breast screening every three years. The invitation process depends on the GP surgery of registration. Breast Test Wales will invite all women for their first breast screening before their 53rd birthday. Occasionally this means that some women will be invited just before they reach 50 years of age.

Women aged between 50 and 70 who are being followed up at a hospital breast clinic will still receive an invitation from Breast Test Wales.

Women over the age of 70 are not routinely invited as there is no evidence of a reduction in mortality from screening women in this age range.

Women who attend for screening have a mammogram (X-ray of their breasts). If there are any abnormalities observed on the mammogram the woman is invited to an assessment clinic for further tests.

More information about the programme and copies of previous statistical reports are available at www.breasttestwales.wales.nhs.uk

2 Headline Statistics

This report covers activity in the period April 2017 to March 2018. All comparative annual data relates to financial years.

- Coverage: this is defined as the percentage of women resident and eligible for breast screening at a particular point in time who have been screened within the previous 3 years. As at 31st March 2018 coverage of women aged 53-70 was 72.9%, compared with 73.6% at the same point in 2017 and 74.1% in 2016.
- Screening activity: just over 114,000 women aged 49 and over were screened in 2017-18, compared with nearly 123,000 last year.
- Invitation and uptake: in 2017-18 more than 148,000 women aged 50-70 were invited for screening, compared to 157,000 last year. The uptake of screening for this group was 69.0%, compared to 70.4% in 2016-17 and 70.9% in 2015-16.
- Assessment: Referrals for assessment were 4.8% of those screened in 2017-18. This compares to 5.3% last year and 5.4% in 2015-16.
- Cancer detection: a total of 1,113 cancers were detected in women screened aged 49 and over. This represents 9.8 cases per 1,000 women screened. In comparison, there were 1,185 cancers detected in 2016-17 (9.6 per 1,000 screened) and 1,166 detected in 2015-16 (10.1 per 1,000 screened).
- Of the 1,113 cancers detected this year, 81.2% (904) were invasive lesions. In 2016-17 77.8% (922) were invasive and in 2015-16 80.8% (942).
- In 2017-18 51.4% (465) of the invasive cancers detected were classified as small (less than 15mm in size). This compares to 49.1% (453) in 2016-17 and 52.9% (498) in 2015-16.

3 Data

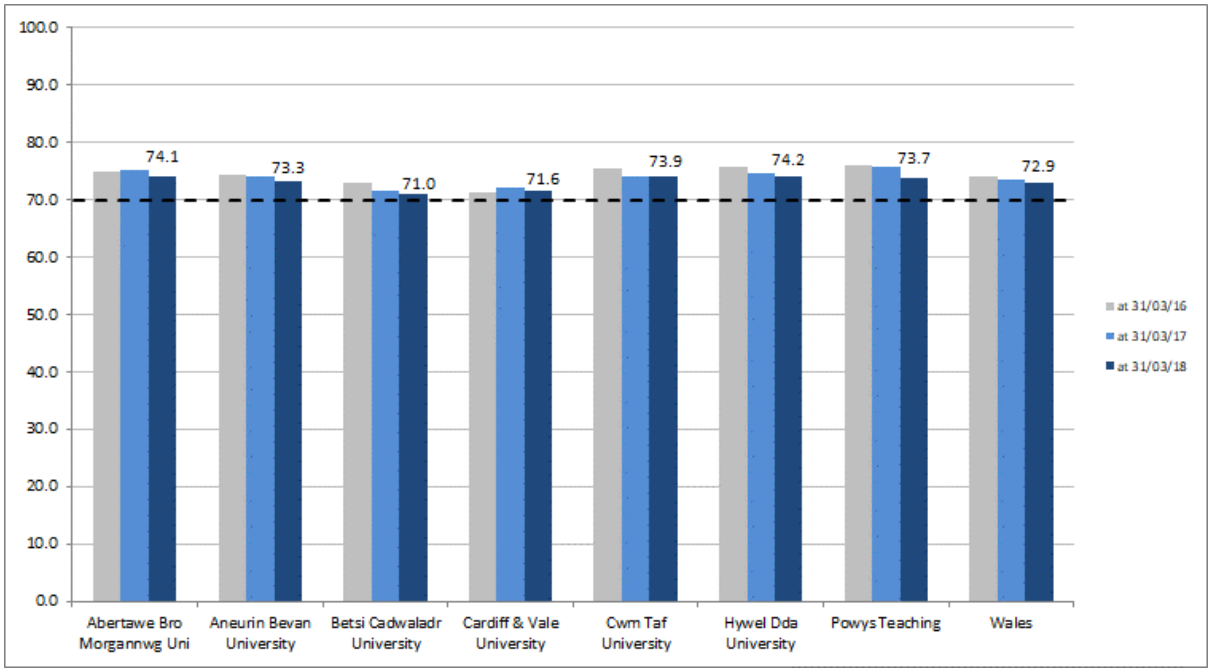
3.1 Coverage

Coverage is defined as the percentage of women resident and eligible for breast screening at a particular point in time, who have been screened within the previous 3 years. Ineligible women include those who have undergone bilateral mastectomy.

Both uptake and round length (invitations issued within 36 months of previous screen) can affect coverage. To allow all women time to have received their first invitation, the coverage is presented for the 53-70 age range. As at 31 March 2018 coverage of women aged 53-70 was 72.9%, compared with 73.6% at the same point in 2017 and 74.1% in 2016.

Considerable work has been undertaken in recent years to correct the round length delays resulting from the digital mammography service modernisation process. However, while round length has improved, uptake has been dropping and this explains the small fall in coverage over the three year analysis period. Nevertheless, coverage remains above the 70% standard for all Health Boards (Graph 1).

Graph 1: Breast screening coverage percentage (%), women aged 53-70, by Health Board of residence, 2016-2018

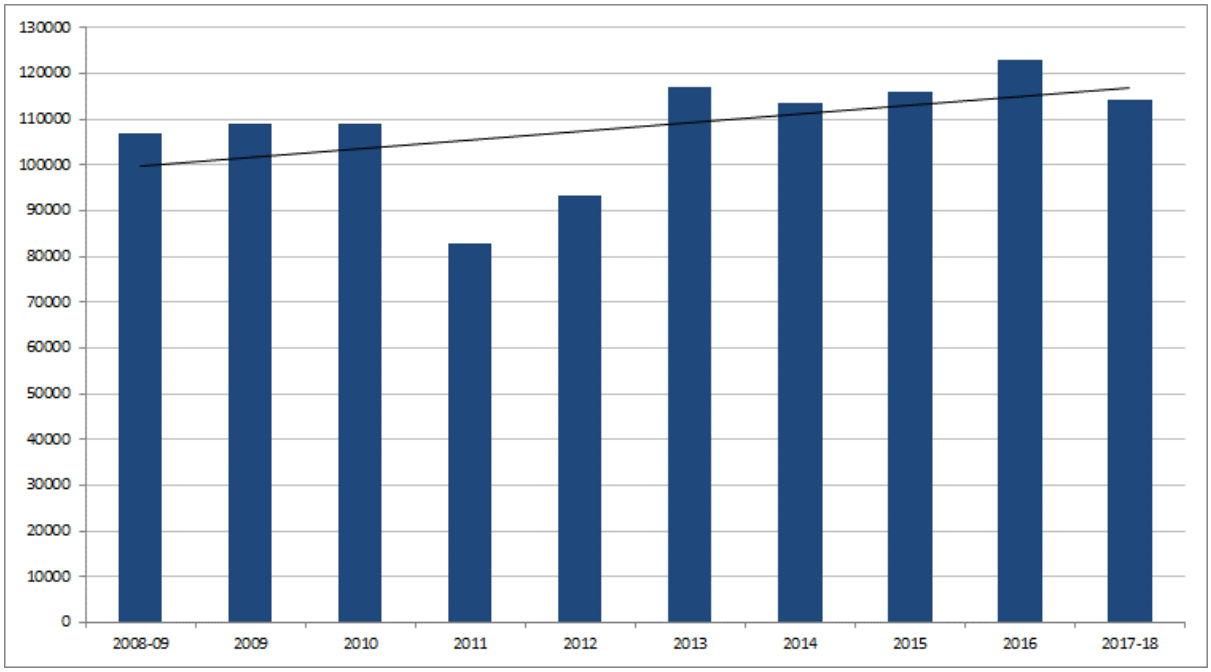


3.2 Screening Activity

Women are routinely invited to attend breast screening if they are aged between 50 and 70 (or aged 49 if they turn 50 in the year their practice is screened). Screening activity numbers also include women older than 70 who have contacted the service to request screening. It is important to note there is no robust evidence that routine screening saves lives in this older age group. All women who notice a change in their breasts should contact their GP immediately.

In total, just over 114,000 women aged 49 and over were screened in 2017-18. The programme is maintaining activity following the two years of disruption associated with digital implementation. Graph 2 illustrates the general trend of increasing screening numbers over the financial years.

Graph 2: 10-year total screening activity, all ages, 2008-09 to 2017-18



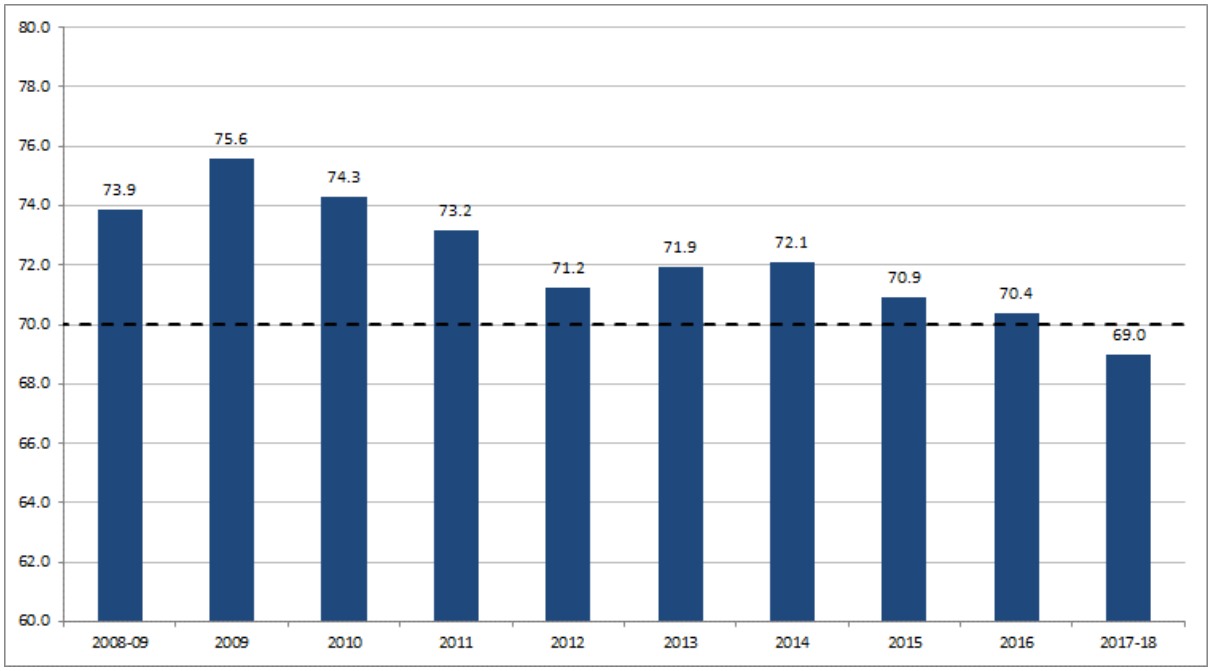
3.3 Invitation and Uptake

The minimum standard for uptake of a routine invitation in those aged 50-70 has been set at 70%. With the exception of financial years 2013 and 2014, Breast Test Wales has observed a gradual decline in uptake since 2009.

In 2017-18 uptake fell to 69.0%, compared to 70.4% in 2016-17 and 70.9% in 2015-16. This is the first year the minimum standard has not been achieved. Graph 3 shows uptake of screening amongst the routinely invited population.

(Note: The 2017-18 Screening Division Annual Report describes breast screening uptake as 72.8%. This refers to an entire 3 year screening round as at November 2018 which is a more robust figure.)

Graph 3: 10-year uptake percentage (%) of routine breast screening invitations, aged 50-70, 2008-09 to 2017-18

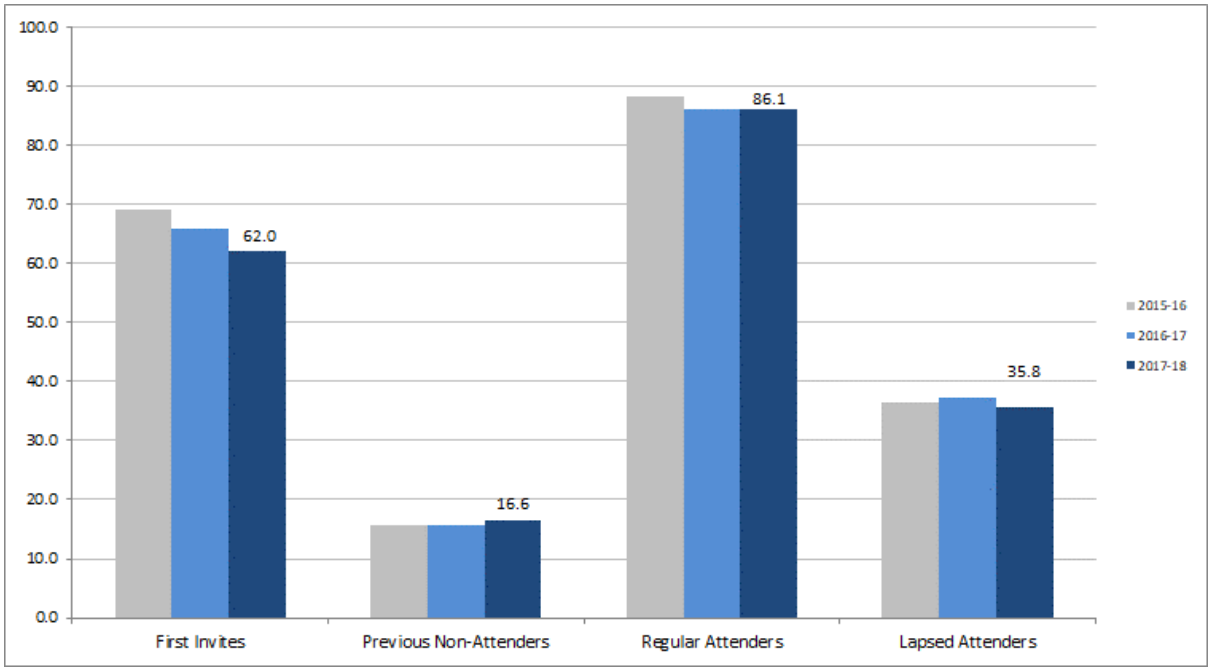


Uptake can vary according to the type of invitation. Routine invitations can be sub-divided into the following groups:

- First invitation
- Invitation to a previous non-attender
- Invitation to a previous attender who has been screened within the last 5 years
- Invitation to a previous attender who has been screened more than 5 years ago

As Graph 4 demonstrates, uptake is highest among the regular attendees (86.1%) and lowest among previous non-attenders (16.6%). Breast Test Wales plans to review current evidence based activities that ensure women are making an informed choice when considering taking up the offer of breast screening.

Graph 4: Uptake percentage (%) by invite type, aged 50-70, 2015-16 to 2017-18

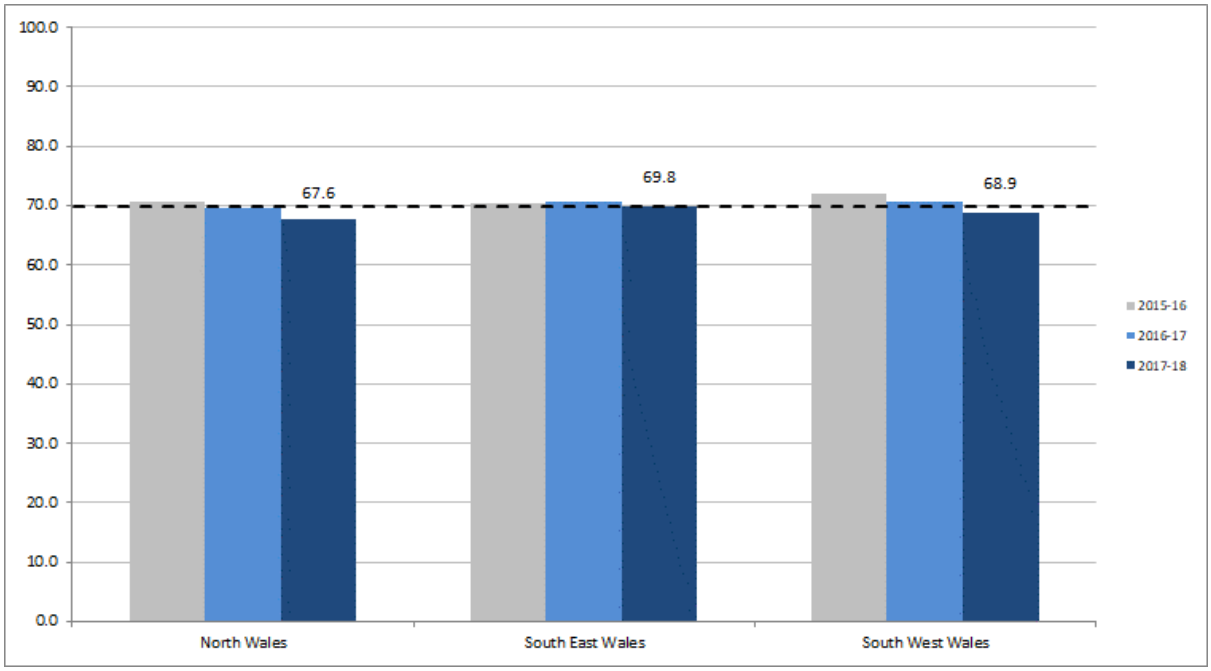


The 7 percentage point drop in uptake amongst the first invite women compared to 2015-16 is of particular concern because lower attendance in this group means the number of non-attenders in subsequent years is likely to grow.

In terms of regional effect, uptake is marginally highest in South East Wales in 2017-18 (Graph 5). The North saw the largest drop in uptake compared to the previous year (2 percentage points) but the South East and South West regions now join it in dipping below the minimum standard for the first time.

Breast Test Wales is currently in the process of reviewing its programme level strategy on uptake. A number of evidence based interventions will be reviewed. Interim activities to support informed choice and public information include providing key messages and clear risks and benefits on breast screening to women who are first timers and regular attenders.

Graph 5: Uptake percentage (%) by screening unit, aged 50-70, 2015-16 to 2017-18



3.4 Assessment

3.4.1 Referral for assessment

If any abnormalities suggestive of cancer are observed on the screening mammogram, the woman will be recalled to an assessment clinic for further assessment tests. It is expected that more women are recalled to assessment following their first screen (the prevalent screen) as there are no prior images to inform the recall decision.

Referral rates for women who have been screened previously (the incident screen) are likely to be lower because they will present with more recent disease and the screening history can assist the image reader (Table 1).

Table 1: Referral for assessment, all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16			2016-17			2017-18		
	Screen	**Refer**	**%**	**Screen**	**Refer**	**%**	**Screen**	**Refer**	**%**
Total	**115,794**	**6279**	**5.4**	**122,903**	**6458**	**5.3**	**114,117**	**5532**	**4.8**
Prevalent Screen	**20,309**	**1968**	**9.7**	**20,590**	**1931**	**9.4**	**20,899**	**1784**	**8.5**
Incident Screen	**84,803**	**3618**	**4.3**	**92,695**	**3943**	**4.3**	**84,200**	**3201**	**3.8**
First invite for routine screening	17,424	1647	9.5	17,495	1637	9.4	17,602	1501	8.5
Routine invite to previous non-attenders	2885	321	11.1	3095	294	9.5	3297	283	8.6
Routine invite to previous attenders, last screen within 5 years	79,550	3277	4.1	87,862	3643	4.1	80,102	2984	3.7
Routine invite to previous attenders, last screen more than 5 years previously	5253	341	6.5	4833	300	6.2	4098	217	5.3
Early recalls	73	73	100	69	69	100	93	92	98.9
Self/GP referrals	10,609	620	5.8	9471	510	5.4	8925	455	5.1

3.4.2 Assessment biopsy procedures

As part of the assessment process further mammograms and a breast examination is undertaken. If, following these further tests and an ultrasound scan there remains a concern there is a cancer then a biopsy procedure is required to make a diagnosis. Most biopsies are carried out in assessment clinic and use wide bore needle technique. A very small number of fine needle aspirations of the breast are performed each year but this is normally in addition to obtaining a tissue sample. A small number of women require an open surgical biopsy to achieve a definitive diagnosis. The programme wide adoption of vacuum assisted biopsy for certain lesions has led to a reduction in referral for open biopsy procedures.

The needle procedures are mostly conducted at a Breast Test Wales unit while an open biopsy is a surgical operation which requires a hospital visit. Of the 5532 women referred for assessment in 2017-18, 39.8% (2199) underwent fine needle aspiration and/or wide bore needle, while 1.1% (62) required an open biopsy (Table 2).

Table 2: Referral for assessment biopsy procedures, all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16					2016-17					2017-18				
	Refer	**Needle Bx**	**%**	**Open Bx**	**%**	**Refer**	**Needle Bx**	**%**	**Open Bx**	**%**	**Refer**	**Needle Bx**	**%**	**Open Bx**	**%**
Total	**6279**	**2503**	**39.9**	**149**	**2.4**	**6458**	**2502**	**38.7**	**140**	**2.2**	**5532**	**2199**	**39.8**	**62**	**1.1**
Prevalent Screen	**1968**	**820**	**41.7**	**68**	**3.5**	**1931**	**737**	**38.2**	**64**	**3.3**	**1784**	**717**	**40.2**	**24**	**1.3**
Incident Screen	**3618**	**1404**	**38.8**	**66**	**1.8**	**3943**	**1515**	**38.4**	**70**	**1.8**	**3201**	**1256**	**39.2**	**33**	**1.0**
First invite for routine screening	1647	690	41.9	58	3.5	1637	620	37.9	57	3.5	1501	603	40.2	18	1.2
Routine invite to previous non-attenders	321	130	40.5	10	3.1	294	117	39.8	7	2.4	283	114	40.3	6	2.1
Routine invite to previous attenders, last screen within 5 years	3277	1247	38.1	60	1.8	3643	1377	37.8	62	1.7	2984	1149	38.5	33	1.1
Routine invite to previous attenders, last screen more than 5 years previously	341	157	46.0	6	1.8	300	138	46.0	8	2.7	217	107	49.3	0	0
Early recalls	73	4	5.5	2	2.7	69	5	7.2	0	0	92	18	19.6	2	2.2
Self/GP referrals	620	275	44.4	13	2.1	510	242	47.5	6	1.2	455	208	45.7	3	0.7

3.5 Cancer Detection

3.5.1 Cancer detection rate

A total of 1113 cancers were detected in women screened aged 49 and over during the period April 2017 to March 2018. This represents 9.8 cases per 1000 women screened. In comparison, there were 1185 cancers detected in 2016-17 (9.6 per 1000 screened) and 1166 detected in 2015-16 (10.1 per 1000 screened).

Cancer detection amongst prevalent screen women was 10.3 per 1000 screened, compared to 8.6 per 1000 in 2016-17 and 9.8 per 1000 in 2015-16. For incident screen women the rate was 9.0 per 1000 screened in 2017-18, 9.2 in 2016-17 and 9.4 in 2015-16 (Table 3).

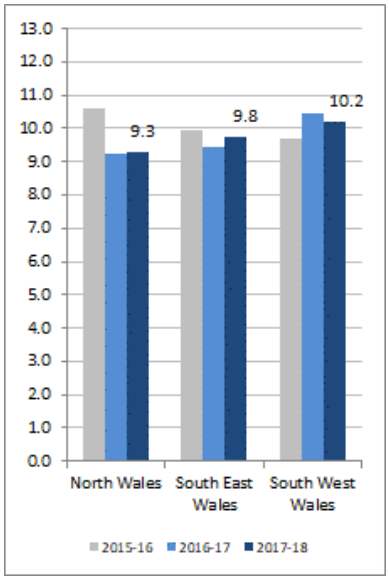
Table 3: Cancer detection rate (per 1000 screened), all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16			2016-17			2017-18		
	Screened	**Cancers**	**Rate**	**Screened**	**Cancers**	**Rate**	**Screened**	**Cancers**	**Rate**
Total	**115,794**	**1166**	**10.1**	**122,903**	**1185**	**9.6**	**114,117**	**1113**	**9.8**
Prevalent Screen	**20,309**	**200**	**9.8**	**20,590**	**178**	**8.6**	**20,899**	**216**	**10.3**
Incident Screen	**84,803**	**795**	**9.4**	**92,695**	**849**	**9.2**	**84,200**	**754**	**9.0**
First invite for routine screening	17,424	163	9.4	17,495	143	8.2	17,602	175	9.9
Routine invite to previous non-attenders	2885	37	12.8	3095	35	11.3	3297	41	12.4
Routine invite to previous attenders, last screen within 5 years	79,550	715	9.0	87,862	774	8.8	80,102	694	8.7
Routine invite to previous attenders, last screen more than 5 years previously	5253	80	15.2	4833	75	15.5	4098	60	14.6
Early recalls	73	0	0	69	0	0	93	4	43.0
Self/GP referrals	10,609	171	16.1	9471	158	16.7	8925	139	15.6

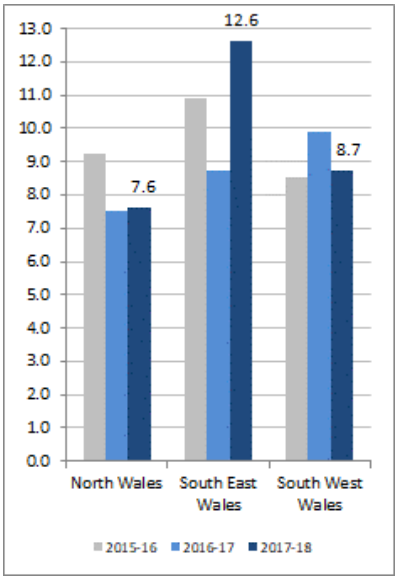
Examination of cancer detection rates at screening unit level (Graph 6) shows overall increases for the North and South East regions, but a fall in South West Wales. The large percentage increase in the South East prevalent rate represents an additional 36 cancers detected in this group compared to last year.

Graph 6: Cancer detection rate per 1000 screened, by invite type, by screening unit, 2015-16 to 2017-18

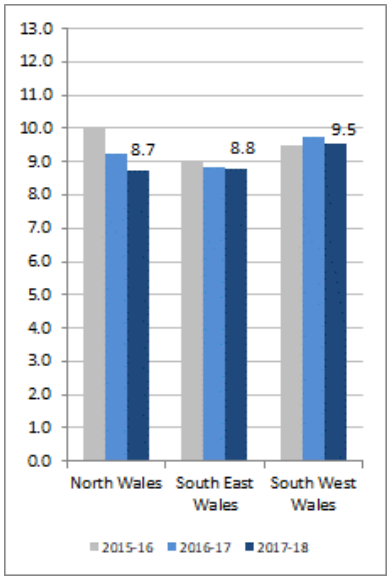
Total



Prevalent Screen

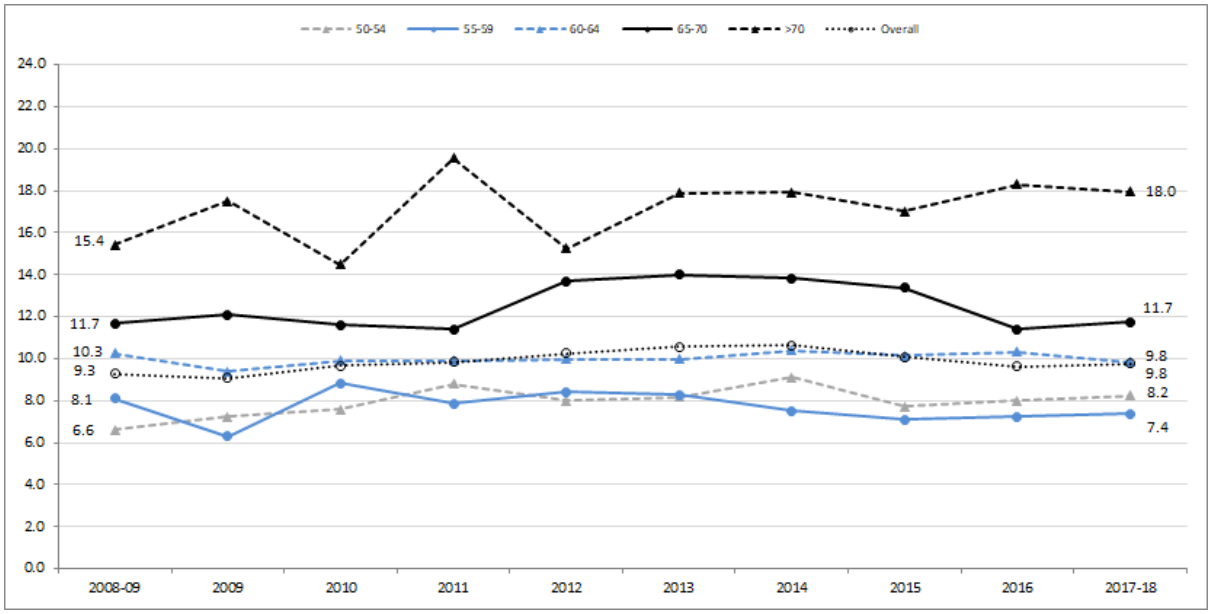


Incident Screen



Graph 7 plots cancer detection rates over a 10 year period and shows how breast cancer incidence generally increases with age. In 2017-18 the cancer detection rate for women aged 50-54 was 8.2 per 1000 screened, rising to 9.8 per 1000 for those aged 60-64 and 11.7 per 1000 in the 65-70 age group.

Graph 7: Cancer detection rate (per 1000 screened), 2008-09 to 2017-18, by age group



3.5.2 Cancer type and size

The breast cancers identified are described in two groups.

An invasive cancer is one which has spread into surrounding, healthy breast tissue. A non-invasive or micro-invasive cancer is contained within the ducts and lobules of the breast or may have started to spread but only by a very small amount (less than 1mm).

In 2017-18 81.2% of the cancers detected in women screened were invasive, compared to 77.8% in 2016-17 and 80.8% in 2015-16 (Table 4). The invasive cancers that are generally too small to feel (less than 15mm) accounted for 51.4% of all the invasives detected in 2017-18 (Table 5). This compares to 49.1% last year and 52.9% in 2015-16.

Non-invasive or micro-invasive disease made up 18.8% of all cancers detected in 2017-18, while in 2016-17 they accounted for 22.2% and in 2015-16 19.2% (Table 6).

Table 4: Invasive cancers detected, all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16			2016-17			2017-18		
	Cancers	**Invasive**	**%**	**Cancers**	**Invasive**	**%**	**Cancers**	**Invasive**	**%**
Total	**1166**	**942**	**80.8**	**1185**	**922**	**77.8**	**1113**	**904**	**81.2**
Prevalent Screen	**200**	**144**	**72.0**	**178**	**131**	**73.6**	**216**	**176**	**81.5**
Incident Screen	**795**	**657**	**82.6**	**849**	**671**	**79.0**	**754**	**607**	**80.5**
First invite for routine screening	163	113	69.3	143	102	71.3	175	137	78.3
Routine invite to previous non-attenders	37	31	83.8	35	29	82.9	41	39	95.1
Routine invite to previous attenders, last screen within 5 years	715	587	82.1	774	609	78.7	694	558	80.4
Routine invite to previous attenders, last screen more than 5 years previously	80	70	87.5	75	62	82.7	60	49	81.7
Early recalls	0	0	0	0	0	0	4	3	75
Self/GP referrals	171	141	82.5	158	120	75.9	139	118	84.9

Table 5: Size of invasive cancers detected, all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16					2016-17					2017-18				
	Total inv	**<15 mm**	**%**	**15+ mm**	**%**	**Total inv**	**<15 mm**	**%**	**15+ mm**	**%**	**Total inv**	**<15 mm**	**%**	**15+ mm**	**%**
Total	**942**	**498**	**52.9**	**409**	**43.4**	**922**	**453**	**49.1**	**437**	**47.4**	**904**	**465**	**51.4**	**393**	**43.5**
Prevalent Screen	**144**	**77**	**53.5**	**64**	**44.4**	**131**	**62**	**47.3**	**64**	**48.8**	**176**	**86**	**48.9**	**83**	**47.2**
Incident Screen	**657**	**353**	**53.7**	**281**	**42.8**	**671**	**343**	**51.1**	**307**	**45.7**	**607**	**322**	**53**	**257**	**42.3**
First invite for routine screening	113	58	51.3	52	46.0	102	49	48.0	48	47.1	137	66	48.2	66	48.2
Routine invite to previous non-attenders	31	19	61.3	12	38.7	29	13	44.8	16	55.2	39	20	51.3	17	43.6
Routine invite to previous attenders, last screen within 5 years	587	324	55.2	245	41.7	609	319	52.4	272	44.7	558	299	53.6	235	42.1

Table 5 (cont…)

	2015-16					2016-17					2017-18				
	Total inv	**<15 mm**	**%**	**15+ mm**	**%**	**Total inv**	**<15 mm**	**%**	**15+ mm**	**%**	**Total inv**	**<15 mm**	**%**	**15+ mm**	**%**
Routine invite to previous attenders, last screen more than 5 years previously	70	29	41.4	36	51.4	62	24	38.7	35	56.4	49	23	46.9	22	44.9
Early recalls	0	0	0	0	0	0	0	0	0	0	3	1	33.3	1	33.3
Self/GP referrals	141	68	48.2	64	45.4	120	48	40.0	66	55.0	118	56	47.5	52	44.1

Table 6: Non-invasive/micro invasive cancers detected, all ages, by invite/referral type, 2015-16 to 2017-18

	2015-16			2016-17			2017-18		
	Cancers	**Non-invasive or microinv**	**%**	**Cancers**	**Non-invasive or microinv**	**%**	**Cancers**	**Non-invasive or microinv**	**%**
Total	**1166**	**224**	**19.2**	**1185**	**263**	**22.2**	**1113**	**209**	**18.8**
Prevalent Screen	**200**	**56**	**28.0**	**178**	**47**	**26.4**	**216**	**40**	**18.5**
Incident Screen	**795**	**138**	**17.4**	**849**	**178**	**21.0**	**754**	**147**	**19.5**
First invite for routine screening	163	50	30.7	143	41	28.7	175	38	21.7
Routine invite to previous non-attenders	37	6	16.2	35	6	17.1	41	2	4.9
Routine invite to previous attenders, last screen within 5 years	715	128	17.9	774	165	21.3	694	136	19.6
Routine invite to previous attenders, last screen more than 5 years previously	80	10	12.5	75	13	17.3	60	11	18.3
Early recalls	0	0	0	0	0	0	4	1	25
Self/GP referrals	171	30	17.5	158	38	24.0	139	21	15.1

4 Definitions

Coverage

The percentage of women resident and eligible for breast screening at a particular point in time, who have been screened within the previous 3 years.

Health Board

The health board of residence.

Uptake

The percentage of women routinely invited for breast screening who take up their invitation and are screened within 6 months.

5 Production Team and Pre-Release List

Production team:

Dean Phillips	Head of Breast Test Wales
Catherine Floyd	Specialty Registrar
Dr Sharon Hillier	Director of Screening Division
Heather Lewis	Consultant in Public Health
Dr Ardiana Gjini	Consultant in Public Health Medicine
Helen Clayton	Lead Informatics and Data Services Manager
Guy Stevens	Deputy Informatics and Data Services Manager
Claire Ellis	Informatics and Data Analyst
Anna Ashman	Communications Manager
Sarah Thomas	Communications Executive
Jennifer McGrath	Clerical Officer
Rhys George	Cofus CTF (Welsh translation)

Pre-Release List:

These Official Statistics were sent to the people on this pre-release list five working days prior to publication in accordance with the Pre-publication Official Statistics Order Access (Wales) 2009.

Public Health Wales

Jan Williams	Chair
Dr Tracey Cooper	Chief Executive
Dr Quentin Sandifer	Executive Director of Public Health Services and Medical Director
Leah Morantz	Head of Communications

Welsh Government

Dr Frank Atherton	Chief Medical Officer
Dr Andrew Goodall	Director General - Health and Social Services
Rebekah Tune	Head of Strategic Communications and Marketing
Prof Chris Jones	Deputy Chief Medical Officer / Medical Director NHS Wales
Neil Surman	Deputy Director of Public Health
Dr Heather Payne	Senior Medical Officer for Maternal & Child Health
Helen Tutt	Senior Executive for Screening, Immunisation and Sexual Health
Stephen Thomas	Head of Health Protection Branch