Annual Report 2017/18

Breast Screening Programme

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1 – Summary and Highlights 2017/18

The Public Health Agency monitors, and quality assures, the Northern Ireland Breast Screening Programme to ensure women have access to a high quality service that meets national standards.

This annual report describes key issues relating to the Northern Ireland Breast Screening Programme and its performance in 2017/18. It compares performance with previous years.

In 2017/18, a total of 84,693 women aged 50-70 years were invited for breast screening and 63,558 attended for screening; giving an uptake rate of 75% (the national standard is ≥ 70%). This compares with 75% uptake in 2014/15, 76% in 2015/16 and 77% in 2016/17. Uptake is the percentage of women who attend each year, following an invitation. This means a quarter of women who were invited did not take up the offer of screening mammography. This highlights an area where more work is required to better understand the reasons some women don't attend..

The PHA, in partnership with other stakeholders, continues work to ensure that all eligible women can make an informed choice about attending for breast screening and that the service is as accessible as possible. Key actions relating to promoting informed choice in breast screening are outlined in Section 5 of this report.

Most women who attend for breast screening mammography (96 out of every 100) will be identified as having normal mammograms. In 2017/18, 99% of women, who had a normal test result, received their results within 2 weeks (acceptable standard ≥95%).

In 2017/18, the percentage of women referred for further assessment after their prevalent (first) screen was 8.5%, which is within the national acceptable standard (<10%). The percentage referred after their incident (subsequent) screen was 2.9%, which is within the national achievable standard (<5%). Of these women, 89.8% were offered an assessment clinic appointment within 3 weeks (acceptable standard ≥98%) with 83% attended their appointment within 3 weeks of their mammogram. The screening programme therefore did not meet this standard in 2017/18. The Young Person and Adult Screening Team (YPAST) has been working with the

Breast Screening Units to improve performance against this standard. More recently performance has improved reaching 99.0% in 2018/19.

Diagnosis before surgery may be made by taking a biopsy at the assessment clinic. In 2017/18, 99.3% of women with invasive cancers detected by screening had the diagnosis confirmed before surgery by biopsy (achievable standard ≥95%).

A total of 537 breast cancers were detected by the programme (all ages) in 2017/18. Of these, 441 were invasive cancers and 96 were ductal carcinoma in situ (DCIS) and 1was micro-invasive-. Of the 441 invasive cancers, 249 (56%) were less than 15 mm in diameter (small invasive cancers).

4.8 per 1,000 women screened for the first time (prevalent screen) were diagnosed with an invasive breast cancer (standard ≥3.6). The figure for women attending subsequent (incident) screening tests was 6.37 per 1,000 (standard ≥4.1)[1]. This shows that Northern Ireland is performing well against the national standards for invasive cancer detection.

Detection of small invasive cancers through breast screening can mean that treatment is more likely to reduce the risk of death from the disease. In 2017/18, 2.4 per 1,000 women screened for the first time (prevalent screen) had a small invasive cancer identified (minimum standard ≥2.0, target ≥2.8[1]). The incident (subsequent screen) small cancer detection rate was 3.8 per 1000 women screened, above the minimum standard (>2.3 per 1000)[1].

The screening round length is the interval between each offered invitation for screening mammography. Measurement of screening round length provides an indicator of the efficiency with which a screening programme is managed. The long-term effectiveness of the programme is dependent on women in the target age group continuing to be screened at regular intervals. In 2017/18, 98.1% of women were offered an appointment for mammography screening within 36 months of their previous normal screen (acceptable standard ≥ 90%).

Overall, while there are some areas that require improvement, these statistics

[1] These standards were not included in programme standards from April 2017. The standards are from pre 2017 standards. From April 2017 performance in this area is monitored using a combined standardised detection ratio (SDR) for small invasive cancers. This was 1.61 which is above the achievable standard of 1.4.

demonstrate that the Northern Ireland Breast Screening Programme was performing well against the national standards in 2017/18.

2 – Introduction

The aim of breast screening is to prevent deaths from breast cancer. Breast screening, like all screening programmes, results in both benefits and harms. The main benefit is that screening saves about 1 life from breast cancer for every 200 women screened. This adds up to about 1,300 lives saved from breast cancer each year in the UK.[2]

The main harm is over diagnosis, as about 3 in every 200 women screened are diagnosed with a cancer that would never have been found without screening and would never have become life threatening.

In Northern Ireland eligible women aged 50 – 70 are invited for breast screening, by GP practice, every 3 years. Due to this 3 yearly round of invites, about a third of women will be invited for the first time before their 51st birthday (the year they turn 50), a third before their 52nd birthday (the year they turn 51) and the rest before their 53 birthday (the year they turn 52). All eligible women should be invited for the first time before their 53rd birthday. As the women who are invited before their 51st birthday are invited in the year they turn 50, some women will be invited for breast screening for the first time when they are 49.

Women invited for the first time the year they turn 50 are invited for the last time the year they turn 68. Women invited for the first time the year they turn 51 are invited for the last time the year they turn 69, and women invited for the first time the year they turn 52 are invited for the last time the year they turn 70. Everyone receives a total of 7 invitations.

Women aged over 70 years are not automatically invited for screening, but are encouraged to continue attending every 3 years by phoning their local screening unit

[2] https://www.publichealth.hscni.net/publications/northern-ireland-breast-screening-helping-you-decide-english-and-12-translations

and requesting an appointment.

Women who have already been identified as being at a significantly increased risk of breast cancer (× 8 the normal risk and higher) are invited to participate in annual surveillance screening by the Northern Ireland Higher Risk Breast Screening Surveillance Programme, which commenced in 2013.

There are 4 Breast Screening Units (BSU) in Northern Ireland (figure 1). These are the:

Eastern BSU	12-22 Linenhall Street, Belfast Tel: 028 9033 3700	This covers the Belfast and South Eastern Trust areas
Northern BSU	Antrim Area Hospital Tel: 028 9442 4425	This covers most of the Northern Trust area. The Northern Unit also provides surveillance screening for women at higher risk of breast cancer for the region.
Southern BSU	Craigavon Area Hospital Tel: 028 3756 0820	This covers the Southern Trust area.
Western BSU	Altnagelvin Area Hospital Tel: 028 7161 1443	This covers the Western Trust, and the Northern part of the Northern Trust area.

The Breast Screening Unit in Linenhall Street provides mammography screening for women in the Belfast HSC Trust area. In the other trust areas most screening mammograms are carried out on mobile breast screening trailers at a variety of locations across Northern Ireland.

The Young Person and Adult Screening Team is part of the Public Health Agency. It provides the quality assurance function for the three cancer screening programmes (breast, bowel and cervical).

The purpose of quality assurance in the breast screening programme is to ensure that it is performing in accordance with the national standards; and processes in place to continuously improve its quality and performance. This is to ensure that women have access to a high quality service, wherever they reside.

The Northern Ireland Breast Screening Programme operates to the same standards as the NHS Breast Screening Programme in England[3]

3- Programme Performance

The YPAST monitors the performance of each of the four Breast Screening Units against national standards using Körner[4] returns:

KC62 – This is an annual return made by HSC Trusts on: outcome of initial screen, outcome of further assessment, cancers diagnosed (by size and type) and overall output and outcome measures (uptake, referral rate, non-invasive cancers, benign biopsy rate, invasive cancer detection rate, referral for cytology/biopsy, the malignant to benign ratio for surgery, early recall rate); by 1st invitation, previous non-attenders, last screen within 5 years, last screen more than 5 years, early recall, self-referrals, all women; by age.

KC62 data are obtained from the National Breast Screening System (NBSS). This is the IT system that supports the breast screening programme.

[3] https://www.gov.uk/government/publications/breast-screening-consolidated-programme-standards
[4] https://datadictionary.nhs.uk/data_sets/central_return_data_sets.html

KC63 – This is an annual return made by HSC Trusts on: numbers of eligible women, invited and screened by age, numbers recalled, numbers self or GP referred, and time since most recent screen in 12 month blocks.

Public Health England sets a number of minimum and target standards for the programme. It should be noted that in April 2017 these standards were revised. Rather than referring to a minimum standard and a target, the document now refers to acceptable and achievable standards. These new standards were endorsed for use locally by the Northern Ireland Screening Committee in July 2017. Women with a date of first offered screening appointment between 01/04/2017 and 31/03/2018 were used to produce this report. Comparative figures for previous years and from the English Breast Screening Programme are also shown.

It should be noted that this report provides information on both the individual performance of the four Breast Screening Units and also the overall programme. Information on the performance of individual staff is not provided.

Acceptable Standards: This is the lowest level of performance which services are expected to attain in order to ensure patient safety and service effectiveness. All units are expected to exceed the acceptable threshold and to agree service improvement plans that develop performance towards an achievable level. Programmes not meeting the acceptable threshold are expected to implement recovery plans to ensure rapid and sustained improvement.

Achievable Standards: This represents the level at which the services are likely to be running optimally. Screening services should aspire to attain and maintain performance at this level.

All English programme data used in this report are taken from the publication Breast Screening Programme, England 2017-18.[5]

[5] https://digital.nhs.uk/data-and-information/publications/statistical/breast-screening-programme/england-2017-18

Number of Women Screened

84, 693 women aged 50-70 were invited for breast screening in 2017/18; 63,558 women (75%) attended for breast screening.

A total of 84, 693 women aged 50-70 were invited for breast screening in 2017/18. Of these, 63,558 attended for screening. Figure 1 below illustrates how many were screened by each unit over a four year period. The number screened in each unit fluctuates year on year depending on the area being screened within the three year round length.

It should be noted that the four breast screening units in Northern Ireland cover screening populations of different sizes. Approximately one third of the eligible screening population is invited each year.

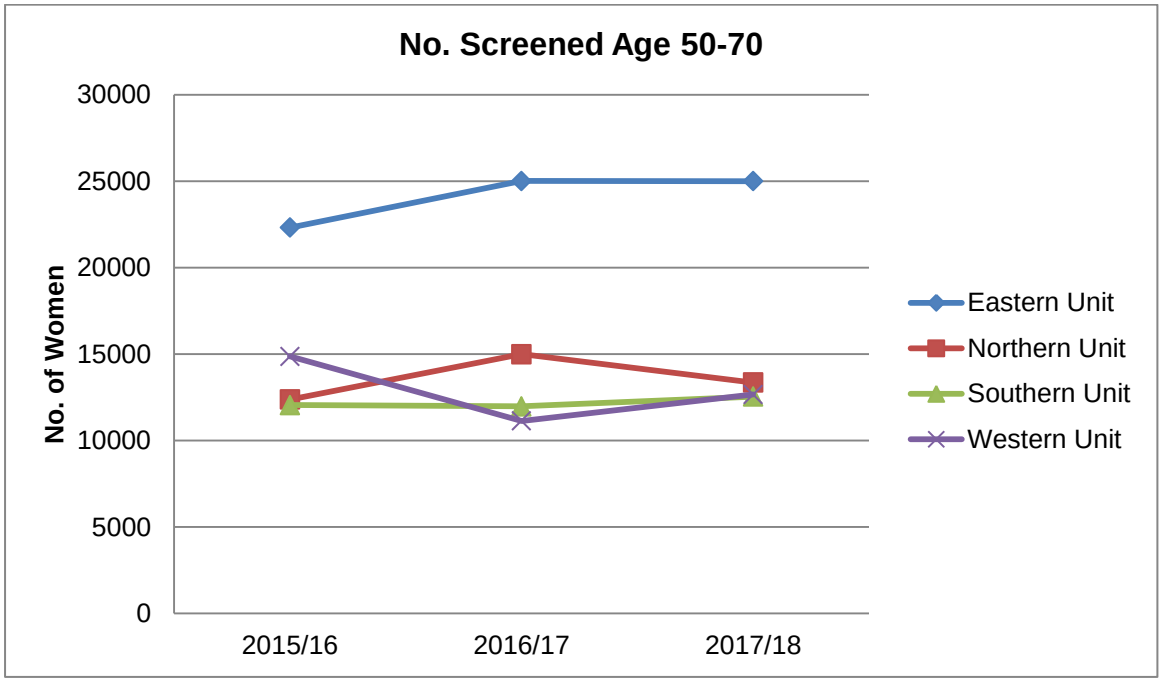


Figure 1 - Number of women aged 50-70 screened each year from 2015/16 to 2017/18

Uptake

In 2017/18, 75.0% of women invited took up the offer and attended for breast screening.

Uptake measures the percentage of women who attend for breast screening each year, following an invitation. Figure 2 shows the uptake rates over the 3 year period between 2015/16 and 2017/18.

Average uptake for Northern Ireland in 2017/18 was 75.0%, meaning that three quarters of all women who were invited accepted the offer of breast screening (a total of 63,558 women). Uptake in 2017/18 was lower than in previous years, i.e. 2016/17 (77.1%) and 2015/16 (76.1%). Uptake for England, in contrast, was 70.5% in 2017/18, which was also lower than had been achieved there in previous years i.e. 2016/17 (71.1%) and 2015/16 (72.1%).

Each of the four Breast Screening Units achieved an uptake of ≥70%, therefore exceeding the acceptable standard. Uptake was highest in the Northern Unit at 79%.

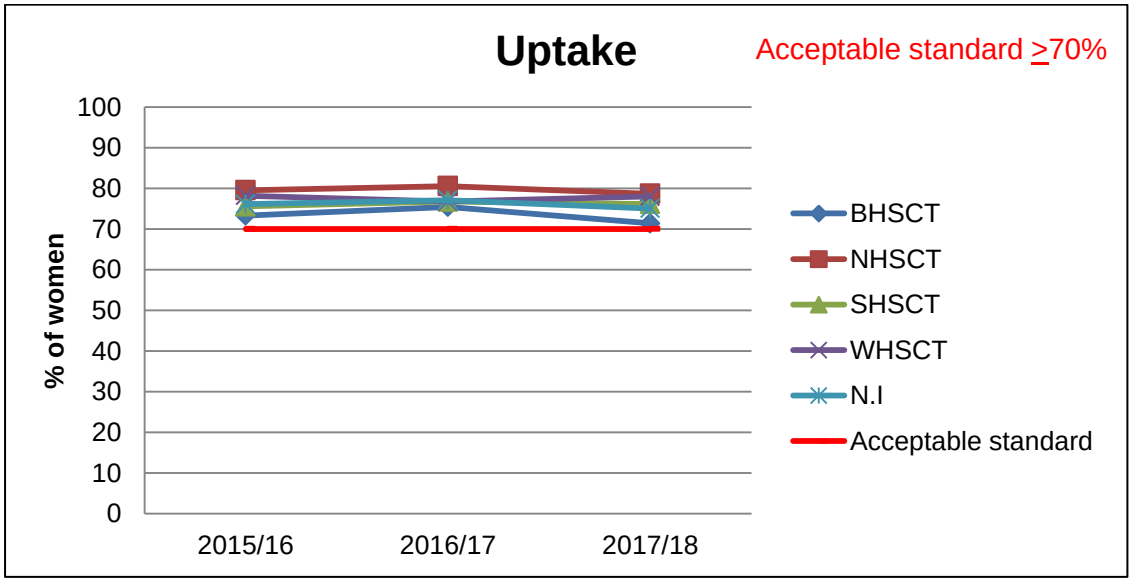


Figure 2 - Uptake for women aged 50-70 by unit and for Northern Ireland 2015/16 to 2017/18

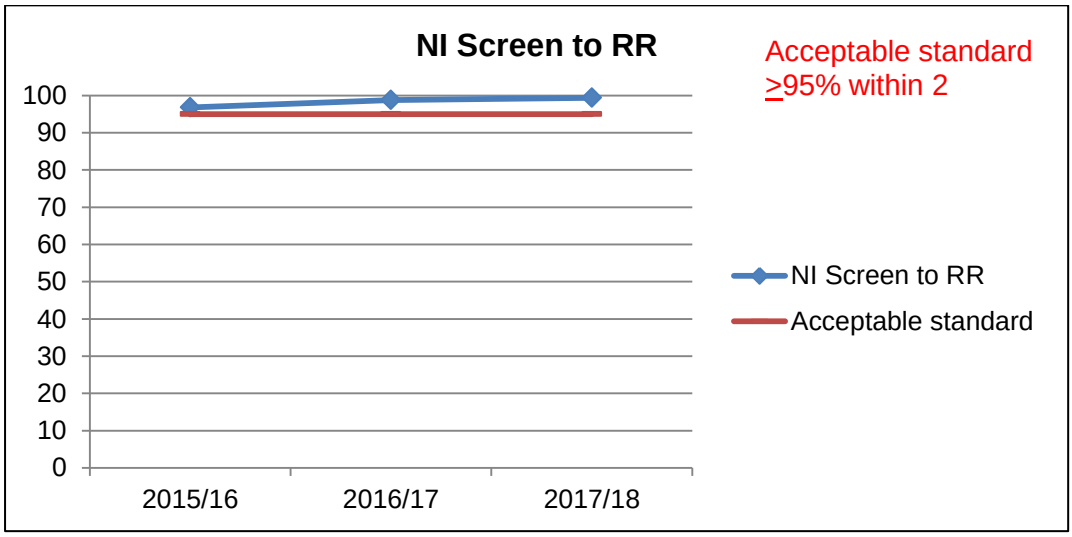
Although women over 70 are not routinely invited for breast screening, the programme actively encourages these women to call their local Breast Screening Unit to make an appointment every three years: 2,068 such women self-referred and attended screening in 2017/18 (1,769 attended in 2016/17 and 1,101 in 2015/16). At the last breast screening appointment, to which they are automatically invited, women are given a leaflet and a reminder card to self-refer in 3 years' time.

Screen to Routine Recall

In 2017/18, 99.4% of women, who had a normal screening test, received the results of their screen mammograms within two weeks.

Most women (96%) who attend for breast screening mammography will be identified as having normal mammograms. Screen to Routine Recall is the interval between a woman attending for screening (the date her mammograms were taken) and the date that her episode is closed on NBSS[6], i.e. the date the result is entered (taken as a proxy for the date she is sent her results letter).

The acceptable standard is that ≥95% of women should receive their results within two weeks. This was achieved in 2017/18, with 99.4 % reaching this standard, and approaches the achievable standard of 100%.



[6] https://www.intersystems.com/wp-content/uploads/sites/8/NBSS-e0429faaa21c57a8278e28fa2df3dd88.pdf

Figure 3 - Screen to routine recall for Northern Ireland by year from 2015/16 to 2017/18

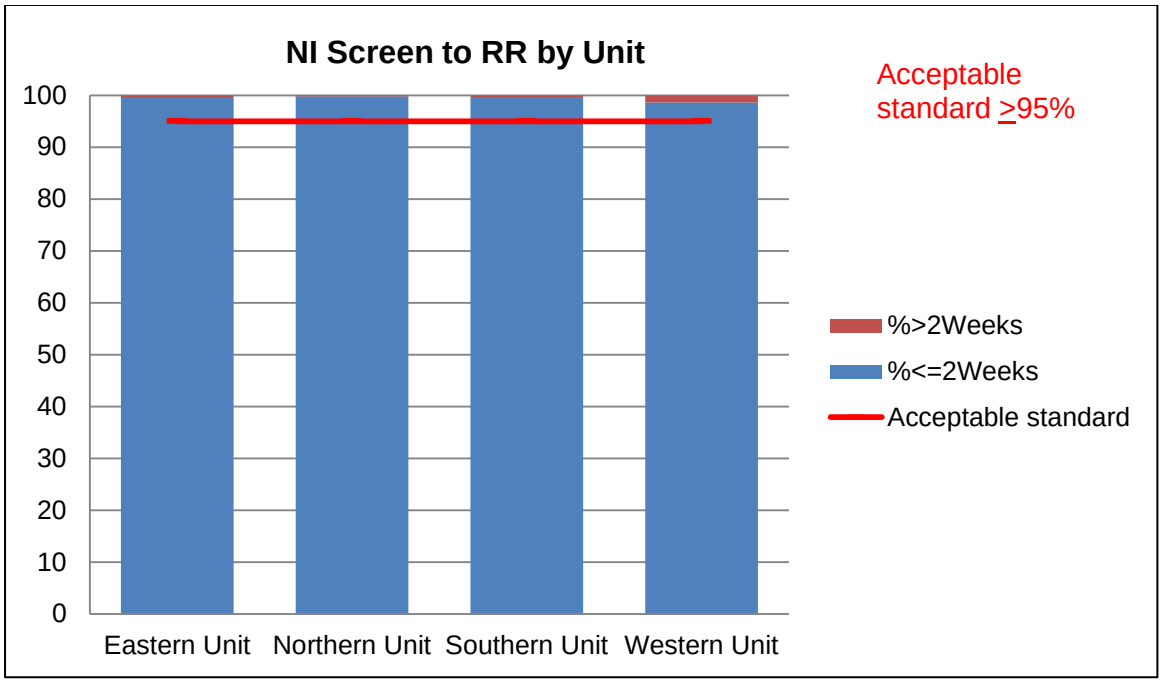


Figure 4 - Screen to routine recall by unit in 2017/18 (%)

Screen to Assessment

89.8% of women referred for assessment were offered an appointment within 3 weeks

About 4 in every 100 women are asked to come back for more tests after screening as the mammogram looks abnormal. These women are invited to attend an assessment clinic for further tests (e.g. breast examination, ultrasound scan or biopsy) which will help confirm if the woman has breast cancer.

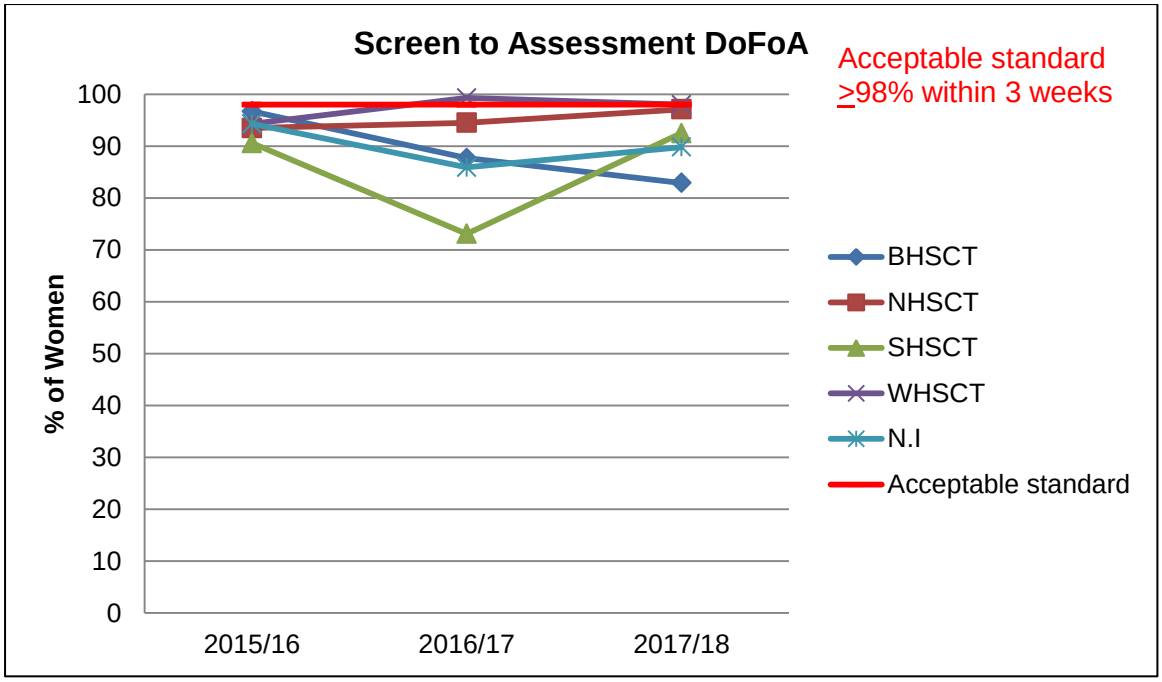


Figure 5 – Screen to Assessment % of women offered an appointment within 3 weeks, for 3 years from 2015/16

On average, 1 in 4 women called back are found to have cancer. The 3 in 4 women confirmed as not having cancer are returned to the routine screening programme to be invited for screening again in 3 years' time (unless they will be over the age of 70, when they can self-refer)

Screen to Assessment is the interval between a woman's screening mammogram and the date she is offered an appointment for the assessment clinic. This is known as the date of first offered appointment or DoFoA.

The acceptable standard in 2017/18 was that ≥98% of woman should be offered an appointment within 3 weeks of attendance for mammography, with the achievable standard of 100%. This was not reached, with 89.8% of women being offered an appointment within 3 weeks of attendance. Although it was achieved in 2018/19 when the figure was 99.0%.

YPAST also monitors the interval between a woman's screening mammogram and the date she actually attends her appointment. This is because some women may choose to change the date of their appointment, some do not attend (DNA) and are offered another date, or (rarely) because an assessment clinic is cancelled. In

2016/17 programme performance was 78.8% regionally, which was lower than the ≥90% standard applicable at the time (NB this is no longer included in the consolidated standards). YPAST worked with the Breast Screening Units to improve this, and the performance in 2017/18 was 83%.

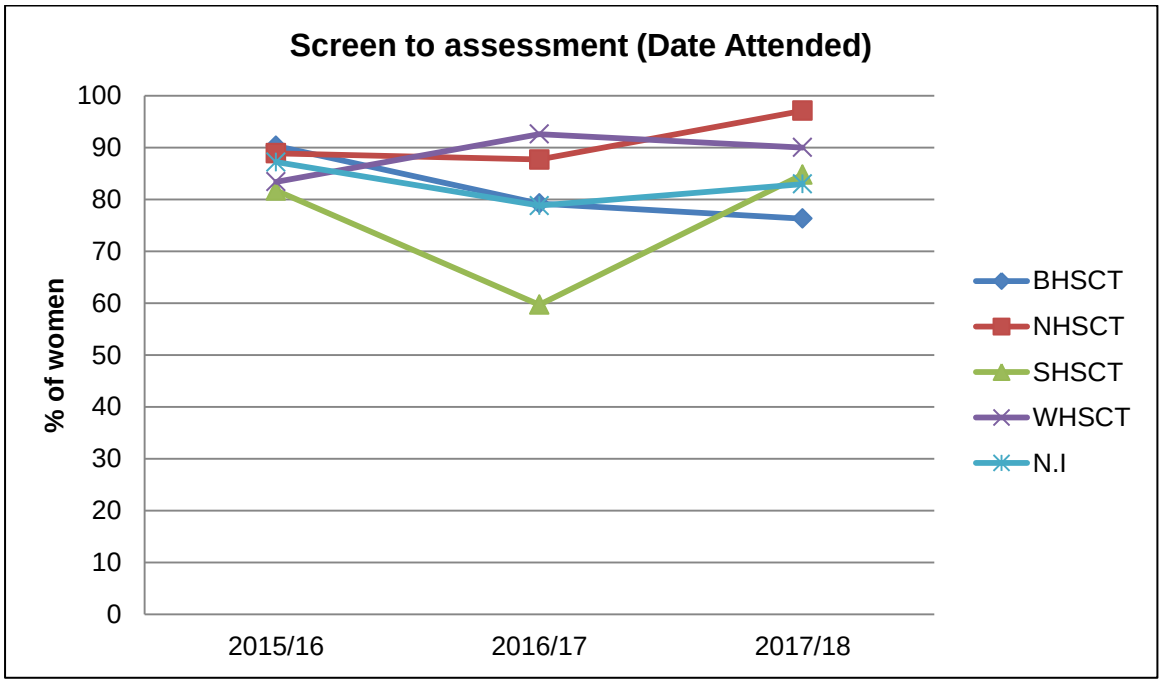


Figure 6 - Screen to assessment for Northern Ireland by year from 2015/16 to 2017/18

Referred for Assessment

In 2017/18 2,520 women aged 50-70,were referred for assessment.

The percentage of women who are recalled to an assessment clinic is normally higher in those attending their first screening mammogram (the prevalent screen) than in those attending for subsequent screening mammography (incident screens). The objective is to minimise the number of women referred unnecessarily for further tests. However, a recall rate that is too low can reduce the number of cancers detected.

Prevalent screen

8.5% of women were recalled for assessment in the prevalent (first screen), which achieves the acceptable standard of <10% but does not meet the achievable standard of <7%. The figure for England was 7.4%.

Incident screen

2.9% of women were recalled for assessment in the incident (subsequent screen), which achieves the acceptable standard of <7% as well as the achievable standard of <5%. The figure for England was 3.0%.

Table 1 - Percentage of women recalled for assessment, by unit, 2017/18

Unit	**Prevalent %**	**Incident %**
Belfast (Eastern)	11.7	2.8
Northern	7.0	3.0
Southern	9.0	4.2
Western	3.7	1.8
Northern Ireland	8.5	2.9
Acceptable and achievable standards	Acceptable < 10% Achievable < 7%	Acceptable < 7% Achievable < 5%

Figure 7 and Figure 8 show the percentage of women referred to assessment over a 3 year period, by Breast Screening Unit. In 2017/18, all units met the acceptable and achievable target for referral to assessment at incident screen. While the Eastern unit did not meet the acceptable standard for referral to assessment at prevalent screen in 2017/18 (with a figure of 11.7%), it did meet the achievable standard in 208/19 (6.5%).

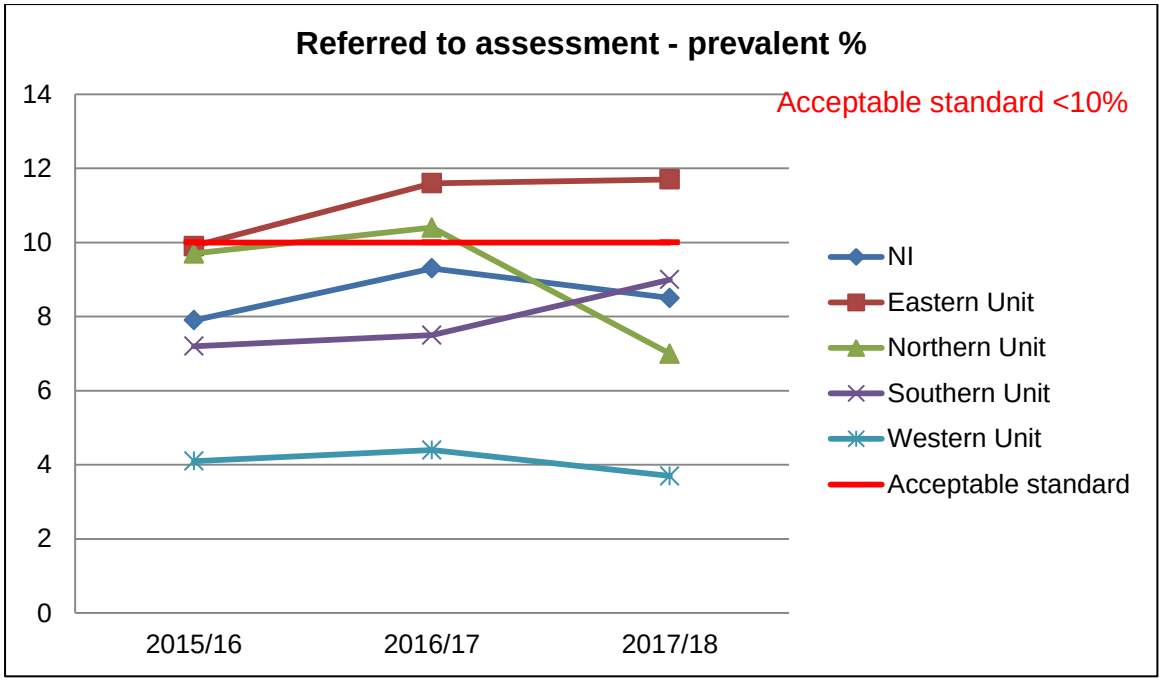


Figure 7 - % referred to assessment for prevalent (first) screen by unit and for Northern Ireland, 2015/16 to 2017/18

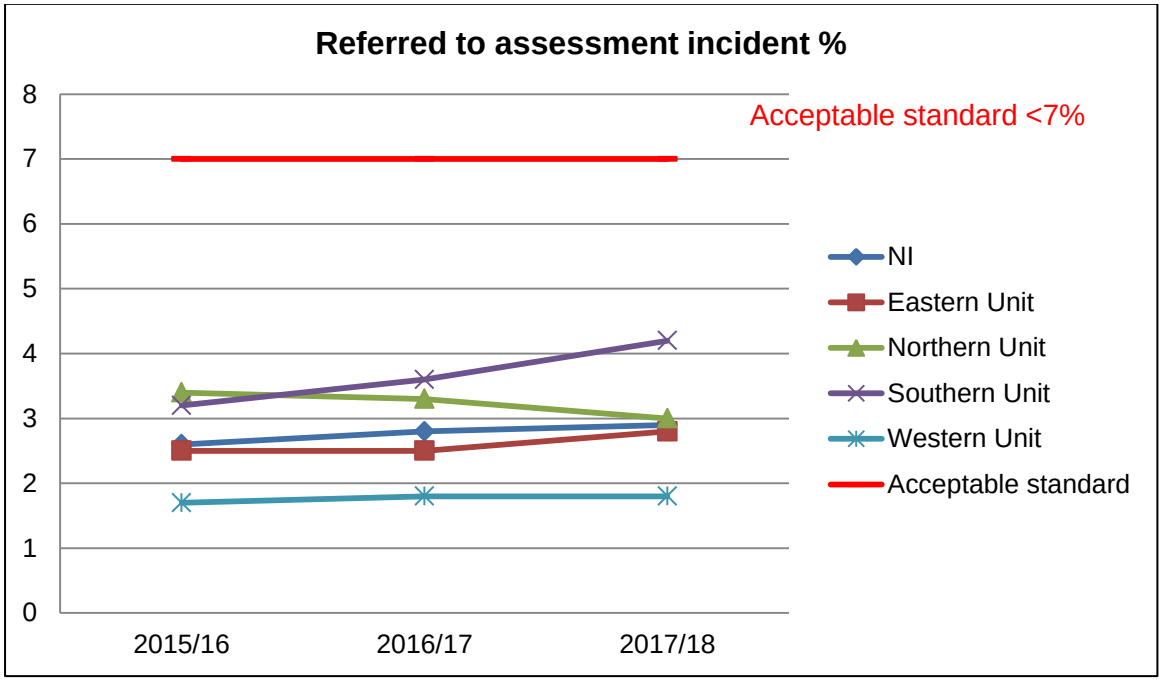


Figure 8 - % referred to assessment for incident (subsequent) screen by unit and for Northern Ireland, 2015/16 to 2017/18

Outcomes of Screening

Younger women are more likely to be called back for assessment, but cancer is more likely to be found in older women.

Younger women are more likely to be called back to an assessment clinic for further testing. The result of this further testing is, for most women, reassurance. These women are returned to routine recall and invited for routine screening again in 3 years' time (shown in figure 9 as "RR from assessment"). Note that the y-axis of the graph starts at 90%; as more than 90% of all women screened have normal mammograms.

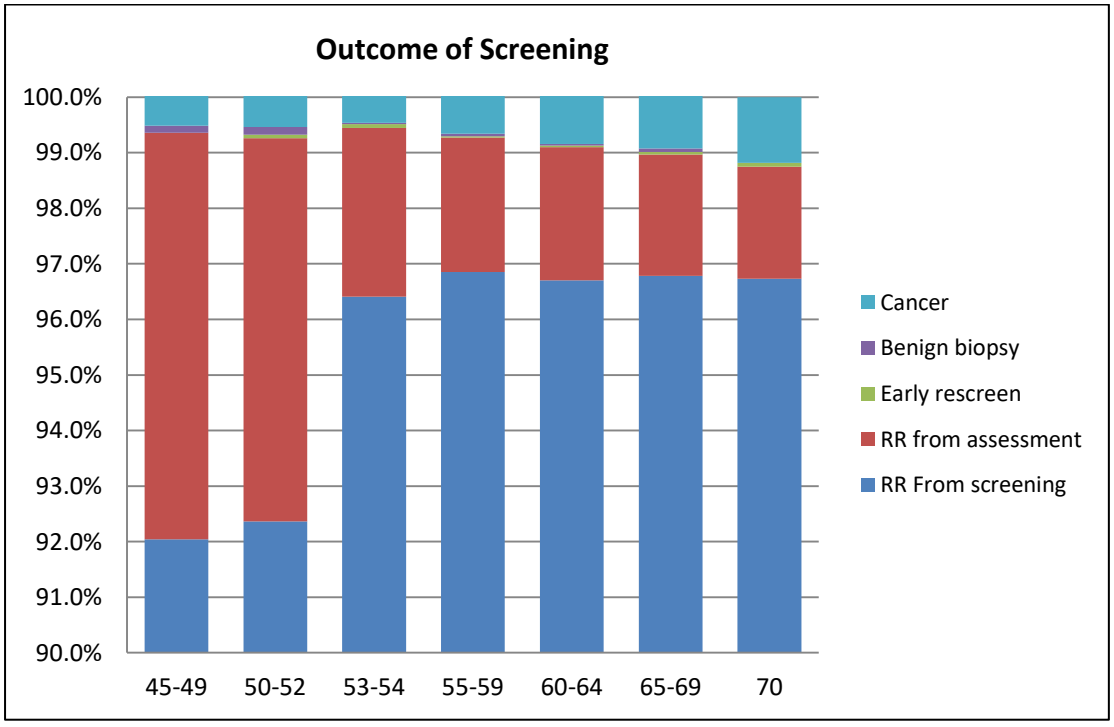


Figure 9 - Outcomes of Breast Screening by Age Band 2017/18. RR indicates 'routine recall' where women are invited for routine screening again in 3 years

Early re-screen involves bringing a woman (who has attended an assessment clinic) back for repeat screening mammography sooner than the normal three yearly screening interval. This occurs infrequently and these cases are monitored and reviewed.

Preoperative Diagnosis Rate

99.3% of women with invasive cancers detected by screening had the diagnosis confirmed before surgery.

The preoperative diagnosis rate measures the percentage of screen detected cancers where the diagnosis was established prior to surgery. Diagnosis before surgery is made by taking a biopsy at the assessment clinic.

Some women need to have a surgical biopsy (i.e. a biopsy taken during surgery). This can be because the diagnosis is difficult to establish beforehand. The acceptable standard for invasive cancers is that ≥95% of cancers should be diagnosed before surgery. All units exceeded the acceptable standard in 2017/18, with overall regional performance being 99.3%.

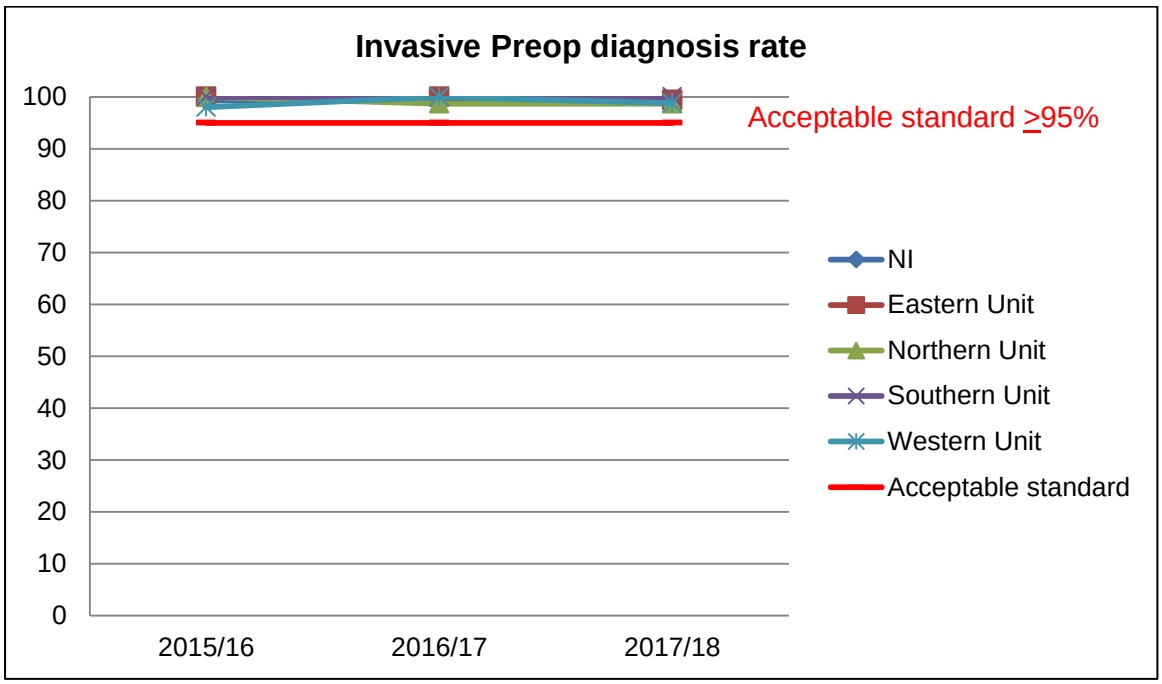


Figure 10 - Preoperative diagnosis for invasive cancers rate by unit and for Northern Ireland from 2015/16 to 2017/18

Number of cancers detected

441 invasive cancers (all ages) were detected in 2017/18. Of these, 249 were small (i.e. less than 15mm in diameter).

537 cancers (all ages) were detected in 2017/18. Of these:

- 441 were invasive cancers
- 96 were ductal carcinomas in situ (DCIS)
- 1 was a micro invasive cancer

A proportion of cases of DCIS will become invasive. It is not possible to identify which will / will not become invasive; therefore all women diagnosed with DCIS are offered treatment.

The total cancer detection rate for the 50-70 age group in 2017/18 was 7.6 per 1000 women. The comparative figure for England was 8.1[7] per 1000 women (Figure 11).

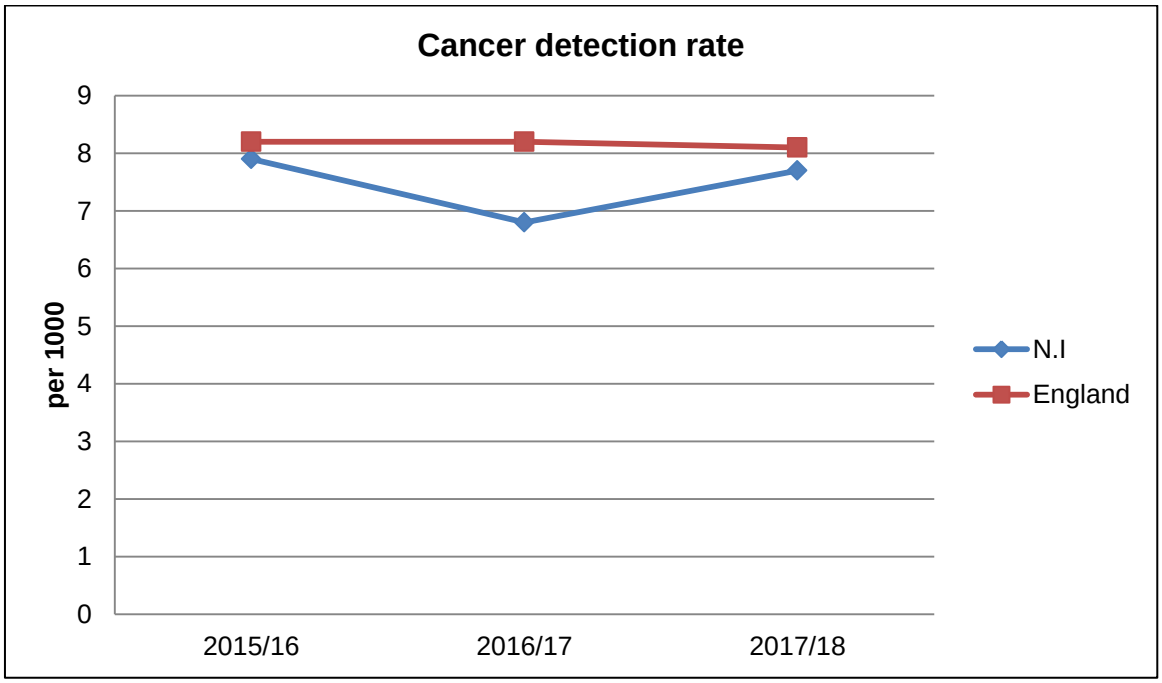


Figure 11 - Total cancer detection rate (per 1000) for Northern Ireland and England from 2015/16 to 2017/18

[7] https://files.digital.nhs.uk/60/77DCCC/breast-screening-programme-eng-2017-18-report.pdf

Invasive Cancer Detection Rate

This measure is the number of invasive cancers detected per 1,000 eligible women who were invited and screened.

4.8 per 1,000 women screened for the first time (prevalent screen) were diagnosed with an invasive breast cancer. The figure for women attending for subsequent screening tests was 6.4 per 1,000.

Prevalent Screen

The acceptable national standard for the invasive cancer detection rate in 2017/18 was ≥2.7 per 1,000 women for the prevalent (first) screen; with an achievable standard of ≥3.6 per 1,000 women screened.

Over a 6 year period the Northern Ireland rate has consistently achieved the acceptable standard. Figure 1 12 below shows the rate for the last 3 years. The rate for Northern Ireland was 4.8 per 1,000 women screening. These figures tend to fluctuate from year to year due to the very small numbers involved.

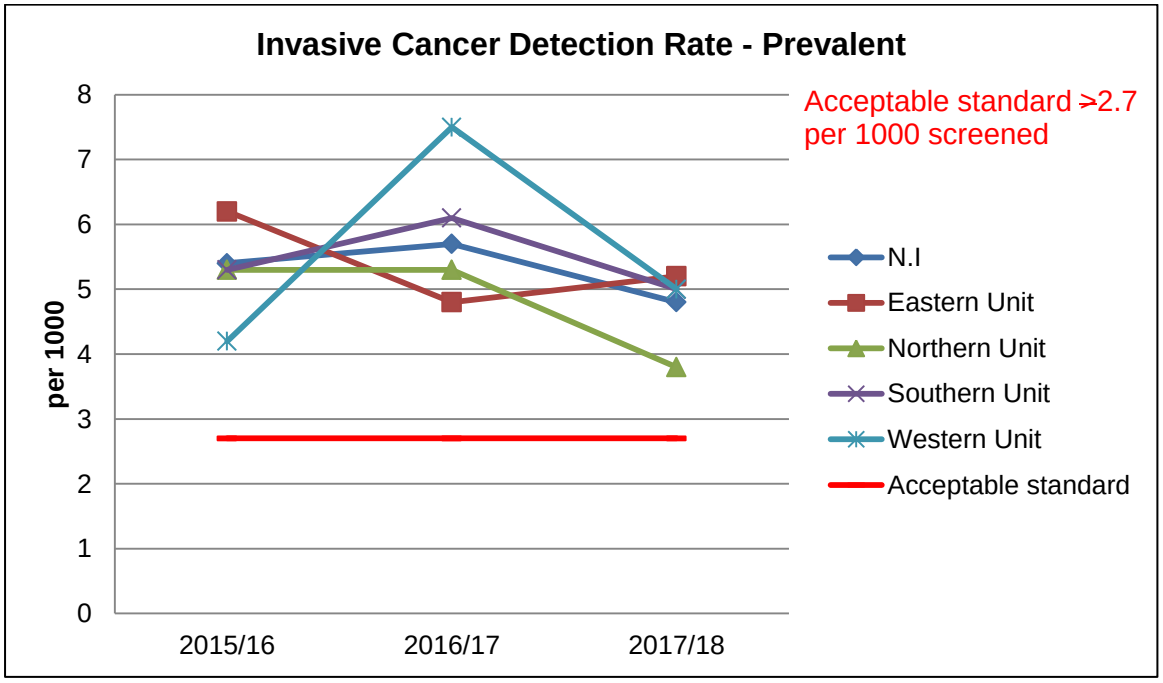


Figure 12 - Invasive cancer detection rate for the prevalent (first) screen by unit and for Northern Ireland, 2015/16 to 2017/18.

The prevalent invasive cancer detection rates for each Breast Screening Unit in 2017/18 are shown again in figure 13 with associated confidence intervals, which are wide due to the small number of invasive cancers detected. All units exceeded the acceptable standard for prevalent cancer detection rates, and were significantly greater (as indicated by confidence intervals (CIs) not crossing the standard line) apart from the Northern unit.

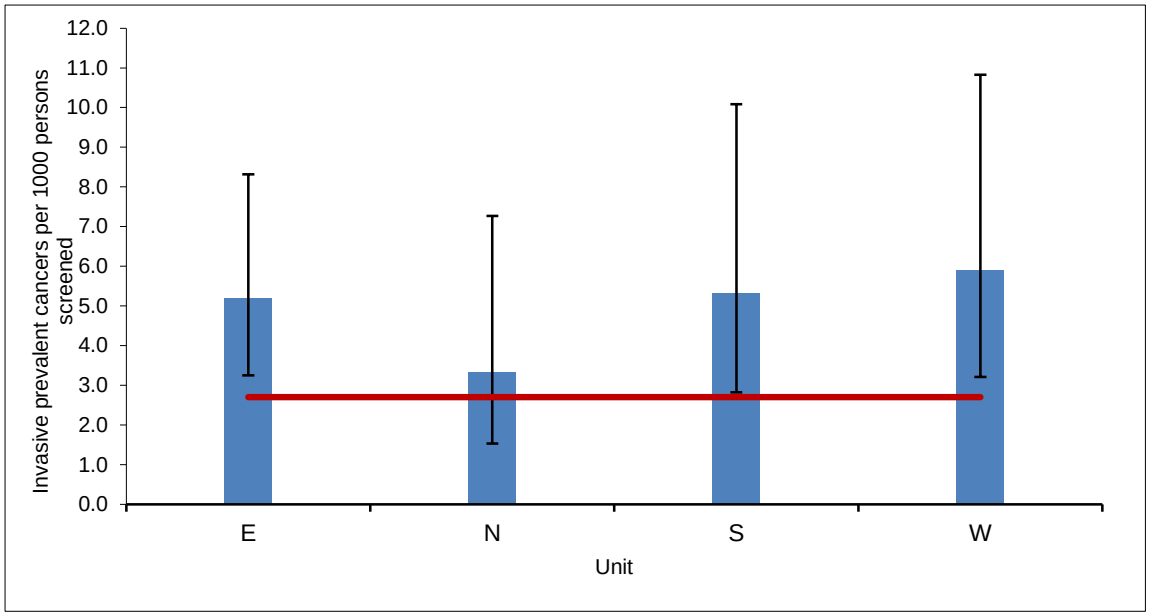


Figure 13 - Prevalent invasive cancer detection rate by unit with 95% Confidence Intervals (CIs) 2017/18

Incident screen

The acceptable standard for the invasive cancer detection rate in 2017/18 was ≥3.1 per 1,000 women for incident (subsequent) screens; with an achievable standard of ≥4.2 per 1,000 women screened.

Each unit met the standard in 2017/18 (figure 14). The Northern Ireland rate was 6.4 per 1000.

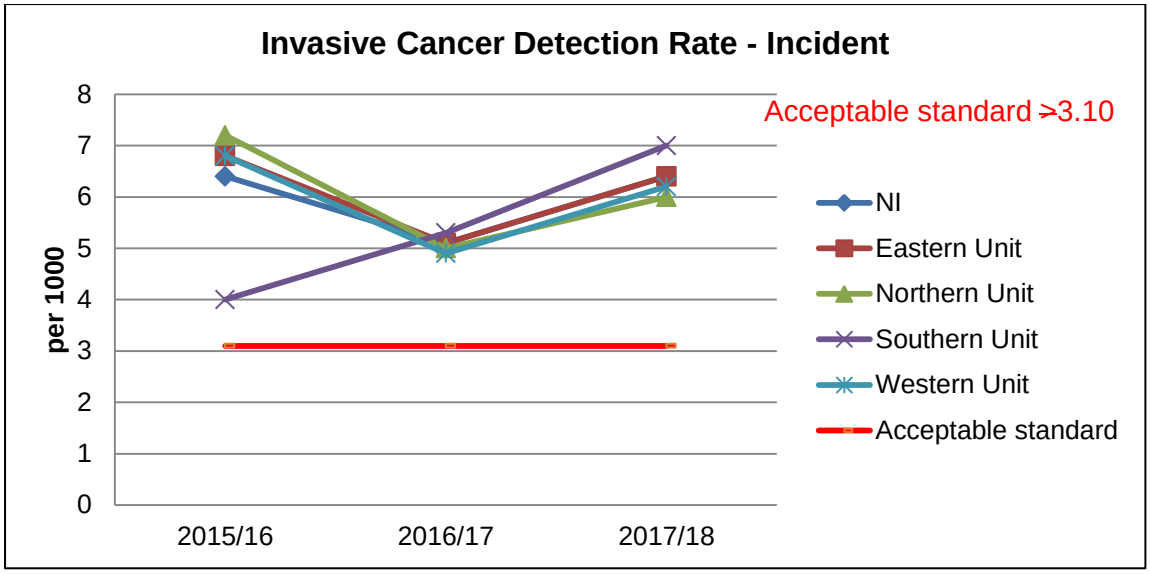


Figure 14 - Invasive cancer detection rates (incident screen) by unit & for Northern Ireland 2015/16 to 2017/18

The incident invasive cancer detection rates for each Breast Screening Unit in 2017/18 are shown again in figure 15, with associated confidence intervals, which are wide due to the small number of invasive cancers detected. All units exceeded the acceptable standard for prevalent cancer detection rates, and were significantly greater (as indicated by confidence intervals (CIs) not crossing the standard line).

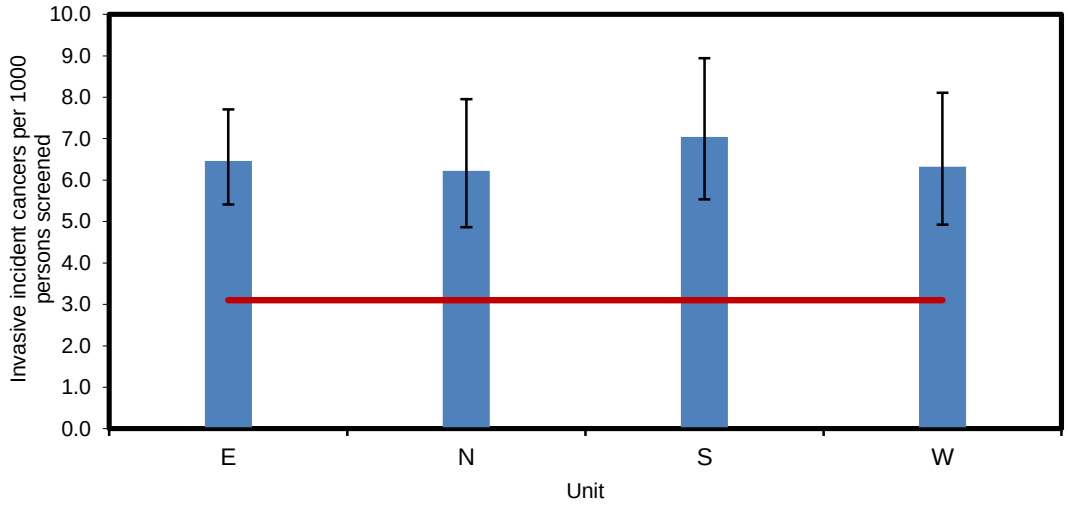


Figure 15 - Incident invasive cancer detection rate by unit with 95% Confidence Intervals (CIs) 2017/18

Small invasive cancers

The main aim of breast screening is to detect small invasive breast cancers, at an early stage in their natural history, when treatment is more likely to reduce the risk of death from the disease. Small cancers are defined as less than 15 mm in their maximum diameter.

2.4 per 1,000 women screened for the first time (prevalent screen) had a small invasive cancer. The figure for women attending for subsequent screening was 3.78 per 1,000

Prevalent

Figure 16 shows the small invasive cancer detection rates for the prevalent (first) screen over a six year period. Rates naturally tend to fluctuate from year to year due to small numbers. The Northern Ireland programme exceeded the acceptable standard (≥2.0 per 1,000) but was below the achievable target (≥2.8 per 1,000) in 2017/18 with a figure of 2.4 per 1,000 women screened. The figure for England was 3.1 per 1,000.

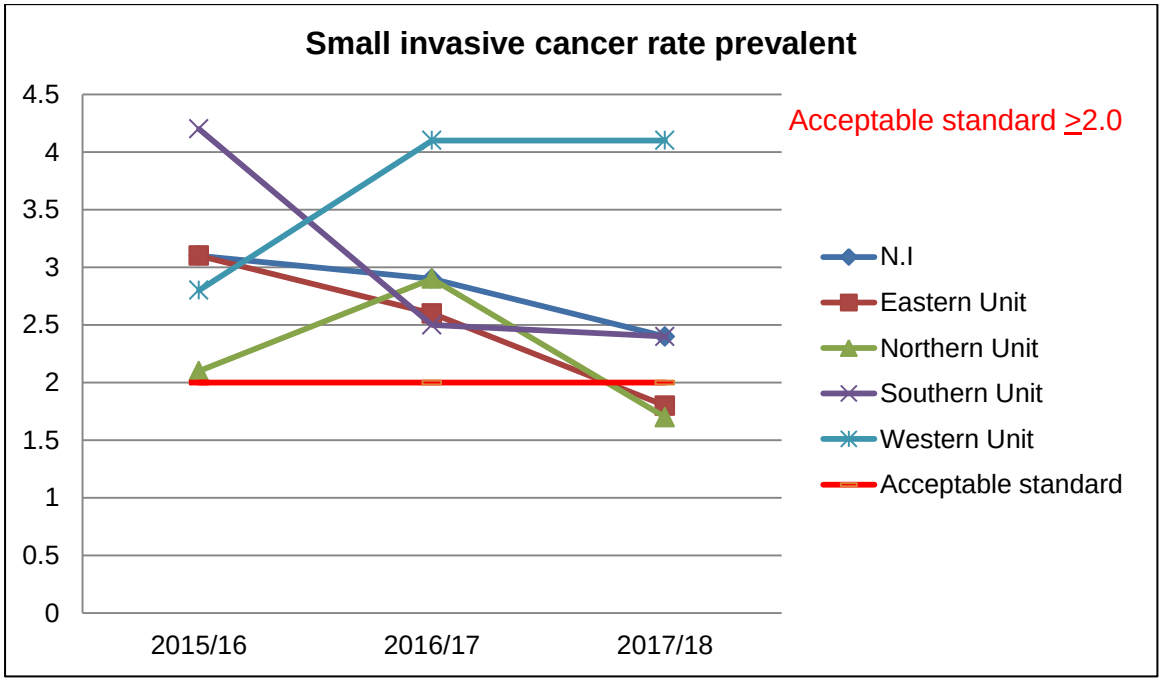


Figure 16 - Small invasive cancer detection rate (prevalent screen) by unit and for N.I 2015/16 to 2017/18

Figure 17 demonstrates the small invasive cancer detection rate for the prevalent screen for each Breast Screening Unit in 2017/18, with associated confidence intervals, which are wide due to the small number of small invasive cancers detected. The red line is the acceptable standard of ≥2.0 per 1,000 women screened. The Eastern and Northern units did not meet the acceptable standard (≥2.0 per 1,000) however they were not significantly lower (as indicated by CIs crossing the standard line). The Southern and Western units met the acceptable standard, however the rate was not significantly greater in the Southern unit (as indicated by CIs crossing the standard line) whereas the rate was significantly greater in the Western trust (as indicated by CIs not crossing the standard line).

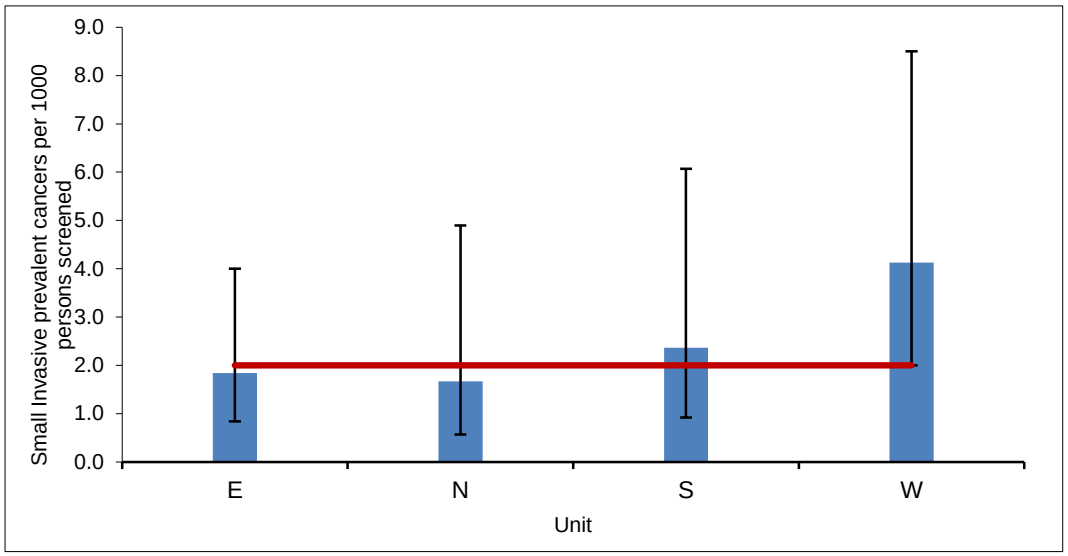


Figure 17 - Prevalent small invasive cancer detection rate by unit with confidence intervals 2017/18

Incident

The small invasive cancer rate for the incident (subsequent) screen is shown in Figure 18. The Northern Ireland programme with a rate of 3.78 per 1,000 exceeded the acceptable standard (≥2.3 per 1,000) and the achievable standard (≥3.1 per 1,000). The comparative figure for England was 3.3 per 1,000.

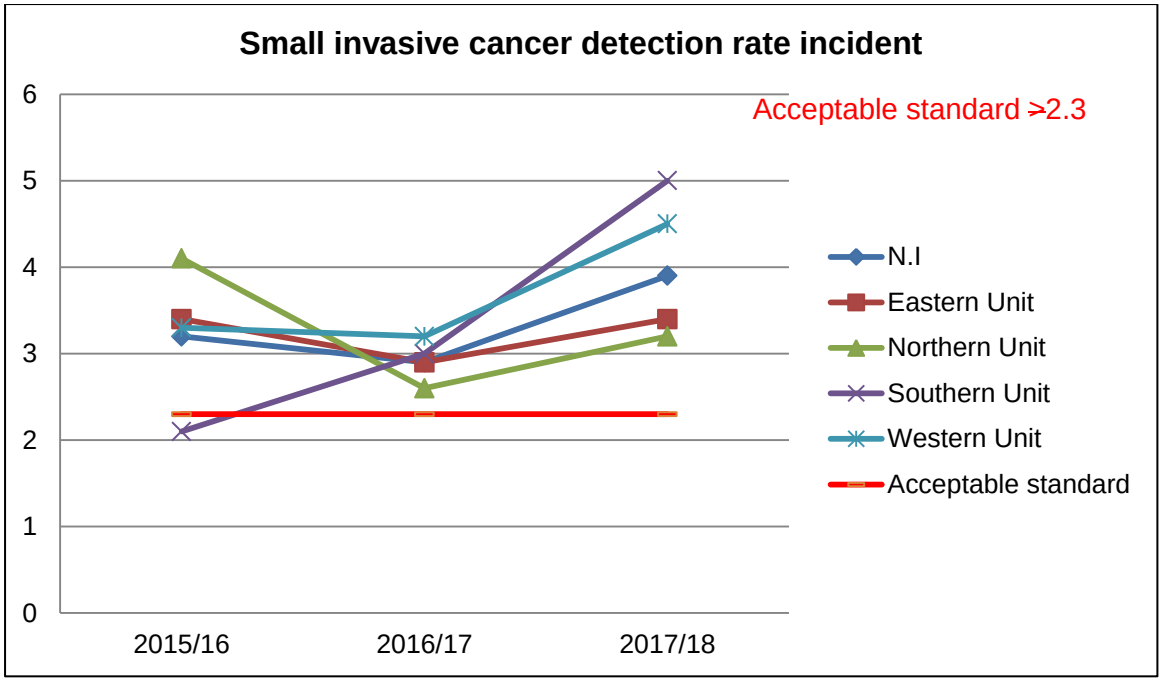


Figure 18 - Small invasive cancer detection rates incident screen by unit & for NI 2015/2016 to 2017/18

Figure 19 demonstrates the small invasive cancer detection rate for the incident screen for each Breast Screening Unit in 2017/18, with associated confidence intervals, which are wide due to the small number of small invasive cancers detected. The red line is the acceptable standard of ≥2.3 per 1,000 women screened. All units exceeded the acceptable standard for small invasive cancer detection rates on incident screen, and were significantly greater (as indicated by CIs not crossing the standard line) other than the Northern unit (as indicated by the CI crossing the standard line).

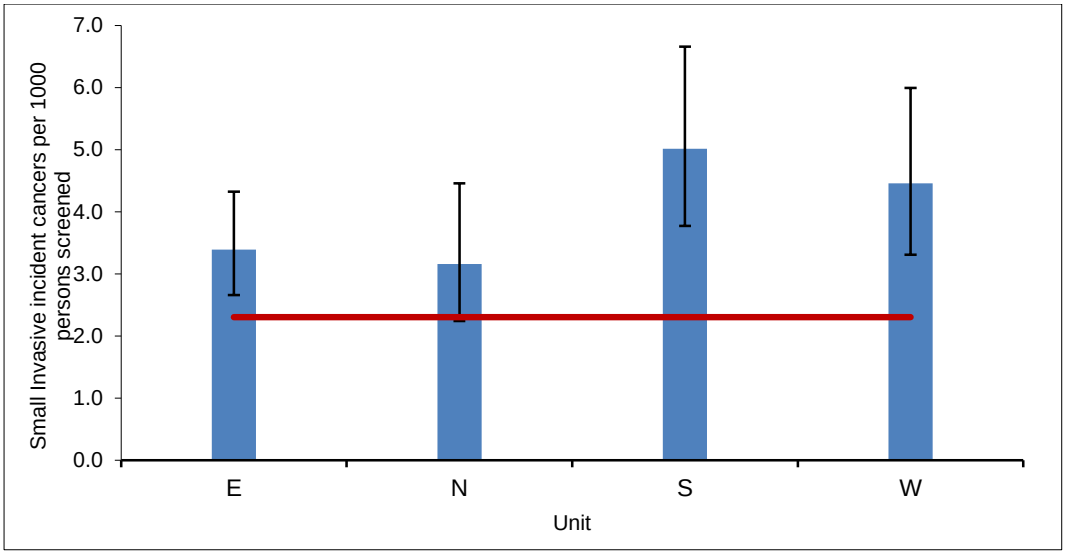


Figure 19 - Incident small invasive cancer detection rate by unit with confidence intervals 2017/18

Treatment of Invasive Cancers

Of the 441 invasive cancers detected (all ages) by the Northern Ireland Breast Screening Programme in 2017/18, 335 were treated using breast conserving surgery, while 98 were treated by mastectomy. A small number had no surgery, this can be due to patient choice or because the patient is too unwell for surgery. Figure 20 shows the proportion of women treated by different methods in Northern Ireland over the past 3 years.

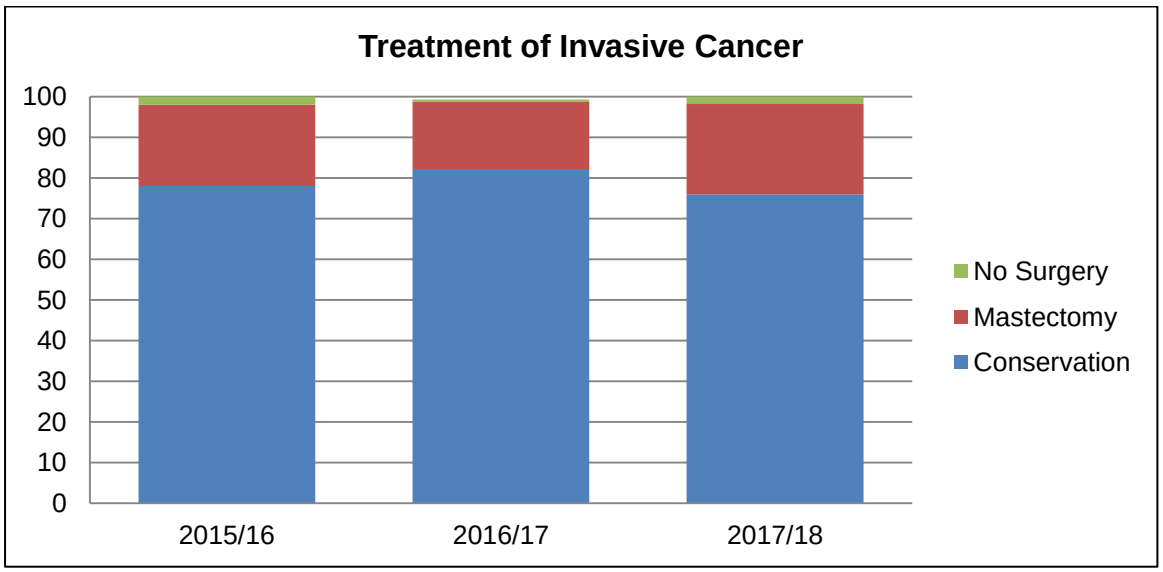


Figure 10 - Treatment of invasive cancers in Northern Ireland, 2015/16 to 2017/18

Benign Biopsy Rates

The proportion of women who had a surgical operation for what turned out to be benign disease was 1.4 per 1,000 screened for the prevalent (first) screen and 0.4 for the incident (subsequent) screen.

The benign biopsy rate is a measure of the number of women per 1,000 women screened who had surgery for benign breast disease. Ideally, this should be as low as possible. However, with some lesions (e.g. fibro-adenomas) the patient may choose to have surgery to remove a lump, even though it has been diagnosed as benign at the assessment clinic. Radial scars (a star shaped thickening of breast tissue which shows up on mammograms) are removed due to their association with tubular carcinoma of the breast; even though they are intrinsically benign.

The benign biopsy rates for the prevalent (first) and incident (subsequent) screening rounds over a 3 year period are shown in figure 21 & figure 22. For the prevalent screen, the rate was 1.4 per 1000 in 2017/18 in Northern Ireland, which met the acceptable standard of <1.5/1000 but not the achievable standard of <1.0/1000.

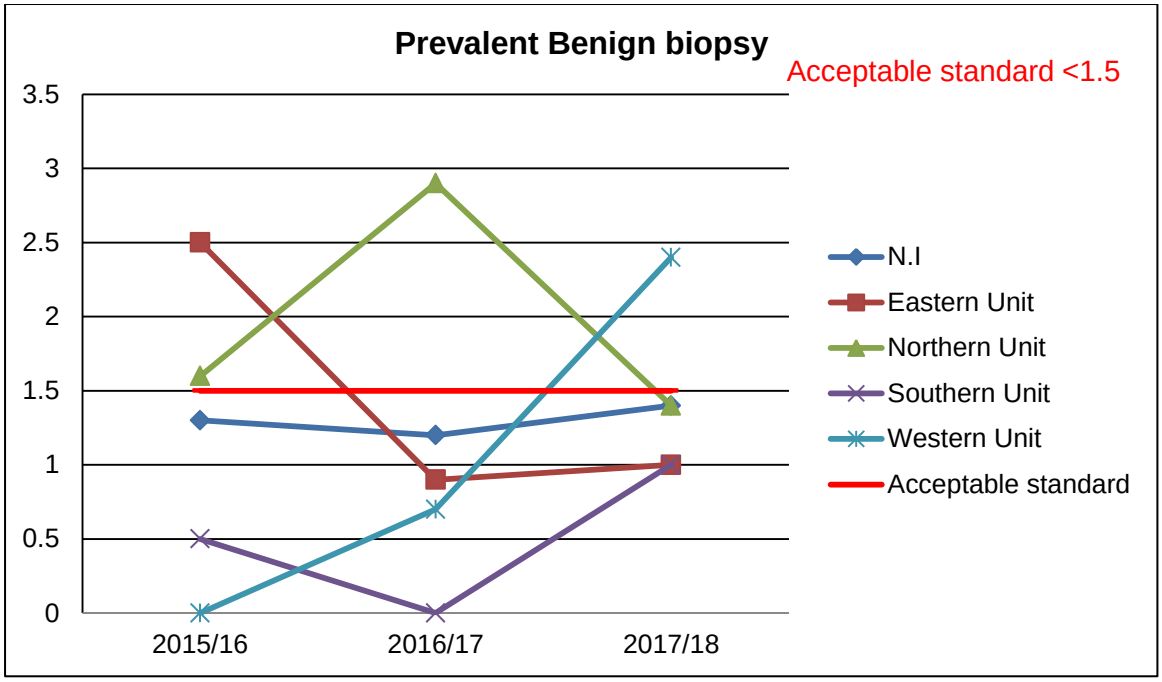


Figure 21 - Benign biopsy rate for the prevalent (first screen) 2015/16 to 2017/18

For the incident screen, the rate was 0.4 per 1000, which met both the acceptable standard (<1.0/1000) and the achievable standard (<0.75/1000)

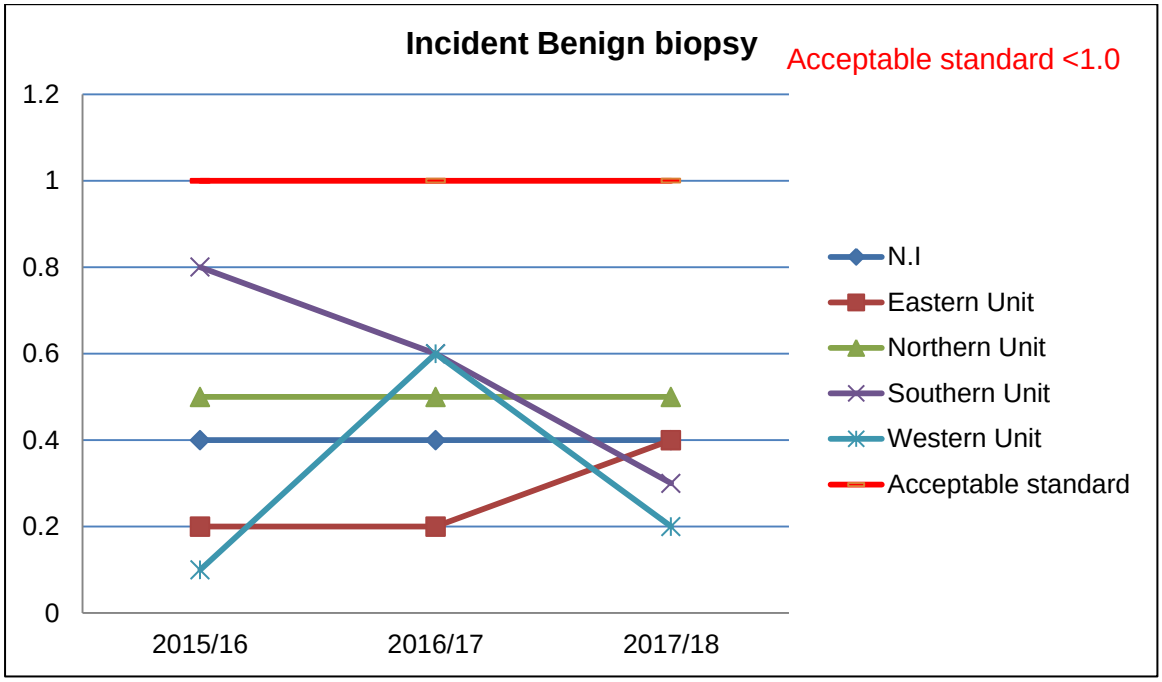


Figure 22 - Benign biopsy rate for the incident (subsequent screens) 2015/16 to 2017/18

Screening Round Length

98.1% of women were offered an appointment for mammography screening within 36 months of their previous normal screen.

The screening round length is the interval between each offered invitation for screening mammography. Measurement of screening round length provides an indicator of the efficiency with which a screening programme is managed. The long-term effectiveness of the programme is dependent on women in the target age group continuing to be screened at regular intervals.

The UK acceptable standard for round length in the year 2017/18 was ≥90%. The achievable standard for round length in the year 2017/18 was 100%. [8]

[8] In Northern Ireland, following discussion at the Interval Cancer Workshop on 15 October 2015, it was agreed to move to a standard of 100% for round length, as a potential way to reduce the number of interval cancers in the third year. The standard has since been revised to ≥90%, in line with new PHE guidance.

The overall Northern Ireland figure for round length ≤36 months in 2017/18 was 98.1%. This achieved the UK acceptable standard.

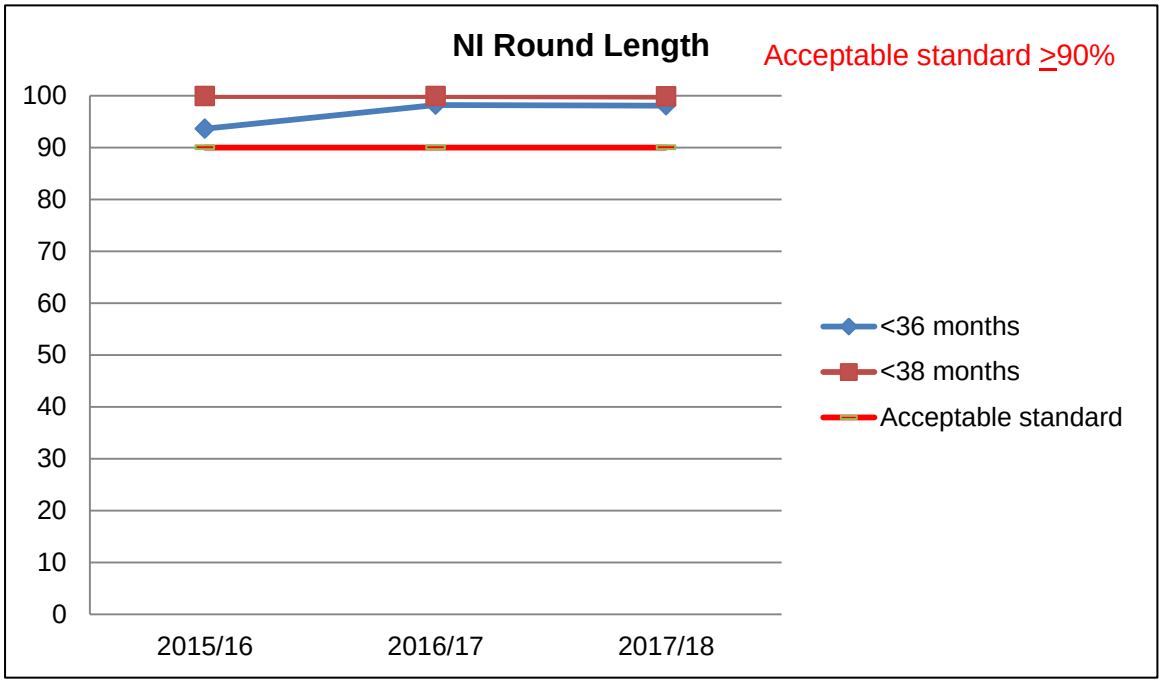


Figure 23 - Round length for Northern Ireland over the period 2013/14 to 2017/18.

Medical Physics: X-ray equipment performance standards

The x-ray equipment base in the NI Breast Screening Programme has been fully digital since 2014. Digital equipment has a number of advantages over analogue units, including better imaging of dense breasts in younger women and a lower radiation dose for all women.

Image quality standards are high in mammography due to the need to detect very small, low contrast cancers. The performance of the x-ray equipment is assured through a rigorous QA programme. This includes testing carried out on a daily, weekly and monthly basis by the breast screening units' radiographers and on a six monthly basis by scientific staff from the NI Regional Medical Physics Service.

Equipment performance standards for mammography equipment are specified by the NHSBSP (BSP Standards 5 and 6) and cover;

- Image quality via detectability of low contrast large and small-sized details;
- Radiation dose via Mean Glandular Dose to the standard breast.

All the x-ray equipment in the NI BSP meets the national standards.

The equipment used for further assessment exposures includes Digital Breast Tomosynthesis – an advanced x-ray imaging technology which provides three-dimensional imaging of the breast. This functionality is also tested following the regime described above. National standards do not currently exist for this technology; however, the equipment used in the NI BSP meets the current suggested levels for image quality and radiation dose.

Ultrasound imaging equipment used in the Breast Screening Programme also undergoes performance testing meeting the requirements of NHSBSP Publication 70 'Guidance Notes for the Acquisition and Testing of Ultrasound Scanners for use in the NHS Breast Screening Programme'. This includes testing carried out on a weekly and monthly basis by the centre radiographers, and on a six monthly basis Medical Physics staff.

Specialist scientific advice relating to imaging equipment performance is provided by the NI Regional Medical Physics Service.

Advice is provided to all Breast Screening Centres on updating Employers Procedures and other documentation to meet the requirements of the Ionising Radiation (Medical Exposure) Regulations (NI) 2018.

4 - The Northern Ireland Higher Risk Breast Surveillance Screening Programme

The Higher Risk Breast Surveillance Screening Programme commenced in April 2013. This programme offers breast surveillance screening to women who are at a significantly higher risk of breast cancer (defined as ×8 the normal risk and higher). **Appendix 3** gives an overview of the guidelines for inclusion in this programme.

This regional service is provided at a specialist imaging unit in Antrim Area Hospital in the Northern HSC Trust. Women in the programme may be offered annual mammography, MRI or both, depending on their age and the reason for referral.

The Higher Risk Breast Surveillance Screening Programme is subject to Quality Assurance (QA) procedures. The programme is included in the QA Visits to the Northern HSC Trust Breast Screening Unit and in internal QA undertaken by the Northern HSC Trust.

The QA Lead for Breast Screening chairs a six monthly meeting of the Coordinating Group for the Surveillance Screening Programme for Women at Higher Risk of Breast Cancer. This group includes representation from all HSC Trusts and from all disciplines involved in the delivery of the Higher Risk Breast Surveillance Screening Programme. In addition, a representative from BRCA Link NI was involved in establishing the surveillance screening programme and now sits on the Co-ordinating Group. Table 5 shows summary statistics for the Higher Risk Breast Surveillance Screening Programme. The recall rate (4.5%) met the minimum standard (<10%)[9].

Table 2 - Statistics for Higher Risk Surveillance Screening Programme, 2017/18

Number of women invited	477
Number of women screened	377
Uptake[10]	79%
Cancer detection rate	2.6
Recall rate	4.5%

[9] Technical guidance for MRI for the surveillance of Women at Higher Risk of Developing Breast Cancer. NHSBSP 68, March 2012.
[10] Uptake based on denominator of all women invited in-year and the numerator is all women who attended in-year including those screened out of area.

5 - Promoting Informed Choice

While the overall uptake of breast screening in Northern Ireland is high, there are areas and subpopulations of women with much lower uptake. This can be due to organisational and community issues in addition to individual factors, including personal choice.

The PHA, in partnership with other stakeholders, continued to work in 2017/18 to ensure that all eligible women can make an informed choice about attending for breast screening and that the service is as accessible as possible.

Key actions in 2017/18 included:

- **Regional Group on Promoting Informed Choice in Breast Screening.** This group is chaired by the PHA and has representation from Breast Screening Units and Trust Health Promotion team members. The remit is to identify opportunities to promote informed choice in the Northern Ireland Breast Screening Programme, with a particular focus on women from disadvantaged communities, women who have learning/physical/sensory disabilities, women from minority ethnic groups, older women and other women considered to have special needs); to identify and share good practice; and to advise on the provision of information to the public and health care professionals.

- **Inclusion of Promoting Informed Choice meetings in the QA Visits to Breast Screening Units.** Since May 2014, the PHA has included standalone meetings related to Promoting Informed Choice in Breast Screening in its 3-yearly QA Visits to Breast Screening Units. A dedicated chapter on promoting informed choice is included in each QA visit report.

- **Working with the Women's Resource and Development Agency (WRDA).** In 2015, the PHA commissioned the WRDA, a local not-for-profit organisation, to raise awareness of the Breast, Cervical and Bowel Cancer screening programmes and promote informed choice among individuals from communities and populations who historically have a low uptake of cancer screening compared with the rest of the population. The aim of the WRDA's

programme of work is to provide enough information to enable individuals to make an informed decision about participating in cancer screening programmes.

- The WRDA recruit, train and support Peer Facilitators to deliver Educational Awareness Sessions, to targeted service user groups, including: people from deprived areas, those from ethnic minorities, those from the LGBT+ community, homeless and those with physical disability, learning disabilities or mental health issues. WRDA also carry out Bespoke Workshops for those latter groups with additional support needs. In 2017/18, WRDA:
    - Delivered 85 Educational Awareness Sessions on the Breast screening programme to targeted service user groups throughout Northern Ireland.
    - Attended 18 Health Awareness Events to provide information on cancer screening.

- Working with HSC Trusts to ensure that comprehensive, up to date, screening information is available on their websites.

6 - Governance and Accountability

The core purpose of the quality assurance programme for Breast Screening is to monitor, maintain and improve upon minimum standards of service, performance and quality across all elements of the breast screening programme.

The details of the aims and structures for this have been included in a QA structures document and agreed by the QA Committee.

The Governance and Accountability structure is as described in the following diagram.

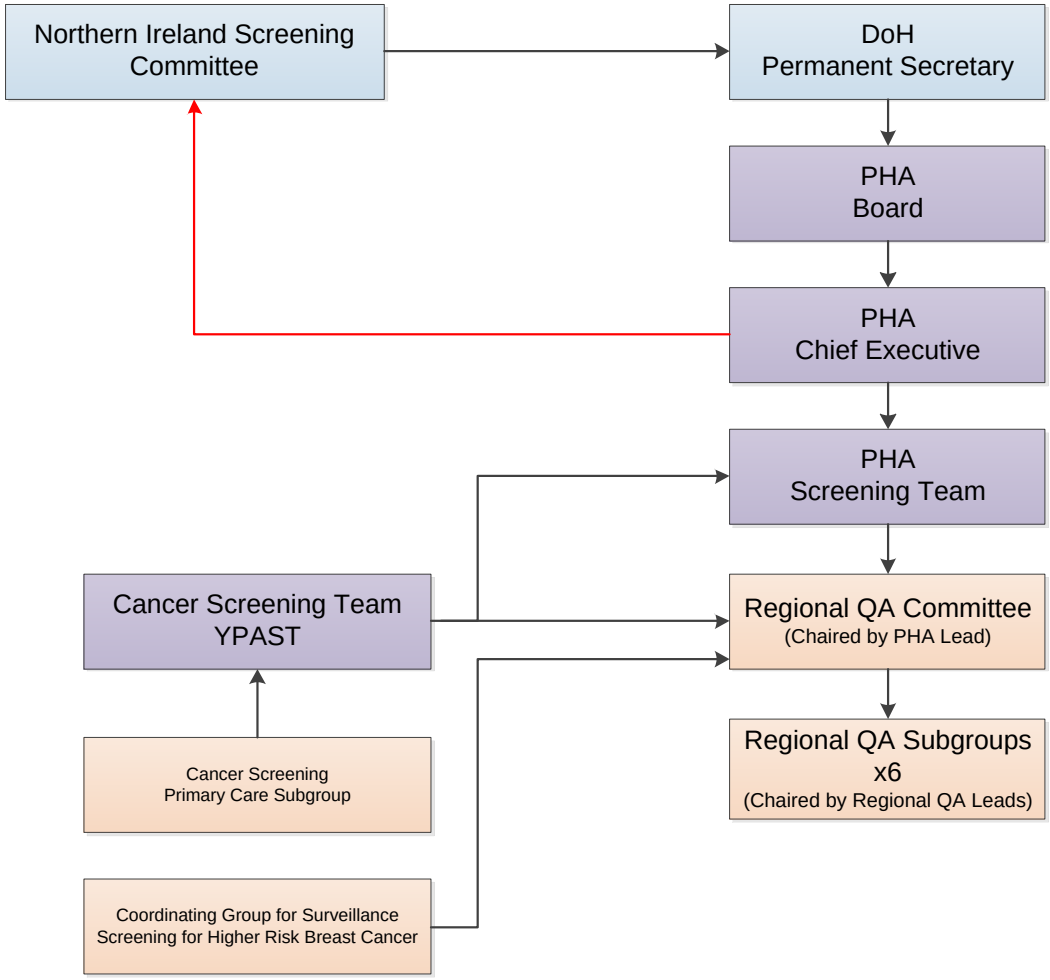


Figure 24 - Governance and accountability structure