### Cancer Screening Programme Report

2019/20 and 2020/21

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# Introduction to screening report

- This report presents information on the three cancer screening programmes in the Western Isles for bowel, cervical and breast cancer. The report gives a summary of the features of each programme and discusses the performance of each programme against the designated key performance Indicators as set by Healthcare Improvement Scotland.
- The report has been prepared by Isabell MacInnes, Health Protection and Screening Nurse Specialist and Dr Maggie Watts, Director of Public Health and the data have been arranged into infographics by Nicola Walsh, Public Health Intelligence Analyst, NHS Western Isles Public Health Department.

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### Bowel screening

This data is from SBSP KPI report November 2020 submission (invitations from May 2018- March 2020)

Figure 1: Annual uptake of bowel screening, WI and Scotland

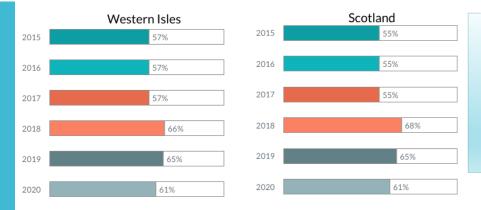


Figure 2: Uptake of screening by gender, 2018-20

The Scottish Bowel Screening Programme started using faecal immunochemical test (FIT) kits instead of faecal occult (FOBT)

for invitations issued from 20<sup>th</sup> November 2017. With the new FIT

test, participants were required to return a sample from only one

FOBT test. This change was anticipated to see a 10% increase in

bowel motion instead of the three samples required with the

uptake of bowel screening (Figure 1).



Bowel screening is offered every two years to those aged 50-

74 years of age. People aged 75 and over can opt to stay in the programme by contacting the screening center. In 2016-2018, 51 people resident in the Western Isles requested to opt-in. 94.1% of those returned the completed test (Figure 3). The females who returned the kit had a 9.09% positive screening test result rate which was the highest level in Scotland. However no cancers were detected in any of the Opt-in responders from the Western Isles.

Uptake is influenced by sex, with more women than men completing the test. In the Western Isles, uptake for females is 68.4%, and for males is 59.9% (Figure 2). The uptake in men remains marginally lower than the national target of 60%.

Figure 3: Percentage of females and males who returned a kit and received a positive result

Opt-in to programme

Of those who returned a kit Of those who returned a kit

2.60% 3.77%

OF FEMALES HAD A DOSTTIVE SCREENING TEST DESILIT

OF MALES HAD A POSITIVE SCREENING TEST RESULT

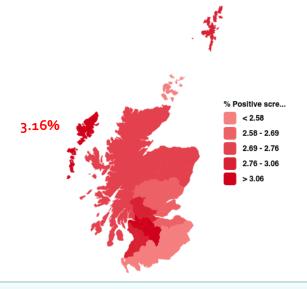
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### Bowel screening

This data is from SBSP KPI report November 2020 submission (invitations from May 2018- March 2020)

Figure 4: Percentage of positive screening test results across

NHS boards in Scotland



Colonoscopy is the first line examination following a positive screening test. In the Western Isles, 85.8% of people with a positive test went on to have a colonoscopy, the highest in Scotland where the average rate is 73.0% (Figure 5).

Figure 6: Time from screening test referral date to colonoscopy performed

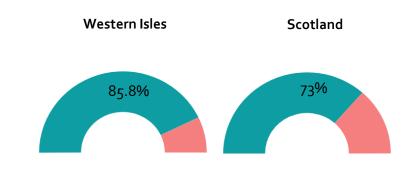




In the Western Isles the positive screening result rate out of those who completed a screening test is the highest in Scotland (Figure 1).

In NHS Western Isles, all persons with a positive screening test are offered a pre-colonoscopy assessment. Following this assessment, colonoscopy is offered if appropriate. There are occasions where individuals do not get offered colonoscopy in the Western Isles Hospital. In 2018-2020, 14.2% of patients did not proceed to Colonoscopy. Reasons range from preference to attend a hospital closer to family, patients who had had a colonoscopy in the last 12 months and patients considered too ill or frail to undergo further procedures as well as patients who declined any further tests.

Figure 5: Percentage of people with a positive screening test going on to have a colonoscopy performed

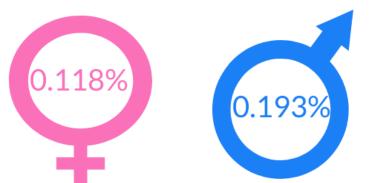


It is important to be able to access treatment timeously. The standard of time from screening test referral date to date that colonoscopy performed is set against ranges of o-4 weeks, 4-8 weeks or more than 8 weeks (Figure 6). In the Western Isles, patient unavailability is the cause of delays beyond 8 weeks.

### Bowel screening

This data is from SBSP KPI report November 2020 submission (invitations from May 2018- March 2020)

Figure 7: Percentage of people with bowel cancer (those who completed a screening test)



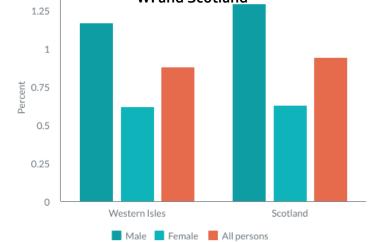
In the period May 2018 to March 2020, the percentage of people with bowel cancer out of those who completed a screening test, i.e. those who received an outright positive or negative test result, was small in the Western Isles in line with most of the other boards (Figure 7).

Once a cancer is detected, the treatment choices are selected based on the staging of the condition – this indicates how far advanced it is and is used to identify the most effective treatment options. The national Detect Cancer Early (DCE) programme is aimed at reducing late presentations and increasing the proportion of cancers that are detected at early stages since recovery is improved with earlier detection. Bowel screening is well placed to support Detect Cancer Early. Of the (few) cancers identified through the screening programme, 70% of those found are Dukes stage A and B which is the earlier stages where the cancer is confined to within the bowel.

Adenoma can be a precursor to cancer and can be classed as high, medium, low, or unclassified risk depending on size and number. Figure 8 shows the adenoma detection rate in Scotland was 1.295 per 100 for men and 0.63 per 100 in women.

The adenoma detection rate is the percentage of people with adenoma as the most serious diagnosis detected out of those who completed a screening test. Screening detected more than twice as many adenomas in men as in women.

Figure 8: Percentage of people with Adenoma detection,
WI and Scotland





# Bowel screening promotion activities

To encourage uptake of bowel screening and to raise awareness and to follow on from the Inflatable colon tour that took place in November 2017 we promoted a video of the event online.

In February 2019 we promoted the availability to attend 'Bowel Health training' which was delivered by Bowel Cancer UK. The training was aimed at supporting people with learning disabilities (Figure 9).

Figure 9: Image – Join the bowel movement in 2019

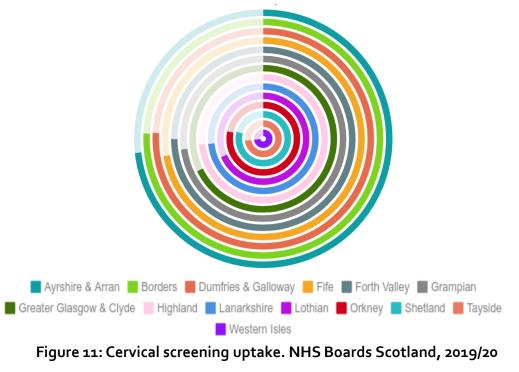


### **Future Recommendations**

- 1. We devise local health promotion messages and activities that seek to promote uptake of the bowel cancer screening programme throughout the year, with a particular focus on male eligible participants. We are looking to develop patient experience stories.
- 2. NHS Western Isles to use local media and social media to inform people how to complete the test and the benefits to completing the test and early recognition of and the benefits to completing the test which include the early recognition of any changes that could lead to developing bowel cancer.
- 3. We continue to support National Bowel Cancer Awareness Month in April with awareness raising media promotions and activities.

Figure 10: Cervical screening uptake. NHS Boards Scotland, 2018/19

The data for this report have been obtained from the Information Services Division (ISD) Scottish Cervical Screening Programme Statistics 2016-2020 and NHS Western Isles Public Health Intelligence Information searches.





The national cervical screening programme was introduced in Scotland in 1988 with the aim of reducing the incidence and mortality from cervical cancer.

From Monday 6th June 2016, the age range of cervical screening changed from ages 20–60 years, to ages 25–64 years. The frequency of cervical screening continued to be every three years from age 25 to age 49, but changed to be every five years for women from age 50 to 64. Women on non-routine screening (where screening results have shown changes that require further investigation/follow up) are now invited up to age 70 years (a change from previous arrangements up to age 68). Women under the age of 25 who had already been invited for a test as part of the screening programme continue to be invited for screening, regardless of whether her recall date was before or after she had reached 25 years and regardless of whether she had attended for screening or not.

Eligible women are invited to attend cervical screening once every 3 or 5 years; uptake statistics are therefore based on women attending in the previous 3.5 or 5.5 years. The additional 0.5 year provides a window to allow for the appointment to have taken place after the invitation has been sent.

Uptake rates for cervical screening vary slightly over time and geography; NHS Western Isles rates sit around the mean of the national rates (Figures 10 and 11).

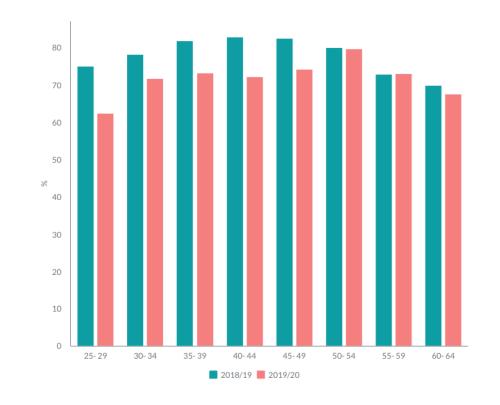
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The data from this report have been obtained from the Information Services Division (ISD) Scottish Cervical Screening Programme Statistics 2016-2020 and NHS Western Isles Public Health Intelligence Information searches.

Uptake of screening is defined as the percentage of women in a population eligible for screening at a given point in time who were adequately screened within a specified time period. As the frequency with which women are invited for screening is dependent on age, as recommended by the UK National Screening Committee, uptake is calculated differently for different age groups. For the total target age group (25 to 64 years), 'Age-appropriate uptake' represents the most up to date definition and takes into account the frequency with which women of different ages are invited for screening. This defines uptake as the percentage of women in the population eligible for cervical screening who were screened adequately within the previous 3.5 years or 5.5 years, according to age on 31 March of the year in question. The percentage of eligible women in the Western Isles who were recorded as having as screened adequately within the specified time period was 72.3%.

Figure 12 shows the uptake of females with a record of a previous screen across the age groups. This figure demonstrates a lower uptake in those at either end of the age range.

Figure 12: Cervical screening uptake by age, Western Isles, 2018/19 and 2019/20



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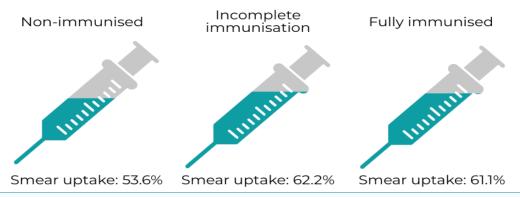
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Human papilloma virus (HPV) is a DNA virus that infects the deepest layer of the skin or genital surfaces (epithelium). Over 100 different types are recognised, some of which are known to be related to the development of cancer. The most common HPV-induced cancer is cervical cancer, with HPV 16 and 18 responsible for 70% of cervical cancers worldwide. The remaining 30% of cervical cancers are caused by the other 16 high-risk HPV types.

From 1<sup>st</sup> September 2008, a programme commenced to routinely vaccinate girls in school against the commonest HPV viruses. From 1<sup>st</sup> August 2019, the HPV immunisation programme in Scotland was extended to include adolescent boys, with the vaccine offered to every pupil in their first year of secondary school (S1) regardless of gender. Routine immunisation of girls aged 11-12 has an uptake of 90% or greater. The Immunisation Status of 'Full' indicates the course of immunisations has been completed; 'Incomplete' indicates that one or more doses of vaccine have been administered but the course has not been fully completed, and 'Non-Immunised' means that no vaccine has been given.

Figure 13: Cervical screening uptake by HPV immunisation status, Aged 23-28 years, Western Isles, 2019/20



Girls immunised as part of catch-up entered the screening programme at age 20 in 2010; those immunised routinely entered the programme in 2015. Following the change in age range in June 2016, no further routinely immunised women will start screening until 2021. Continued attendance for cervical screening after immunisation is important for many reasons. The HPV types covered by the vaccines currently account for between 75 and 90% of cancers in Scotland, depending upon the vaccine given. However, this leaves between 10 and 25% of tumours for which regular screening is still the only prevention.

Nationally, women aged 22-27 who have been immunised against HPV are nearly twice as likely to participate in the screening programme compared with women who have not been immunised against HPV (68.7% vs 33.3%). This may be partly due to the education provided as part of the HPV immunisation programme, making women more aware of cervical cancer and its associated risks. Other factors, such as socio-economic deprivation, will also influence both immunisation and screening behaviour. NHS Western Isles uptake figures according to HPV immunisation status are shown in Figure 13.

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Figure 14: Cytology Practitioner Achievement Notification, at year end 2019/20 and 2020/21, Western Isles

	No. Practices	List Size	Excluded Women	Pregnant	Co-Morbidity	Not Clinically Appropriate	Terminally ill	Anatomically Impossible	No Cervix	No Further Recall	Opted Out	Suspended	Defaulter	Transferred out by SCCRS	Eligible Women	Adequately Smeared Eligible Women	Overall Achievement Rate %	List Size excluding No Cervix	Recalculated Adequately Smeared Eligible Women	Overall Achievement Rate (excluding No Cervix) %	Total Adequately Smeared Excluded Women	Total Adequately Smeared Women with a No Cervix Exclusiono
At year end 2019/20	19	6636	1901	6	1	6	0	0	373	37	69	0	1414	0	4735	4390	92.71	6263	4776	76.26	439	53
At year end 2020/21	19	6674	1839	7	0	6	0	0	355	35	66	0	1370	0	4838	4456	92.1	6319	4714	74.6	305	47

A 'defaulter' is the term used to describe women who have not taken up an invitation to have a cervical screening test carried out after receiving 3 reminders. Women can also opt out of the programme which should only happen when they have received advice on the benefits of screening and the risk they may have in respect of developing cervical cancer. Even after opting out, women automatically receive a letter every 5 years generated by SCCRS to remind them that they can still take up the programme at any time. There are also various reasons when a GP may exclude a woman on a temporary basis, this may be due to other medical conditions or when a woman becomes pregnant. Figure 14 outlines the categories into which women of eligible age may be grouped and the adequacy of smears taken..

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'Unsatisfactory' is the term used to describe cervical screening tests which cytopathology laboratories are unable to analyse.

Women whose cervical screening test is assessed as being 'unsatisfactory' are invited to have a repeat smear taken. This is inconvenient and some women may not attend. In addition, it may also lead to a loss of confidence in the screening programme. For these reasons, it is important that the rate of unsatisfactory screening tests is as low as possible.

The average rate of unsatisfactory samples received by our cytopathology laboratory at Aberdeen Royal Infirmary from the Western Isles was 2.7% in 2018/19 and 3.1% in 2019/20. This rate is consistent with the unsatisfactory rate across Scotland which was 2.6% in 2018/19 and 2.5% in 2019/20. To monitor standards, unsatisfactory smear rates are also monitored by general practices/ and colposcopy through SCCRS at practice/department level and by individual practitioners. This information is fed back to practices as part of quality review work and is followed up by the cervical screening coordinator locally to ensure training and knowledge are up to date.

Figure 15: Smear reporting times, year end 2018/19



Average number of days: 38.4

The national standard is that 80% of women should receive the results of their smear test in writing within four weeks from the date of the test, and 100% of smears reported within 6 weeks (42 days) and is set out in Figures 15 and 16..

The imminent changes that the introduction of primary HPV testing will bring to the cervical screening programme have led to difficulties with retaining and recruiting staff across all laboratories in Scotland. The Aberdeen laboratory was the first to report the difficulties they had with achieving the target reporting times. A memorandum of understanding was co-ordinated by the National Cervical Screening committee which developed protocols and gained agreement from all the cervical screening laboratories. This agreement allowed laboratories to with a backlog of unreported slides to send them to other laboratories for analysis, this memorandum was devised to ensure all cervical results are processed within the recommended 28 day turnaround time.

Figure 15: Smear reporting times, year end 2019/20



Average number of days: 18.8

The data from this report have been obtained from the Information Services Division (ISD) Scottish Cervical Screening Programme Statistics 2019-2020 and NHS Western Isles Public Health Intelligence Information searches.

### Deaths from cervical cancer in the Western Isles

During the period 2019 and 2020, there were less than five deaths in the Western Isles from cervical cancer. Across Scotland, approximately 74.2% of women diagnosed with cervical cancer during 2008-2012 were alive, five years after diagnosis. Over the time period 1993-1997 to 2013-2017, the five-year relative survival among women in Scotland rose by 13.2%.

In advance of the change to primary HPV and in partnership with Jo's cervical cancer trust, the NHS Western Isles Cervical Screening Coordinating Group delivered a smear taker training event in Uist and Lewis as well as hosting promotional awareness events in Lewis, Harris and Uist in February 2020. Training and awareness events were scheduled for Barra but had to be cancelled due to bad weather.



Future plans and recommendations

### Future recommendations:

- 1. Promote training opportunity to smear takers for new staff and update training for others.
- 2. In response to comments received at the awareness events, we are going to survey GP practices to find out more about scheduling smear appointments.
- 3. Continue to raise awareness with strategies to encourage non-attenders to take up the offer of screening.

### Background

The Scottish breast screening programme offers women aged 50–70 years a routine X-ray test, known as a mammogram, to detect possible breast cancers. Since 2016, advancements in technology mean that these X-rays are converted to digital images which are viewed on a computer screen and stored electronically.

### Aim of screening

The Scottish Government's Detect Cancer Early programme aims to improve outcomes from cancer through early diagnosis and treatment, and the purpose of breast screening by mammography is to detect breast cancers at the earliest possible time so that treatment may be offered promptly. It is believed that very early detection of breast cancers in this way can result in more effective treatment, which may be more likely to reduce deaths from breast cancer.

### Eligible population

Women aged 50-70 years are invited every three years. Along with the invitation, women receive information about the benefits and disadvantages of breast screening to encourage them to make an informed choice whether or not to undergo breast screening. Eligible women are identified using the Community Health Index (CHI). Access to the programme is therefore CHI dependant, so women need to be registered with a GP.

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### The screening test

The method used is a routine X-ray test, known as a mammogram. Advancements in technology mean that these X-rays are converted to digital images which are viewed on a computer screen and stored electronically.

### Screening setting

The North of Scotland Breast Screening Centre screens NHS Highland (excluding Argyll and Bute), Western Isles and Grampian (Forres area only). Residents are screened either in the static centre within Raigmore Hospital, Inverness or by outreach via Mobile Units.

In the Western Isles the mobile unit is based from January to June every 3 years, timetabled to be active in four locations - Barra, Benbecula, Harris and Lewis.

### Screening pathway

Every woman registered with a GP receives her first invitation to attend for a mammogram at her local breast screening location sometime between her 50th and 53rd birthdays and then three yearly thereafter until her 70th birthday.

A woman can request a screening appointment when she turns 50 providing her practice is not being screened in the next six months.

The mammograms taken during the screening visit are examined and the results sent to the woman and her GP.

A proportion of women attending for screening will be recalled if the mammogram was technically inadequate or will be asked to go to an assessment clinic for further tests if a potential abnormality has been detected. Tests may include further imaging, clinical examination and possibly ultrasound and biopsy if required.

If a woman is found to have cancer, she is referred to a consultant surgeon to discuss the options available to her. This usually involves surgery: a lumpectomy where just the lump and a small amount of surrounding tissue is removed or a mastectomy where the whole breast is removed. Surgery is likely to be followed by radiotherapy, chemotherapy, hormone therapy or a mixture of these.

The exact course of treatment will depend on the type of cancer found and the woman's personal preferences guided by expert advice and evidence. In the North of Scotland the assessment clinics are carried out in Raigmore Hospital in Inverness.

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Figure 17: Breast screening uptake rate, Scotland and Western Isles, 2013/14 – 2019/20 (3 year rolling average)

NHS boards are to ensure that the uptake rate for breast screening is in line with the NHS Breast Screening Programme consolidated standards:

• Acceptable level of uptake: ≥ 70%

• Achievable level of uptake: ≥ 80%

NHS WI achieved the acceptable level of ≥ 70% uptake with an uptake of 78% recorded in the last screening round in 2020. This demonstrates a slight increase when compared to the 77.9% achieved in the previous screening round (Figures 17 and 18).

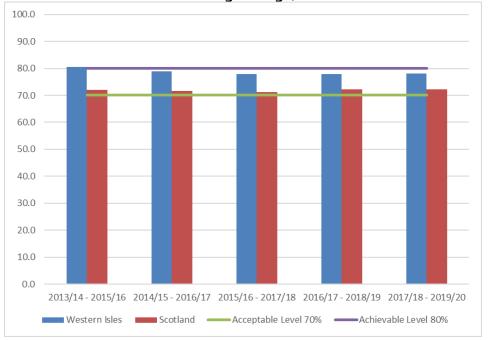


Figure 18: Delivery and uptake of breast screening, Western Isles

	Uptake rate	Invited	Attended
LEWIS	79%	3,027	2,392
HARRIS	79%	282	223
UISTS & BENBECULA	70%	775	641
BARRA	84%	201	164

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The Highland breast screening centre has been unable to provide us with accurate data on the breast screening outcomes. This is recognised as a problem across all the screening centres in Scotland, and changes are being developed to the new SBSS IT system to allow accurate data retrieval. ISD have produced the data in Figures 19 and 20 with the acknowledgment that they may be incomplete.

The effectiveness of screening is measured by monitoring the invasive cancer detection rate for women in the incident round of screening; these women have had a screen within five years of their initial screen. The detection rate for women previously screened rose slightly to 7.3 per 1000 women screened.

Figure 19: Trends in the number of invasive breast cancers detected, by size: Scotland, 2010/11 to 2019/20 (All appointment types)

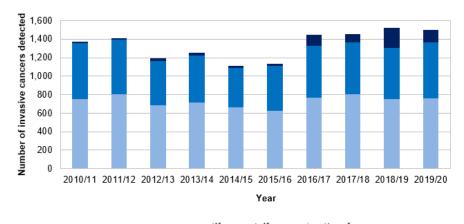
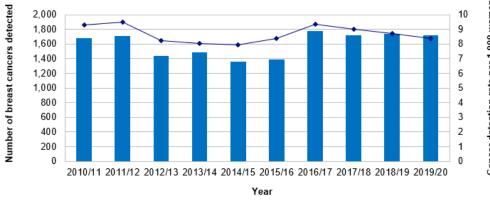


Figure 20: Trends in the number of breast cancers detected, and cancer detection rate per 1,000 women screened, Scotland, 2010/11 to 2019/20



The number of screen-detected breast cancers in women of all ages in 2019/20 increased from 2018/19 (Figure 20).

In 2019/20, 86.9% of the cancers detected in women of all ages were invasive breast cancers, 50.5% of these were less than 15mm in size. Such small tumours are unlikely to be detected by physical examination, highlighting the importance of screening in the early detection of breast cancer as picking up small cancers is one of the key methods to achieve the aim of reducing deaths due to breast cancer.



Figure 21: Breast cancer registrations, Western Isles, 2000-2016

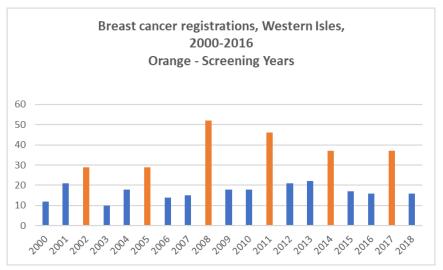
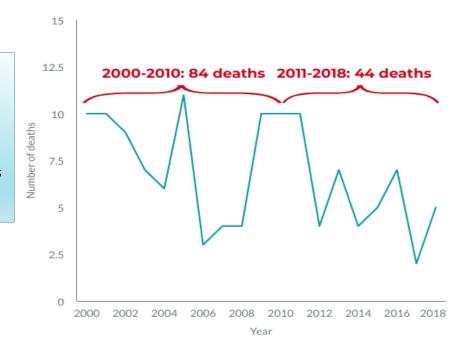


Figure 21 indicates that the years where screening takes place there are more breast cancer registrations. The screening years are highlighted on figure 21.

Figure 22: Deaths from breast cancer, Western Isles, 2000-2018

There has been a marked reduction in the numbers of deaths from breast cancer. From the years 2000-2010 there were 84 and in the period 2011-2018 this has dropped to 44 cases.

When you consider the number of breast cancer registrations increasing in the screening year and the number of deaths overall has reduced, this would suggest that the breast cancers are being identified and treatment is more successful resulting in less deaths from breast cancer.



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An NHS Western Isles screening co-ordination group has been established and links the Highland breast screening centre with NHS Western Isles staff representing health promotion, MacMillan service and public health. This group will support delivery of the screening programme in the Western Isles particularly around the time the mobile unit will be in the Western Isles.

The most recent screening session in the Western Isles started in Lewis in January 2020, however due to the Covid-19 pandemic the programme (along with all screening programmes) was paused and resumed in August 2020.

### Future plans and recommendations

- 1. NHS Western Isles will continue to use DCE breast cancer resources to encourage women to participate in breast screening.
- 2. Schedule planning meetings in advance of the next time the mobile unit is due to start screening in the Western Isles .
- 3. Next screening sessions have been scheduled to commence in Stornoway on 11<sup>th</sup> May 2023.

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