Annual Report 2017-18

Northern Ireland Cervical Screening Programme

Published March 2021

Contents

1 Summary and Highlights for 2017-18

This report covers activity within the Northern Ireland Cervical Screening Programme from 1 April 2017 to 31 March 2018 inclusive. The key statistical headlines are:

- At 31 March 2018, 76.4% of eligible women (aged 25-64) in Northern Ireland had been screened at least once in the previous five years. The coverage has decreased from 76.8% at end March 2017.
- Between 1st April 2017 and 31st March 2018, the regional call/recall centre issued letters to 143,541 women aged 25-64 years, inviting them to attend for screening.
- A total of 114,942 women (all ages) had a screening test reported in 2017-18. Of these 111,399 women were in the 25-64 age group. A proportion of women will have more than one sample reported in a given year.
- 122,745 cervical samples were reported by Northern Ireland cytology laboratories in 2017-18. Of these, 112,240 samples (91.4%) were undertaken in primary care or at a community based Sexual and Reproductive Healthcare clinic.
- 79.1% of samples were reported by the laboratory within 14 days of the sample being taken, and 98.3% within 28 days.
- In 2017-18, 3.9% of samples from eligible women were reported as inadequate.
- 0.92% of samples from eligible women were reported as having high grade abnormalities.
- Of the recorded first attendances at colposcopy, 67.8% of women had some treatment or procedure.

2 Introduction

2.1 Background and programme objectives

The aim of the Northern Ireland Cervical Screening Programme is to reduce the incidence, morbidity and mortality associated with cervical cancer. It achieves this by detecting early changes in cervical cells that could, if left untreated, develop into cancer. While the programme succeeds in detecting a small number of cancers each year, its main role is in detecting these precancerous changes.

Screening is offered to all eligible women aged 25-49 every three years, and to women aged 50-64 every five years. This policy is in line with the recommendations of the UK National Screening Committee.

Screening is intended for women who do not have symptoms. Women of any age who present to their General Practitioner with symptoms suggestive of a cervical abnormality (such as bleeding or pain) should be examined and referred for onward investigation as clinically appropriate.

This report presents key information about the NI Cervical Screening Programme for 2017-18 and benchmarks performance against national standards where available. It also describes new service and quality improvements undertaken during this period. The statistics presented here are used to monitor and continuously improve the quality of the screening programme.

2.2 Programme Delivery and Screening Pathway

2.2.1 Call recall process

The Business Services Organisation (BSO) provides the regional call and recall functions for the screening programme. This involves identifying those women who are eligible for cervical screening and issuing invitation letters to attend for screening when their next test is due. A patient information leaflet about the programme, *'Cervical Screening: It's best to take the test',* is included with the invitation letter. Women are encouraged to make an appointment with their GP Practice to have their screening test.

Screening starts from the age of 25, with women invited to attend for their first screening test up to 6 months in advance of their 25th birthday. Women remain eligible for inclusion in the programme up to the age of 64yrs + 364 days. They are usually ceased from screening on the basis of age once their next test due date exceeds this threshold. Women over 65 years who require on-going surveillance due to a previous cervical abnormality will continue to be followed up within the programme.

Screening tests can also be undertaken opportunistically and are not always the direct result of an invitation letter from the programme: for example, when a woman attends her GP Practice for another issue and is also offered a screening test when she is there as her test is overdue. This means that a significant proportion of screening tests are undertaken in Northern Ireland without a formal invitation being issued and are recorded as being taken 'outside programme'.

2.2.2 Cervical cytology

Cervical screening samples collected at GP Practices and community clinics (i.e. Sexual and Reproductive Healthcare Services) are sent to a cytopathology laboratory to be processed and reported. There are four cytopathology laboratories in Northern Ireland participating in the cervical screening programme, located at:

- Belfast City Hospital
- Craigavon Area Hospital
- Antrim Area Hospital
- Altnagelvin Area Hospital

The Belfast laboratory provides a cytology service for both the Belfast and South Eastern Health and Social Care Trust areas.

The results of all screening tests are returned to the professional who took the test (sample taker) as well as to the woman's registered GP. The test result is electronically notified to the call/recall centre to be included on the cervical screening database and form a part of the woman's screening history. This will also trigger the next test due date to be set for that woman.

Most women receive a negative result and are recalled for another routine screening test in 3 or 5 years' time dependent on her age (routine recall).

When the laboratory identifies cell changes that require further investigation, an abnormal result is issued. These may be high grade abnormalities (severe or moderate changes) or low grade abnormalities (mild or borderline changes). All women with high grade changes are referred for colposcopy. Those with low grade changes are triaged, with a test for high risk human papilloma virus (hr-HPV) carried out on the sample. Depending on the outcome of the hr-HPV test, the woman may be referred to colposcopy or returned to routine recall.

Antrim and Altnagelvin laboratories provide the hr-HPV testing service for Northern Ireland.

In a small number of cases there are not enough cells in the sample for the laboratory to issue a result. These are reported as inadequate and a repeat test is advised.

2.2.3 Colposcopy

Women referred for further investigation attend a colposcopy clinic provided by their local Trust. A colposcopy is an examination of the cervix using a lighted, low powered microscope (a colposcope). A biopsy may be taken during the examination for diagnosis, and treatment may also be carried out at the same time.

Women who have confirmed cancer are managed within the multidisciplinary team setting.

3 Programme Performance

Standard data returns are used to collect and present data on the cervical screening programme:

- KC53 – information sourced from the call and recall system via the NHAIS system.
- KC61 – information on screening samples processed by the cytology laboratories. Data is sourced from the four screening laboratories via Cyres Statistical Analysis Software.
- KC 65 – information gathered from colposcopy clinics via the Excelicare Colposcopy Management System.

These standard data returns are used to support the quality assurance of the screening programme and facilitate benchmarking of the Northern Ireland programme against national standards and similar programmes elsewhere in the UK.

This report outlines the performance of the NI Cervical Screening Programme for the year 2017-18. It contains information compiled from the standard data returns, reports on performance against national standards and describes significant trends in the programme over recent years.

The colposcopy section of the report is incomplete, containing data from four of the five Trusts. All input of colposcopy data was suspended by Belfast Trust in June 2016 due to software limitations.

3.1 Call and recall

3.1.1 Eligibility

In 2017-18, approximately 494,000 women aged 25-64 were eligible to participate in the cervical screening programme in Northern Ireland (Table 1).

Table 1: Number of women eligible for cervical screening, by age group and Trust. Northern Ireland at 31 March 2018.

Age group (years)	Trust					
	Belfast	South Eastern	Northern	Southern	Western	Northern Ireland
25-29	16,701	9,811	14,442	13,668	10,438	65,060
30-34	17,487	10,513	15,365	15,068	11,267	69,700
35-39	16,058	10,852	15,446	14,777	11,388	68,521
40- 44	13,706	10,020	14,321	13,125	10,695	61,867
45-49	13,921	10,962	15,641	13,430	11,062	65,016
50-54	14,543	10,867	14,974	12,701	10,585	63,670
55-59	13,050	9,829	12,772	11,039	9,230	55,920
60-64	9,702	8,057	10,376	8,704	7,446	44,285
Total	115,168	80,911	113,337	102,512	82,111	494,039

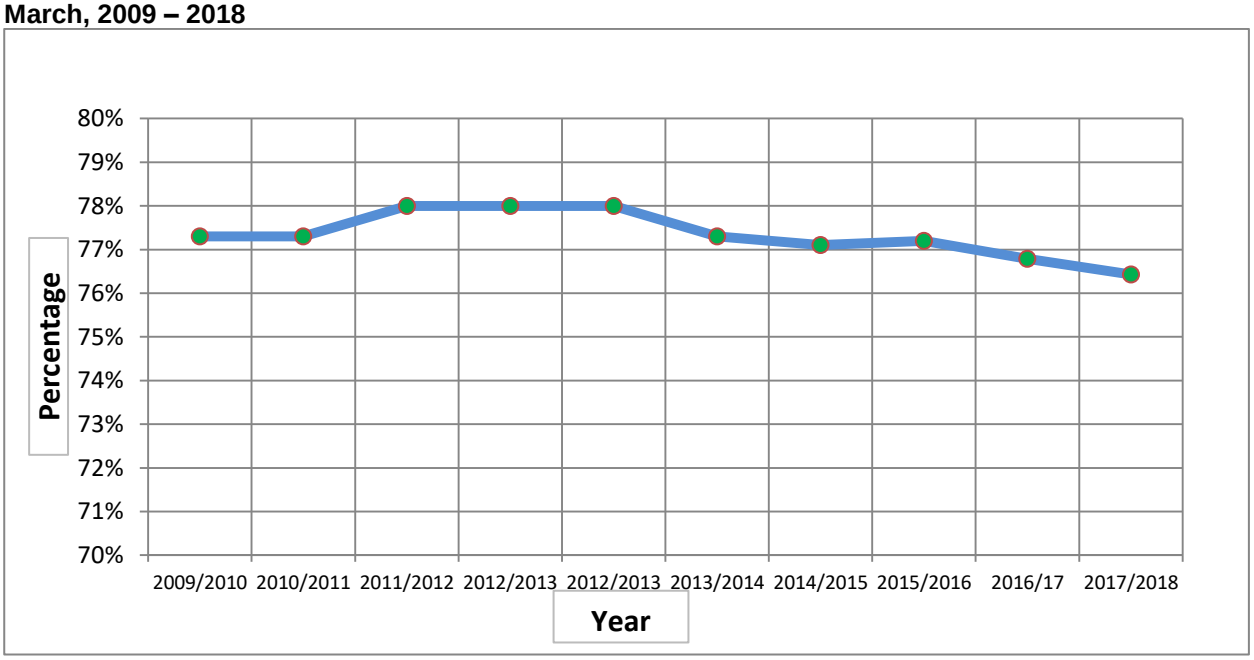
Source: KC53 Part A

3.1.2 Coverage

Coverage is used as a measure of participation in the cervical screening programme. It is defined as the percentage of women in the population who are eligible for screening at a given point in time, who were screened adequately within a specified period. The trend in five year coverage over the last ten years is shown in Figure 1.

As can be seen, the five year coverage has been relatively stable in Northern Ireland in recent years. At end March 2018, 76.4% of women in the eligible age group (25-64 years) had been screened with an adequate result recorded at least once in the last 5 years. This compares to 76.8% at end March 2017. Work to ensure that all eligible women can make an informed choice about participation in the cervical screening programme is described in Section 4 of this report.

Figure 1: Cervical Screening five year coverage (25-64 years) by year. Northern Ireland, at 31 March, 2009 – 2018



Source: KC53 Part A

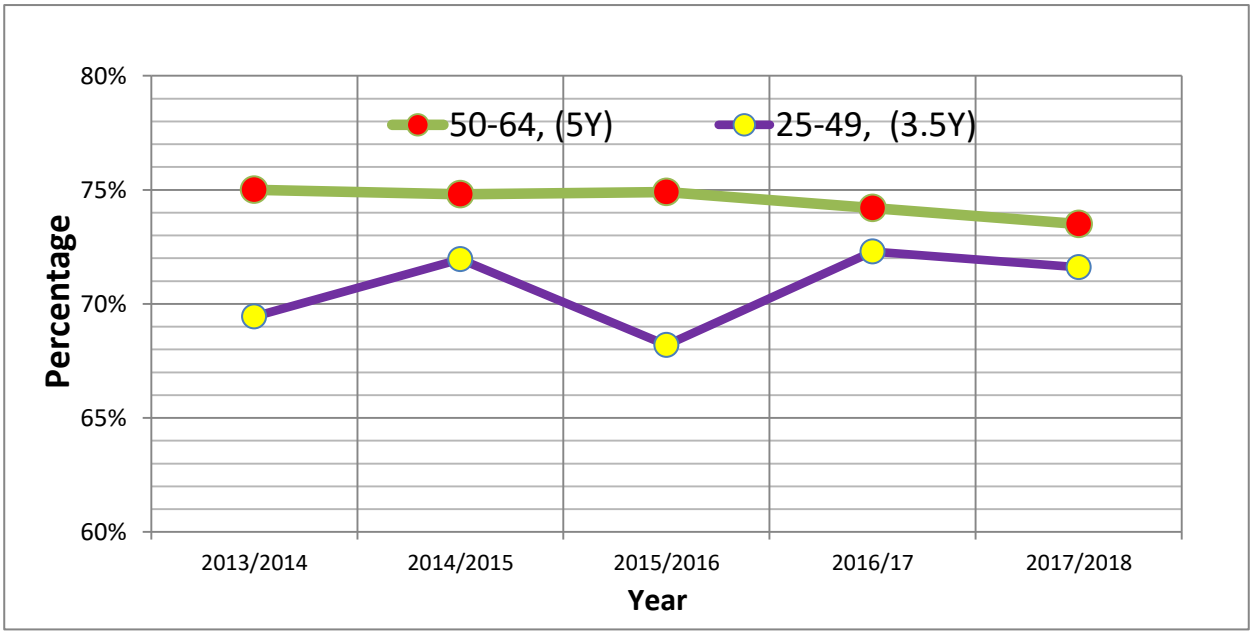
3.1.3 Age appropriate coverage

At 31 March 2018, 71.6% of women aged 25-49 had been screened at least once in the last 3.5 years, and 77.9% in the last 5 years

73.5% of women aged 50-64 had been screened at least once in the last 5 years

A three year screening interval was introduced in Northern Ireland for women aged 25-49 in early 2011. Women aged 50-64 continue to be invited for screening every five years. The achievable standard is that >=80% of eligible women have an adequate screening test result in the age appropriate timescale. The trend in age-appropriate coverage by age group for the last five years is shown in Figure 2. This shows that coverage is higher in women aged 50-64.

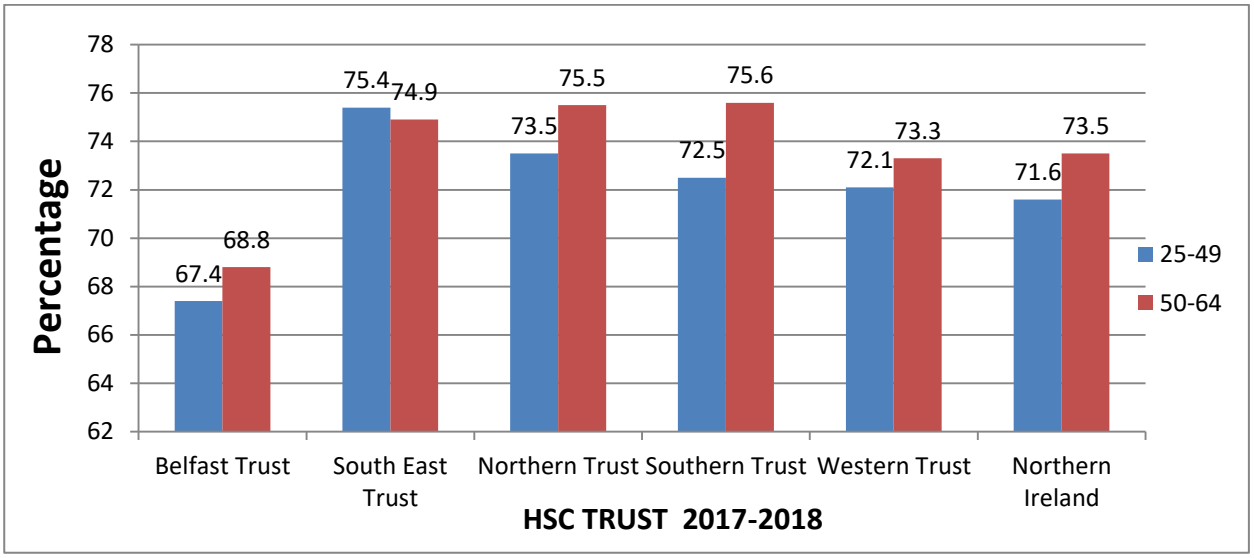
Figure 2: Cervical Screening age appropriate coverage by year. Northern Ireland, at 31 March, 2014 – 2018.



Source: KC 53 Part A

There is variation between Trusts in the coverage rates. Belfast has the lowest coverage with 67.4% of women aged 25-49 having a screening test recorded in the 3.5 years up to 31 March 2018. This compares to 75.4% in the South Eastern Trust area. Belfast Trust also has the lowest coverage rates for older women with 68.8% of women aged 50-64 having a screening test in the last 5 years, compared to 75.6% in the Southern Trust. No Trust area in Northern Ireland met the 80% achievable standard for coverage at end March 2018.

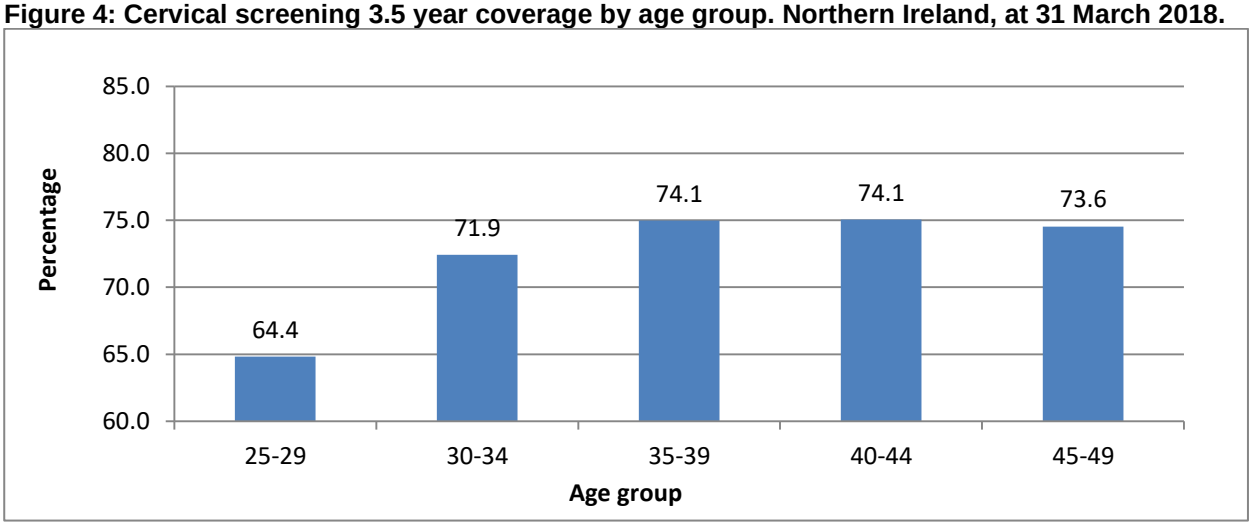
Figure 3: Cervical Screening age appropriate coverage by Trust. Northern Ireland, at 31 March 2018.



Source: KC 53 Part A

A more detailed analysis by five year age bands shows that women aged 25-29 have the lowest coverage with 64.4% of this group having been screened with an adequate result in the 3.5 years to end March 2018. This compares to 74.1% of women aged 35-39 and 40-44.

Figure 4: Cervical screening 3.5 year coverage by age group. Northern Ireland, at 31 March 2018.



Source: KC53 Part A

3.1.4 Invitations for screening

The regional call/recall service invited 143,541 women aged 25-64 to attend for screening between 1 April 2017 and 31st March 2018.

The programme categorises screening invitations into the types shown in Table 2.

Table 2: Percentage of women (aged 25-64) invited, by type of invitation. Northern Ireland, 2017-18.

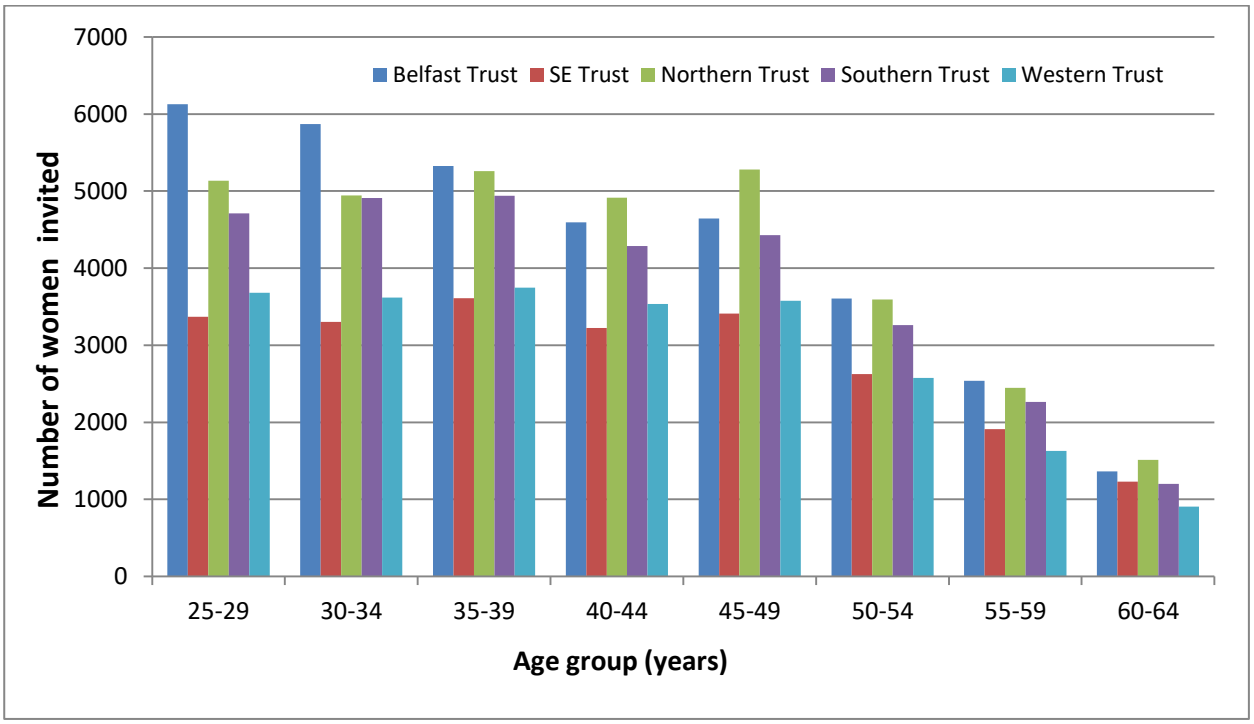
				Repeat in less than 3 years for reasons of		
Year	Total	Call	Routine Recall	Surveillance	Abnormality	Inadequate Sample
2017-18	143,541	17.3%	61.2%	15.5%	3.7%	2.2%

Source: KC53 Part B

Although most women were invited for screening as a result of a call or routine recall, 15.5% were invited for an early repeat as part of surveillance. A 'call' is an invite sent to a woman who has never attended screening before. This will include women entering the programme age range for the first time, as well as women who have previously been invited but never attended. A small proportion (5.9%), were followed up for abnormalities or previous inadequate samples.

The breakdown of the age of women invited and by Trust is shown in Figure 5. There are fewer eligible women in the older age groups as this population is smaller and they are more likely to have been ceased from screening due to clinical reasons (e.g. previous total hysterectomy).

Figure 5: Women aged 25-64 invited to attend for screening, by age group and Trust. Northern Ireland, 1st April 2017 – 31 March 2018.



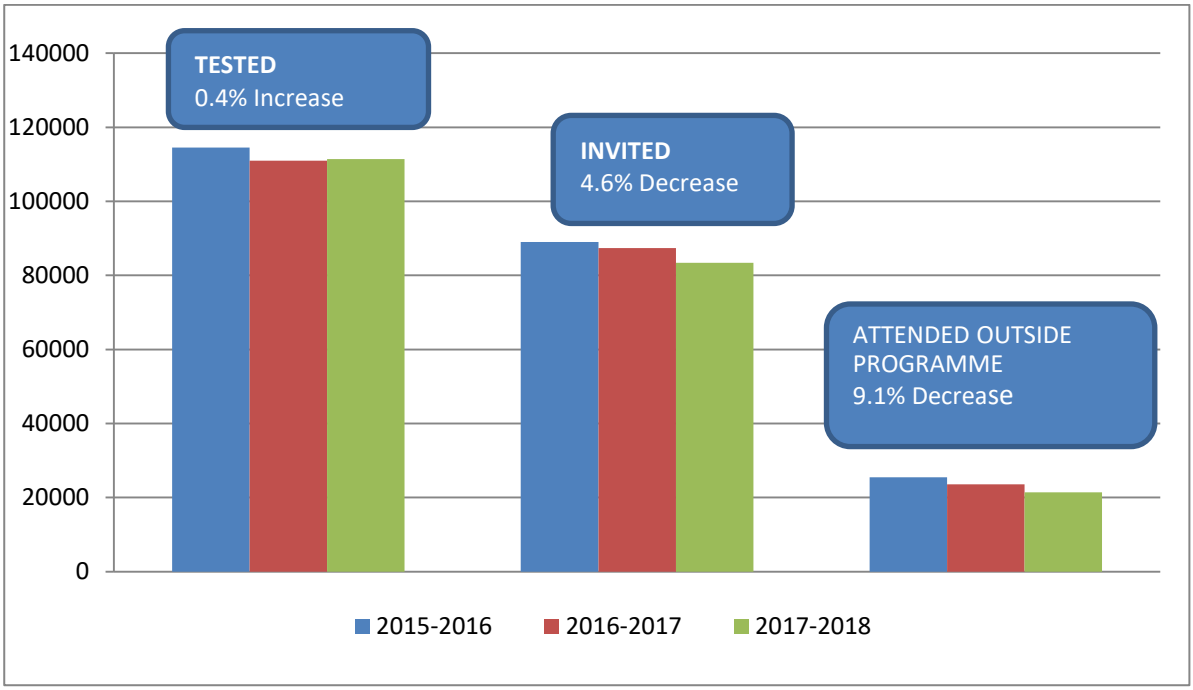
Source: KC53 Part B

3.1.5 Number of women tested

A total of 111,399 women aged 25-64 were tested during 2017-18.

Of these, 21,423 (19.2%) had tests not prompted by the screening programme. This will include tests initiated opportunistically by the sample taker or the woman herself, without an invite having been issued by the programme in the previous six months. There has been a 9.1% decrease in the number of women tested outside the programme in the last year.

Figure 6: Number of women aged 25-64 tested in the year by invitation status. Northern Ireland, 2015-16 to 2017-18.



Source: KC53 Part C1

3.2 Cervical Cytology

3.2.1 Samples examined

A total of 122,745 samples were examined by cytopathology laboratories in 2017-18

112,240 (91.4%) of these were submitted by GP practices or through community clinics (i.e. Sexual and Reproductive Healthcare clinics). Samples from hospitals, including colposcopy clinics, accounted for 5.8% of the total.

Table 3: Number of samples examined by cytopathology laboratory, by source of sample. Northern Ireland, 2017-18.

Laboratory	Total Samples	GP	Community clinics	Genito-urinary medicine	Hospitals	Private	Other
Belfast	42481	37931	1159	0	3200	121	70
Antrim	27950	26263	485	0	1193	31	0
Craigavon	25370	23651	18	1	1700	24	0
Altnagelvin	26944[1]	22151	582	0	1000	3210[1]	1
Northern Ireland	122,745[1]	109,996	2,244	1	7,093	3,340[1]	71

Source: KC61 Part A1

[1] Includes 3191 Private cytology samples from the Republic of Ireland : tested by Altnagelvin laboratory as part of a private contract

3.2.2 Time from sample taken to issue of results

79.1% of samples examined by laboratories in 2017-18 were reported within 14 days of the sample being taken. Overall, 98.3% of samples were reported within 28 days

There was some variation between laboratories in their turnaround times and these are described in Table 4. The standard is that 80% of samples should be reported within 4 weeks. All laboratories met the Northern Ireland standard for turnaround times in 2017-18.

Table 4: Percentage of cervical cytology samples reported within 14 days and 28 days, by laboratory. Northern Ireland, 2017-18

Laboratory	14 days	28 days
Belfast	72.5%	98.8%
Antrim	84.0%	98.0%
Craigavon	66.9%	96.6%
Altnagelvin	95.7%	99.3%
Northern Ireland	79.1%	98.3%

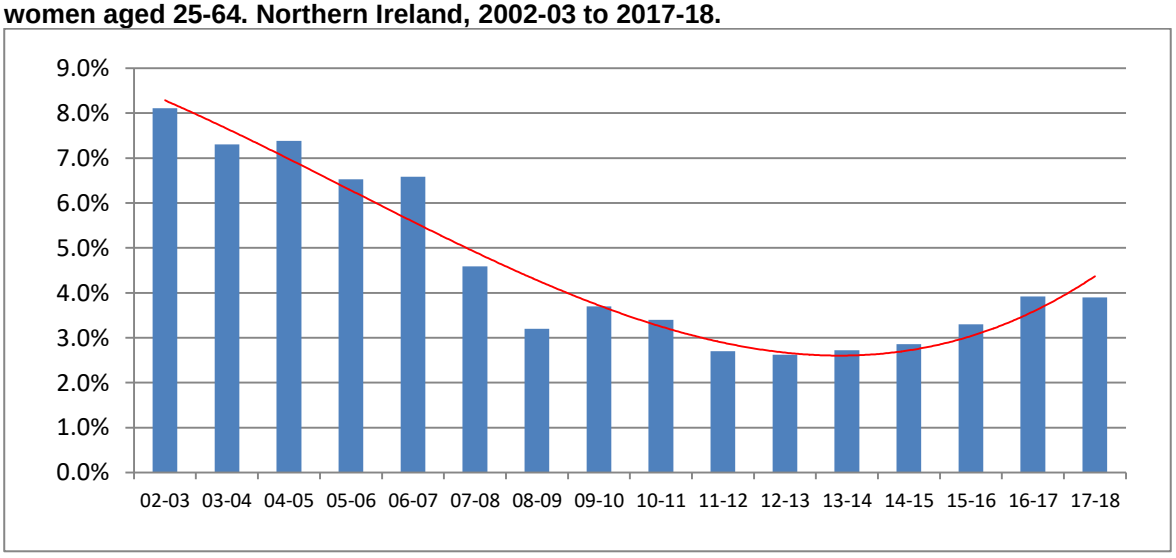
3.2.3 Results

3.9% of all samples submitted by GP and community clinics from women aged 25-64 were reported as inadequate

An inadequate sample is one which does not contain enough cellular material suitable for analysis.

The trend in inadequate rates since 2002/03 is shown in Figure 7. The marked reduction in inadequate rates seen from 2007/08 is a result of the introduction of liquid based cytology (LBC). However, it is noted that inadequate rates have started to increase above 3% again in the last few years.

Figure 7: Percentage of samples from GP and community clinics reported as inadequate, from women aged 25-64. Northern Ireland, 2002-03 to 2017-18.



Source: KC61 Part B

There was variation between individual laboratories in their reported inadequate rates in 2017-18, ranging from 2.1% to 7.85%.

Of the adequate samples submitted by GP and community clinics for women aged 25-64, 92.2% were reported as negative in 2017-18 (Table 5).

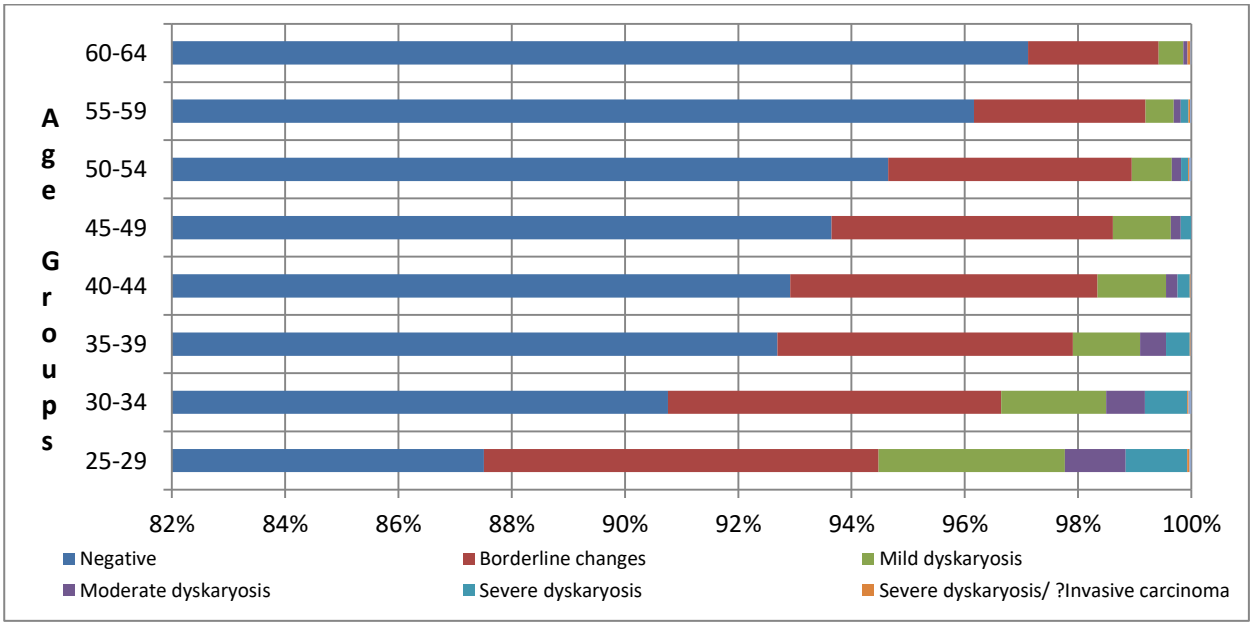
Table 5: GP and Community Clinic adequate samples from women aged 25-64, by results. Northern Ireland, 2017-18.

Result of test	Number	Percentage (%)
Negative	99,406	92.2
Borderline changes	5,725	5.3
Low grade dyskaryosis	1,698	1.6
High grade dyskaryosis (moderate)	491	0.5
High grade dyskaryosis (severe)	484	0.4
High grade dyskaryosis/?Invasive carcinoma	21	0.0
?Glandular Neoplasia (endocervical)	28	0.0
Total adequate samples	107,853	100.0

Source: KC61, Parts A1

When results are analysed by age group, it is noted that women aged 25-29 are more likely to have an abnormal test result than older women (Figure 8). The proportion receiving an abnormal test result reduces with age.

Figure 8: Adequate results in women aged 25-64 by result type and age group. Northern Ireland, 2017-18.



Source: KC61 Part B

3.2.4 Outcome of colposcopy referrals

Laboratories record the outcomes of colposcopy referrals by the category of the referring sample. Table 6 shows the documented colposcopy outcomes for women referred following a sample that was registered in a Northern Ireland laboratory during the 3 month period April – June 2017.

During this quarter, 61.9% of women referred following a high grade cervical abnormality on cytology were found to have cervical cancer, cervical intra-epithelial neoplasia (CIN3) or adenocarcinoma in situ. This compares to 8.3% of women referred following a persistent inadequate or low grade dyskaryosis/positive HPV result.

Table 6: Outcome of colposcopy referrals for samples registered at a laboratory between 1st April and 30th June 2017 Northern Ireland.

		Women referred after persistent inadequate or low grade/positive HPV sample	Women referred after high grade (moderate) or worse sample
Total outcomes with known result		797	270
		%	%
Cervical Cancer		0.0	2.6
CIN3 & Adenocarcinoma in situ		8.3	59.3
CIN2		10.3	15.6
CIN1		22.7	8.1
Non Cervical Cancer		0	0
	HPV only	15.7	3.3
	No CIN/No HPV	7.2	4.1
Other	Seen in Colposcopy – result not known	5.8	3.3
	Inadequate biopsy	0.6	0.4
	Colposcopy – No abnormality detected	16.6	1.5
	Result known – none of above	12.9	1.9

Source: KC61 Part C1

3.2.5 Achievable standards for laboratory reporting

The range of individual laboratory results published for England is used for benchmarking and quality assuring laboratory performance in Northern Ireland. Achievable standards for laboratory reporting are set from the 5th to the 95th percentiles of the distributions of key indicators across all laboratories in England. The performance of each Northern Ireland laboratory benchmarked against the English achievable standards for 2017-18 is shown in Table 7.

Table 7: Performance against achievable standards for laboratory reporting. Northern Ireland, 2017-18.

	Laboratory				England Standard/ 5th - 95th percentile range
	Altnagelvin	Antrim	Belfast	Craigavon	
Inadequate as a % of all samples[1]	2.1%	7.8%	2.1%	4.1%	1.0 – 4.3%
Positive Predictive Value (PPV) for CIN2 or worse[2]	84.2%	83.8%	82.7.%	81.85%	76.7% – 92.3%
Referral Value for CIN2 or worse[2]	2.6	2.5	2.4	2.6	2.0 – 5.0
Abnormal Predictive Value (APV) for CIN2 or worse[2]	19%	27.3%	20.5%	20.8%	5.3% – 31.1%

Source: Cyres Statistical Analysis Software
[1] based on results for women aged 25-64 tested in GP and community clinics only
[2] Percentile ranges for PPV, RV and APV are calculated using data from the previous year (e.g. PPV for 2017-18 is based on data from 2016-17).

It is noted that Antrim laboratory had a higher than expected inadequate rate. All other indicators for Northern Ireland laboratories were within the achievable standards.

The definitions of the each of the indicators are described in the glossary at Appendix 3.

3.2.6 Testing for Human Papilloma Virus

Cervical samples are tested for hr-HPV as part of the triage or test of clearance pathway. The volume of hr-HPV testing and the results are shown in Table 8. This shows that Belfast laboratory has the highest rate of hr-HPV positive results in samples which are reported with low grade cytology.

Table 8: hr-HPV testing activity and results by reporting cytology laboratory. Northern Ireland, 2017-18.

	Altnagelvin	Antrim	Belfast	Craigavon	Northern Ireland
Number of samples tested for hr-HPV	2401	2784	4108	2401	11,694
hr-HPV positive rate for cytology borderline/low grade samples	39.6%	37.8%	49.6%	42.7%	43.3%
hr-HPV positive rate for cytology negative samples	24.6%	28.0%	29.9%	29.8%	28.2%

Source: Cyres Statistical Analysis Software

3.3 Colposcopy

The colposcopy data presented in this report represents four of the five Trusts. All input of colposcopy data to the Excelicare colposcopy management system was suspended by Belfast Trust in June 2016 due to software limitations, so no data is available for Belfast Trust.

3.3.1 Referrals for Colposcopy

A total of 3167 new referrals were made to colposcopy services in 2017-18. The majority of these referrals were as the result of a screening test, but 10.9% of referrals were due to a clinical indication or other referral. Of those referred following an abnormal screening test, 26.2% had reported high grade dyskaryosis (moderate or severe) and 0.005% had reported suspected invasive carcinoma. There were 0.01% referrals following cervical cytology of suspected glandular neoplasia.

3.3.2 Appointments for Colposcopy

Clinics collected data on the time taken between the date of a woman's referral letter and her first offered outpatient appointment, regardless of whether she attended or not. As all cytology laboratories in Northern Ireland operate a direct referral process to colposcopy, the referral date for these is taken as the date the test was reported. The accuracy of the data available in table 9 is dependent on the first offered appointment being recorded correctly. This process is going to be discussed with each of the Trusts to ensure information is recorded accurately.

Table 9: Time from referral to first offered appointment at colposcopy, by indication. Northern Ireland excluding Belfast Trust[1] 2017-18.

Total number of referrals		3,167		
Waiting time		Northern Ireland %	Range across N.I.Trusts[1] %	National average[2] %
All referrals				
	Less than or equal to 2 weeks	**13.8**	(9.7 - 21.9)	36.4
	Less than or equal to 4 weeks	**38.5**	(28.8 - 62.3)	65.5
	Less than or equal to 8 weeks	**73.2**	(52.9 - 96.5)	98.8
	Less than or equal to 12 weeks	**93.1**	(87.9 - 99.4)	99.6
High grade dyskaryosis (moderate or severe)				
	Less than or equal to 4 weeks	**77.7**	(62.5 - 91.7)	98.6
High grade dyskaryosis/ ?invasive carcinoma[3]				
	Less than or equal to 2 weeks	**62.5[3]**	-	98.3
?Glandular neoplasia[3]				
	Less than or equal to 2 weeks	**36.4[3]**	-	96.5

Source: KC65 Part A

[1] Belfast Trust Colposcopy did not submit data for this period
[2] National average based on returns from 195 NHS CSP colposcopy clinics 2016-2017
[3] Warning low numbers

Of all new appointments to colposcopy offered in 2017-2018, 80.1% of appointments were attended. Of those not attended, 3.8% were cancelled by the clinic, 1.2% were cancelled by the patient on the day and in 4.1% of cases the patient did not attend and gave no advance notice.

3.3.3 First Attendances at Colposcopy

Colposcopy services record details of treatments and procedures undertaken at first attendance at clinic. In the case of deferred treatment the woman is recorded as having no treatment at her first attendance.

In 2017-18, a total of 3,029 first attendances at colposcopy were recorded.

Of all of first attendances at colposcopy, 67.8% of women had some treatment or procedure.

For those referred with high grade abnormalities, the proportion was 93.4%. For those with low grade abnormalities (borderline change or low-grade dyskaryosis), it was 63.2%.

Table 10: Women referred to colposcopy – first attendance by type of procedure and result of referral. Northern Ireland excluding Belfast Trust, 2017-18.

	Referral indication					
Treatment	All referrals	Inadequate	Borderline changes or low-grade dyskaryosis	High-grade dyskaryosis or worse	Clinical indication urgent	Clinical indication non-urgent
Total First Attendances	3,029	57	1914	728	129	52
	%	%	%	%	%	%
No procedure	32.2	77.2	36.8	6.6	45.7	61..5
Procedure used	67.8	22.8	63.2	93.4	54.3	38.5
Diagnostic biopsy (Punch)	66.1	15.8	50.9	37.5	41.9	25
Excision	25	3.5	6.8	50	3.9	1.9
Ablation without biopsy	4.7	0.0	3.1	2.7	1.6	7.7
Ablation with biopsy	3.3	1.8	1.9	2.9	4.7	1.9
Other	0.9	1.8	0.3	0.3	2.3	1.9

Source KC65 Part C1

The most common treatment or procedure at first attendance was diagnostic biopsy, which was carried out at 66.1% of all first attendances. The use of this procedure was most common amongst those referred with low-grade abnormalities (50.9%), with 6.8% of this group undergoing excision.

For those women referred with high grade abnormalities the most common treatment at first appointment was excision (50%) followed by diagnostic biopsy (37.5%).

The Northern Ireland Cervical Screening Programme uses published comparative data from services in England for benchmarking purposes (Table 11).

Table 11: Women referred to colposcopy – first attendance by type of procedure. Northern Ireland and England, 2017-18.

	No Procedure	Procedure used	Diagnostic Biopsy	Excision	Ablation without biopsy	Ablation with biopsy	Other
Northern Ireland	32.2%	67.8%	66.1%	25%	4.7%	3.3%	0.9%
NHSCSP	39%	61%	47%	12.%	0.5%	0.1%	1.4%

Source KC65 Part C1

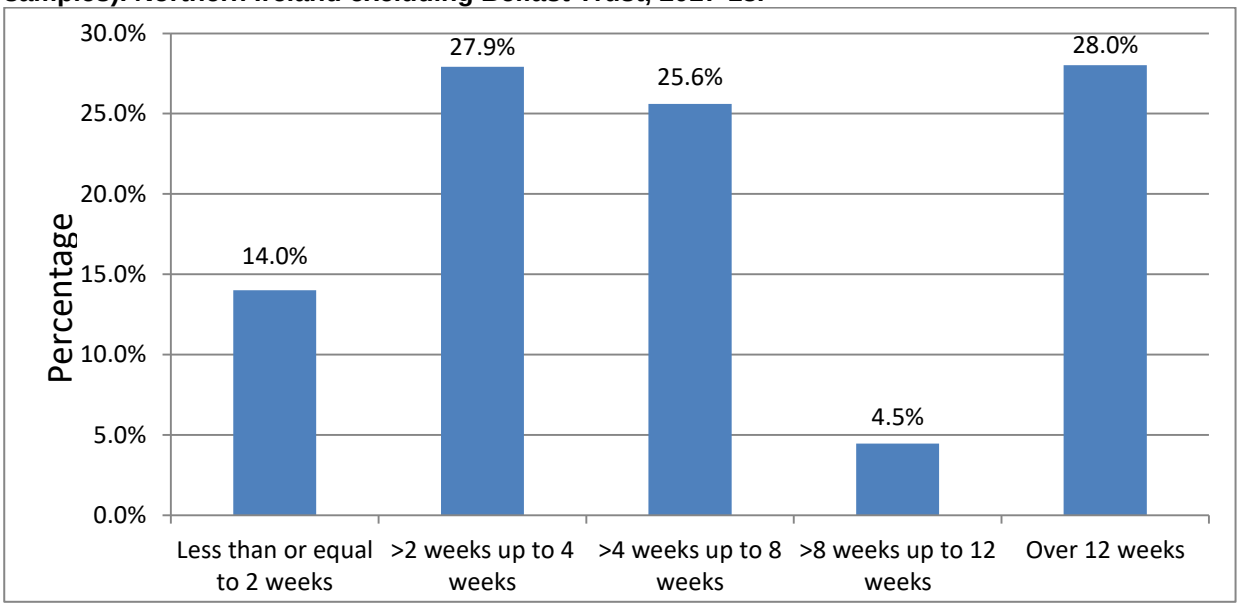
3.3.4 Biopsies

For each biopsy taken at colposcopy, the time between the biopsy being taken and the result being made available to the clinician on the colposcopy management system is monitored. To allow time for follow up of results, the data relates only to biopsies taken in the first month of each quarter during the year.

In 2017-18 there were 1,078 biopsies taken at colposcopy in four "One Month" samples

- 14% of the biopsy results were available to the clinician at two weeks
- 42% of the biopsy results were available to the clinician within four weeks
- 28% of biopsies had a waiting time of 12 weeks or greater

Figure 9: Time from biopsy until the result is available in the patients' record (4 one month samples). Northern Ireland excluding Belfast Trust, 2017-18.



Source: KC65 Part D

Non-diagnostic biopsies taken at colposcopy are mostly those performed as a treatment to remove abnormal cells from the cervix. Of the non-diagnostic biopsies taken in 2017-18, where

the result was known, 88.3% showed evidence of Cervical Intra-epithelial Neoplasia (CIN) or worse. CIN2 or worse was found in 72.4% of non-diagnostic biopsies (Table 12).

Table 12: Non-diagnostic biopsies taken at colposcopy by outcome (4 one month samples). Northern Ireland excluding Belfast Trust, 2017-18.

Outcome	Northern Ireland
Number of Non diagnostic biopsies reported	367
Biopsies with unknown result	2
Biopsies with known result (=100%)	365
Cancer	2.2%
Adenocarcinoma in situ	3.6%
CIN 3	48.5%
CIN 2	18.1%
CIN 1	15.9%
HPV / Cervicitis only	4.4%
No CIN / No HPV	7.1%
Inadequate / unsatisfactory biopsy	0.3%
Total showing CIN or worse	88.3%

Source: KC65 Part

4 Promoting Informed Choice

Participation in cervical screening in Northern Ireland remains below the target coverage rate of 80%. However, it is recognised that there are likely to be areas and subpopulations of women who are less likely to take up their invite for screening. This can be due to a range of factors, such as cultural and community issues, programme organisation issues, and individual personal choice.

The PHA continues to work with the service and key stakeholders to ensure that all eligible women can make an informed choice about participation and that the service is accessible to them.

Key actions in 2017-18 included:

- Promotion of key messages through media releases to coincide with cervical cancer prevention and screening awareness weeks
- Continuation of a programme to raise awareness and promote informed choice on the three cancer screening programmes. This programme is delivered by the Women's Resource and Development Agency (WRDA) and provides peer education sessions though community networks to include the following targeted groups:
    - Members of deprived communities (e.g. 20% most deprived wards in each Trust area as per the NISRA Index of Multiple Deprivation)
    - People from a black or ethnic minority group
    - Members of the Traveller community
    - Members of the LGBT community
    - People with learning, physical or sensory disabilities.

    In 2017-18, WRDA delivered 83 educational awareness sessions on cervical screening to target service users throughout Northern Ireland, and attended 18 health awareness events to provide information on cancer screening.

5 Quality Improvement Activity

A number of quality improvement activities were undertaken within the cervical screening programme during 2017-18:

- Programme updates were communicated to the wider service providers through the publication of the "*Screening Matters*" newsletter, throughout the year.
- In response to an adverse incident, the PHA produced a template 'Practice Protocol for Cervical Screening' which was distributed to all practices in NI and can be adapted for individual practices. The protocol was developed by the Young Person and Adult Screening Team in collaboration with colleagues in Portrush Medical Centre, colleagues in Integrated Care in the Health and Social Care Board and the Regional Primary Care Quality Assurance Advisory Group for Cancer Screening.The protocol is aligned with current national and regional policy, standards and guidance for cervical screening. The template will be regularly reviewed and updated in the event of any changing policy or practice.
- The PHA in partnership with HSCB developed an audit tool **'**Audit of Cervical Samples Taken in General Practice' for use in GP Practices. The tools aim is to improve the quality of cervical samples being taken in the practice.
- Following on from the implementation of a new cytology request form for smear takers in 16/17 , a cervical sample taker register was introduced in May 2017 when GP practices in the Northern, Southern, South Eastern and Belfast Trusts and were given the opportunity to register their sample takers using their NMC or GMC number. The register was introduced to allow screening reporting profiles (including inadequate rates) to be generated centrally and to support practices in audit reporting profiles at both individual and practice-level, with comparative data provided at Trust level.
- A Cervical Screening Programme Patient Experience Survey was carried out from May to December 2017. A questionnaire was collaboratively developed by the Young Person and Adult Screening Team, the NI Primary Care Quality Assurance Group and Colposcopists drawing on existing patient satisfaction surveys used in other UK units and other NI screening programmes. 100 questionnaires were delivered to each of the 11 colposcopy units and anonymised responses were collected. This was a significant step as it marked the first collaboration between all colposcopy unis in NI for such a project. Summary findings:

    - 659 responses collected from 10/11 colposcopy units in NI (one unit did not participate)- response rate **60%**
    - Overall reported patient satisfaction rates were high at **95%** (excellent or good)

- 95% of respondents would you encourage a relative/friend/colleague to participate in cervical screening and attend colposcopy if they need to
- There was wide geographical spread in terms of patients reporting no information provided:

- 23% reported receiving no info before smear
- 10.3% did not receive their result, or had to phone for it
- 16% reported receiving no info before colposcopy

At the end of the survey, respondents were invited to provide comments. The majority of comments were positive, with women commenting on the friendly, reassuring and informative staff and the excellent service –

“Dr X is always very helpful, answers questions, explains the process and results in a way you understand. He makes the whole process a lot easier. Nurses are always lovely too”

“Very professional staff in the clinic, thank you for making the examination less daunting”

“Service was first class, hospital staff were exceptional”.

Dr Cathy Malone won a prize at the BSCCP Conference for her oral presentation of the findings from the survey.

The Cervical Screening Team plan to review cervical patient literature in light of survey findings. We also plan to work with CRUK to hold a learning event for sample takers and also to develop a practice tool kit.

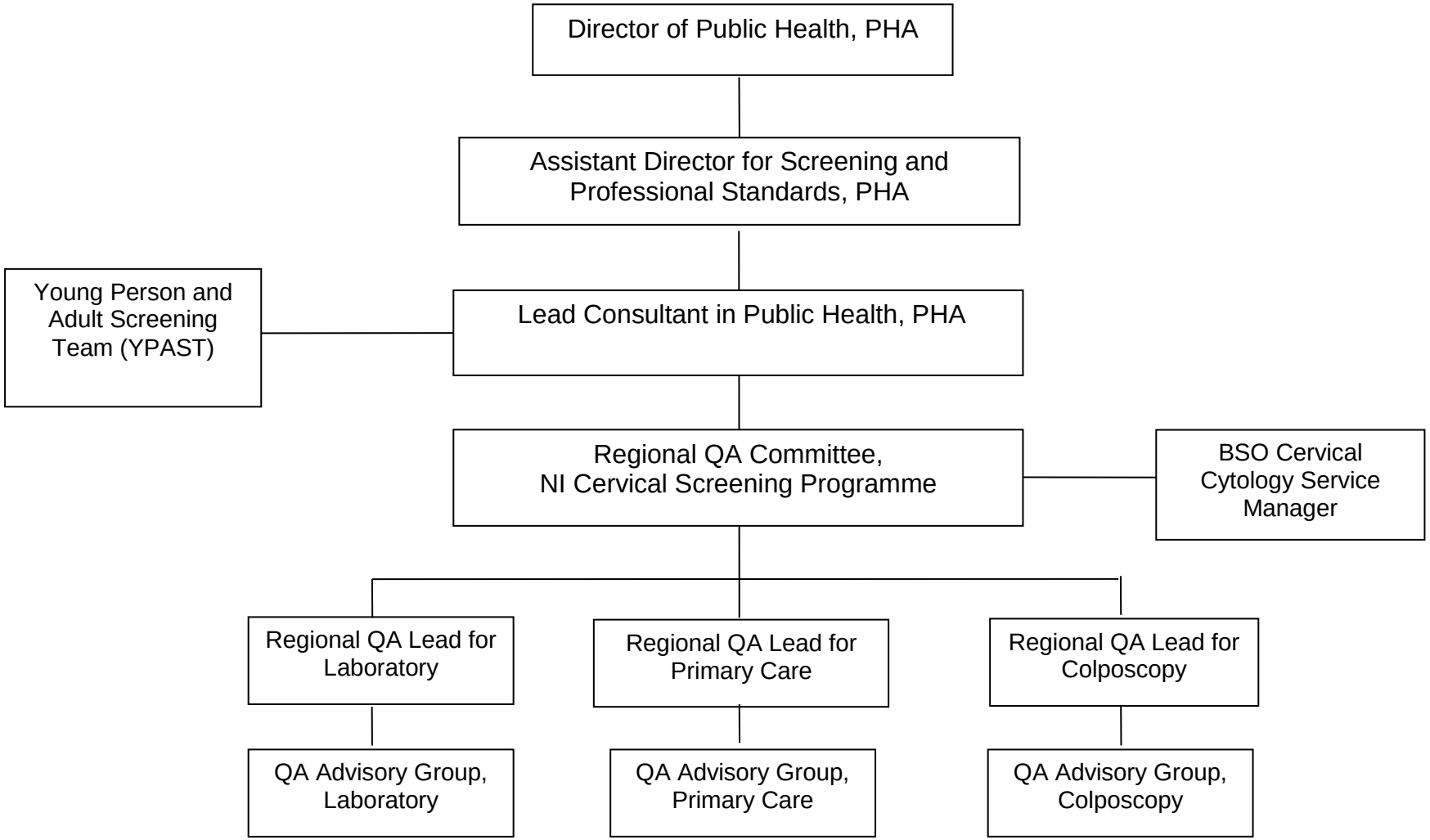
6 Quality Assurance

The purpose of quality assurance is to monitor, maintain and improve on minimum standards of service, performance and quality across all aspects of the cervical screening programme. This function is led and facilitated by the PHA and supported through the structured input of a range of professionals across key clinical disciplines (see Appendix 1).

Ongoing quality assurance activities include:

- Regular disciplinary led meetings across the programme
- Annual colposcopy led conference
- Annual data review meetings with all Trusts
- Regular performance review with BSO on call/recall service
- Rolling programme of formal quality assurance visits to Trusts

Appendix 1: Quality Assurance Structure



Appendix 2: Data Tables

KC53 Part A1/A2: Coverage at 31 March 2018										
AGE OF WOMAN AT 31/3/2018	NUMBER OF WOMEN IN RESIDENT POPULATION	NUMBER OF WOMEN WITH RECALL CEASED FOR			ELIGIBLE POPULATION	NUMBER OF WOMEN WHOSE MOST RECENT TEST WAS NO MORE THAN 3.5 YEARS AGO	COVERAGE (%) - LESS THAN 3.5YRS SINCE LAST ADEQUATE TEST	NUMBER OF WOMEN WHOSE MOST RECENT TEST WAS NO MORE THAN 5 YEARS AGO	COVERAGE (%) - LESS THAN 5YRS SINCE LAST ADEQUATE TEST
		CLINICAL REASONS	AGE REASONS	OTHER REASONS					
UNDER 20	237481	0	0	0	237481	183	0.08%	183	0.08%
20-24	58002	1	0	0	58001	4535	7.82%	4932	8.50%
25-29	65074	14	0	1	65060	41870	64.36%	44229	67.98%
30-34	69799	99	0	1	69700	50106	71.89%	55012	78.93%
35-39	68864	343	0	3	68521	50788	74.12%	55424	80.89%
40-44	62937	1070	0	7	61867	45871	74.14%	50055	80.91%
45-49	67868	2852	0	9	65016	47834	73.57%	52369	80.55%
50-54	68927	5257	0	14	63670	43187	67.83%	49769	78.17%
55-59	62950	7030	0	8	55920	27790	49.70%	40266	72.01%
60-64	52552	8267	16478	3458	44285	21344	48.20%	30457	68.77%
65-69	45992	8409	30537	5440	37583	8304	22.10%	15173	40.37%
70-74	42254	8506	26294	5748	33748	780	2.31%	1602	4.75%
75-79	31925	6680	16934	1530	25245	140	0.55%	246	0.97%
80 & OVER	47820	4975	5205	30	42845	28	0.07%	62	0.14%
TARGET AGE GROUP (25-64)	518971	24932	16478	3501	494039	328790	66.55%	377581	76.43%
TOTAL ALL AGES	982445	53503	95448	16249	928942	342760	36.90%	399779	43.04%

KC 53 Part B: Number of women invited 2017-18

		Number of women invited in the year as a result of:				
Age of woman at 31/03/2018	TOTAL			Repeat in < 3 years for reasons of:		
		Call	Routine recall	Surveillance	Abnormal sample	Inadequate
Under 20	22	0	0	1	14	7
20-24	1181	692	33	153	267	36
25-29	22998	12244	7664	1582	1226	282
30-34	22748	3811	13697	3734	1163	343
35-39	22923	2540	14861	4262	862	398
40-44	20585	2041	14122	3378	640	404
45-49	21369	1842	15355	3186	574	412
50-54	15790	1256	10758	2832	489	455
55-59	10846	978	7102	2007	261	498
60-64	6282	160	4341	1209	151	421
65-69	817	1	256	323	54	183
70-74	103	0	0	70	11	22
75 & over	45	0	0	34	7	4
Target age group (25-64)	143541	24872	87900	22190	5366	3213
Total all ages	145709	25565	88189	22771	5719	3465

KC53 Part C1: Number of women tested in the year 2017-18									
Age of woman at 31/03/2018	**TOTAL**	as a result of:		Repeat in < 3 years for reasons of:			While recall suspended	While recall ceased	Attended outside the programme
		Call	Routine recall	Surveillance	Abnormality	Inadequate smear			
Under 20	125	0	0	2	1	1	2	0	119
20-24	1939	13	1	91	83	22	139	0	1590
25-29	17094	5688	4676	1099	174	174	1552	0	3731
30-34	17810	611	8616	2680	263	203	1473	0	3964
35-39	17849	328	9570	3136	253	208	905	0	3449
40-44	15725	226	9320	2444	233	205	603	1	2693
45-49	15774	165	9827	2303	246	210	533	0	2490
50-54	12212	90	7254	1823	196	253	416	0	2180
55-59	8515	57	4476	1326	115	260	248	0	2033
60-64	6420	33	3629	748	58	206	164	699	883
65-69	1318	2	343	168	20	77	50	613	45
70-74	131	0	0	20	1	5	8	92	5
75 & over	30	0	0	8	0	0	4	12	6
Target age group(25-64)	111399	7198	57368	15559	1538	1719	5894	700	21423
Total all women	114942	7213	57712	15848	1643	1824	6097	1417	23188

KC53 Part D: Woman's most severe test result in the year, 2017-18								
Age of woman at 31/03/2018	**TOTAL**	Negative	Borderline	Mild dyskaryosis	Moderate dyskaryosis	Severe dyskaryosis	Severe/ ?invasive	?Glandular neoplasia
Under 20	122	91	22	9	0	0	0	0
20-24	1921	1541	206	137	23	14	0	0
25-29	16832	14499	1302	612	208	197	6	8
30-34	17532	15713	1120	399	145	144	3	8
35-39	17563	16154	982	254	92	77	2	2
40-44	15466	14285	881	209	47	39	3	2
45-49	15472	14376	833	194	32	36	0	1
50-54	11908	11186	554	118	17	23	5	5
55-59	8183	7805	280	66	17	11	2	2
60-64	6076	5843	176	41	9	2	4	1
65-69	1255	1207	35	10	0	0	1	2
70-74	129	117	9	3	0	0	0	0
75 & over	28	26	1	0	0	1	0	0
Target age group(25-64)	109032	99861	6128	1893	567	529	25	29
Total all ages	112487	102843	6401	2052	590	544	26	31

KC 61 Parts A1 and B: Samples from GP and NHS Community Clinics, Laboratory cytology results, 2017-18									
	Total samples examined			Total adequate samples (ages 25-64)	Result (as a percentage of total adequate 25-64)				
	All sources all ages	GP & NHS CC (ages 25 - 64)	Inadequate (%)		Negative (%)	Borderline (%)	Low-grade dyskaryosis (%)	High-grade dyskaryosis (moderate) (%)	High-grade dyskaryosis (severe or worse) (%)
Belfast Laboratory	46,834	42003	*2.4%*	43,995	*91.5%*	*5%*	*2.4%*	*0.51%*	*0.55%*
Antrim Laboratory	27,312	25,348	*7.9%*	24,395	*90.7%*	*7.2%*	*1.1%*	*0.5%*	*0.45%*
Craigavon Laboratory	25,293	22,869	*4.3%*	23,428	*92.2%*	*5.3%*	*1.4%*	*0.5%*	*0.6%*
Altnagelvin Laboratory	18,735	16,925	*2.1%*	17,454	*92.1%*	*5.5%*	*1.4%*	*0.5%*	*0.5%*
Northern Ireland	**118,174**	**107,145**	***4.03%***	**109,272**	***91.6%***	***5.62%***	***1.75%***	***0.51%***	***0.53%***

Appendix 3: Glossary

Ablation: a treatment that destroys tissue rather than removes it.

Abnormal predictive value (APV): the percentage of samples reported as borderline or low grade that led to referral for colposcopy and subsequent diagnosis of CIN2 or worse.

Biopsy: a procedure that involves taking a small sample of tissue that can be examined under a microscope.

CIN (cervical intra-epithelial neoplasia): CIN is not cancer but an indicator of the depth of abnormal cells within the surface layer of the cervix, and is divided into 3 grades. The higher the number/grade the more severe the condition:

> **CIN 1** – one third of the thickness of the surface layer of the cervix is affected.
>
> **CIN 2** – two thirds of the thickness of the surface layer of the cervix is affected.
>
> **CIN 3** – full thickness of the surface layer of the cervix is affected (also known as carcinoma in situ).

Colposcopy: a detailed examination of the cervix

Coverage: the percentage of women in a population eligible for screening at a given point in time, who were screened within a specified period. Women ineligible for screening, and thus not included in the numerator or denominator of the coverage calculation, are those whose recall has been ceased for clinical reasons (most commonly due to hysterectomy).

Cytology: the examination of cell samples

Dyskaryosis: the small changes which are found in the cells of the cervix

Eligible: eligible women are those within the defined age range, resident in Northern Ireland and registered with a GP.

Excision biopsy: a procedure that involves removing a larger area of tissue for further examination

Human Papilloma Virus (HPV): a family of viruses. Infection of the cervix with some types of HPV (high risk types) can cause abnormal tissue growth and changes to cells which can lead to cervical cancer

Non-diagnostic biopsy: a biopsy taken which is intended to remove/treat the cervical abnormality

Positive predictive value (PPV): the percentage of women referred to colposcopy with high grade cytology or worse, whose biopsy is reported as CIN2 or worse.

Referral value: the number of women referred to colposcopy to detect one CIN2 or worse lesion