



Sgrinio Serfigol Cymru
Cervical Screening Wales



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Cervical Screening Wales Annual Statistical Report 2018-19

October 2019



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

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Further information

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This report is a detailed summary of information on work undertaken by Cervical Screening Wales for the year from 1 April 2018 to 31 March 2019.

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Quality Assurance Statement

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

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1 Introduction

Cervical Screening Wales is responsible for the NHS cervical screening programme in Wales. The aim of the cervical screening programme is to reduce the incidence of, and morbidity and mortality from, invasive cervical cancer.

Information contained in this report is collected from the following sources:

1. NHAIS (National Health Application and Infrastructure Services) call and recall system used by the Cervical Screening Administration Departments
2. Pathology laboratories
3. Canisc – Cancer Information System Cymru which records clinical and administrative data from colposcopy services in health boards

An explanation of terms used in the document is in section 5 (Definitions).

1.1 Key messages for the public

- Cervical screening aims to prevent cancer from developing in the cervix at the neck of the womb.
- Individuals from the age of 25 are invited for screening every three years. Individuals aged 50 to 64 are invited every five years.
- Cervical screening (a smear test) is a free NHS test that is carried out at your GP surgery or at some sexual-health clinics.
- The test is quick and simple and should not be painful, but may be uncomfortable for some individuals.
- Screening will not prevent all cancers and not all cancers can be cured.
- Taking part in cervical screening is your choice. Read the information leaflet provided carefully to help you make your decision.

1.2 Programme delivery

The Screening Division of Public Health Wales is responsible for managing, delivering and quality assuring the cervical screening programme in Wales. Most cervical screening tests are carried out by a registered health professional in primary care or in a community or sexual health clinic. A small number of tests are taken in secondary care, in colposcopy clinics or gynaecology clinics.

The cervical screening programme is an All Wales programme, with a central governance team and three regional centres responsible for the operational management and quality assurance of the screening programme in their area: North Wales, Mid and West Wales and South East Wales.

1.3 Screening pathway

Policy for the cervical screening programme in Wales was changed in September 2013, so that women aged 25-49 years are now invited every three years and women aged 50-64 years are invited every five years. Prior to this the lower age limit was 20 and all women were invited every three years. The changes were in line with UK policy, following recommendation from the National Screening Committee and based on evidence which supported the change in age range.

From September 2014, Cervical Screening Wales introduced testing for Human Papilloma Virus (HPV) into the Cervical Screening Programme with the introduction of HPV Test of Cure (ToC) for women having their first smear test following treatment. In November 2015, ToC was extended for women who were invited for early follow-up smears. From May 2016 HPV testing was extended to triage low grade abnormalities on smears.

In January 2016, the UK National Screening Committee recommended that testing for high risk types of human papillomavirus (hrHPV) should be the primary (first) test done on a cervical screening sample. This is because it is a more sensitive test (so less likely to miss cell changes) but also much more accurate if no hrHPV is found. Cytology (looking at the cells) is only needed if hrHPV is found.

From April 2017, as part of the planning for full rollout of primary hrHPV screening, an 'early adopters' phase of primary screening using HPV testing began throughout Wales. Just under 20% of cervical screening samples were tested for hrHPV as the primary screening test. During June and July 2018, as roll out continued, a further 30% of all screening samples were tested for hrHPV.

In September 2018, all samples began to be tested for hrHPV as the primary screening test. By 1 October 2018, Wales had fully moved to hrHPV primary screening. Wales was the first country in the UK to fully implement hrHPV as the primary screening test.

All samples are now tested at Public Health Wales' Magden Park laboratory in Llantrisant. If a sample has no hrHPV detected, a result is issued by Magden Park laboratory. The cells in the sample are not examined.

If a sample has hrHPV detected, a slide is made and the cells are examined. If there are any cell changes, the slide is sent for medical reporting by one of a network of consultant pathologists or biomedical scientists across Wales.

Eligible women are sent a letter inviting them to make an appointment for cervical screening. A leaflet explaining screening is included with this letter. A reminder letter is sent if they do not appear to have attended for screening within a certain time. Demographic details are taken from GP registrations on the NHAIS system and it is important that women ensure that their name and address are up to date with their GP.

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

2 **Headline statistics 2018-19**

This report covers activity from 1 April 2018 to 31 March 2019 inclusive.

- At 31 March 2019, screening coverage was 73.2% across Wales, and exceeded 70% in all health board regions. This figure combines the proportion of 25-49 year olds screened in the previous 3.5 years, and the proportion of 50-64 year olds screened in the previous 5.5 years. This is known as 'age-appropriate' coverage
- In 2018-19 260,247 individuals aged 25-64 were invited for screening.
- 173,547 individuals were screened in 2018-19, (including those with inadequate results); most were following an invitation from the screening programme to make a screening appointment. This number includes individuals who were screened during the year 2018-19 and does not reflect all the individuals that were invited in that year
- Laboratories examined 173,984 samples from Welsh residents in 2018-19
- 1.8% of tests were reported as 'inadequate'
- 2.6% of tests were reported as showing high grade cell changes, ranging from 1.9% to 4.5%
- The Positive Predictive Value (PPV) correlates high-grade cytology with high-grade histology. For 2018-19, the PPV for Wales remains within range at 82.1%, ranging from 79.9% to 89.1%
- 8,525 new patients were seen at colposcopy clinics in Wales in 2018-19, 65.3% having been directly referred by Cervical Screening Wales and 34.7% for clinical reasons, e.g. symptoms or an abnormal appearing cervix
- In 76.4% of cases where the colposcopist thought there were high grade or worse changes, this was confirmed on biopsy (standard $\geq 65\%$) (PPV of colposcopist opinion)
- 57.9% of histology results reported as CIN2 or worse were similarly identified on assessment (this demonstrates the sensitivity of colposcopist opinion)
- 1 in 26 individuals screened in the year were directly referred to colposcopy by CSW. Of these 1 in 105 individuals (less than 1%) had cancer

3 Data

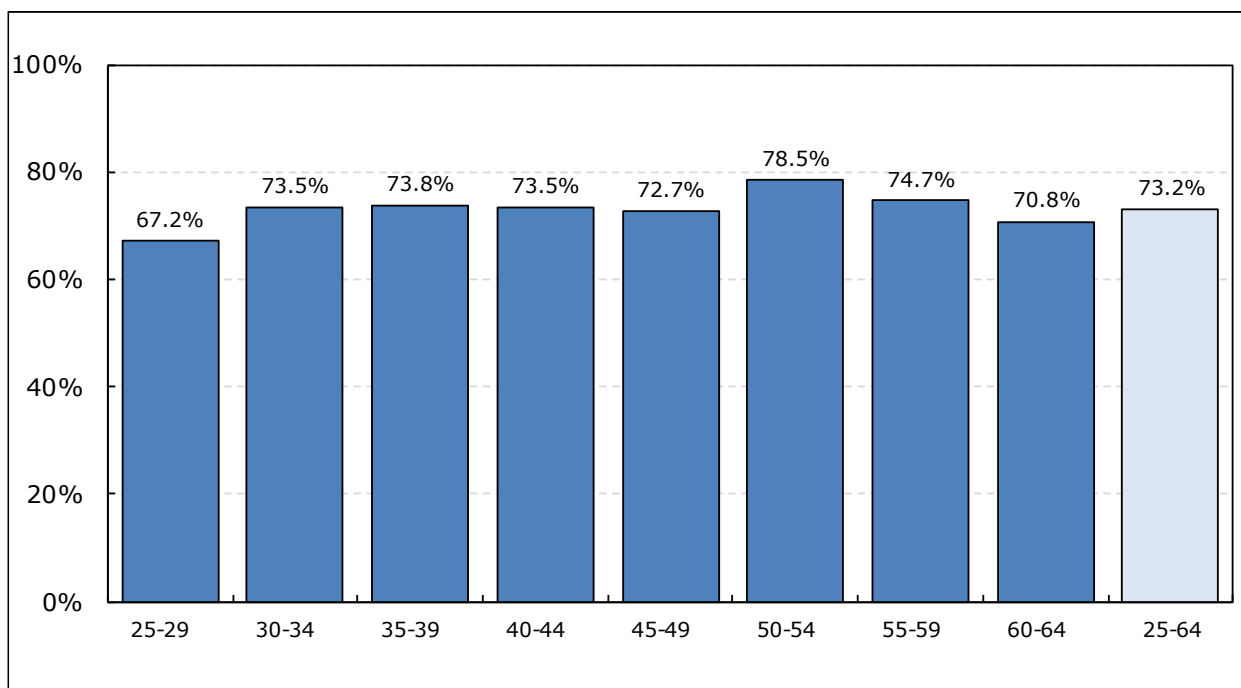
3.1 Coverage

Table 1a: Cervical screening age appropriate coverage by age group

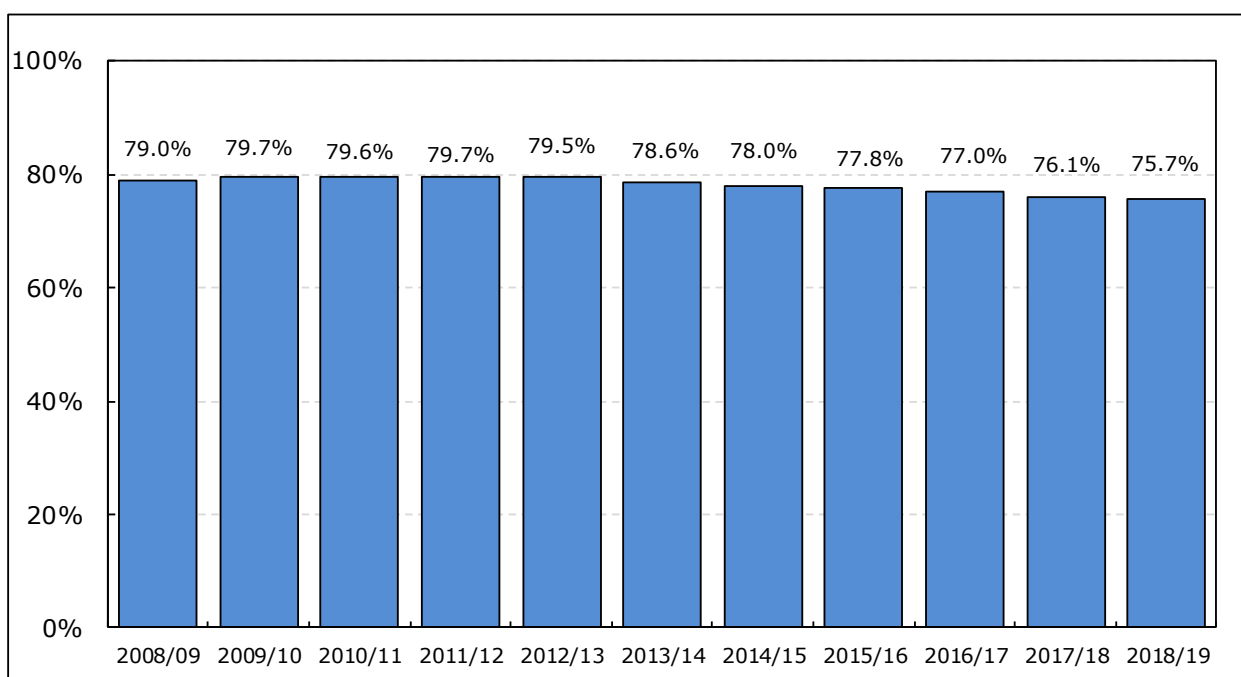
| Age Group | Eligible | Tested within 3.5 years | % Coverage within 3.5 years |
|--------------------|----------------|-------------------------|-----------------------------|
| 25-29 years | 102,540 | 68,947 | 67.2% |
| 30-34 years | 103,360 | 76,006 | 73.5% |
| 35-39 years | 98,755 | 72,906 | 73.8% |
| 40-44 years | 87,298 | 64,127 | 73.5% |
| 45-49 years | 100,576 | 73,127 | 72.7% |
| 25-49 years | 492,529 | 355,113 | 72.1% |

| Age Group | Eligible | Tested within 5.5 years | % Coverage within 5.5 years |
|--------------------|----------------|-------------------------|-----------------------------|
| 50-54 years | 104,803 | 82,244 | 78.5% |
| 55-59 years | 97,642 | 72,917 | 74.7% |
| 60-64 years | 81,679 | 57,855 | 70.8% |
| 50-64 years | 284,124 | 213,016 | 75.0% |

Note: The eligible age range for cervical screening is 25-64 years. Individuals over 50 are routinely invited for screening every 5 years, coverage within 3.5 years is not applicable in this age group. A combined age appropriate coverage for 25-64 year olds has been calculated as 73.2%. Please see definition section for more details.

Graph 1a1: Cervical screening age appropriate coverage by age group**Graph 1a2:** Cervical screening 5 year coverage of target age group (25-64 years) by year

Cervical Screening Wales has now moved to publishing age appropriate coverage (see graph 1a1) in line with England. However 5 year coverage for ages 25-64 has been shown here in order to provide comparison with coverage in previous years.



Five-year coverage of individuals aged 25-64 has been over 75% from 2008-2009 to 2018-19. In 2018-19 75.7% of individuals aged 25-64 years had been tested with an adequate result in the last 5 years. There is some variation in coverage between health boards (HB), ranging from 73.1% in Hywel Dda University Health Board to 78.0% in Powys Teaching Health Board. Overall coverage has decreased across Wales, however this may reflect the change to a five-year screening interval for women aged 50-64 years.

There are some individuals who may require screening outside of our 25-64 year age range, due to the follow-up of previous abnormalities.

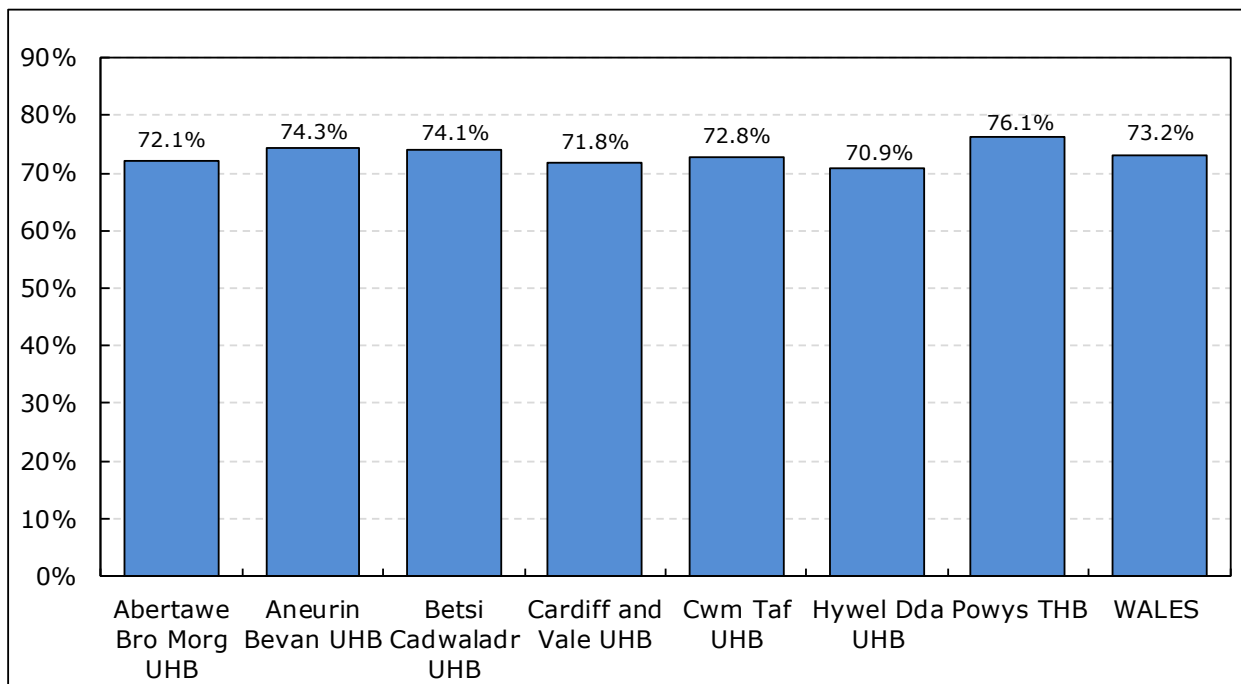
Table 1b: Cervical screening coverage (25-64 year olds) by health board of residence

| Health Board | 25 - 49 | | |
|----------------------------|----------------|-------------------------|-----------------------------|
| | Eligible | Tested within 3.5 Years | % Coverage within 3.5 Years |
| Abertawe Bro Morgannwg UHB | 80,399 | 57,120 | 71.0% |
| Aneurin Bevan UHB | 91,656 | 67,267 | 73.4% |
| Betsi Cadwaladr UHB | 99,402 | 72,902 | 73.3% |
| Cardiff and Vale UHB | 85,195 | 59,763 | 70.1% |
| Cwm Taf UHB | 47,316 | 34,090 | 72.0% |
| Hywel Dda UHB | 51,772 | 35,687 | 68.9% |
| Powys Teaching HB | 16,824 | 12,660 | 75.2% |
| Unknown HB | 19,965 | 15,624 | 78.3% |
| TOTAL | 492,529 | 355,113 | 72.1% |

| Health Board | 50 - 64 | | |
|----------------------------|----------------|-------------------------|-----------------------------|
| | Eligible | Tested within 5.5 Years | % Coverage within 5.5 Years |
| Abertawe Bro Morgannwg UHB | 46,912 | 34,675 | 73.9% |
| Aneurin Bevan UHB | 53,205 | 40,353 | 75.8% |
| Betsi Cadwaladr UHB | 63,624 | 47,904 | 75.3% |
| Cardiff and Vale UHB | 40,047 | 30,105 | 75.2% |
| Cwm Taf UHB | 25,858 | 19,170 | 74.1% |
| Hywel Dda UHB | 36,404 | 26,814 | 73.7% |
| Powys Teaching HB | 13,299 | 10,264 | 77.2% |
| Unknown HB | 4,775 | 3,731 | 78.1% |
| TOTAL | 284,124 | 213,016 | 75.0% |

This shows the coverage stated of those individuals eligible for cervical screening on 1 April 2019, by the number and proportion with an adequate test within last 3.5 or 5.5 years.

Graph 1b: Combined cervical screening coverage of target age group (25-64 years) by health board



3.2 Individuals invited by age group and health board

Table 2: Individuals invited by age group and health board

| Health Board | Under 25 years | 25-49 years | 50-64 years | 65+ years | All Ages |
|----------------------------|----------------|----------------|---------------|--------------|----------------|
| Abertawe Bro Morgannwg UHB | 3,369 | 28,242 | 11,145 | 164 | 42,920 |
| Aneurin Bevan UHB | 3,972 | 31,453 | 12,166 | 261 | 47,852 |
| Betsi Cadwaladr UHB | 4,062 | 34,454 | 14,959 | 207 | 53,682 |
| Cardiff and Vale UHB | 3,987 | 29,138 | 9,674 | 167 | 42,966 |
| Cwm Taf UHB | 2,084 | 16,668 | 6,159 | 97 | 25,008 |
| Hywel Dda UHB | 2,232 | 18,299 | 8,636 | 143 | 29,310 |
| Powys Teaching HB | 671 | 5,573 | 2,951 | 37 | 9,232 |
| Unknown HB | 964 | 7,089 | 1,210 | 14 | 9,277 |
| All Wales | 21,341 | 170,916 | 66,900 | 1,090 | 260,247 |

Eligible individuals are invited for their first screening test between 24 years 8 months and 24 years 9 months. This ensures that they will have had the opportunity to attend for screening by their 25th Birthday. In addition, some individuals under the age of 25 will be invited due to incidental findings of cell changes, which have required follow-up screening tests.

3.3 Individuals tested by age group and health board

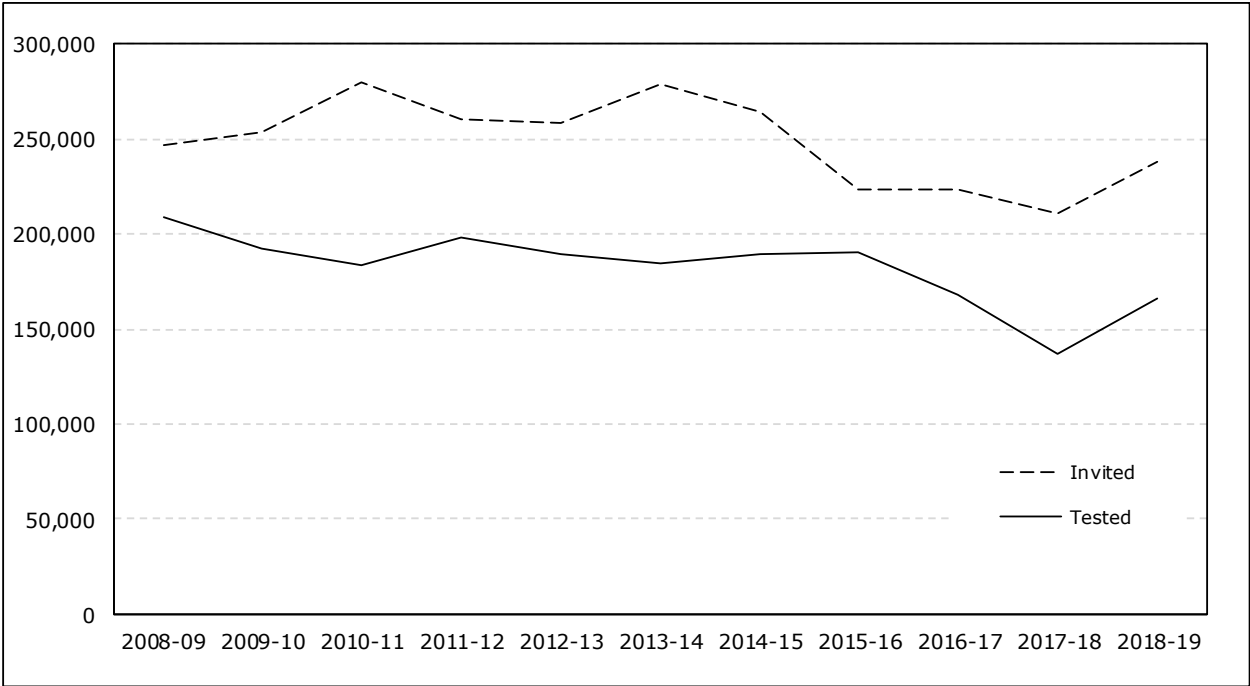
Table 3: Individuals tested by age group and health board

| Health Board | Under 25 years | 25-49 years | 50-64 years | 65+ years | All Ages |
|----------------------------|----------------|----------------|---------------|------------|----------------|
| Abertawe Bro Morgannwg UHB | 1,002 | 20,159 | 6,231 | 83 | 27,475 |
| Aneurin Bevan UHB | 1,385 | 23,777 | 7,191 | 101 | 32,454 |
| Betsi Cadwaladr UHB | 1,277 | 26,766 | 9,110 | 122 | 37,275 |
| Cardiff and Vale UHB | 1,177 | 21,297 | 5,669 | 96 | 28,239 |
| Cwm Taf UHB | 640 | 12,114 | 3,498 | 44 | 16,296 |
| Hywel Dda UHB | 614 | 12,663 | 4,730 | 79 | 18,086 |
| Powys Teaching HB | 245 | 4,654 | 1,967 | 25 | 6,891 |
| Unknown HB | 346 | 5,715 | 758 | 12 | 6,831 |
| All Wales | 6,686 | 127,145 | 39,154 | 562 | 173,547 |

In 2018-19 this data has been calculated directly from information taken from the call and recall system, more detailed definitions are given in section 5 of this report.

Uptake would generally be defined as the proportion of invited individuals who attend for screening within a defined period following an invitation. The uptake of cervical screening invitations cannot be precisely measured as some tests undertaken in the screening year (1 April to 31 March) may result from invitations that are either issued in the previous screening year, or taken up in the following year. There is currently no standard for 'uptake' within Cervical Screening in England and Wales and therefore coverage has been presented.

Graph 3: Number of individuals (aged 25-64 years) invited and screened each year



The reduction in the number of individuals invited during 2017-18 is due to the age and frequency changes implemented in September 2013 (described in section 1.3), where the age for first screening invitation was raised from 20 to 25 and the frequency of invitation for individuals aged 50-64 was changed from 3 years to 5 years. The rise seen in 2018-19 includes individuals aged 25 being invited for the first time, and those individuals aged 50 or over in 2013 now being invited back after 5 years.

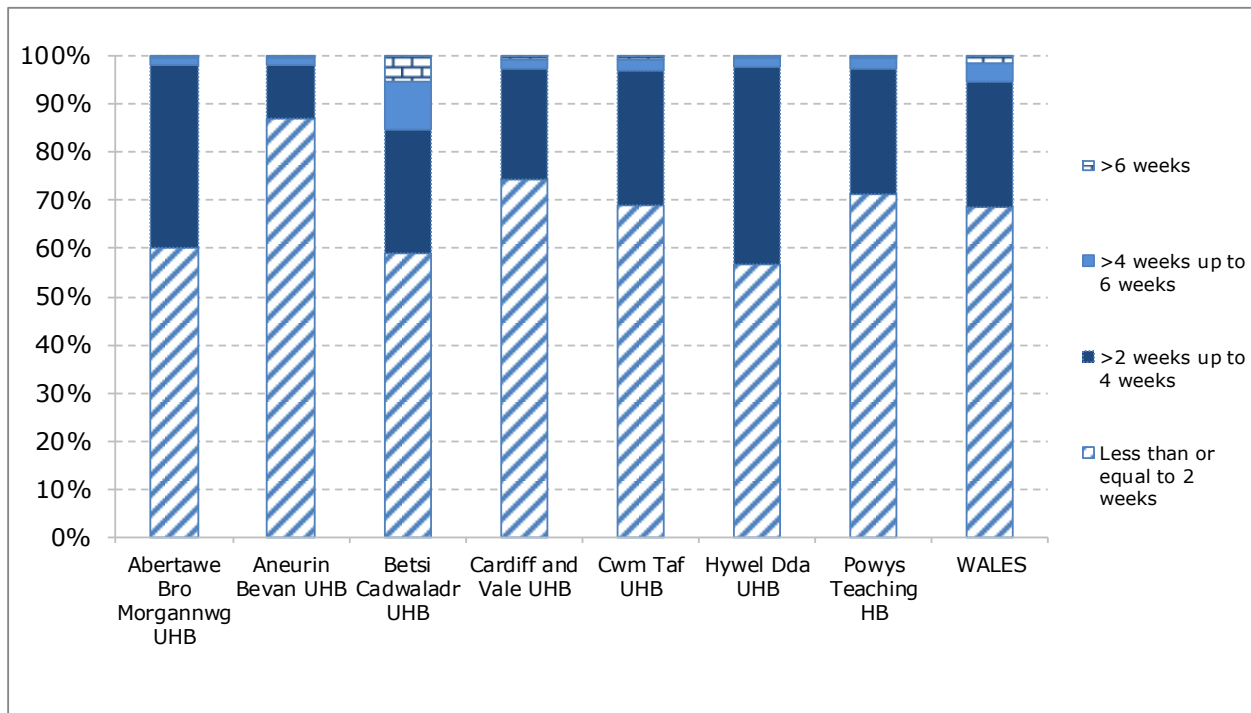
3.4 Screening sample result turnaround times by health board

Our standard is for 95% of individuals to be sent their results within 4 weeks (28 calendar days) of the screening sample being taken.

Table 4: Time from date sample was taken to issue of result letter, by health board

| Health Board | Less than or equal to 2 weeks | >2 weeks up to 4 weeks | >4 weeks up to 6 weeks | >6 weeks | Total |
|----------------------------|-------------------------------|------------------------|------------------------|---------------|----------------|
| Abertawe Bro Morgannwg UHB | 16,163 | 10,196 | 429 | 43 | 26,831 |
| Aneurin Bevan UHB | 27,649 | 3,596 | 439 | 96 | 31,780 |
| Betsi Cadwaladr UHB | 21,619 | 9,349 | 3,720 | 1,905 | 36,593 |
| Cardiff and Vale UHB | 21,032 | 6,437 | 572 | 206 | 28,247 |
| Cwm Taf UHB | 11,357 | 4,615 | 409 | 110 | 16,491 |
| Hywel Dda UHB | 10,121 | 7,308 | 333 | 48 | 17,810 |
| Powys Teaching HB | 4,779 | 1,753 | 144 | 28 | 6,704 |
| Unknown HB | 4,712 | 1,628 | 248 | 80 | 6,668 |
| All Wales | 117,432 | 44,882 | 6,294 | 2,516 | 171,124 |
| Cumulative % | 68.6% | 94.9% | 98.5% | 100.0% | 100.0% |

Graph 4: Time from date sample was taken to issue of result letter, by health board



Across Wales 68.6% of results were issued within 2 weeks of the test being taken (range 56.8% to 87.0%), this is an increase compared with 54.5% in 2017-18).

94.9% of results were issued within 4 weeks (95% standard) compared with 95.0% in 2017-18. This slight drop was in part due to the transition in the method of primary screening involving the all-Wales rollout of HPV testing.

3.5 Samples reported by cervical screening laboratory

Table 5a: Number of cervical screening samples reported by cervical screening laboratory and source of test

| Laboratory | GP | Integrated Sexual Health Clinics | NHS Hospital | Not Specified | Total |
|------------------------|----------------|----------------------------------|--------------|---------------|----------------|
| Magden Park Laboratory | 125,812 | 3,237 | 6,076 | 216 | 135,341 |
| North Wales Service | 7,843 | 455 | 507 | 2 | 8,807 |
| Royal Gwent Hospital | 9,775 | 1,099 | 690 | 24 | 11,588 |
| S & W Wales Service | 16,021 | 734 | 1,344 | 149 | 18,248 |
| All Wales | 159,451 | 5,525 | 8,617 | 391 | 173,984 |

Magden Park figures include all samples having primary hrHPV testing, where no hrHPV was detected.

Table 5b1: Number of cervical screening samples reported by health board of residence and source of test

| Health Board | GP | Integrated Sexual Health Clinics | NHS Hospital | Not Specified | Total |
|----------------------------|----------------|----------------------------------|--------------|---------------|----------------|
| Abertawe Bro Morgannwg UHB | 25,493 | 273 | 1,285 | 239 | 27,290 |
| Aneurin Bevan UHB | 28,442 | 2,317 | 1,293 | 56 | 32,108 |
| Betsi Cadwaladr UHB | 34,768 | 890 | 967 | 3 | 36,628 |
| Cardiff and Vale UHB | 27,133 | 425 | 1,110 | 18 | 28,686 |
| Cwm Taf UHB | 14,282 | 176 | 2,175 | 13 | 16,646 |
| Hywel Dda UHB | 15,858 | 1,098 | 1,195 | 12 | 18,163 |
| Powys Teaching HB | 6,237 | 20 | 229 | 33 | 6,519 |
| Unknown HB | 7238 | 326 | 363 | 17 | 7,944 |
| All Wales | 159,451 | 5,525 | 8,617 | 391 | 173,984 |

Table 5b2: Percentage of cervical screening samples taken in each health board of residence by source of test

| Health Board | GP | Integrated Sexual Health Clinics | NHS Hospital | Not Specified |
|----------------------------|--------------|----------------------------------|--------------|---------------|
| Abertawe Bro Morgannwg UHB | 93.4% | 1.0% | 4.7% | 0.9% |
| Aneurin Bevan UHB | 88.6% | 7.2% | 4.0% | 0.2% |
| Betsi Cadwaladr UHB | 94.9% | 2.4% | 2.6% | 0.0% |
| Cardiff and Vale UHB | 94.6% | 1.5% | 3.9% | 0.1% |
| Cwm Taf UHB | 85.8% | 1.1% | 13.1% | 0.1% |
| Hywel Dda UHB | 87.3% | 6.0% | 6.6% | 0.1% |
| Powys Teaching HB | 95.7% | 0.3% | 3.5% | 0.5% |
| Unknown HB | 91.1% | 4.1% | 4.6% | 0.2% |
| All Wales % | 91.6% | 3.2% | 5.0% | 0.2% |

Table 5c1: Inadequate cytology samples reported by cervical screening laboratory

| Laboratory | | GP | Integrated Sexual Health Clinics | NHS Hospital | Not Specified | Total |
|--------------------------------|----------------|--------|----------------------------------|--------------|---------------|--------|
| Magden Park Laboratory | Total Samples | 23,680 | 704 | 2,344 | 44 | 26,772 |
| | No. inadequate | 1,059 | 53 | 150 | 3 | 1,265 |
| | % inadequate | 4.5% | 7.5% | 6.4% | 6.8% | 4.7% |
| North Wales Service | Total Samples | 7,843 | 455 | 507 | 2 | 8,807 |
| | No. inadequate | 328 | 26 | 42 | 0 | 396 |
| | % inadequate | 4.2% | 5.7% | 8.3% | 0.0% | 4.5% |
| Royal Gwent Hospital | Total Samples | 9,769 | 1,099 | 690 | 24 | 11,582 |
| | No. inadequate | 324 | 51 | 73 | 2 | 450 |
| | % inadequate | 3.3% | 4.6% | 10.6% | 8.3% | 3.9% |
| S & W Wales Service | Total Samples | 16,021 | 734 | 1,344 | 149 | 18,248 |
| | No. inadequate | 702 | 43 | 100 | 10 | 855 |
| | % inadequate | 4.4% | 5.9% | 7.4% | 6.7% | 4.7% |
| All Wales | Total Samples | 57,313 | 2,992 | 4,885 | 219 | 65,409 |
| | No. inadequate | 2,413 | 173 | 365 | 15 | 2,966 |
| | % inadequate | 4.2% | 5.8% | 7.5% | 6.8% | 4.5% |

Of the 108,575 samples where no cytology slide was made, 204 samples had been reported as 'hrHPV result unavailable/unreliable (HPVU)'. These

results are added to the 'inadequate cytology' results. This would give an overall combined 'inadequate' rate of 1.8%.

Table 5c2: High grade cytology samples reported by cervical screening laboratory

| Laboratory | | GP | Integrated Sexual Health Clinics | NHS Hospital | Not Specified | Total |
|--------------------------------|----------------|--------|----------------------------------|--------------|---------------|--------|
| Magden Park Laboratory | No. Adequate | 22,621 | 651 | 2,194 | 41 | 25,507 |
| | No. high grade | 396 | 5 | 76 | 2 | 479 |
| | % high grade | 1.8% | 0.8% | 3.5% | 4.9% | 1.9% |
| North Wales Service | No. Adequate | 7,515 | 429 | 465 | 2 | 8,411 |
| | No. high grade | 330 | 14 | 36 | 0 | 380 |
| | % high grade | 4.4% | 3.3% | 7.7% | 0.0% | 4.5% |
| Royal Gwent Hospital | No. Adequate | 9,445 | 1,048 | 617 | 22 | 11,132 |
| | No. high grade | 253 | 52 | 28 | 0 | 333 |
| | % high grade | 2.7% | 5.0% | 4.5% | 0.0% | 3.0% |
| S & W Wales Service | No. Adequate | 15,319 | 691 | 1,244 | 139 | 17,393 |
| | No. high grade | 331 | 20 | 63 | 12 | 426 |
| | % high grade | 2.2% | 2.9% | 5.1% | 8.6% | 2.4% |
| All Wales | No. Adequate | 54,900 | 2,819 | 4,520 | 204 | 62,443 |
| | No. high grade | 1,310 | 91 | 203 | 14 | 1,618 |
| | % high grade | 2.4% | 3.2% | 4.5% | 6.9% | 2.6% |

High grade includes results reported as high grade dyskaryosis (moderate and severe), high grade dyskaryosis (query invasive squamous carcinoma), query glandular neoplasia of endocervical type and query glandular neoplasia of non cervical origin. The proportion is calculated from all adequate cytology results.

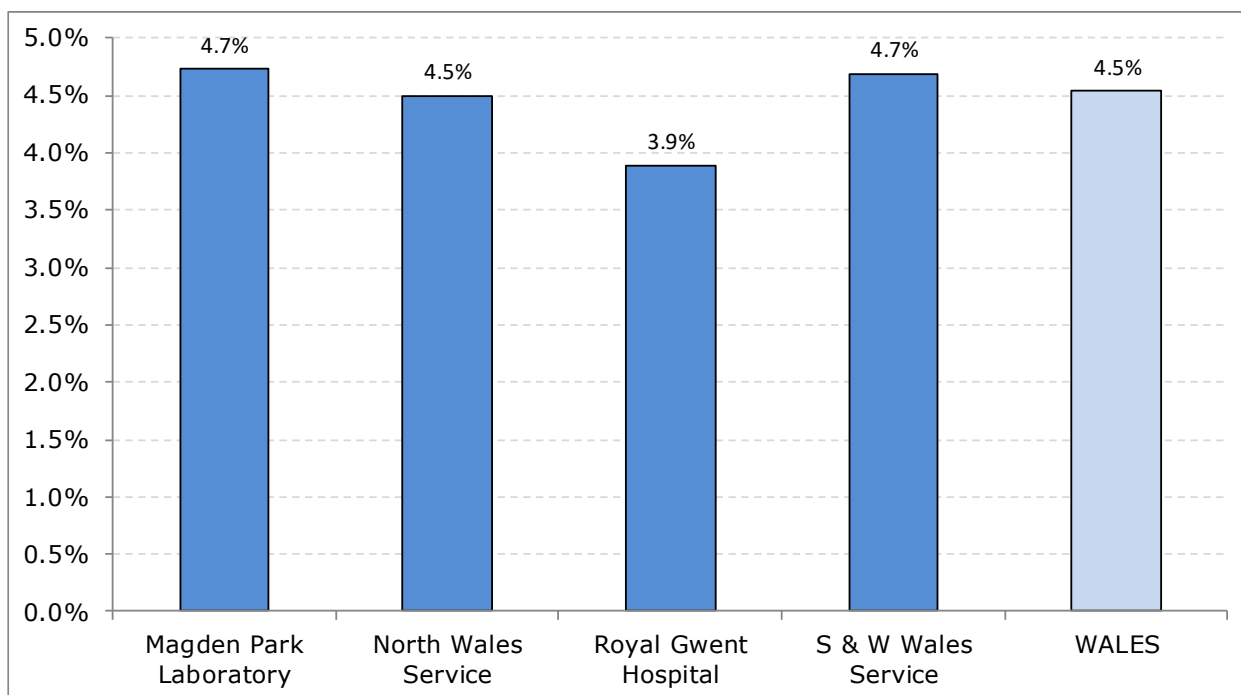
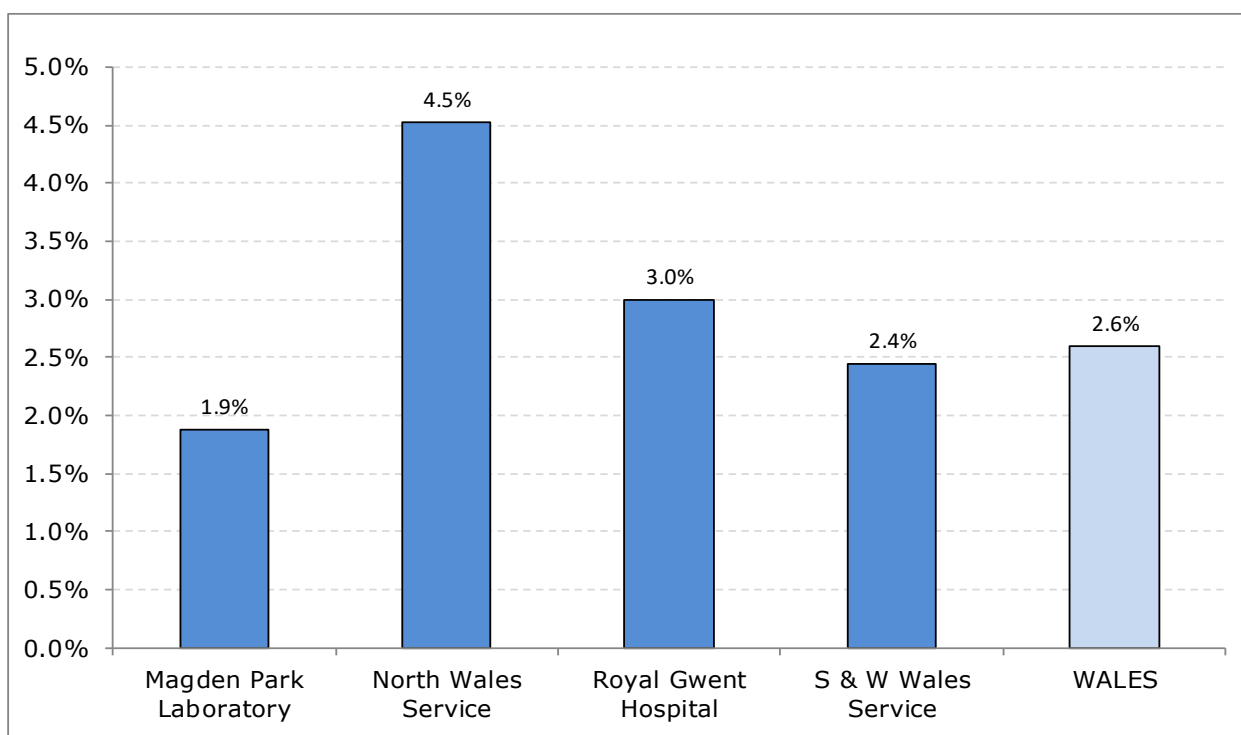
Graph 5c1: Percentage of inadequate cytology tests by cervical screening laboratory**Graph 5c2:** Percentage of high grade cytology tests by cervical screening laboratory

Table 5d: Number of adequate samples reported by result of test and age group

| Result | 25-49 years | 50-64 years | All Ages |
|---|----------------|---------------|----------------|
| Negative | 43,428 | 9,661 | 55,119 |
| Borderline Change in squamous cells | 2,124 | 308 | 2,585 |
| Borderline Change in endocervical cells | 89 | 5 | 101 |
| Low Grade Dyskaryosis | 2,445 | 354 | 3,020 |
| High Grade Dyskaryosis (Moderate) | 601 | 39 | 693 |
| High Grade Dyskaryosis (Severe) | 699 | 55 | 800 |
| High Grade Dyskaryosis (?invasive squamous carcinoma) | 50 | 9 | 60 |
| ?Glandular neoplasia of endocervical type | 41 | 5 | 51 |
| ?Glandular neoplasia of non-cervical origin | 7 | 7 | 14 |
| No cytology | 77,010 | 27,399 | 108,575 |
| All Wales | 126,494 | 37,842 | 171,018 |

All ages includes women outside of the eligible age range.

Table 5e: Number of adequate samples reported with an HPV test

| Result | High Risk HPV detected | High Risk HPV not detected | HPV unavailable / unreliable | No HPV Test | TOTAL |
|---|------------------------|----------------------------|------------------------------|---------------|----------------|
| Negative | 9,643 | 3,201 | 77 | 42,198 | 55,119 |
| Borderline Change in squamous cells | 1,804 | 650 | 100 | 31 | 2,585 |
| Borderline Change in endocervical cells | 66 | 34 | <5 | <5 | 101 |
| Low Grade Dyskaryosis | 2,589 | 317 | 81 | 33 | 3,020 |
| High Grade Dyskaryosis (Moderate) | 475 | <5 | <5 | 217 | 693 |
| High Grade Dyskaryosis (Severe) | 572 | <5 | <5 | 227 | 800 |
| High Grade Dyskaryosis (?invasive squamous carcinoma) | 37 | <5 | <5 | 23 | 60 |
| ?Glandular neoplasia of endocervical type | 33 | <5 | <5 | 17 | 51 |
| ?Glandular neoplasia of non-cervical origin | <5 | <5 | <5 | 13 | 14 |
| No cytology | <5 | 108,370 | 204 | <5 | 108,575 |
| All Wales | 15,221 | 112,575 | 462 | 42,760 | 171,018 |

During the reporting year, most (75%) samples were tested for high risk HPV. These were: -

- All Primary HPV screened samples
- Primary cytology screened samples showing low grade or borderline changes (as HPV triage)
- Primary cytology 'test of cure (ToC)' samples
- 'Ad hoc' samples requested by colposcopy clinics

Table 5f: Outcome for individuals referred during April 2017-March 2018 following an inadequate or low grade result

| Outcome | Magden Park Laboratory | North Wales Service | Royal Gwent Hospital | S & W Wales Service | ALL WALES |
|-------------------------|------------------------|---------------------|----------------------|---------------------|--------------|
| Cervical Cancer | <5 | <5 | <5 | <5 | 5 |
| CGIN | <5 | <5 | <5 | <5 | 11 |
| High Grade CIN | 196 | 179 | 117 | 201 | 693 |
| CIN1 | 249 | 294 | 125 | 203 | 871 |
| No Abnormality Detected | 389 | 214 | 210 | 281 | 1,094 |
| Inadequate Biopsy | 13 | 14 | 14 | 29 | 70 |
| No Biopsy Taken | 395 | 176 | 279 | 402 | 1,252 |
| Non Cervical Cancer | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1,247 | 881 | 747 | 1,121 | 3,996 |

Table 5g: Outcome for individuals referred during April 2017-March 2018 following a high grade cytology result

| Outcome | Magden Park Laboratory | North Wales Service | Royal Gwent Hospital | S & W Wales Service | ALL WALES |
|-------------------------|------------------------|---------------------|----------------------|---------------------|--------------|
| Cervical Cancer | 23 | 16 | 9 | 18 | 66 |
| CGIN | 7 | 13 | 6 | 9 | 35 |
| High Grade CIN | 407 | 256 | 296 | 290 | 1,249 |
| CIN1 | 41 | 19 | 25 | 36 | 121 |
| No Abnormality Detected | 54 | 10 | 40 | 30 | 134 |
| Inadequate Biopsy | <5 | <5 | <5 | <5 | <5 |
| No Biopsy Taken | 11 | 6 | 13 | 9 | 39 |
| Non Cervical Cancer | <5 | <5 | <5 | <5 | <5 |
| TOTAL | 543 | 321 | 391 | 395 | 1,650 |

Table 5h: Outcome for individuals directly referred during April 2017-March 2018

| Laboratory | Positive Predictive Value (PPV)% | Abnormal Predictive Value (APV)% | Referral Value (RV) |
|------------------------|----------------------------------|----------------------------------|---------------------|
| Magden Park Laboratory | 80.5% | 16.8% | 3.1 |
| North Wales Service | 89.1% | 22.1% | 2.8 |
| Royal Gwent Hospital | 79.9% | 16.5% | 2.9 |
| S & W Wales Service | 80.9% | 19.4% | 3.3 |
| All Wales | 82.1% | 18.6% | 3.1 |

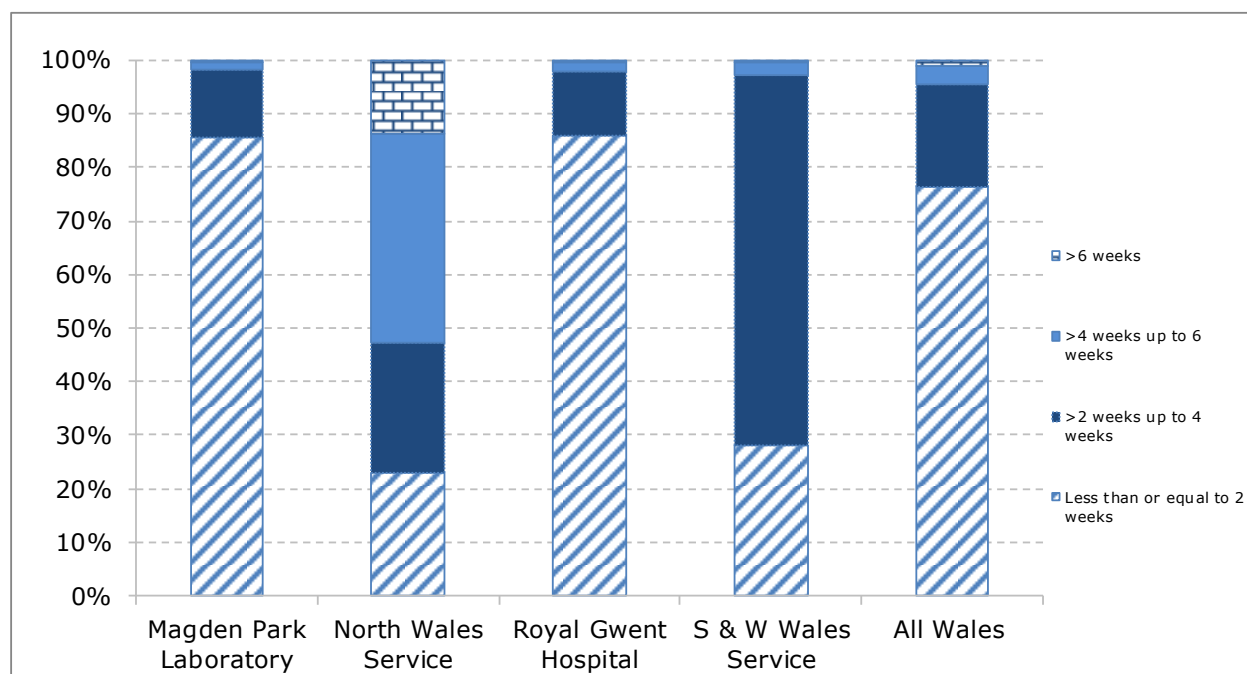
For definitions of PPV, APV and RV please see section 5.

Table 5i: Turnaround times for cervical screening laboratory, from date of receipt of sample, to date result first authorised

| Laboratory | Less than or equal to 2 weeks | >2 weeks up to 4 weeks | >4 weeks up to 6 weeks | >6 weeks | Total |
|------------------------|-------------------------------|------------------------|------------------------|---------------|----------------|
| Magden Park Laboratory | 115,762 | 17,274 | 1,680 | 625 | 135,341 |
| North Wales Service | 2,031 | 2,134 | 3,430 | 1,212 | 8,807 |
| Royal Gwent Hospital | 9,974 | 1,358 | 218 | 38 | 11,588 |
| S & W Wales Service | 5,136 | 12,614 | 425 | 73 | 18,248 |
| All Wales | 132,903 | 33,380 | 5,753 | 1,948 | 173,984 |
| Cumulative % | 76.4% | 95.6% | 98.9% | 100.0% | 100.0% |

In 2018-19 the laboratory authorised 76.4% of results within two weeks from date of receipt. This is an increase from the 66.5% seen in 2017-18.

Graph 5i: Turnaround times for cervical screening laboratory, from date of receipt of sample, to date result first authorised



3.6 Colposcopy activity

Table 6a: Number of colposcopy referrals by source of referral and colposcopy clinic

| Colposcopy Clinic | CSW Direct Referral | Other Referral | TOTAL | % CSW Direct Referral | % Other Referral |
|--------------------|---------------------|----------------|---------------|-----------------------|------------------|
| Brecon | 120 | 60 | 180 | 66.7% | 33.3% |
| Bronglais | 108 | 126 | 234 | 46.2% | 53.8% |
| Cardiff and Vale | 1190 | 941 | 2131 | 55.8% | 44.2% |
| Glan Clwyd | 497 | 64 | 561 | 88.6% | 11.4% |
| Neath Port Talbot | 673 | 319 | 992 | 67.8% | 32.2% |
| Nevill Hall | 288 | 114 | 402 | 71.6% | 28.4% |
| Newtown | 76 | 25 | 101 | 75.2% | 24.8% |
| Prince Charles | 291 | 613 | 904 | 32.2% | 67.8% |
| Royal Glamorgan | 439 | 485 | 924 | 47.5% | 52.5% |
| Royal Gwent | 899 | 373 | 1272 | 70.7% | 29.3% |
| Singleton | 404 | 420 | 824 | 49.0% | 51.0% |
| West Wales General | 314 | 298 | 612 | 51.3% | 48.7% |
| Withybush | 172 | 216 | 388 | 44.3% | 55.7% |
| Wrexham | 558 | 140 | 698 | 79.9% | 20.1% |
| Ysbyty Gwynedd | 439 | 144 | 583 | 75.3% | 24.7% |
| Ysbyty Ystrad Fawr | 272 | 83 | 355 | 76.6% | 23.4% |
| All Wales | 6,740 | 4,421 | 11,161 | 60.4% | 39.6% |

The other referrals that are not directly referred from CSW are a mixture of individuals referred from primary or secondary care with symptoms or an abnormal appearance of cervix, individuals moving into Wales with abnormal cytology or those where there were difficulties in obtaining a sample in primary care.

Table 6b: Number of new patients seen by referral test result and colposcopy clinic

| Colposcopy Clinic | Low Grade | High Grade | Negative Cytology HPV Positive | No Abnormal Smear | Total |
|--------------------|--------------|--------------|---|-------------------------|---------------|
| Brecon | 51 | 28 | 8 | 45 | 132 |
| Bronglais | 68 | 17 | 18 | 92 | 195 |
| Cardiff and Vale | 632 | 211 | 115 | 654 | 1612 |
| Glan Clwyd | 221 | 110 | 45 | 54 | 430 |
| Neath Port Talbot | 353 | 127 | 66 | 171 | 717 |
| Nevill Hall | 127 | 76 | 27 | 81 | 311 |
| Newtown | 45 | 11 | 15 | 17 | 88 |
| Prince Charles | 157 | 75 | 40 | 427 | 699 |
| Royal Glamorgan | 216 | 91 | 55 | 340 | 702 |
| Royal Gwent | 427 | 198 | 81 | 262 | 968 |
| Singleton | 259 | 77 | 65 | 241 | 642 |
| West Wales General | 187 | 68 | 44 | 140 | 439 |
| Withybush | 96 | 44 | 31 | 156 | 327 |
| Wrexham | 241 | 84 | 51 | 166 | 542 |
| Ysbyty Gwynedd | 245 | 100 | 50 | 62 | 457 |
| Ysbyty Ystrad Fawr | 145 | 43 | 28 | 48 | 264 |
| All Wales | 3,470 | 1,360 | 739 | 2,956 | 8,525 |
| % | 40.7% | 16.0% | 8.7% | 34.7% | 100.0% |

Low grade referrals include borderline change in squamous cells and low grade dyskaryosis

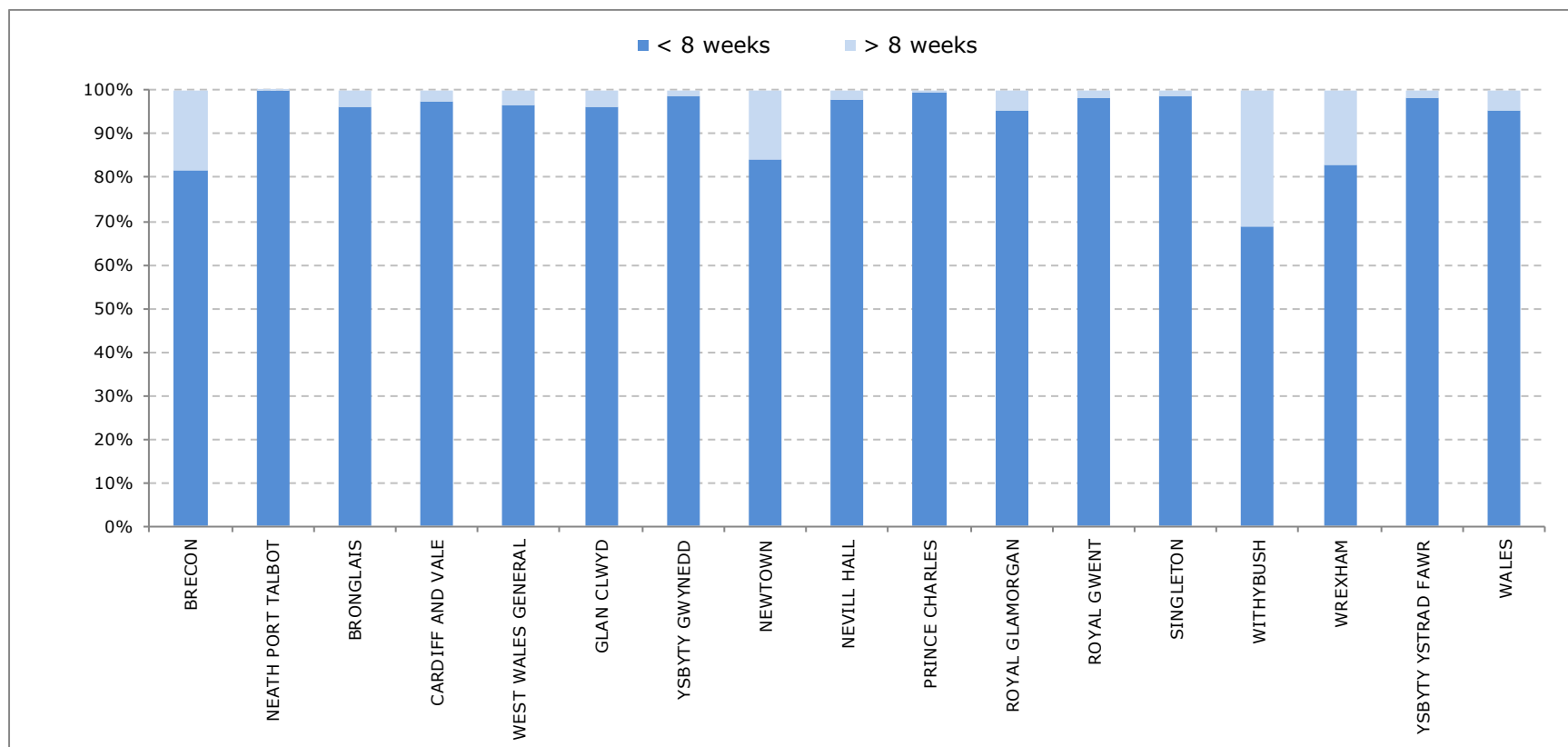
High grade referrals include borderline changes in endocervical cells, high grade dyskaryosis (moderate and severe), high grade dyskaryosis (query invasive squamous carcinoma), query glandular neoplasia of endocervical type and query glandular neoplasia of non cervical origin.

Table 6b shows referrals with negative (normal) cytology. These individuals are referred either because of persistent hrHPV in their sample, or because of previous high grade disease ('test of cure') and current hrHPV. Due to the persistence of hrHPV or their previous history, they are at higher risk of high grade disease.

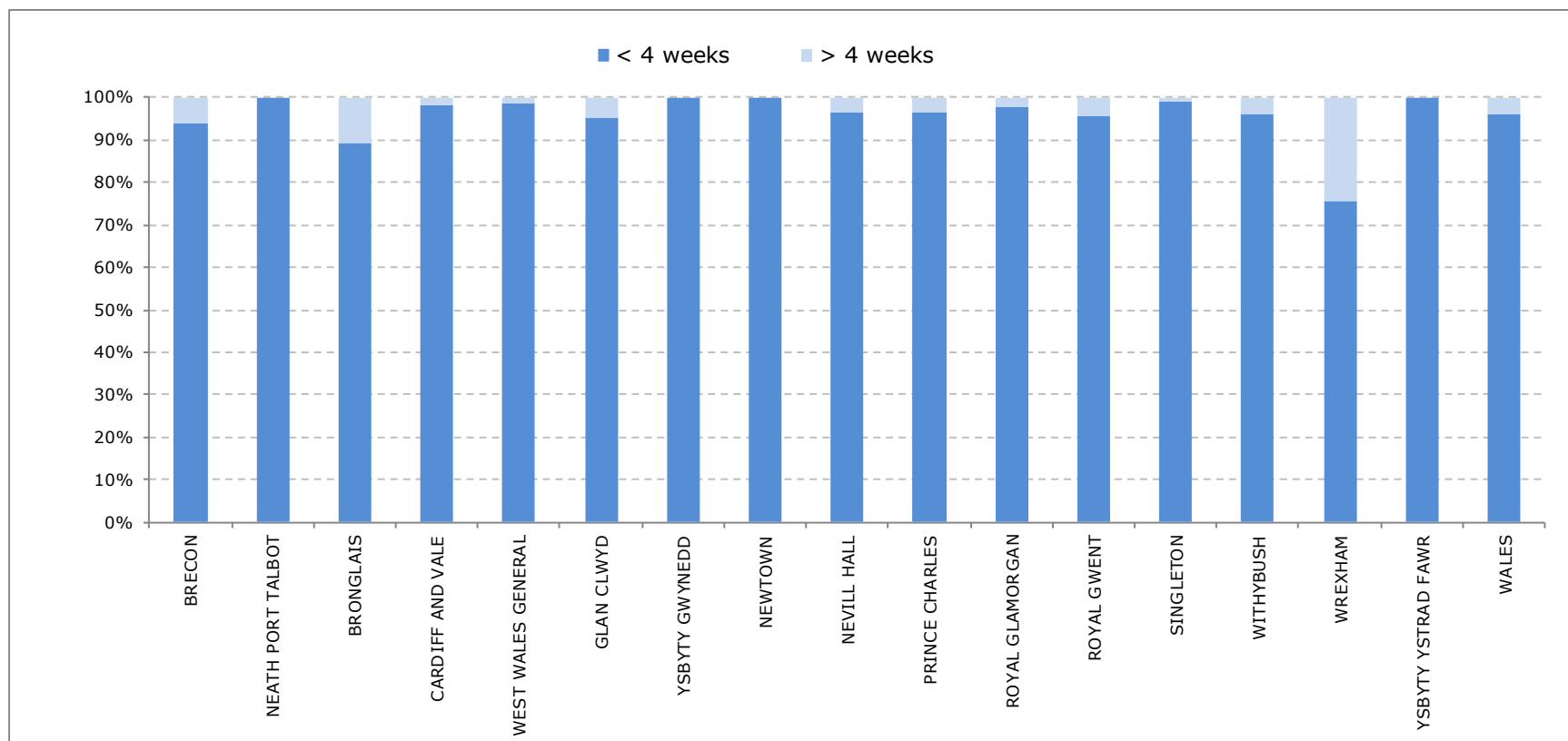
Table 6c: Waiting times by colposcopy clinic and type of referral

| | All referrals | | | | High grade dyskaryosis or worse | | | |
|--------------------|---------------|-----------------|---------------|------------------|---------------------------------|-----------------|---------------|------------------|
| Colposcopy Clinic | <8 weeks | 8 weeks or over | TOTAL | % within 8 weeks | <4 weeks | 4 weeks or over | TOTAL | % within 4 weeks |
| Brecon | 145 | 33 | 178 | 81.5% | 31 | 2 | 33 | 93.9% |
| Bronglais | 244 | 10 | 254 | 96.1% | 17 | 2 | 19 | 89.5% |
| Cardiff and Vale | 2,026 | 55 | 2,081 | 97.4% | 256 | 4 | 260 | 98.5% |
| Glan Clwyd | 495 | 20 | 515 | 96.1% | 118 | 6 | 124 | 95.2% |
| Neath Port Talbot | 937 | 2 | 939 | 99.8% | 159 | 0 | 159 | 100.0% |
| Nevill Hall | 384 | 9 | 393 | 97.7% | 84 | 3 | 87 | 96.6% |
| Newtown | 95 | 18 | 113 | 84.1% | 13 | 0 | 13 | 100.0% |
| Prince Charles | 867 | 5 | 872 | 99.4% | 85 | 3 | 88 | 96.6% |
| Royal Glamorgan | 832 | 40 | 872 | 95.4% | 100 | 2 | 102 | 98.0% |
| Royal Gwent | 1,236 | 23 | 1,259 | 98.2% | 231 | 10 | 241 | 95.9% |
| Singleton | 789 | 11 | 800 | 98.6% | 92 | 1 | 93 | 98.9% |
| West Wales General | 523 | 19 | 542 | 96.5% | 79 | 1 | 80 | 98.8% |
| Withybush | 266 | 121 | 387 | 68.7% | 47 | 2 | 49 | 95.9% |
| Wrexham | 548 | 113 | 661 | 82.9% | 81 | 26 | 107 | 75.7% |
| Ysbyty Gwynedd | 544 | 8 | 552 | 98.6% | 112 | 0 | 112 | 100.0% |
| Ysbyty Ystrad Fawr | 337 | 6 | 343 | 98.3% | 63 | 0 | 63 | 100.0% |
| All Wales | 10,268 | 493 | 10,761 | 95.4% | 1,568 | 62 | 1,630 | 96.2% |
| % | 95.4% | 4.6% | 100.0% | - | 96.2% | 3.8% | 100.0% | - |

Graph 6c1: Percentage of all new referrals offered an appointment within 8 weeks by colposcopy clinic (excluding patient instigated delays)



Graph 6c2: Percentage of high grade referrals offered an appointment within 4 weeks by colposcopy clinic (excluding patient instigated delays)



The tables and graphs above show the time taken from the receipt of referral to the first appointment offered by the colposcopy clinic, excluding delays initiated by patients. 96.2% of referrals for a result of high grade dyskaryosis or worse were offered an appointment within four weeks (90% standard). Over 95.4% of all referrals were offered an appointment within eight weeks (90% standard).

Table 6d: Total attended visits by type of visit and colposcopy clinic

| Colposcopy Clinic | Colposcopic assessment | Select and treat | Planned treatment | Follow up | Not specified | Total |
|--------------------|------------------------|------------------|-------------------|--------------|---------------|---------------|
| Brecon | 140 | 27 | 28 | 125 | <5 | 320 |
| Bronglais | 241 | 10 | 37 | 84 | 13 | 385 |
| Cardiff and Vale | 2,137 | 89 | 332 | 385 | <5 | - |
| Glan Clwyd | 498 | 23 | 158 | 93 | 19 | 791 |
| Neath Port Talbot | 806 | 14 | 173 | 278 | <5 | 1,271 |
| Nevill Hall | 317 | 58 | 45 | 59 | <5 | - |
| Newtown | 102 | <5 | 18 | 34 | <5 | - |
| Prince Charles | 763 | 35 | 185 | 372 | <5 | - |
| Royal Glamorgan | 863 | 14 | 279 | 310 | 92 | 1,558 |
| Royal Gwent | 1,108 | 99 | 200 | 296 | <5 | - |
| Singleton | 737 | <5 | 139 | 233 | <5 | 1,114 |
| West Wales General | 478 | 12 | 162 | 586 | <5 | 1,238 |
| Withybush | 343 | 7 | 86 | 273 | <5 | - |
| Wrexham | 600 | 22 | 118 | 97 | 68 | 905 |
| Ysbyty Gwynedd | 584 | 23 | 170 | 118 | <5 | 895 |
| Ysbyty Ystrad Fawr | 272 | 45 | 43 | 80 | <5 | - |
| All Wales | 9,989 | 482 | 2,173 | 3,423 | 206 | 16,273 |
| % | 61.4% | 3.0% | 13.4% | 21.0% | 1.3% | 100.0% |

There were 16,273 recorded attended visits during 2018-19. The majority of these were for 'colposcopic assessment'. Although only 482 visits were recorded as 'select and treat' (where treatment is performed at a first visit to colposcopy), there was variation in this practice across Wales. One clinic accounted for 20.5% of these cases, whereas another clinic only accounted for 0.2%.

Table 6e shows procedures undertaken for new referrals. 45.2% did not require any biopsy or treatment. 48.2% received a diagnostic biopsy only and 5.9% had a treatment procedure performed. Diagnostic biopsies show variations between clinics ranging from 24.8% to 70.9%.

Table 6e: New patients seen by most significant procedure at first visit and type of referral

| Referral Type | Ablation | Excision | Diagnostic biopsy | Other | No treatment | Total |
|---------------------|-------------|-------------|-------------------|-------------|--------------|---------------|
| CSW Direct Referral | 5 | 421 | 3,132 | 3 | 1,789 | 5,350 |
| Other Referral | 49 | 26 | 974 | 62 | 2,064 | 3,175 |
| All Wales | 54 | 447 | 4,106 | 65 | 3,853 | 8,525 |
| % | 0.6% | 5.2% | 48.2% | 0.8% | 45.2% | 100.0% |

Table 6f: New patients seen by most significant procedure at first visit and colposcopy clinic

| Colposcopy Clinic | Ablation | Excision | Diagnostic biopsy | Other | No treatment | Total |
|--------------------|-------------|-------------|-------------------|-------------|--------------|---------------|
| Brecon | <5 | 24 | 58 | <5 | 49 | 132 |
| Bronglais | 7 | <5 | 72 | <5 | 116 | 195 |
| Cardiff and Vale | <5 | 92 | 715 | <5 | 803 | 1,612 |
| Glan Clwyd | <5 | 21 | 305 | <5 | 100 | 430 |
| Neath Port Talbot | <5 | 13 | 283 | <5 | 418 | 717 |
| Nevill Hall | <5 | 54 | 77 | <5 | 174 | 311 |
| Newtown | <5 | <5 | 24 | <5 | 64 | 88 |
| Prince Charles | 12 | 23 | 328 | <5 | 336 | 699 |
| Royal Glamorgan | 5 | 8 | 323 | 11 | 355 | 702 |
| Royal Gwent | <5 | 98 | 345 | 13 | 509 | 968 |
| Singleton | <5 | 6 | 316 | 16 | 301 | 642 |
| West Wales General | <5 | 11 | 293 | <5 | 134 | 439 |
| Withybush | <5 | 10 | 157 | 9 | 149 | 327 |
| Wrexham | <5 | 30 | 291 | <5 | 214 | 542 |
| Ysbyty Gwynedd | 9 | 17 | 362 | <5 | 69 | 457 |
| Ysbyty Ystrad Fawr | <5 | 40 | 157 | 5 | 62 | 264 |
| All Wales | 54 | 447 | 4,106 | 65 | 3,853 | 8,525 |
| % | 0.6% | 5.2% | 48.2% | 0.8% | 45.2% | 100.0% |

Table 6g: New patients seen by colposcopic opinion and worst outcome of histology

| Colposcopic Opinion | Cancer | CGIN | High grade CIN | CIN1 | No abnormality detected | Inadequate biopsy | Unknown | No biopsy taken | TOTAL |
|---------------------|-------------|-------------|----------------|--------------|-------------------------|-------------------|-------------|-----------------|---------------|
| ? Invasive | 32 | 1 | 30 | 4 | 4 | 0 | 1 | 1 | 73 |
| High grade | 28 | 29 | 921 | 149 | 139 | 2 | 14 | 23 | 1,305 |
| Low grade | 4 | 12 | 550 | 792 | 876 | 53 | 11 | 480 | 2,778 |
| Inflammatory | 1 | 4 | 107 | 157 | 483 | 26 | 18 | 597 | 1,393 |
| Normal | 2 | 2 | 26 | 27 | 108 | 4 | 5 | 1,344 | 1,518 |
| Other | 1 | 1 | 6 | 9 | 20 | 1 | 6 | 47 | 91 |
| Not specified | 3 | 2 | 32 | 19 | 48 | 3 | 4 | 1,197 | 1,308 |
| No Assessment | 0 | 0 | 4 | 3 | 2 | 0 | 1 | 49 | 59 |
| All Wales | 71 | 51 | 1,676 | 1,160 | 1,680 | 89 | 60 | 3,738 | 8,525 |
| % | 0.8% | 0.6% | 19.7% | 13.6% | 19.7% | 1.0% | 0.7% | 43.8% | 100.0% |

Correlation between colposcopic opinion and worst histology result recorded is shown in Table 6g. 57.9% of histology results reported as CIN2 or worse were similarly identified on assessment (sensitivity of colposcopic opinion). 76.4% of lesions thought by the colposcopist to be high grade or worse were reported CIN2 or worse on histology, for all known results (PPV of colposcopic opinion).

Table 6h: New patients seen by type of referral and worst outcome of histology

| Referral Type | Cancer | CGIN | High grade CIN | CIN1 | No abnormality detected | Inadequate biopsy | Unknown | No biopsy taken | TOTAL |
|---------------------|-----------|-----------|----------------|--------------|-------------------------|-------------------|-----------|-----------------|--------------|
| CSW Direct Referral | 51 | 47 | 1,563 | 939 | 1,023 | 59 | 25 | 1,643 | 5,350 |
| Other Referral | 20 | 4 | 113 | 221 | 657 | 30 | 35 | 2,095 | 3,175 |
| All Wales | 71 | 51 | 1,676 | 1,160 | 1,680 | 89 | 60 | 3,738 | 8,525 |

Table 6i: New patients seen by colposcopy clinic and worst outcome of histology

| Colposcopy Clinic | Cancer | CGIN | High grade CIN | CIN1 | No abnormality detected | Inadequate biopsy | Unknown | No biopsy taken | Total |
|--------------------|-------------|-------------|----------------|--------------|-------------------------|-------------------|-------------|-----------------|---------------|
| Brecon | <5 | <5 | 40 | 17 | 35 | <5 | <5 | 38 | 132 |
| Bronglais | <5 | <5 | 20 | 26 | 29 | <5 | <5 | 115 | 195 |
| Cardiff and Vale | 13 | 11 | 263 | 156 | 381 | 5 | 22 | 761 | 1,612 |
| Glan Clwyd | <5 | 6 | 137 | 98 | 87 | 13 | <5 | 86 | 430 |
| Neath Port Talbot | 6 | 5 | 141 | 78 | 63 | 13 | <5 | 411 | 717 |
| Nevill Hall | <5 | <5 | 76 | 14 | 41 | <5 | <5 | 170 | 311 |
| Newtown | <5 | <5 | 12 | 10 | <5 | <5 | <5 | 60 | 88 |
| Prince Charles | 6 | <5 | 102 | 109 | 141 | <5 | <5 | 336 | 699 |
| Royal Glamorgan | <5 | <5 | 99 | 104 | 139 | 6 | 8 | 341 | 702 |
| Royal Gwent | 14 | <5 | 205 | 67 | 163 | 9 | 7 | 499 | 968 |
| Singleton | 6 | <5 | 96 | 74 | 141 | 13 | <5 | 309 | 642 |
| West Wales General | <5 | <5 | 105 | 108 | 89 | 7 | <5 | 126 | 439 |
| Withybush | <5 | <5 | 63 | 53 | 48 | <5 | <5 | 156 | 327 |
| Wrexham | <5 | <5 | 112 | 91 | 110 | <5 | 13 | 208 | 542 |
| Ysbyty Gwynedd | 5 | 9 | 141 | 120 | 115 | 5 | <5 | 60 | 457 |
| Ysbyty Ystrad Fawr | <5 | <5 | 64 | 35 | 94 | 5 | <5 | 62 | 264 |
| All Wales | 71 | 51 | 1,676 | 1,160 | 1,680 | 89 | 60 | 3,738 | 8,525 |
| % | 0.8% | 0.6% | 19.7% | 13.6% | 19.7% | 1.0% | 0.7% | 43.8% | 100.0% |

4 Audit of cervical cancer in Wales 2017-18

The Cervical Screening Wales Audit of Cervical Cancer (CSWACC) database is a bespoke web-enabled database, used solely by CSW. All cervical cancer diagnoses for individuals resident in Wales at the time of diagnosis are entered onto the CSWACC database.

Information regarding cervical cancer diagnoses is received from:

- Pathology reports
- Hospital/GP letters
- Death reports
- Welsh Cancer Intelligence and Surveillance Unit (WCISU)

The demographics for each individual are uploaded automatically. Each case is then reviewed by the Clinical Lead for CSW who checks that the case is a cervical cancer, and that the following data are complete, where possible:

- Histological cancer type
- Cancer staging
- Overall treatment
- Screen –detected status
 - If non-screening detected, then further categorization (e.g. never screened, lapsed screening)

The CSW Clinical Lead ensures that reviews are requested and completed for eligible screening samples or prior colposcopy episodes. The review is primarily for education and improvement of the screening programme, but individuals are informed of the review and are able to have a disclosure of any review results, on request.

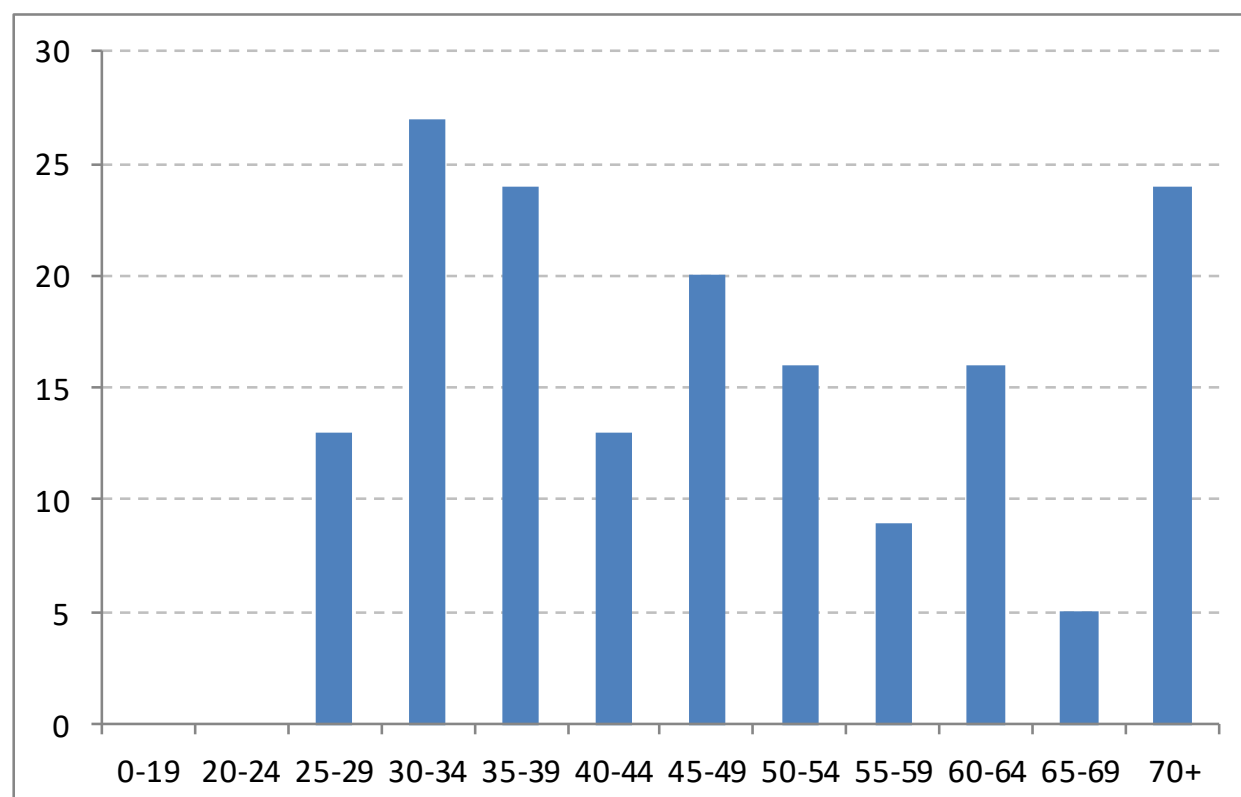
As of August 2019, there were 167 cervical cancers on the CSWACC database for the period 1 April 2017 – 31 March 2018. The final number of cancers for this period may increase as cancer registry data can be delayed, and also as some resident individuals may be diagnosed 'out of area'.

During the period April 2018 – March 2019, 8 women requested meetings to discuss their review results.

4.1 Age at diagnosis

The age range at diagnosis was 26 years to 90 years. The median was in the 45-49 age group, with a peak in the 30-34 age group (Graph 7a).

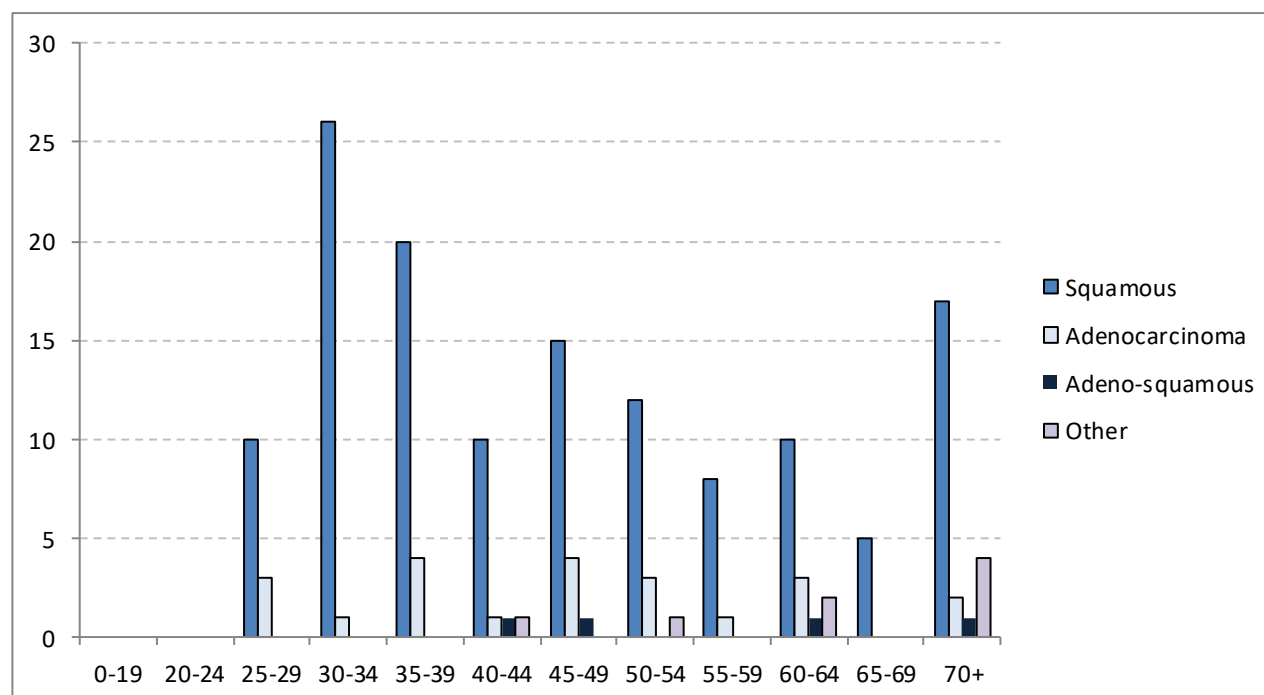
Graph 7a: Number of Cervical Cancers by Age Band



4.2 Cancer type

Of the 167 cancers diagnosed, 133 (79.6%) were squamous cell carcinomas, 22 (13.2%) were adenocarcinomas, 4 (2.4%) were adenosquamous carcinomas and 3 (1.8%) were 'other'. The 'other' group included neuroendocrine, small cell and cases where no biopsy had been taken to confirm histological diagnosis. There were 5 cases that were not categorized into cancer type.

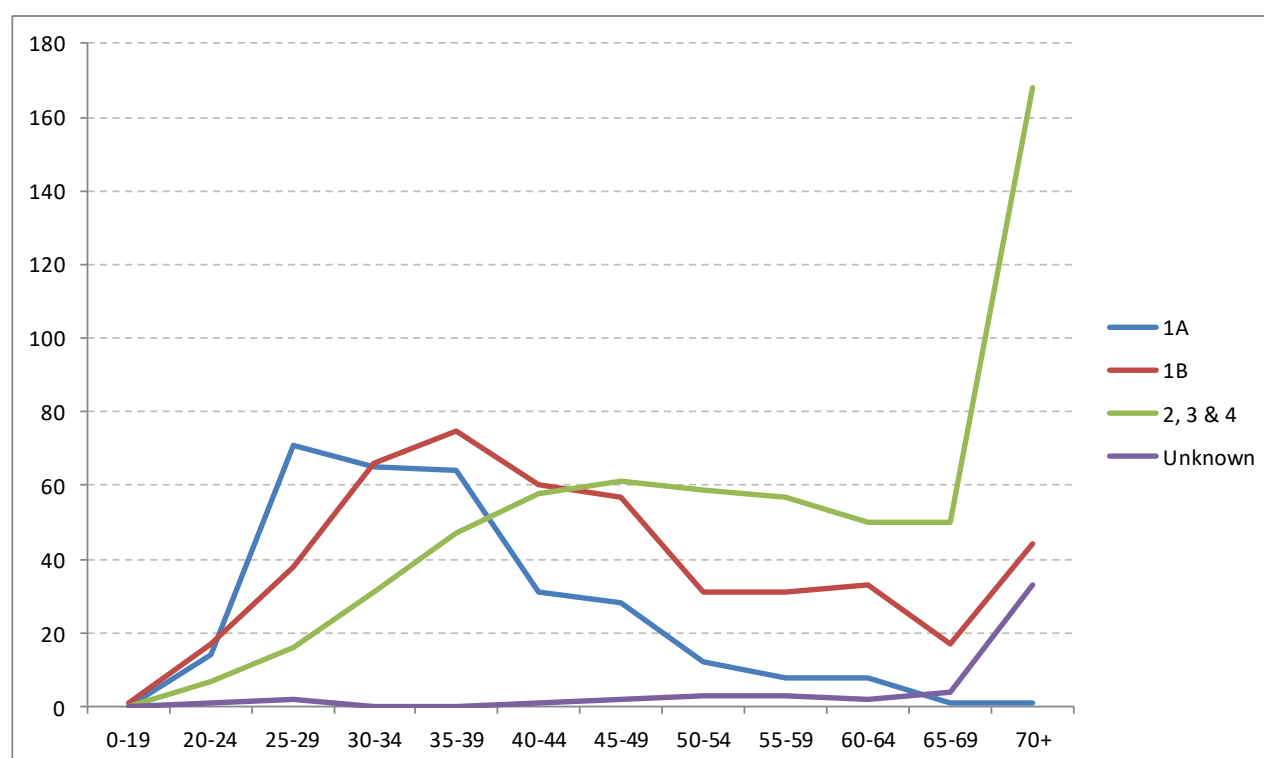
Squamous cell carcinomas appeared to show the same age distribution pattern as 'all' cancers, with the peak in the 30-34 group.

Graph 7b: Number of cervical cancers by type and age at diagnosis

4.3 Cancer stage

Of the 167 cases, 31 (21.2%) were stage 1A, 45 (32.9%) were stage 1B, 46 (21.5%) were stage 2, 19 (11.4%) were stage 3 and 22 (13.2%) were stage 4. In four cases staging was not undertaken, which may have been due to the diagnosis only being recorded on a death certificate.

Due to the small numbers, the cancers diagnosed from 2009-2018 are shown by age and stage (graph 7c). This shows the peak for stage 1A is in the 25-29 age group, for 1B in the 35-39 age group and for later stage cancers the peak occurs in the older age group.

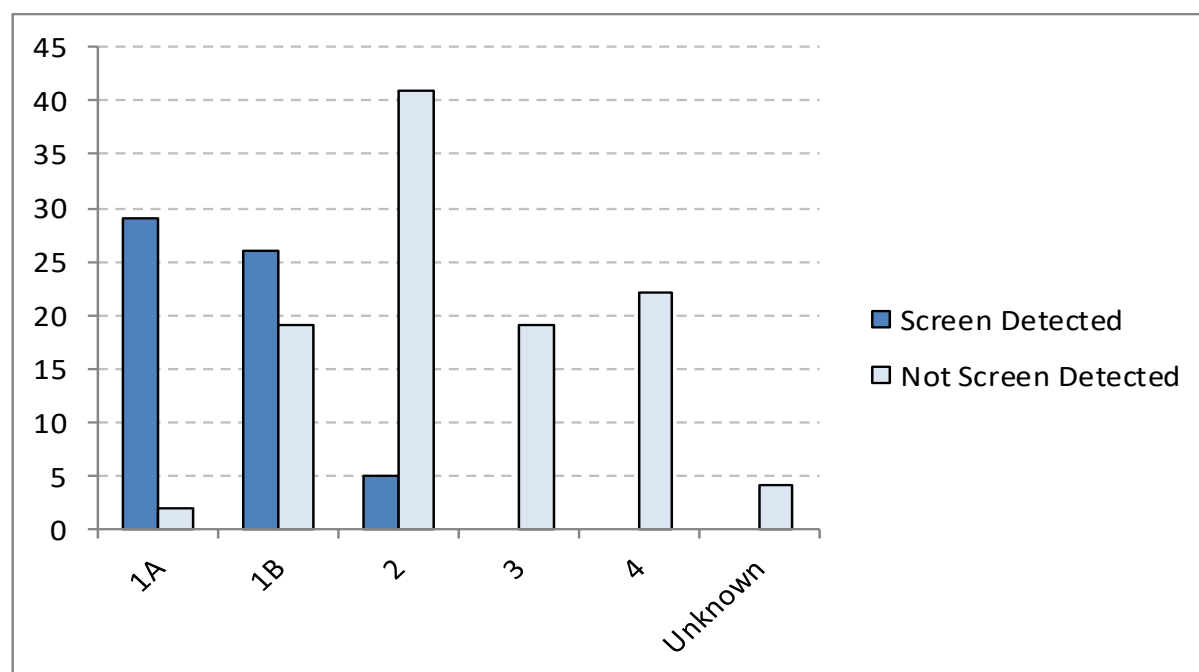
Graph 7c: Number of cervical cancers by stage and age at diagnosis

4.4 Screen-detected status

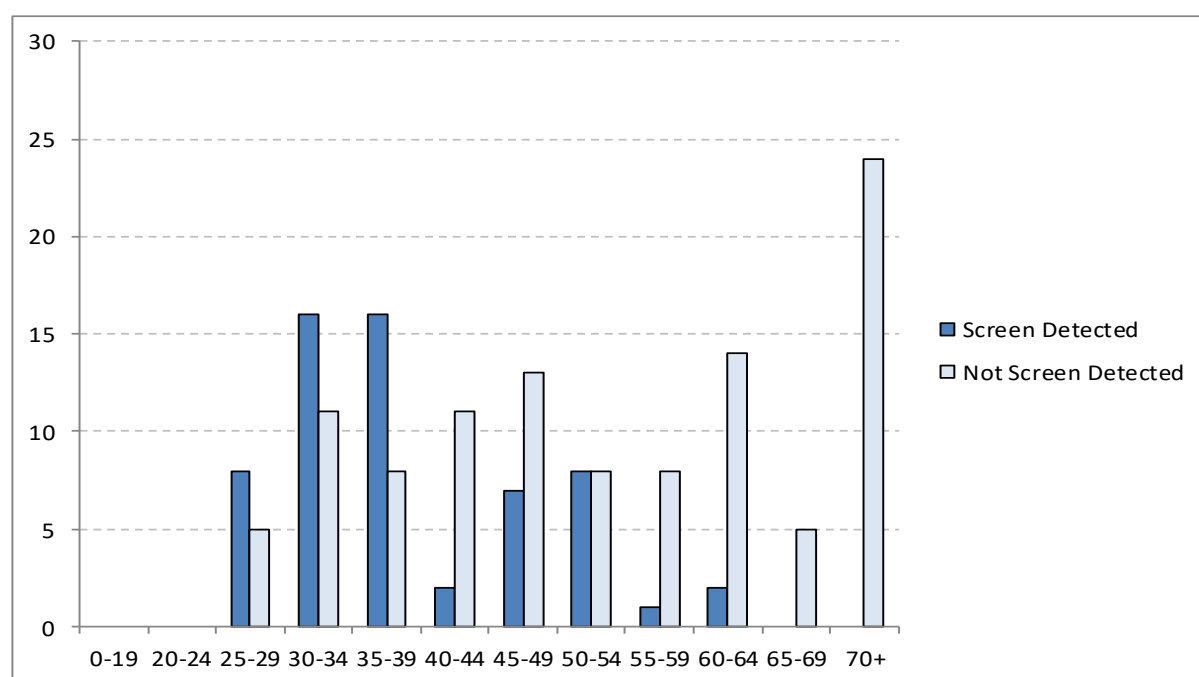
The definition of screen-detected cancer is a cancer detected following referral due to an abnormal screening test. This may include cases where individuals have not attended for screening for many years, as long as they did not present for screening due to symptoms. Although the aim of the screening programme is to reduce the incidence of invasive cervical cancer, sometimes cancer is detected by the screening test.

Non-screen detected cancers are those where the individual presents because of symptoms, leading to their cancer diagnosis, rather than as a result of a screening test. Non-screen detected cancers may occur in individuals with full screening histories, with long periods of non-attendance, or with no screening history.

Of the 167 cancers, 60 (35.9%) were screen detected and 104 (62.3%) were not. There were 3 cancers that were not classified into screen-detected status. It is clear that the majority of screen detected cancers were early stage (1A and 1B), whereas non-screen detected cancers were mainly later stage.

Graph 7d: Number of cervical cancers by stage and screen-detected status

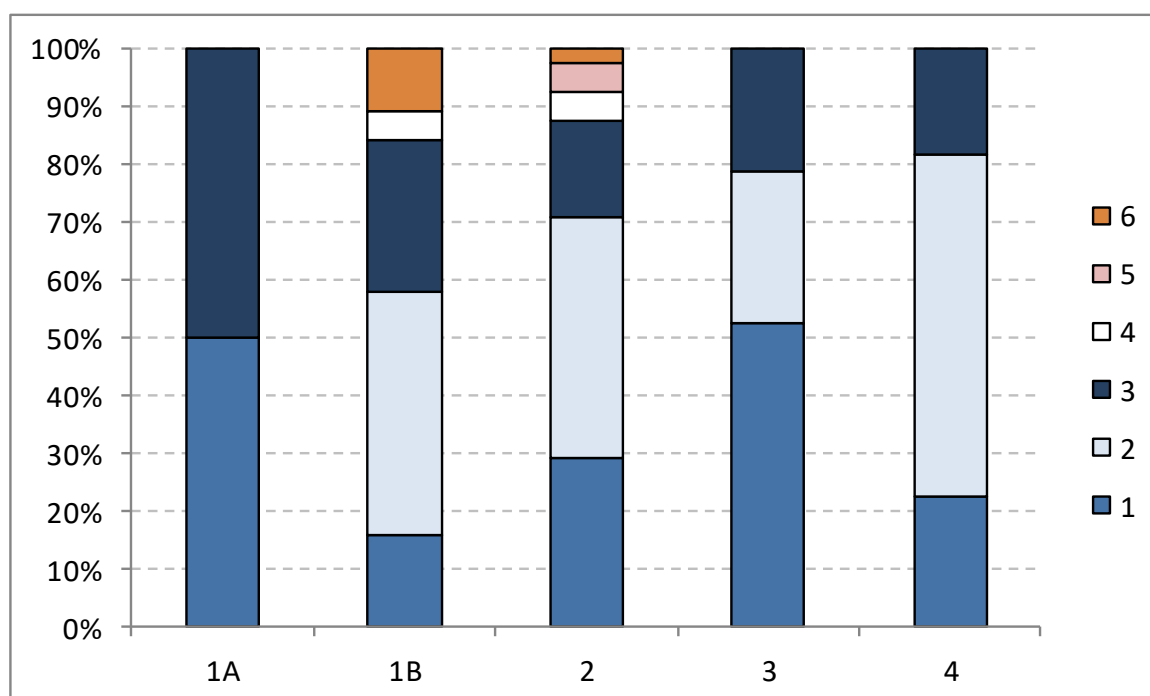
Across the age range, cancers in younger individuals were more likely to have been screen-detected, whereas those in older individuals were mainly non screen-detected. In individuals aged over 65 years, many had never been screened, or had not been screened for many years. This latter group includes those who had not been screened for many years before the age of 65 (when they exited the programme), but also those who were fully screened up to the age of 65 but were diagnosed over the age of 70.

Graph 7e: Number of cervical cancers by age and screen-detected status

Where a cancer is non screen-detected, the individual's screening history is categorized as per the list below:

- 1 - No record of a cervical screening
- 2 - Screened more than 5.5 years before diagnosis (this includes individuals over 65 who may have been fully screened up till that age)
- 3 - Screening reported only as negative within preceding 6 months - 5.5 years (may include an occasional inadequate screening if quickly repeated as negative)
- 4 - Non-negative screening(s), including inadequate screening(s), recommending repeat (within the preceding 6 months - 5.5 years)
- 5 - Previous treatment for cervical intraepithelial neoplasia (CIN) (within preceding 6 months - 5.5 years) following abnormal screening recommending referral
- 6 - Abnormal screening within the preceding 6 months - 5.5 years recommending referral to colposcopy with subsequent delay in diagnosis

Graph 7f: Non screen-detected cancers by stage and screening history



There is a pattern between the non-screening detected category for these cases and the cancer stage. The higher the stage, the more likely they are to be individuals who have either no record of a cervical smear, or it has been over 5.5 years since their last screen.

5 Definitions

This section provides further detail on terminology and calculations used in this report.

Eligible

Eligible individuals were those resident in Wales.

Uptake

Note that the percentage of individuals attending for screening vs the percentage invited cannot be precisely measured as some tests undertaken in the screening year (1 April to 31 March) may result from 'marginal' invitations, either issued in the previous screening year, or taken up in the following year.

Coverage

Coverage figures are not directly comparable year on year.

- Prior to 1997-98, all individuals classified as 'recall ceased' by the programme (for medical, age or other reasons) were excluded from the denominator used to calculate coverage
- In 1998/99 the definition changed to exclude only those individuals with "recall ceased for clinical reasons" (no cervix)
- Since 2001-02, coverage figures include only those individuals who received an adequate test in the last 3.5 or 5 years in the numerator.

Age Appropriate Coverage

Age appropriate coverage figures include individuals aged 25-49 years who received an adequate test in the last 3.5 years and individuals aged 50-64 years who received an adequate test in the last 5.5 years in the numerator.

Health Board

This is health board of residence.

Invited

From 2016-17 onwards, the number of individuals invited by Cervical Screening Wales, has been calculated by analysis of the data extracted from the call and recall system – invitations that were issued by the Welsh programme for individuals during the time period.

Tested

From 2016-17 onwards, the number of individuals tested by Cervical Screening Wales, has been calculated by analysis of the data extracted from the call and recall system – tests that have been taken in Wales during the time period.

Direct referral

Where a screening sample result indicates that an individual needs a colposcopic examination, the referral is made by Cervical Screening Wales, rather than the sample taker.

Cytology

The examination of individual cells under a microscope, to look for cell changes.

Histology

The examination of body tissue (e.g biopsies) under a microscope.

Colposcopy

Examination of the cervix using visual inspection with acetic acid and magnification.

Positive Predictive Value

The positive predictive value (PPV) is the proportion of those thought to have a high grade abnormality on screening, that then go on to have a proven high grade abnormality.

Cytology PPV correlates high grade cytology opinion with histology outcome. It calculates the proportion of cases in which an adequate biopsy, following a screening test reported as high-grade dyskaryosis (moderate) or worse, yields a histological diagnosis of CIN2 or worse. This excludes individuals referred to colposcopy following a test result of non-cervical query glandular neoplasia.

From 2007-08 onwards KC61 part C data shows outcomes for cervical and non-cervical cancers separately. Non-cervical cancers are excluded from PPV calculations. From 2012-13 the definition for calculating PPV has changed, the denominator now includes – colposcopy no abnormality detected (NAD) with no biopsy taken.

Colposcopy PPV correlates high grade colposcopy opinion with histology outcome.

Abnormal Predictive Value

The Abnormal Predictive Value (APV) calculates the percentage of samples reported as borderline changes or low-grade dyskaryosis that led to referral and subsequent histological diagnosis of CIN2 or worse. For the period of this report, this also includes samples reported as showing 'borderline change in endocervical cells'.

Referral Value

The referral value (RV), is defined as the number of individuals referred to colposcopy per detection of one CIN2 or worse histology result. This excludes

individuals referred to colposcopy following a test result of inadequate or query glandular neoplasia (non-cervical).

Incidence

The number of new cases per year of invasive cervical cancer

Morbidity

The harm caused by cervical cancer and by treating cervical cancer, both physical and psychological)

Mortality

Deaths caused from invasive cervical cancer.

6 Production Team and Pre-Release List

The production team for this report are all employed within Public Health Wales and are listed below.

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| Helen Clayton | Lead Informatics and Data Services Manager |
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| Dr Louise Pickford | Clinical Lead for Cervical Screening Wales |
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| Sarah Jones | Communications Executive |
| Jamie Topp | Digital Editor |
| Rhys George | Cofus CTF (Welsh translation) |

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

Public Health Wales

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| Stephen Thomas | Head of Health Protection Branch |