



# Bowel Screening Wales Annual Statistical Report 2018-19

February 2020



# About us

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

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

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

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

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

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

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

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

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

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

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

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

## Further information

**Web:** [phw.nhs.wales](http://phw.nhs.wales)  
**Email:** [general.enquiries@wales.nhs.uk](mailto:general.enquiries@wales.nhs.uk)  
**Twitter:** [@PublicHealthW](https://twitter.com/PublicHealthW)  
**Facebook:** [facebook.com/PublicHealthWales](https://facebook.com/PublicHealthWales)

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

### **Publication Details:**

**Title:** Bowel Screening Wales Annual Statistical Report 2018-19

**Date:** This report published 13 February 2020

**ISBN:** 978-1-78986-110-5

### **For more information about this report contact:**

Helen Clayton, Lead Informatics and Data Services Manager,  
Informatics Division, Floor 6, Public Health Wales, Number 2 Capital  
Quarter, Tyndall Street, Cardiff, CF10 4BZ  
Tel: 029 2010 4405

Email: [screening.information@wales.nhs.uk](mailto:screening.information@wales.nhs.uk)

Rydym yn croesawu gohebiaeth a galwadau ffôn yn Gymraeg. Byddwn yn ateb gohebiaeth yn Gymraeg heb oedi / We welcome correspondence and phone calls in Welsh. We will respond to correspondence in Welsh without delay.

### **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 is received from a large number of different sources with varying levels of accuracy and completeness. The Screening Division checks data for accuracy by comparing datasets – for example GP practice data – and corrects the coding data where possible. It should be noted that there are sometimes delays in data collection – for example a person might not immediately register with their GP if they move address. These delays will therefore affect the completeness of the data depending on individual circumstances. In addition, the reader should be aware that data is constantly updated and there might be slight readjustments in the numbers cited in this document year on year because of data refreshing. We occasionally suppress numbers lower than five when the data is potentially sensitive.

© 2020 Public Health Wales NHS Trust

Material contained in this document may be reproduced under the terms of the Open Government Licence (OGL)

[www.nationalarchives.gov.uk/doc/open-government-licence/version/3/](http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/) provided it is done so accurately and is not used in a misleading context.

Acknowledgement to Public Health Wales NHS Trust to be stated.

Copyright in the typographical arrangement, design and layout belongs to Public Health Wales NHS Trust.

This document is also available in Welsh.

## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>7</b>
1.1	'Key messages' for the public .....	7
1.2	Programme delivery .....	7
1.3	Screening pathway .....	8
<b>2</b>	<b>HEADLINE STATISTICS .....</b>	<b>9</b>
<b>3</b>	<b>DATA .....</b>	<b>11</b>
3.1	Coverage and Uptake .....	11
3.2	Participants invited .....	20
3.3	Validated tests .....	23
3.4	Waiting times for screening results .....	25
3.5	Attendance at colonoscopy.....	26
3.6	Detection rates.....	26
3.7	Waiting times for index colonoscopy/ flexible sigmoidoscopy appointment within four weeks of Booking SP Appointment .....	27
3.8	Attendance at CT scans .....	27
<b>4</b>	<b>DEFINITIONS .....</b>	<b>27</b>
<b>5</b>	<b>PRODUCTION TEAM AND PRE-RELEASE LIST .....</b>	<b>30</b>

## Tables and Graphs

Table 1a: Bowel Screening Coverage (within 2.5 years) by Health Board of residence, as at 1 October 2019..... 11

Graph 1a: Bowel Screening Coverage (within 2.5 years) by Health Board of residence, as at 1 October 2019..... 12

Table 1b: Bowel Screening Coverage (within 2.5 years) by Deprivation Quintile and Health Board of residence, as at 1 October 2019..... 13

Graph 1b: Bowel Screening Coverage (within 2.5 years) by Deprivation Quintile and Health Board of residence, as at 1 October 2019..... 14

Table 1c: Bowel Screening Uptake by Health Board of residence..... 15

Graph 1c: Bowel Screening Uptake by Health Board of residence..... 16

Table 1d: Bowel Screening Uptake by Deprivation Quintile and Health Board of residence.....17

Graph 1d: Bowel Screening Uptake by Deprivation Quintile and Health Board of residence.....	18
Table 1e: All Wales Bowel Screening Uptake by Type of Recall.....	19
Table 1f: All Wales Bowel Screening Coverage and Uptake - Historical Comparison .....	19
Table 2a: Number of male participants invited for bowel screening – by age and Health Board of residence.....	20
Table 2b: Number of female participants invited for bowel screening – by age and Health Board of residence .....	21
Table 2c: Total participants invited for bowel screening – by age and Health Board of residence .....	22
Table 3a: Bowel Screening tests validated by test result and Health Board of residence – FOBt kit.....	23
Table 3b: Bowel Screening tests validated by test result and Health Board of residence – secondary, confirmatory, test kit.....	23
Table 3c: Bowel Screening tests validated by test result and Health Board of residence – Liquid FIT kit.....	24
Table 3d: Bowel Screening tests validated by test result and Health Board of residence – Total tests .....	24
Table 4: Waiting time for screening test results, from receipt of test to validated result .....	25
Table 5: Attendance at index colonoscopy/ flexible sigmoidoscopy by Health Board of residence.....	26
Table 6: All Wales Cancer / Polyp / Adenoma detection rates at index colonoscopy/ flexible sigmoidoscopy .....	26

## 1 Introduction

This is the sixth annual statistical report published by Bowel Screening Wales (BSW). This report covers data for the financial year 2018-19. BSW was launched in October 2008 with the aim to reduce the number of people dying from bowel cancer in Wales by 15% by 2020 in the group of people invited for screening.

The aim of the bowel screening programme is to identify cancer early when treatment is more likely to be successful and also remove pre-cancerous growths. In the year 2018-19 Bowel Screening Wales diagnosed 232 people with bowel cancers and removed polyps for 1,223 participants.

The 2018 Annual Report from the National Bowel Cancer Audit<sup>1</sup> reported that 23% of patients diagnosed with bowel cancer were referred via screening programmes in England and Wales. Screen detected patients had less advanced disease, were generally fitter and more likely to have curative treatment.

### 1.1 'Key messages' for the public

- Bowel screening reduces your risk of dying from bowel cancer
- Men and women aged 60 to 74 are invited to take part every two years
- You may feel well even if you have early bowel cancer. Finding cancer early gives you the best chance of survival
- Bowel screening uses a free NHS test that can be completed easily in your own home
- Screening will miss some cancers, and some cancers cannot be cured
- Taking part in bowel screening is your choice. If you are invited for screening we encourage you to read the information pack 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 programme. The programme is led by a Consultant in Public Health Medicine and headed by a Head of Programme. The bowel screening programme is delivered by multi-disciplinary staff, including screening colonoscopists, pathologists, radiologists, nursing, administrative and laboratory-based staff. The programme is supported by Quality Assurance Advisors for colonoscopy, pathology, biochemistry, radiology and surgery.

<sup>1</sup> 2018 NBOCAP <https://www.nboca.org.uk/content/uploads/2018/12/NBOCA-annual-report-2018-v2.pdf>

### 1.3 Screening pathway

Eligible participants are identified from the Welsh Demographic System and invited for screening. Men and women aged 60 to 74 years are invited every two years.

Invitation is based on date of birth and comprises a letter and an information pack which contains the test to complete. During 2018-19 the primary screening test was a Guaiac Faecal Occult Blood (FOBT) test. The test is sent to eligible people by post for completion at home and returned to the central screening laboratory by post in the prepaid envelope provided.

People with negative screening test results are returned to routine recall and invited again for screening two years later, if they remain in the eligible age range. Those with equivocal results are sent a more sensitive secondary test to confirm the presence of blood in the stool sample.

Participants with positive results are invited for assessment of their fitness for colonoscopy with Screening Practitioners (SP), who are nurses based in hospitals across Wales. Most assessments are undertaken by telephone, but face to face appointments are available on request or if considered necessary by the SP.

If considered fit, colonoscopy is offered to the participant and, if accepted, this is undertaken at a hospital local to the participant. Depending on the findings after colonoscopy, participants are either; returned to routine recall; put onto a surveillance programme according to the number and size of polyps identified and removed; or referred to the multi-disciplinary team following a diagnosis of cancer.

If a participant is not fit for colonoscopy, a Computerised Tomography (CT) scan is usually offered.

During 2019 the programme started the introduction of a new primary screening test, the liquid faecal immunochemical test (liquid FIT) which is easier to complete for participants. This new test was introduced from January 2019 in a phased manner, with full implementation from September 2019.

More information is available at <http://www.bowelscreening.wales.nhs.uk/>

## 2 **Headline statistics**

This report covers the time period from April 2018 to March 2019.

- Bowel screening coverage as at 1 October 2019 was 55.7%, an increase from the previous year when coverage was 53.4%

Coverage on 1 October 2019 ranged from 55.0% in both Cardiff and Vale University Health Board and Cwm Taf University Health Board to 56.4% in both Aneurin Bevan University Health Board and Powys Teaching Health Board

- Bowel screening uptake for participants invited between April 2018 and March 2019 was 57.3%, an increase from the previous year when uptake was 55.7%

Uptake in 2018-19 ranged from 56.4% in Cardiff and Vale University Health Board to 58.3% in Powys Teaching Health Board

- Coverage and uptake rates were higher in females. Coverage was 57.2% in females compared to 54.1% in males, uptake was 58.8% in females compared to 55.7% in males
- Coverage and uptake rates were also higher in those living in the least deprived areas (62.8% and 64.9% respectively in the least deprived areas compared to 46.3% and 47.6% respectively in the most deprived areas)

### **For the period April 2018 to March 2019:**

- 283,622 participants were invited for bowel screening
- 175,215 tests were validated of which 1.1% were spoilt and a further 2.4% rejected as they could not be tested
- 163,580 tests were given a definitive result, of which 98.8% were negative and 1.2% were positive
- 3.4% of all guaiac Faecal Occult Blood (FOBT) tests were validated with an equivocal result, these participants were sent a second test kit
- For 83.9% of all tests a result letter was issued to the participant within a week (less than seven calendar days) of receipt by the laboratory
- Across Wales, 41.0% of participants with a screening positive result were offered a diagnostic procedure (colonoscopy or flexible sigmoidoscopy) within four weeks of contacting Bowel Screening Wales

to make the appointment with a Screening Practitioner. This is a decline from 46.0% in the previous year

- In 2018-19, 83.3% of participants with a screening positive result were offered a diagnostic procedure within eight weeks compared to 95.9% last year
- Attendance at the first diagnostic procedure was 93.5% with 1,744 participants attending a first procedure
- At the first diagnostic procedure, the cancer detection rate was 13.3%, polyp detection rate was 70.1% and the adenoma detection rate was 54.4%
- 232 participants were diagnosed with cancer and 1,223 participants had polyps detected and removed
- Across Wales, 95.2% of booked Computerised Tomography (CT) scans were attended

### 3 Data

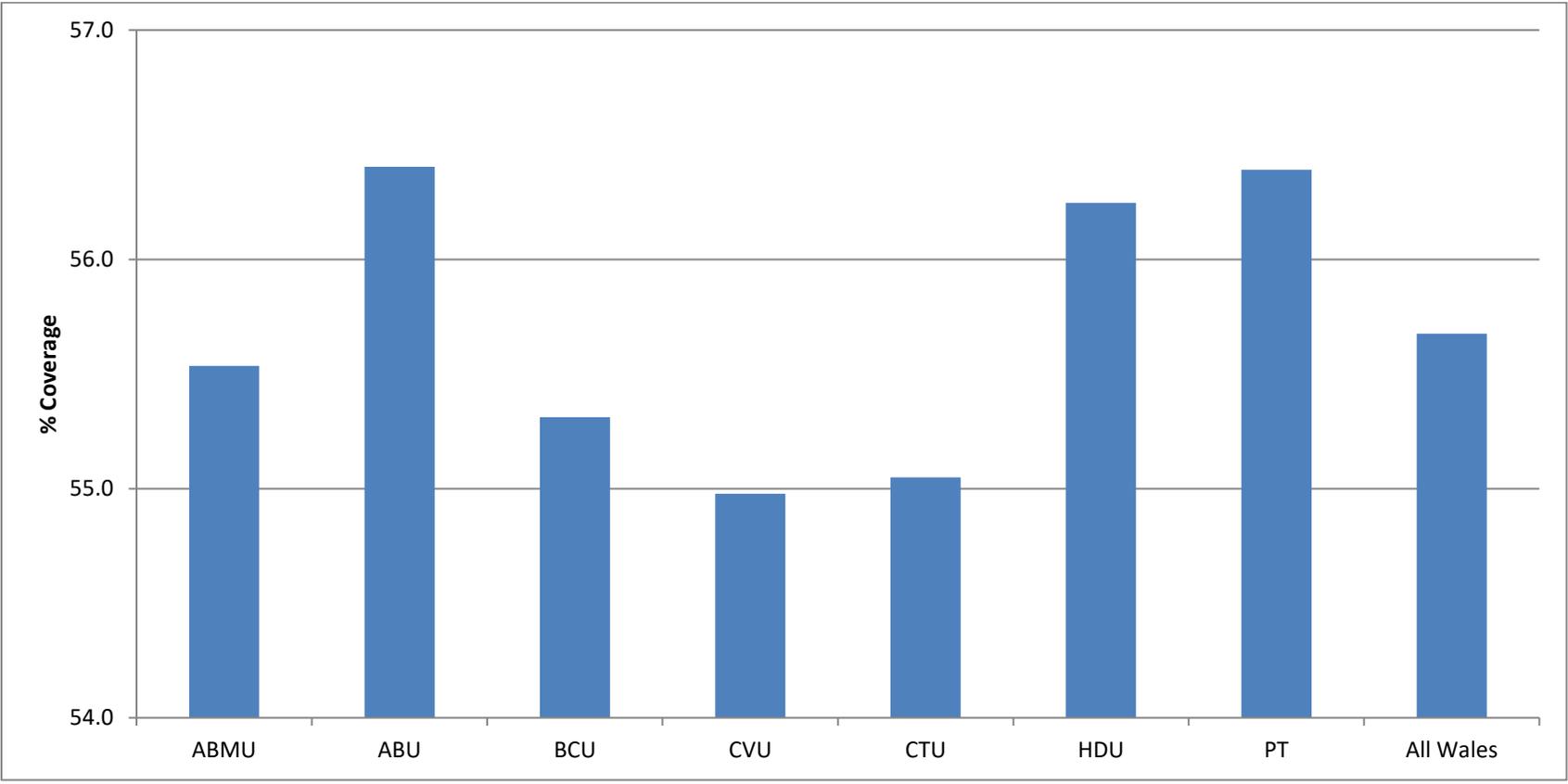
#### 3.1 Coverage and Uptake

**Table 1a:** Bowel Screening Coverage (within 2.5 years) by Health Board of residence, as at 1 October 2019

Health Board	Total			Female			Male		
	Eligible	Screened within 2.5 years	% Coverage	Eligible	Screened within 2.5 years	% Coverage	Eligible	Screened within 2.5 years	% Coverage
Abertawe Bro Morgannwg UHB	90,441	50,227	<b>55.5</b>	46,395	26,194	<b>56.5</b>	44,046	24,033	<b>54.6</b>
Aneurin Bevan UHB	100,219	56,527	<b>56.4</b>	50,911	29,416	<b>57.8</b>	49,308	27,111	<b>55.0</b>
Betsi Cadwaladr UHB	129,972	71,889	<b>55.3</b>	66,419	37,757	<b>56.8</b>	63,553	34,132	<b>53.7</b>
Cardiff and Vale UHB	70,583	38,805	<b>55.0</b>	35,840	20,391	<b>56.9</b>	34,743	18,414	<b>53.0</b>
Cwm Taf UHB	50,204	27,637	<b>55.0</b>	25,391	14,129	<b>55.6</b>	24,813	13,508	<b>54.4</b>
Hywel Dda UHB	77,113	43,373	<b>56.2</b>	39,151	22,812	<b>58.3</b>	37,962	20,561	<b>54.2</b>
Powys Teaching HB	28,852	16,270	<b>56.4</b>	14,570	8,605	<b>59.1</b>	14,282	7,665	<b>53.7</b>
Unknown	8,165	4,575	<b>56.0</b>	4,134	2,396	<b>58.0</b>	4,031	2,179	<b>54.1</b>
<b>All Wales</b>	<b>555,549</b>	<b>309,303</b>	<b>55.7</b>	<b>282,811</b>	<b>161,700</b>	<b>57.2</b>	<b>272,738</b>	<b>147,603</b>	<b>54.1</b>

For description of uptake and coverage calculations, please see definitions in section 4.

**Graph 1a:** Bowel Screening Coverage (within 2.5 years) by Health Board of residence, as at 1 October 2019

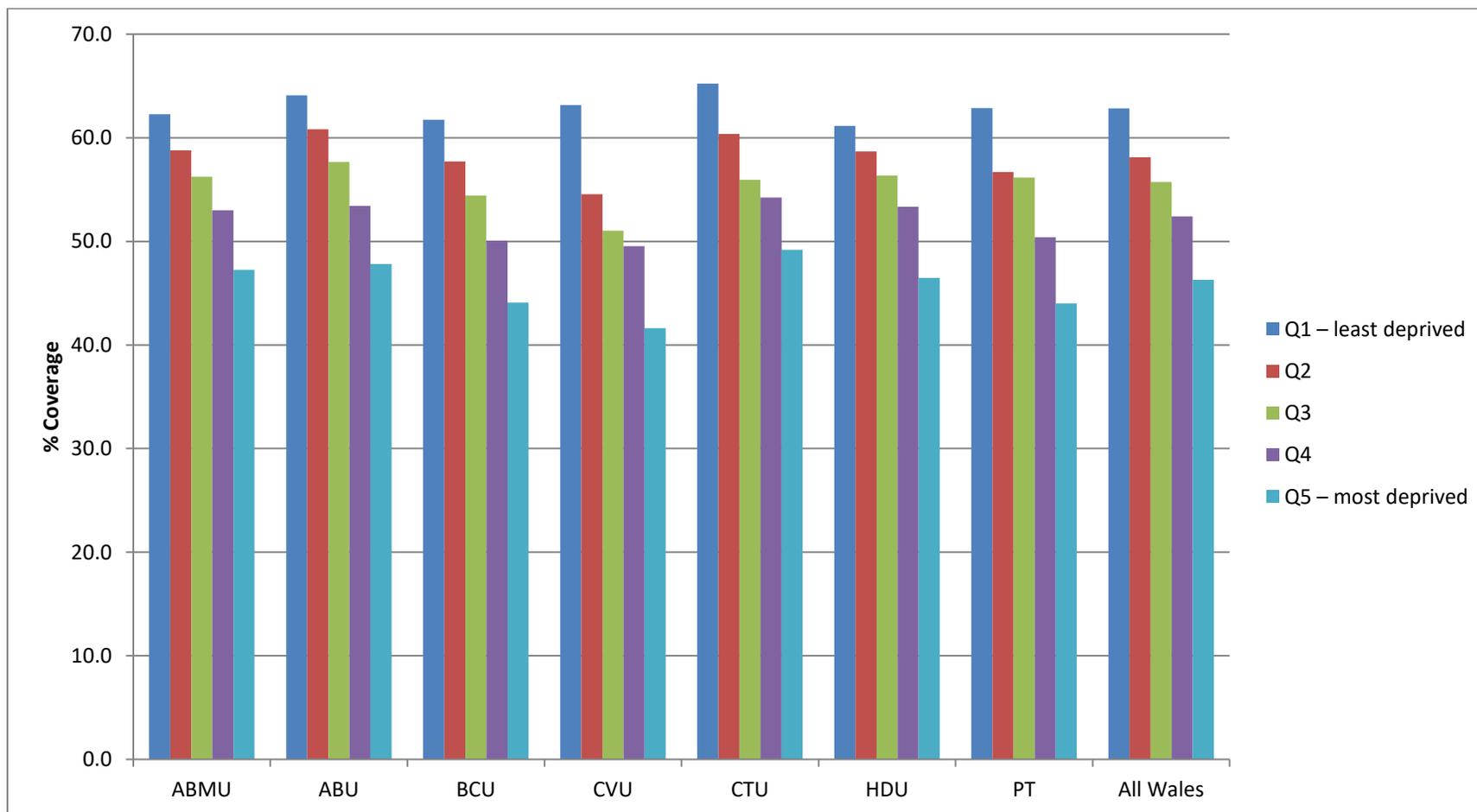


**Table 1b:** Bowel Screening Coverage (within 2.5 years) by Deprivation Quintile and Health Board of residence, as at 1 October 2019

Health Board	Q1 – least deprived	Q2	Q3	Q4	Q5 – most deprived	Total
Abertawe Bro Morgannwg UHB	62.3	58.8	56.2	53.0	47.2	<b>55.5</b>
Aneurin Bevan UHB	64.1	60.8	57.7	53.4	47.8	<b>56.4</b>
Betsi Cadwaladr UHB	61.7	57.7	54.4	50.1	44.1	<b>55.3</b>
Cardiff and Vale UHB	63.2	54.6	51.0	49.5	41.6	<b>55.0</b>
Cwm Taf UHB	65.2	60.4	56.0	54.2	49.2	<b>55.0</b>
Hywel Dda UHB	61.2	58.7	56.4	53.3	46.5	<b>56.2</b>
Powys Teaching HB	62.9	56.7	56.1	50.4	44.0	<b>56.4</b>
Unknown	0.0	0.0	0.0	0.0	0.0	<b>56.0</b>
<b>All Wales</b>	<b>62.8</b>	<b>58.1</b>	<b>55.7</b>	<b>52.4</b>	<b>46.3</b>	<b>55.7</b>

Note: where a residence postcode is unknown it is not possible for it to be linked to a quintile or Health Board. It is therefore categorised as unknown and not shown.

**Graph 1b:** Bowel Screening Coverage (within 2.5 years) by Deprivation Quintile and Health Board of residence, as at 1 October 2019



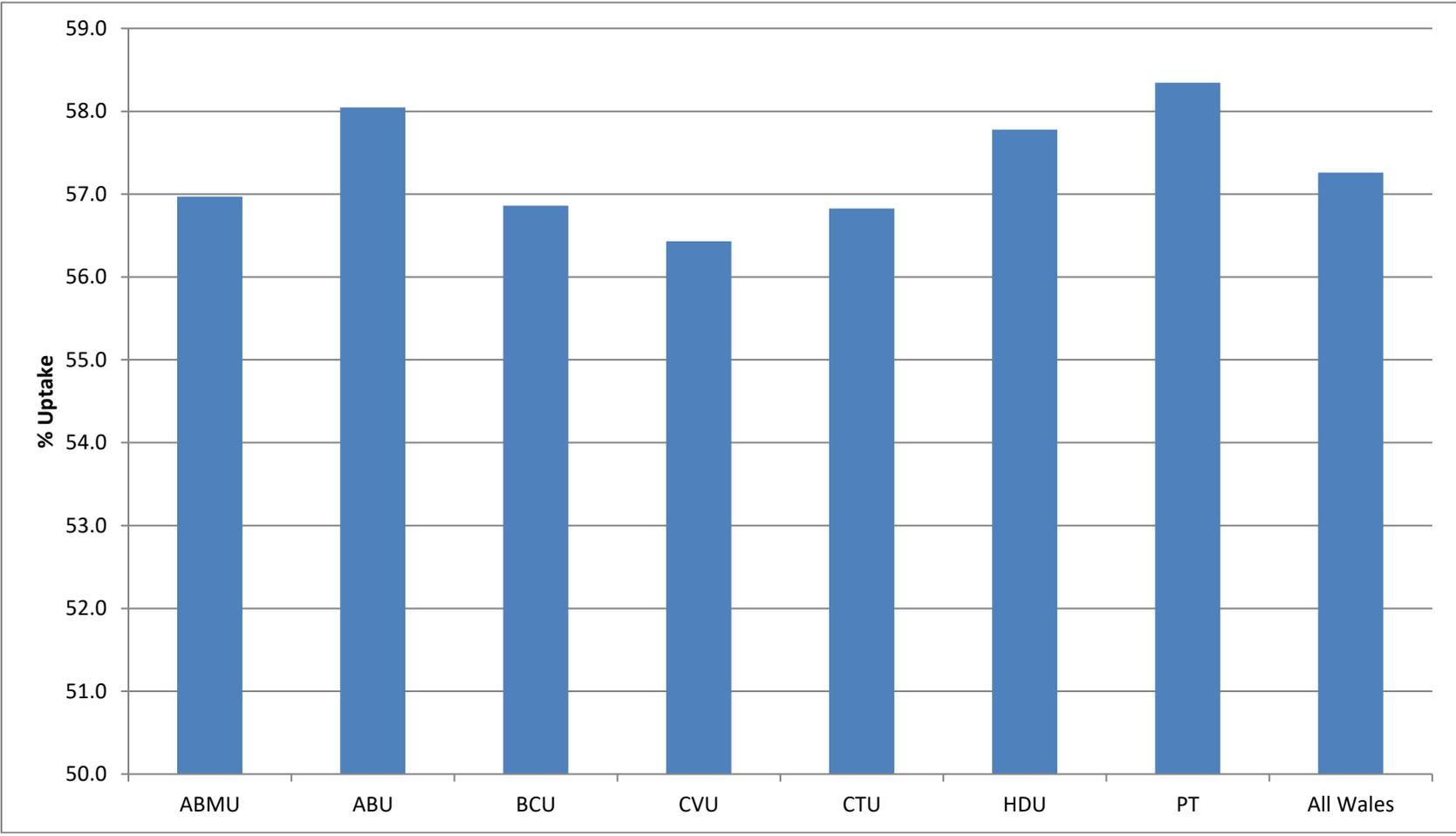
**Table 1c:** Bowel Screening Uptake by Health Board of residence, 2018-19

Standard: A minimum of 60% of invited participants returned a completed test within six months of invitation.

Health Board	Total			Female			Male		
	Eligible	Responded	% Uptake	Eligible	Responded	% Uptake	Eligible	Responded	% Uptake
Abertawe Bro Morgannwg UHB	45,646	26,004	<b>57.0</b>	23,493	13,619	<b>58.0</b>	22,153	12,385	<b>55.9</b>
Aneurin Bevan UHB	50,684	29,420	<b>58.0</b>	25,794	15,394	<b>59.7</b>	24,890	14,026	<b>56.4</b>
Betsi Cadwaladr UHB	65,903	37,473	<b>56.9</b>	33,837	19,785	<b>58.5</b>	32,066	17,688	<b>55.2</b>
Cardiff and Vale UHB	35,253	19,893	<b>56.4</b>	17,840	10,394	<b>58.3</b>	17,413	9,499	<b>54.6</b>
Cwm Taf UHB	25,207	14,324	<b>56.8</b>	12,751	7,236	<b>56.7</b>	12,456	7,088	<b>56.9</b>
Hywel Dda UHB	39,205	22,652	<b>57.8</b>	20,089	11,963	<b>59.6</b>	19,116	10,689	<b>55.9</b>
Powys Teaching HB	14,620	8,530	<b>58.3</b>	7,391	4,532	<b>61.3</b>	7,229	3,998	<b>55.3</b>
Unknown	4,038	2,356	<b>58.3</b>	2,060	1,245	<b>60.4</b>	1,978	1,111	<b>56.2</b>
<b>All Wales</b>	<b>280,556</b>	<b>160,652</b>	<b>57.3</b>	<b>143,255</b>	<b>84,168</b>	<b>58.8</b>	<b>137,301</b>	<b>76,484</b>	<b>55.7</b>

Uptake includes participants invited for bowel screening during April 2018 to March 2019.

**Graph 1c:** Bowel Screening Uptake by Health Board of residence, 2018-19



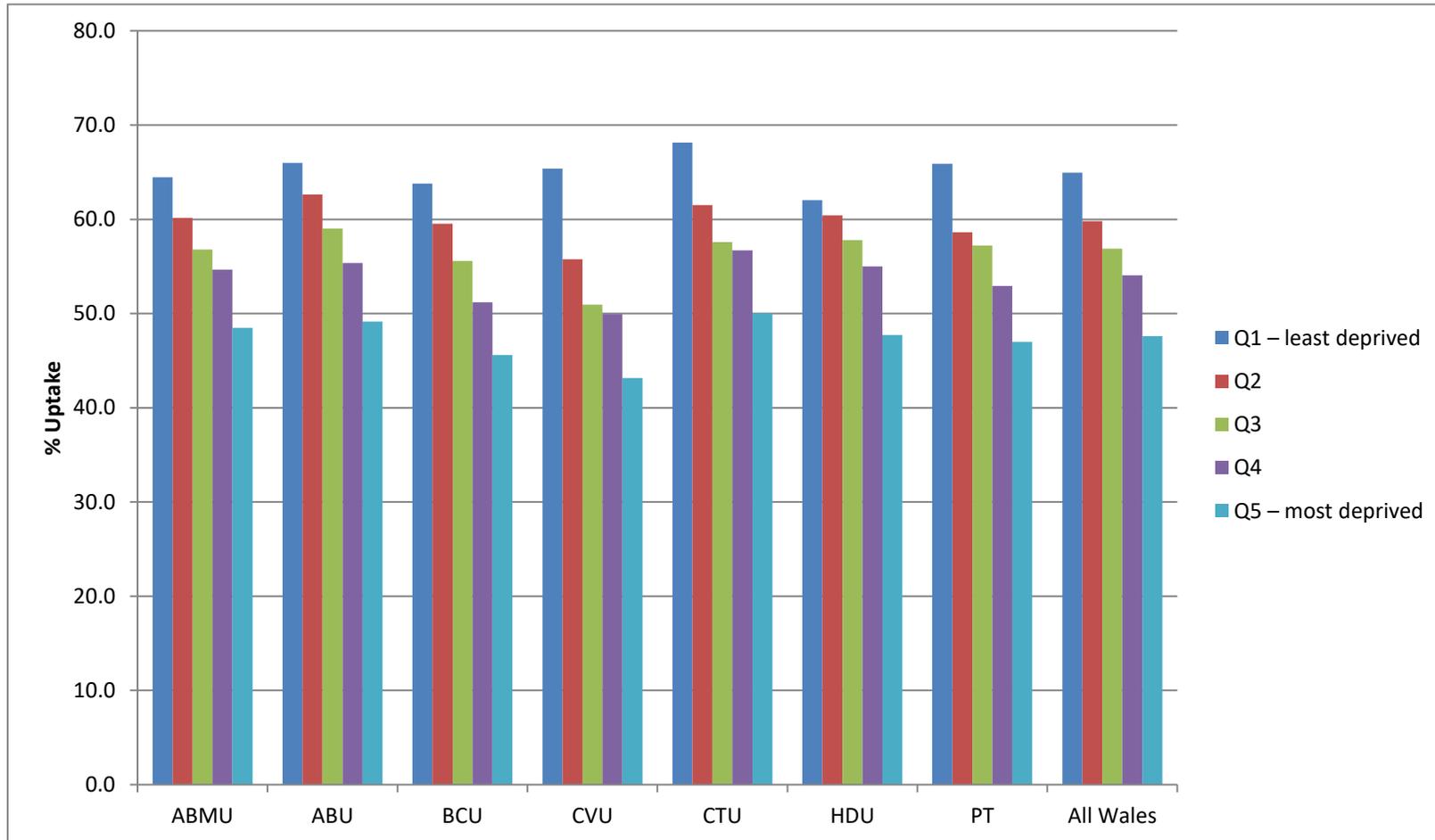
**Table 1d:** Bowel Screening Uptake, %, by Deprivation Quintile and Health Board of residence, 2018-19

Health Board	Q1 – least deprived	Q2	Q3	Q4	Q5 – most deprived	Total
Abertawe Bro Morgannwg UHB	64.5	60.1	56.8	54.7	48.5	<b>57.0</b>
Aneurin Bevan UHB	66.0	62.6	59.0	55.4	49.1	<b>58.0</b>
Betsi Cadwaladr UHB	63.8	59.5	55.6	51.2	45.6	<b>56.9</b>
Cardiff and Vale UHB	65.4	55.8	50.9	49.9	43.2	<b>56.4</b>
Cwm Taf UHB	68.2	61.5	57.6	56.7	50.0	<b>56.8</b>
Hywel Dda UHB	62.0	60.4	57.8	55.0	47.7	<b>57.8</b>
Powys Teaching HB	65.9	58.6	57.2	52.9	47.0	<b>58.3</b>
Unknown	0.0	0.0	0.0	0.0	0.0	<b>58.3</b>
<b>All Wales</b>	<b>64.9</b>	<b>59.8</b>	<b>56.9</b>	<b>54.1</b>	<b>47.6</b>	<b>57.3</b>

Note: where a residence postcode is unknown it is not possible for it to be linked to a quintile or Health Board. It is therefore categorised as unknown and is not shown.

Bowel screening uptake has seen an increase during 2018-19 to 57.3 % compared to 55.7% the previous year. The programme is working closely with partners to increase uptake across the population as well as specifically in groups where uptake is low.

**Graph 1d:** Bowel Screening Uptake, %, by Deprivation Quintile and Health Board of residence, 2018-19



**Table 1e:** All Wales Bowel Screening Uptake by Type of Recall, 2018-19

Year	Prevalent Round - 1st Invite			Prevalent Round - Subsequent invite(s)			Incident Round		
	Eligible	Tested	% Uptake	Eligible	Tested	% Uptake	Eligible	Tested	% Uptake
2018-19	45,977	23,359	50.8	90,712	12,755	14.1	143,867	124,538	86.6

**Table 1f:** All Wales Bowel Screening Coverage and Uptake - Historical Comparison

Year	Eligible	Tested	% Coverage	Eligible	Tested	% Uptake
2011-12				268,727	137,366	51.1
2012-13				266,693	128,583	48.2
2013-14	528,794	264,446	<b>50.0</b>	280,192	147,378	52.6
2014-15	533,294	268,257	<b>50.3</b>	254,139	129,118	50.8
2015-16	540,022	279,308	<b>51.7</b>	281,082	152,794	54.4
2016-17	545,623	281,321	<b>51.6</b>	274,738	146,592	53.4
2017-18	550,971	294,121	<b>53.4</b>	283,106	157,594	55.7
2018-19	555,549	309,303	<b>55.7</b>	280,556	160,652	57.3

Only six years of coverage data is presented because of a change in definition in 2013-14.

Coverage has shown an improving trend and uptake this year is the highest achieved by the programme.

## 3.2 Participants invited

**Table 2a:** Number of male participants invited for bowel screening – by age and Health Board of residence, 2018-19

Health Board	Males			Total Invited
	60-64 years	65-69 years	70-74 years	
Abertawe Bro Morgannwg UHB	9,479	7,074	5,869	<b>22,422</b>
Aneurin Bevan UHB	10,708	7,970	6,510	<b>25,188</b>
Betsi Cadwaladr UHB	13,186	10,320	9,013	<b>32,519</b>
Cardiff and Vale UHB	8,051	5,389	4,304	<b>17,744</b>
Cwm Taf UHB	5,343	3,984	3,298	<b>12,625</b>
Hywel Dda UHB	7,855	6,228	5,270	<b>19,353</b>
Powys Teaching HB	2,898	2,358	2,081	<b>7,337</b>
Unknown	920	633	477	<b>2,030</b>
<b>All Wales</b>	<b>58,440</b>	<b>43,956</b>	<b>36,822</b>	<b>139,218</b>

**Table 2b:** Number of female participants invited for bowel screening – by age and Health Board of residence, 2018-19

Health Board	Females			Total Invited
	60-64 years	65-69 years	70-74 years	
Abertawe Bro Morgannwg UHB	9,742	7,443	6,469	<b>23,654</b>
Aneurin Bevan UHB	10,656	8,340	6,996	<b>25,992</b>
Betsi Cadwaladr UHB	13,565	10,864	9,685	<b>34,114</b>
Cardiff and Vale UHB	7,744	5,601	4,636	<b>17,981</b>
Cwm Taf UHB	5,150	4,237	3,462	<b>12,849</b>
Hywel Dda UHB	8,032	6,516	5,702	<b>20,250</b>
Powys Teaching HB	3,051	2,395	2,036	<b>7,482</b>
Unknown	909	670	503	<b>2,082</b>
<b>All Wales</b>	<b>58,849</b>	<b>46,066</b>	<b>39,489</b>	<b>144,404</b>

**Table 2c:** Total participants invited for bowel screening – by age and Health Board of residence, 2018-19

Health Board	Participants			Total Invited
	60-64 years	65-69 years	70-74 years	
Abertawe Bro Morgannwg UHB	19,221	14,517	12,338	<b>46,076</b>
Aneurin Bevan UHB	21,364	16,310	13,506	<b>51,180</b>
Betsi Cadwaladr UHB	26,751	21,184	18,698	<b>66,633</b>
Cardiff and Vale UHB	15,795	10,990	8,940	<b>35,725</b>
Cwm Taf UHB	10,493	8,221	6,760	<b>25,474</b>
Hywel Dda UHB	15,887	12,744	10,972	<b>39,603</b>
Powys Teaching HB	5,949	4,753	4,117	<b>14,819</b>
Unknown	1,829	1,303	980	<b>4,112</b>
<b>All Wales</b>	<b>117,289</b>	<b>90,022</b>	<b>76,311</b>	<b>283,622</b>

Note: Seven people outside the age bands were invited between the reporting period.

### 3.3 Validated tests

**Table 3a:** Bowel Screening tests validated by test result and Health Board of residence – Guaiac Faecal Occult Blood (FOBT)

Health Board	Number of tests validated - FOBt						Percentage - FOBt				
	Spoilt	Rejected	Equivocal	Negative	Positive	Total	Spoilt	Rejected	Equivocal	Negative	Positive
Abertawe Bro Morgannwg UHB	342	625	923	25,352	62	<b>27,304</b>	1.3%	2.3%	3.5%	99.8%	0.2%
Aneurin Bevan UHB	406	823	1,074	28,900	69	<b>31,272</b>	1.3%	2.6%	3.6%	99.8%	0.2%
Betsi Cadwaladr UHB	384	777	1,258	36,560	73	<b>39,052</b>	1.0%	2.0%	3.3%	99.8%	0.2%
Cardiff and Vale UHB	261	561	693	19,653	42	<b>21,210</b>	1.2%	2.6%	3.4%	99.8%	0.2%
Cwm Taf UHB	194	385	517	13,988	23	<b>15,107</b>	1.3%	2.5%	3.6%	99.8%	0.2%
Hywel Dda UHB	222	495	742	22,041	54	<b>23,554</b>	0.9%	2.1%	3.2%	99.8%	0.2%
Powys Teaching HB	82	193	223	8,403	17	<b>8,918</b>	0.9%	2.2%	2.6%	99.8%	0.2%
Unknown	22	81	71	2,234	9	<b>2,417</b>	0.9%	3.4%	3.1%	99.6%	0.4%
<b>All Wales</b>	<b>1,913</b>	<b>3,940</b>	<b>5,501</b>	<b>157,131</b>	<b>349</b>	<b>168,834</b>	<b>1.1%</b>	<b>2.3%</b>	<b>3.4%</b>	<b>99.8%</b>	<b>0.2%</b>

**Table 3b:** Bowel Screening tests validated by test result and Health Board of residence – secondary, confirmatory, test kit

Health Board	Number of tests validated - secondary, confirmatory, test kit						Percentage - secondary, confirmatory, test kit				
	Spoilt	Rejected	Equivocal	Negative	Positive	Total	Spoilt	Rejected	Equivocal	Negative	Positive
Abertawe Bro Morgannwg UHB	13	34	N/A	674	282	<b>1,003</b>	1.3%	3.4%	N/A	70.5%	29.5%
Aneurin Bevan UHB	17	41	N/A	791	298	<b>1,147</b>	1.5%	3.6%	N/A	72.6%	27.4%
Betsi Cadwaladr UHB	20	38	N/A	942	346	<b>1,346</b>	1.5%	2.8%	N/A	73.1%	26.9%
Cardiff and Vale UHB	14	30	N/A	488	193	<b>725</b>	1.9%	4.1%	N/A	71.7%	28.3%
Cwm Taf UHB	9	20	N/A	382	141	<b>552</b>	1.6%	3.6%	N/A	73.0%	27.0%
Hywel Dda UHB	6	20	N/A	569	190	<b>785</b>	0.8%	2.5%	N/A	75.0%	25.0%
Powys Teaching HB	5	9	N/A	166	59	<b>239</b>	2.1%	3.8%	N/A	73.8%	26.2%
Unknown	2	2	N/A	49	24	<b>77</b>	2.6%	2.6%	N/A	67.1%	32.9%
<b>All Wales</b>	<b>86</b>	<b>194</b>	<b>N/A</b>	<b>4,061</b>	<b>1,533</b>	<b>5,874</b>	<b>1.5%</b>	<b>3.3%</b>	<b>N/A</b>	<b>72.6%</b>	<b>27.4%</b>

**Table 3c:** Bowel Screening tests validated by test result and Health Board of residence – Liquid FIT

Health Board	Number of tests validated – Liquid FIT						Percentage - Liquid FIT				
	Spoilt	Rejected	Equivocal	Negative	Positive	Total	Spoilt	Rejected	Equivocal	Negative	Positive
Abertawe Bro Morgannwg UHB	0	0	N/A	92	0	<b>92</b>	0.0%	0.0%	N/A	100.0%	0.0%
Aneurin Bevan UHB	0	<5	N/A	78	<5	<b>80</b>	0.0%	1.3%	N/A	98.7%	1.3%
Betsi Cadwaladr UHB	0	0	N/A	112	<5	<b>114</b>	0.0%	0.0%	N/A	98.2%	1.8%
Cardiff and Vale UHB	0	0	N/A	65	0	<b>65</b>	0.0%	0.0%	N/A	100.0%	0.0%
Cwm Taf UHB	0	0	N/A	46	0	<b>46</b>	0.0%	0.0%	N/A	100.0%	0.0%
Hywel Dda UHB	0	0	N/A	79	<5	<b>81</b>	0.0%	0.0%	N/A	97.5%	2.5%
Powys Teaching HB	0	0	N/A	22	0	<b>22</b>	0.0%	0.0%	N/A	100.0%	0.0%
Unknown	0	0	N/A	7	0	<b>7</b>	0.0%	0.0%	N/A	100.0%	0.0%
<b>All Wales</b>	<b>0</b>	<b>1</b>	<b>N/A</b>	<b>501</b>	<b>5</b>	<b>507</b>	<b>0.0%</b>	<b>0.2%</b>	<b>N/A</b>	<b>99.0%</b>	<b>1.0%</b>

**Table 3d:** Total Bowel Screening tests validated by test result and Health Board of residence – Total

Health Board	Number of tests validated – TOTAL						Percentage – TOTAL				
	Spoilt	Rejected	Equivocal	Negative	Positive	Total	Spoilt	Rejected	Equivocal	Negative	Positive
Abertawe Bro Morgannwg UHB	355	659	923	26,118	344	<b>28,399</b>	1.3%	2.3%	3.4%	98.7%	1.3%
Aneurin Bevan UHB	423	865	1,074	29,769	368	<b>32,499</b>	1.3%	2.7%	3.4%	98.8%	1.2%
Betsi Cadwaladr UHB	404	815	1,258	37,614	421	<b>40,512</b>	1.0%	2.0%	3.2%	98.9%	1.1%
Cardiff and Vale UHB	275	591	693	20,206	235	<b>22,000</b>	1.3%	2.7%	3.3%	98.9%	1.1%
Cwm Taf UHB	203	405	517	14,416	164	<b>15,705</b>	1.3%	2.6%	3.4%	98.9%	1.1%
Hywel Dda UHB	228	515	742	22,689	246	<b>24,420</b>	0.9%	2.1%	3.1%	98.9%	1.1%
Powys Teaching HB	87	202	223	8,591	76	<b>9,179</b>	0.9%	2.2%	2.5%	99.1%	0.9%
Unknown	24	83	71	2,290	33	<b>2,501</b>	1.0%	3.3%	3.0%	98.6%	1.4%
<b>All Wales</b>	<b>1,999</b>	<b>4,135</b>	<b>5,501</b>	<b>161,693</b>	<b>1,887</b>	<b>175,215</b>	<b>1.1%</b>	<b>2.4%</b>	<b>3.3%</b>	<b>98.8%</b>	<b>1.2%</b>

Note: Spoilt and rejected rates are calculated as a percentage of the total results.

Equivocal rates are calculated as a percentage of the equivocal, negative and positive results.

Negative and positive rates are calculated as a percentage of negative and positive results only.

From January 2019 we introduced a new screening test into the bowel screening programme in Wales, the liquid FIT kit. This was introduced in a phased manner, with 1 in 28 random screening participants issued with the new liquid FIT kit from January to March 2019.

### 3.4 Waiting times for screening results

Standard: 95% of participants are sent their screening test result within seven days of receipt of test kit in laboratory.

**Table 4:** Waiting time for screening test results, from receipt of test to validated result, 2018-19

Days	Number validated	Percentage of total validated
Same day	36,949	21.1%
1	27,010	15.4%
2	23,043	13.2%
3	16,268	9.3%
4	15,208	8.7%
5	12,519	7.1%
6	15,997	9.1%
7-13 days	27,958	16.0%
14 days +	263	0.2%
<b>TOTAL</b>	<b>175,215</b>	<b>100.0%</b>

Across Wales in 2018-19, 83.9% of all tests were validated and a result letter issued to the participant within a week (7 calendar days) of receipt by the laboratory. This is a decrease from the 96.5% seen last year.

### 3.5 Attendance at colonoscopy

**Table 5:** Attendance at index colonoscopy/ flexible sigmoidoscopy by Health Board of residence, 2018-19

Health Board	Booked index procedure	Attended index procedure	% Attended
Abertawe Bro Morgannwg UHB	340	307	90.3%
Aneurin Bevan UHB	344	330	95.9%
Betsi Cadwaladr UHB	433	404	93.3%
Cardiff and Vale UHB	230	219	95.2%
Cwm Taf UHB	167	156	93.4%
Hywel Dda UHB	235	218	92.8%
Powys Teaching HB	80	78	97.5%
Unknown	36	32	88.9%
<b>All Wales</b>	<b>1,865</b>	<b>1,744</b>	<b>93.5%</b>

### 3.6 Detection rates

**Table 6:** All Wales Cancer / Polyp / Adenoma detection rates at index colonoscopy/ flexible sigmoidoscopy, 2018-19

	Number Detected	Total Index Procedures	Percentage Detected
Cancer detection rate	232	1,744	13.3%
Polyp detection rate	1,223	1,744	70.1%
Adenoma detection rate	948	1,744	54.4%

### 3.7 Waiting times for index colonoscopy/ flexible sigmoidoscopy appointment within four weeks of Booking SP Appointment

During the April 2018 to March 2019 year, 1762 participants were offered an index procedure, and of these 723 (41.0%) were offered a procedure date within four weeks of booking their Screening Practitioner (SP) assessment appointment. A total of 1467 (83.3%) were offered a procedure date within eight weeks and 295 (16.7%) were offered a procedure date more than eight weeks after booking their SP assessment appointment. This is a decline on waiting times reported during 2017-18 where 46.0% of participants were offered an index procedure within four weeks.

### 3.8 Attendance at CT scans

Across Wales, 95.2% of booked CT scans were attended; this varies between 91.2% and 100% across health boards for the year April 2018 to March 2019.

## 4 Definitions

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

### Eligible

- For **coverage** calculations, eligible participants are those that are resident in Wales at the time of reporting, that are not currently ceased or suspended from bowel screening invitation following notification of a diagnosed bowel condition, movement or death and are between invite age range 60 to 74 years.
- For **uptake** calculations, eligible participants are those that were resident in Wales (not deducted on NHAIS in the six months following invitation) and invited for bowel screening during the reporting period date range. Participants that were ceased or suspended from bowel screening invitation following notification of a diagnosed bowel condition, movement or death, within six months following invitation were excluded, unless they had returned a used test.

### Uptake

Participants were deemed to have responded to their invitation if the bowel screening programme received a used test within six months following their invitation.

## Coverage

The calculation counts those eligible participants that have had a used test validated within two and a half years of the reporting date.

## Deprivation

Deprivation quintiles were assigned using the Welsh Index of Multiple Deprivation (WIMD) 2014, measured at lower super output area (LSOA) level. LSOAs are ranked into quintiles at an all-Wales level so they can be compared between health boards. This means that there will not be an equal proportion of people in each quintile when you look at each health board e.g. in Monmouthshire, 40% of the population live in the least deprived quintile of Wales, but no areas fall into the Welsh most deprived quintile.

## Health Board

This is health board of residence.

## Test kit Types

Faecal Occult Blood test (FOBT) – A guaiac-based test card that was issued as the primary screening test for the majority of screening participants during this period.

Secondary screening test – A confirmatory, second test issued to participants who demonstrated small amounts of blood when tested with the FOBT kit (those with equivocal results).

Liquid Faecal Immunochemical Test (liquid FIT) – A new test kit introduced from January 2019 to a small proportion of the screening population (i.e. 1 in 28 participants).

## Spoilt test

A spoilt test is a test that is rendered unavailable for testing either by the participant or the laboratory for reasons defined in the Bowel Screening Wales and Laboratory Quality Manuals e.g. no date on the test or the test not completed well by the participant. These rates are calculated as a proportion of the total bowel screening tests validated in the reporting period.

## Rejected test

A rejected test is one that is rejected for testing by the laboratory because it fails to meet defined specific criteria for sample acceptance that are documented in the Laboratory Quality Manual e.g. a mismatch between the name and the barcode or a test that is past the manufacturer's expiry date. These rates are calculated as a proportion of the total bowel screening tests validated in the reporting period.

**Equivocal test**

These rates are calculated as a proportion of the un-spoilt bowel screening tests validated in the reporting period.

**Negative and positive test**

These rates are calculated as a proportion of the tests validated in the reporting period as negative and positive results – i.e. those tests that have a definitive result.

**Polyp**

A polyp is a growth found on the lining of the colon or rectum.

**Adenoma**

An adenoma is a benign growth which can develop into a cancer.

**Prevalent Round - first invite** (table 1e)

The prevalent round first invitation is the first time a person is invited to take part in screening. They have not been screened before as they have not been invited before.

**Prevalent round - subsequent invite** (table 1e)

The prevalent round subsequent invitation is when a person has previously been invited, but has not actually taken part in screening before. They have not been screened before but they have been invited before.

**Incident Round** (table 1e)

The incident round is when people who have been invited previously, and taken up the offer, are subsequently re-invited for screening.

**Colonoscopy**

Colonoscopy is the visual inspection of the interior of the colon with a flexible, lighted tube (colonoscope) inserted through the rectum. During colonoscopy, biopsies (tissue samples of abnormal areas) can be obtained to aid diagnosis.

**Flexible Sigmoidoscopy**

A flexible sigmoidoscopy is the visual inspection of the lower part of the large intestine with a flexible lighted tube inserted through the rectum. During flexible sigmoidoscopy, biopsies (tissue samples of abnormal areas) can be obtained to aid diagnosis.

**Attendance and detection rates**

Attendance and detection rates (Tables 5 and 6) report procedures that are booked in the reporting period. Waiting times were calculated using those participants with an index procedure first offered within the reporting period. This might not be the procedure they attended, due to participant choice or other factors.

## 5 Production Team and Pre-Release List

### Production Team

Steve Court	Head of Programme - Bowel Screening Wales
Dr Sharon Hillier	Director of Screening Division
Dr Ardiana Gjini	Consultant in Public Health Medicine
Helen Clayton	Lead Informatics and Data Services Manager
Richard Wakely	Senior Informatics and Data Analyst
Sarah Thomas	Communications Executive
Diane Rawlings	Personal Assistant

Rhys George                      Cofus CTF (Welsh translation)

### Pre-Release List:

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

### Public Health Wales

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

### Welsh Government

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