



Sgrinio Clyw Babanod Cymru  
Newborn Hearing Screening Wales



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# Newborn Hearing Screening Wales Annual Statistical Report 2019-20

June 2022



# 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

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

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

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

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

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

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

**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

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This report is a detailed summary of information on work undertaken by Newborn Hearing Screening Wales for the financial year from April 2019 to the end of March 2020. Results are reported by Health Board and are broken down to show the hospital location where screening or assessment has been carried out in some cases. Further details are available on request.

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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 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. 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.

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# 1 Introduction

This is the sixteenth annual statistical report published by Newborn Hearing Screening Wales (NBHSW). This report covers data for babies born between 1 April 2019 and 31 March 2020.

One or two babies in every 1,000 are born with a hearing loss that may affect their speech and language development. NBHSW was launched in 2003 and aims to identify these babies as early as possible, as evidence shows that introducing an early support programme before six months of age leads to better outcomes for speech and language development.

## 1.1 'Key messages' for parents

- Newborn hearing screening identifies if your baby has a hearing loss that could affect their speech and language development without early support
- All babies born to women who live in Wales are offered newborn hearing screening soon after birth
- Screening is offered either while you are still in hospital after your baby's birth, or a week or two later, usually in a local clinic
- Babies who have needed special care usually have their hearing screen before they go home
- The screening tests do not hurt or harm your baby
- Screening does not identify all hearing loss or prevent it at a later date
- Having your baby's hearing screened is your choice. The newborn hearing Screener and the leaflet "Your Baby's Hearing Screening Test" will give you more information

## 1.2 Programme delivery

The Screening Division of Public Health Wales is responsible for managing, delivering and quality assuring the Newborn Hearing Screening programme. It is one of three programmes within Maternal and Child Screening. The programme is administered and delivered in three Regions across Wales and employs Coordinators, Screening Managers, Screeners and administrative staff. The North Wales Region covers Betsi Cadwaladr University Health Board. The Mid and West Wales Region covers Swansea Bay University Health Board, Hywel Dda University Health Board and Powys Teaching Health Board. The South East Wales Region covers Aneurin Bevan University Health Board, Cardiff and Vale University Health Board and Cwm Taf Morgannwg University Health



Board. Screening of babies in Powys is shared across the three Regions factoring in geographical proximity and the most effective deployment of staff and resources. Diagnostic assessment and early support is provided by a clinical network of Audiologists and medical leads in each Health Board.

### **1.3 Screening pathway**

Babies who are eligible for screening are identified in each Health Board from midwife birth notifications. Newborn Hearing Screeners offer screening tests to babies who are in hospital, and in community clinics when it has not been possible to perform the screen in hospital. The majority of babies in neonatal intensive care or special baby care units are screened before discharge.

Well babies who have a clear response in one or both ears on screening are discharged from the programme. Parents of Well babies who have a clear response in one ear are offered the opportunity to make arrangements for a further hearing test. Those who do not show a clear response in both ears at the end of the screening process are referred for diagnostic assessment.

High Risk babies who have a clear response in both ears on screening, are discharged from the programme. Those who do not show a clear response in one or both ears at the end of the screening process are referred for diagnostic assessment.

Babies who miss or do not complete screening or assessment are offered a hearing test at nine months of age by their local Health Board.

Diagnostic assessments are undertaken by Audiologists within Health Boards. Babies identified with a hearing loss are fitted with hearing aids if appropriate and are supported by a multi-disciplinary early years team. The team includes a Specialist Doctor, Teacher of the Deaf, Audiologist and Speech and Language Specialist.

More information is available at  
[www.newbornhearingscreening.wales.nhs.uk](http://www.newbornhearingscreening.wales.nhs.uk)

### **1.4 Impact of COVID-19 on NBHSW**

The impact of the Covid -19 pandemic was seen towards the end of the period covered by this report but required rapid and significant change to programme delivery to ensure the safety of babies, parents and staff. Newborn Hearing Screening continued to be delivered by Newborn Hearing

Screeners across Wales on the post-natal wards and in Special Care and Neonatal Intensive Care Units throughout the Covid-19 pandemic, with the aim of completing hearing screening for as many babies as possible in hospital. However, not all babies are able to complete their screen in hospital (this includes babies who are discharged outside the hours covered by the Newborn Hearing Screening Team, those babies who are home births and babies of mothers who are Covid positive). In line with UK and Welsh Government directives, Community Clinics for NBHSW were suspended on 18 March 2020 until July-August 2020. As at the time of publication, Community Clinics across Wales remain subject to social distancing and local venue restrictions.

Full details of the action taken by NBHSW in response to the Covid-19 pandemic, including changes to the service model and the involvement of Audiology services in screening can be found in the 'Changes to the NBHSW Screening Pathway during Covid 19' report, which is available from NBHSW on request.

Babies who were not able to be offered screening in hospital, or were awaiting an initial screening test in community on 18 March 2020, are considered eligible for screening but are recorded by NBHSW with a 'screening suspended' status and were referred for Targeted Behavioural Testing. Many of these babies were later offered screening by Audiology services or by NBHSW. Details can be found in the report 'Management of babies affected by suspension of NBHSW community clinics due to Covid-19', which is available from NBHSW on request.

Babies who were awaiting follow-up screening in Community Clinics at the time of clinic closures were referred to Audiology for diagnostic assessment (but were able to have a repeat AOA screen in Audiology in the first instance).

Despite attempts to maximise the opportunity for babies to complete screening whilst in hospital, there has inevitably been an impact on screening performance activity throughout the pandemic, which is reflected in this Annual Statistical Report. Understandably, the reluctance of families to attend Audiology clinics for either completion of screening or for diagnostic assessment has also impacted on the performance of the programme. This effect can be seen in the period before mid March 2020 when service changes and lockdowns came into force, and concern around the Covid-19 virus was already rising.

NBHSW would like to acknowledge the Audiology services across Wales who worked tirelessly to ensure that babies who were unable to be screened in Hospital were given every possible opportunity to have timely neonatal hearing screening, diagnostic assessment and habilitation. Grateful thanks



also go to the screeners who were redeployed from the Abdominal Aortic Aneurysm (AAA) Screening Programme.

## 2 Headline statistics

### Screening

- The coverage rates show that screening is offered to 98.7% of eligible babies (29,767) with 97.4% tested (28,982) with very few parents declining the screen
- Across Wales, 75.2% of Well babies are screened within seven days of birth which meets the standard of 70%
- 97.8% of Well babies complete screening within four weeks.  
100.0% of High Risk babies complete the screening programme

### Assessment

- 1.2% of babies screened are referred for assessment
- 89.3% of babies referred for assessment complete the assessment process within three months
- The time taken to start the assessment process is within the allocated time for 96.2% of Well babies (within four weeks of final screening test) and 98.8% of High Risk babies (within eight weeks of final screening test)
- 91.0% of babies referred attended an assessment
- 72.7% of assessment appointments were attended
- 9.0% of babies referred for assessment were not seen due to non-attendance

### Outcomes

- In babies born between 1 April 2019 and 31 March 2020, the prevalence of diagnosed permanent hearing loss greater than 40 dBHL in both ears was 1.1 per 1,000 of those babies screened. This is slightly lower than the prevalence recorded since the start of the programme which is 1.5 per 1,000.
- The mean age of confirmation of hearing loss was 11.2 weeks.
- The mean age of hearing aid fitting was 16.1 weeks.
- 80.0% of babies were fitted with hearing aids within four weeks of confirmation of hearing loss.

### 3 Data

#### 3.1 Standards

This table outlines the standards set by the screening programme to monitor performance.

**Table 1:** Programme performance standards

NBHSW Standards – Screening Programme						
	Objective	Criteria	Minimum Standard	Actual Value	Met	Variance From 2018/19
1	To maximise the number of babies who are offered screening	The percentage of eligible babies who are offered screening	>= 99% of all babies	98.7%	No	-1.2%
1b	To provide assurance that each eligible and suitable baby has completed screening.	The percentage of eligible and suitable babies who complete screening. (Coverage)	>=98% of eligible and suitable babies	97.2%	No	New indicator - not reported on in 2018/19
2b	To provide assurance that each eligible and suitable baby for whom the offer of screening is made and is accepted has a completed screening outcome.	The percentage of offered eligible and suitable babies who complete screening. (Uptake)	>=98% of all babies offered screening	98.5%	Yes	New indicator - not reported on in 2018/19
3	To screen most babies within the first week of life	The percentage of babies receiving the first screening test within the first week of life	>=70% of those Well babies screened	75.2%	Yes	+1.1%
4	To maximise the number of babies who complete the screening programme within the allocated time periods	Well babies - the percentage of babies who complete the screening programme within four weeks	>=90% of all babies entering the screening programme	97.8%	Yes	-0.8%
		High risk babies in SCBU > 48 hours - the percentage of babies who complete the	>=98% of all High Risk babies entering the screening programme	100%	Yes	= None
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	screening programme					
	All babies - the percentage of babies who complete the screening programme	>=99% of all babies entering the screening programme	<b>99.8%</b>	<b>Yes</b>	<b>-0.2%</b>	

	<b>Objective</b>	<b>Criteria</b>	<b>Minimum Standard</b>	<b>Actual Value</b>	<b>Met</b>	<b>Variance From 2018/19</b>
5	To minimise the number of babies requiring a diagnostic ABR who have normal hearing	Those babies who are referred for diagnostic ABR with normal hearing	<3% of all those who complete assessment and are found to have normal hearing as a proportion of all babies screened	<b>0.7%</b>	<b>Yes</b>	<b>-0.1%</b>
6	To start the assessment procedure (diagnostic ABR) in appropriate cases within the allocated time	Referred Well babies that start assessment procedure (Diagnostic ABR) in appropriate cases within four weeks	>=90% of those referred	<b>96.2%</b>	<b>Yes</b>	<b>-1.8%</b>
		Referred High Risk babies that start assessment procedure (Diagnostic ABR) in appropriate cases within eight weeks	>=90% of those referred	<b>98.8%</b>	<b>Yes</b>	<b>= None</b>
7	To complete the assessment procedure within the allocated time	Those babies that complete the assessment procedure within three months (in appropriate cases)	>=85% of those requiring assessment	<b>89.3%</b>	<b>Yes</b>	<b>-4.3%</b>
8	To minimise the number of babies who do not receive screening	The percentage of offered screening appointments which are not	<=3% (includes DNA appointments only)	<b>2.5%</b>	<b>Yes</b>	<b>+0.2%</b>

		attended (Well babies)				
9	To minimise the number of babies who do not receive screening	The percentage of offered screening appointments which are declined (Well babies)	< 1% of Well babies	<b>0.2%</b>	<b>Yes</b>	<b>+0.1%</b>

	<b>Objective</b>	<b>Criteria</b>	<b>Minimum Standard</b>	<b>Actual Value</b>	<b>Met</b>	<b>Variance From 2018/19</b>
10	To refer an appropriate number of babies for assessment	The percentage of screened babies referred for assessment	Between 1-2%	<b>1.2%</b>	<b>Yes</b>	<b>= None</b>
11	To minimise the number of babies who do not receive an assessment	The percentage of offered assessment appointments which are not attended	< 10% (DNA appointments only)	<b>8.5%</b>	<b>Yes</b>	<b>-2.3%</b>
12	To minimise the number of babies who do not receive an assessment	The percentage of babies who are referred for assessment and not seen	< 5%	<b>9.0%</b>	<b>No</b>	<b>+5.5%</b>
13	To refer an appropriate number of babies for a repeat screen from audiology (one ear clear response, Well babies)	The percentage of screened babies referred	< 1%	<b>1.3%</b>	<b>No</b>	<b>+0.3%</b>
16	To provide information to promote informed choice.	The percentage of mothers who provide positive responses on the information subscale of a user survey. The criteria for inclusion in the survey may be selected to compare the experiences of families	>90% positive responses from mothers completing the user survey	<b>98.7%</b> <b>(Data from Maternal and Child Programme Survey April 2019 and October 2019 )</b>	<b>Yes</b>	N/A*

17	To evaluate mothers' satisfaction with the screening programme	The percentage of mothers who provide positive responses on a general satisfaction subscale of a user survey. The criteria for inclusion in the survey may be selected to compare the experiences of families.	>= 95% of mothers completing user survey questionnaire .	<b>96.8% (Data from MAC Programme Survey April 2019 and October 2019 )</b>	<b>Yes</b>	-3.2%
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\* Note that variance from 2018/2019 can not be calculated for Standard 16 as the question on the information subscale in the 2019 MAC Programme Survey was different to that in the 2018 MAC Programme Survey. The updated question is focussed on how understandable the pre-screen information is.

## 3.2 Coverage

*Standard 1:  $\geq 99\%$  of eligible babies are offered screening*

**Table 2:** Total number of live births by Health Board, babies eligible and suitable, number and proportion consented and tested

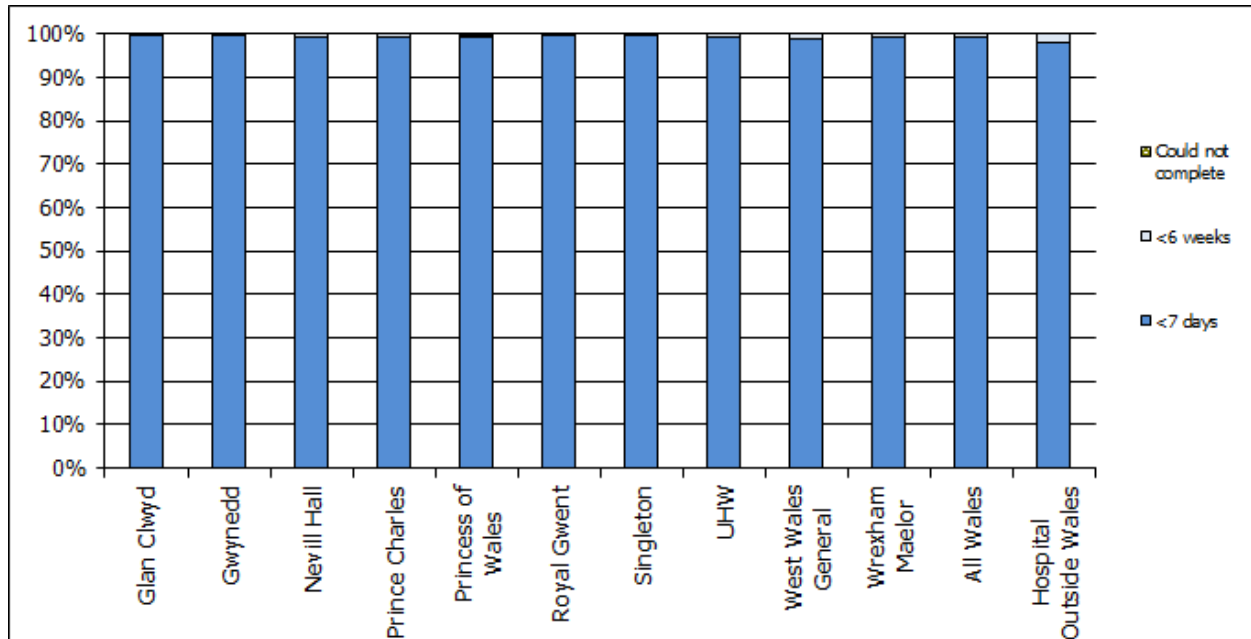
Health Board	Births	Eligible & Suitable	Consented & Tested	% Tested of Eligible & Suitable	Total Offered	% Offered of Eligible and Suitable
Aneurin Bevan University Health Board	6283	6137	6003	97.8%	6057	98.7%
Betsi Cadwaladr University Health Board	6793	6596	6438	97.6%	6530	99.0%
Cardiff and Vale University Health Board	5160	4997	4876	97.6%	4969	99.4%
Cwm Taf Morgannwg University Health Board	4434	4353	4211	96.7%	4275	98.2%
Hywel Dda University	3258	3179	3065	96.4%	3113	97.9%
Powys Teaching Health Board	1119	1068	1028	96.3%	1041	97.5%
Swansea Bay University Health Board	3528	3437	3361	97.8%	3395	98.8%
<b>All Wales</b>	<b>30575</b>	<b>29767</b>	<b>28982</b>	<b>97.4%</b>	<b>29380</b>	<b>98.7%</b>

This standard was met in all regions of Wales until the final quarter of 2019/20. The COVID-19 pandemic impacted on service coverage, both within hospital and community clinic settings, as described in section 1.4. In response to the pandemic, alternative arrangements were established to ensure that those babies to whom NBHSW could not offer routine screening were subsequently offered hearing assessments via NBHSW or Audiology services.

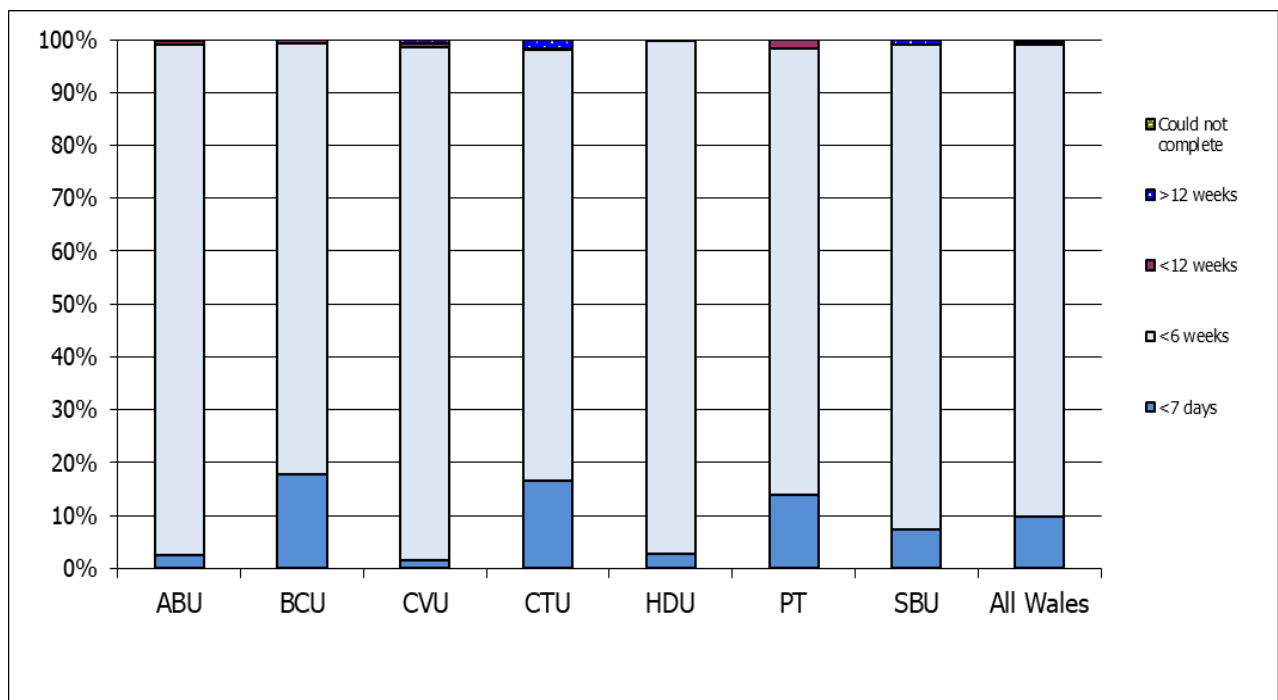
### 3.3 Timeliness of testing

*Standard 3:  $\geq 70\%$  of Well babies screened receive the first screening test within the first week of life*

**Graph 1:** Timeliness of Well babies receiving their first test in hospital



**Graph 2:** Timeliness of Well babies receiving their first test in the community



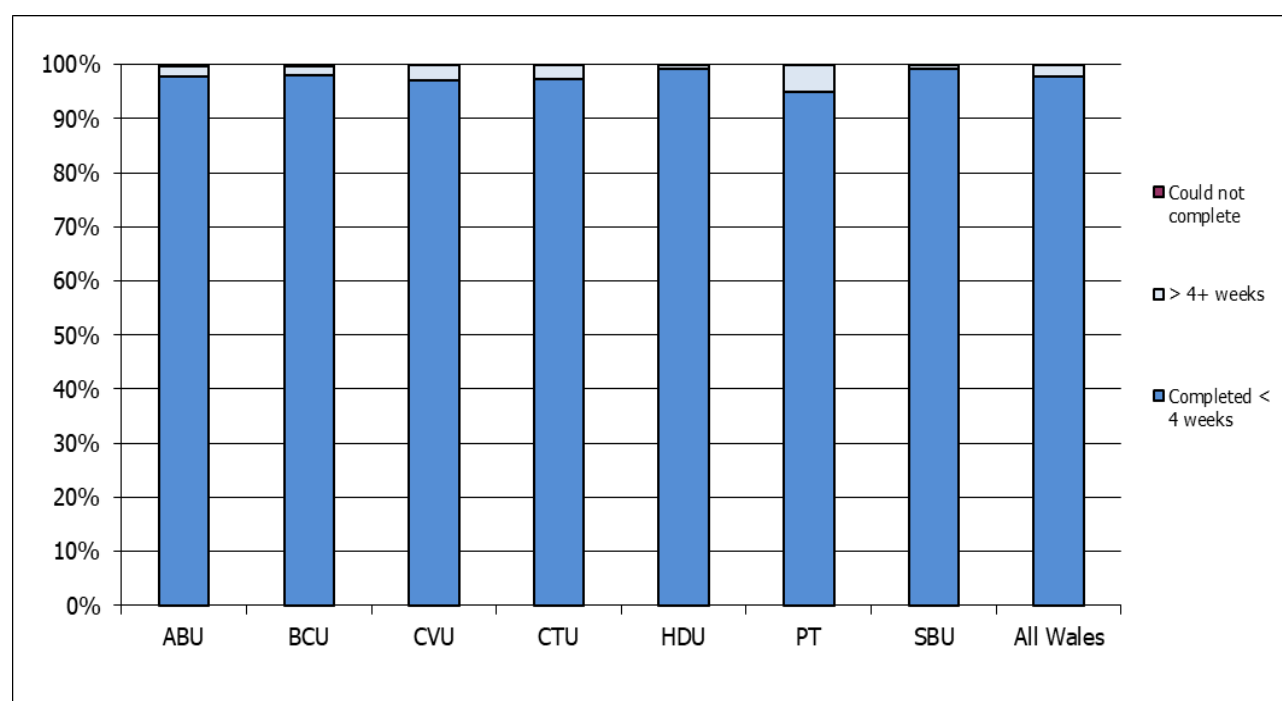


The all Wales average for Well babies having an initial test within seven days of birth in any setting is 75.2%. This is an increase of 1.1% on the previous year.

In some areas it is not possible to perform an initial screen in hospital. Home births, early discharges from hospital and the limited hospital screening at weekends affect this figure as there is no hospital screening opportunity.

*Standard 4:  $\geq 90\%$  of Well babies entering the screening programme complete screening within four weeks*

**Graph 3:** Well babies completing screening within four weeks



Seventy five babies were over six weeks old before their initial test. This is an increase of 44 babies from the previous year which relates to staff shortages experienced in the South East Wales region in early 2020. The service continues to encourage attendance by reviewing clinic locations and timings in relation to convenience for parents and agreeing appointments by telephone.

Across Wales, 97.8% of Well babies completed screening within four weeks which is 0.8% less than the previous year. Screening is complete when the baby is discharged or referred for assessment. For the majority of Powys resident babies there is no hospital screening opportunity. However following a review of frequency of clinics, the standard for the percentage of babies completing screening within four weeks has again been comfortably achieved at 94.9% a drop of 2.2% on the previous year.

### 3.4 Attendance at screening appointments for Well babies

*Standard 8:  $\leq 3\%$  of offered screening appointments not attended (DNA appointments only)*

*Standard 9:  $< 1\%$  of offered screening appointments declined*

**Table 3.i:** All Wales Well baby attendance at screening appointments

Screening Location	Attended (%)	DNA (%)	Cancelled (%)	Parent Declined (%)	Total
All Wales	29541 (92.5%)	795 (2.5%)	1551 (4.9%)	59 (0.2%)	31946

Numbers are rounded to 1 decimal place

The standard for DNA appointments has again been achieved this year at 2.5%. Cancelled appointments remain at a similar level to last year at 4.9% despite continued efforts to agree convenient appointments with the parents and ensure maximum convenience with clinic locations and timings.

**Table 3.ii:** Well baby attendance at screening appointments by Health Board

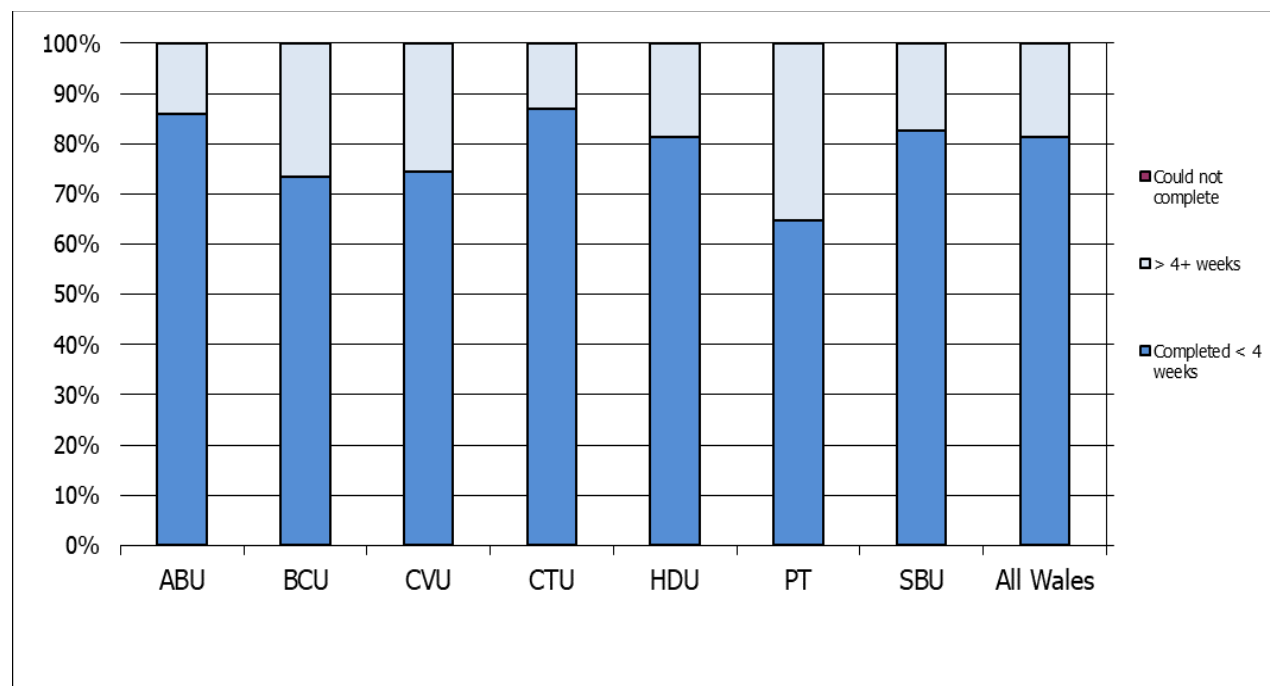
Screening Location	Attended (%)	DNA or Cancelled (%)	Parent Declined (%)	Total
Aneurin Bevan University Health Board	92.9%	7.0%	0.1%	6270
Betsi Cadwaladr University Health Board	94.6%	5.3%	0.1%	7151
Cardiff and Vale University Health Board	93.0%	6.8%	0.2%	5865
Cwm Taf Morgannwg University Health Board	89.7%	10.1%	0.2%	5375
Hywel Dda University Health Board	89.4%	10.1%	0.5%	3251
Powys Teaching Health Board	90.6%	9.2%	0.1%	682
Swansea Bay University Health Board	94.0%	5.8%	0.1%	3352

The number of parents declining the screening test remains minimal despite the pandemic.

### 3.5 High risk babies completing screening

*Standard 4:  $\geq 98\%$  of all High Risk babies entering the screening programme complete screening*

**Graph 4:** High risk babies completing screening



100.0% of High Risk babies completed screening.

### 3.6 Screening Outcomes

*Standard 10: Between 1 and 2 % of screened babies referred for assessment*

*Standard 13: <1 % of screened babies referred to audiology for repeat screen (Well babies with a one ear clear response)*

**Table 4:** Screening outcomes for Well babies

Screening Location	Discharged	Referred for Assessment	Referred to Audiology	Referred for Behavioural Test
Outside Wales	97.3%	0.1%	1.4%	1.1%
Aneurin Bevan University Health Board	96.8%	0.9%	1.7%	0.4%
Betsi Cadwaladr University Health Board	97.0%	0.7%	1.1%	0.9%
Cardiff and Vale University Health Board	96.6%	1.0%	1.8%	0.6%
Cwm Taf Morgannwg University Health Board	97.5%	1.1%	0.8%	0.5%
Hywel Dda University Health Board	98.3%	0.6%	0.6%	0.4%
Powys Teaching Health Board	97.9%	0.9%	0.3%	0.9%
Swansea Bay University Health Board	97.4%	0.6%	1.3%	0.6%
<b>All Wales Total</b>	<b>97.2%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>0.6%</b>

Numbers are rounded to 1 decimal place

The above table excludes High Risk babies and therefore shows that 0.8% of Well babies are referred for assessment following bilateral no clear response. Referrals to audiology for repeat screen are overall at 1.3%.

**Table 5:** Screening outcomes for High Risk babies

Screening Location	Discharged	Referred for Assessment	Referred for Behavioural Test
Outside Wales	79.3%	15.5%	5.2%
Aneurin Bevan University Health Board	90.6%	7.5%	1.9%
Betsi Cadwaladr University Health Board	92.0%	6.4%	1.5%
Cardiff and Vale University Health Board	88.4%	10.2%	1.4%
Cwm Taf Morgannwg University Health Board	94.3%	5.7%	0.0%
Hywel Dda University Health Board	98.1%	1.2%	0.6%
Powys Teaching Health Board	-	-	-
Swansea Bay University Health Board	89.3%	9.1%	1.6%
<b>All Wales Total</b>	<b>91.5%</b>	<b>7.2%</b>	<b>1.3%</b>

Although the overall referrals for assessment meet the standard of 1-2% of babies screened, there are, as expected, a higher percentage of High Risk babies referred for assessment. Referrals for assessment for High Risk babies include those with no clear response in one ear as well as those with bilateral no clear response.

### 3.7 Referrals for assessment

*Standard 10: Between 1 and 2% of screened babies referred for assessment*

**Table 6:** Referrals for assessment

Location	Total Screened	Referred for assessment	% of Babies Referred
Aneurin Bevan University Health Board	6003	89	<b>1.5%</b>
Betsi Cadwaladr University Health Board	6438	64	<b>1.0%</b>
Cardiff and Vale University Health Board	4876	68	<b>1.4%</b>
Cwm Taf Morgannwg University Health Board	4211	63	<b>1.5%</b>
Hywel Dda University Health Board	3065	22	<b>0.7%</b>
Powys Teaching Health Board	1028	12	<b>1.2%</b>
Swansea Bay University Health Board	3361	40	<b>1.2%</b>
<b>All Wales</b>	<b>28982</b>	<b>358</b>	<b>1.2%</b>

The above breakdown is based on screening location rather than assessment location, it should be noted that some babies will be assessed in a different Health Board area from where they were screened. There were an additional 53 babies referred directly for assessment as a result of a medical decision without first completing screening.

### 3.8 Attendance at assessment appointments - Well and High Risk babies

*Standard 11: <10% offered assessment appointments not attended (DNA appointments only)*

**Table 7.i:** All Wales attendance at assessment appointments (includes community clinic and hospital outside Wales)

Health Board	Attended	Cancelled	Parent Declined	DNA	Total
All Wales Total	505 (72.7%)	103 (14.8%)	28 (4.0%)	59 (8.5%)	695

**Table 7.ii:** Attendance at assessment appointments by Health Board

Health Board	Attended	% DNA
Aneurin Bevan University Health Board	117	<b>8.0%</b>
Betsi Cadwaladr University Health Board	115	<b>7.3%</b>
Cardiff and Vale University Health Board	106	<b>7.8%</b>
Cwm Taf Morgannwg University Health Board	87	<b>13.2%</b>
Hywel Dda University Health Board	32	<b>7.3%</b>
Swansea Bay University Health Board	45	<b>6.3%</b>

The all Wales standard is being met at 8.5%, an improvement by 2.3% from the previous year. As in previous years, there is variability between Health Boards. Work is continuing to reduce the percentage of DNAs for the assessment appointments.

### 3.9 Time taken to start and complete assessments

*Standard 6: ≥ 90% Well babies start assessment within four weeks*

*Standard 6: ≥ 90% of High Risk babies start assessment within eight weeks*



**Table 8:** Time taken to start assessment

	<b>% Starting within Set Timescales</b>	
<b>Assessment Location</b>	<b>Well babies</b>	<b>High Risk babies</b>
Hospital Outside Wales	100.0%	100.0%
Glan Clwyd Hospital	100.0%	100.0%
Gwynedd Hospital	100.0%	100.0%
Neath Port Talbot Hospital	100.0%	100.0%
Nevill Hall Hospital	100.0%	100.0%
Princess of Wales Hospital	100.0%	100.0%
Royal Glamorgan Hospital	100.0%	-
Royal Gwent Hospital	93.6%	97.6%
Singleton Hospital	100.0%	100.0%
UHW	93.6%	100.0%
West Wales General Hospital	100.0%	100.0%
Wrexham Maelor Hospital	100.0%	94.7%
Ysbyty Cwm Cynon Outpatients Dept	91.7%	100.0%
<b>All Wales Total</b>	<b>96.2%</b>	<b>98.8%</b>

All Wales figures show a slight decrease in the Well baby group. This relates to 9 babies where the initial assessment appointment was delayed, 6 of which were referred March/April 2020 at the time of the initial Covid impact on services.

The High Risk figure relates to just 2 babies, one of which was delayed due to impact of Covid.

*Standard 7:  $\geq 85\%$  babies complete assessment within three months (if appropriate)*

*Standard 12:  $< 5\%$  of babies referred for assessment are not seen*

**Table 9.i:** All Wales time taken to complete assessment  
Includes community clinics and hospitals outside Wales

Assessment Location	Never Attended	Attended then DNA'd final test	Not Yet Complete	Completed < 3 Months	Completed 3+ Months
All Wales Total	9.0%	0.7%	0.0%	89.3%	1.0%

Standard 7 continues to be met but with an decrease of 4.3% compared with last year's figures for babies completing assessment within three months. There is an increase of 5.5% in the number of babies referred but never seen. This relates to the impact of the Covid-19 pandemic as described in section 1.4.

**Table 9.ii:** Time taken to complete assessment by Hospital

Assessment Location	Never Attended	Attended then DNA'd final test	Not Yet Complete	Completed < 3 Months	Completed 3+ Months
Glan Clwyd Hospital	0.0%	0.0%	0.0%	95.8%	4.2%
Gwynedd Hospital	10.0%	0.0%	0.0%	90.0%	0.0%
Neath Port Talbot Hospital	14.3%	0.0%	0.0%	85.7%	0.0%
Nevill Hall Hospital	13.3%	0.0%	0.0%	86.7%	0.0%
Newborn Hearing Clinic, Ysbyty Cwm Rhondda	0.0%	0.0%	0.0%	100.0%	0.0%
Princess of Wales Hospital	0.0%	0.0%	0.0%	100.0%	0.0%
Royal Glamorgan Hospital	0.0%	0.0%	0.0%	100.0%	0.0%
Royal Gwent Hospital	10.0%	1.1%	0.0%	87.8%	1.1%
Singleton Hospital	2.7%	0.0%	0.0%	97.3%	0.0%
UHW	8.5%	0.0%	0.0%	90.2%	1.2%
West Wales General Hospital	3.8%	0.0%	0.0%	96.2%	0.0%
Wrexham Maelor Hospital	7.3%	0.0%	0.0%	90.2%	2.4%
Ysbyty Cwm Cynon Outpatients Dept	22.0%	4.0%	0.0%	74.0%	0.0%
Hospitals Outside Wales	0.0%	0.0%	0.0%	100.0%	0.0%

### 3.10 Confirmation of hearing loss

The total number of babies identified with a bilateral moderate or greater permanent hearing loss in Wales born between 1 April 2019 and 31 March 2020 is 31. This was a prevalence of 1.1 per 1,000 babies screened.

**Table 10:** Number of babies with confirmed hearing loss (as defined above) born between 1 April 2019 and 31 March 2020 by Region

Division	Total
North Wales	6
Mid & West Wales	7
South Wales	18
<b>All Wales Total</b>	<b>31</b>

Table 11 shows average and median age of confirmation of hearing loss in babies born between 1 April 2019 and 31 March 2020.

**Table 11:** Age of confirmation of hearing loss

Health Board	Average (weeks)	Median (weeks)
Aneurin Bevan University Health Board	9.4	7.8
Betsi Cadwaladr University Health Board	12.3	12.3
Cardiff and Vale University Health Board	11.8	7.3
Cwm Taf Morgannwg University Health Board	7.8	6.7
Hywel Dda University Health Board	18.4	14.9
Swansea Bay University Health Board	8.0	8.0
<b>All Wales Total</b>	<b>11.2</b>	<b>9.0</b>

### 3.11 Hearing aid fitting

#### Average and median age of hearing aid fitting by Health Board

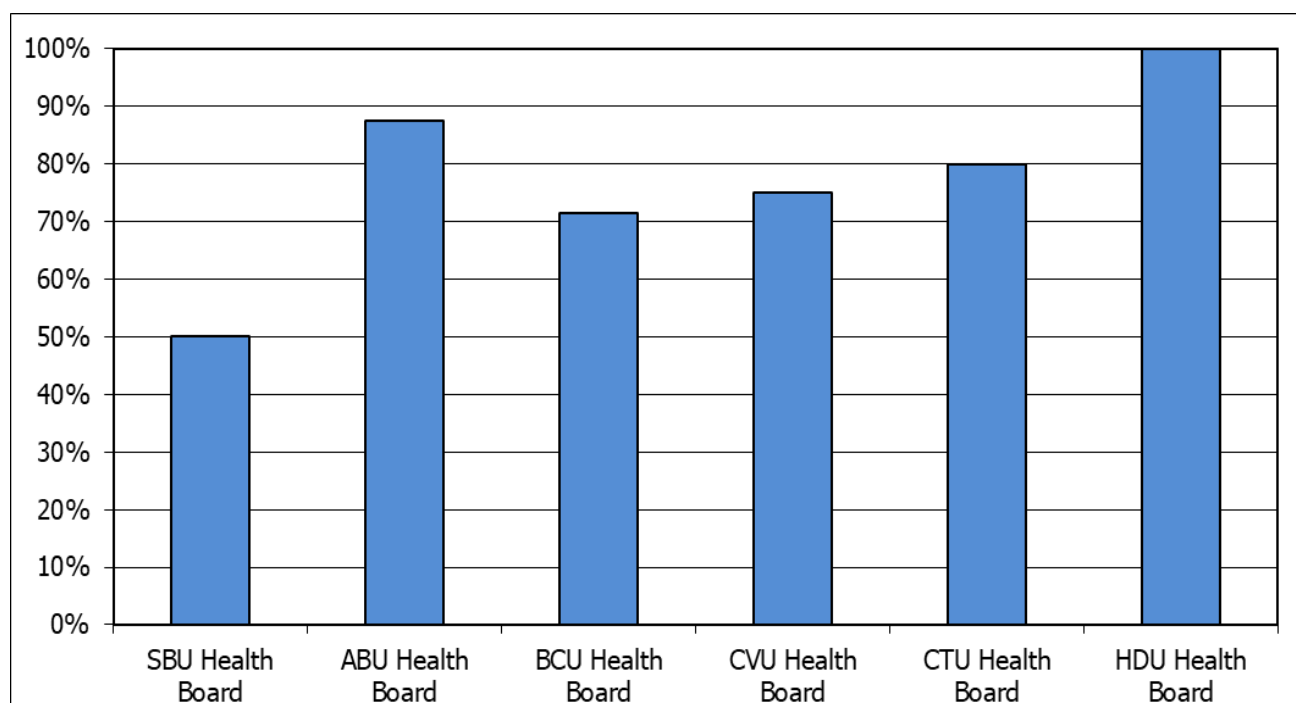
Table 12 shows average and median age of hearing aid fitting of babies born between 1 April 2019 and 31 March 2020. These figures allow for prematurity.

**Table 12:** Age at hearing aid fitting

Health Board	Average (weeks)	Median (weeks)
Aneurin Bevan University Health Board	15.8	11.0
Betsi Cadwaladr University Health Board	15.8	13.6
Cardiff and Vale University Health Board	21.6	21.5
Cwm Taf Morgannwg University Health Board	8.9	6.0
Hywel Dda University Health Board	20.1	16.1
Swansea Bay University Health Board	17.6	17.6
<b>All Wales Total</b>	<b>16.1</b>	<b>11.7</b>

The figures in both Tables 11 and 12 are affected by small numbers of identified babies in each Health Board. Clinical and social factors can influence timing of both confirmation of hearing loss and hearing aid fitting.

**Graph 5:** Hearing aid fitting within four weeks of identification of hearing loss by Health Board for 2019 – 2020



80.0% of babies in Wales are fitted within four weeks of identification.

Timely hearing aid fitting for babies identified with a hearing loss can be influenced by clinical and social factors and does not always reflect issues with service delivery.

### 3.12 Yield, Sensitivity, Specificity and Predictive Values

The yield from the programme indicates that the number of cases detected related to the number of babies screened is 1:788. The sensitivity of the programme is 89.9% with a specificity of 98.8%. The positive predictive value of the screen is 9.7%.

## 4 Definitions

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

### Health Board

Screening data is taken from the All Wales New Born Hearing system. Babies are allocated to Health Boards based on residence, unless stated that the location is based on where the screening took place. We do not hold data on place of birth.

### Eligible babies

Babies born to mothers who are temporarily or permanently resident in Wales at the time of birth and babies that move into Wales under the age of six weeks.

### Suitable for testing

Babies are suitable for testing when they and their mother are well. Babies born prematurely are suitable for testing when the baby's gestational age is more than 36 weeks.

### Uptake

The proportion of eligible and suitable babies who are tested.

### High risk babies

Babies who have spent more than 48 hours in a Special Care Baby Unit/Neonatal Intensive Care Unit.

### Well babies

All babies that are not classified as High Risk.

### Referral for re-screen in Audiology

Parental request for re-screen following a one ear clear response result for a Well baby on completion of screening.

### Targeted Behavioural Test

A hearing assessment for babies undertaken by audiologists at a developmental age of nine months. This is offered to babies who do not complete screening or assessment, babies whose parents request follow up for a Well baby with a one ear clear response, and babies who have identified risk factors for hearing loss.

### Yield

The number of babies with a follow-up outcome that meets the definition of the target case, per 1,000 babies screened. The target case for NBHSW is bilateral permanent hearing loss of a level greater than 40 dBHL across the frequency range of 500Hz, 1KHz, 2kHz and 4KHz.

**Sensitivity**

The number with confirmed hearing loss that were correctly identified as positive on screening.

**Specificity**

The number confirmed with no hearing loss that were correctly identified as negative on screening.

**Predictive Value**

The proportion of referred cases following a positive screening test which are found to have confirmed hearing loss.

**5 Production Team****Production Team:**

Jacqui Evans	Newborn Screening Manager, North Wales
Meg Shepherd	Programme Co-ordinator, North Wales
Jackie Harding	Programme Co-ordinator, South Wales
Lara Tompkins	Programme Co-ordinator, Mid and West Wales
Ruth Lawler	Head of Programme, Maternal and Child Screening (retired)
Jude Kay	Head of Programme, Newborn Hearing
Sikha de Souza	Consultant in Public Health, Screening
Dr Sharon Hillier	Director of Screening Division
Helen Clayton	Lead Informatics and Data Services Manager
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Diane Rawlings	Personal Assistant
Rhys George	Cofus CTF (Welsh translation)

This report was not published as official statistics.