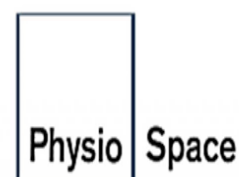
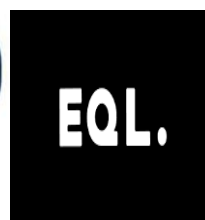


**PhysioNow in Wales – a pilot as part of the ‘Digital solutions fund’.  
In conjunction with Wales Government and Life Sciences.**

**Evaluation Summary**

Project Name	PhysioNow Wales
Project purpose	Digital Solution Fund – response to Covid-19
Project start date	21 <sup>st</sup> August 2020
Project finish date	11 <sup>th</sup> December 2020
Project Sponsor	Mike Turner COO, Connect Health
Evaluation author	Gary Howe, Senior Service Transition Manager Connect Health
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## 1.0 Executive Summary

PhysioNow is an advanced musculoskeletal (MSK) triage, assessment and management tool. It is a digital solution, allowing patients to access physiotherapy at the time and place of their choosing. PhysioNow provides 24/7 access to patients every day of the year. It enhances patient safety and empowers patients to begin management of their painful conditions at the earliest possible time. The technology is constantly evolving with many exciting future developments and advancements due to be added imminently.

Across all ages MSK conditions affect 887,000 people annually in Wales accounting for 29.3% of the population. The pressure MSK conditions place on the health system are huge. 20% of all GP appointments are related to MSK problems with 7.9% of all hospital admissions attributed to MSK presentations. As a result, MSK conditions account for the third largest area of NHS programme spending.

PhysioNow is a fully tested, proficient and reliable solution. Patients are prioritised and managed more safely as they are not bound by typical service opening hours. In addition, they can self-refer, meaning they receive support when they need it and are not confined by the date they were referred. Patients will soon be able to fully self-manage their conditions exclusively through the use of PhysioNow. By providing rapid access and management PhysioNow reduces waiting lists and frees much needed capacity in physiotherapy departments as well as the wider healthcare system. PhysioNow is being used by Connect Health in a number of healthcare systems in England.

This pilot in Wales was developed as part of the response to the Covid pandemic. A number of key performance indicators (KPI's) were set prior to launch. The intention was to accurately measure various potential benefits across a range of aims and objectives. PhysioNow was a huge success when measured against these KPI's. Detailed analysis of quantitative and qualitative feedback from a range of stakeholders will be presented showing an overwhelmingly strong body of evidence to support the introduction of PhysioNow within current pathways. The benefits are extensive and range from improved access for all, safer and more efficient patient management, greater convenience - all with the potential to save significant sums of money.

The introduction of PhysioNow into a small sized Health Board with relatively modest physiotherapy activity has the potential to create efficiency / productivity improvements of over £300,000 per annum. If implemented across Wales, the benefit would reach well over £1 million per year. MSK patients and staff and the wider healthcare system would clearly benefit from the positive capacity impact. These improvements are combined with excellent patient experience and would also benefit clinical staff within MSK departments.

The pilot has now finished and the next steps involve the Welsh Government, Life Sciences and other stakeholders responsible for the provision of care in Wales to review this report. The evidence supports the implementation of PhysioNow within Wales. As part of healthcare pathways it would benefit patients and staff whilst making significant savings. Patients in particular have been very vocal in their hope to see PhysioNow continue. PhysioNow fully aligns to the core principles of reports such as '*A Healthier Wales*' and we hope the opportunity to continue the excellent work we have started in Wales will present itself.

## 2.0 Project Overview

In response to the Covid pandemic Wales Government and Life Sciences set-up a 'digital solutions fund'. Connect Health put forward 'PhysioNow' as a potential product to help locally in Wales to maintain and improve health care services for patients and the wider health system.

On the 28<sup>th</sup> of July 2020 Connect Health received a grant letter stating the project could commence. Every Health Board within Wales were approached and almost all indicated a willingness to become involved in the pilot. Cwm Taf Morgannwg and Hywel Dda Health Boards were selected and work began to set-up and deliver the pilot in accordance with the grant letter criteria.

Owing to some Information Governance (IG) clearance requirements requiring discussion and authorisation there was a slight delay in initiating the pilot. We were able to successfully launch on the 21<sup>st</sup> August 2020.

The digital solutions fund originally intended for 6-8-week pilots. The hope for this particular pilot was that 1000 patients would complete PhysioNow consultations. Through this number it was felt all stakeholders would receive meaningful data for evaluation. It became apparent that the original 6-8-week timescale would not be a sufficient duration for the predetermined target numbers to access PhysioNow. With the agreement of all organisations the pilot was able to extend until the 11<sup>th</sup> of December 2020 to provide more time for patient throughflow.


Upon completion on the 11<sup>th</sup> of December the table below indicates final activity numbers for the pilot. As demonstrated the target of 1000 patients was exceeded. The following section provides details on how the pilot performed with respect to the pre-determined objectives.

Service	Aug	Sept	Oct	Nov	Dec	Total PhysioNow completed
Cwm Taf Morgannwg	32	164	226	266	67	755
Hywel Dda	4	80	91	82	17	274
<b>Total</b>	<b>36</b>	<b>244</b>	<b>317</b>	<b>348</b>	<b>84</b>	<b>1029</b>

### 3.0 Project Performance

Five main KPI's were set for this pilot as part of the grant letter received. This section provides details as to the nature of each KPI, how they were measured and ultimately how PhysioNow performed in relation to each during the pilot.

#### KPI 1

Descriptor	Measure(s)	PhysioNow performance to KPI
Regular collection of PREMS in both Health Boards to capture overall experiences of patients following usage of PhysioNow as an initial assessment tool.	<ul style="list-style-type: none"> <li>Friends and Family Test (FFT) / PhysioNow specific PREM</li> </ul>	

Before the pilot commenced both Health Boards indicated that their departments collection of PREMS was sporadic. On the occasions when they were collected it was done 'in-house' i.e. clinicians would hand out questionnaires to the patients of their choice. This approach can limit visibility of patient experiences for services due to lack of data collection on a regular basis and potential bias as to who receives questionnaires.

Within this project 100% of patients who completed a PhysioNow consultation received an automatic anonymised email to a Microsoft Forms questionnaire. Through this mechanism every patient had an opportunity to share their experiences of using PhysioNow. In total 225 patients responded giving a 22% response rate. This compares favourably with typical anonymised survey response rates in healthcare.

The form was designed in conjunction with Connect Health's Head of Patient Engagement and allowed for both quantitative and qualitative analysis. Some of this feedback will be analysed as part of the remaining KPI's, other aspects will be analysed in Section 5 - Stakeholder experiences.

By providing all patients with the opportunity to voice their opinions and to assess the quality of the care they received we aligned with the Welsh Governments 'A Healthier Wales' document. A key aim of this paper is 'for services to get better at measuring what really matters to people, based on that information the Government can work out which services and treatments work well and which ones need to be improved.' As is demonstrated throughout this document PhysioNow matters to people and clearly works.

KPI 2

Descriptor	Measure(s)	PhysioNow performance to KPI
Positive feedback from patients and clinicians regarding the Welsh language aspect of PhysioNow.	<ul style="list-style-type: none"> <li>• FFT / PhysioNow specific PREM</li> <li>• Welsh speaking clinicians verifying content of PhysioNow output as part of their feedback survey</li> </ul>	~

One of the many benefits of having PhysioNow is that the decision tree underpinning it can be translated into hundreds of languages including Welsh. As part of the pilot, we aimed to provide this level of accessibility for patients and robustly test the processes involved. However, the technology requirements for this were delayed meaning it was not available until 4-5 weeks before the pilot ended. Following launch, we had no patients who choose to complete PhysioNow in Welsh. As well as the limited time window available to patients’ part of this lack of uptake may be related to the relatively poor visibility of this capability on the homepage for PhysioNow (see Appendix A and B).

Another potential factor was that no marketing or promotion for this aspect took place meaning awareness among the patient population would have been low. We did however test the language translation with some Welsh speaking clinical staff who felt it was extremely accurate.

Despite the lack of patient testing, PhysioNow did provide several mechanisms through which the Welsh language could be recognised and used. The first of these was through self-referral. Both Health Boards indicated that the ability to do this pre-pilot was sporadic and inconsistent. For example, having Welsh translated paper self-referral forms or online versions for patients to access was not always readily available or guaranteed.

With PhysioNow the ability to self-refer in Welsh was always available when launched within the pilot. As this capability has been developed and tested it would ensure full compliance with the Welsh Language Act and improve the accessibility of services for Welsh speaking patients for any future rollouts.


As well as being able to self-refer in Welsh, patients had the potential to complete their full assessment in Welsh online and receive an immediate outcome. This is something not currently available in either Health Board or to our knowledge anywhere in Wales presently.

Having a Welsh language aspect available within PhysioNow is advantageous to local departments. It improves compliance with the Welsh Language Act as well as reducing pressures within departments for Welsh speaking clinicians at initial appointments. This

avoids any problems that can arise in terms of diary management for clinicians and the subsequent effect this can have on patients.

We were unable to obtain data from the departments as to how many Welsh speaking patients they have per year. Although disappointing not to have any patients access this during the pilot, the technical solution is now deployed and we would look forward to providing a fully bilingual service to patients in the future. As part of the development of our translation capacity we are working to offer PhysioNow in several other languages e.g., Polish, Arabic, Bengali etc. This will continue to open services to all, increasing accessibility and reaching out to those groups in the community who are typically underrepresented in services.

### KPI 3

Descriptor	Measure(s)	PhysioNow performance to KPI
Positive clinician feedback following their patients having an initial PhysioNow assessment.	<ul style="list-style-type: none"> <li>Satisfaction survey</li> </ul>	

It was important to consider the experiences of the clinical workforce in both Health Boards via their interactions with PhysioNow, however, this KPI was slightly more difficult to assess. The initial feedback from clinicians towards the introduction of PhysioNow was negative. The rationale from staff was that they were having to read 3-4 pages on a PDF at triage comprising of clinical content from the online assessment. ‘Traditionally’ they are accustomed to reading <1 page via a GP referral. Staff naturally felt this slowed them down at triage.

The process underpinning this initial reaction was implemented during the pilot as management teams in both Health Boards understandably wanted to cross-check the accuracy of PhysioNow. This meant staff were asked to re-triage the subjective information acquired from patients in combination with the outcomes produced by PhysioNow. This ‘duplication’ was naturally frustrating for clinicians.

This is not how PhysioNow is intended to fit within a service as this ‘manual’ triage by clinicians would be replaced by PhysioNow. This was not communicated well with clinicians initially and this is covered in lessons learned (section 7) in more detail. When meetings were arranged with staff and the processes explained fully there was a much more positive perception of PhysioNow as clinicians became aware of the benefits it could bring to their departments.

The pilot provided an excellent opportunity for external validation of PhysioNow from a clinical perspective. From a red flag / safety aspect PhysioNow performed (as it has done in



the 16 services it is used by Connect Health throughout England) with no concerns identified. This is a critical component for all involved as the safety of patients is everyone's foremost priority and concern. In the services we deploy PhysioNow we have already rapidly identified conditions such as Cauda Equina Syndrome (CES) and Metastatic Spinal Cord Compression (MSCC). These are both medically serious conditions and more pertinently extremely time sensitive. By having rapid access to assessment, patient care is not delayed by lengthy waiting lists and they receive access to the emergency care they need at the necessary time.

As part of clinical validation staff who triaged referrals were asked to compare PhysioNow outcomes with their own personal outcomes. This was asked to be completed after the clinicians had their first direct clinical consultation with the patient. Staff were asked to track this on an Excel spreadsheet supplied. Local staff choose not to do this and rather flagged any concerns or queries directly with their service manager / clinical leaders.


Towards the latter end of the pilot Cwm Taf Morgannwg in particular felt confident that they no longer needed to re-triage the PhysioNow outcomes. This could be partly due to the higher volume of patients going through PhysioNow in this Health Board allowing for greater validation potential. It could also be due to more operational capacity to support the pilot in general within this Health Board. As a result, some of their triage staff gained additional CPD time during the pilot within their blocked triage hours.

Approximately 7 cases out of the completed 1029 consultations were identified and feedback to Connect Health to query. 6 of these 7 were perceived discrepancies in timescales from the onset of a patient's condition. For context when Connect Health was developing PhysioNow we used our internal guidelines for timescales e.g., 'acute' presentation <48 hours, 'subacute' 48 hours to 6 weeks and 'chronic' >6 weeks. Each Health Board have their own internal guidelines for timescales which varied slightly from ours and this formed the nature of these queries.

It is important to acknowledge that PhysioNow is being constantly clinically reviewed and amended by our internal clinical leadership group. If clinical adjustments are required these can be rapidly changed within the system to bring about the necessary changes. One such case (the remaining 1/7) was identified by staff in Cwm Taf Morgannwg whereby they felt the algorithms could not fully rule out a significant shoulder muscle tear. Upon reviewing the rationale, we were in agreement and made the necessary changes to the system instantaneously. No harm came to the patient in question but we wanted to immediately amend the decision-tree as we recognised a minor openness in the system.

The ability to constantly review and improve the system can only benefit patients as we continue to evolve the decision-making of PhysioNow to keep it at the forefront of this cutting-edge technology.

KPI 4

Descriptor	Measure(s)	PhysioNow performance to KPI
1. Cost savings / improved capacity management within the Health economy as a direct result of patient self-referral.	<ul style="list-style-type: none"> <li>Count of self-referrals overall.</li> <li>Count of self-referrals from targeted GP Practices.</li> <li>FFT / PhysioNow PREMS</li> <li>Cost and health analysis of appointments with GP versus PhysioNow.</li> </ul>	

As well as considering patient and staff feedback and experiences it was very important to analyse the implications PhysioNow has had on the wider health system. There are several different mechanisms through which to evaluate this and the following will provide further detail on some of the key findings from the data collated. Much of that detail is based on the below table which provides a breakdown of how patients first accessed / became aware of PhysioNow.

1. Self-referred <b>without</b> seeing any health professionals	<b>33%</b>
2. Reception 'divert' (patients signposted to PhysioNow by reception staff without the need for a GP appointment)	<b>26%</b>
3. GP / Primary care referral	<b>31%</b>
4. Other referral source e.g., orthopaedics	<b>10%</b>

A key benefit of PhysioNow is the capability for patients to self-refer and register without needing a direct referral from a health care professional. Outcomes 1 and 2 in the above table show patients that used PhysioNow without seeing a health professional first - during the pilot this amounted to 59%. This is obviously a significant number which will have had considerable benefits to the wider health system.


The reason for this is that these 59% of patients did not utilise GP (or other health professionals) appointments first and as a result they will have generated increased capacity within the system. This capacity could have been used in Covid related cases or for patients with more urgent needs than typical MSK presentations.

This is important as the current pressures on our GP colleagues are considerable, the Royal College of General Practitioners for Wales produced the '*Transforming General Practice: Building a profession fit for the future*' document in 2018 (<http://www.gpone.wales.nhs.uk/sitesplus/documents/1000/RCGP-transforming-general-practice-dec-2018.pdf>). This document revealed worrying findings regarding moral within

GP’s in Wales. 31% say they are so stressed they feel they cannot cope at least once a week with nearly a quarter (23%) saying they are unlikely to be working in General Practice in 5 years’ time. This level of stress and burnout are not sustainable and the introduction of tools such as PhysioNow could have a meaningful impact in negating some of these issues.

The Covid pandemic is ongoing and has been developing since this document has been produced, it will only have increased the pressures being faced by an already overwhelmed GP workforce. By delivering and implementing tools such as PhysioNow we have an opportunity to help and support our colleagues in General Practice and this can only be to the betterment of patients in Wales. In addition, section 6 provides details on the substantial financial benefits that can be linked to self-referrals from a GP capacity perspective.

### KPI 5

Descriptor	Measure(s)	PhysioNow performance to KPI
Cost savings / improved capacity management within each Health Board because of PhysioNow stratification and output.	<ul style="list-style-type: none"> <li>• FFT / PhysioNow PREMS from patients</li> <li>• Completion rates for those directed to PhysioNow.</li> <li>• Cost saving comparison of time no longer required for triage.</li> <li>• Clinician feedback survey will ask if they agreed with the stratification output of PhysioNow.</li> </ul>	

The introduction of PhysioNow has the potential to enhance and streamline pathways for patients by helping them see the right person at the right time. As has been alluded to both Health Boards ordinarily use a ‘paper’ triage mechanism whereby a clinician will manually read through a GP (or self-referral) document. Based on this information they will then make a decision which they feel is the most appropriate to the needs of the patient in terms of next steps in their care journey.

This process is obviously labour intensive as it requires ‘blocked’ clinician time to read and triage these referrals which comes at the expensive of patient facing time. PhysioNow eradicates the need for this as the sophisticated algorithms which have been clinically designed by Connect Health’s senior leadership team (and are built into the software) replicates this process automatically.

This means that if PhysioNow is used to triage the referrals entering an MSK service a significant amount of clinician time can be removed from triage tasks and reassigned to more clinical facing time with patients. This could be used to reduce waiting list times or additionally it could reduce the total number of reviews required. Both of which would improve patient

experience and quality whilst simultaneously improving capacity within departments. In the Finance section (section 6) the time savings and the financial benefits are explored and explained in more detail. Further potential options as to how these benefits could be realised are also expanded upon.

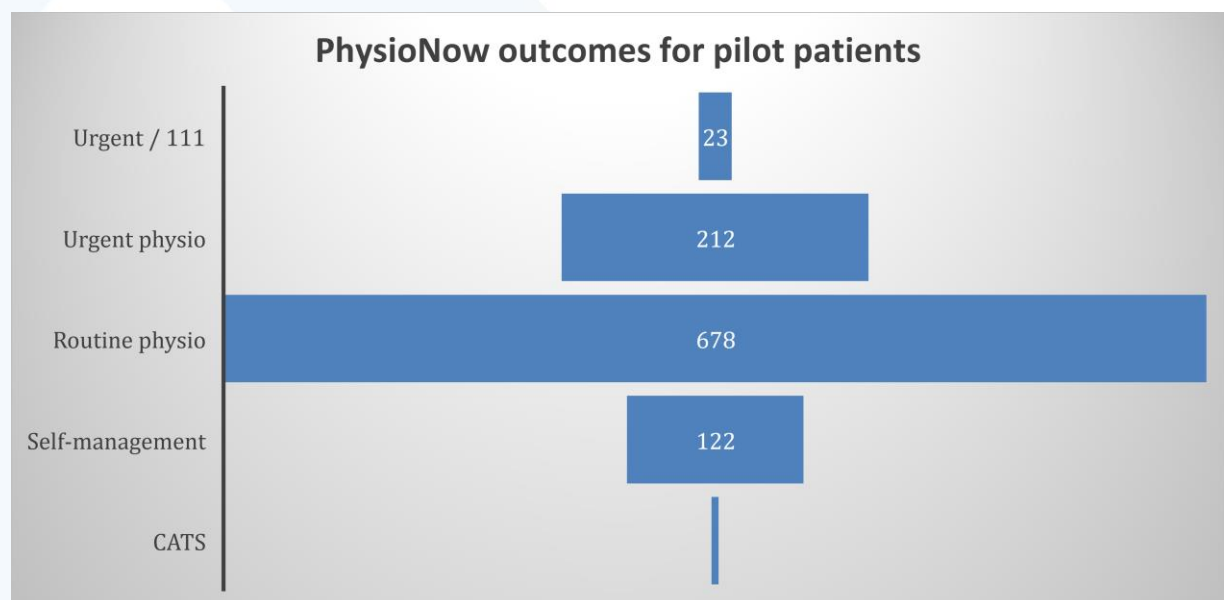
#### 4. Project statistical analysis

Connect Health has been using PhysioNow across 16 of our NHS MSK services for close to a year. We collect and analyse large components of data via our vast data warehouse which then creates live reports for analysis. All this data is generated ‘internally’ as it comes from services we directly run and therefore control. Our work in Wales has provided us an opportunity to validate some of this data which was generated ‘externally’ within Wales, in services and population levels previously unknown to us.

Throughout our nationwide services in England, we have observed that PhysioNow outcomes for patients choosing digital assessment are extremely consistent with first appointment outcomes with clinicians. This means that if a patient completed a PhysioNow assessment as their first point of contact within our services, the outcome would be no different than if the same patient had spoken with a clinician directly as their first point of contact within a service.

The ability to replicate this is crucial. If patients are not signposted correctly at their first contact it can lead to safety issues, delays in their care, poor patient experiences as well as avoidable operational, clinical and administrative waste.

The below chart shows the outcomes generated by PhysioNow for the 1029 who completed consultations within the pilot. As you can see the vast majority (~67%) of patients required a ‘routine’ appointment with a physiotherapist after their initial PhysioNow consultation. This correlates to the results generated within our other services.



Graph showing PhysioNow outcomes for completed pilot patients.

National statistics for MSK presentations within physiotherapy suggest that <5% are deemed as medically urgent. As the table demonstrates ~2% of the pilot outcomes fell into this category. It is reassuring that this is similar to our services who report 3% of patients with this outcome.

These low volumes of patients should not detract from the essential ability to recognise these types of emergency presentations. When we talk about conditions in this bracket, we mean those such as cancer, spinal cord compression, acute joint infection and CES.

PhysioNow provides 24/7 access to not only self-referral but more importantly assessment and outcome. Some services provide the former and although very beneficial to allow self-referral, it is the ability to produce a full assessment and outcome that sets PhysioNow apart.

This capability allows PhysioNow to stratify patients instantly upon completion of their consultation. This will filter out these emergency patients and signpost them to the medical services they need. This ensures a patient's next management step is determined by their clinical need rather than the date they were referred.

PhysioNow will also prioritise patients who need to see a physiotherapist more urgently. The table shows ~20% of pilot patients had this outcome. This means those patients most in need due to severe pain or more complicated presentations, can be easily identified and within Connect Health services speaking to a physiotherapist in <48 hours.

PhysioNow is constantly evolving and the 'self-management' outcome is one such area we will be developing extensively in early 2021. Some additional detail relating to this is available in sections 6 and 8. The c.10% of outcomes that came within this category steadily rose through the pilot. That was because we are beginning to make the necessary changes to the clinical algorithms to gradually guide appropriate patients towards this particular outcome. We have always been satisfied with the rationale behind self-management as an outcome but have been somewhat reluctant to have more patients being guided to this outcome until we have the complete support package to accompany this.

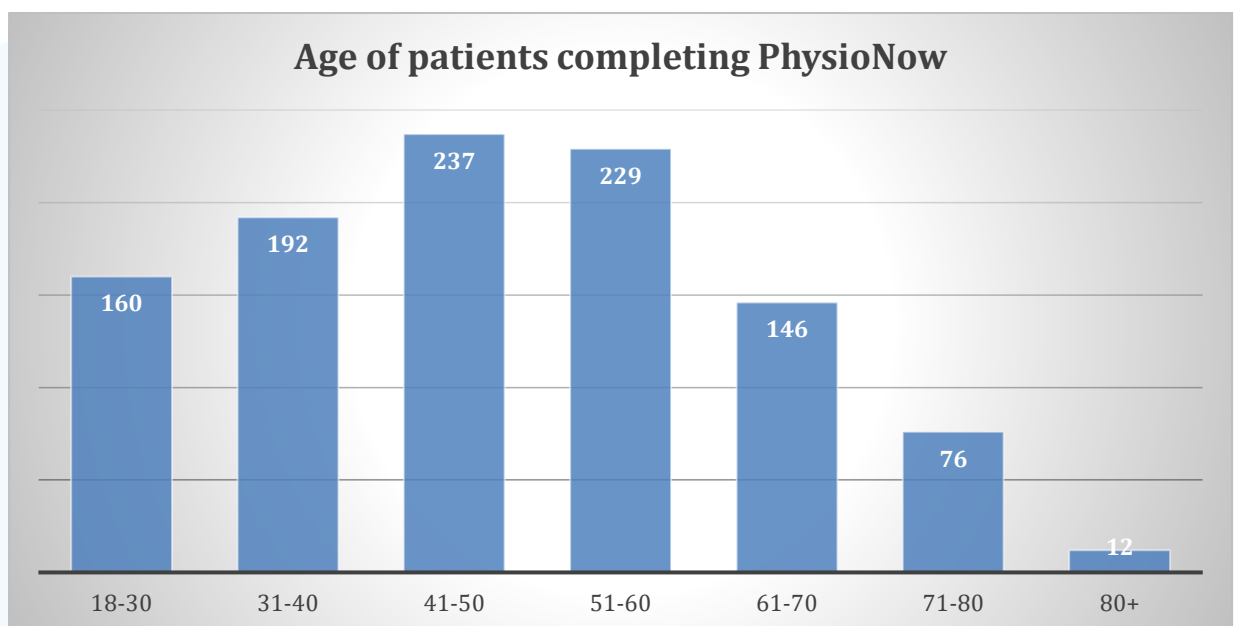
Further evidence of our ability to continually advance PhysioNow technology has been the introduction of a 5<sup>th</sup> outcome – 'CMATS'. This outcome means that patients would by-pass the initial 'Tier 1 physiotherapy' service and have their first appointment in a CMATS or 'Tier 2' service. The desire to have this outcome is for those conditions that typically do not respond well to initial physiotherapy but may benefit directly from a more advanced treatment technique like a corticosteroid injection; an example being a 'trigger finger' diagnosis. By having the capability to more accurately direct patients to the most appropriate clinician it means they get to see the right person at the right time.

We anticipate the percentage of patients filtering through to this outcome to be low at around 1-3% and the pilot data, as well as our internal data correlates with this. Although the volumes are modest it will still make continued improvements in overall capacity management planning. Most importantly it will shorten the patient journey for this cohort by providing an earlier opportunity to begin more effective management of their pain.

Through the above and by utilising PhysioNow, services will have the opportunity to meet the aims of 'A Healthier Wales'. The Welsh Government indicate they 'want to shift services out of hospital to communities, and we want more services which stop people getting ill by detecting things earlier or preventing them altogether'. As the above testifies PhysioNow can help meet these aims and objectives.

As a by-product of the data generated and captured through business intelligence reports, as well as patient experience responses, we have accumulated a diverse set of data. The below provides details on some key findings and the impact they had on stakeholders involved in the pilot.

#### 4.1 Age of those who used PhysioNow.



Graph showing age ranges of those who completed PhysioNow in the pilot.

There are numerous benefits achieved by making technology such as PhysioNow available for all ages such as improved speed of access to services and convenience. An age group who are perceived to be 'disadvantaged' by digital technologies are those aged 65 and over. In their recent publication 'Technology and Older People Evidence Review', Age UK report that digital technology can help the over 65's live more independent lives and keeps them in control of

their healthcare affairs for longer. They also noted that internet access for those aged 65 and over is increasing throughout the UK.

Our pilot supports the above in that more people completed PhysioNow in the over 65 brackets when compared to the 18-30 age bracket. This is a very positive outcome for the pilot and replicates the results we are seeing across our services.

Active patient involvement and engagement were fundamental aspects in the development of PhysioNow. As part of this development work for PhysioNow our Head of Patient Engagement worked closely with patient groups to design the questions to ensure they were easy for patients to understand and interact with. This work will supplement enhancing ease of access and use for all age groups.

It is essential that access to services is maintained for every patient. As part of development, PhysioNow went through an Equality Impact Assessment. Statistical analysis of those accessing and using PhysioNow is constantly reviewed to ensure it accurately reflects the demographics we serve. It was also policy throughout the pilot that patients who did not wish to use PhysioNow could still access the service through 'traditional' mechanisms.

## 4.2 Out of hours capability

PhysioNow provides 24/7 access which is hugely beneficial to both patients and the wider health service. Physiotherapy outpatient appointments typically occur between standard operating hours over an 8-hour window e.g., 09:00-17:00. PhysioNow obviously significantly extends this providing patient's superior access. This benefits patients from a safety perspective as well as convenience.

During the pilot 34% of the 1029 patients completing PhysioNow did so beyond / outside of 09:00-17:00 i.e., out of hours (OOH). This figure also includes patients completing their assessment at weekends and on Bank holidays when typically MSK physiotherapy appointments are also unavailable. This ability to provide around the clock assessment and guidance to patients has numerous benefits e.g., they do not have to sacrifice work or family time to attend appointments. More details on the positive impact this has had on patients can be found in the next section.

It became apparent when analysing those who accessed PhysioNow OOH that a significant proportion of those patients had outcomes that were either 'Urgent' meaning they were advised to contact 111 or 'Urgent Physiotherapy' meaning they needed an urgent initial appointment with a clinician. 24% of patients accessing PhysioNow OOH had one of these two outcomes.



Given the severity of these patient's pain and symptoms whilst completing their PhysioNow consultation, which subsequently generated an urgent outcome upon completion, it is not inconceivable that they would have sought other forms of emergency help. The aforementioned '*Transforming General Practice*' document indicates that patients are likely to access the NHS at the point of least resistance outside of core hours. Not having access to OOH services risks increasing unnecessary A&E attendance. A report by The Board of Community Health Councils revealed that every Health Board in Wales identified fragility in their out of hours services and A&E capacity.

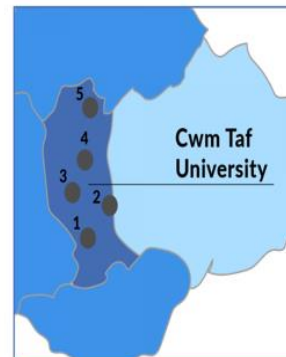
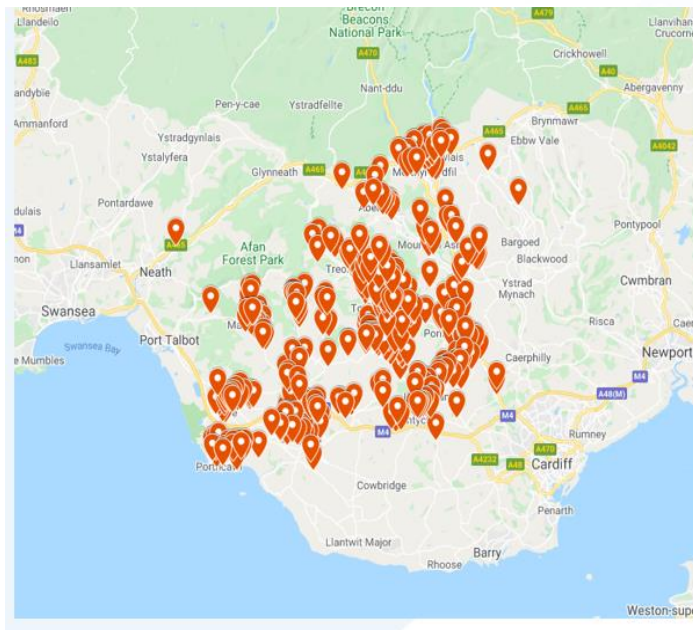
We are all aware that healthcare exists far beyond 'core' hours. It is hugely beneficial to patients and the wider healthcare system if patients can access appropriate services in the evenings, nights, weekends, and during bank and public holidays. PhysioNow is a solution to this, not only increasing patient safety but patient experiences as well.

### 4.3 Access for all

It is vitally important when considering introducing any form of digital technology that it does not disadvantage or act as a barrier to entering services for patients. By not mandating PhysioNow for all patients this was achieved but it was important for us to analyse access trends for patients. As noted in 4.1 age did not appear to be a barrier as patients of all ages accessed PhysioNow in line with typical MSK access rates.

At registration patients were asked to complete their address to include their postcode. By analysing this data, we were able to compare it with typical referral and access rates for patients before the pilot. In both Health Boards when comparing the data it was apparent that referral and access trends before PhysioNow were the same as when it was introduced. This helps provide strong reassurances that demographics, age, geography etc were not a barrier when using PhysioNow and that access was consistent for all.

The 'heat-map' on the next page illustrates completed PhysioNow consultations within Cwm Taf Morgannwg Health Board. The corresponding map to the right shows this Health Board's borders relative to Wales and its key hospital sites. As the heat-map demonstrates there was a good spread of completed consultations across the Health Board which is consistent with typical referral activity within the region.



1. Royal Glamorgan Hospital
2. Pontypridd Cottage Hospital
3. Ysbyty Cwm Rhondda
4. Ysbyty Cwm Cynon
5. Prince Charles Hospital



## 5.0 Patient experience

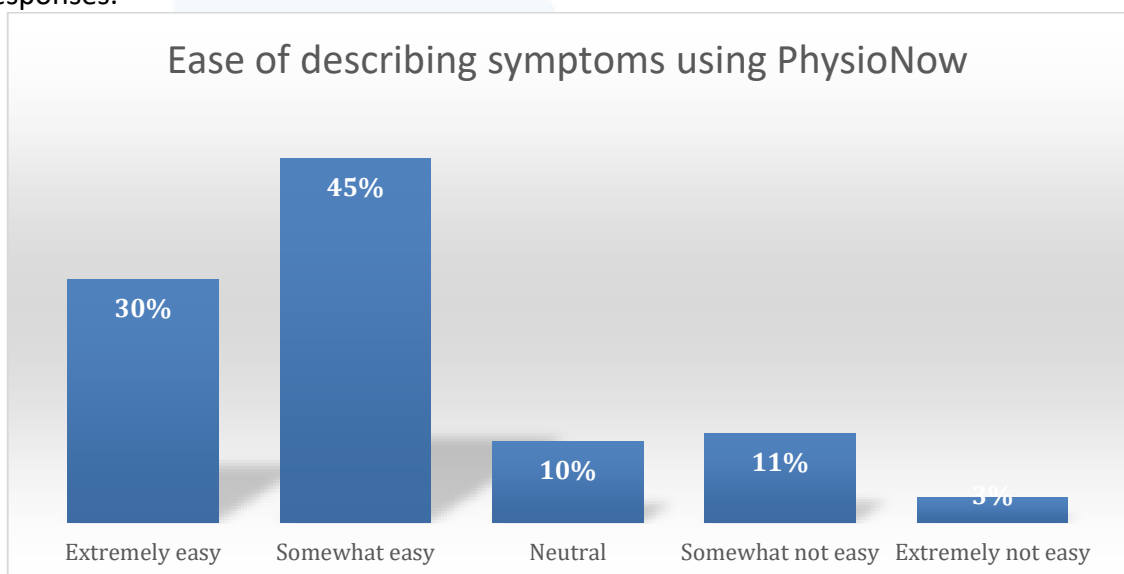
### 5.1 Friends and Family Test

The above sections demonstrate that PhysioNow is extremely safe and effective from a clinical performance perspective. The considerations of patients are also always of great importance and their voices must always be heard: our services need to be built to help, support and protect those who use them.

It is vitally important to analyse patient experiences of services as it can provide an indicator as to the quality of service provided. One of the most common outcome measures within healthcare and one considered to be the gold standard for measurement within the NHS is the 'Friends and Family Test' (FFT). The FFT data for the pilot shows that 81% of respondents would recommend PhysioNow to their friends and family. This is an exceptionally high positivity rating for PhysioNow. It very clearly demonstrates the extremely high satisfaction patients had using PhysioNow and that they would have no hesitation in recommending its use to their family and friends.

### 5.2 Ease of use

With any new addition to a service, it is important to analyse how easy and accessible it is for patients to use; this subsection will focus on the former with the next addressing the latter. It is imperative that PhysioNow can accurately facilitate patients sharing their stories. Patients need to be able to easily articulate their symptoms to ensure safety, accuracy and guarantee a standardised assessment and positive patient experience. Patients were asked 'How easy was it for you to describe your symptoms using PhysioNow?', the graph below demonstrates the responses.



*Graph showing how easy patients felt it was to describe their symptoms using PhysioNow.*

As illustrated the vast majority (75%) of patients felt it was easy to describe their symptoms using PhysioNow, this is vital due to some of the factors listed above. PhysioNow clearly provides a platform that patients feel comfortable using to describe their symptoms. The below are some direct responses from patients articulating this.

anonymous	English (United Kingdom)	Its brilliant as its easy to answer and how to point out where the pain is coming from
anonymous	English (United Kingdom)	Quick and easy system to use with early response time.
anonymous	English (United Kingdom)	Felt it was a very thorough assessment tool
anonymous	English (United Kingdom)	I was impressed by the thoroughness of my initial assessment and am pleased I will hear from an adviser in two days. I felt that someone with knowledge and skills was listening to me. Thank you.

As can also be seen from the above graph 14% of patients had a less favourable experience when attempting to articulate their symptoms with PhysioNow. Although this percentage is low it was still very valuable to read some of the responses associated with these so we can take the learning forwards to further advance PhysioNow. The responses associated with less favourable patient experiences centred around 2 main themes.

The first of these was that some patients felt they were unable to articulate their symptoms in as full a manner as they would have liked. The responses below summarise these patient experiences.

anonymous	English (United Kingdom)	It would have been nice to have had an option of putting in other reasons on more of the questions as I'm some cases things are not always black/white
anonymous	English (United Kingdom)	Sometimes I wanted to answer something other than yes or no and there was no free text option available. But in general I thought it was a very good service.

PhysioNow has over 3000 clinical questions and responses built into its decision-making tree and this provides patients with a safe and robust assessment process allowing multiple avenues to be explored. Although PhysioNow does have the capacity for some ‘free-text’ boxes overall these have been restricted. The rationale here is software coding, in that it has been difficult thus far to analyse these responses and apply appropriate clinical reasoning to this style of input.

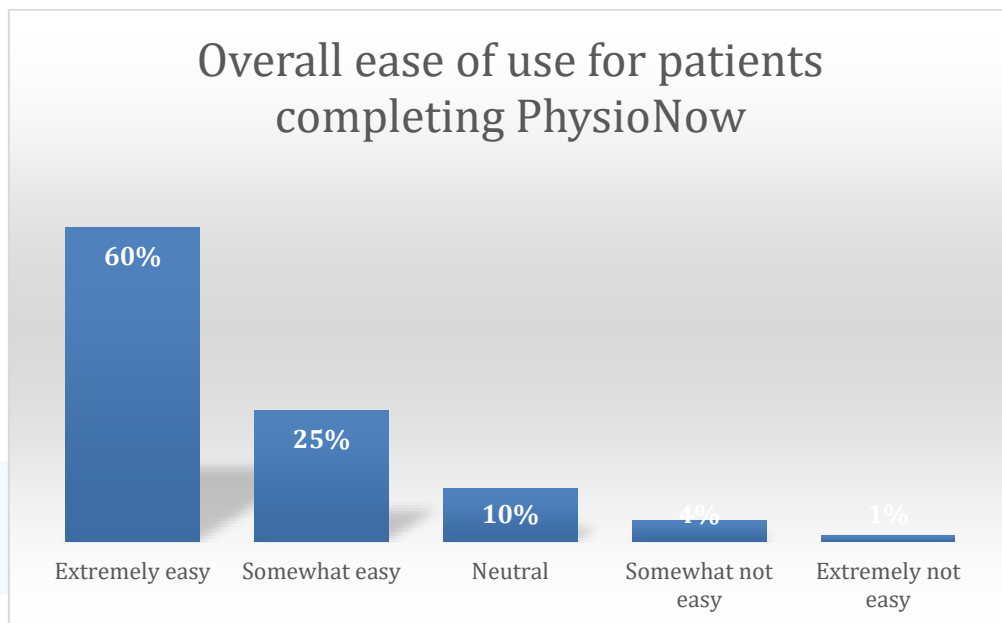
This feedback has been something we have observed in our own services and as referenced in section 8 it is one of the future developments we have actively been working to improve and develop. The plan will be to provide a more interactional experience for patients and to allow them to be more descriptive. This exciting new development is already in test phase and will be ready for introduction soon.

A further less favourable theme for patients (and indeed clinicians) is when a patient presents with multiple body area’s that are painful. This inevitably leads to more questions for these patients as it necessary to try and rule in / out connections between the presentations. The below response alludes to this but it should be noted that even with direct human assessment this process is required. In this environment multi-site presentations are also more time consuming with many services offering longer appointment times to facilitate this.

Some services will even ‘cap’ the number of body area’s a patient can present with. Thus far it has been decided not to do this with PhysioNow as the number of multi-site referrals across MSK services is generally low. It is something that we will continue to monitor across our services and we will always be continually trying to enhance all patients’ experiences.

anonymous	English (United Kingdom)	The assessment questions were not easy to use, incredibly aggravating at times as it made my problem seem like 3 different issues but correlate together but nowhere to write in own words your issue rather just answering with answers already supplied and some don't suit what you are trying to portray across.
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The above sub-section has been analysed as the ability to describe symptoms easily for patients is a cornerstone of their assessment and management. Related to ease-of-use, patients were asked ‘Overall how easy did you find PhysioNow to use?’, the graph below details the responses. Although these aspects are closely linked and indeed overlap, we wanted to provide an opportunity to capture patients’ overall experiences using PhysioNow and the technology upon which it is built.



Graph showing how easy overall patients felt it was to use PhysioNow.

The above clearly demonstrates positivity in this area with 85% satisfaction. There were dozens of positive patient responses that could have been included and some of the responses associated with this positivity have already been discussed.

The less favourable responses relating to this were regarding consideration for elderly patients completing PhysioNow. The below response describes this but it should be noted that in total only 3 responses mentioned the elderly. As has been covered in 4.1 more patients over 65 used PhysioNow than in the 18-30 bracket. The oldest patients who completed PhysioNow in each Health Board were 92 and 86 respectively so it certainly does not appear that PhysioNow has been a barrier to treatment.

anonymous	English (United Kingdom)	Great new advancement just have to be cognisant of elderly less technologically advanced people
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Some other less favourable responses in this area related to not seeing a physiotherapist face-to-face (FTF) initially. We have been using 'PhysioLine' which is a 20-minute initial assessment completed on the telephone in our services for over 20 years and still receive responses like the below. Some patients will always feel that they need to be seen FTF and technology like PhysioNow will not replace this perceived need.

anonymous	English (United Kingdom)	Easy to use, hopefully i will have a one to one physical examination soon as I feel its hard to describe the problem without actually being examined. Its a great service .
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For many FTF appointments are not necessary especially as a first entry point into a service. What can be observed in section 4 is that the majority of outcomes from PhysioNow ultimately require the next management step to be a FTF appointment. The same is the case where we use PhysioNow and indeed PhysioLine. We do not view either of these as a replacement for FTF, on the contrary we view them as an essential support for it.

In order for patients to get access into our services in <48 hours it is operationally impossible to have FTF as the first point of contact for all patients. A balance must be sought to provide safe and effective care whilst providing rapid access, advancements such as PhysioNow not only facilitate this relationship but strengthen it. The below response direct from a pilot patient encapsulates how PhysioNow can work harmoniously within a service to benefit all its stakeholders.

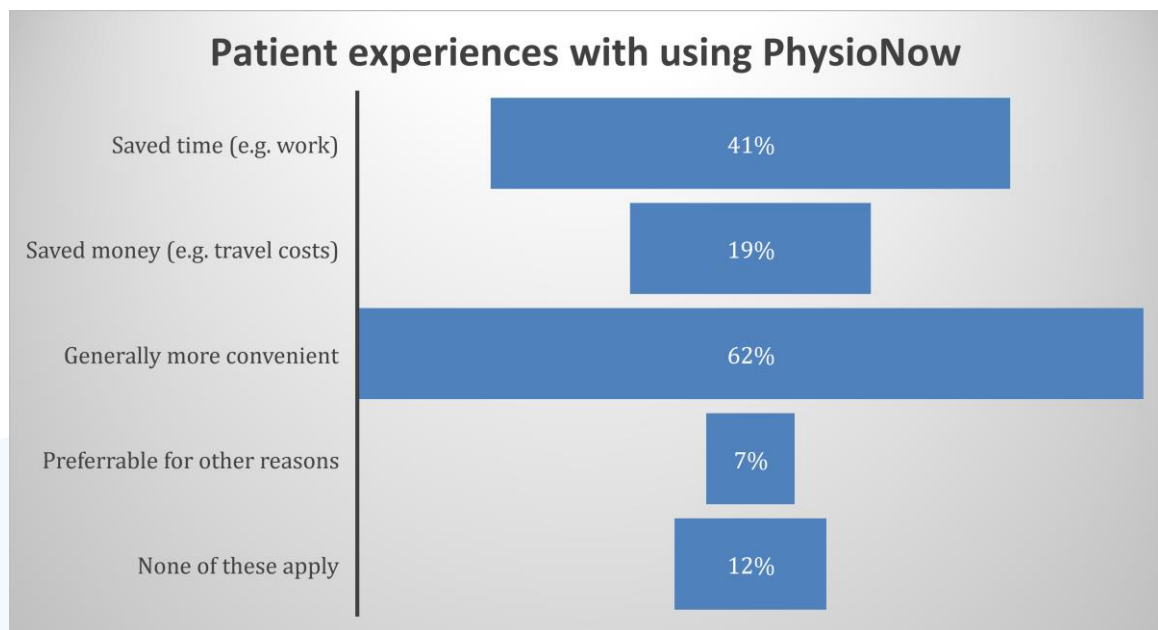
anonymous	English (United Kingdom)	for triage and initial assessment via a video call this worked extremely well. Post Covid this would be worth keeping and developing. The video call with the physio does give you confidence that you are being "treated" and not just put through a computer assessment. I was contacted within 1 hour of completing the online form and I had a consultation within 24hrs. That would have taken days - weeks with the normal referral system. For my symptoms the video link was very effective and I have a follow up call in 2 weeks already booked. All very efficient for my time and the Physio
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### 5.3 Accessibility

89% of patients responded that they were satisfied they could access PhysioNow at any time of day or night. There will be multiple reasons for this and some of these are covered below. There was no rationale provided by the 11% of patients dissatisfied by this, these responses may have come from those more reluctant to see technology such as PhysioNow become embedded in services.

Patients were also asked if they felt PhysioNow provided them with quicker access to their physiotherapy service with 69% feeling it did. The benefits of having a 24/7 service which is also operational 365 days a year have already been documented. These statistics support the view that as well as benefitting services operationally, PhysioNow also provides huge satisfaction for patients from an accessibility perspective.

Patients were asked to expand on some of the specific benefits they felt using PhysioNow as a first point of contact for their services were, the graph below outlines the feedback received.



*Graph showing some benefits patients attributed to using PhysioNow.*

As can be observed the benefits from using PhysioNow were multiple for patients. Some mentioned reduced travel time and the associated cost savings of 2-3 hour round trips. Considering the geographical layout of Wales as a whole and population densities in some Health Boards this could have a huge positive impact upon patients. The time ‘gained’ from being able to access PhysioNow from anywhere means patients get to spend more of their time with family, at work, recreationally etc and this has a major positive influence and benefit on our patients lives.

Saved travel costs will benefit patients financially but will also have an environmental impact. Patients did not need to physically travel for their first appointment meaning no carbon footprint was created direct from physical attendance at initial appointments.



## 5.4 Covid safety

It would be remiss of an evaluation for a pilot set-up as part of the Covid response not to address some of the benefits directly relating to this ongoing battle. As we are all aware the global pandemic has had a profound effect on healthcare. There has been a loss of life and change to our day-to-day lives that we never would have been able to foresee or comprehend just over a year ago. Our colleagues working on the frontline have put in levels of care and dedication unparalleled in modern times and to steal a line from our CMO in one of his recent updates to all our staff 'so much is owed to so few once again in history'.

Wales has been continually battling the pandemic and like every country will have struggled to cope with the pressures. Statistics from Public Health Wales show 184,000 cases across Wales which is the highest number among the devolved nations. The current winter peak causing the latest lockdown has led to 30% of hospital beds in Hywel Dda being used by Covid patients and 42% in Cwm Taf Morgannwg. Due to demand and capacity issues within hospitals to help these Covid patients' services have redeployed staff to help manage increased patient activity. This has led some MSK services to either suspend 'new' referrals into services or waiting lists have had to extend as staffing numbers and capacity are not at their normal levels.

Recent NHS guidance has stressed the importance of trying to keep outpatient type services such as MSK open and performing as much to normal levels as possible to prevent the development of waiting list backlogs. This would put additional pressure on services upon a return to more normalised activity levels. PhysioNow can negate this issue as it maintains access for patients and keeps services open. This means there are no delays in their care and their presentations do not become more chronic and by default more difficult and time-consuming to treat.

Anything that can play a part in aiding the fight against Covid, no matter how small, can be beneficial. PhysioNow has provided support in this way in that as it can be completed remotely i.e., without the need to attend an appointment face-to-face. This obviously helps with adherence to social distancing.

A further significant benefit PhysioNow has played in this regard is the freeing up of GP capacity. The ability of patients to self-refer for a complete MSK assessment enabled GP appointments to be better utilised within the healthcare system to help manage Covid related matters. Recent statistics from Public Health Wales show 30 GP appointments in every 100,000 are Covid related. To put this in context, the worst flu outbreak in recent years equated to 1.3 GP appointments in every 100,000.

In addition, some patients will be reluctant to seek care for their MSK complaint deeming it not a priority when compared to Covid related patients, as illustrated in the below patient comment. As alluded to above these patients, although meaning well now, will in most cases still enter the system at some point. The earlier they can do this, the more likely they are to

resolve quicker which ultimately benefits them, the healthcare system and society. Maintaining access to services were possible facilitates this and should always be encouraged.

anonymous	English (United Kingdom)	I had put off going to the gp so this was an excellent prompt to investigate my pain
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## 6.0 Financial case

The above sections have outlined some of the benefits directly felt by patients from PhysioNow. They have also provided a statistical analysis of findings from the pilot; this section explores how these are presented and developed from a financial perspective.

### 6.1 Benefits from self-referral

There are significant financial benefits associated with more patients self-referring as opposed to being referred by other healthcare professionals. The average GP appointment 'costs' the health system £30 (source: <https://www.england.nhs.uk/2019/01/missed-gp-appointments-costing-nhs-millions/>). The cost of PhysioNow for this pilot was £7 meaning each completed pilot patient 'saved' the system 76% for each consultation.

The cost of PhysioNow beyond the pilot can be further reduced (from £7) with economies of scale and/or longer contract. If we use £5 per consultation for ease of calculations the below table shows what impact this could have within the system for an MSK service accepting 20,000 referrals per year – in other words an average sized MSK service. The self-referral rates have been 'kept low' in the table so as not to 'over-promise' on the potential benefits. If we work on an extremely modest self-referral rate of 5% that means 1000 patients (5% of 20,000 = 1000) passing through PhysioNow would cost £5,000 (£5 per consultation x 1000). The same 1000 patients having a GP appointment and then being referred onto physiotherapy would cost £30,000 (£30 per GP appointment x 1000).

The 'saving' within the system therefore equates to £25,000 for this 1000 patients.

Self-referral rate	Number of patients	Costs for PhysioNow (No. of pt's x £5)	Cost for GP apt (No. of pt's x £30)	Savings within the system
5%	1000	£5,000	£30,000	<b>£25,000</b>
10%	2000	£10,000	£60,000	<b>£50,000</b>
15%	3000	£15,000	£90,000	<b>£75,000</b>
20%	4000	£20,000	£120,000	<b>£100,000</b>
25%	5000	£25,000	£150,000	<b>£125,000</b>

As part of a larger scale roll-out of PhysioNow the plan would be to provide education sessions with GP's and in particular their reception staff. By better informing them of the benefits of PhysioNow they will be able to direct patients straight to PhysioNow as opposed to using a GP appointment to achieve a referral to physiotherapy. Messages and links can be added to GP websites, as well as information posters displayed in practices containing QR codes which would take patients straight to the PhysioNow assessment page.

## 6.2 MSK physiotherapy services demand and capacity savings

By introducing PhysioNow within an MSK service there are numerous achievable financial benefits. Health Boards in Wales, like the two involved in this pilot, perform a manual triage of all inbound referrals. As discussed this means a clinician reading the referral (the vast majority from GP's) and then making a clinical decision based on the information available as to the next desired management step for the patient.

This information is dependent upon some key variables chiefly the quality of the information provided by the referrer and the competency of the clinician. The quality of information provided by GP's within referrals can be variable which in turn can reduce the chances of signposting the patient to the most appropriate next step in management. PhysioNow eliminates this variable as all patients undergo a comprehensive subjective assessment to include red flag questioning for serious conditions.

Equally, staff competency can have a bearing on getting the patient to most appropriate next management step, less experience and / or poor clinical reasoning can lead to errors in judgement. The decision-making tree for PhysioNow is built using the Connect Health's senior clinical leaderships wealth of knowledge and expertise. Staff involved have spoken internationally in a variety of MSK fields creating a balance of intelligence and understanding that is unparalleled.

To evaluate the impact this could have we have combined the above rationale and data analysed from our 30 years' experience completing this work. As a result of this analysis it has been determined that it takes on average 3 minutes for a clinician to perform triage on each referral. This time includes reading the referral and any administrative tasks associated with processing the referral on a clinical system. Before this step has taken place the reception team within the physiotherapy department need to register the referral onto the system, again using similar rationale, an estimate has been made that this will take 3 minutes per patient / referral.

The table on the next page illustrates the time that is saved per week for administrative and clinical staff using the above 20,000 referrals per annum example. This would equate to 1155 minutes or 19 hours per week, the table also shows the average salary savings that would result from this per annum for both clinical and administrative staff.

Current Health Board model							
Description	Value	Total Time (mins)	Total Time (Hrs)	WTE Required	Shrinkage	Total WTE Required	Total Gross Salary Cost
Referrals <i>per week</i>	385						
Admin Time (mins)	3	1,155	19	0.51	0.17	0.68	£16,427
Triage Time (mins)	3	1,155	19	0.51	0.28	0.79	£27,641
<b>TOTALS</b>		<b>2,310</b>	<b>39</b>	<b>1.03</b>	<b>0.45</b>	<b>1.47</b>	<b>£44,068</b>

As you can see by adding in PhysioNow and removing manual triage there is a potential saving of £44,068 per Health Board. If this was rolled out in all Health Boards this has the potential to save the system / departments close to £500,000 per annum. As with the above self-referral benefits these are calculated in isolation. A summary at the end of this section combines all potential savings.

### 6.3 Self-management

As noted in section 4 approximately 10% of all pilot patients were directed towards a self-management outcome. At Connect Health we have deliberately not programmed the decision tree within PhysioNow to direct more patients this way pending the launch of a full suite of resources to fully support patients who could self-manage. We are steadily moving towards this position and as a result flows to this outcome have slowly been increased as part of our testing. Those patients with this outcome in the pilot were all spoken to by a physiotherapist but we are close to being able to provide the necessary support package so that patients would not need any clinician contact with this outcome.

The ability to signpost more patients to a self-management option has huge benefits for all. For patients it empowers them to manage non-complex conditions independently. By providing a comprehensive support package of exercises, advice, education, progressions, information on local groups and support available etc., patients would have the confidence and resources at their fingertips to make a full and quick recovery.

The benefits operationally are that these patients would not need to directly enter the service. In this way no direct administrative or clinical resources are required to manage their condition. These resources could be better used in the system producing several benefits which are further outlined in the table towards the end of this section.

The next table shows some of the direct benefits that could be realised from introducing self-management from a capacity and financial perspective. For consistency these have been

calculated using the same 20,000 referrals per annum example. As you can see using the pilot data of 10% of patients with this outcome, a potential saving of £63,237 per Health Board is achievable. As discussed above this 10% was achieved through very subtle increases in flow to this outcome as we begin to finalise the resources that support this. The potential to safely reach higher percentages of self-management are the next step, thus moving closer to the bottom row in the below table.

% of patients self-managed	No. of referrals (as a % of 20,000)	Triage time saved. (3 mins x column no.2)	Face-to-face time saved. 60 mins (see rationale above)	Total clinical time saved. mins/hrs/wks (Column no.3 + no.4)	Admin time saved mins/hrs/wks (8 mins x column no.2)	Admin financial benefit (Band 3 salary x wks from column 6)	Clinical financial benefit (Band 6 salary x wks from column 5)	Total saving (per Health Board) (column 7 + column 8)
5%	1000	3000 mins	60,000 mins	63,000 / 1050 / 28	8000 / 133 / 3.6	£1,800	£23,800	<b>£32,429</b>
10%	2000	6000 mins	120,000 mins	126,000 / 2100 / 36	16,000 / 267 / 7.12	£3,560	£47,600	<b>£63,237</b>
15%	3000	9000 mins	180,000 mins	189,000 / 3150 / 84	24,000 / 400 / 11	£5,500	£71,400	<b>£94,045</b>
20%	4000	12,000 mins	240,000 mins	252,000 / 4200 / 112	32,000 / 533 / 14.2	£7,100	£95,200	<b>£124,853</b>
25%	5000	15,000 mins	300,000 mins	315,000 / 5250 / 140	40,000 / 667 / 18	£9,000	£119,000	<b>£155,661</b>

## 6.4 Financial summary

The above subsections demonstrate potential benefits regarding specific aspects of PhysioNow. If we combine these we get a collective appreciation of the potential impact this can have on the healthcare system. By adding the lower, middle and higher savings from each subsection the below are indicative savings that could be achieved.

- £101,497      5% self-referral + removal of triage + 5% self-managed
- £213,113      15% self-referral + removal of triage + 15% self-managed
- £324,729      25% self-referral + removal of triage + 25% self-managed

This equates to a **six-figure saving per Health Board** and therefore the potential to **save over £1 million if rolled out across Wales**. These savings will primarily produce 'more time' within

the system which will lead to increased productivity and could be realised in a number of ways, a few of which are outlined in the table on the following page.

Benefit	How benefit could be realised
Increased capacity in departments clinically and administratively	<ul style="list-style-type: none"> <li>• Reduction in waiting times for patients.</li> <li>• Increased capacity to review patients quicker / more often.</li> <li>• Admin staff could focus on other tasks.</li> </ul>
Increased time for staff training	<ul style="list-style-type: none"> <li>• The more evidence based and better skilled staff are, the more patients will benefit, this leads to better patient outcomes.</li> <li>• Reduced error rates for clinical and admin staff.</li> </ul>
Recruitment (increased time created would not need to be replaced)	<ul style="list-style-type: none"> <li>• There would not be the same pressure to fill vacancies, this would be especially beneficial in geographical areas / Health Boards where this is a constant struggle.</li> </ul>
Service development / extension	<ul style="list-style-type: none"> <li>• Time created could be used to develop additional sections of a service such as CMATS services, Women's Health, Pain etc.</li> </ul>

The above show a multitude of benefits for introducing PhysioNow into local pathways. Through discussions with the Health Boards involved in the pilot, we know that by using some of Connect Health's other advancements and technology, in conjunction with PhysioNow, we could further expand upon these benefits.

We work as a change partner with several NHS Trusts and organisations in England and have been facilitating better patient care combined with streamlining services for numerous years. **These benefits could realise several million per annum for the system in Wales.** As the focus of this evaluation summary is on our PhysioNow pilot in Wales further expansion of these figures has not been described but can be discussed in more detail as required.

## 7.0 Lessons Learned.

The purpose and focus of any pilot is to examine the feasibility of an approach which could then be rolled out on a larger scale. Through the above sections there is an overwhelmingly body of evidence demonstrating the benefits PhysioNow had in a short time span and relatively small geographical spread.

As we have seen within our own services these benefits can be easily multiplied and expanded upon. In this way the pilot can be deemed a huge success from the perspective of all stakeholders. That is not to say that everything went perfectly and we welcome an opportunity to learn and improve. Some of the below would make a further expansion of PhysioNow in Wales smoother and more beneficial to all partners as well as patients.

### 7.1 Information Governance (IG) considerations

The pilot faced some IG compliance issues at the outset. The criteria for data sharing and IG in Wales is gold-standard and world-leading. English services, where we currently operate, are rapidly adopting the same criteria. Whilst we fully comply with and indeed exceed many of the baseline requirements for IG in England, we do not currently meet the criteria in Wales. We are submitting our processes and policies to reach this level and will be fully compliant soon.

As a result of the above, an interim solution had to be developed in conjunction with IG leads from both Health Boards and our IG leads. This took several weeks involving numerous emails and sharing of documentation. It was when all parties sat down and explained the situation that we all had a better understanding and a compromise was reached. Data Protection Impact Assessments (DPIA's) were then signed with both Health Boards for the duration of the pilot. It should be noted that there were no concerns at any point during the pilot and all data was handled safely and securely.

Given the pilot was a response to a global pandemic, the flexibility offered by Life Science and Wales government was beneficial in maximising the options for patients and the system alike. In the end a sensible resolution took place which benefitted all whilst maintaining safety from an IG viewpoint.

### 7.2 Planning beyond the pilot

There have been numerous discussions with all parties involved in coordinating the pilot regarding this aspect. The digital solutions fund, which this pilot was part of, was set up as a response to Covid with the aim of helping the system. To that end this particular pilot has demonstrated its worth.



The 'issue' here is that the fund focused on the short timeframe it was supposed to last i.e., 6-8 weeks with no firm provision for continued funding for successful pilots to allow extension / embedding in local pathways beyond pilot completion.

Unfortunately, no funding has thus far been identified beyond the initial grant offer for £30,000. We understand that both Health Boards would welcome PhysioNow within their pathways, those coordinating the pilot feel it was successful, patients are strong advocates for keeping it and the wider financial benefits would be huge. It would therefore be positive to identify mechanisms for continued funding.

### 7.3 Leadership capacity to support

As with the above, pre-planning for this, around an ever-changing Covid landscape, would have been extremely difficult. Nevertheless, some added consideration as to clinical and operational willingness and capacity to support this pilot may have helped.

Due to clinical staff and management needing to take annual leave at certain times during some weeks of the pilot we were left with limited support locally. Operational management were faced with trying to juggle their existing services, with a switch to Covid related policies to include redeployment of some staff back onto ward-based duties. This put pressure on local leadership and the pilot will only have added to this.

Again, no one could have predicted the dynamism required from management but further consideration as to whether they felt their teams could absorb a project such as this may have been beneficial. Additionally, it would have been useful to know the reasons why they wanted to be part of the pilot and what they really wanted to get out of it. This was unclear to us and would have been advantageous to discuss more at Health Board selection phase as it may have influenced which Health Boards were included.

### 7.4 Staff communication, training and education.

Due to an inability to deliver any of this on the ground owing to Covid as well as a perceived need to deliver the pilot within 6-8 weeks, communication around the pilot was limited with the wider teams. Initially all information was fed into local operational management with the intention to filter this down. This led to some mixed messages and some background context for the pilot not being accurately shared.

As discussed in the KPI section the main grumble for clinicians was that they were triaging 3-4-page documents that PhysioNow produced after a completed consultation. They were doing this until 'trust' in the outcome generated could be achieved. As noted previously once the rationale for this process was explained to staff, they fully understood and were much more satisfied.

In hindsight it would have been much better to have online meetings with all clinical and administrative staff involved in the pilot at the earliest possible stage / before go-live. When we eventually did organise these sessions with local teams, they were hugely positive, engaging and informative. Everyone left with a clearer understanding of 'why' things were being done a certain way. If introducing PhysioNow to other Health Boards having these meetings ahead of launch would be a prerequisite.

## 7.5 Welsh Language translation.

As documented in Section 3 there were delays in developing the technology to provide full translation in Welsh. Part of this was an underestimation of the work required from a technological perspective to translate back and forth between languages. This would have been an issue no matter what language needed to be translated so it was not that Welsh was more complicated than any other. Now that the technology has been developed (as Section 3 notes) the ability to translate PhysioNow into several languages is in live testing.

Marketing and branding for PhysioNow in general could be developed if an extension / roll-out is being considered and the Welsh language aspect should be key among this material. Having the ability to self-refer, complete a full assessment and receive an outcome immediately and all in Welsh should be highlighted and encouraged. Maintaining native languages is a hugely emotive and an important aspect for many with the Welsh Language Act ensuring this should be maintained. PhysioNow is compatible with this and is something we can confidently provide going forwards.

## 7.6 Geographical spread.

The intention of selecting the two Health Boards used in the pilot was to give a variety of geographical and demographic areas. As section 4.3 has shown PhysioNow when deployed did not negatively affect access for patients. Cwm Taf Morgannwg were happy to use PhysioNow across their Health Board whereas Hywel Dda were a little more reluctant. The rationale being that they did not want to communicate to GP clusters that something 'new' was coming in for 6-8 weeks and then have to go back to them saying it was 'gone'.

In essence, this is what a pilot is about but ultimately it was a local decision to make. As a result, in this Health Board the deployment of PhysioNow was focused on the Pembrokeshire region. The heat map on the next page shows that uptake here was good and was in keeping with typical access activity and spread for this area. The corresponding map shows the Health Boards total geographical spread. For comparison on the heat-map Aberystwyth and Llanelli have been marked, they correspond with points 1 and 5 on the Health Board map on the right.

This gives an indication of the area that did not have access to PhysioNow in the pilot and is likely to account for why this Health Board only had approximately 25% of the total pilot activity. Originally it was intended to be a 50:50 split and this was felt to be somewhat of a lost opportunity for patients in this Health Board.



## **8.0 PhysioNow developments / the future.**

As has previously been alluded to, PhysioNow is constantly developing and evolving. Even within the pilot changes were made that benefitted patients locally. These included a 'smart' address search and the addition of more free-text boxes as we have recognised feedback from our patients has been they want to describe their symptoms more. These changes supplement constant evaluation and tweaks of the decision tree to ensure only the most evidence based and highest quality input is included.

The above changes demonstrate an ability to listen to and react positively to feedback as well as a desire to constantly have a market leading product. Some of the features below are well into development and we are extremely excited about. We firmly believe they will take PhysioNow to a world-leading product that will benefit patients, clinicians, systems and society.

### **8.1 Artificial Intelligence (AI) advancements.**

PhysioNow is already at the forefront of algorithm-based technology but our plan in conjunction with our software partners is to move towards a 'true' AI offering. The technology and systems for this are already built for the neck and upper limb so work is well underway. This will allow a more interactional experience for patients with even more free-text boxes for them to describe their symptoms. We have listened to feedback from patients, to include comments from pilot patients, and this progressive next developmental step will benefit patients, clinicians and the wider system.

The experience for patients will be more akin to a 'live' chat and will utilise cutting edge keyword recognition within their answers to prompt next level questions. This process will move PhysioNow towards a medical device which will be fully regulated by the Medicines and Healthcare products Regulatory Agency (MHRA).

We are in the pilot phase with this work with outcomes and feedback thus far being extremely positive. This will make PhysioNow the most advanced assessment and outcome tool for MSK physiotherapy on the market.

### **8.2 Improving the patient journey.**

Getting It Right First Time (GIRFT) is an NHS policy designed to improve the quality of care within healthcare by reducing unwarranted variations. This is also a fundamental aspect of Prudent Healthcare in Wales. PhysioNow fully adheres to these principles and enhances the patient journey making sure that patients see the right clinician, at the right time and in the right setting.

This evaluation summary has already demonstrated compliance with this as we know the outcomes produced by PhysioNow have been appropriate from a clinical perspective. We have started to take this a step further through analysis of patient trends using our comprehensive data warehouse. We see over 350,000 patients per annum and we house vast quantities of data tracking patient journey's and management outcomes.

Through analysis of PhysioNow patients we have observed trends whereby patients would have benefitted further if they by-passed certain stages of management as their care needs could be escalated earlier. By introducing this concept, we have started to shorten the patient journey for some patients. This means patients do not have to 'jump through hoops' to get to the next stage of their care. This helps the patient as they receive the management they need quicker meaning resolution of their symptoms is likely to happen at the earliest possible stage.

This benefits the system as fewer 'ineffective' appointments are required. This capacity could then be used to review other patients bringing benefits to all. Therefore, every possible patient would get faster access to the care they need which would reduce overall appointment numbers.

### 8.3 Self-management

Although covered in section 6 from a financial perspective it is worth a brief recap in this section as it is a fundamental aspect of our future advancements. As part of '*A Healthier Wales*' a key aim is 'to make it easier for people to remain active and independent in their homes and communities'. We see this as a key deliverable for our services and something we will be operationalising soon. We know that patients and the system will benefit from its introduction.

This will never become a barrier for patients to access care in a clinical setting. We know from analysis of our first patient contact appointments that self-management trends and therefore, the flow of patients going through this outcome, will always have a ceiling from a safety and suitability perspective.

We also fully recognise that there are a significant number of patients that could receive the support and care they need to resolve their symptoms without directly accessing the service. We know this will benefit patients and that they are key drivers in requesting self-management options. As we have seen in section 6, we also know that this has the potential to release significant sums of money back into the wider healthcare system in Wales.

### 8.4 Software integration.

As part of the pilot Life Sciences kindly introduced our IM&T department to the team at NWIS. Some informative and purposeful discussions ensued whereby we explored options around

advanced software integration. The aim was to explore possibilities around software compatibility and to discuss the feasibility of linking patient records between the different software applications.

Without going into the granular detail in our current systems PhysioNow interrelates seamlessly with GP and central NHS spine records on Systm1 – this is the clinical records system used in all our services. This occurs through a variety of API (Application Programming Interface) platforms and software via Robotic Process Automation (RPA).

When speaking with NWIS the ability to replicate this within Wales was discussed and work started to explore this further. Aligning with '*A Healthier Wales*', which aims for combined clinical record keeping, all sides were confident and happy this could proceed and work well. Further development naturally stalled as the pilot came to an end. With no clarity as to whether an extension was possible neither side currently wished to commit any further resources to developing this. It was agreed that if an extension / further roll-out was to be arranged then these discussions would 'simply pick-up where they left off.'

Delivering this would further reduce administration time particularly for those patients who self-refer. It will also make life easier for clinicians as all records will be in the one place reducing time and effort. A further benefit and perhaps the most important, is that patient safety is increased as their records are centralised and there are not multiple documents created containing their personal and clinical details.

## 9.0 Evaluation summary / next steps

The content within this summary provides a significant body of evidence suggesting that the pilot was not only successful but that there is a strong case for finding a way to introduce PhysioNow into services.

The case in support of this comes from staff, those coordinating and involved in the pilot, the potential financial benefits and most importantly overwhelmingly from patients. Technology such as PhysioNow definitely has a place in MSK physiotherapy pathways. There are no negatives to PhysioNow: it is safe, available at all times and an enhancement to services; this has been demonstrated within our services and throughout the pilot.

The pressures on healthcare systems are only increasing, an ageing population, people living with more long-term conditions, continuing tightening of budgets and the implications from a yearlong global pandemic will all challenge resources. Advancements such as PhysioNow can help meet some of these challenges and ease some of the pressure within the NHS in Wales.

MSK conditions affects 1 in every 3 people and require 20-30% of GP appointments. They have huge implications on the economy from a working days lost perspective. Most importantly they have a huge impact upon people's day-to-day lives. Living in pain from an MSK condition is not pleasant and can be hugely debilitating. Having an option such as PhysioNow which allows 24/7 access, all year round, to assessment and potential self-management can benefit a huge number of patients.

By introducing this technology into pathways it creates the potential to deliver efficiency / productivity benefits estimated at well over £1 million per annum in Wales. The pilot provided an opportunity to test our market ready technology within Wales and this test has been more than passed. It would be fantastic to help create a change in the status quo of service delivery bringing about a new model of care within Wales that could benefit all.

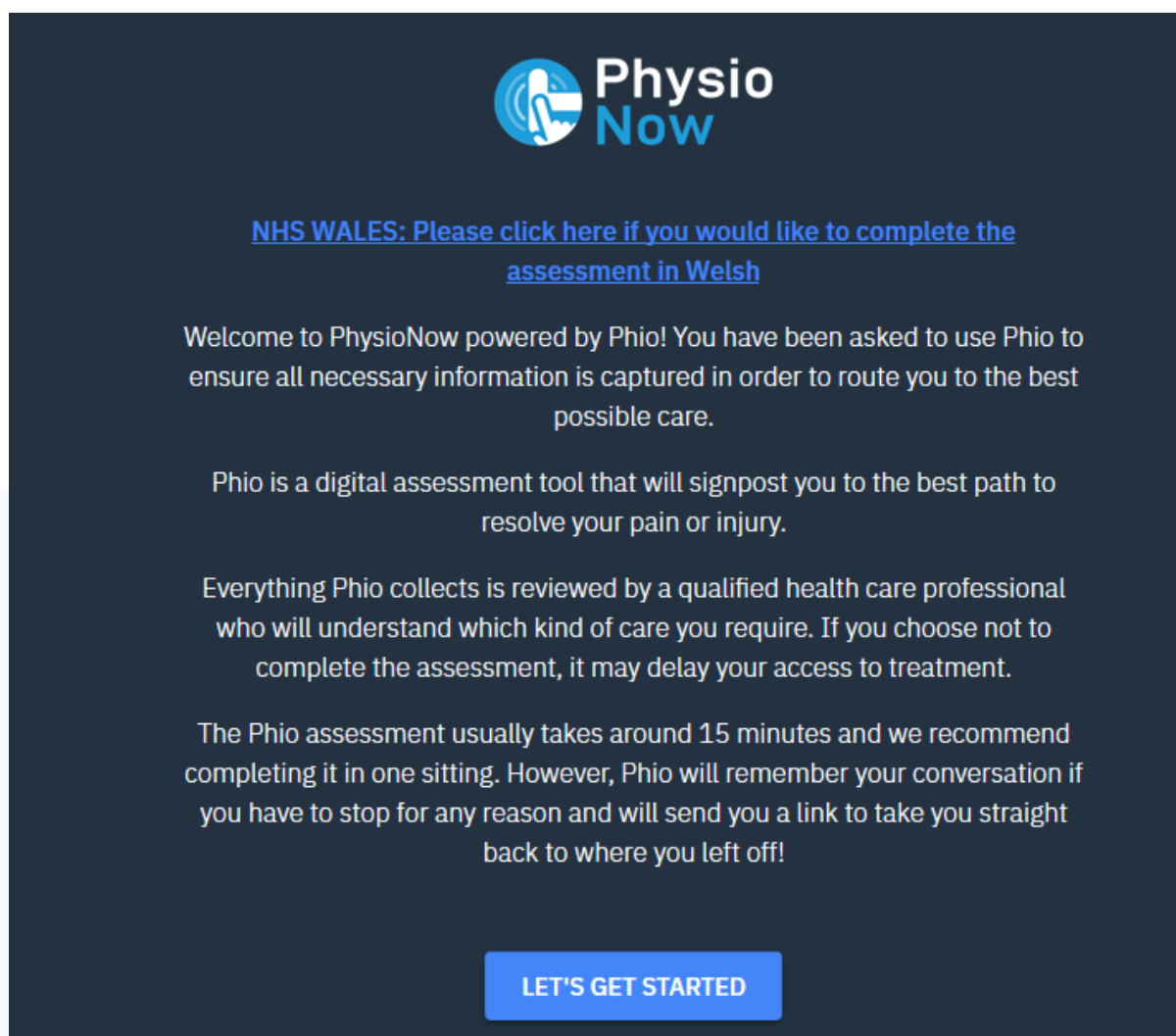
As part of '*A Healthier Wales*' the Welsh Government plan to 'invest in new technology which will make a real difference to keeping people well and help our staff to work better'. PhysioNow fully adheres to these principles and we would welcome the opportunity to bring this about with you as a change partner.


We understand a comprehensive review of MSK services within Wales is underway. Service leads recognise inconsistencies in service delivery which is leading to inefficient use of resources. The quality of services provided to patients will suffer because of this. At Connect Health we have been at the forefront of driving change and improvements within MSK services in England. We would be delighted to support further work in this area.

## 10.0 Appendices

### Appendix A

The below is a screenshot of a link to the Welsh translation option (blue hyperlink) presented to patients during the pilot. The link was available / active on the PhysioNow homepage.





[NHS WALES: Please click here if you would like to complete the assessment in Welsh](#)

Welcome to PhysioNow powered by Phio! You have been asked to use Phio to ensure all necessary information is captured in order to route you to the best possible care.

Phio is a digital assessment tool that will signpost you to the best path to resolve your pain or injury.

Everything Phio collects is reviewed by a qualified health care professional who will understand which kind of care you require. If you choose not to complete the assessment, it may delay your access to treatment.


The Phio assessment usually takes around 15 minutes and we recommend completing it in one sitting. However, Phio will remember your conversation if you have to stop for any reason and will send you a link to take you straight back to where you left off!

[LET'S GET STARTED](#)



## Appendix B

The below shows Appendix A translated into Welsh i.e., when the blue hyperlink was selected by patient's wishing to complete PhysioNow in Welsh.



[If you would like to complete the Physiotherapy assessment in English please click here](#)

Croeso i PhysioNow bweru gan Phio! Gofynnwyd i chi ddefnyddio Phio i sicrhau bod yr holl wybodaeth angenrheidiol yn cael ei ddal er mwyn llwybr chi at y gofal gorau posibl.

Phio digidol yw offeryn asesu a fydd yn eich cyfeirio at y llwybr gorau i ddatrys eich poen neu anaf.

Popeth Phio casglu yn cael ei adolygu gan cymwysedig proffesiynol gofal iechyd a fydd yn gallu deall pa fath o ofal sydd ei angen arnoch. Os byddwch yn dewis peidio i gwblhau'r asesiad, efallai y bydd oedi cyn eich mynediad i driniaeth.

Y Phio asesu fel arfer yn cymryd tua 15 munud ac rydym yn argymhell ei gwblhau mewn un eisteddiad. Fodd bynnag, Phio yn cofio eich sgwrs os oes yn rhaid i stopio am unrhyw reswm ac anfon y ddolen i fynd â chi yn syth yn ôl i ble rydych yn gadael i ffwrdd!

**LET'S GET STARTED**