

Digital tools for those with sensory impairments

Evaluation

October 2018



Contents

Introduction to the pathfinder	3
Intervention Model	4
Before you Start	5
Stage 1 Engaging Patients and Practices	6
Stage 2 Implementing Learning	10
Stage 3 Benefits	14
In your area	22

Introduction

From August 2016, all organisations that provide NHS care or publicly-funded adult social care are legally required to follow the Accessible Information Standard. The standard sets out an approach to identifying, recording, flagging, sharing and meeting the information and communication support needs of patients, service users, carers and parents with a disability, impairment or sensory loss.

This approach was developed because many service users with additional support needs still receive information from health and social care organisations in formats which they are unable to understand. They are also unlikely to receive the support they need to communicate.

The standard reflects what patients, services users, carers and parents with a disability, impairment or sensory loss should be able to expect from services. To access health services, an individual should:

1. Be able to contact, and be contacted by, services in accessible ways, for example via email or text message.
2. Receive information and correspondence in formats they can read and understand, for example in audio, braille, easy read or large print.

3. Be supported by a communication professional at appointments if this is needed to support conversation, for example a British Sign Language interpreter.
4. Get support from health and care staff and organisations to communicate, for example to lip-read or use a hearing aid.

Rapid improvements in technology means that assistive technology is increasingly mainstream. This radically increases the opportunities for both services and patients to use everyday technology to meet the accessibility standard. This sentiment echoes recent work by the House of Commons Work and Pensions Committee.**

The aim of this pathfinder was to investigate the infrastructure needed to support patients and health providers to use mainstream assistive technology. To do this, the pathfinder:

- Reviewed and tested assistive technology that could improve interactions between patients and health care providers
- Designed and developed assets to support health care providers to respond to patients with sensory impairments.

*[NHS England, Accessible information specification v1.1 \(2017\)](#).

**[House of Commons Work and Pensions Committee, Assistive Technology \(2018\)](#).

Digital Champions

Recruitment may need to be creative and far reaching when you are trying to engage with people who may find it difficult to communicate with you. We had to be careful to plan our methods and the design of our communications so as not to exclude the very people we were trying to engage. In the electronic staff pack, there's guidance from NHS England and links to AbilityNet, both give great advice on making communication accessible.

Our biggest breakthrough was using local places that we knew the community we were trying to reach would be more likely to access; for example local charities, government and NHS services, private eye and hearing businesses (such as Boots and SpecSavers). Even as a seasoned charity, Age UK stated that it took them 18 months to get reasonable engagement from the hearing loss community, and RSPB stated that despite the range of sessions they put on with paid travel, and good communication, uptake is still generally poor. Considerations for those embarking on similar projects:

- Front load the effort into planning and preparation for a good engagement strategy, and outcome
- Think creatively about how you'll reach the community you are trying to engage with.
- Take advice from those with lived experience on how to engage successfully.

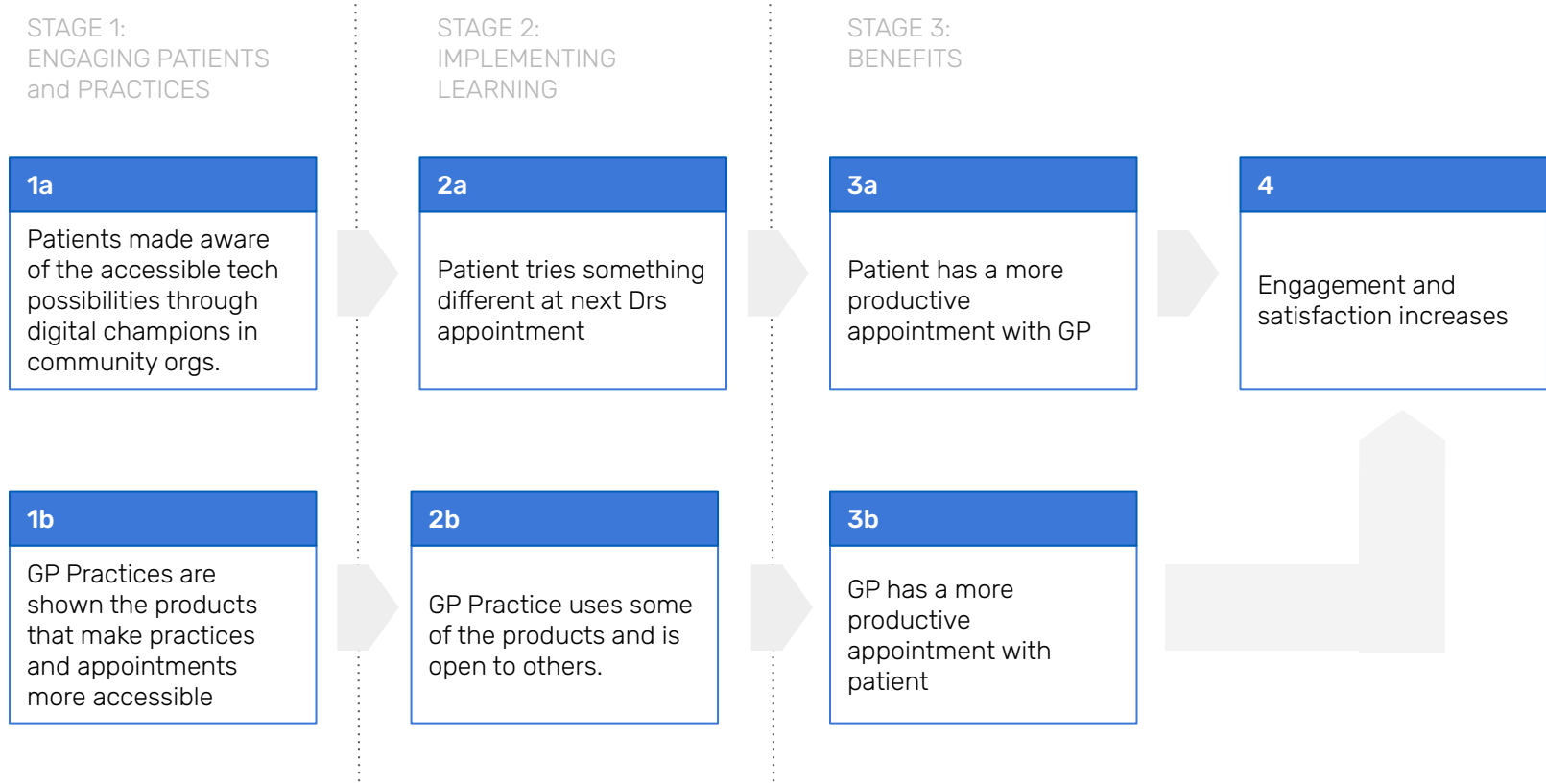
Digital Champions

When you are a digital champion:

- For complex needs, small and varied workshops are better. Sometimes one to one is necessary.
- Cost can be higher than expected, given the point above.
- Utilise other experts in the field to help with engagement activities.
- Use social media to actively promote so that you can also engage family, friends, carers, and others who are in direct contact with the people you are trying to reach.
- Run through any workshop or engagement activities with someone with lived experience first, so you know you've covered all bases in your planning.

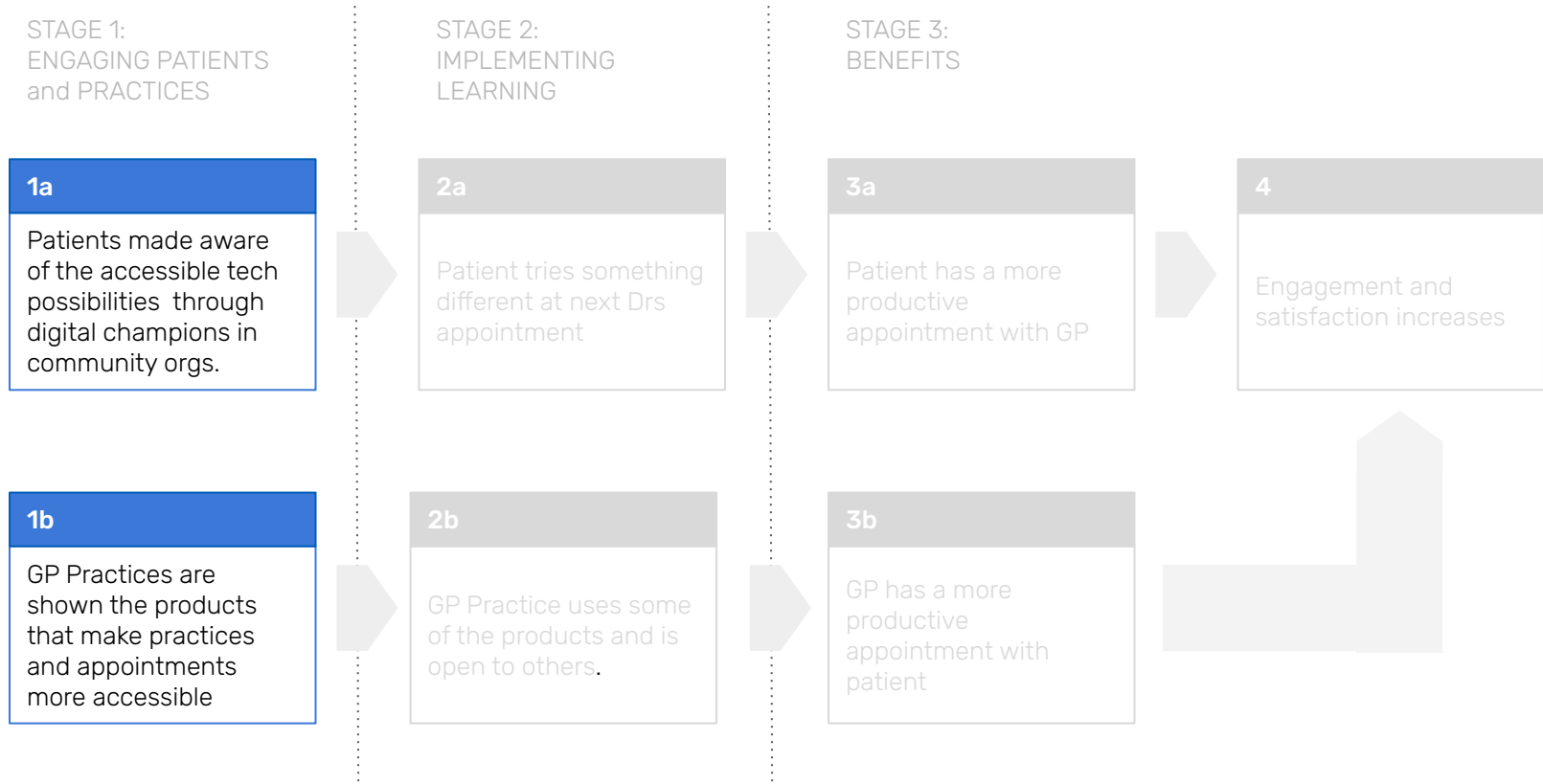
The Model

Model: Accessibility, through digital inclusion, working in parallel across patients and GP Practices



Stage 1 Engaging Patients and Practices

Model: Accessibility, through digital inclusion, working in parallel across patients and GP Practices



STAGE 1: Engaging Patients and Practices

Discovery

The discovery phase began with a review of historic engagement activity undertaken by the West Yorkshire and Harrogate Health and Care partnership. This [review](#) addresses the major barriers to engaging with care services for people with visual and hearing impairments. It provides a framework which brings together points in the patient journey which are known to be difficult. These are:

- Booking an appointment
- Access to BSL interpreters
- Access to buildings and waiting areas
- During the consultation
- Access to information
- Access to technology

Some of these points are known to interact with cross-cutting issues around **staff awareness** and **flagging medical records**.

These themes give a sense of the ways in which the care experience can be problematic for people with hearing or sight impairments.

For many people with sensory impairments, the need to reassert their needs at each interaction can be tiring and disincentivizing.

For example, Ada talked about how **“the reception that’s on might not know I can’t see well, and I’d have to tell them to get help, which I’d rather not have to do.”**

Feelings like this can be improved by staff awareness of specific needs, which can also be improved by the GP’s computer system flagging which patients have impairments that affect their care.

This creates an inescapable level of responsibility for GPs, but the pathfinder demonstrated how technology can support and facilitate other barriers to effective care.

STAGE 1: Engaging Patients and Practices

Discovery

Early stage discovery was a comprehensive [review of literature](#) and evidence around the specific challenges faced by people with hearing and/or visual impairments accessing health services. These include:

- Receiving written information in inaccessible formats
- Difficulties communicating with staff
- Staff failing to respect people's ability to participate in their own care
- Difficulties getting to around healthcare facilities
- Problems trying to identify or diagnose a potential medical condition which relies heavily on visual signs
- Problems with ongoing management of conditions (e.g. read drug information leaflet or do a blood glucose reading).

MHabitat then compiled a list of assistive technologies and accessibility applications that respond to these challenges. [This review covers over 1000 accessibility applications that have been validated by the platform, Orcha.](#)

From this, MHabitat curated short lists of the most effective apps and assistive technologies for people who are [visually impaired](#) and those who are [hard of hearing or deaf](#). These lists were compiled based on:

- Fit and appropriateness for the problems experienced in healthcare settings
- Cost effectiveness
- Security
- Likeability and user experience.

STAGE 1: Engaging Patients and Practices

Booking an appointment

Many people with hearing loss find it difficult or impossible to use the telephone. Online services can make it easier for them to book an appointment, order repeat prescriptions or get test results. Many people still do not know about online services, so staff should make sure they let people know. This is really important for people with hearing loss as online services are a great option if you cannot use the telephone. To make sure that information is accessible to people with hearing loss, ask them how they would like to receive information and the easiest way to share information with you. People who use BSL may need extra help getting online services. Information about online services needs to be written in plain English so it is easy to understand. BSL videos will help support the Deaf community to use online services. Practices should work with the Deaf community to get feedback on materials and information and to raise awareness of online services.

Two solutions:

Online booking

Patient Online services are a widely available, if not widely adopted, solution. By promoting and assisting in set up a GP Practice can facilitate a smoother appointment booking process

Apps/ Services

A variety of apps/services, highlighted in the resource pack, can help to make booking appointments easier for those with sensory impairments. Features such as text <> speak can be effective

STAGE 1: Engaging Patients and Practices

Orientation within the waiting room of a GP surgery

Following discovery, MHabitat developed walk-throughs at which people with sensory impairments recorded their experiences of interacting with GP services.

These walk-throughs developed experiential insights about the barriers to accessing GP services. For some of these barriers, the experience could be improved using digital technology. Others could be improved by service improvements at the surgery.

These walk-throughs were facilitated by participant researchers, David from KVIN (Kirklees visual impairment network), Dinos from RNIB (Royal national institute for the blind), Sean from Action on Hearing Loss, Jo from BTM (Bradford Talking Media). and Molly from the Molly Watt Trust.

These walk-throughs uncovered pain points in the basic experience of orienting within a GP surgery. Insights from the walk-throughs were [recorded by Molly Watt in a video of the day.](#)

Communication in a clinical consultation

Workshops and interviews with patients and clinicians identified points within the clinical consultation that are barriers to effective care.

These relate to the environment of the room and the actions of the clinician. There are particular pain points in consultations which immediate points of communication within the clinical consultation. Environmental factors which make communication difficult include:

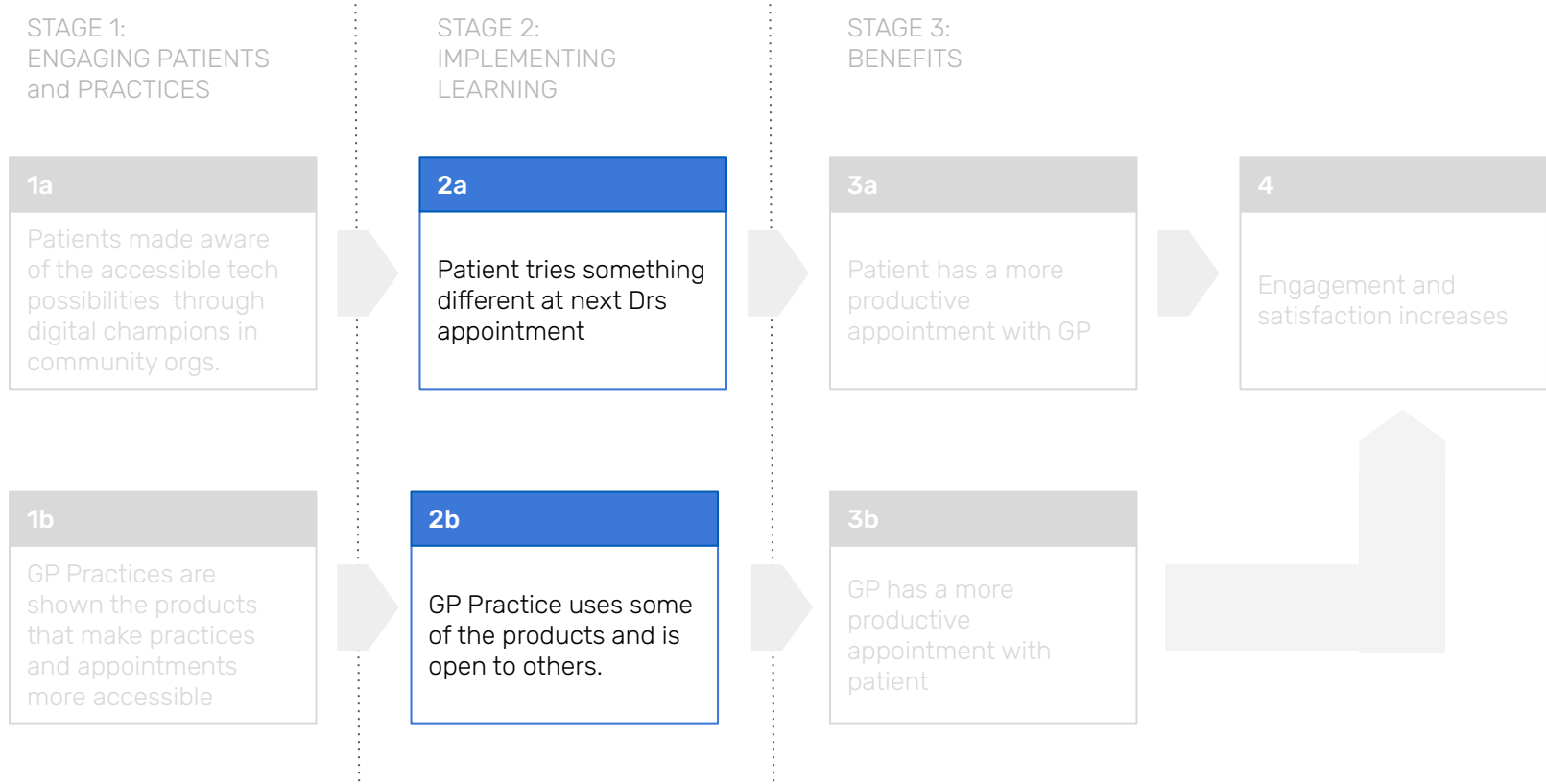
- Background noise
- Dimly lit spaces, or changes in lighting

Communication itself needs to respond to the needs of hearing or visually impaired patients. They may feel disoriented or anxious if they:

- Have to wait a long time to get BSL interpreters
- Are part of a procedure and the steps are not verbalised.
- Are in a consultation and the clinician leaves the room without letting them know.
- Don't understand information that is contained in a health letter or leaflet.
- Don't get the chance to make a record of the information that the clinician tells them.

Stage 2 Implementing Learning

Model: Accessibility, through digital inclusion, working in parallel across patients and GP Practices



STAGE 2: Implementing Learning

The pathfinder has been able to demonstrate how

- People know themselves and their needs best
- Showing 'what is possible' allows people to find the things that would work best for them
- GP practices can be cumbersome and inaccessible and their are standard things that they could do
- GP practices can be more open to accepting the technological solutions that work for patients in their everyday life

It is impossible for GP practices and patients with sensory impairments to know all of the features, apps and tools that are out there, however promoting the existence of such things has been shown to be a powerful mechanism in patients finding solutions that work for them.

The market is constantly providing new things for people with sensory impairments and will not stay stagnant. Therefore, GP practices should be open to change and more willing to accept the solutions provided by their patients. When there are concerns around data or medical accuracy of apps etc then GP practices can persuade a patient to try something else, that satisfies the same needs.

The following pages are examples of issues and tech that can help, but should not be seen as exhaustive.

ProDeaf Translator translates a number of languages into sign by the use of a virtual character. It works off a signing dictionary and may be helpful for those people who use sign language, in order to communicate when a translator is not present.

Evergreen Life: share information with GP - including your accessibility requirements. And, enables you to store all health documentation on the app - which can then be magnified.

Deaf:

Electronic note-takers or speech-to-text reporters for meetings and training etc.

Speech-to-text reporters and electronic note-takers Speech-to-text reporters (STTRs) help people with hearing loss to access spoken information via a laptop or computer / projection screen. STTRs use a special keyboard and system called Palantype or Stenograph to type words phonetically. This enables English translations to be provided in real time on your screen, and is most suitable for people who are capable of reading text quickly for long periods.

STAGE 2: Implementing Learning

Challenges for people accessing services

During our workshops we uncovered some of the complexities and challenges for people, given the

Diverse and changing requirements, cost, and personal preference.

“We demonstrated a text to speech app to a group who use British Sign Language, and found that for those who are born deaf, the written word may not be a language they can use. Another participant explained that they could text, but as they were quite slow it would make conversing in this way inappropriate for for a health related appointment.”

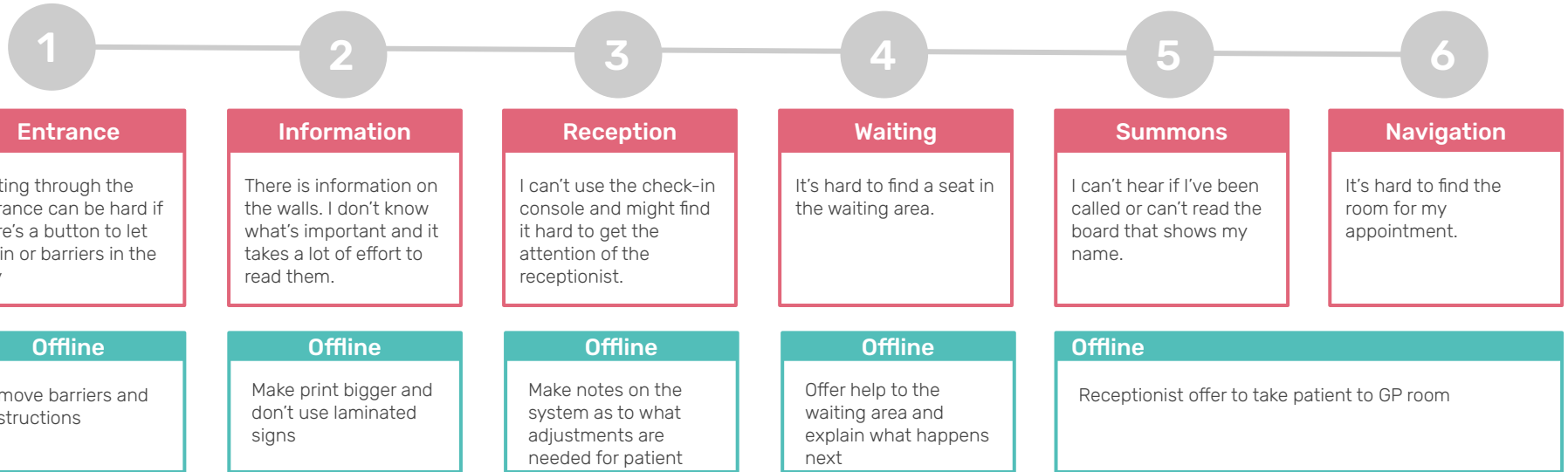
“For some, seeing AI was a very exciting find, however, it only runs on apple phones at this time so anyone with Android or Windows couldn’t use it without investing in an iPhone.”

“For those who have complete sight loss, using a smartphone app to navigate or recognise a face, for example, can be problematic if they are commanding a guide dog at the same time.”

Our Key Learning Points

1. Inclusion is the word to keep in mind when getting things right for everyone who accesses health and care services. For example, something as simple as having information in different formats for those with sight loss, and highlighting important information that might not otherwise be seen.
2. Co design of the smallest things will help inclusivity. One participant talked to us about the environment, and how signs and notices that are laminated reflect light that makes them difficult to read. Another person explained that even a small change in the layout of the room can make it difficult to navigate.
3. Using the GP systems to flag where people need support would save the embarrassment of having to ask each time, for example needing help to find a seat or being notified when their name appears on the sign to go through to the Doctor.

Orientation within a GP surgery



Examples of digital support - **Visual** **Hearing**

Seeing I

Smartphone Accessibility Features

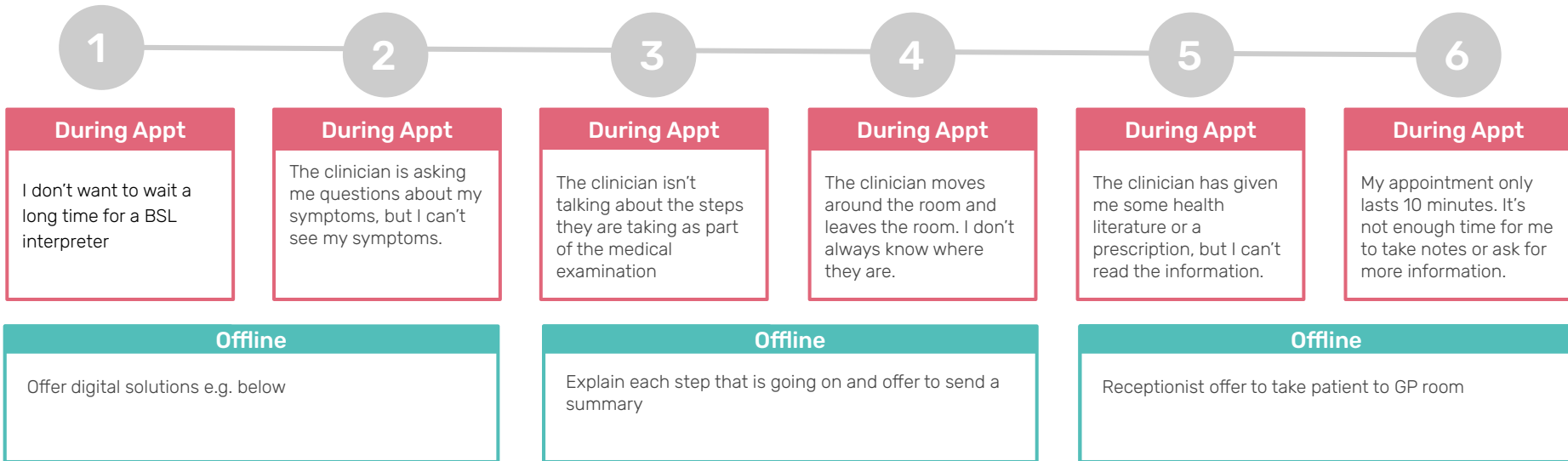
Evergreen Life

Signly

BioAid Medical

&ava

Communication in a clinical consultation



Examples of digital support -

Visual

Hearing

Seeing I

Smartphone Accessibility Features

Evergreen Life

&ava

Skype

BioAid Medical

STAGE 2: Implementing Learning

Training and engagement encouraged participants to try new ways in which technology can support their experience of accessing GP services.

Part of the pathfinder process was to introduce people with visual and hearing impairments to the digital tools that might improve their experience of health care services.

Although the pathfinder recommended some applications with broad interest, it is important to note that each app was used and adapted for use in different ways by each participant.

For example:

Mark decided to try [BioAid Medical](#) when he was in the doctors, so he could hear when the name buzzer went off. He said that **'at least this way I don't get the doctor having to come for me. It's not practical all the time, but it's better than wearing a hearing aid for situations like this.'**

Kay said that she **"liked the magnifier function because it means I can read things out when I'm out and about without feeling embarrassed."**

I thought that the app (Seeing AI) was okay but I wouldn't use all of the things it does, and I wouldn't want to use the talking parts in public without having headphones in.

Next Generation Text Service will allow you to make calls via your desktop computer or on the move, using a PC, laptop, various tablets, phones & other mobile devices. Free to download from the Google play store, Apple app store and the NGT Website - www.ngts.org.uk/

Patient Online Services

"I didn't do it straight away but I wish I had. I can't tell you how much easier it is now I can make my own appointments. I can also order repeat prescriptions online, and they said that they're planning to add on the facility to view your test results at some point."

I don't feel so anxious about going to the doctors now that I know I won't have to explain that I can't see well and that I need help.

STAGE 2: Implementing Learning

GPs from the Grange Group practice described their current offer for people with sensory impairments:

1. We don't have any specific resources available for patients with sensory impairments.
2. Longer appointments are currently available for people for whom English is not a primary language. There is only one appointment of this kind each day at the end of the clinic.
3. The practice intends to buy some equipment to help people with sensory impairments, but have not defined a specification or timescale for this.

This is a summary of points from an interview with one of the GP's:

The main response from those who participated noted that it had to be patient led, with the GP being receptive.

For example at an interview with a GP, accessibility apps were demonstrated (Seeing AI and Text2Speech) to them, both received a positive response but the onus was firmly placed on the patient to teach the doctor how the technology should be used. That said, our observation was that longer appointments were not offered by the practice or GP at the time of booking, and we found that this would be helpful for those who might want to use technology that the GP may not be familiar with (or may make the interaction longer), are blind or hard of hearing and necessary for those with BSL interpreters.

STAGE 2: Implementing Learning

Intel from the inside

There are physical aspects of the GP Surgery that, if improved, can help improve the patient experience. This done in parallel with the digital solutions this evaluation focuses on can help make GP visits more effective, a better experience and less stressful for patients with sensory impairments.

Physical surgery issues can include

- Finding buttons to open doors and chairs to sit on
- Signing in presents more challenges than talking to the receptionist
- A visually impaired person may find it hard to initiate the request for help for personal reasons (e.g. perceived loss of independence) or physical reasons (they don't know where reception staff are)
- Knowing when your name has been either called or put up on the board is an issue.
- Responding to visual cues summoning patients.

Good communication empowers patients and enhances their contribution to managing their condition.

Accommodating the requirements for people with differing levels of sight and/or hearing loss needs to be carefully considered. This is what Molly Watt states regarding her own lived experience:

“Reliance on visual clues on a one to one basis is always much easier than a two, three or more way conversation, something to bear in mind.”

“Being deaf means concentrating really hard on all visual clues to aid with listening, and communication and is very tiring.”

STAGE 2: Implementing Learning

GP willingness

One of the reasons that people with sensory impairments feel that standard GP appointments are inaccessible is because the technology that the patient uses (or has become aware of) in their daily lives aren't accepted in the interactions with GPs. GP's are reticent to use apps and assistive technology due to concerns on data safety, medical robustness and a fear of falling foul of rules around recording etc.

These concerns, legitimate in many cases, stifle finding readily available solutions with patients that could increase the value of appointments.

This can often manifest itself in perverse situations. E.g. A blind patient who has asked numerous times to have letters emailed to him still gets letters posted because **"it is more private"** - receptionist. This patient has accessibility features that means his phone can read out an electronic document in a private space, at his leisure. The existing system means he has to ask his neighbour to read out the very personal nature of GP letters.

The West Yorkshire pathfinder has curated a list of apps and assistive settings that are available to most -this should only be viewed as a starting point for GP's. The real value in this approach is in not being overly dogmatic in the apps that can /can't be used. Instead, we found it worked best when GP's were open to new things. Allowing the patient to use what works for them.

If, in the rare occasions, there are legitimate concerns about a tool then adopting the approach of "that's really useful, I know something that does the same thing" and showing the patient an app from your approved list.

STAGE 2: Implementing Learning

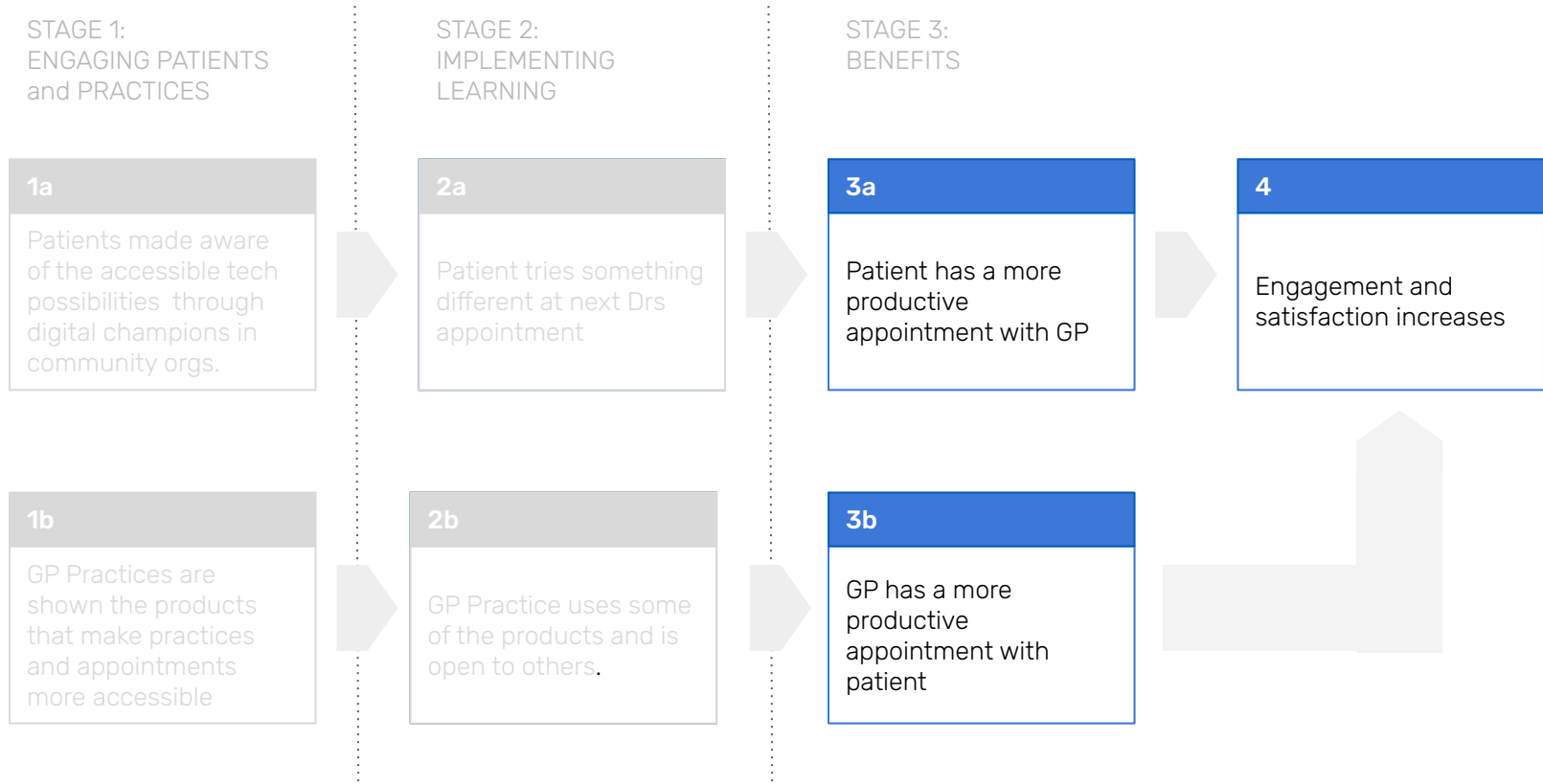
Considerations for future work

The needs of those with sensory impairments are wide ranging and specific to individuals. It is therefore of paramount importance that any solutions for patients are embedded in consultation with the patient themselves.

Building relationships with local organisations who have digital champions to help people in their day to day lives will help unearth some of these needs. Solutions are very often not expensive, even free (e.g. knowing the accessibility features on a phone) and can improve the whole patient journey.

Stage 3 Benefits

Model: Accessibility, through digital inclusion, working in parallel across patients and GP Practices



STAGE 3: Benefits

Measuring impact for those who are receiving a better service can be difficult.

Qualitative reports and case studies from staff and patients point to an increase in satisfaction using GP practices when they adopt assistive technology.

All participants saw value in using tools to make GP appointments better, with significant improvement in 5 star rating of the service when they have been shown something digital that can help their needs.

Reception staff that have been involved in the pathfinder are working together to promote accessibility apps etc post pathfinder engagement. They are eager to provide a better service that satisfies individual needs. This, they have concluded, can be done through physical changes and digital technologies.

This evidence points to the wider adoption of this practice being scaled into other areas with a longitudinal measurement on

- Appointment effectiveness
- Improved wellbeing and confidence in GP surgeries
- Improved confidence and independence in day to day interactions through using digital technology

This pathfinder is can also be seen as a body of evidence for the importance, and implementation, of [Martha Lane Fox's proposals from 2015](#)

1. **“Reaching the ‘furthest first’ – making sure those with the most health and social care needs who are often the least likely to be online, are included first in any new digital tools being used across the NHS.**
2. **Free Wi-fi in every NHS building.**
3. **Building the basic digital skills of the NHS workforce to ensure that everyone has the digital skills needed to support people’s health needs.”**

Thanks

This is how the West Yorkshire pathfinder worked

We want to thank the people who made it happen:

- Alison Braithwaite and colleagues at mHabitat
- Kate Henry and colleagues at South West Yorkshire Partnership Foundation Trust
- Molly Watt - Molly Watt Trust
- Digital champions and experts from a variety of sensory impairment causes in the area

- mHabitat
- South West Yorkshire Partnership Foundation Trust
- Molly Watt Trust
- Kirklees Visual Impairment Network (KVIN)
- RNIB
- Calderdale Council Adult Health and Social
- West Yorkshire Research and Development
- Leeds Institute of Medical Education
- National Deaf Children & Adolescent
- BTM
- Leeds City Council
- Community Transport Calderdale
- Locorum CIC
- Wakefield CCG
- Disability Partnership Calderdale
- Local GP Practices

If you would like to discuss how you might be able to try something in your area please contact pete@goodthingsfoundation.org