How can the NHS ensure the rapid introduction of Digital first Primary Care remains in place once the pandemic is over?

Business Project

SRN: BP0233863

Executive Summary

This report reviews the rapid switch to digital services that GP practices have undertaken due to the Covid-19 Pandemic. It focuses on practices across the city of Leeds to ascertain how successful the implementation of the new systems has been.

This focuses on 3 research objectives

- What actions can be put in place in Leeds to ensure that digital-first services have the greatest chance of being sustainable
- How do we address digital exclusion and ensure that people with the greatest health inequalities are not left behind
- What effect have the changes had on practice staff

The research began with a literature review to identify research associated with the implementation of digital systems and to review theories and recommendations around how to make the current changes sustainable. The review also looked at the effect digital changes had on staff and customers. Primary research was then undertaken in the form of questionnaires sent to practices and secondary research interviewing two GPs in the city and the Cities I.T lead.

The findings showed there are a number of changes that can be made to give digital Primary Care the greatest chance of being sustainable. These were improvements around reducing the pressure on GPs, online consultations triaging, continued funding for AccuRX, further staff training, and identifying patients at risk of digital inclusion.

In conclusion, NHS leaders can ensure digital-first Primary Care remains in place if the recommendations made in line with the findings of the research are put into action.

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Glossary

AccuRX-Video Consultation System

CCG-Clinical Commissioning Group

GP-General Practitioner

ICS-Integrated Care System

IT-Information Technology

Online Consultations Software-Allows patients to book appointments online

PCN-Primary Care Network

VUCA-Volatility, Uncertainty, Complexity, and Ambiguity

Introduction

The Covid-19 pandemic has resulted in the rapid adoption of digital technology in the NHS and significant changes in the delivery of services more widely. The transformation is enabled not just by technology but staff, patients, and protocol changes. The changes have helped to protect patients as well as freeing up space and capacity in acute hospitals; it has also enabled remote working and reduced the risk of infection transmission in NHS settings. Primary care especially has seen a huge increase in remote appointments. There was an almost overnight switch between face to face appointments and telephone and digital appointments. The changes were dramatic as many GP Practices moved to new digital systems and ways of working almost overnight; this led to changes in the way patient's access services. Lauchlan, S (2020) suggests "Years' worth of work being achieved in a matter of weeks as the pandemic forced quick decisions and eliminated endless cycles of executive dithering".

Digital First Primary Care is one of the key strategic objectives within the NHS long term plan along with the aim of reducing hospital visits to enable earlier discharge, a further aim is to reduce face to face outpatient appointments by a third by 2023/24 (NHS England, 2019). Within Leeds, due to national capital investment, one of the sites at the main acute provider is being rebuilt on a smaller footprint. This has led to a place-based strategy around a left shift of patient activity from the Acute sector into Community and Primary Care (Appendix 1). To enable Primary Care to incorporate extra activity; effective digital systems must be in place, if implemented successfully they will enable practices to work more closely with Secondary Care colleagues and help to increase capacity through digital services.

A further aspect of the importance of digital systems within Leeds is in line with Porters 5 forces (Porter, M.E 1998) to reduce the threat of substitute digital Primary Care providers. These companies offer digital services to patients, if patients choose to use these digital services it will mean patients are removed from the practices patient list along with the funding allocated to them.

The aim of the research is to review how successful the changes have been, reviewing how the changes have affected staff, patients, and services in a VUCA type environment. The report will review if systems need to improve to enable practices in Leeds to continue to use digital-first Primary Care after the pandemic ends to enhance patient services. The aim is to find out what can be put in place to stop practices reverting to the pre-pandemic norms, this will help inform CCG and ICS leads as well as national policymakers of what effect the changes are having on General Practice and what further changes should be made. The is an important subject for the NHS as (Christopher J 2020) describes “if the technological advancements do not stick around after COVID-19 eventually fades away, the healthcare industry missed out on a giant opportunity”.

Background of the Research (Literature Review)

The first step in answering the research question was to meet with the CCGs IT lead; this was to discuss the digital changes that had been made in GP practices since the first lockdown began in March 2020 (Appendix 2). There are 94 practices in Leeds; the practices were all at varying different stages of developing digital services before the pandemic.

Some practices were already offering telephone first services rather than face to face appointments so the changes required by those practices were slightly less significant.
Over the last two years, online consultation software was starting to be used by practices; this allowed patients to be navigated to the correct service they require for their request. Not all healthcare problems need to be dealt with by GPs; some are better served by a practice nurse, physiotherapist, or pharmacist. The aim of the software is not only to direct patients to the right service but also to free up GP time to ensure they are seeing patients who require a GP appointment.

Further to the online consultations software, video consultation software was introduced to all practices via the AccuRX system. This system was procured by NHS England and is funded nationally until the end of March 2021. As well as video consultations the software allows pictures to be shared between patients and clinicians, practice staff can also make phone calls and send SMS messages through the system.

The 2nd stage of the research, the Literature Review sought to identify key theories and academic research associated with the implementation of digital systems. Further to this the research looked at evaluation methods of the digital systems and sought to review the approaches that should be taken to ensure that the implementation is successful.

A modelling study produced by (Salisbury C et al, 2020) around the impact of digital-first consultations on workload in General Practice. The paper limited the study to the impact on GPs and didn't explore the impact of other healthcare staff within GP practices.
The paper highlights the reasons that online consultations are being introduced into General Practice; these are twin aims of managing workload pressures on GPs and to improve patient access. The paper describes how the two aims are likely to put pressure on each other, if access to services increases unless under stringent conditions such as short initial assessments and that only a low percentage of consultations require a face to face appointment, this is very likely to add to GPs workload.

The study's conclusion highlighted that gains or losses around efficiency are finely balanced, the key to efficiency gains will be around whether demand increases. One critical factor in this area will be whether online consultation systems can increase the number of patients using self-care. Each online system will allow patients to manage their condition using self-care; the critical factor will be how well each system is able to do this.

One further development that the paper doesn't mention is the growing workforce that is part of the GP contract five-year framework, in line with the long-term plan. (BMA & NHSE 2019). GP Practices have now formed Primary Care Networks (PCNs) typically bringing neighbouring practices together to form PCNs of a population size of between 30,000 and 50,000 patients, there are 19 PCNs in Leeds. Each PCN has access to funding for a wide variety of roles; these include Pharmacists, Social Prescribers, Physiotherapists, and Mental Health Practitioners. One of the key success factors around GP efficiency will be how much activity can be diverted to these new roles, this will mean that PCNs will need to link up and work closely together to ensure all practices within the PCNs have access to the new

workforce. The paper describes how several private online providers such as Babylon GP at Hand, LIVI, and Push Doctor are growing rapidly. This adds to the importance of digital systems being implemented successfully and to the patient's satisfaction.

The paper recommends in its conclusion that careful and staged implementation of online systems is developed alongside detailed evaluation at each stage. Since the paper was produced the pandemic has forced all GP practices to move to digital-first systems virtually overnight. The research in the business project will build on the research in this paper by investigating the impact the changes have had on the non GP workforce, how systems can be improved as well as the perceived effect the changes have had on health inequalities. The paper highlights that it is important to prioritise that the use of technology gives improved access to groups of patients with the highest health care needs; the research in the business report will look for evidence to understand if this is happening.

A limitation of this paper is that as in Leeds, only the more digitally advanced practices will have implemented the use of online consultation software to its full effect when the paper was produced. The research in the business project will allow every practice in the city the chance to feedback their views on how successful the changes have been, how they feel the online consultations software can be improved and what effect the changes have had on patient access as well as practice staff.

Hutchings, R (2020) suggested "People may have accepted during covid that remote care was the right and only option, but this doesn't necessarily mean they actually prefer accessing services remotely when another option is back on the table." The Nuffield briefing looks at the period over the Pandemic and analyses what changes have been made, such as the

significant shift away from face to face consultations which were replaced by online or phone consultations. It describes how the changes happened at an incredible pace supported by national bodies including support around information governance and procurement.
The paper describes how the majority of practices have switched to a system of total triage with practices now using remote consultation software via a practice's website. Before the lockdown, around 80% of GP appointments took place via a face to face appointment; by June 2020 this had fallen to half with other appointments coming predominantly via phone call.

One of the paper's key points is that changes happened at an incredible pace but due to the pace of change it is important to evaluate the changes and review possible risks or any disadvantages of the changes. This adds more importance to the evaluation of the changes once the pandemic ends, the changes must be right for both the patient and healthcare workers for them to be able to remain in place. Practices should avoid continuing to use systems and processes that may add risk to the system or that don't offer benefits to the patient.

The Kings Fund paper by Collins, B (2020) looks at several key digital case studies that can relate to what may happen once the pandemic ends. It discusses the evidence that poorly designed digital technology can create a barrier between caregivers and patients but also highlights the potential of technology to enable stronger therapeutic relationships.
It points out iterative cycles of improvement to gain feedback from service users and test improvements are important, particularly given the challenges that particular groups of people face in using digital services. With the practices moving to digital technology virtually

overnight PDSA cycles (Appendix 3) will become an important factor in deciding if the digital changes can remain sustainable.

There will be numerous improvements that can be made to the technology from both a patient and a clinician's point of view. If the improvements to the systems are not made promptly it will test the patience of patients and clinicians using the system who then may opt to return to the ways of working before the pandemic. Collins points to the fact in the paper that downsides of the changes will need to be addressed and further changes made to achieve the full benefits of the digital changes.

The document suggests that practitioners have reported that the digital tools implemented during the lockdown have the potential to bring services together allowing staff across different settings such as community and hospital settings to work together, this is crucial for the changes planned for Leeds allowing the patients to move more freely between services. The paper points out that collaborative design from the beginning of the process involving technology experts, health care professionals, and patients is important to the success of the implementation. This is very difficult to do with an organisation the size of the NHS, it is important to do this at a national level but due to the scope of the changes, no one was involved in the design from Leeds. Local clinicians and patients should be able to drive system improvements going forward, this will be of further importance to certain groups of patients who may not be as experienced as others using digital technology.

The paper describes how there is already anecdotal evidence to suggest that moving Primary care services online has delivered benefits for staff and patients but there needs to be more detailed evidence. It also points out some key questions that should be addressed in order to

make the changes sustainable such as, is the technology been used to its full potential, is it strengthening or weakening the link between patients and healthcare staff, has the patient now got greater control of their health, has there been enough communication and has the feedback been received from key social groups. The research project will aim to answer these points.

The changes that have been made digitising GP practices services due to the pandemic have been transformational. For the changes to remain in place leaders of transformational change must ensure they create good evidenced-based reasons for the change, remain objective, be confident, and be empathetic. A further key impact the leaders will need to make is to create a vision of what the future organisational state will look like. According to (Kotter 1996), a good vision needs to be imaginable, convey a picture of what the future will look like, desirable, and appeals to the long-term interests of employees, customers, shareholders, and stakeholders.

Reviewing Kotters 8 stage model (Appendix 4) this change is now arguably at stage five removing obstacles/empowering actions, how this stage and stage six creating short wins are addressed will be crucial in how sustainable the changes are by making improvements and anchoring the changes into the culture of the practices and PCNs.

Research Aims/Objectives

The objectives of the project are to build on research such as the Salisbury C (2020) paper to review the effects that the move to digital-first Primary Care has had on the GP practices of Leeds. The Research will review the rapid implementation and focus on the following key objectives

- What actions can be put in place in Leeds to ensure that digital-first services have the greatest chance of being sustainable.
- How do we address digital exclusion and ensure that people with the greatest health inequalities are not left behind
- What effect have the changes had on practice staff

The aim of the research is to develop ideas of what can be put in place across Primary care providers to ensure practice don't revert back to pre-pandemic services models and ways of working

Research Methodology

The research approach was an inductive longitudinal study sampling all GP Practices within the city of Leeds.

Primary Methodology

The primary research approach for the study took the form of a questionnaire (Appendix 5) inclusive of both open and closed questions intended to generate both qualitative and quantitative data in its responses. The questionnaire was issued to all 94 GP practices in the city; the survey intended to try to achieve a balanced response from across the cities practices whether from an affluent or deprived area. The survey was sent to GPs as well as non-clinical practice managers, it is recognised that the impact of the changes on non-clinical staff

will have a large influence on whether the changes will be sustainable. Guidance from Easterby-Smith et al, (2008) was followed which suggests that to increase the response rate the communication should explain the purpose, assure confidentiality, and ensure the questions are simple.

Secondary Methodology

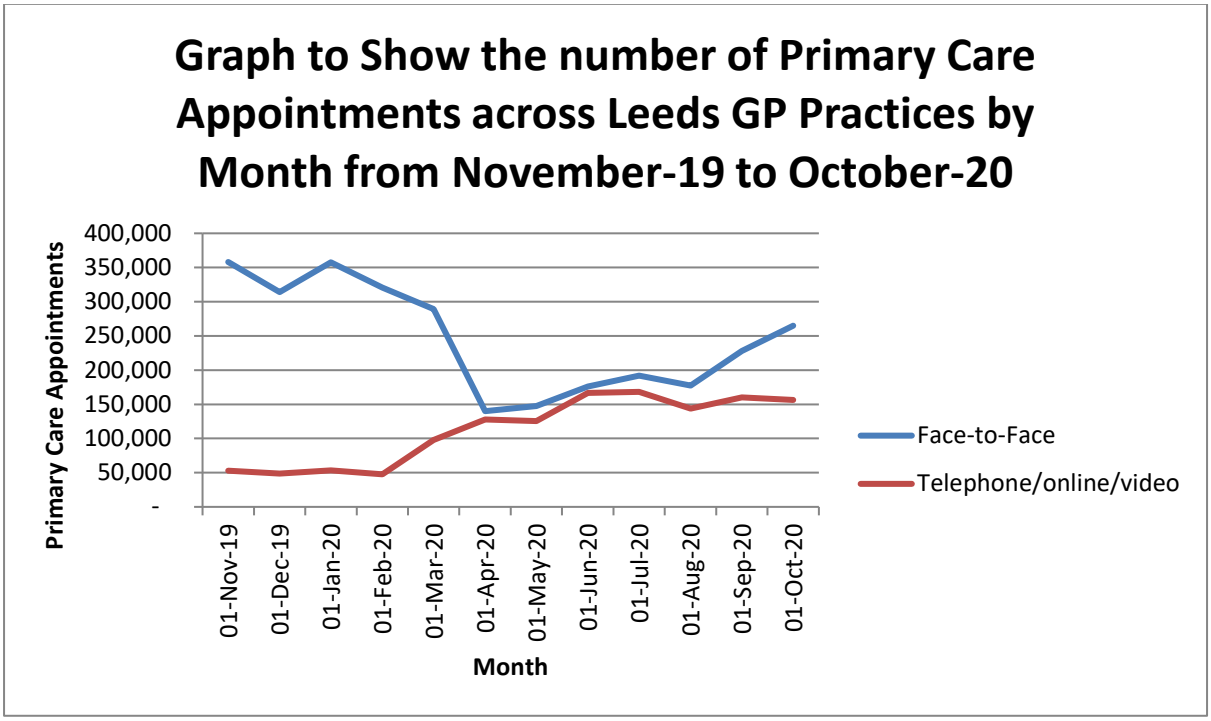
To gain a deeper incite around the changes I interviewed two GPs one from an affluent area and one from a more deprived area of the city. I also reviewed national statistics around Leeds GP data.

Limitations

The timing of sending out the questionnaire came at possibly the busiest time in history for General Practice, on top of the move to digital-first Primary Care and the usual winter pressures it had just been announced the covid vaccine would be administered by General Practice. This no doubt reduced the number of questionnaires returned reducing the breath of the research overall.

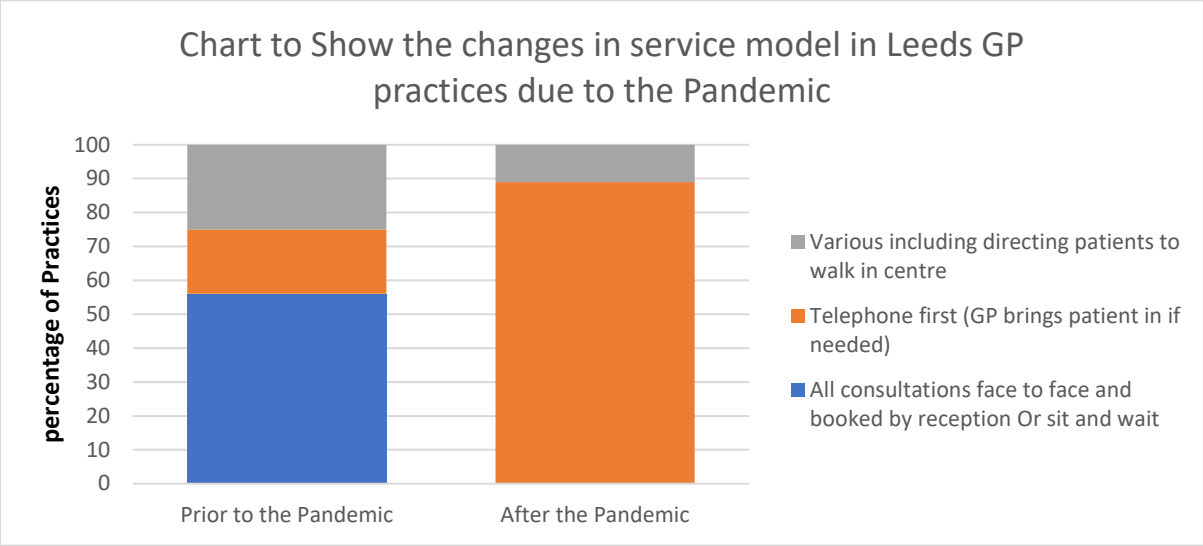
Findings, Analysis and Discussion

Before looking into the research provided by the questionnaires and interviews, to highlight the size of the change in General Practice I reviewed Primary Care appointment data for the city over the last year. The data highlights the huge changes in how appointments were dealt with between March and April 2020, the time of the start of the first national lockdown. (NHSX, 2020). The chart aligns with the Nuffield report in the literature review.



The first two questions on the questionnaire were asked to establish an overall view of which service model each practice used to triage patients before and after the lockdown. This gave an idea of how big an impact the change had on practices. Before the lockdown, only 19% of practices were using a telephone first service model with 56% using face-to-face consultations first which were booked either by reception or were sit and wait appointments. The remaining 25% used a mix of those approaches or directed patients directly to the cities walk-in centre in busy times. After the lockdown 89% had in place a telephone first service

model, this shows that the vast majority of practices in the city had to change their service model overnight.



Findings, Analysis and Discussion in line with the main objective of what actions can be put in place to ensure digital services have the greatest chance of being sustainable

To answer the main objective a wide number of areas needed to be reviewed around digital systems, training, and the effects on patients and practice staff.

Of the practices who returned the questionnaire 25 of the 36 thought that digital services had led to patients having increased access to services. In the Qualitative feedback coded below using research design approaches by (Creswell J. 2009), there was a significant amount of positive feedback around online consultations making access easier for patients; it did though flag the issues around increasing demand that practices have to deal with. Several respondents raised that improved patient triage was in place directing demand to where it is best met, such as physio first contacts. Reviewing the responses there is a feeling that continuity of services is being affected and face to face appointments now take longer due to only the most complex problems requiring a face to face appointment. The data also points to

the fact that access may now be too easy and a lot of patients are receiving appointments when they are not needed. This demonstrates that online consultation systems are not being used correctly in those practices and that further training is required by the staff triaging the patients.

The risk flagged by respondents was that the changes will increase health inequalities, two respondents from practices in the more deprived part of the city alluded to the fact that non-English speaking patients are now struggling to access services, previously this cohort would turn up to the practice to book appointments which at the moment is no longer an option.

Increased access	
	Online consultations makes access easier
	Digitisation helps to increase the service to patients
	Yes, definitely. However it sometimes feels like we have "turned on the tap
	Now appointments booked by clinical need where as patients felt bullied into booking before
	More appointments but increase in demand
	Increased access for more skilled patients
	Patients think we are definitely more accessible, contacts up 20%
	Using eConsult has increased access.
	More apt generated as phone calls can be dealt in less times
	eConsultations are on the increase, allowing patients multiple ways to contact the practice
Better triage	
	minor illness can be triaged to 'other services such as pharmacy etc.
	Patients can now access a variety of other clinical support tools.
	We regularly sign post patients to Mind Well, Mind Mate, first contact physios, social prescribers etc.
	better navigation to other colleagues such as nurses, physio first & pharm technician. Also, social prescribers involved now
	Patients can book via telephone or eConsult so very easy access for those with digital means.
	Website questionnaires facilitates some interactions (sick note requests, asthma reviews for example)
Face to face appointments more difficult, continuity affected	
	Telephone first damages continuity
	Routine day to day squeezed
	face to face slower than before pandemic
	Telephony followed by face to face appointments means less capacity
Pressure on existing systems/too much access when appointment my not be required	
	pressure on phone systems not really designed/set up for this purpose
	Too much access, some that should not reach GP
	Telephone first has caused delays in getting through to the practice
	Patients are currently ringing with very minor ailments and on the day demand has increase
	The number of patients needing a call and then face to face has increased since the start of the pandemic
Increase in Health inequalities	
	it will increase health inequality further
	also challenges for non-English speakers
	reduced access for our non English speaking patients who used to turn up to surgery to book an appointment

Concerning practices being able to offer more appointments since the lockdown 27 of the 36 practices thought that the appointments offered had remained the same or increased. The

responses showed that telephone appointments are shorter which had allowed increased appointments to be made by the practices. A number of practices had found that patients were attending with more than one issue to be dealt with which increases the time required for each appointment. This evidence was backed up in the interviews I held with GPs, as more patients are being dealt with over the phone or online it does mean only the most complex patients are seen face to face making it increasing difficult to treat the patient within the 10 minute consultation standard.

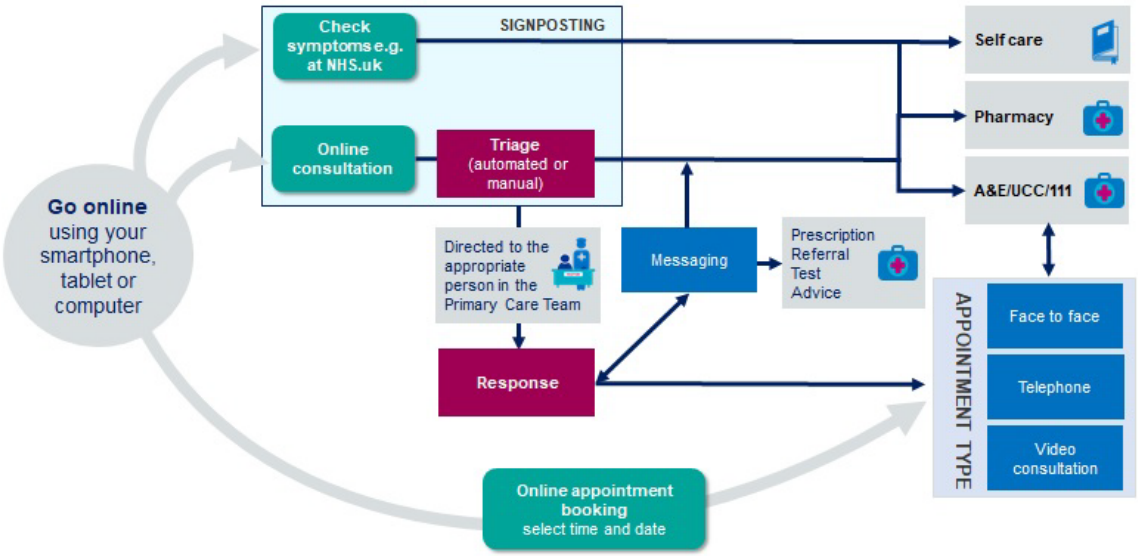
Compared with prior to the lockdown and following changes in working practices, do you feel the number of appointments your surgery has been able to offer has?-	
Stayed the Same	13
Increased	14
Decreased	7
Unsure	2

There are a varied number of responses to the question of whether online consultation software has reduced the number of GP's appointments that would have been better seen by another health professional. The majority of practices were unsure of the effect at this stage. Patient navigation and reducing GP workload is one of the key advantages of implementing online consultations software, if it is not clear that this is being achieved it will reduce the chances of the software being used going forward which would be a disadvantage for patients.

How has the implementation of online consultations software affected the number of patients being seen by a GP, which would have been more suited to an appointment with another health care professional?	
Stayed the Same	5
Increased	8
Decreased	9
Unsure	14

It is clear from the feedback of the questionnaires and interviews that online consultation software is not been used by all practices and in a lot of practices, not to its full extent. Aside from the implementation of the system the problem is that it takes extra time to triage the patients through the online consultation system. From my interviews, some practices are using GPs to triage patients and some are using a non-clinical staff member. Because of the extra time required some practices are not promoting the use of the system to patients.

Analysing the data around the planned implementation of online consultation software the extract from the NHSE toolkit shows the plan around how the system should work below (NHSE, 2019). The toolkit outlines what should be used to make triage effective, one of those areas is training. No doubt due to the speed of the changes; training hasn't taken place in all practices. Currently, online consultation software doesn't link with GP management systems; the interoperability issue is a barrier to a successful implementation that will need to be resolved. There are already discussions taking place around interoperability nationally. (Moore, A 2020)



One area that came out clearly from both the interviews and the questionnaire is that the AccuRX Video system should remain in place. There is anxiety around whether the system will be affordable for practices after March 2021 when national funding is set to end. This is a national issue as (Rory Cellan-Jones 2020) states “AccuRx's video consultations have taken off, and are now running at 35,000 a day” Due to the swift implementation of the system, there is still a training need across the city, once training takes place there is a greater chance the system will be used to its full capability. An advantage of Accurx is that it can link to GP management systems such as EMIS (Thornton J 2020); this improves the efficiency of healthcare professionals as data doesn’t need to be input into different systems.

When it came to the need for extra training there was a mixed response, although there has been little formal training due to the speed of the changes; practices felt that they had taught themselves, with several practices using their in-house I.T expert to train the remainder of their staff. Because of the way the systems were implemented a lot of practices require further training for their staff, training will be crucial going forward to ensure that systems are used to their full functionality and are being used as efficiently as possible. It may be sensible for the CCG to procure training for all practices once the pandemic ends, the practices reported there was a need for face to face training rather than using online portals.

In terms of non-face-to-face consultations, there was a wide range of appointments that GPs thought they worked well for, particularly prevalent in the answers were skin problems, colds, infections as well as fit note requests or advice. Where non-face-to-face appointments worked less well this included appointments around learning difficulties, patients who were non-English speakers, or who had more serious skin lumps.

The questionnaire analysis shows that practices thought that improvements in data sharing would help digital changes become more sustainable. Although there have been steps forward with sharing data with the acute provider and practices within PCNs further sharing within the community trust would be an advantage. Healthcare professionals would have better information about their patients if they could see all tests or investigations that they had received. It is recognised that when sharing any data it must be of high quality as in some cases services may be dependent on the data rather than human interaction.

There is a growing significant cost of GP estate across the city, if digital services are embedded and there is a significant reduction in face to face appointments half of the practices who responded thought that this would lead to future changes in their practice estate. There were varied responses around this on whether the changes would be in clinical or non-clinical areas, from the GP interviews it was felt that changes to waiting areas were inevitable. The days of allowing sick and infectious people to sit together in a waiting room should be coming to an end, especially if covid remains an issue. The reason practices thought their estate wouldn't change is that the space saved through the changes would be used to house the additional workforce, in line with the new GP contract.

The main issues from the questionnaire results around digital-first Primary Care being sustainable going forward was around training, improvements to digital systems including integration, and reducing resistance to change. Several points were raised around the lack of hardware across practices such as laptops and cameras, further issue were raised around the practices phone systems which were stopping admin and reception staff working remotely as the phones at the practice cannot be transferred to the mobile of home numbers of the staff.

Training was another factor that practice thought would help digital sustainability, as well as training around the use of the new systems there is a need for clinical staff to develop their skills when dealing with patient non-face to face. Integration between systems would improve efficiency as GPs wouldn't have to log in to different systems to perform different tasks, in a pressured environment GPs may revert to just using one system losing the functionality of another. Reducing the resistance to change was another prominent area from the answers, the changes the NHS are going through are transformational and they have happened rapidly which is bound to cause upset for a lot of workers who would rather work in ways they were used to before the pandemic. The sustainability of digital systems will to a large degree depend upon how the patients responded to them, if the majority of patients don't want to use online consultations or have non-face to face appointments the benefits of having digital systems in place will be reduced, and could become burdensome as the practices use more than one service model.

Findings, Analysis and Discussion- Digital Exclusion

Reviewing the digital exclusion objective, most practices had communicated changes to their patients via their website or text messages with a lesser amount by e-mail and social media. Two-thirds of practices had managed to identify their patients who don't have access to digital services but only 14 practices had managed to put things in place to help those patients gain access to services. The key findings were that practices were finding it difficult to identify patients, analysing the data the practices who were affected the most were those in the more deprived areas of the city. The answers state that patients in more deprived areas have limited digital access and shy away from using digital services due to a lack of confidence. The lack of confidence can also be seen in older patients who aren't used to

using technology, this cohort of patients cover a wider range of practices. Some elderly patients prefer a face to face appointment which may be the only face to face interactions they receive.

There has been some work done in a few practices to resolves this, some practices have worked with family members others have worked with community and public health colleagues. From the data, it is obvious that there are patients in the city that have lost access to services through the changes to Digital-first Primary Care, this cohort of patients is difficult to identify. Identifying this cohort of patients' needs to be an urgent priority for city leaders, this can't be resolved solely by the NHS; local government partners and community groups will need to be involved for this growing health inequality to be suppressed.

Findings, Analysis and Discussion- how the changes have affected staff

Looking at the objective of how the changes affected staff almost all respondents reported that working hours hadn't reduced since the changes to the digital-first services model; the majority thought they had stayed the same and nine practices stated they had increased. The most alarming issue was that the practices were reporting that their work had become more pressurised and they had fewer natural breaks in the day. This is a real concern as General Practice was already an extremely pressurised place to work before the pandemic. One of the drivers of the extra pressure is due to the bedding in of the new systems as surgeries have become less structured. At some practices, they are also using GPs to triage patients through the online consultations system which is reducing the number of consultations they can deliver. A number of practices are seeing increased demand for services which is possibly because patients now have increased access through the online consultations portal.

The increased working hours correspond with the feedback that in general, very few practices are seeing the length of a GP consultation reduce. A lot of practices reported that this was due to the new systems, sometimes it takes more than one phone call to get through to a patient. Often when a patient has a telephone consultation it may not resolve the problem and the patient is then required to come to the surgery to have a face to face appointment, this increases the length of an appointment when an initial face to face appointment would have been quicker. In addition to this an increasing number of patients are feeling anxious and needed more reassurance from health professionals, some patients have not seen there GP for a long period and are presenting with more than one problem which increases consultation times. Part of the increased time of an appointment is due to clinical staff becoming more skilled on the new systems that are in place, getting used to sending referrals, links, and advice letters in a new format. As the systems become more embedded the efficiency of using the systems will improve.

Apart from one practice, all respondents reported their staff are able to work from home when required, the practice that responded no reported that some of their staff were able to but not all. There has been a lot of funding through NHS England to increase the number of laptops in General Practice which the CCG has helped deliver. The majority of practices were positive about the changes but some of the usual problems were highlighted such as Wi-Fi coverage and VPN connectivity, the disadvantage of this is when GPs work from home there are less GPs available to offer face to face appointments

Of the 37 respondents 23 felt the digital changes would help attract and retain staff going forward, this was due to increased flexible working, working from home, and allowing increased flexibility around childcare. Several practices thought that this would attract

younger staff members that were more used to digital working but that it may put off older workers who have less confidence working with digital technology.

Conclusion

Building on the literature review the study found that several developments can be made to help the digital-first Primary Care changes remain in place across the city. The research evidenced the changes that are required are set across different levels of the NHS from national changes down to the place and practice level. Due to the continuing pandemic, the NHS is still working in a VUCA environment, due to this now may not be the time to put in action all the recommendations but in line with Kotter's steps of change; quick wins are now required to continue the momentum of the changes.

As well as improvements around digital systems it is clear that not all staff members are comfortable with the changes at this stage, this is due to the size and speed of the change but also due not yet having a full understanding of the new systems. Increasing pressure across Primary Care is a major risk that will need to be addressed swiftly to mitigate the risk of employee burnout.

It's clear to see from this feedback that patients who most need to see their GP are the ones that are the most affected by the changes. It is important that practices are in contact with patients and can ensure pathways are in place to meet their need, once the pandemic is over service models need to be put in place that can ensure all patients have access to services. Currently, there is a risk of increasing health inequalities across the city due to digital exclusion; this is directly opposite to the CCG strategy so needs be a focus for city leaders. For the digital changes to be embedded they need to be equitable and accessible to all.

Years' worth of transformation has been put in place in a few months. As the Primary Care workforce become more used to the changes more ideas are being developed around how systems can be improved, building on the changes and developing pathways that are safe to deliver virtually and face to face.

Digital services are here to stay, but to what extent is yet to be determined. To ensure digital services remain in place the research has identified changes that should be made involving practice staff, patient access, and improvements to digital systems. If these changes can be addressed and it is clear that digital systems are adding value and efficiency for patients they have a greater chance of remaining embedded within GP practices in the City.

Recommendations

Following the findings of the research, the following recommendations should be actioned to give digital-first Primary Care the greatest chance of being sustainable.

- At a national level due to the increased complexity of face-to-face appointments and increased pressure on GPs, the national standard consultation time of 10 minutes should be raised to 15. This would increase diagnosis accuracy, reduce GP burnout while increasing job satisfaction due to further health promotion opportunities. This is also recognised by (Bjglife 2020).

- At a national or regional level, a commitment should be made to fund the AccuRX system or a similar system for practices going forward. This will help meet the objectives within the long term plan of increasing the number of digital appointments available for patients, and enable more activity to move from the acute sector.

- The CCG working with the PCNs is required to show strong leadership across the city, all practices are independent business so strong leadership is required to give practices the best chance of making the changes sustainable. The CCG and PCNs should work to identify training that can be put in place to help ensure staff members are more comfortable with systems and they are used to their full effect. This will be a continuous PDSA improvement cycle which will help to keep the technology in place.

- The CCG Communications team should help practices by communicating the changes to all patients around how Digital-first Primary Care works. The CCG should work with PCN leads to help identify patients that are at risk of digital inclusion, this will involve partnership working with the council and the cities translation provider. Once identified digital training hubs should be set up across the city based in a library or community centre.

- For online consultation software to work to its full effect, the triage of patients' needs to be put in place at a PCN level. This will make triaging much more efficient across practices and allow patients to have consultations with GPs outside their practice if required. PCN funding from the national contract can be used to employ a member of staff if required.

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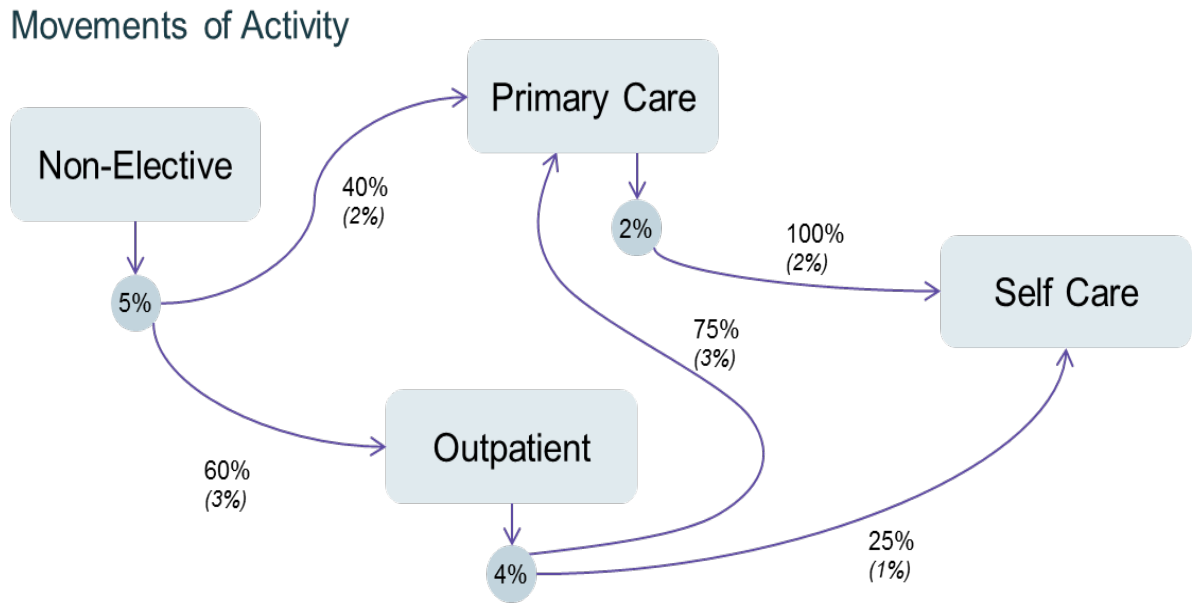
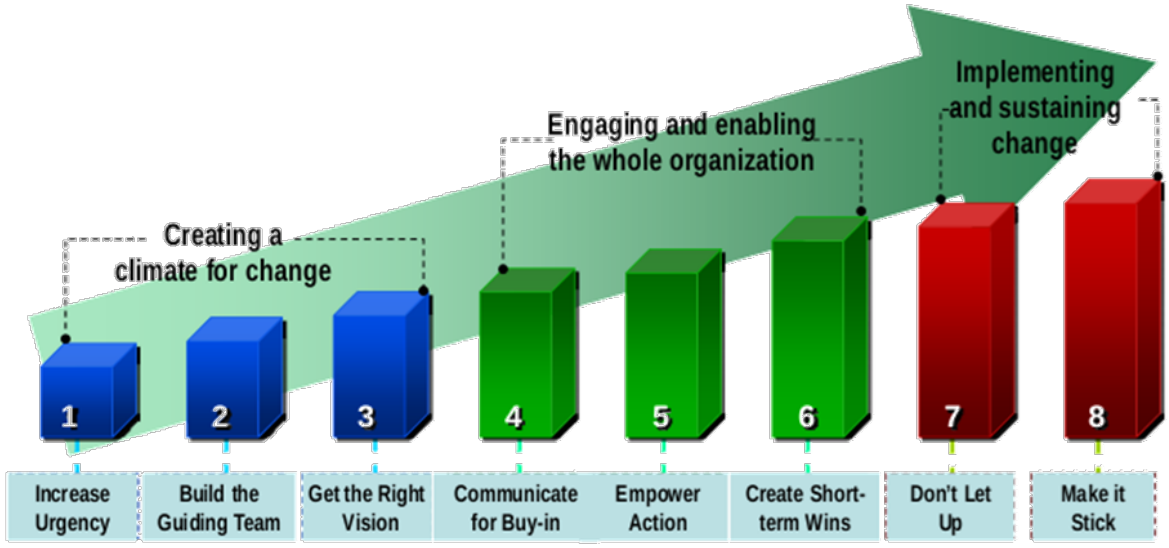
Appendices

Appendix 1-The left Shift movement of activity



Appendix 3 the PDSA Cycle

Appendix 4 Kotter's 8 Steps of Change



Kotter, John P. and Cohen, Dan S. The Heart of Change. Boston: Harvard Business School Press

Appendix 5 Questionnaire

A Research Questionnaire with the aim to develop an understanding of the impact of the Digital changes to Leeds GP Practices throughout the Pandemic, and what could be put in place to make the changes sustainable.

Section 1 – Personal Details

A. Name (optional):
B. Practice:
C. Role:

Section 2-Access

1. For urgent same day appointments what was your practices service model prior to lockdown?

A	Telephone first (GP brings patient in if needed)	
B	All consultations face to face and booked by reception	
C	Sit and wait clinics	
D	Direct patients to the walk in centre	
E	None of the above. Please specify -	

2. For urgent same day appointment what is your Practices Service model now?

A	Telephone first (GP brings patient in if needed)	
B	All consultations face to face and booked by reception	
C	Sit and wait clinics	
D	Direct patients to the walk in centre	
E	None of the above. Please specify -	

3. Do you feel that the Digital changes have led to patients having increased access to services?

A	Yes	
B	No	
C	Unsure	

Any additional comments-

4. Compared with prior to the lockdown and following changes in working practices, do you feel the number of appointments your surgery has been able to offer has?-

A	Stayed the Same	
B	Increased	
C	Decreased	
D	Unsure	

Any additional comments-

5. How has the implementation of online consultations software affected the number of patients being seen by a GP, which would have been more suited to an appointment with another health care professional?

A	Stayed the Same	
B	Increased	
C	Decreased	
D	Unsure	

Any additional comments-

Section 3-Systems and Capability

6. Would you welcome the continuation of the AccuRX system after the Pandemic?

A	Yes	
B	No	

7. What improvements do you feel could be made to the AccuRX system?

8. What improvements do you feel could be made to the online consultations system?

9. From your opinion which type of presentations do remote consultations works well for?

10. From your opinion which type of presentations do remote consultations works less well for?

11. Could any further developments be made around data sharing to make digital working more sustainable?

12. How has the move to digital first primary care affected working hours?

A	Increased working hours	
B	Decreased working hours	
C	No real change	

Any Further Comments-

13. Since the shift towards telephone first triage following lockdown, how has the time it takes to complete a clinical session changed?

A	It takes about the same length of time to complete	
B	It takes longer to complete	
C	It takes less time to complete	

Any Further Comments-

14. Has digital technology enabled staff to work from home whether shielding or otherwise?

A	Yes	
B	No	

15. If digital technology remains in place do you feel this will lead to changes in the size or design of the practices estate?

A	Yes	
B	No	
C	Don't Know	

If yes, which areas may change? (Clinical, non-clinical areas)

Section 4-Practice Staff

16. Do you feel practice staff has been trained adequately in the use of digital systems?

A	Yes	
B	No	
C	Partly	

17. Do you feel the implementation of digital working will help retain staff or attract staff going forward?

A	Yes	
B	No	

Please elaborate your views-

18. What changes can be made going forward to ensure digital working can be sustainable for Practice staff?

Section 5-Patients

19. How have the Practice communicated the changes to Patients?

A	Website	
B	Text	
C	E-mail	
D	None of the above. Please specify -	

20. Have you been able to identify patients that don't have access to digital technology?

A	Yes	
B	No	

21. Has anything been put in place to help those patients gain digital access?

A	Yes If yes please Specify-	
B	No	

Any Further Comments-

Appendix 6 Research letter

Date: 27th November 2020
Via Email

MBA Research Project into the Rapid Digital changes in Primary Care due to the pandemic.

Dear Colleague,

Hopefully we have met before over the last few years, if not I would like to introduce you to myself, [redacted] and I lead on Primary Care finance for the CCG working very closely with the CCGs Primary Care team.

I am currently undertaking an MBA qualification in Healthcare Finance through the Healthcare Financial Management Association (HFMA). For the final part of the qualification I am required to undertake a research project, to enable me make this worthwhile I have focused on an area that could benefit Primary Care and the Leeds System. I have been discussing the proposal with Primary Care colleagues around areas that would be beneficial.

The area I have chosen to research is the switch to digital first primary care due to the pandemic. I am focusing on what improvements could be made to digital systems to make them sustainable as well as their effect on practice staff and patients. The questionnaire should take less than 15 minutes to complete. I am interested in your input because I am looking for a full picture of the impact from across the city. The aim is that the information collated will help drive positive changes for General Practice in Leeds.

In completing the questionnaire any data or information provided would remain confidential and any responses will not be identifiable within the publication of the final research document. Additionally, please complete the participant consent form included within this email to ensure full ethical compliance throughout the research project.

As the research project holds strict times constraints, if I could please request all completed questionnaires to be returned to myself directly to [redacted] no later than **5.00pm 7th December 2020.**

I look forward to receiving your completed questionnaire and would like to thank you for your support in completion of the research project.

Yours sincerely,

Contextualisation Statement

LEARNING OUTCOME	HOW YOU HAVE MET THE LEARNING OUTCOME
1. Demonstrate the knowledge of theory and the ability to apply it in the context of healthcare	Kotter's change theory has been discussed with in the document to give an example of the change and at what step that change is currently at. Porters 5 forces have also been discussed to highlight risks that are in place if the digital implementation is not successful.
2 Exercise appropriate judgment in the planning, selecting and collecting of evidence to investigate the chosen issue via primary and/or secondary data	As the research was looking at the impact of the changes in the cities GP practices, questionnaires were sent to all the practice in the city with open and closed questions as part of the primary research, for further depth secondary research was under taken with two GP who worked in the city. The CCGs I.T lead was also interview to gain a full picture of the digital changes in Leeds.
3 Generate recommendations which will contribute to business success, using analysis of value	The recommendations built on the findings will ensure digital first Primary Care have the best chance of remaining in place if actioned correctly. If digital services remain in place they will add value for the patient through enhanced services and practice staff through more flexible working. It will also help the city meet the objectives in the long term plan as well as enabling a shift of activity from hospital outpatients into Primary Care
4 Communicate complex information succinctly, effectively and appropriately via different forms	Both quantitative and qualitative data was presented in a clear written format using graphs and charts where required. Qualitative feedback was coded using an approach by Creswell J. (2009), this ensured data was grouped into meaningful themes that were easily understood. The report was set out in an appropriate format to clearly demonstrate research and findings.
5 Develop problem-solving competencies by applying key knowledge and concepts to an organisation's business challenges	This was demonstrated through the recommendations put in place. The recommendations were built on the findings which detailed the challenges in place for practices, staff and patients. The

	recommendations detail what action need to be put in place both nationally and locally to help enable practices and their staff to embed digital services into the service models. This will allow practices to offer an improved service which will add value for patients. This will also reduce the risk from online digital providers.

The contextualisation statement is evidence to show that the research paper comprehensively satisfies all learning outcomes.