

Ready, Steady, Go:

A telehealth implementation toolkit

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The
University
Of
Sheffield.



NHS

*National Institute for
Health Research*

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About the University of Sheffield

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Foreword



In this radical new world where global financial challenges are having an unprecedented impact on the delivery of healthcare, we need to think very differently about how we provide quality

services to the growing number of people with long-term conditions. Furthermore the ageing population is placing huge demands on ever reducing resources within both a health and social care context. Innovations in technology have given us the opportunity to change the way we provide more cost effective services and care; however, in order to have an impact on our health economies we need to implement these technologies at scale, ensuring the adoption and diffusion of new ways of working and new paradigms for self-managed care across the care pathways.

The benefits that telehealth offers for improving both the health and the wealth of populations is immense. Whilst there have been numerous small scale deployments these have frequently not been embedded in service redesign or service delivery. Internationally many health providers now have integrated care pathways moving care closer to the home; this offers a huge opportunity

for the scaling up of telehealth deployments. However, without understanding the complexities of implementing change at organisational, work force and individual user levels, progress will continue to be slow.

Barriers to the implementation of telehealth have been evident at multiple levels, not least because of the difficulty of working across many organisational boundaries requiring complex business models. Many decision makers require evidence of benefit before committing to large scale investments. This again is resulting in a lack of innovation adoption across the health and social care environment.

This toolkit is an important step in moving telehealth adoption and diffusion forward as it provides a clear framework for implementation that will afford an opportunity for greater success. Implementing change is always challenging but with the knowledge and experience underpinning this toolkit I believe it will provide a real opportunity to deliver telehealth successfully and at scale.

Professor Sue Mawson

Director, NIHR CLAHRC for South Yorkshire
Collaborating partner, RICHARD Framework Programme 7,
European Union



“We need to radically transform the way we deliver services. Innovation is the only way we can meet these challenges. Innovation must be core business to the NHS.”

Sir David Nicholson,
December 2011

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Executive Summary



Introduction

Telehealth, the use of Information and Communication Technologies to deliver healthcare remotely, has grown in prominence over recent years. However, despite investment, telehealth is still in a state of infancy. Most deployments are led by telehealth enthusiasts and few mainstream services exist. We believe one of the reasons for this is that delivering telehealth is a complex programme of change yet few initiatives follow a structured approach to deliver the business objectives. Based on our experience, and validated with national and international colleagues, this toolkit provides a framework which can be followed and which should provide a supportive environment for telehealth to flourish.

The toolkit is structured around the analogy of a race. Preparation is involved, training is required, a clear focus is needed and endurance is crucial to make the finishing line. Just like a race, preparation is key; elite athletes may train for years to run a 100m race lasting less than 10 seconds. Similarly, in the toolkit effort is front-loaded, with more work and activity taking place in the earlier phases; much of this is unseen until the race is being run. To date, most deployments seem to be

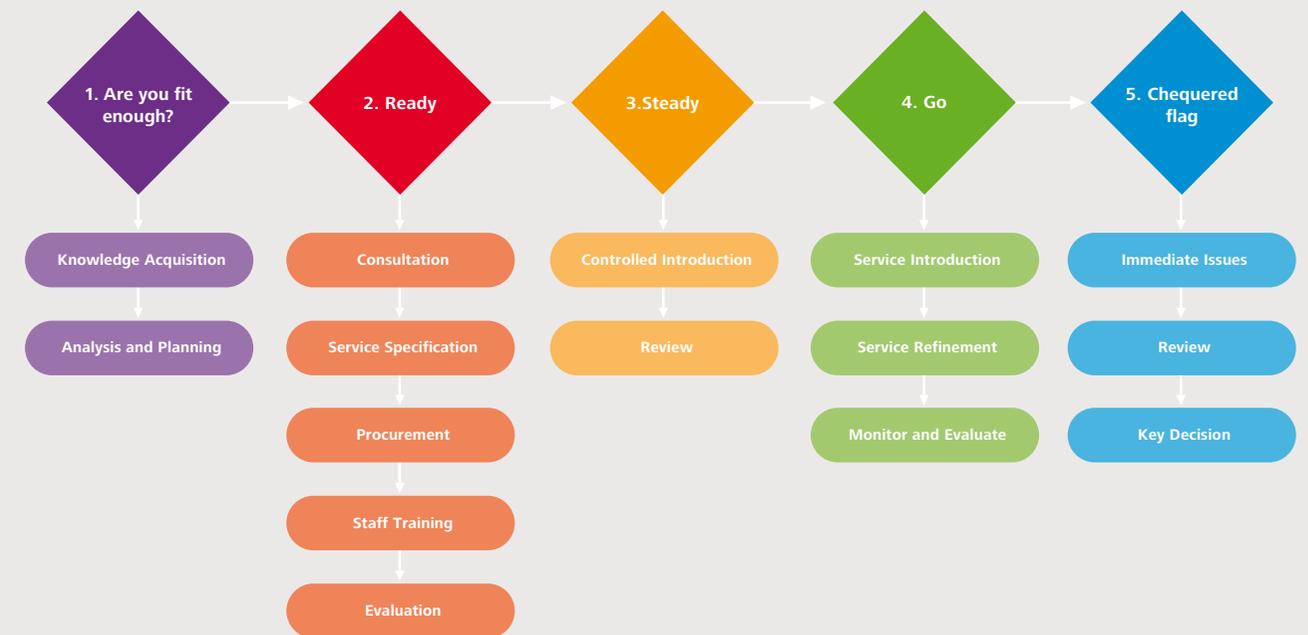
the other way round with little attention given to planning and preparation, with the focus instead on getting installations in as quickly as possible. When things go wrong, as they inevitably do, planning and mainstreaming activities have to be undertaken at the same time as 'crisis

management' - this is a recipe for mistakes, poor performance and poor patient/staff experience.

Structure

Five phases are defined within this toolkit which fit within the following structure:

Figure 1: Structure of Ready Steady Go toolkit





Phase 1: Are you fit enough?

Attention is given first to understanding the scope of the vision, reviewing whether there is sufficient ability to deliver such a vision, obtaining senior management and relevant organisational support, developing a business case, establishing a team to deliver the programme, and communicating plans.

This step is often missed or rushed as a group of enthusiasts seek to operationalise their own vision without embedding plans into the main operations of the business/service. In our running analogy, this would be like entering a marathon without doing any training - inadvisable in nearly all circumstances!

Phase 2: Ready

This is another phase which is often completed hurriedly and therefore can result in difficulties later on. Having set a vision and having had the outline business case approved, attention is now given to translating this into a tangible service specification and preparing for implementation.

Consultation with service users and providers is pivotal in developing an appropriate service specification which meets both the business objectives and the wishes of users. This will require iteration, but fine tuning the service at the planning phase is a lot less time consuming and expensive than further into the process. The final activities in this phase involve procuring equipment and services, defining and delivering a training programme, and establishing how the telehealth programme will be evaluated.

Phase 3: Steady

A clear vision has been translated into a service specification and the plans are now ready to be implemented. There can be a noticeable temptation, or pressure put on, to commence the service as quickly as possible. However, just like a runner in the blocks, the steady position is what gives them the power to explode and attain maximum speed as quickly as possible.

Rather than rushing into a situation where there is potential for a large number of unknown events to occur, a controlled environment is advocated, for a limited time, to establish whether there are any unforeseen difficulties or consequences. Resolving such issues with a limited number of users and staff is much easier than doing so during a full scale implementation. Once there is confidence the service is stable and appropriate then mainstream implementation can commence in the next phase.



Phase 4: Go

A runner may have had numerous training injuries and difficulties, but at the time of the race these have been treated or resolved as far as possible. It is the performance delivered on the track that matters. This phase is similar to the athlete running in the race - the service is tangible, sizeable and performing, and any issues previously encountered are soon forgotten.

Even though the service should be stable, there may still be opportunities to refine it to enhance effectiveness or efficiency. Where appropriate such changes should be introduced with an understanding of the consequences for the evaluation of the service. A stable service should enable rapid expansion with minimal or no complications.

Phase 5: Chequered flag

The race has been run, the prize attained, but that is not the end; the runner will need to cool down, review the race, and focus again on the future. Similarly, this final phase commences by ensuring any legal and contractual issues connected to the mainstream service are in place and appropriate, while ensuring appropriate financial stability for the service during the post-race analysis.

Review and reflection with stakeholders and service users is required to understand what went well, what lessons can be learnt and how improvements can be made. The telehealth programme did not take place in isolation of other service pressures and priorities so these should be revisited to ensure alignment with local priorities. Of course, this is all building up to the final conclusion where, based on this information and the evaluation results, a decision is required to either (a) stop and close down the service, (b) hold the service as is, waiting for new information or changes to the operating environment, or (c) expand the service.



Are you a runner?

The work involved in delivering a complex intervention such as telehealth should not be underestimated. Like a running partner this toolkit can provide support, but ultimately it is the runner's responsibility to run the race. If you are not prepared to do the training then consideration must be given to whether it is appropriate to even start down this path. There are too many examples of half completed telehealth initiatives or ones deemed successful, only for them to dwindle and disappear over time. Running the telehealth race is a significant commitment, but just like the runner who wins the race, the rewards can outweigh even the most challenging training programmes.

The relevance of this toolkit to stakeholders

We believe this toolkit will have relevance to a wide range of stakeholders. Whilst some people will have multiple roles and there may be slight variations in the naming of functions in each organisation seven key stakeholders are defined within a telehealth project:

- **Sponsor:** The project sponsor will be a senior executive (often at or just below board level) who is responsible to the organisation for the success of the project
- **Project Manager:** The person with the responsibility for planning, execution and closing of the project
- **Practitioner:** Health or care providers qualified in the delivery of support through clinical practice and/or social care who are working with, or planning to work with, telehealth
- **Finance and Procurement:** Those responsible for ensuring the appropriate governance for funding and guiding the procurement of goods and services
- **Legal and Information Governance:** Those responsible for ensuring the appropriate governance of the project in terms of data security and privacy and legal requirements for the organisation
- **Technical Services:** Those responsible for the set-up, calibration, installation, integration with other IT systems, maintenance, decontamination and decommissioning of hardware and software associated with the telehealth service
- **Audit and Evaluation:** Those responsible for assessing the impact of the new service.

Each phase within the toolkit has a **RACI (Responsible, Accountable, Consulted, Informed)** analysis to provide insight into the work being undertaken and the responsibilities of key stakeholders. The analysis examines each task set and defines who is:

R = Responsible: person conducting the work

A = Accountable: person ultimately held answerable

C = Consulted: person providing feedback or contribution to work

I = Informed: person needing to know of an activity or decision.

As in most management programmes, the project manager has much responsibility, so appointing someone to this position is one of the most important early decisions to make.

Introduction



The format: This toolkit uses a running analogy throughout, hence the Ready Steady Go title. It is broken into five phases and each phase can be read in isolation. It would be helpful to read the whole toolkit to provide oversight and context before embarking on a telehealth deployment to provide a detailed overview of the whole approach. However, due to the level of detail provided it is intended that each section is worked through at the time it is required.

Why the running analogy? The analogy can make the toolkit easier to understand and remember, and may even encourage readers to pass on the lessons learnt; few people train in isolation.

What is telehealth? A broad definition is taken to encompass the use of Information and Communication Technologies to support healthcare at a distance between a medical or care professional and a patient.

Why the interest in telehealth? Throughout much of the world the burden on health services is growing due to the mid-century baby boom and the tendency for older people to develop long-term conditions. This increase in demand is happening at a time when there is a need to contain healthcare costs and cope with a smaller

healthcare workforce. In response, healthcare policies increasingly emphasise supporting people to self-care, managing people with more complex needs more closely and shifting care into the community and out of expensive fixed assets such as hospitals. Telehealth has been proposed as one solution that can contribute to all these ambitions and increase users' quality of life. It offers the potential to enable higher quality clinical decision making, more productive working, reduction in hospital admissions, and earlier hospital discharge.

Why this toolkit? There are many examples where small scale telehealth pilot projects have reported success, but these often disappear over time and have struggled to become mainstream. An investigation of robust evaluation studies shows a mixed evidence base, with some trials reporting successful deployments but others failing to realise this. It could be hypothesised that one of the reasons for this mixed evidence base is that introducing telehealth is a complex programme of change. It is not a case of changing 'drug A' for 'drug B' and comparing the difference, rather there are many variables such as the way the service is introduced, the timing and handling of patient recruitment, duration of the intervention, views and attitudes of staff,

"Every morning in Africa, a gazelle wakes up. It knows it must outrun the fastest lion or it will be killed. Every morning in Africa, a lion wakes up. It knows it must run faster than the slowest gazelle, or it will starve. It doesn't matter whether you're a lion or gazelle - when the sun comes up, you'd better be running."

Author Unknown



readiness of an organisation to embrace change, and effectiveness of working across multiple organisations, which can all impact on the ability to deliver a successful outcome.

This toolkit seeks to support implementation by providing a robust framework in which telehealth operates and which can help control many confounding variables that can impact on a successful implementation. It also highlights many of the known pitfalls so that these can be avoided. Other toolkits are available and may be helpful, however, this toolkit is intended to provide guidance in creating the local procedures required to deliver an effective telehealth solution. Local context can make so great a difference that a successful implementation in one area may not be replicable in another. This toolkit suggests key questions that can be asked which can help organisations steer towards a successful implementation and which are appropriate for all circumstances. This toolkit can therefore assist in the local development and delivery of a telehealth programme. Unfortunately it is not possible to provide the answers to all questions, but generic principles

for success which are evident in 'successful' telehealth programmes are raised for your local consideration.

All toolkits have limitations and it should be remembered that following the toolkit will not guarantee a successful deployment. The toolkit does seek to provide a mechanism to avoid common pitfalls and point towards areas that require further consideration and local consultation. Such pointers can be highly beneficial, but they enhance rather than replace the insight, skills and commitment of those delivering a telehealth programme.

Who is this toolkit for? Anyone involved in the delivery of a telehealth programme could find valuable guidance in this toolkit. For those new to telehealth it provides a detailed account of steps that should be covered, and provides insight into common mistakes and ways in which progress can be monitored. For those with more experience, benefit could still be derived as it may provide new insights on certain aspects along with a clear overriding framework which can assist in ensuring all aspects of the programme are managed effectively.



Validation and Endorsement

The toolkit has been developed based on a systematic review of the literature and the experience of the authors, further details of the approach undertaken are provided in Appendix A. To ensure completeness and robustness, the toolkit has been constructively scrutinised by a number of prominent individuals/organisations and we thank them for their support (see Appendix B).

Toolkit use and future editions

This toolkit should be viewed as a 'living document'. It provides many insights and can support deployment, however improvements can always be made and greater clarity may perhaps be required in some areas. To that end we are working with test sites in at least two European countries to refine the toolkit further. Therefore if you are using the toolkit and/or have suggestions as to how it could be improved, please contact us at THToolkit@sheffield.ac.uk.

How to use this Toolkit



The toolkit uses the principles of Business Process Reengineering and is structured around five key phases with the intention that each phase is worked through at the time required. However, an overview of the whole process would be valuable to understand the context. The phases are:

- **Are you fit enough?:** To ensure sufficient organisational support and a clear mandate is given
- **Ready:** To undertake detailed planning, consultation and procurement prior to commencing implementation
- **Steady:** A controlled small scale implementation and review
- **Go:** Full scale implementation against the project brief
- **Chequered flag:** An opportunity to take stock, feedback results to senior management and plan for the future.

Each phase consists of a number of activities which should be undertaken, with activities being broken down further into specific tasks to be completed.

Where appropriate tasks are presented with the following levels of supporting information:

- **Key questions:** Primarily focused on input from senior management or the project board, these questions steer overall direction
- **Secondary points:** These can be resolved by project managers or sub groups as they are more detailed in nature and do not impact upon overall programme direction
- **Possible KPIs:** Areas for which Key Performance Indicators can be defined to monitor progress
- **Hints and tips:** Useful advice which would support decision making and help avoid known pitfalls.

As part of the introduction to each phase a RACI (Responsible, Accountable, Consulted, Informed) analysis has been conducted. This summarises the goals of each phase and the level of input required from different stakeholders. Goals relate to specific tasks within the phases.

How to use this Toolkit

Most telehealth toolkits start at the **Ready** phase, but this misses out one of the most important aspects, that of securing organisational buy-in and ensuring the organisation is in a position to undertake the programme. The **Are you fit enough?** phase focuses on this. In some cases it may be that a telehealth programme goes no further as the necessary support, skills or resource are not available. If proceeding would have resulted in failure, it is better to know this prior to mobilising a service. There are many cases where telehealth has been undertaken, even though chances of success were minuscule.

The **Ready, Steady** and **Go** phases require working through as part of the programme of change management. They cover the project planning, pilot implementation and roll-out of the service.

The final phase, **Chequered flag**, is another phase which tends to be overlooked. Having delivered the telehealth programme, a decision is required upon whether to expand the service, abandon it or continue 'as is' until new evidence, finance or resource becomes available.

If overlooked this phase tends to result in programmes which report success but are never mainstreamed and tend to disappear over time.

Planning for sustainability can never start early enough, but this final phase gives particular emphasis and insight into how the work undertaken could become a mainstream service.

One other thing to remember is that you may find this toolkit hard work and you may struggle to meet all of the suggestions. However, working through the toolkit will give you a much better chance of success. Do not give up on it or your telehealth programme. As Thomas Edison said "*Many failures... did not realize how close they were to success.*" Run the race, keep the finishing line in view and bask in the glory of your ultimate success!



"Many failures... did not realize how close they were to success."

Thomas Edison

Chapter 1

Are you fit enough?



Chapter 1 - Are you fit enough?



A telehealth programme is a set of co-ordinated and controlled activities that collectively aim to deliver benefits in terms of improved clinical decision making and health outcomes, changes in working practice and productivity, altered patient service utilisation patterns and improved patient and carer satisfaction. This usually takes place in an uncertain and changing environment and it is therefore necessary to work through a process to establish the telehealth programme within the relevant organisation(s) and which aligns everyone for subsequent activity.

A properly established programme will have active senior management support from the outset. It is also essential that clear plans have been made for how the programme will be monitored and managed. These steps are often overlooked or completed hurriedly, with subsequent knock-on effect when the telehealth programme encounters difficulties.

When telehealth programmes fail, the reasons uncovered often indicate a lack of preparation or limited involvement of key stakeholders during preparation. Common causes of failure include diverse expectations of the benefits telehealth programmes deliver, lack of any implementation strategy, and the omission of an underlying

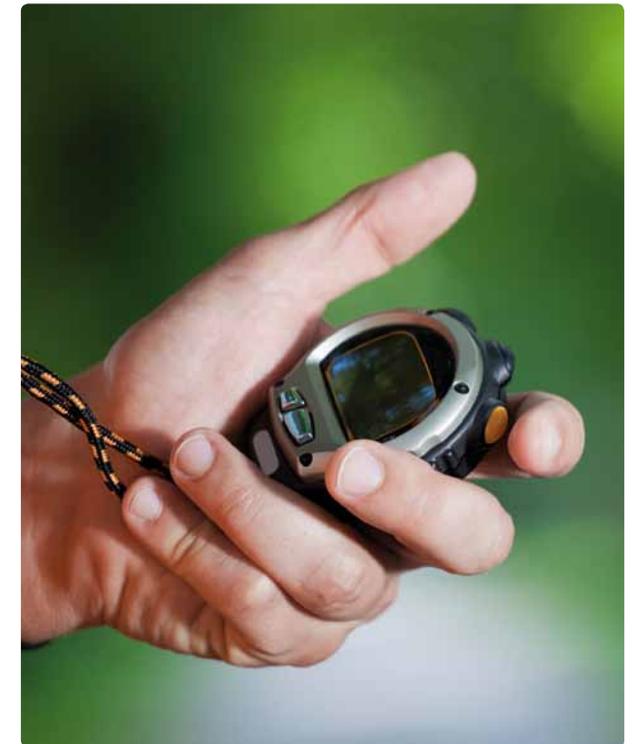
strong business case. Too often the preparation for a telehealth programme is undertaken by a small number of advocates with limited external scrutiny. Another issue cited for project failure is poor communication, be that with users, between teams or between organisations. Throughout every phase of this toolkit communication is highlighted and its value cannot be overstated. Active and well-planned communications will help to motivate, assist in change management and highlight obstacles in a timely way. However, remember that communication is a two-way process, Peter Drucker highlights that *"the most important thing in communication is hearing what isn't said."*

This phase describes how to ensure the correct foundations can be laid and these common pitfalls avoided.

The following RACI (Responsible, Accountable, Consulted, Informed) analysis provides an overview of the phases main goals, who is responsible for them, and who should be involved. The vast majority of work in this phase is led by the programme sponsor and project manager. However, the involvement of all parties is required in order to gain an initial insight into a realistic and deliverable telehealth vision.

"It's not the will to win that matters - everyone has that. It's the will to prepare to win that matters."

Paul 'Bear' Bryant



Chapter 1 - Are you fit enough?



Task	Goal	Responsibility and Involvement						
		Sponsor	Project Manager	Practitioner	Finance and Procurement	Legal and Governance	Technical services	Audit and Evaluation
A	1. Gather data for informed investment decisions	C	A/R	C	C	C	C	C
A	2. Understand care pathways and patient flows	I	A	R	-	-	-	-
A	3. Understand patient information flows	I	A	C	-	-	R	-
B	4. Conduct AS-IS and TO-BE modelling	C	A/R	C	C	C	C	-
B	5. Agree a service vision	A	R	C	C	C	C	-
B	6. Understand the benefits the new vision would deliver	A	R	I	I	I	I	I
C	7. Evaluate whether the necessary skills/environment exist	I	A/R	C	C	C	C	C
C	8. Understand the financial envelope and timescales	A	R	C	C	C	C	C
C	9. Embed telehealth within relevant organisation(s)	A	R	C	C	C	C	-
C	10. Agree a high level strategy to develop and deliver the vision	A/R	C	C	C	C	C	-
C	11. Assign roles and responsibilities	A	R	C	I	I	I	I
C	12. Create a clear business case to support decision making	A	R	I	C	I	I	I
C	13. Create a communications plan for consultation and engagement	I	A/R	I	I	I	I	I
C	14. Create clear plans to monitor and manage the programme	A/C	R	C	-	-	-	-

Key

R = *Responsible*: person conducting the work

A = *Accountable*: person ultimately held answerable

C = *Consulted*: person providing feedback or contribution to work

I = *Informed*: person needing to know of an activity or decision



Activity 1 - Knowledge Acquisition



Objectives

- 1 Obtain a detailed understanding of the current business/processes, priorities and future direction.
- 2 Acquire knowledge pertaining to the intervention, how to deliver it, and its impact on service delivery.

There are many possible motivations for starting a telehealth programme. In some cases the need for telehealth may be due to the over-burdening of financial or other resources, and in other cases the decision to implement telehealth may follow a high-level strategic review of organisational priorities. A more common starting point is a local telehealth pilot initiated by a clinical or managerial champion. In some cases there may even have been a programme of research and development or a policy directive, such as the UK's Whole System Demonstrator programme and subsequent 3millionlives programme, which report positive benefits and encourage action.

Whatever the starting point, for telehealth to meet expectations a process is required which gathers together the required knowledge and information so that an informed decision can

be made as to how to proceed. In preparation for a physical race consideration would be given to the ambition or end target. It may be that a long-term plan is in place and preparations are made for the next step, or it could be that you have never run before but are inspired to run a marathon! Based on experience, consideration would be given to how much running was undertaken recently, past performance would be reviewed (how far, how fast, how often), any injuries would be reflected upon, and consideration would also be given to running equipment. If knowledge was lacking online resources, a book or discussions with others would direct the steps required. This opening phase similarly involves confirming ambition and identifying prerequisite information to determine the way forward.

Task A - Understand the Current Business and Possible Role of Telehealth



Key questions

- 1 What are the organisational priorities in the short, medium and long-term?
- 2 What is the service context within which changes are being envisaged?
- 3 Who within the senior management team should have responsibility for the programme?
- 4 What relevant knowledge or experience exists in the organisation and its partners, or is available elsewhere, for change management and the intervention being considered?
- 5 What are the current care pathways and what requires consideration if they were to be reengineered to embrace telehealth delivery?
- 6 Who are the delivery partners in the care pathway and what arrangements and flexibilities are there?
- 7 What are the service strengths and weaknesses of the organisation and delivery partners?
- 8 What information management strategies exist?

Secondary points

- 1 Is the necessary background information available to enable informed planning?
- 2 What information sharing agreements with other organisations are required and who will obtain them?
- 3 Where will data be hosted and how will access rights and so forth be introduced?
- 4 What consideration should be given to risk stratification to understand current and likely future needs for user populations?

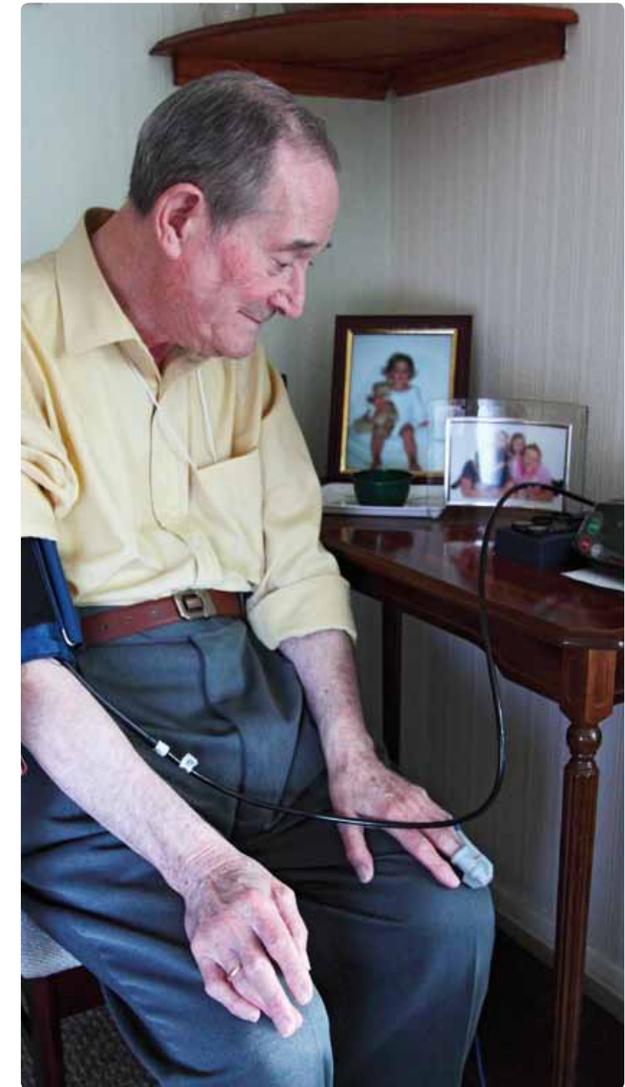
Task A - Hints and Tips



- Organisational priorities may be in the form of a strategy document or the Project Initiation Document for approved transformation projects. Several silos of responsibility may have to be spanned to gain a full picture of priorities i.e. overall organisational strategies, particular service strategies, and also IT strategies. In some instances strategy and strategic targets may not be clear, making it difficult to identify benefits the programme is expected to deliver against. The existence of overarching national goals, such as QIPP (Quality, Innovation, Productivity and Prevention) in the NHS, enable a high-level mapping to take place that will have some resonance within the senior team even where any local strategies appear unclear.
- All too often telehealth projects are assigned to a senior manager that subsequently realises the work has little fit with their portfolio. In a more dangerous scenario there are no senior managers associated with the project. Where senior management is lacking, and subsequently the telehealth programme is not reported as part of their performance assessment, then it is likely to be a low priority in the organisation. In such circumstances

delivering a successful programme can be problematic.

- When analysing the available evidence base be honest with decision makers. The telehealth evidence base is often described as 'mixed', and publications that show negative findings should be presented alongside positive ones. The evidence base has become stronger over time, but there is still a risk that positive results may not materialise in your initiative. We believe the way in which services are introduced (often poorly) impacts greatly on the evidence base but decision makers should nevertheless be provided with fair and non-biased facts.
- The growing number of publications and case studies, as well as learning resources, can provide helpful hints, tips and templates for programme documentation. Vendor reports for benefits delivered on previous projects may also be available. The evidence should be assimilated and focused on the local context.
- How the telehealth implementation will integrate, or replace, existing practice will need discussion. A good starting point is the agreed and documented care pathways used locally.



Task A - Hints and Tips



- The changing environment in settings such as the NHS necessitates a continual review of who is contracted to deliver what in each care pathway and what flexibilities there are in these arrangements. This is particularly important if a pilot is to be mainstreamed as it may be that contractual arrangements do not allow up-scale provision without repeating the procurement process.
- A mapping of patients through the relevant parts of the health system is required. If focus is to be, for example, people with a long-term condition (LTC), then LTC prevalence, service utilisation patterns, influencing factors (deprivation, age, ethnicity) will all need to be understood. At this stage information sharing agreements between delivery partners may be required whilst guidance on information governance should be considered.
- External quality assurance reviews and audits will highlight service strengths and weaknesses. Telehealth may be able to help address some of the concerns raised in these reports and build upon existing good practice.
- Whilst telehealth is a service enabler it will gather more patient specific data than ever before. This raises challenges as to where data can be hosted and who has the right to view, amend and delete data.
- Risk stratification is not essential but is highly advisable when informing the user group with whom you will deploy telehealth interventions. The key is that a cohort of people are identified to whom known resource is given, and which will enable a prediction of future need. Typically such a list will identify a significant cohort of people who could benefit from telehealth and can be used as the basis of a business case.

Activity 2 - Gap Analysis and Initial Planning



Objectives

- 1 Identify possible obstacles and reflect these in the ambition planning.
- 2 Determine the size of the service ambition which is realistic in the given timescale and resources.
- 3 Quantify the level of commitment from senior colleagues.
- 4 Produce initial high-level service plans.

Activity 2: An analysis of the facts available and knowledge acquired enables a decision to be reached as to which race is being run and whether this is realistic - a 100 meter sprint, 400 meters or perhaps even a marathon.

Attention is required to translate the ambition into reality; a running partner may be sought to assist in training. There must be acceptance that some hardship will be encountered and determination will be needed, but fundamentally a plan is required which will understand the current position, and through hard work and training, achieve the stated ambition by the given time. The level of commitment from senior colleagues, despite obstacles that may be forthcoming, should also be gauged.





Task B - Scope the Service Vision

Key questions

- 1 Have previous track records been taken into account when setting the ambition?
- 2 Is the gap known between the starting point and finishing line?
- 3 Is there differentiation between what is possible, what is desirable and what is necessary?
- 4 Is the service ambition deliverable with the resources available?
- 5 Is there a clear and documented vision for how the telehealth service will operate, focusing on one or, at most, two primary aims?
- 6 Are the benefits and drawbacks the vision delivers, understood and clearly described?
- 7 Is this vision defined from multiple perspectives (a minimum of patient and staff)?
- 8 Do key stakeholders agree with a single definition of success, and have those who may be unconvinced been identified?
- 9 Do senior management support the service vision?

Secondary points

- 1 Who should be involved in an analysis of the key facts and initially scope the service vision?
- 2 What level of modelling should be conducted on the current state, the As-Is model?
- 3 What level of modelling is required for the future service vision, the To-Be model?
- 4 What are the levers for change?
- 5 What are the anticipated barriers to change?
- 6 Can the service vision be clearly communicated to key stakeholders?

Task B - Hints and Tips



- Success is more likely by focusing on one, or at most two key benefits that will be delivered. Telehealth business cases often cite multiple benefits such as reduced emergency admissions, reduced length of stay, improved patient satisfaction and improved mortality. Whilst it may be possible to achieve benefits across the board, chances of success are improved by focusing on one or two goals whilst monitoring impact on others.
- There will be many individuals and groups who have an interest in, who are affected by, or who do not wish to engage with the telehealth programme and its outcome. A plan is required to engage with all stakeholders, and sufficient resource must be available for this.
- People with a high degree of influence who do not support the telehealth vision must not be ignored. If anything, more time should be spent addressing their concerns than in liaising with advocates.
- Defining, also known as modelling, the As-Is situation (a detailed representation of how the current service operates) and the To-Be (either a new process addressing problems or a completely new service) situation in a structured way is an important process. If done well, it elicits information from a wide range of stakeholders to inform decision making. Tom Peters stated that *“innovation comes only from readily and seamlessly sharing information rather than hoarding it.”* The modelling of As-Is and To-Be will depend on the scope of ambition. It may focus on one specific disease pathway or perhaps one domain such as intermediate care. The reality is that when introducing telehealth in one service area there will be knock on effects, or consequences, across care pathways. The information generated by telehealth will be of use to acute, rehabilitation and primary care staff. Any one discipline may initiate the service but all should be aware of the system being developed, and act on the information generated if the true benefit is to be realised.

“Innovation comes only from readily and seamlessly sharing information rather than hoarding it.”

Tom Peters



Task B - Hints and Tips



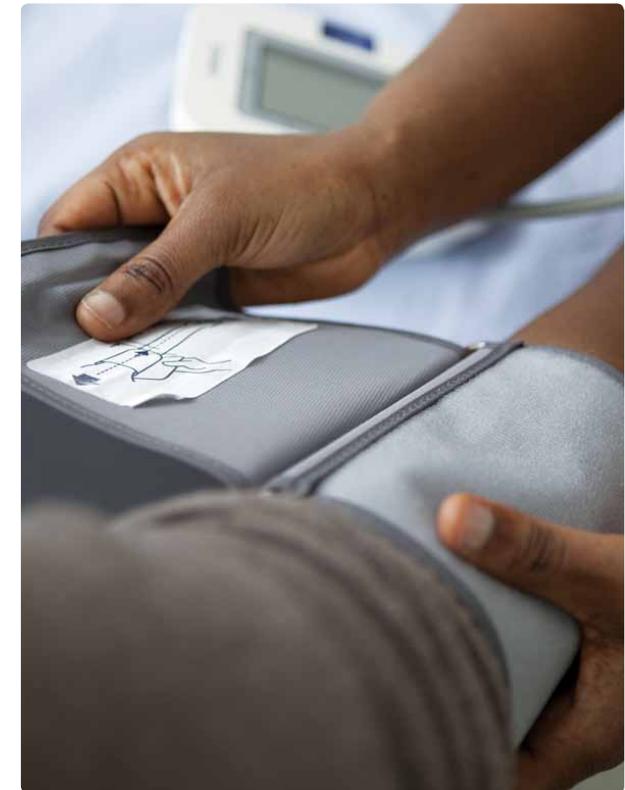
- Most process modelling methods start with analysis of the existing processes, the As-Is model. One of the challenges with As-Is modelling is deciding how much work to do. Very detailed As-Is models can be time consuming and costly and may drain the organisations tolerance for service design activities quickly. As-Is modelling can also be frustrating because there often is not a single As-Is process, and/or there are many across localities and providers. This can lead to staff becoming defensive of their specific situation. Alternatively, To-Be modelling is a description of the future desired processes. To-Be modelling requires stakeholders to be creative in solving problems and designing processes to achieve business outcomes. For that reason it is recommended that one starts with high-level To-Be modelling. An understanding of where improvements are needed and the starting point for change must be identified, but a detailed As-Is process map is not normally required. In all cases modelling must focus on 2 scenarios (1) A description of the experience patients should receive, (2) A description of the experience staff should have. When agreement has been reached on the desired future states,

the As-Is situation can be considered. It is recommended that this is limited to a level of detail required to identify what needs to change to deliver the To-Be model, although there could be some dialogue about what the correct As-Is process should be. This is fine as making incremental changes to the existing process can help prepare for more substantial changes later. As Kurt Lewin said *"if you want truly to understand something, try to change it."*

- Both the As-Is and To-Be models need to consider a range of elements such as technology, systems, pathways, processes, people, culture, incentives, rewards, relationships, leadership characteristics, resources and time.
- By examining the gaps between the To-Be and As-Is models this will automatically identify potential levers for change, as well as the likely barriers to success. The gap assessment is the basis of the requirements statement for the telehealth programme.

"If you want truly to understand something, try to change it."

Kurt Lewin



Task C - Produce High Level Plans and Communicate Commitment



Key questions

- 1 Are the programme constraints (scope, time, resources, money etc) defined?
- 2 Is there an outline project plan that details the main elements of the telehealth programme?
- 3 Are there clear objectives, expressed in terms of cost, time and deliverables for the telehealth programme and are they documented in a business case?
- 4 Do the plans provide a clear understanding of the nature of telehealth at the top level of the business that is translated into an understanding of the benefits and a statement of the probable impact of telehealth for staff, patients and the organisation?
- 5 Does the strategy identify which elements of the organisation will contribute to the design, operation and maintenance of the service?
- 6 Are the high level plans appropriate and do they provide sufficient information?
- 7 Is the high level plan robust and likely to deliver the benefits envisaged?
- 8 Is the outline business case a compelling case for change?
- 9 Is there an overview document of the vision that can be shared with managers, suppliers, staff and patients?
- 10 Has a comprehensive communication plan been written?
- 11 Is there a clear mandate to recruit a project team of sufficient quality, and whose roles and selection criteria are specified?
- 12 Are the sponsor and project manager content to be accountable for the telehealth programme?
- 13 Does the Senior Responsible Officer support the plans?
- 14 Is there confidence that the sponsor will gain and maintain the necessary commitment to funding, resources, timescales and impact of change involved?

Task C - Produce High Level Plans and Communicate Commitment



- 15** Do senior management support the plans and are they committed to them?
- 16** Is the programme authorised and the sponsor actively promoting telehealth?
- 17** Has a senior project board been established, with clear Terms of Reference, which is accountable for the programme and which will monitor and review progress?
- 18** Have plans been agreed as to how the telehealth programme will be monitored and managed?

Secondary points

- 1** Do the entire senior management team know what is expected of the telehealth programme and how 'success' will be measured?
- 2** Are there clear authority levels and does the project manager know when and why they have to escalate for approval?
- 3** Does the team have the necessary skills and capabilities to deliver what is required?
- 4** Can the project manager, and each project manager in post, articulate the benefits that will be delivered by the telehealth programme and how this contributes to at least one of the strategic goals of the organisation?
- 5** Are relevant people/departments/organsations aware of the vision and that senior management are committed to it?

Task C - Produce High Level Plans and Communicate Commitment



Possible KPIs

- Board level sign-off for the programme vision. The vision and objectives should be clearly defined and measurable.
- Stakeholders support the design of the programme and understand the contribution they must make towards programme objectives. This could include key Boards and/or stakeholders signing a Memorandum Of Understanding.
- Project Initiation Document (information acquired through starting up a project and initiating a project process) agreed and signed off by the project board.
- Business case baselined and signed off by the project board.
- Programme plan baselined and signed off by the project board.
- Communication plan baselined and signed off by the project board.
- Programme budget allocated.
- Programme lead recruited.
- Key programme staff recruited.

Task C - Hints and Tips



- If the above plans are not achieved during the preparation, then it is almost certain that significant effort will be wasted during the following phases, resulting in increased risk of delays, clashes and rework. Poorly co-ordinated work is costly and an ill-planned programme will usually face delays at a later stage to gather the information and seek resource that should have been gained at the outset.
- If the project manager or senior responsible officer face frequent pressure to re-justify the telehealth programme then preparation has not been adequately undertaken.
- A common problem is that leadership publicly support the aims and objectives of a telehealth programme but their behaviours do not always align to this. If observed then the programme should be halted and efforts made to re-engage. Do not restart the project until the concerns and needs of the majority of those who have influence (those who perhaps did not see the need for telehealth) have been addressed.
- Follow these principles for marketing the telehealth service:
 - **Keep it simple:** Cut through the jargon and focus on service benefits when reaching new stakeholders.
 - **Make sure it is fresh and exciting:** People are often fatigued by change. They have not given up, but need to be convinced that the telehealth programme will be different and more meaningful to them. They also want to enjoy the change and so fostering an environment of high energy is advantageous.
 - **Make it personal:** Many people experience innovative change as unconnected from their current lives. People react well to solutions that help them deal with routine issues and challenges but react less positively if there are no such wins until later in the programme.
- If the preparation has been thorough and there is a good chance of success, then posting entry into the race is the first key milestone - after all *"you have to be in it to win it"*. Doing this publicly so everyone knows the race has been entered demonstrates commitment. From a telehealth programme perspective the ambition should be documented in strategic plans and mentioned in public-facing documentation.



Activity 3 - Phase Completion

At the end of the phase it is important to check that the objectives have been met, and that any additional objectives or key questions, relative to a given local context, have also been considered and addressed. Upon receiving the organisation's sign off and commitment, delivering to their expectations is the next challenge. The best marathon training program in the world will not enable a runner to make it to the finish line if they are not internally motivated to undergo and complete the training and subsequently finish the race.

The following phases will define process goals and outcome goals. Just like a runner it is important to set short-term objectives on your way to achieving the ultimate ambition.



“Just like a runner it is important to set short-term objectives on your way to achieving the ultimate ambition.”



Chapter 2

Ready



Chapter 2 - Ready



Your race is about to start. You walk up to the blocks. You need to ensure you get a good start. This phase is all about being mentally and physically prepared. You have a routine for entering the blocks. The better you are at focusing on the task at hand, the more likely you are to deliver a good performance. It demands high levels of concentration. You need to be relaxed. You shake out your arms, shoulders and upper body. Doing a few vertical jumps helps get your body ready to explode out of the blocks. As you get positioned in the blocks you prepare for the steady position, and ultimately the gun.

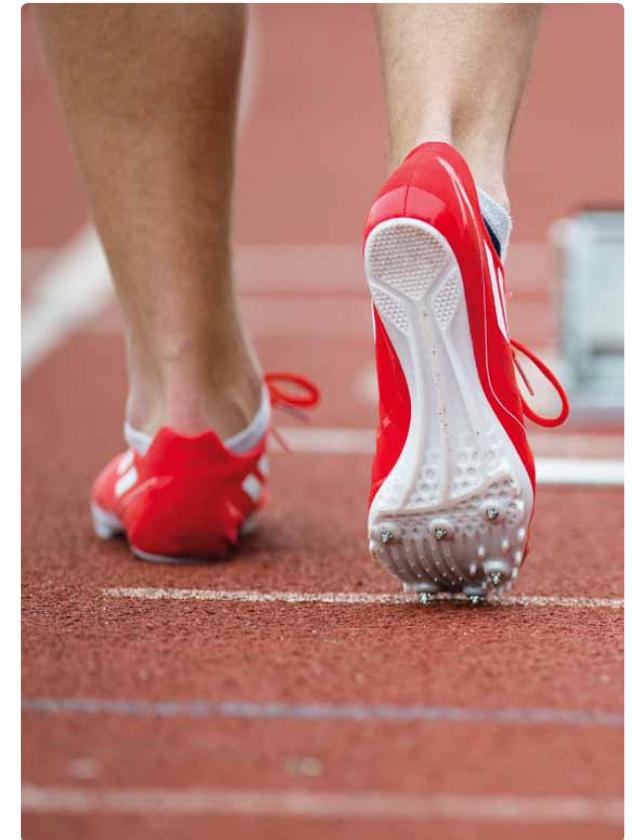
The Ready phase, as in a race, is the time when you try to give yourself the best possible chance of success. It is an important planning phase to translate the business case into a service specification which is accepted by users (patients and providers), is deliverable within the resource envelope as described in the business case, and which will provide the equipment and training required to launch the service. As the highlighted quote by Larry Elder in the right box demonstrates, if you proceed without a plan the desired transformation will be just a wish. This section ensures that due consideration is given to maximising the likelihood of a successful implementation.

At the commencement of this phase it can often be beneficial to investigate whether service specifications or expert opinions could feed into the process. It is not often that ground-breaking services are introduced so existing knowledge should be considered where possible. This is important to (a) learn from previous examples, and (b) reduce the time required for this phase. It should be acknowledged that this planning stage can take substantial time and due resource should be dedicated to it. Rushing this stage can have a direct result on effectiveness. Golub's Law says that *"a carelessly planned project takes three times longer to complete than expected, a carefully planned project takes only twice as long."*

The following table provides an overview of the main goals, who is responsible for them and who should be involved in this phase. As this is primarily a planning phase the project manager has the greatest concentration of effort and responsibility. However, practitioners are also heavily involved in feeding into the process and translating the vision and business case into something more tangible, ultimately moving towards a full service specification, procurement of technology, and provision of appropriate service specification and technology training.

"A goal without a plan is just a wish."

Larry Elder



Chapter 2 - Ready



Task	Goal	Responsibility and Involvement						
		Sponsor	Project Manager	Practitioner	Finance and Procurement	Legal and Governance	Technical services	Audit and Evaluation
D	1. Move the vision into detailed plans through patient consultation	I	A	R	I	I	I	-
E	2. Move the vision into detailed plans through staff consultation	A	R	C	C	C	C	C
F	3. Consult with organisations which may be impacted upon	A	R	-	-	-	-	-
G-N	4. Create a detailed service specification	C	A/R	C	C	C	C	-
O	5. Source appropriate technology according to business needs	I	A	-	R	C	-	-
P	6. Plan and deliver a training programme to meet business needs	I	A/R	C	I	I	C	-
Q	7. Determine how the impact of the programme will be evaluated	I	A	-	-	-	-	R

Key

- R** = *Responsible*: person conducting the work
- A** = *Accountable*: person ultimately held answerable
- C** = *Consulted*: person providing feedback or contribution to work
- I** = *Informed*: person needing to know of an activity or decision



Activity 4 - Consultation



Objectives

- 1 Verify that users (patients, carers and service providers) can foresee benefit from the intervention.
- 2 Understand users' (patients, carers and service providers) requirements for a successful intervention (service and technology).
- 3 Maximise benefit and confer with secondary organisations which are likely to be impacted upon as a consequence of the intervention.
- 4 Resolve any outstanding questions in the business case. For example, the business case may suggest LTCs but not specify the disease type or clinical severity of the intended user group.
- 5 Identify clinical champions who are committed to the intervention and can support its deployment with other practitioners.

The first activity in this phase seeks to translate and discuss the business case with staff and users in order to gain initial impressions and considerations when moving from theory to practice. It can be challenging as consulting too early can leave the impression that ideas are not formulated and a lack of direction could result. Conversely consulting too late can make people feel like changes are being imposed on them and any useful ideas they have cannot be integrated into plans without revision. It should also be appreciated that different people/organisations need to be consulted at different times within the development cycle, and that often consultation is not just a single, one-off event, but may require iteration and refinement.



Task D - Patient Consultation



Key questions

- 1 Which users (patients, carers and service providers) should be consulted and how - larger events through support networks, one-to-ones or mixed methods?
- 2 What benefits do users (patients, carers and service providers) foresee?
- 3 What barriers to uptake, service delivery or technical difficulties do users foresee, including whether devices should be medical or consumer/fixed or mobile, whether target users have sufficient room in their home for equipment, and a technical audit to determine whether appropriate telecommunications infrastructure (perhaps broadband) exists?
- 4 How and when should patients be informed and enrolled onto the intervention?
- 5 What types of people should be excluded from the service?

Secondary points

- 1 What are the characteristics of users who would benefit the most from the intervention?
- 2 What information should be given to users (patients, carers and service providers) during the consultation process?

Task D - Hints and Tips



- Consultation should be about listening and refinement of plans based on appropriate new information becoming apparent. Extremes should be avoided, i.e. taking the views of just a few individuals and making fundamental changes or having clear direction from users but not refining the plans.
- Discussions with secondary organisations should aim to maximise holistic benefit for all while addressing fears which could result in opposition to the intervention if not handled early in the development cycle.
- Any potentially contentious areas of the service should be prioritised for consultation so that issues can be resolved early in the specification.
- Local newspaper articles could disseminate plans, raise awareness and provide an opportunity for wider consultation, however expectations must be managed. This needs careful handling as the press can also have knee-jerk reactions if they feel face to face contact will be reduced or that the new service is driven primarily by a desire to lower costs.
- If patients and carers do not anticipate benefit for themselves then acceptance will be harder. It is also not uncommon for patients to decline involvement as they anticipate that the intervention could mean they have fewer nurse visits or that nurses' jobs are under threat. This issue may require particular attention.





Task E - Service Provider Consultation

Key questions

- 1 Which managers should be consulted and how?
- 2 Which practitioners should be consulted and how?
- 3 Which service providers/organisations should be 'informed' rather than 'consulted'?
- 4 Which practitioners are enthusiastic regarding the intervention, have the respect of other practitioners, and could be encouraged to be a champion?
- 5 Are there any conflicts of interest between key individuals and around equipment providers or other organisations?

Secondary points

- 1 What benefits do practitioners envisage?
- 2 What implementation difficulties do providers envisage, both for themselves and patients?
- 3 Is there agreement by staff in terms of the roles and responsibilities they are anticipated to undertake?
- 4 What benefits are there for patients from a staff perspective?
- 5 What training will practitioners require?

Task E - Hints and Tips



- Deciding when to consult staff can be difficult. A balance must be found between consulting too early, and therefore not having the depth of answers required, or consulting at a later point in which case valuable input could have been missed and practitioners could feel they cannot feed into the process.
- A clinical champion is often key in driving through change with colleagues who may be more sceptical.
- Changing systems and introducing any change takes time and can be challenging to people, especially in an environment where people may feel multiple changes keep occurring. Empathy and understanding is required from managers.
- Some practitioners can see the intervention as a threat to their jobs and may therefore be less supportive than envisaged. They will need an open and honest assessment of the impact on their roles.
- If practitioners are not supportive of the intervention then the process will be substantially more difficult and their views transferred to patients, resulting in an inferior or failed system. A common pitfall is that people running telehealth projects think that sufficient communication has taken place but as the famous quote of George Bernard Shaw explains "*the single biggest problem in communication is the illusion that it has taken place.*" What typically happens is that there is early engagement with key stakeholders, an assumption is made that they understand and are on board, and then there is no follow-up until much too late. In the interim the environment may have changed and it can be assured that opponents of the initiative will not have ceased to communicate. It can take a great deal of effort to overcome a persistent rumour, however absurd it may be, that could have been avoided by proactive, honest and regular communication.





Task F - Secondary Organisations

Key questions

- 1 Which organisations are likely to be impacted upon (positively or negatively) when the planned intervention is introduced?
- 2 Are there opportunities for mutual benefit/cost sharing between organisations?
- 3 Which individual(s) are best placed to consult with external organisations?

Secondary points

- 1 Which organisations, and people, should be informed of the programme with newsletters, posters etc?

Hints and tips

- It is likely that there will be both known and unknown consequences on organisations when the service is introduced. This may even impact upon existing cash flows on other organisations, therefore consultation is important for long-term collaboration. Vertical integration of organisations, such as in the merging of acute and community services, may reduce this sensitivity.
- Through the extended health economy it may well be plausible that strategic negotiations on matters unrelated to this initiative are being discussed. The appropriate senior management support is therefore vital and where appropriate they should be included in discussions with external organisations.

Activity 5 - Service Specification

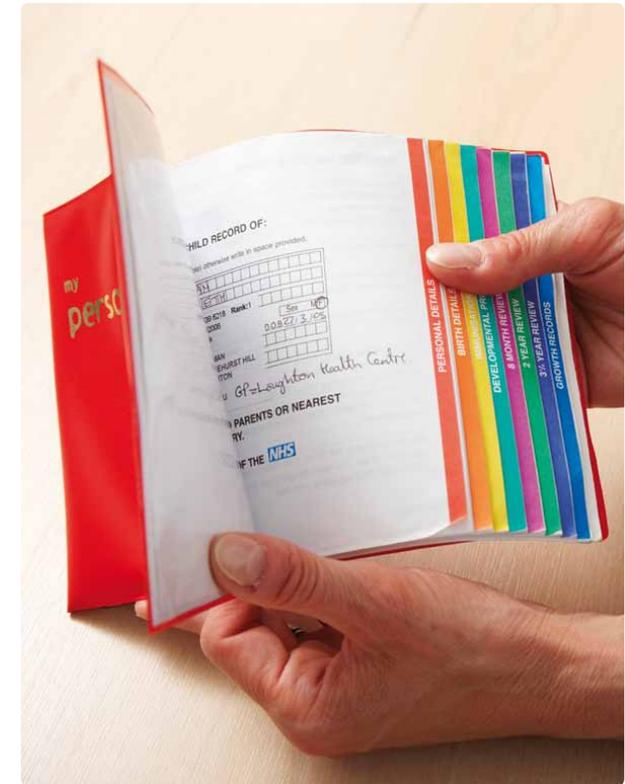


Objectives

- 1 Produce detailed plans of the implementation covering all aspects of the service and supporting functions.
- 2 Identify measurement points (recruitment rates, clinical data, etc) which would inform decision making (linked to the business case). Such KPIs (Key Performance Indicators) are required to determine the flexibility or scope of the service, and define what is important in terms of the quality of the service offered.
- 3 Update and review the risk log, detailing aspects which may impact on delivering against the business case.

This activity should result in a detailed plan of the system, outlining how patients travel through it. Together with the business case it provides an operational manual of how the service functions and the level of service expected. It should provide sufficient detail so that it can be followed unambiguously.

To support this, the specification should be prepared with SMART (Specific, Measurable, Agreed, Realistic and Time-limited) targets and include a service/operational manual. It is likely that the consultation activities and development of this specification will overlap and inform each other, possibly requiring significant re-iteration.



Task G - Service Principles



Key questions

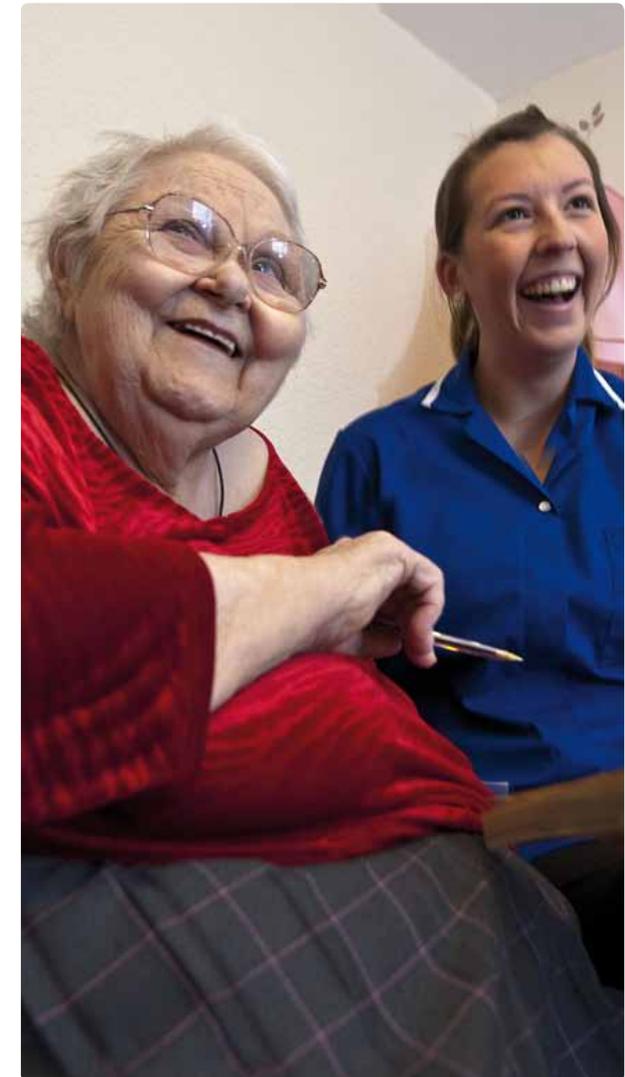
- 1 Can external knowledge and previously developed service specifications be sourced?
- 2 How will existing services be re-engineered so the telehealth service can be integrated into existing operations?
- 3 What moral and ethical dimensions need to be considered as part of the service innovation?
- 4 Who will develop and lead a change strategy, which will ensure the correct people are informed of the forthcoming changes and drive the agenda through to completion?
- 5 When developing the intervention programme should a theoretical basis, such as patient-centred approaches to care, self management, patient empowerment etc be used, and if so, which theory and how will it be integrated into the service planning and specification?
- 6 How long should patients receive the telehealth intervention for?
- 7 What procedures are required for defining default question sets, alert parameters and so on for the home hub and analysis software? This should include identifying which clinical panels need to approve the question sets, alert thresholds, and protocols for changing parameters.
- 8 When should patients use the device and enter data, including how often/when should the data be sent to the monitoring centre?
- 9 What generic technology decisions can be made, for example should Bluetooth devices be used or should the person manually enter data onto a home hub?
- 10 What level of service resilience (the ability to provide and maintain an acceptable level of service in the face of changes to normal operation) is needed and how will this be measured?
- 11 How is the new data generated provided to other departments/organisations where this would add value, i.e. A&E? Implications of legal, governance, data accuracy, and IT standards must be understood.

(There are no secondary questions).

Task G - Hints and Tips



- Even experienced practitioners probably only have in-depth experience of one or two telehealth systems. Efforts need to be made to ensure that this limited experience does not unintentionally constrain the specification such that it guides the service towards a familiar solution.
- It may be helpful to envisage what the system seeks to deliver from viewpoints such as the patient, provider, and service commissioner. Having these 'measurements of success' in mind can be helpful when developing the service specification.
- Simply adding telehealth as an extra service, or adjunct, is unlikely to be profitable and tends to lead to fragmented care delivery. Existing services must be re-engineered to embrace the new telehealth initiative under appropriate clinical control.
- Practical strategies to support change and promote engagement are often necessary. Approaches include the use of clinical or academic staff to 'champion' telehealth, incentives, and marketing to encourage adoption.





Task H - User Identification

Key questions

- 1 Define the patient eligibility criteria (for instance home requirements, clinical background, support infrastructure, geographical location) such that appropriate people are identified who might benefit, and who meet the business case's criteria.

Secondary points

- 1 Seek clarification on the accessibility and accuracy of data used to establish the eligibility of possible recruits.
- 2 Ensure sufficient people are available to meet recruitment targets and that the expected recruitment target is feasible in the resource envelope provided. Seek alterations from the project board where appropriate.

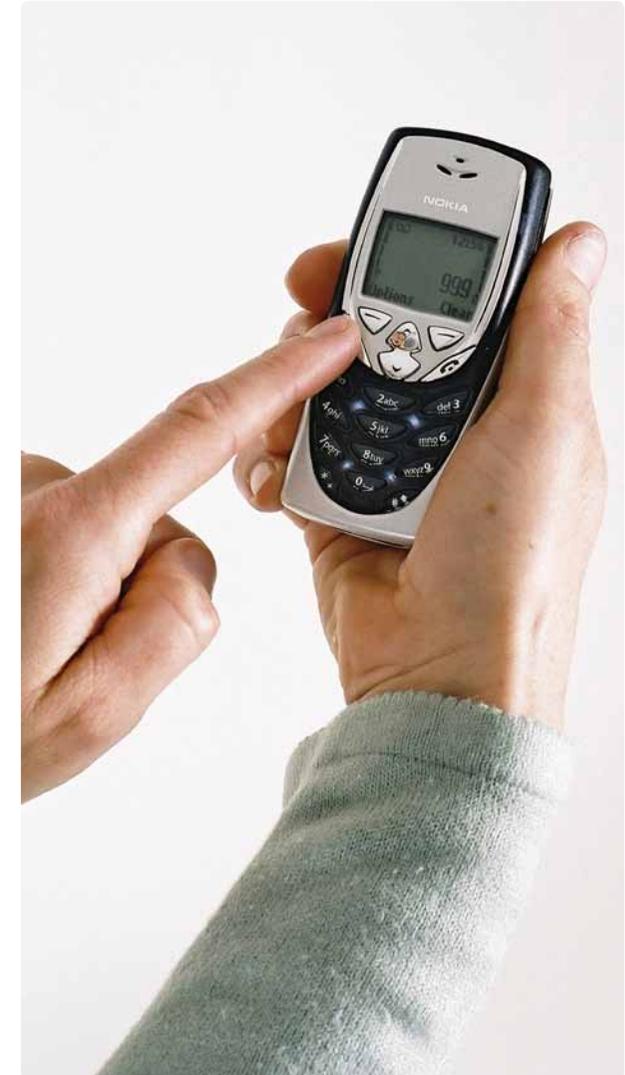
Possible KPIs

- Data accessibility and accuracy.
- Number of possible people that could be approached.

Task H - Hints and Tips



- The inclusion criteria of patients eligible for the intervention should not be left to individual practitioners. Instead, agreed inclusion criteria should be used to determine whether patients are included or excluded.
- Be mindful of patients who could be seen in different parts of the service and be counted more than once in recruitment pools. That is if recruitment pool A and B are suggested but 40% of patients in pool A can also be identified in pool B then the actual number of recruitments is substantially lower than initially thought. Understanding clinical paths and the multiple points of entry into services is important to get an accurate reflection of the true number of potential people who may be assisted. Risk stratification helps overcome such issues.
- Where evaluation is a major part of the programme, the inclusion and exclusion criteria should be especially robust to ensure the impact of the intervention is appropriately measured for this group of people.



Task I - Recruitment



Key questions

- 1 Is there an agreed process for recruitment i.e. who does what, when, and what information is provided? This should be clearly defined and replicable.
- 2 Will the recruitment process require additional resourcing, or can it be managed within existing delivery?
- 3 Should information sheets (detailing the level of service offered) and consent forms be used to ensure people are aware of the strengths and limitations of the new service and to officially sign them up to it? This may need clarification from your legal department.

Secondary points

- 1 At what point should the eligibility of the patient be checked and how?
- 2 What procedures are in place to inform people who do not meet the eligibility criteria?
- 3 If people initially decline the telehealth service should there be a second attempt at a later date to recruit, or is it a one-time offer only?
- 4 How will user refusals be recorded and classified?
- 5 How will the number of people eligible/being recruited be managed with stock control issues? In other words, how will it be ensured that people are not recruited only to find out there is no telehealth equipment available?
- 6 How will user expectations be managed (including equipment withdrawal)?

Task I - Recruitment



Possible KPIs

- Recruitment pool size.
- The number of people who appear eligible by scanning public health data sets for disease prevalence and severity but, when investigated, fail to meet criteria (data accuracy rate).
- Performance against recruitment targets, such as number of patients identified meeting the eligibility criteria, number of patients who have consented to the service, number of patients who have had an assessment, number of patients who have equipment installed, number of patients 'live' on the system and routinely submitting data, number of patients withdrawn from service.
- Auditing individual members of staff around the number of patients eligible who accept, decline, or withdraw within a set period of time - if undertaken staff should be informed this will happen. This can be an important monitoring tool, but can also be considered divisive if not handled well.

Hints and tips

- Where equipment is not available for an immediate install it is important to keep patients informed. An estimated date should be given and the patient kept informed of any changes. A contact point should also be made available should the patient wish to acquire further information. In some cases if there are installation delays it may still be possible to provide peripherals and ask them to telephone in measurements.
- Benchmarking and performance managing recruitment can often be important to ensure appropriate uptake, and to ensure that all staff are equally supportive of the programme. Staff should be informed that this will occur. It should also be considered whether an opt-out policy should be introduced rather than opt-in when running both the new and existing service. That is, people are assumed to have telehealth unless they specifically indicate that they do not want it.
- If recruitment targets are being introduced, these should take into account periods where recruitment will be less than optimal, such as Easter, Christmas, summer holidays and winter pressures.
- Allow for recruitment drop out, but monitor the underlying reasons for withdrawal throughout the programme to see whether measures can be put in place to reduce drop out.
- The user 'refusal list' should be checked prior to approaching people, so that people previously refused are not unnecessarily placed back within the recruitment pool. This list, and the reasons cited, can also be used to assist in recruitment training and refining of the system.



Task J - Install Procedures



Key questions

- 1 How long should it be between patient acceptance and subsequent equipment installation?
- 2 How will asset management be controlled?
- 3 Are installations conducted by staff or by the individuals themselves (with a back-up installation team)?
- 4 Which staff will conduct installations (to appropriate legal, safety and security standards)?
- 5 What are the operating hours for installations to take place (evenings may be requested)?
- 6 What is the lone worker policy of the organisation(s) and how will this impact upon the service?
- 7 How will user training be conducted (in person/handbook)?
- 8 How will the effectiveness of the training for each individual be assessed?
- 9 What paperwork is required to record this process (who installed, training, equipment working etc)?

Secondary points

- 1 Are the appropriate insurances (such as liability and indemnity) or staff checks, such as criminal record checks, in place for relevant staff?
- 2 How is information regarding which patients have accepted the intervention going to be transferred to the installation team?
- 3 Who logs the user onto the system with the appropriate question sets, alert thresholds etc?
- 4 What equipment checks are necessary before undertaking an installation?
- 5 How long should the average installation take?



Task J - Install Procedures

- 6 What information should be checked with the user, i.e. contact telephone number of person and a carer/responder at the time of installation?
- 7 What level of detail will the training cover?
- 8 How long should training take?
- 9 How many times will retraining be offered before deciding the approach is not effective?
- 10 What tests should be conducted to ensure the equipment is working?

Possible KPIs

- Time taken between the recruitment of a user to when equipment is installed.
- Time taken to install/train.
- Installation/training satisfaction.
- Number of installations per day by installers.
- Number of failed installations requiring a revisit.
- Number of refusals when installers arrive.
- Number of times additional training is required.

Task J - Hints and Tips



- Standards are beginning to emerge in this area and should be kept in mind. For example, the UK Telecare Services Association are developing a code of practice for telehealth and a draft EU Code of Practice for telehealth services is available.
- Consideration should be given to documented service operation limits, that is if an install time is agreed and consequently entrance to the property cannot be secured, then if this happens several times, then the service is not offered.
- Where possible efficiencies should be sought, for example in cases where clinical staff conduct the install, could they perform other duties whilst there, such as nursing support or a health or care assessment.
- This phase is really the start of the process for the end user, as they experience the equipment and have it in their homes for the first time. Clarity on the installation process is therefore required and efforts should be made to be encouraging and supportive.



Task K - Monitoring and Response



Key questions

- 1 What are the operating hours for analysing any alerts and responding to patients?
- 2 Who is conducting the monitoring and what skills are required?
- 3 What procedures should be followed for alert situations?

Secondary points

- 1 What cover is in place to ensure monitoring is performed as required, i.e. annual and sick leave etc?
- 2 Is there appropriate access to IT systems for the monitoring to be conducted?
- 3 What should happen if alerts are experienced but the patient cannot be contacted?
- 4 Who changes alert thresholds (following the previously defined protocol)?
- 5 Who changes questions on the device in the patients home (following the previously defined protocol)?
- 6 Who responds to continued non-entry of data, when, and how?
- 7 Due to possible alerts from non-use of the equipment, how will periods of absence (hospital or holiday) be handled so alerts are not generated during valid periods of non-use?

Task K - Monitoring and Response



Possible KPIs

- Time between data being entered by a user and then contact being established by the medical team in cases where alerts are generated.
- Time spent by staff monitoring and responding to alerts.
- Number of alerts generated (generically and per user).
- Number of changes made to alert thresholds (generically and per user).
- Number of occasions where expected data was not entered (generically and per user).
- Number of alerts generated by failure to enter data.
- Number of occasions where there is missing data for certain questions (indicating an inappropriately worded or difficult question).
- Equipment malfunctions.

Hints and tips

- It should be stressed that in most cases telehealth is not an emergency system which is to be relied upon. If the patient is unwell they should continue taking the action they would have prior to telehealth being installed. This is especially true where staff review telehealth data only during office hours.
- Consideration should be given to whether a mixture of staff types/grades can perform certain functions such as initial response, monitoring of patient data, maintenance or equipment failures.
- When alerts arise and patients data are outside of set parameters, guidance is required on the type of comment to be recorded on the reporting system, especially for alerts generated but which are not subsequently followed up with the user.
- The service must be resilient e.g. back-up services should be considered for when a computer server is unavailable.
- Appropriate access controls should be set on the software system, such that appropriate access levels are given to specific individuals, thus ensuring that only information relevant to the individual is presented to them. This would include access rights for an individual patient to view their own data (and not other patients' data).



Task L - Withdrawal

Key questions

- 1 What circumstances determine equipment withdrawal and what procedures will be required for withdrawing the equipment (including: medically not receiving benefit any more, through patient's failure to use equipment appropriately, end of life care and death)?
- 2 Who is responsible for physically removing equipment, or can this be done by post?
- 3 What will happen to a patient's data once the service is withdrawn - i.e. how long should data be kept (should also be stipulated in the information sheet for patients)?

Secondary points

- 1 What equipment cleaning and re-use procedures (including the removal of patient data from devices) is required.

Possible KPIs

- Number of withdrawals.
- Time taken once a withdrawal request is made to this actually occurring.
- Number of devices/peripherals which cannot be reused and have to be discarded.
- Number of devices/peripherals which are lost/stolen.

Hints and tips

- It is important to manage expectations so patients know the equipment will ultimately be withdrawn (if that is the desired service plan).
- Service review questionnaires/review may be useful to inform future service delivery planning and delivery.

Task M - Review



Key questions

- 1 How often and who conducts the review of user alerts to identify any areas of concern and ensure thresholds/questions are correct?
- 2 Should audits be conducted to ensure that the system/staff are following procedures/training as required?
- 3 What procedures are required for the service manual to be updated and who is responsible for this?
- 4 How often should personal patient/staff data held on the monitoring website, such as contact details, be reviewed for accuracy?

Possible KPIs

- Periodic review of question set and threshold setting (and amending).
- Annual review of key policies and service specification.

Hints and tips

- The depth and frequency of reviews should be agreed in advance and communicated to staff.
- Thought must be given as to when to review certain types of data. For instance reporting the impact on hospital episode data could be misleading if not analysed over an appropriate time horizon i.e. there are routine seasonal variations in admission rates.
- Where a telehealth service has elements that are operated by other departments or organisations attention should be given to ensuring issues do not fall between them. There should be clear ownership and areas of responsibility.

Task N - Maintenance



Key questions

- 1 What level of Mean Time Between Failures and type of equipment failures are tolerable and is this reflected in service contracts?
- 2 How would a device recall be handled?

Secondary points

- 1 Are faults going to be handled by nursing staff on visits, the stock control teams or dedicated staff?
- 2 What advice/troubleshooting can be done over the telephone?
- 3 What operating hours and response time is required in any given circumstance?
- 4 What procedures are required for dealing with the replacement of batteries in equipment kept at a patient's home?

Possible KPIs

- Categorisation of 'faulty' equipment and remedies sought where appropriate.
- Time taken to replace faulty stock.
- Number of devices failing within warranty period.
- Number of devices failing outside warranty period.
- Costs incurred due to 'faulty' equipment.

Hints and tips

- Equipment failure needs to be remedied quickly (perhaps with replacement units, with investigation of the fault performed by the stock control team) if it is not to undermine daily/regular entry of data.
- Placing stickers on equipment providing details of whom to contact should technical difficulties be encountered can be helpful in the absence of more sophisticated solutions.

Activity 6 - Procurement



Objectives

- 1 To acquire the required equipment/ services against the objectives defined in the business case and service specification in the most efficient and effective manner.
- 2 To facilitate an appropriate long-term cost effective contract which also enables abandonment if the desired results cannot be obtained.
- 3 To future-proof purchased equipment, so that if new technology becomes available that will not function with previously purchased equipment, the service is not committed to a long-term contract which is cost prohibitive to break.

Based on the requirements of the users (patients, carers and service providers), along with the financial envelope as outlined in the business case, appropriate equipment should be sourced on either a lease or outright purchase, along with any maintenance or support contracts required.



Task O - Purchasing



Key questions

- 1 Are there any appropriate procurement frameworks that will ease the burden of procuring the services and technology e.g. the Buying Solutions national procurement framework for telehealth and telecare in the UK?
- 2 How will purchased telehealth equipment integrate with existing Information Technology systems?
- 3 What regulatory or medical device standards are relevant?
- 4 What device safety checks and approvals are required prior to use i.e. PAT (Portable Appliance Testing)?
- 5 Should equipment be purchased outright or leased, and if leased, for how long?
- 6 What duration of equipment warranty should be purchased (where appropriate)?
- 7 What peripherals (blood pressure cuffs etc) should be purchased?
- 8 Where peripherals such as weighing scales are going to be used, can patients use their own, can low cost ones be purchased or should approved scales be used which are calibrated annually?
- 9 Can any performance criteria be included in contracts to ensure a stated level of performance of the equipment? If so, what are the criteria and what contractual penalties can be agreed?
- 10 Should any training, change management support or subcontract services be externally purchased? If so KPIs and deliverables will be required to support the contract negotiations.

Task O - Purchasing



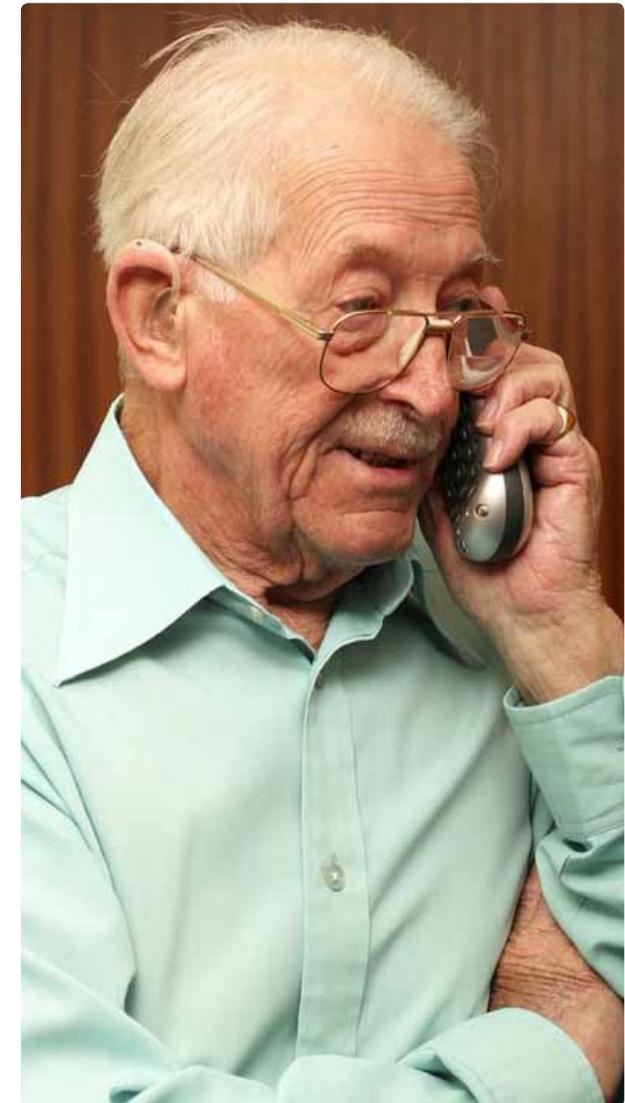
Secondary points

- 1 Which manufacturer(s) can equipment be purchased from?
- 2 What performance and reliability data can be obtained to inform investment decisions?
- 3 What are the experiences of other service providers/organisations who have experience of using certain equipment?
- 4 How many units should be purchased, delivered at one time, and when? Is just in time delivery required? It is necessary to ensure appropriate stock but not take up too much space.
- 5 What is the timeline for conducting procurement, delivery of equipment, testing and checking equipment, ready for first installation? This information will impact upon the start date for installations.

Task O - Hints and Tips



- Involve the contracts and procurement department(s) as soon as possible as the process can often take longer than envisaged, and needs to confirm to legal regulations.
- Involve Information Technology departments to ensure unforeseen difficulties with software integration and firewalls can be avoided.
- Where batteries are being used in devices it should be considered whether spare ones should be routinely left with people if they will be able to change them without support. This reduces operating costs due to the additional time required on a planned visit, or in some circumstances requiring a specific visit.
- Technology is always developing and a view must be taken as to whether clinically more effective technology may be available in the future - thus there is a trade-off when deciding to purchase outright or lease equipment. External political pressures may also influence the market price of equipment over time.
- Depending on the technology being deployed there can be an ongoing monthly monitoring charge even if equipment is not being used by a patient (i.e. in a store room not in use). Where practical, seek to remove this from contracts or negotiate an appropriate settlement.
- Review contracts as more cost-effective solutions may emerge from time to time, which may support a renegotiation in the price, or it may be more cost effective to terminate a contract and receive services from another supplier.
- Consider the wider role industry could take by offering products and services on a revenue rather than capital basis. Risk reward arrangements may also be considered.
- Interoperability of equipment supplied by different suppliers should be considered. Additionally interoperability between community services (including GP) and other systems should be taken into account.
- Thought should be given to the possibility of emerging software based services that leverage patients existing equipment, such as mobile phone. Thus reducing the burden of learning a new technology whilst also reducing capital expenditure.



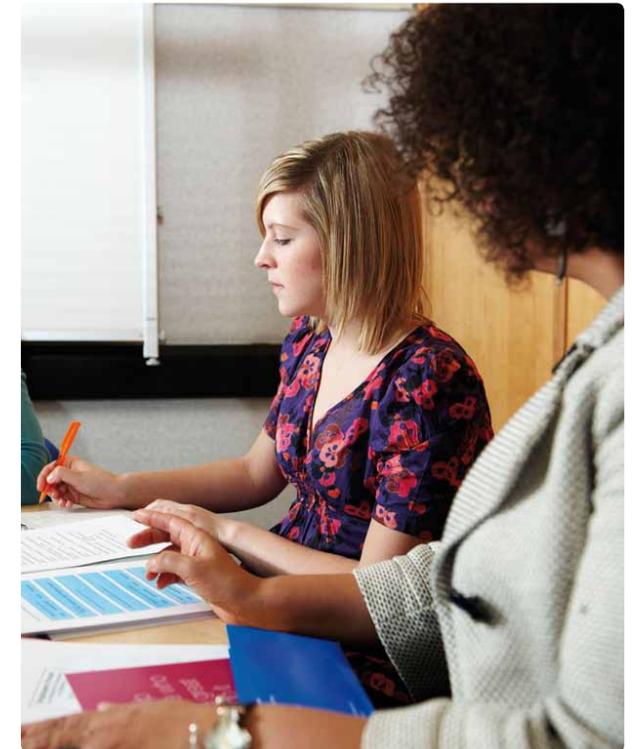
Activity 7 - Staff Training



Objectives

- 1 To ensure staff involved in the management and delivery of the service have the necessary skills, and are comfortable using them, to deliver the intervention as required.
- 2 To ensure staff deliver the programme as stipulated in the programme specification and that there is a consistent level of service irrespective of individual staff involved.

This activity must be dealt with sensitively as it is the first occasion where the majority of staff will have interaction with the new system. There is therefore likely to be some concerns over its use, some staff may feel resentment to it, some may feel they do not have sufficient technical skills to be able to operate and support its use, while some may be highly enthusiastic. It is therefore important to acknowledge the wide variety of competencies and views that may present in a team, and to ensure that staff can understand the benefits the system offers to both themselves and patients. All relevant stakeholders should receive training which provides a generic overview of the whole system and competencies for the elements they are responsible for. The training should not be restricted to just understanding any technical aspects, but the full service specification also so that the desired service is delivered.



Task P - Instruction



Key questions

1. What skills and competencies are required of the work force?
2. Have those required to undertake training been identified, what should be covered and to what level?
3. When should the training be delivered (how long before launch)?
4. How much training is required?
5. Should assessments be conducted to ensure the desired level of understanding, and how is that level defined?
6. When and how should refresher training take place for staff who use the system less often?
7. When and how will training be provided for technical updates?

Secondary points

- 1 Which individual(s) should deliver the training sessions?
- 2 Should training be provided in one-off events or a series of shorter sessions over time?
- 3 Who is going to be responsible for ensuring that the required training takes place?
- 4 Where will the training be undertaken?
- 5 How will staff unable to attend training sessions be provided with the required support?
6. What training should be provided for newly appointed staff, when, and by whom will this be provided?

Task P - Hints and Tips



- Training should be provided in how to use the equipment (including website) and also the service specification so that the service is understood. During such training the limitations of the new intervention should also be covered so a full understanding of the benefits and limitations can be appreciated. This helps to ensure that any shortcomings are not experienced in practice (which could be dangerous for someone's health), or results in disappointment. Managing expectations fairly will give a better chance of success.
- Do not assume all staff will welcome the change or training. Resistance to change is normal human behaviour, but it can be managed and effectively overcome. Training is sometimes where this resistance can first be encountered in a sizeable way.
- For training taking place on software applications ensure there are no fire wall or other technical difficulties prior to training sessions.
- It may be helpful to use different terminology for training sessions, such as workshops or introduction sessions. For some people, the use of the word 'training' can suggest they do not possess the required skills, and therefore sessions commence with a negative mindset. Different terminology can minimise or remove this hurdle.



Activity 8 - Evaluation



Objectives

- 1 To develop an evaluation protocol that will accurately and without bias provide reliable data against the objectives as outlined in the overall business case.

Generically the new intervention should be evaluated to measure (a) safety, (b) patient and staff views, (c) clinical effectiveness, and (d), cost effectiveness. More specifically it should accurately quantify the impact of the intervention against the original objectives of the business case. Ideally sufficient data should be gathered so it can be determined whether the new intervention is better than an alternative strategy, but the data can also be used to support service refinement as evaluation data highlights areas which could benefit from improvement.





Task Q - Design and Measurement

Key questions

- 1 What methodology should be deployed to answer the objectives as detailed in the business case?
- 2 Are qualitative and/or quantitative findings required?
- 3 Should validated questionnaires be used, and if so, which ones?
- 4 Is baseline data required, what is required and how will it be established?
- 5 Over what duration should data be gathered?
- 6 Should the evaluation consider looking forward to possible service improvements or just measure impact?
- 7 At what points in the business timeline should evaluation results (including preliminary) be provided?

Secondary points

- 1 Where clinical data is being obtained using validated questionnaires, do local clinicians have a particular favourite tool?
- 2 Where cost data is being gathered, how will cost-shunting (making savings in one part of the service and moving the costs to another part) be investigated?
- 3 How many data points are required, for example baseline, midpoint, at the point of withdrawal, sometime later?
- 4 How will any questionnaires be administered (post/delivered in person) and how will any support be provided to people who have difficulty completing them?

Task Q - Hints and Tips

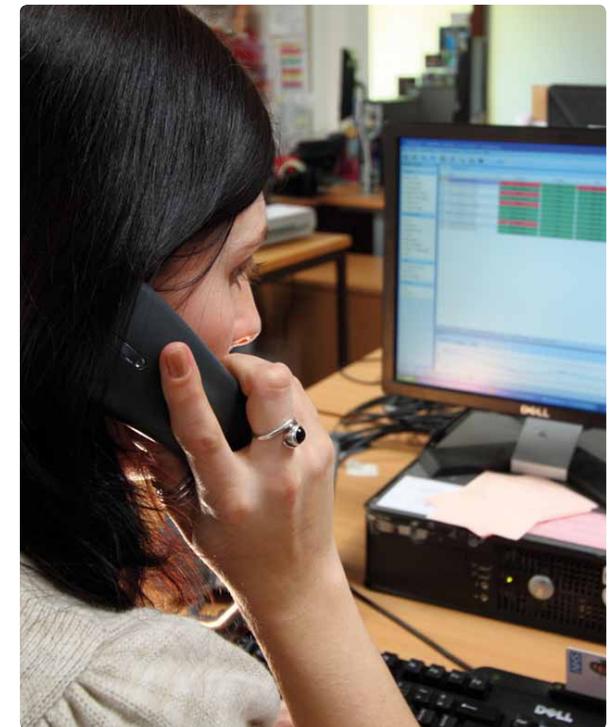


- All must acknowledge there is a trade-off between confidence in the results and the resources required to obtain this. For example, a large-scale Randomised Control Trial may provide results that are accepted by decision makers but are costly to deliver. Alternative methodologies may be more appropriate and cheaper to operate. The important aspect is that key decision makers will accept the results generated and use them to inform future investment decisions. Such a position should be used when deciding upon the methodology, data gathered, analysis and so on.
- Qualitative data tends to give depth and explain why the results are as they are, whereas quantitative data provides arguably less subjective findings but little explanation of why the results are as they are.
- Where a control group is not being used, efforts must be undertaken to remove regression to the mean. That is when working with a group of people who are not typical, such as people who have more

hospital episodes than normal, the first measurement will be higher than the average, but the second measurement point will tend to be closer to the average irrespective of an intervention taking place. This must be considered in study design and analysis.

- Attention must be given to possible bias such as, users (patients and staff) giving untruthful answers due to their own agenda. This is often experienced when medical staff provide questionnaires to patients. Consideration should be given to external or unfamiliar staff undertaking the data collection.
- Thought must be given to the issue of overburdening users (patients and staff) through the data gathering process. For patients who are severely ill asking them to complete long questionnaires or interviews over a 3 month period would not be appropriate. There must be a compromise agreed by practitioners, the management board, and those seeking to conduct the evaluation. Clarity is important to ensure all are content with the process.

- Some data is inappropriate to report quickly, for example the impact on hospital bed days as a longitudinal time horizon is required. Ensuring decision makers are aware of the time required to obtain reliable findings is important.



Activity 9 - Phase Completion



At the completion of this preparatory phase the objectives detailed in each activity should be checked to ensure they have been met. Although many may regard this Ready phase as rather dull, it is arguably one of the most important phases. Failure to appreciate this will almost certainly lead to a challenging implementation which does not yield the benefits envisaged. As the famous quote by Benjamin Franklin stresses *"by failing to prepare, you are preparing to fail."*

Due to the importance of this phase it is recommended that 3 system/patient walk-throughs are undertaken with senior management, operational management and practitioners. Walk-throughs provide an opportunity to walk through the service plans from given viewpoints and thus try to anticipate problems and difficulties prior to operationalising the plans. Where appropriate revision may be required based on feedback.

Sometimes when conducting such walk-throughs, the person presenting the material being commented upon incorrectly anticipates that no alterations should be made, and that the work is complete. Making changes at the planning phase is safer and much cheaper than later in the programme, so the walk-throughs should be a real test of the plans and people should be encouraged to critique what is presented.

John D. Rockefeller has said that *"I do not think there is any other quality so essential to success of any kind as the quality of perseverance. It overcomes almost everything, even nature."* This phase requires perseverance. It is fundamental to overall success. The phase completion should be celebrated, the achievement recognised, and those that contributed acknowledged and thanked. Praise can go a long way to keeping the team committed and motivated for the race ahead.

"I do not think there is any other quality so essential to success of any kind as the quality of perseverance. It overcomes almost everything, even nature."

John D. Rockefeller



Chapter 3

Steady



Chapter 3 - Steady



When using starting blocks, it is important to remember that blocks are used to put you in a position to accelerate, not to get you to full speed in the first few steps. The steady position is not a relaxed position. Being set in the blocks is your final opportunity to focus and get ready to maximise all the strength and power developed from training. It also enables you to get into a proper sprint position upon clearing the blocks, increasing the likelihood of smooth acceleration and reaching top speed.

This phase takes the carefully established plans and preparatory work and translates them to practice in a controlled way. Much as with the steady position in running if you get your preparation right it will enable you to accelerate rapidly in the Go phase. If you set off too quickly you may run out of steam and hit problems. This Steady phase is an exciting part of the process as tangible impact can be observed. However it can also be highly problematic if control is not embedded within the process. Donald Rumsfeld emphasised this when he famously said *"There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know."*

The *"known knowns"* along with the *"known unknowns"* are addressed through careful consideration, consultation and planning. However, by their very nature the *"unknown unknowns"* are only encountered when the intervention becomes reality. If the intervention is a relatively small incremental change or if strong expert opinion and experience is available, then there may be few, if any, *"unknown unknowns"*. However, the potential for *"unknown unknowns"* is always present and therefore this phase seeks to provide tools with which such encounters can be controlled with the involvement of a small number of people rather than launching into large-scale deployment without considering the impact *"unknown unknowns"* could have. In the words of De Vaus *"do not take the risk, pilot test first."*

The duration of this phase is highly specific to individual implementations. In some circumstances it could be very short, but in others a period of several months or longer. Regardless of duration the objective is to introduce the intervention and give ample time for *"unknown unknowns"* to have presented themselves, and therefore a steady state service to have been established prior to the Go phase when the service is fully launched.

The following table provides an overview of the main tasks, who is responsible for them and who should be involved in this phase. The effort tends to focus more on the project manager and practitioners in this phase as the service is first introduced within a controlled environment.

"Plans are only good intentions unless they immediately degenerate into hard work."

Peter Drucker



Chapter 3 - Steady



Task	Goal	Responsibility and Involvement						
		Sponsor	Project Manager	Practitioner	Finance and Procurement	Legal and Governance	Technical services	Audit and Evaluation
R	1. Introduce the pilot implementation	A	R	C	C	C	C	C
R	2. Pilot evaluation questionnaires	I	A	I	I	I	I	R
S	3. Review all service delivery against the service plan	I	A/R	C	C	C	C	C
S	4. Refine service delivery as required	A	R	C	C	C	C	-
S	5. Ensure accurate documentation and training through refinements	I	A/R	C	-	C	C	-
S	6. Check evaluation data is appropriate	-	A	-	-	-	-	R
S	7. Close the pilot ready for mainstream launch	A	R	C	I	I	I	I

Key

- R** = *Responsible*: person conducting the work
- A** = *Accountable*: person ultimately held answerable
- C** = *Consulted*: person providing feedback or contribution to work
- I** = *Informed*: person needing to know of an activity or decision



Activity 10 - Controlled Introduction



Objectives

- 1 To test each section of the implementation process to ensure it works as required.
- 2 To pilot any evaluation questionnaires to ensure they are appropriate and also to check eligibility data (such as hospital episodes, disease severity) are accessible and accurate.

A thorough pilot of the service should be instigated prior to mainstream deployment. In other words the pilot service should function as outlined in the planning phase, but only involve a relatively small number of end users. This ensures any unforeseen circumstances are only encountered by a limited number of users. Typically the pilot should be structured to stress test technical, business, organisational and user acceptance elements of the planned deployment.



Task R - Pilot



Key questions

- 1 What key components of the implementation should be checked and how will effectiveness be measured?
- 2 What resources are available for the pilot?
- 3 What specific planning is required for the pilot?
- 4 How extensive is the pilot service? How many staff are involved, how many patients, how long will it last?
- 5 What circumstances determine when piloting should cease?
- 6 How many users (patients, carers and service providers) should be involved in checking evaluation material is understandable, not burdensome, and likely to quantify the effect of the new service?
- 7 What approvals are required prior to launching the pilot?

Secondary points

- 1 How and when will the pilot be launched?
- 2 How are issues going to be communicated to the project team and how will changes to the service be made and approved?

Hints and tips

- It is important to foster an environment where positive and negative comments can be communicated by staff. This should be celebrated as it promotes ownership, engagement and system improvement. Not all of the suggestions made may be useful to the primary objectives, and if so the reasons why suggestions are not taken forward should be communicated. Where good suggestions are made these should be introduced and communicated accordingly.

Activity 11 - Review



Objectives

- 1 To ensure the service being delivered reflects the service specification.
- 2 To remove any obvious service issues which could improve effectiveness or efficiency.
- 3 To check data required for both service operation and evaluation is available and of sufficient quality.
- 4 To have confidence that as the number of deployments increases the service will be replicable irrespective of individual staff involved and the transition to more deployments will not be disruptive.

The focus here is to ensure service delivery is as stipulated in the service specification and operational manual. Any minor changes upon how the service is delivered should be implemented and reviewed. At this point the effectiveness of the intervention is not measured, rather the purpose is purely to check the system is being delivered as expected and is running smoothly and efficiently.



Task 5 - Pilot Review



Key questions

- 1 How should a review be conducted to validate that the service being delivered is as stipulated in the specification?
- 2 At what point in the pilot should the review commence?
- 3 How long should the review last?
- 4 Is the data used for selecting people for eligibility to the programme accessible and accurate? If not, what implications does this have on recruitment levels and the target population?
- 5 How will confidence be judged that, as the number of deployments increases, the service will operate as defined in the service specification?

Secondary points

- 1 What are the data points and what checks can be conducted to ensure data is accurate and appropriate?
- 2 What lessons can be learnt and how should the service specification be modified?

Task 5 - Hints and Tips



- The review should focus on the service specification and not the evaluation or effectiveness of the intervention.
- KPIs detailed in the service specification should be helpful in establishing a review plan which is fit for purpose. All aspects of the implementation should be reviewed. Particular attention should be given to the sections outlined in the service specification and also to investigating whether issues fall between sections/departments with the consequence that no-one takes ownership or responsibility for the issue. As a minimum the pilot should have indicated:
 - **Programme Capability** - Do the businesses involved in delivering telehealth have the skills, capabilities and resources to deliver the solution? Did everyone perform the roles expected of them? Do the planned Service Level Agreements/ contracts reflect all the elements of service they need to? Are there identified sources of support/resource that can be called on to overcome implementation barriers?
 - **Technical Readiness for Mainstreaming** - Does the solution work as planned? Is the solution safe? Is the solution able to be deployed with acceptable failure rates? Will the solution integrate as planned? Is the solution scalable?
 - **Business Case Robustness** - Are the assumptions about the target population and associated delivery benefits being reinforced by experience on the pilot?
 - **Business Readiness** - Can the organisation/business absorb the necessary level of change? Is the disruption to 'business as usual' acceptable?
 - **Timescales** - Can the programme be delivered in the time required by the business? Will it deliver the required benefits when required? One of the most frequent mistakes made in telehealth implementations is to assume a constant recruitment rate. Rarely do plans reflect the impact of inexperience, holiday periods, supply chain realities, contract breaks, illness etc.
 - **Affordability** - is the deployment likely to be achievable with the planned level of funding/resource?
 - **Confidence in Plans** - Has the pilot proven the robustness of existing plans? Are the risks to delivery in line with expectations? Are the dependencies known ones?



- It is important to have confidence that all of the data (hospital records, recruitment rates etc) required to deliver the service are available in a timely manner.
- An important area to investigate is regarding the eligibility of participants. Is any historical data being used actually accurate? Data reliability and cleaning issues often become evident and require resolution.
- Consult key stakeholders and users (patients, carers and service providers) who have been involved in the implementation to discover any aspects which require modification prior to roll-out.
- There is always a danger that the review is either too short or too long. Consultation with different stakeholders (practitioners and managers) can assist in identifying the correct duration. The consequence of ending the pilot too soon is that difficulties will materialise when rolled out which impact upon many people, while also compromising the evaluation. The consequence of ending the pilot too late is that momentum is lost and there can be a negative impact on the overall timeline.



Activity 12 - Phase Completion

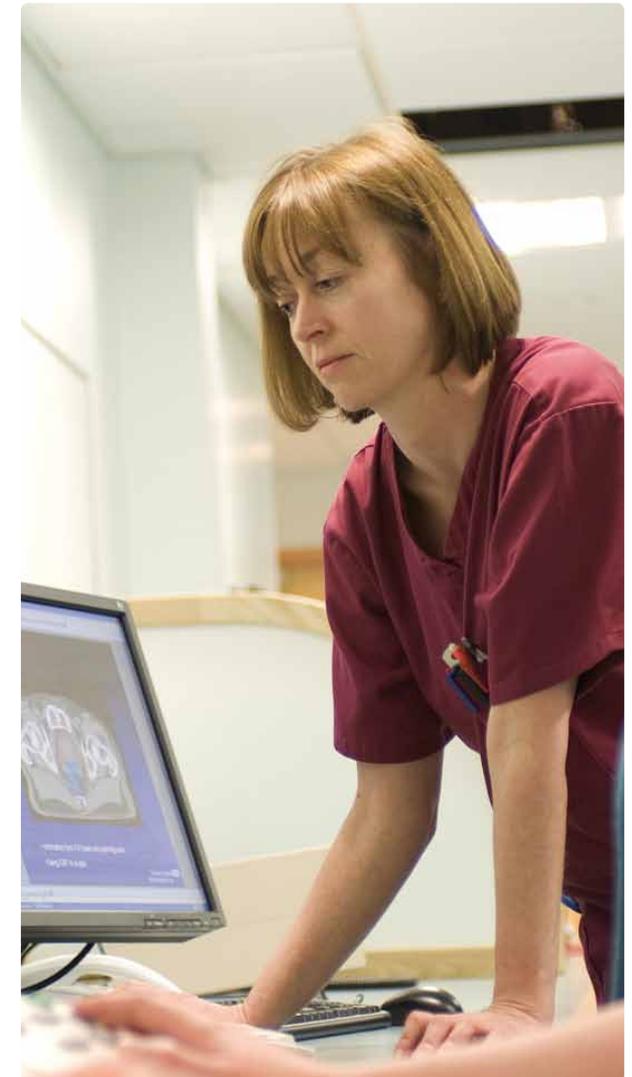


Anecdotal evidence indicates a growing trend of abandoning pilots and going straight to mainstream deployment. It is often commented that telehealth has more pilots than many airlines and we do not need to prove telehealth works, we just need to do it. However, pilots should be conducted where there are likely to be implementation difficulties. It is surely more beneficial to observe and address difficulties within a controlled environment than during a full-scale implementation. Pilots provide many advantages, including:

- Requiring limited resource
- Enabling plans to be checked for accuracy in a 'real situation'
- Providing an environment to deal with problems quickly and safely
- If major difficulties are experienced and staff become disillusioned, this only impacts on a few people and the required changes can be made before trying again
- It identifies implementation tips and pitfalls
- It provides an environment to showcase effectiveness to assist in launching the 'live' programme.

It is important to ensure that the pilot is not the end point of the programme and that once the objectives for this phase have been met (lessons are learnt, the system appears appropriate and operates in a stable manner) the pilot ends and the next phase is embraced. There are always opportunities to learn more, but one of the greatest dangers once a pilot is introduced is that it becomes a cycle of piloting which reaps marginal benefit.

It is easy to feel that the hard work undertaken to this point has gone unnoticed by others, or indeed been unrecognised by the 'workers' themselves. It is therefore important to take stock, celebrate the successes to date, thank those without whose assistance progress would not have been possible, and then focus again for the next part of the race.



Chapter 4

Go



Chapter 4 - Go



The final issue to cover before the gun goes off is what to focus on once you are set in the blocks. You can focus on your first movement or you can focus your attention on the starter's gun. Focusing on the gun is not necessary because you will react to it whether you are concentrating on it or not. Instead, focusing on your first movement will give you a better reaction time. The gun goes off! Once you are out of the blocks your goal is to accelerate as smoothly as possible. You start with lots of horizontal drive and as speed builds you move into an upright position. Similarly, as part of a telehealth implementation, by looking forward rather than expecting the pilot to naturally morph into a mainstream service you are likely to be more effective.

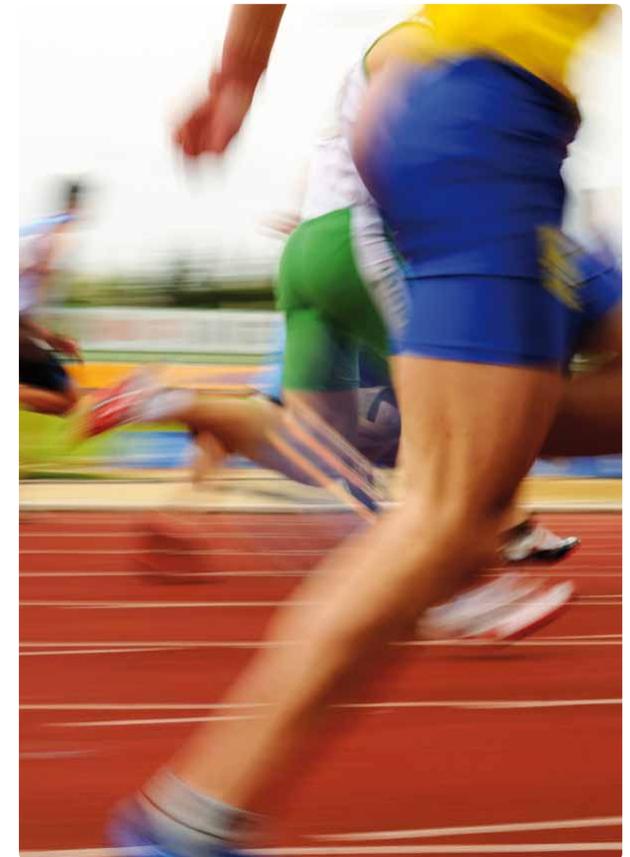
This phase should not be viewed as just rolling out what has been done in the Steady phase at a bigger scale. Rather, much effort is required to provide the best environment within which success can be fostered. As the Toffler quote highlights, making real, effective, long-term change is easier to talk about than deliver. This phase breaks away from the controlled environment and introduces deployment at scale. Supporting the service introduction is a process of refinement and evaluation.

When the service is first introduced there should be little or no refinement necessary as a 'steady state' should have been previously established. Yet, it is possible that some refinement may be helpful, especially if any "unknown unknowns" are encountered when functioning within a less controlled environment. Thereafter, through continued monitoring and evaluation the service can be regularly refined to maximise effectiveness. As Peter Drucker has suggested, "*follow effective action with quiet reflection. From the quiet reflection will come even more effective action.*"

The following table provides an overview of the main goals, who is responsible for them and who should be involved in this phase. As a mainstream service is being introduced the main effort is required by practitioners to operationalise the service under the watchful eye of the project manager, who has the main responsibility for ensuring the service is delivered as specified.

"It is always easier to talk about change than to make it."

Alvin Toffler



Chapter 4 - Go



Task	Goal	Responsibility and Involvement						
		Sponsor	Project Manager	Practitioner	Finance and Procurement	Legal and Governance	Technical services	Audit and Evaluation
T	1. Launch the mainstream service	A	R	I	I	I	I	I
U	2. Refine service delivery as required	A	R	C	C	C	C	I
U	3. Ensure accurate documentation and training through refinements	-	A/R	-	-	-	-	-
V	4. Ensure service delivery matches the service specification	I	A/R	C	C	I	C	I
V	5. Check the service is stable as deployments rapidly increase	I	A/R	I	I	I	I	I
V	6. Conduct the service evaluation and report findings	I	A	-	-	-	-	R

Key

- R** = *Responsible*: person conducting the work
- A** = *Accountable*: person ultimately held answerable
- C** = *Consulted*: person providing feedback or contribution to work
- I** = *Informed*: person needing to know of an activity or decision



Activity 13 - Service Introduction



Objectives

- 1 To have a fully operational system as defined in the business case and subsequent service specification.
- 2 To increase the size of the deployments as stated in the business case and against agreed timelines.
- 3 To ensure that the service is communicated to stakeholders as required.

Having achieved a steady state service, deployment should be increased in line with the requirements of the business case. Appropriate marketing/information should be provided to ensure that all relevant people/organisations are aware that the service is now 'live'.

Effective communication is key here. People need to understand why they need to embark on the race, what it will mean for them and what it will feel like to win. In numerous projects poor communication is often cited as the predominant reason for failure. As Lee Iacocca has said *"you can have brilliant ideas, but if you can't get them across, your ideas won't get you anywhere."* Communication often does not even have a line on the project budget. If active communication, and some measure of its effectiveness, is not discussed at every project board meeting, then greater focus on communication is probably advisable.



Task T - Launch Service



Key questions

- 1 Are all staff sufficiently trained for the service launch?
- 2 What date does the service launch?
- 3 Do all sections of the service have the ability to increase deployments on this date (including stock control issues)?
- 4 Is a publicity strategy/event required? If so who will deliver this?
- 5 Are any one-off transitions required, especially if closing down one mode of operation in favour of the new one?

Secondary points

- 1 Are there clear lines of communication if unforeseen events occur so that issues can be resolved quickly?
- 2 Who is responsible for ensuring that any baseline data and requirements of the evaluation are introduced in an integrated manner along with the service?

Hints and tips

- Ensure the launch and running of the service are communicated widely so that key stakeholders hear about the service directly from those involved. This may also assist with recruitment.
- Appreciate there may be additional time demands on staff at this time and that planned recruitment and installation targets require careful consideration in these circumstances. Some flexibility may be required as staff not previously engaged with the system come to grips with it in addition to their other commitments.

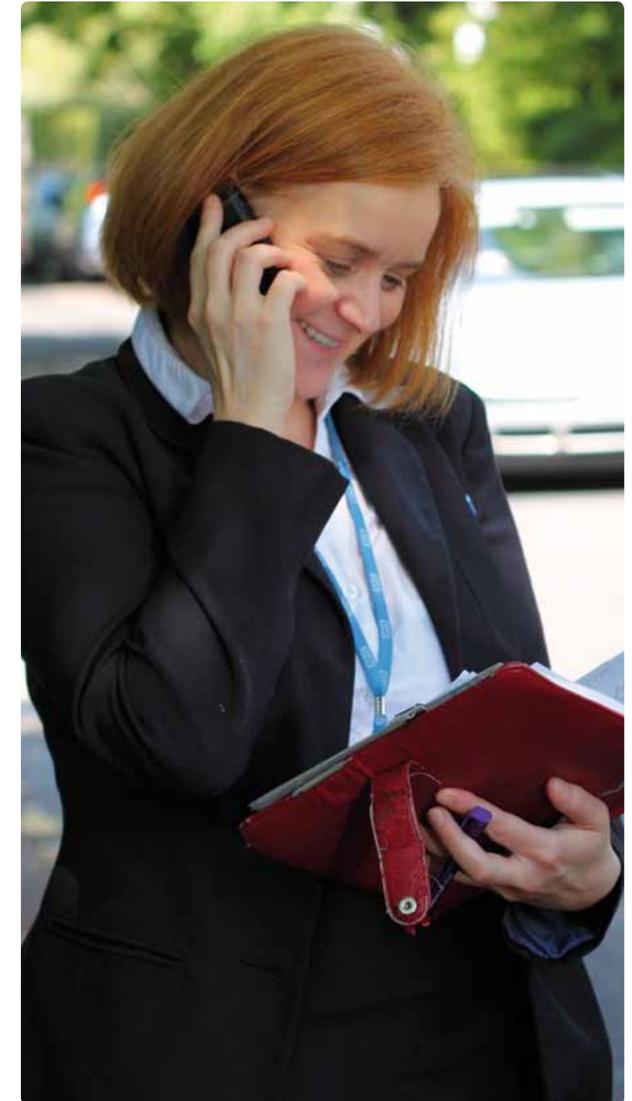
Activity 14 - Service Refinement



Objectives

- 1 Introduce refinements as agreed through the monitoring and evaluation and as approved by the project board.

At the same time as the deployment there are likely to be other changes (new initiatives, increasing local expertise, political environments) that may affect your service changes. Where appropriate (as agreed by the project board) changes should be reflected in the new service - the service specification, patient information, training and so forth should be amended, provided and communicated to reflect changes as required.



Task U - Fine Tuning



Key questions

- 1 Who approves service refinement and what consultation is required?
- 2 What formal change control mechanisms are required?
- 3 Who will introduce the changes and supporting documentation, when, and how?

Secondary points

- 1 Who will ensure changes can be monitored and the evaluation lead informed?

Hints and tips

- Little refinement should be needed in the first iteration of this stage.
- Refinements should only be documented if they are fundamental to operation. If they are, training and documentation changes will be required, and service specification changes will need communicating to stakeholders.
- A few iterations of refinement may be beneficial but continual tinkering should be avoided as the costs associated with small changes may out-weigh the benefits derived. Once the service is considered stable, refinements should be introduced at set times, perhaps annually.
- Depending on the evaluation methodology service refinement may not be possible within the evaluation period. Certain study designs must have a controlled environment with variables (such as service delivery changes) being postponed for a later iteration. Other methodologies, such as Action Research, can be organised to include service refinements at set times.

Activity 15 - Monitor and Evaluate



Objectives

- 1 Provide reliable evidence to inform decision making.
- 2 Ensure the service is being delivered as stipulated in the service specification.

As defined against the initial project objectives, data which can be used to inform key decisions should be secured. Any unexpected benefits, difficulties or pertinent issues should also be reported. Lessons learnt which could inform future decision making or generic learning for the organisations involved should also be reported.





Task V - Evaluation

Key questions

- 1 Is the service being delivered in practice the same as the one envisaged?
- 2 Who is responsible for ensuring that the evaluation procedures are known by the appropriate staff, and that the evaluation protocol will be followed?
- 3 Who is responsible for obtaining the required data at appropriate times?
- 4 Who is going to review data to ensure the data being gathered is as required i.e. questionnaires are being conducted when and as required?

Secondary points

- 1 What constitutes a change to the service for which the evaluation team should be informed?
- 2 Are there any participants who should be excluded from the analysis, such as those involved in the controlled state testing?

Hints and tips

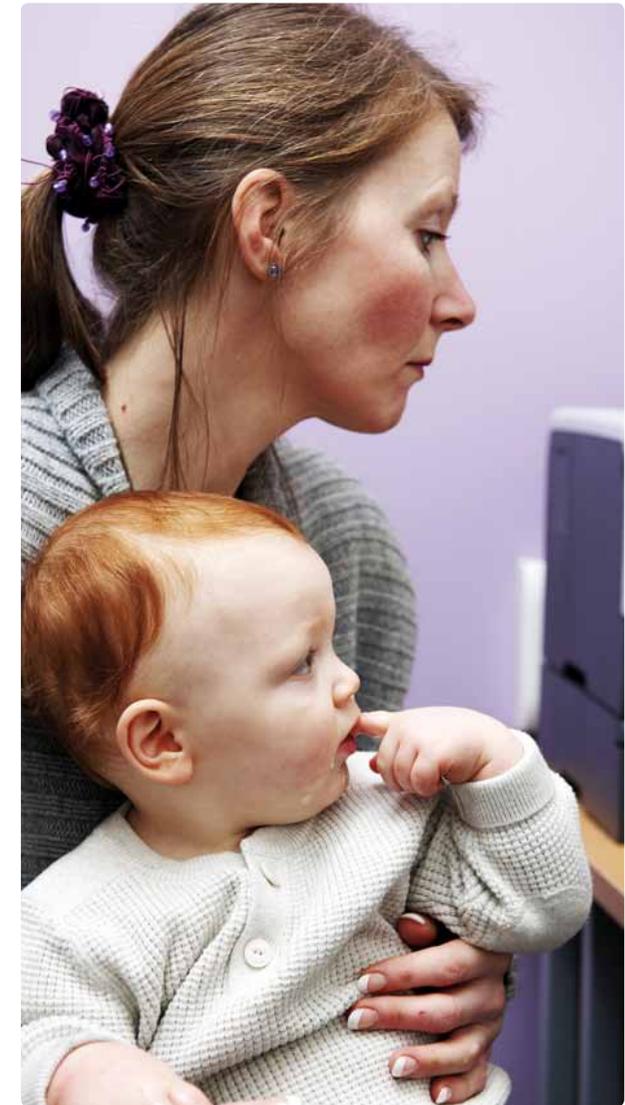
- During analysis, for problems associated with regression to the mean consider alternative statistical means such as analysis of covariance instead of using differences from baseline.
- Depending on the type of service introduction, consider informing patients of the effectiveness of the new service.
- Many evaluations will seek to answer what impact the intervention has had on healthcare and services. They often ignore why the results are as presented and recommendations for future service improvement. Providing input in these areas would be advisable.

Activity 16 - Phase Completion

This phase is the culmination of all of the hard work to this point, the bringing together and maintaining of a team, and then delivering the programme. The service should (1) be operating at the desired activity and performance levels, (2) have been refined where necessary and where allowed by the evaluation methodology, and (3) be delivering a successfully against the original project objectives.

Many people will have been involved in assisting the programme to reach this point, and it would seem appropriate to pause to thank them for their efforts and to inform them of progress based on a brief outline of the evaluation findings. Often overlooked groups are patients and their carers, so consideration should be given to providing relevant information to them regarding what has changed and what has been achieved. This may support further patient demand as word of mouth informs potential future service users.

This phase is completed by providing senior management and the management board with the evaluation findings. Interpretation of the findings, or likely impact on services as a consequence of the findings, should not be openly discussed by the project team or frontline staff until senior management has determined the appropriate way forward in the light of competing interests and resource constraints.



Chapter 5

Chequered flag



Chapter 5 - Chequered flag



So the race is over. It can feel strange to see the end of something that has taken so much time and effort. The preparation has been completed, the odd minor injury incurred, support garnered, advice taken, fears overcome, a few regrets lingered upon, and then the big day, the event, prayers, perseverance, accomplishment, screaming muscles, elation, afterglow. And soreness! The question is what do you do next? How do you sustain the performance level achieved?

When the telehealth programme is stable and results have been obtained, a decision must be made to adopt it as the 'norm' and spread the service to other disciplines, maintain what you have or abandon the programme. Relatively few telehealth programmes have blossomed into mainstream services of any scale; most have ceased as soon as seed funding has dried up despite the acknowledgement that continuing with traditional models of care is unsustainable.

What many services fail to grasp is that any significant expansion of services requires just as much investment of time, financial resource and leadership effort (if not more) as the initial pilot and service deployment. Even where success has been observed it will not be sustained unless there has been careful planning to ensure that it will

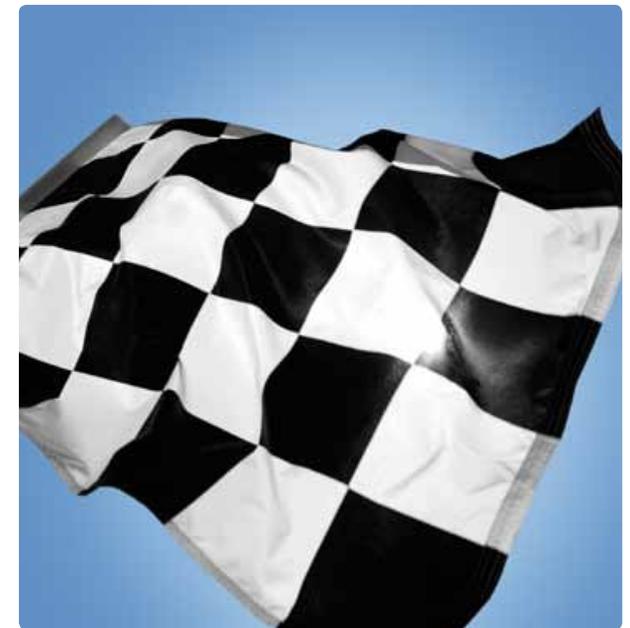
continue. Efforts to initiate such planning are often criticised as pre-judging the outcome of the work in hand. The reality however is that if sustainability is not planned for then the service is unlikely to be sustained.

Another common pitfall is that pioneers often have a vision for where their innovations could further be deployed that is not shared with those practicing in those areas. Perhaps looking for natural opportunities rather than trying to force solutions into an organisation may yield more return. Rather than tackle people head on, and risk alienating them, it is suggested that it is more appropriate to work with people willing to explore opportunities, even if perhaps the prize is not as great.

The following table provides an overview of the main goals, who is responsible for them and who should be involved in this phase. As the focus is upon deciding on the next course of action the project manager plays an important role in acquiring the relevant information for decision makers. Upon receiving the decision from the board the programme sponsor and project manager must then deliver upon the decision made. Additionally contractual and financial issues must be reviewed with the support of financial and procurement colleagues.

“Faced with the choice between changing one’s mind and proving that there is no need to do so, almost everyone gets busy on the proof.”

John Kenneth Galbraith



Chapter 5 - Chequered flag



Task	Goal	Responsibility and Involvement						
		Sponsor	Project Manager	Practitioner	Finance and Procurement	Legal and Governance	Technical services	Audit and Evaluation
W	1. Investigate any pressing contractual or legal issues	I	A	-	R	R	C	-
W	2. Ensure continued finance and resources	A	R	-	C	-	-	-
X	3. Ensure alignment with strategic goals, cultural and political fit.	A/R	C	I	I	I	I	-
Y	4. Continue communication campaign	C	A/R	C	C	C	C	I
Z	5. Reflect on progress made and pitfalls experienced	I	A	C	C	C	C	R
-	6. Review evidence for future implementation/continuation	A	R	I	I	I	I	C
-	7. Act upon mainstream, continue or abandon decision	A/R	C	C	C	C	C	-

Key

- R** = *Responsible*: person conducting the work
- A** = *Accountable*: person ultimately held answerable
- C** = *Consulted*: person providing feedback or contribution to work
- I** = *Informed*: person needing to know of an activity or decision



Activity 17 - Immediate Issues



Objectives

- 1 Ensure the smooth running of the service while future service decisions are being made.
- 2 Realign the telehealth programme with strategic goals and cultural/political fit.

At the commencement of this final phase it is important to ensure that the service can be maintained while future service decisions are being made. Specifically there may be some immediate management, contractual and employment issues that require attention. It is also commonly accepted that for an innovation or initiative to flourish there must be some strategic fit with the objectives and operation of the business. The issue facing many organisations implementing telehealth is that strategic priorities seem to change with great frequency. Typically in the past it could be expected that a change in Chief Executive or a change in government would lead to an organisation reviewing their portfolio of activity and culling certain activities in order to initiate new ones. However, the level of consolidation of health and social care providers has increased greatly recently and these mergers and acquisitions make it necessary for programmes to check and reposition their offerings.

Throughout the programme active communication with stakeholders should have been the cornerstone on which success has been built. What often happens at the end of a programme is that communications cease. There may well be an initial flurry of activity to promote key outcomes but all too often the programme falls silent. To sustain efforts, sustained communication is needed.



Task W - Management Issues



Key questions

- 1 Has a review been conducted of service and procurement contracts, where appropriate ensuring Service Level Agreements continue?
- 2 Have key staff (practitioners who may feel a lack of security as fixed term telehealth project staff) been identified and their job security addressed, thus maintaining the service through periods of future transition?
- 3 Is the appropriate infrastructure, resource and finance in place to secure the running of the service while future service decisions are being made?

(There are no secondary questions)

Task W - Hints and Tips



- There may be much work to extend or renegotiate service and employment contracts along with Service Level Agreements (SLAs). If mainstream services are to deliver telehealth then this must be reflected in their SLAs and contracts. Contracts must also clearly identify hand-offs and who is responsible should these hand-offs fail. They will also assign roles and responsibilities for the service.
- All procurements will need to be reviewed as problems with contract extensions can arise where either there is no provision for extension within the contract, the potential for extension was not made clear at the outset, or where the arrangements for the contract extension result in renegotiations. In these circumstances, there are specific provisions that apply in the context of contracts subject to EU rules, and advice should be sought. There may be further complications if the ownership of the service is changing from one organisation to another. There are often issues when the original procurement of telehealth equipment was only for the duration of the initial roll out. A full re-procurement may be required and

this may result in working with a new vendor with subsequent implications for training, running multiple telehealth systems and administrative infrastructure.

- In some cases deployment will rely on contracts established elsewhere within the organisation, for example using a preferred telecommunication provider. The nature and duration of these contracts could impact on the telehealth service that requires a continuity of provision. If the other part of the organisation decides to change the telecommunication provider and you are unaware, the service may fail.
- It is not unusual for key staff to be contractors on short or fixed-term contracts. Typically authorisation will only have been granted to keep these individuals for a set duration. Given the need for these individuals to have job security it should be expected that a significant proportion of such people will leave near the project completion date. It is therefore strongly suggested that options are built into contracts to allow for an optional extension of employment. This should provide sufficient time to either put in place new arrangements to keep these staff

on, or in the worse case, capture some of the learning from these individuals before they move on.

- Throughout the Ready Steady Go phases there was a reliance on infrastructure, resource and the associated finance to keep things moving. In many cases it is assumed that these enablers will continue to be in place for the mainstream service until, too late in the day, it is realised that adequate provision has not been planned or budgeted for. It is important to check that the required finance is in place to continue and that the business case is sustainable.



Task X - Continued Alignment with Strategic Goals and Cultural/Political Fit



Key questions

- 1 Does the telehealth service continue to align with organisational priorities?
- 2 How will service provision breaks be avoided during transition arrangements, such as from pilot to Mainstream, or from mainstream in one functional area to mainstream in others?
- 3 How will telehealth staff be valued and career opportunities maintained?

Secondary points

- 1 Who should be responsible for communicating the alignment of the telehealth programme with organisations?

Hints and tips

- A paper, that can be widely circulated, in which it is articulated how the telehealth service supports the achievement of organisation priorities may be required.
- If the organisation is going through a period of significant transformation it is essential that the telehealth team dedicate time to being represented in the transformation planning. This ensures telehealth plans account for: changes in the hierarchy of responsibility and accountability; how the business is organised functionally, geographically or by service type; and the way activities and processes are to be delivered. Similarly, softer issues such as the values and beliefs which are important to the new business and the skills, abilities, and attitudes that are important in the new organisation (the culture) can be gleaned and mirrored by the telehealth team to ensure good organisational fit.

Task Y - Continuing an Active Communication Campaign



Key questions

- 1 What information should be put into the public domain and what should be considered confidential (whilst being as transparent as possible)?
- 2 Is there an effective communications campaign with key stakeholders?
- 3 Has the success achieved been demonstrated to key stakeholders?
- 4 Do stakeholders understand what has been achieved and what is still required?

Secondary points

- 1 What information should be communicated to users (patients, carers and service providers)?

Hints and tips

- Telehealth projects often cut across numerous disciplines and have, at face value, a very large number of stakeholders, so there is a tendency not to map the communication needs of the majority of stakeholders. This is ill-advised. Typically there are lots of stakeholders but most of them require little effort to maintain. For each audience, the communication plan must detail what they need to know, how often you will communicate with them, by what mechanism, and who will be responsible. Whilst this should be at an individual level for key players, many others with lower levels of interest and influence can be tackled by a single newsletter, event or email update.

Activity 18 - Review



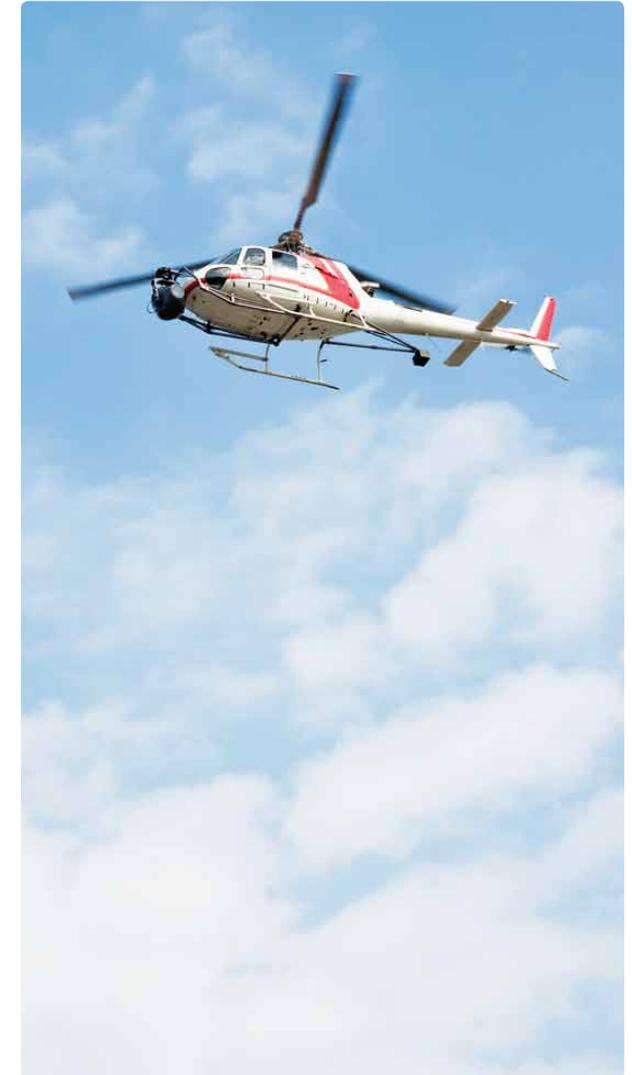
Objectives

- 1 Review what has happened so that lessons can be learnt - both positive and negative experiences.
- 2 Ensure learning is reported and can feed into future investment and delivery decisions.

This is the time to reflect upon the whole process from preparation through the Ready, Steady, Go phases. Performance will have been reviewed against plans at various points and no doubt adjustments made. Now is the time to take a broader perspective on what has been achieved. This approach is often called Whole Systems Thinking, or more often this is simplified to terms such as taking a helicopter view. The helicopter view refers to the ability to rise above the specifics of a particular situation and to see it in its overall context and environment. It is the ability to see the big picture without losing sight of the details and their implications.

Systems thinking is a discipline for seeing wholes; it is a framework for seeing inter-relationships rather than things, for seeing patterns of change rather than static snapshots.

The simplicity and effectiveness of the 'helicopter' concept makes it memorable. Taking the sporting analogy this helicopter outlook enables a view of the race as it develops and does not just focus on those leading or dropping off the back.



Task Z - Take Stock



Key questions

- 1 How will recommendations from the review be incorporated into the future funding decision making process?
- 2 When should suggested service improvements be incorporated into planning and delivery?

Secondary points

- 1 Who should attend the review sessions?
- 2 Where should review sessions be held?
- 3 Who will facilitate the sessions?

Task Z - Hints and Tips



There are a number of steps to enable objectivity in the review process and the After Action Review (AAR) approach is suggested as follows:

1 Meeting planning and venue:

Set aside time for two team meetings to take stock, and try to ensure all the necessary people attend. Once a project is over and a service has become mainstreamed it is easy for people to mentally move on and hence avoid sessions that require them to reflect and perhaps admit that some things could have gone better. Having these sessions in the original baseline project plan sets the expectation of attendance early on. Try to minimise distractions at the meeting - request that mobile phones be turned off, and perhaps conduct meetings at a neutral venue or out of normal office-hours. Incorporating the feedback of patients and carers at these sessions should be considered. If there has been representation within your existing governance arrangements then these individuals should be invited and encouraged to attend.

2 Independent reflection prior to discussions:

In advance of the first meeting distribute a template asking team members to reflect individually on:

- what was expected to happen (planning)
- what actually happened
- what went well and why
- what could have gone better and how
- what changes they would make if they were setting out afresh.

Sharing a chronological project/programme history is recommended to support this activity. Such a graphical summary of the project will be non-contentious as it will overlay documented achievements and the documented key risks and their resolutions in one place. The scope of work being reflected upon will be determined by the original project brief. Large complex projects with numerous teams may require several smaller review sessions in order to inform a high level, more extensive review. People can comment on activities, outcomes, challenges, opportunities or process. The strengths and weaknesses from a number of perspectives can then be highlighted.



Task Z - Hints and Tips



3 Meeting 1 - Group discussion on independent reflections:

At the first meeting show the collated and anonymised information that has been collected so that everyone's views are displayed. If possible group opinions into themes to aid discussion and to help ensure that any contradictory views can be discussed. If possible, an independent facilitator can discuss each item or theme, trying to arrive at a consensus view on each one. A good facilitator is essential and will prevent the review becoming a complaint session. If managed well this shared learning experience will improve team interplay, promote bonding and group cohesion. If managed poorly it will lead to resentment and disengagement. (Note: if consensus is not possible on an issue then move on. Come back later and break the issue down into further detail and try again. If there is still no agreement then record the range of opinion and ask the group to reflect on these in advance of a further meeting). All views should be treated with equal weight irrespective of staff seniority.

4 Meeting 1 - Identify areas for further improvement:

The team should then brainstorm ideas on how to improve performance with these thoughts being captured, including focusing on the things they did well and would wish to take forward. The output from the first meeting should be a long list of actions that can be attributed to improving or sustaining one or more of the themes discussed. If possible photograph, scan or copy the summary sheets and email them to participants immediately following the meeting. More formal documentation can follow in advance of the second meeting.

5 Meeting 2 - Action plan for mainstream activity/improvement:

At the second meeting quickly refresh people's memories about the themes identified and the consensus viewpoints achieved. If there were any issues that had diverse or contradictory views now is the time to ask people whether, on reflection since the last meeting, their views have changed. The remainder of the second session is dedicated to formulating an action plan. The action plan should be detailed and specific with named objectives, roles and responsibility and delivery dates. People outside of the team may need to be commissioned to support this process.

Throughout the process of taking stock it is essential to keep reinforcing the benefits that will be achieved if the sessions are successful. It should be remembered that *"change is hard because people overestimate the value of what they have - and underestimate the value of what they may gain by giving that up."* (James Belasco and Ralph Stayer). By developing the action plan in this inclusive way it should be easier for people to commit to the changes they need to make.

Activity 19 - Future Strategy and Key Decisions (Stop, Hold or Expand)



There will be a degree of uncertainty about the future telehealth strategy. Hopefully by planning and rigorously taking stock this will have minimised the level of uncertainty, but there comes a time when a decision is required as to whether to:

- **Stop:** Cease activity on telehealth altogether
- **Hold:** Continue with existing service levels
- **Expand:** Expand the telehealth service into new areas and new specialisms.

With the exception of a 'stop' decision, the performance management arrangements employed to date will not necessarily translate into an existing or expanding mainstream service. The KPIs used for the service may no longer be valid. For example, to date a host of bespoke measures may have been used that must now align with routine data collection mechanisms. Also, performance management of any new service is often too aggressive. Just because the service has been successful in one area does not mean translating it to another will attain the same level of performance from the outset.

Typically performance drops initially as unmet demand is uncovered and the workforce learn their roles.

In terms of incentives, rewards must continue to be appropriate, achievable and aspirational. Something as simple as a box of chocolates or a celebratory lunch can be just as effective as financial incentives. The goal is to determine what will incentivise areas to adopt the new approach given the common 'not invented here' attitude to innovation in health services. Incentives must be budgeted for and considered carefully in the light of the available data and subsequent setting of KPIs. People are excellent at maximising returns and so reflection is needed to ensure KPIs drive the 'right' behaviours. Public acknowledgement of success and associated reward help promote desired behaviours. The incentives that each individual is eligible for should also be recorded on the stakeholder management database to inform how people are best engaged.



Stop



“In NASA, we never punish error. We only punish the concealment of error.” Al Siefert

The reasons a telehealth project or programme are stopped are numerous but can broadly be classified as the:

- budget or schedule radically fails and hence the business case is no longer viable
- project does not deliver the outcomes expected and hence the business case is no longer viable
- project has failed in a way that damages the reputation of the business
- environment radically changes and the business case becomes unviable
- project is no longer aligned with the strategy of the organisation
- key personnel leave the organisation damaging delivery capability.

Once a decision is made to terminate the telehealth programme, the process by which this is conducted needs careful handling. Patient

safety, staff motivation, personal and organisational reputations are at risk. Project termination causes frustration for stakeholders who sincerely believed, and in most cases often still believe, the project could produce the results expected. Key people may feel they have personally failed and their motivation and consequently their productivity will decrease significantly.

The reasons for closing the project must be well communicated, widely discussed with the whole project team, and finally mutually agreed. The following checklist should prevent the closure stalling:

- Review all contracts/Service Level Agreements and Memorandum Of Understandings to appreciate the implications and cost of termination
- Calculate the cost of any staff displacements e.g. redundancy
- If necessary review lease arrangements on buildings used by the project team and quantify the cost of vacating the premises or repurposing their use
- Create clear plans for how services will be withdrawn from patients without degrading the level of care. In some cases this will require additional investment in alternative services
- Have a clear timeline for activity associated with withdrawing services
- Decide on any exceptions for which patients would be allowed to continue with the service for a fixed period i.e. end of life stage
- Create standard question and answer briefings for all staff to use
- Create a range of communication materials for patients and their careers. Decide who will break the news to patients, when and how
- Clearly communicate the reason for project closure internally referencing the original business case and project success criteria (in terms of scope, schedule, and budget)
- Clearly communicate the project closure to all third party suppliers. If there is to be a residual service ensure sufficient spares/ consumables to support service delivery for the desired duration
- Consult with all the patient and carer user groups on the closure and be prepared for a challenge. Organise accessible events to allow patients and their advocates to provide their input



- Demonstrate visible high-level management support for the decision
 - Have an active press handling team with proactive and defensive lines to take
 - Hold periodic review meetings with senior management to ensure the project is closed smoothly
 - Prepare the final presentation of the project results - this may be positive or negative but the impact of the programme needs to be quantified and signed-off
 - Close all project controls and performance management arrangements
 - Document lessons learned (many will have been captured in the AAR). All projects will have had achievements that need documenting. As Thomas Edison said *“just because something doesn’t do what you planned it to do doesn’t mean it’s useless”*. As a minimum there will be new knowledge and experience on what does not work and why. Documenting this in an accessible way ensures the organisation does not recreate the situation in the future
- If there are to be any legacy services then arrange for support for the warranty period and ongoing further customer support. This may be the case when it is decided to allow existing users to keep the service until it is no longer of value to them i.e. they have died, become too ill, or the equipment has failed
 - Arrange for the decontamination and disposal (possibly by sale) of all telehealth equipment and spares. Dispose of consumables
 - Release project staff and support them to find new assignments
 - Close all project accounts and carry out the final financial reconciliation.

“Just because something doesn’t do what you planned it to do doesn’t mean it’s useless.”

Thomas Edison



Hold

“The person who risks nothing, does nothing, has nothing, is nothing, and becomes nothing. He may avoid suffering and sorrow, but he simply cannot learn and feel and change and grow and love and live.”

Leo F. Buscaglia

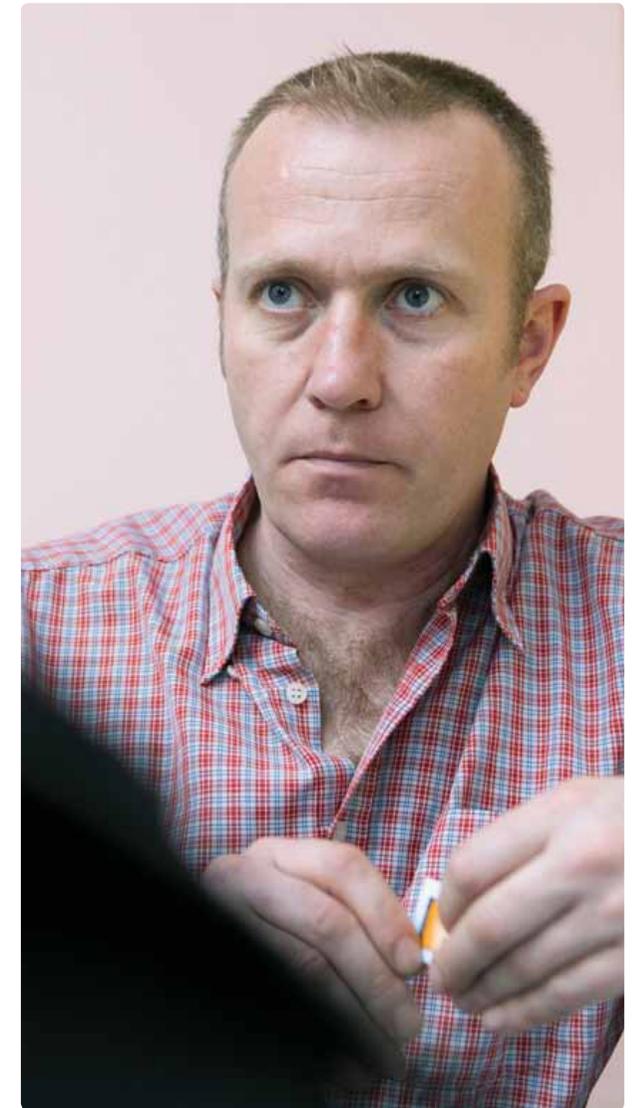
In some circumstances a ‘hold’ decision may be the most appropriate action. For example, where evaluation results are unclear or substantial local change is taking place. As such the reasons for the decision should be communicated to relevant stakeholders and a timeline agreed by which the ‘hold’ decision is reviewed.

Experience suggests that putting future expansion on hold can sometimes be the result of choosing the easiest option. However, it should be noted that not choosing to act is an act in itself. Very few decisions are made with full knowledge of the consequences, and almost all human endeavour involves risk of some kind. Risk is made up of two aspects; the probability of an action or activity

occurring, and the negative consequences or resulting loss that occurs as a result. Organisations often fail to robustly assess the risk of doing nothing. The opportunity cost can be significant. If the business case for change in one area has already been established then translating that business case for new opportunities is a priority. A calculation can be made to quantify the opportunity cost of doing nothing. This cost should include the risk of losing key staff and knowledge that would make future expansion more costly and risky.

Typically throughout the Ready, Steady, Go phases an in-depth analysis of risk will have been conducted drawing on detailed information such as project plans, financial data, pathways, demand forecasts, workforce plans and other relevant information. It is not uncommon for a service to be established in one specialism and then for decision paralysis to prevent any growth. The effort involved in reinvigorating a new area or silo and going through the process again is off-putting.

Delayed decision making is often the death of telehealth projects. There will always be better technology and more robust evidence just around the corner. Whilst the management team may be happy to wait, the project team almost certainly will not.





The lost opportunity cost of not doing telehealth needs to be emphasised in situations where the preferred option is to do nothing or let the service shrink in the hope that new, better and cheaper technology will be available soon.

The events that often lead to a non-decision, and by default put activity on hold, are:

- **Human:** loss of a key individual(s)
- **Operational:** disruption to operations due to reorganisation or loss of access to essential services/assets
- **Reputational:** loss of sponsor or patient confidence, or unfavourable press
- **Project:** going over budget or taking too long on key tasks
- **Financial:** non-availability of sufficient funding
- **Technical:** waiting for advances in technology developments that are 'just around the corner'
- **Political:** from changes in policy and/or incentives.

To prevent decision paralysis it is essential to keep the problem, and corresponding risk, in perspective. Most of the lessons required to deliver telehealth successfully have already been learnt and the knowledge exists in the organisation(s). The current pressing problem is likely to be one for which the solution is at hand. Instead of thinking of reasons why nothing should be done, opportunities that involve reusing or redeploying existing equipment, improving existing methods and systems, changing people's responsibilities, improving internal controls, and so on should be sought.

Expand

“If we’re growing, we’re always going to be out of our comfort zone.” **John Maxwell**

In many ways this option, from the toolkit perspective, is the easiest to explain. The AAR will have provided many valuable lessons learned and business cases for expansion into new areas will have been created. The process can commence again - returning to the start of this toolkit to revisit the elements needed to provide a supportive environment and the best possible chance of success.

The key for growth beyond the initial service is that a culture in which telehealth will thrive is being created. The number of champions from both professional and service user cohorts will grow exponentially. Telehealth will no longer need to be justified as it will become embedded within the beliefs and norms of all those involved in shaping and receiving services.

In all likelihood the AAR would have highlighted that processes are a little muddled and inefficient pathways have been created during the first

iteration of telehealth delivery. Now is the time to reflect on the approach and to introduce improvements and efficiencies that will drive higher performance. The opportunity of greater scale will necessitate that activities are done differently if they are to be done well.

It should be noted that the remit of this toolkit is not to go through telehealth service optimisation (streamlining), which may follow in the future. However, reflection on what was achieved and how it may be improved is advocated. One well-known Japanese car manufacturer, Toyota, pioneered the idea of lean manufacturing based on a very simple idea. Staff are encouraged to contribute ideas for improvement wherever they worked, be they managerial, clerical, design, manufacturing or sales/service staff. On average each staff member submitted 180 ideas each per year of which 98% were implemented. Many of the ideas lead to miniscule improvements in productivity and quality. However, they had a workforce of 60,000 people that resulted in nearly 11 million continuous improvements being made to the way they worked every year. With a 250 day working year, as an organisation they worked through 43,000 ideas for improvement every day.



With typical large scale health deployments involving over 100 staff it would not be unreasonable to expect each staff member to suggest 25 improvements a year. However it takes concerted effort to create an environment in which everyone is encouraged to do things better, faster, more effectively and more economically. We look forward to sharing our thoughts on how to achieve this in the future.



Activity 20 - Phase Completion



This final phase can be emotionally challenging for those who have invested the most time. If, despite hard work and commitment, a decision is made to stop or place on hold the programme then this can be difficult to accept; especially as is sometimes the case, when such a decision is made as a consequence of a changing political or cultural environment. Similarly if a positive decision to expand is taken, then the hiatus of success can soon be broken by the reality of starting again, possibly with a different team of stakeholders or core working group. These issues therefore need careful consideration and compassion by all involved. Communicating decisions as they are made to all relevant parties in a timely manner is vital, however caution is required where those communicating decisions do not agree with the decision made.

In all outcomes, whether stopping, placing on hold or expanding, the progress made during the programme must be celebrated. Health services are always seeking new ways of improving services or making them more efficient, and it is likely that people who have worked together on this change management programme will interact again in the future. Keeping people informed, investing time with them and maintaining

relationships is vital to embed a culture of innovation which can embrace new opportunities to improve services.

Whatever the outcome, all projects are time limited and must come to an end. However, make sure that people know the programme is ending, don't let it fizzle out tamely, go out with a bang!



Concluding remarks

Planning, introducing, piloting, mainstreaming and sustaining a telehealth service is a significant challenge. Consequently you can almost guarantee that it will not go smoothly. Expect a rough ride and do not give up when issues arise one after another. Resilience is so important to success.

There is a tipping point on most implementations when the majority of barriers have been addressed and continued effort will lead to real success. This point is usually just after the time of maximum stress. Many projects get close but people abandon their efforts at the 11th hour.

We trust this toolkit will guide you through some of the issues which we have faced and provide a framework in which success can flourish. Remember though that this is a 'living document' therefore if you are using the toolkit and/or have suggestions as to how it could be improved, please contact us at THToolkit@sheffield.ac.uk.

Good luck!



“The idea of sustainability can imply there is one perfect, unchanging future, if only we could work out how to get there. Resilience might be more useful, in that it assumes a dynamic environment and that perfection is impossible. You need to design systems to accommodate failure rather than eliminate it. By trying to be perfect, many visions of sustainability are quite brittle.”

Jamais Cascio



Ensuring Continuity through Key Staff Changes

The key stakeholders, including the project sponsor and project manager, have been highlighted throughout this toolkit. Should there be a change in these positions, as a consequence of going mainstream or through natural staff changes, then an effective handover of responsibility is needed. The outgoing individual must:

- Brief their replacement on the history of the project, highlighting the major issues/ challenges in the project, and the major milestones achieved and remaining
- Hand over all the documents related to the project, including the project proposal, the Project Initiation Document - the project plan (which includes the communication plan, the risk log, the issue log, dependency log and the cost management plan)
- Forward all key emails (sent and received) relating to the project
- Review, update and share the list of all the stakeholders involved in the project

- Review, update and share a list of all the team members, their roles and responsibilities on the project (along with their contact information and historical information on past team members roles)
- Advise on any ongoing issues/conflicts and what has been done so far to address them
- Give the necessary access information (username/password where legally allowed) to all tools being used to review and manage the project
- Inform all the stakeholders that a new sponsor/manager is taking over the project, and give them contact information (email, phone number, etc)
- Present the new sponsor/manager to the project team.

The above measures will ensure that if ownership of the service is going to change then all parties are aware of the implications of the transition and there is a plan for how and when this will happen.

Toolkit Development

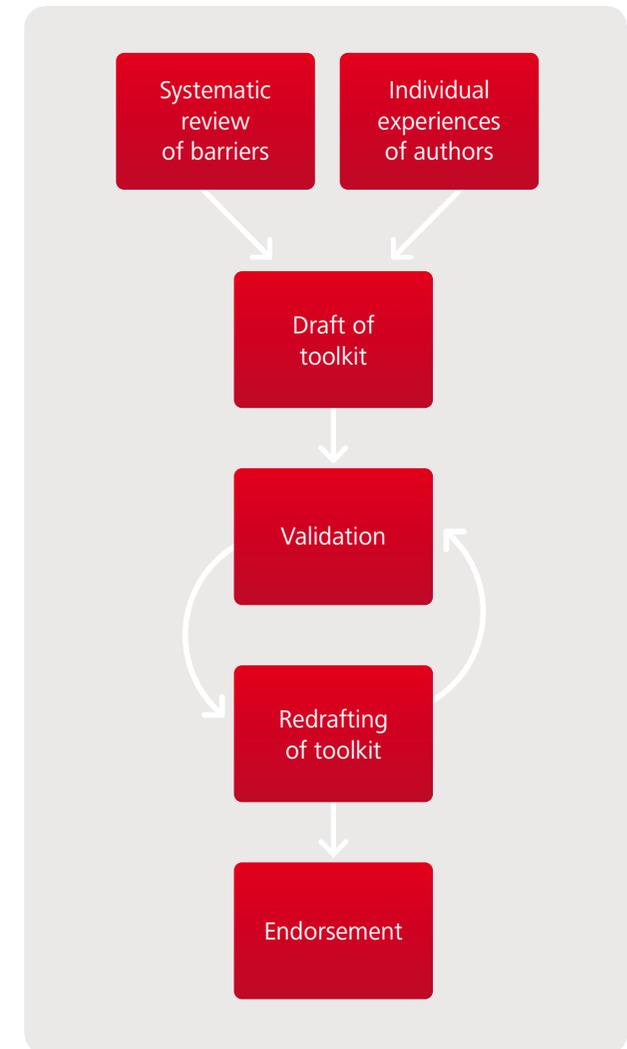
The authors have been involved in the deployment of telehealth and change management for a combined period approaching 30 years. Based on this experience, programme management of telehealth initiatives, and of conducting workshops and training events to support telehealth implementation, we were increasingly becoming aware of the need for reliable, unbiased information. Additionally we conducted a formal systematic literature review of the barriers and facilitators for telehealth and discovered that many of the obstacles being reported were ones we were familiar with and had put strategies in place to overcome. It is our hope that by sharing our experiences and formalising this into a framework for deployment that barriers commonly observed can be overcome and we can move towards effective deployments which support individuals in their healthcare choices.

An overview of the methodology is provided in Fig A1. In essence three processes were undertaken:

- 1** Identification and prioritisation of the key barriers based on a systematic literature review and the authors experience.
- 2** Barriers and solutions considered in light of the authors' experience.
- 3** Refinement was undertaken by the authors and subsequently by a varied team of independent experts (see acknowledgements for details). Individuals who assisted in the validation process were known contacts of the authors who have been involved in the delivery of telehealth nationally and internationally.



Fig A1: Toolkit methodology



Reviewers

The authors are grateful to the following for their comments, insight, recommendations, support and encouragement. Without their support the quality of this toolkit would have been compromised.

Anna Rogut

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*Research Assistant, Department of Informatics,
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“3millionlives welcomes the publication of robust, practical tools that will assist in the wider take-up of telehealth/telecare as a part of integrated services that deliver sustainable benefits to people living with long term conditions. Ready Steady Go is one of a growing collection of practical tools that can help guide clinicians and commissioners with effective integration of the right technology into overall service design.”

Chris Wright, 3millionlives Programme Manager, Department of Health, UK

“Telehealth is a great opportunity, and this toolkit provides an important guide for the European health authorities that want to make their telehealth services successful and sustainable.”

Andrea Leto Tuscany Region, Health and Social Regional System, Head of Unit and Coordinator of the RICHARD Project, Italy

“Telehealth services are increasingly being delivered through integrated health and social care pathways supporting people to move from being passive recipients to active participants in their care. Telehealth promotes independence and self care, however few services are able to deliver effective mainstream telehealth services. This comprehensive and well ordered toolkit should be a major addition to the field and help us all to deliver effective and efficient telehealth solutions.”

Paul Higginbottom, Business Manager, Barnsley Council Independent Living at Home Service, UK



This toolkit seeks to support the mainstreaming of telehealth by providing a robust framework in which telehealth can operate. It is structured around the following phases of a race:

- **Are you fit enough?:** To ensure sufficient organisational support and a clear mandate is given
- **Ready:** To undertake detailed planning, consultation and procurement prior to commencing implementation
- **Steady:** A controlled small scale implementation and review
- **Go:** Full scale implementation against the project brief
- **Chequered flag:** An opportunity to take stock, feedback results to senior management and plan for the future.

We believe the analogy is appropriate to demonstrate the practicality of the steps required to deliver a successful telehealth programme. We also hope it will help you pass on the lessons you learn to others.