

Delivering Digital Transformation for Healthcare

Activating Patient Self Care Maturity to deliver Shift Left Stay Left

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The challenge

Across the world there is a growing demand for health services and a global shortage of healthcare staff. The demand side is particularly driven by an ageing, less healthy population alongside a significant growth in multi-morbidity. This latter aspect adds a new degree of complexity to the patient/clinician relationship and also significantly adds to the costs for health systems.

None of these issues are going away and whilst they may not get the attention of the public in the way that the Covid pandemic did, in their own right they are even bigger trends in population health that we need to find ways to manage.

Alongside these issues, patients are now mature consumers in every other aspect of their lives. They use multiple services that have changed their expectations of delivery so that standards that may have been acceptable in the past will no longer be tenable in the future. In particular, ease and accessibility are service entry points and in addition, personalisation, digital delivery and immediacy (think Netflix/Spotify, Strava, Amazon respectively) are standard expectations.

This “consumerisation” and increasing level of expectation is also shifting the power paradigm between clinician and patient; in favour of the patient.

As a result of all these factors, health systems are having to find ways to serve the "Unhealthy Consumer".

On the supply side, the global shortage of healthcare staff means that we have to find alternative solutions, and digital (alongside the use of data and new ways of working) does give us the hope that we can find a way to satisfy the growing demand.

Lastly, we know that the concept of remote care, best captured by Shift Left, Stay Left x10, has to be the way forward if we have any chance of resolving this challenge because we know it can improve the quality of care, improve quality of life, and reduce demand and costs. But and again, we are not going to be able to deliver remote care without the use of digital interventions.

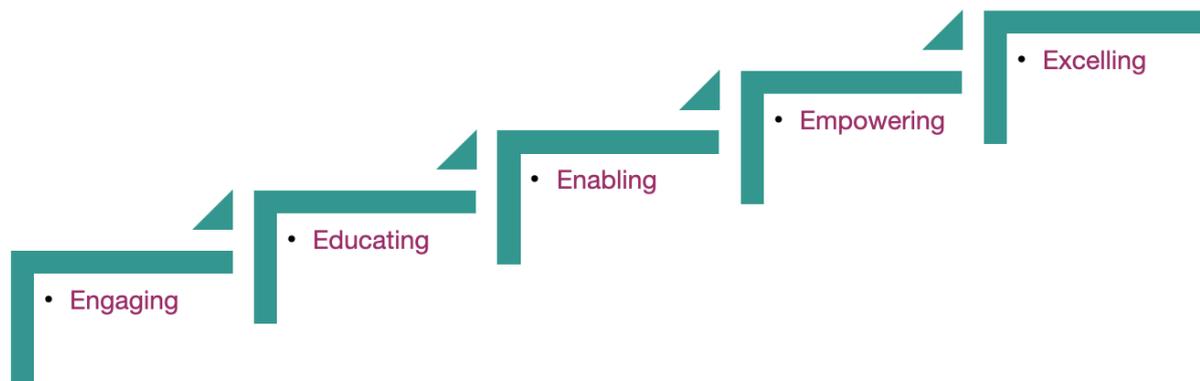
So the question has to be what approaches are needed to enable Shift Left, Stay Left x10 to succeed and how can we give ourselves the best chance possible to deliver the results that are required?

In this paper we propose that there are two particular interrelated themes that need pursuing; firstly, changing the role of the patient in the care pathway and secondly, using local health care systems and health care professionals to bring about the required change in patients.

The patient

It is our view, and our experience, that a shift to remote care combined with greater patient independence, and ultimately self-management, demands a change in behaviour both by patients and the clinicians that serve them. In this respect, we believe that patients need an increasing capability that results in an enhanced ability to self-manage as close to home as possible (*5Es Model of Patient Self Care Maturity*).

Recognising that this is a progression and that different patients have different levels of maturity enables us to consider how we can help patients to make the step from one level to another. We also have to understand that to maximise the use of remote care and Shift Left Stay Left x10, health systems and healthcare professionals need to help individual patients to make their way as far up this maturity ladder as possible. The role of local health systems and individual clinicians in this is paramount.



5Es Model of Patient Self Care Maturity

The table below describes the different stages and provides some examples of triggers that can be used to move the patient from one level to another. For this to succeed, there needs to be increasing maturity and capability within the health system itself in order to bring this about (next section).

Layer	Name	Description	Examples of Activators
5	Excelling	Empowering patients, using a digital closed loop approach	Making patient reported data available to the whole system to enable remote monitoring and support
4	Empowering	Giving patients the authority and	Establish patient initiated clinics, using shared decision making and encouraging patients to identify what matters to them

		co-responsibility for their health	
3	Educating	Using information so that patients understand the what, why and how	Providing patients with simple & accessible education about their condition/health
2	Enabling	Giving patients the tools to participate in their own care	Provide patients with information they can action – e.g. symptom tracking, pathway activities to complete
1	Engaging	Getting patients involved in their disease and health management	Use the power of the clinician recommendation

Activating the 5Es Model of Patient Self Care Maturity

If we are going to give involve to patients in this way, it is necessary to recognise that:

- **Information is power.** If patients have more information and a greater understanding, they will also gain power as they will be better placed to question and challenge, as well as act independently.
- **Information flows will be two-way.** This approach is not just about health systems providing clear and accessible information to patients about their diseases. Equally, patients will be the source of data that enhances clinical decision-making. This will be from data collected in the home and in their daily lives through devices and symptom tracking. In this model, no longer will data just come from an MRI or a blood test in the hospital, it also comes in massive quantities from the granular data that is captured in the patient's home every day. And often, patients will be familiar with the trends within this data and will be making independent decisions for themselves about the management of their conditions. As a result they will meet their clinicians in the knowledge that they also bring information and understanding to the consulting room.
- **Patient participation in decision making will increase.** Through models such as shared decision making and "what matters to me" discussions, patients will increasingly take a more dominant role in the decisions about their treatment and conditions. As a result clinicians will need to be much more open to, and capable of, facilitating those discussions and decisions, rather than dominating and prescribing.

These three facets together will shift the patient/clinician power paradigm so that there is a much more equal balance of power in the relationship. In this world, both parties recognise that they are each bringing value to the table.

This shift will be a natural consequence of empowering patients through the different levels of maturity and will challenge health systems and individual healthcare professionals to adopt a different role and skills. These aren't the new digital skills, but instead are behavioural and consultation skills that are required as a result of the increasing adoption of digital in order to facilitate Shift Left Stay Left x10.

Health systems and healthcare professionals

Curley and others have proposed a Digital Health Capability Maturity Framework that allows countries to assess their current level of digital healthy maturity and determine the actions necessary to improve outcomes. But this country-wide view does not help at the hospital level and in the patient/clinician interface. The principles in the Curley approach remain sound but the issues differ both for local health systems and healthcare professions.

In this model, local health systems and healthcare professionals need the capabilities (including digital), skills and behaviours two maximise the patient's progression through the levels of the 5Es Model of Patient Self Care Maturity.

As a result, the table below lays out the levels of attainment that local health systems and healthcare professions need if they're going to fulfil this role and help their patients progress.

Maturity Levels	Local Health System Digital Health Capabilities - System Enablers					HCP Digital Health Capabilities		
	Digital Health Location	Data Handling Capabilities	Digital Health Value	Digital Health Budgets	Strategic Alignment	Digital Health Adoption	Digital Health Promotion	Digital Power Relationship
Optimising	Transferring knowledge & systems to other health systems at pace	Combining system data with large scale patient data	Maximising scale and value	Strategic funding	Delivering new strategic value	Leveraging digital for new value	Evangelists	Equality, HCPs are facilitators
Advanced	Dissemination across the system to address strategic issues	Integrated system-wide information used across the whole service	Assessing strategic value & transformational potential	Accelerator funding	Enabling strategic delivery	Wide-scale participation in digital initiatives	Active promoters, reinforcing the use of digital	Shared decision making enabled by patient and system data
Intermediate	Specialty wide testing, transferring to other specialties	Utilising in-house and external data to manage care	Measuring and evaluating KPI outcomes	Larger pilots, using allocated funding	Operational benefits	Engagement with local initiatives	Intermittent and sporadic	Shared decision making commonplace
Basic	Additional test sites	Digital education	Capturing anecdotal outcomes	Local pilots, using existing budgets	Local agendas	Compliant but not engaged	A few early adopters, silent majority	Sporadic shared decision making
Initial	Small scale testing	Separate databases/paper records	Personal success	Small scale, very local, spare funds	Individual driven projects	Disengaged	Reluctant	Clinician dominates

Digital Health Capability Maturity Framework for Local Health Systems

The challenge facing local health leaders is how to purposefully develop their organisations and staff to achieve these higher levels of capability with the aim of maximising the delivery of Shift Left Stay Left x10.

Whilst there will be different approaches to the change required in individual organisations, a common factor in bringing about this change will be the role of leaders and leadership throughout the organisation. In that regard, the onus will be on them to bring about the necessary Clarity, Commitment and Capability (3Cs):

- Clarity. Leaders have a key role in ensuring people understand where the organisation is going and why. There will be many cultural and operational barriers to change of this nature, and the energy that will be needed to bring about a change in mindset and approach across the organisation cannot be understated. This means that this isn't a one off task and the focus and purpose needs to be repeated continually (and incessantly) by leaders right across the health system.
- Commitment. Once people understand what's needed and what the change will entail, the role of leaders is to win the commitment to make the change. And at its simplest level, the aim is to win the commitment of healthcare professionals to promote digital solutions and approaches that help patients progress up the 5Es ladder.
- Capability. Clearly, there are multiple skills required by healthcare professionals in their daily lives, but in this regard, and to enable patients to progress the key skills will be around communication and familiarity with the use of the new digital tools. Healthcare professionals will need to be as adept at using these tools with patients as they are at undertaking a bed bath or carrying out an angiogram. Alongside a cultural shift will be required that welcomes shared decision-making and accepts the shift in the patient/clinician paradigm.

Ultimately, leaders want their people thinking every day "What can I do to help this patient Shift Left and Stay Left?". And in turn, staff need to have the skills and mindset to enable that to happen repeatedly and consistently across their daily activities.

Conclusion

The macro conditions of supply and demand mean that a shift to digital health and the use of remote care accelerated by the Shift Left Stay Left x10 model is a necessity across the world.

In order to achieve and deliver the potential of Shift Left Stay Left x10, consumerised patients have to be activated to achieve increasing levels of maturity of self-management and independence.

Patients will not do this on their own initiative and need to be encouraged, enabled and facilitated by local health systems and individual healthcare professionals at all levels.

For that to happen local leaders need to set the context and conditions to build the capabilities in their systems and staff to fulfil this role.

A case study

This case study briefly explores the utilisation of the HCI CONNECTPlus app platform (www.hci.digital) in a single department in the Torbay and South Devon NHS Foundation Trust in England to illustrate the application of Shift Left Stay Left x10 and some of the benefits it can bring.

Problem or Opportunity

A new diagnosis can be overwhelming. A patient receives lots of information about their condition, but remembering what the clinician said can be difficult. Patients have expressed fear and confusion over diagnosis, treatment and medication options and details.

In addition, Torbay & South Devon NHS Foundation Trust Rheumatology Department were receiving an unsustainable amount of demand (e.g. 100% increase in follow-up appointments in 5 years) and phone calls; a growth in patient numbers, the expectation of more information and support, and the need to start new medications in the timeframe set out by national guidelines.

These growing demands were causing delays in medications becoming therapeutic and ultimately, delays to early remission. To improve outcomes and increase department capacity, a safe place was needed to share assured advice and information to patients and their families, that could be accessed 24/7.

Solution

The CONNECTPlus app - www.hci.digital by HCI has been specifically developed to be a flexible platform that can address the needs of people with multiple conditions (long term conditions and treatment pathways, such as day surgery) so that support can be provided to the whole person.

CONNECTPlus supports patients in a number of core ways:

- Information. Quality information in text and video formats to guide people about their conditions
- Symptom tracking and surveys. Helping people to record and report, learn and feedback
- Localised set up. Reflecting the needs of local services and tailored to local pathways
- A Clinician Dashboard. A web based tool that provides staff members with the ability to remotely monitor their patients' symptoms to facilitate remote care
- Multi-condition. As many conditions as needed and all in one place.

CONNECTPlus was deployed by HCI and launched in three phases.

Phase 1 - Information and support

To educate, support and empower patients to enable them to better self-manage their care at home and to reduce the need for face-to-face or phone consultations and calls to the helpline.

Phase 2 - Interactivity

To empower and engage patients with symptom trackers and interactive features that allow more interaction between patient and consultant, allowing patients to get feedback on their disease progression and the healthcare team to intervene more precisely with the benefit of more information.

Phase 3 - Remote care

The roll out a clinician facing dashboard to enable clinicians to review symptom tracking scores from the patient in order to facilitate remote care and patient initiated clinics.

What is the 10X?

Like many digital interventions, service delivery was changed in a multiplicity of ways, and there is no one individual impact that delivers a x10 change on its own. But collectively they far exceed the x10 goal.

In this project, x10 is achieved and exceeded through the collective savings in staff time enabling them staff to focus on those patients in greatest need.

Impacts/ Success Factors/Quadruple Aim

1. Better care/better outcomes
 - Reduced waiting times
 - Rheumatology medication start time down from 3 weeks to 1 week
 - Multi-morbidity data from the patient's home enabling more precise interventions and remote care
 - Consistent information provision across all health teams
 - Patient feedback averages 9 out of 10
 - Patient and clinician feedback video - <https://vimeo.com/healthandcarevideos/connectplus/video/617901842>
2. Lower cost or higher value
 - Fewer calls and appointments
 - 42% reduction in daily helpline calls - 70 a day down to 40
 - 90% removal of face to face sub-cut methotrexate appointments
 - 100% of new start patients for DMARDs, subcut methotrexate and biologics educated remotely through the app
 - 75% reduction in appointments for patients stable on biologics
 - Releases nurses from patient education to patient care
 - 75% weekly saving in nurse time educating patients - 16 hours a week reduced to 4 hours
 - Conditions better controlled requiring fewer interventions
 - More efficient preparation for treatment
3. Better patient/staff experience
 - Visibility of the whole patient, not just a disease
 - Dashboards for individual patients and cohorts
 - Time created to care for those in most need
 - App used by nearly 60% of the patient book
4. Better staff patient/quality of life
 - Educated, Empowered and Engaged patients participating in their own care, at home

- 100% of new start patients for DMARDs, subcut methotrexate and biologics educated remotely through the app
- Feedback loop for their disease progression through the symptom trackers
- Sense of connection to their own health providers

Financial Indicators

- Return on investment of 360% repeated annually
- Payback period - 100 days