



Engineering Better Outpatient Services: using a systems engineering approach to the redesign of outpatient services in the Surrey Heartlands Health and Care Partnership.

Connecting you with experts for your health.

Report prepared on behalf of the RCP team by Dr John Dean, Clinical Director for Quality Improvement and Patient Safety, Aimee Protheroe, Quality Improvement Programme Manager. April 2019

Summary

The Surrey Heartlands Health and Care Partnership (SHHCP) invited the Royal College of Physicians (RCP) to work with them to help clarify the needs of patients, staff and the systems that support and deliver local outpatient services. The aim was to gain engagement from staff working across the constituent parts of SHHCP to articulate and develop future working models once the needs were fully understood. The RCP working with Cambridge Engineering and Design Centre (CEDC) utilised an exciting new framework based on a systems engineering approach that has been developed with the Royal Academy of Engineering and other partners. The initial focus of this approach was to deliver a full day of activities on Friday 8 March including interviews with staff and patients, visits to several outpatient departments to observe current systems in action and delivery of a half day workshop for c.70 local staff and patients to start to explore needs and future requirements. The design of the visit and workshop was shaped in collaboration with senior leaders at SHHCP. The approach agreed was to start with a very broad view of outpatients before focussing in on more specific services for innovative development. Findings and recommendations were shared with Surrey Heartland Academy on April 10th, comments and conclusions from that discussion were considered to finalise this report.

The RCP convened a team of experts in quality improvement, systems engineering, environmental sustainability and information technology as well as clinical and patient peers to deliver this multifactorial 'understand' approach. They aimed to facilitate a more detailed understanding of need through review of service performance information, observation and the delivery of several exercises with local staff and patients.

During the day, very good practice was identified within the system. However, outpatient services are highly complex; its components are not well articulated and are therefore subject to variable practice, inefficiency and inequity of care for patients. There are obvious constraints such as geography and physical space which undoubtedly complicate patient flow and practice. Issues such as growing demands on the service, against a backdrop of staff shortages and outdated technology are not unique to SHHCP but are noteworthy as important issues that affect performance and potentially outcomes.

Staff and stakeholders (clinicians, managers, patients) who engaged with the RCP team, whether through 1:1 or group interviews, hosting 'walk arounds' or participating in the workshops expressed passion and enthusiasm to co-produce change and work together to ensure that new systems are developed to serve the needs of local people, and those who serve them. There was a strong desire to maintain

and spread what works well, but to think radically differently to enable local citizens to access expert support for their health when they need it.

Key findings

1. The purpose of an outpatient visit can often be unclear. In fact current outpatient services have multiple purposes, but are not specifically designed to meet the needs of patients, staff or the system
2. Without the appropriate and consistent infrastructure for real-time patient and practitioner access to advice and information, coordination of care, ongoing demand and capacity management, and skill development of staff and patients, any new models of care will be difficult to implement
3. There is a considerable amount of redesign and improvement work being undertaken across SHHCP, but it did not appear to be fully coordinated or clearly connected to other programmes of work
4. Data is currently limited to activity data. Wider data on population needs, outcomes, experience, efficiency and effectiveness were not readily available either to shape services or to inform their improvement.
5. SHHCP has significant opportunities through the devolution of Health and Care responsibilities, a high level of expertise in service improvement and strong partnerships to be a national if not international leader in developing and delivering new models of care.
6. There is a need to stabilise current services by spreading best practice and through process improvement, but also to create an approach that is radically different for the “new world” of needs and opportunities.

Recommendations

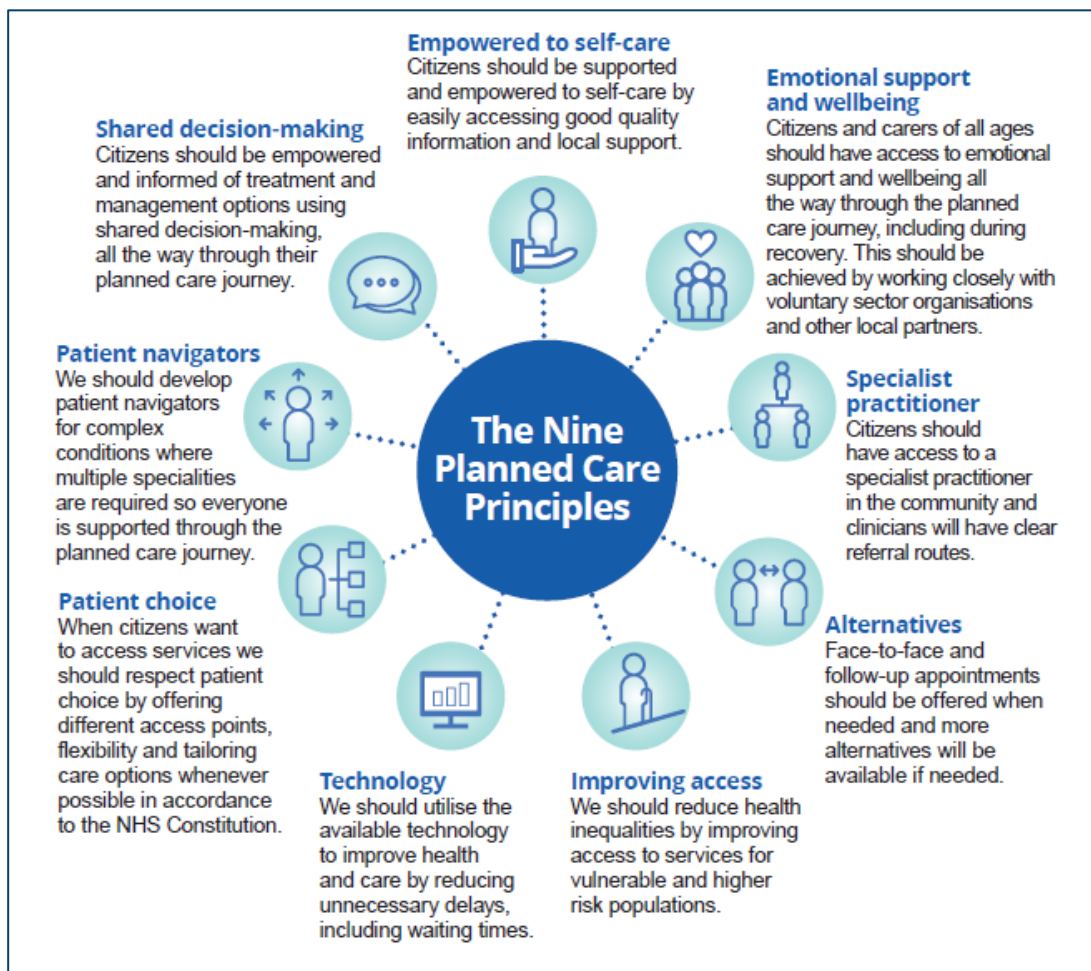
1. A full scoping exercise of current work across the partnership on improving outpatient care, including examples of innovative practice in primary, secondary and community care is undertaken by SHHCP. Suggested completion by July 2019.
 2. Agree current areas of innovative practice that could form elements of a planned ‘spread and adapt’ programme across the partnership. Suggested completion by September 2019 SHHCP Planned Care Programme.
 3. Current outpatient improvement programmes should focus on “stabilisation” and spread of good practice.
 4. A data set for outpatient quality of care is developed (see appendix E, slide 15). Current data from across the system is analysed for areas of high quality and concern. Mechanisms are established for ongoing measurement of the data set. Suggested completion by end of July 2019 SHHCP with RCP and CEDC.
 5. Agree core desired characteristics of “connect with experts” services for people with long term conditions, multimorbidity, episodic/pathway care. Suggested completion by end of July 2019 SHHCP with RCP/CEDC
 6. Focus on redesign of ‘infrastructure’ to support new practice of modernised outpatients. Suggested programme to commence September 2019 with scoping work during July 2019
 7. Identify 2 or 3 focussed innovation areas for application of Engineering Better Care to “connect with experts” service design, to include ‘infrastructure’, as an innovation component of the Planned Care Programme. Suggested agreement of areas by July 2019 for prototype development from September 2019. SHHCP with support from RCP/CEDC
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Context: national and local

In November 2018, the RCP published the report *'Outpatients: the future. Adding value through sustainability'* which recognised the traditional model of outpatient services as no longer fit for purpose, placing unnecessary financial and time costs on patients, clinicians, the NHS and the public purse. It proposed that the time had come to re-evaluate the purpose of outpatient care and align those objectives with modern-day living and expectations. The report outlines the 16 principles for good outpatient care (see appendices) and made five recommendations for action nationally including utilisation of quality improvement, remuneration on the basis of clinical value not physical interaction, collaborative working between specialist organisations and charities to prevent duplication and partnership approaches between voluntary and community sectors.

In several areas in SHHCP, outpatient transformation work was already underway, and the RCP was made aware of examples of local best practice ahead of the visit. These known examples were circulated to attendees ahead of the afternoon workshop as pre-reading information. Some activity data was shared with and analysed by the RCP ahead of the visit but there were significant gaps in this information, with large sectors of the Partnership absent and others represented by somewhat dated information

SHHCP has agreed Planned Care Principles (Appendix I):



Traditionally, there is a tendency to tackle problems by coming up with solutions, often without truly understanding the need or issue that caused the problem in the first place. As part of a Systems Design approach, design thinking

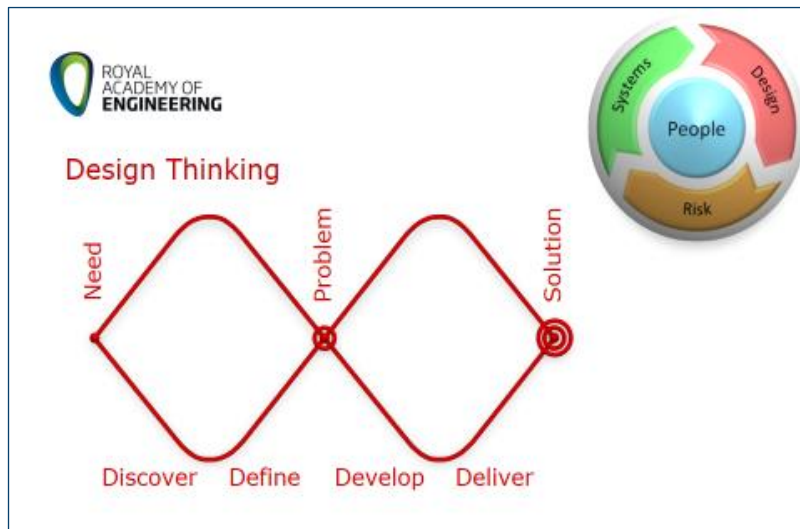


Figure 2: Systems Design approach

is a method used by engineers to solve complex problems. It is solution-focused, requiring 'needs' to be clearly articulated, on route to defining the problem(s), before moving on to develop and deliver solutions. The 'understand' day on 8 March 2019, sought to consider the first diamond (Figure 2) – to identify the needs of the outpatient service stakeholders. It explored the key domains of People thinking, Systems thinking, Design thinking and Risk thinking (Figure 1),

using a structured questions framework. This approach was used throughout each component of the understand day, the format for which was designed in collaboration with senior leaders from SHHCP.

Delivery of the 'Understand' visit

The aim of the day was therefore to begin to understand

- The local system of outpatients
- The needs of local people and the system
- The opportunities for redesign and improvement
- The requirements of a future system based on needs

The day comprised a mixed-method approach to engage as many colleagues as possible. SHHCP performance data were provided and reviewed, although time did not allow for detailed discussion of this with senior staff. The systems approach to design and improvement was presented. The RCP team split into three groups to observe several outpatient services in practice. Interviews were undertaken with staff and patients, on a 1:1 basis, pairs or teams depending upon their availability. A script based on the systems engineering approach provided a framework to guide interviews.

The afternoon workshop brought SHHCP staff, wider colleagues and service users together to work in multi-disciplinary groups to explore the needs of the system using five different user perspectives; they also began to explore potential future system characteristics. Facilitated by members of the RCP team, each group articulated the purpose of outpatients for that service user, and identified key stakeholders and their requirements of the system which were articulated through 'need statements'. They considered the opportunities and threats to system

improvement, 'dreamt a little' and described what good looks like, before thinking about the required functions that would underpin the new system. The event concluded with a high-level summary of observations and information gathered during the day.



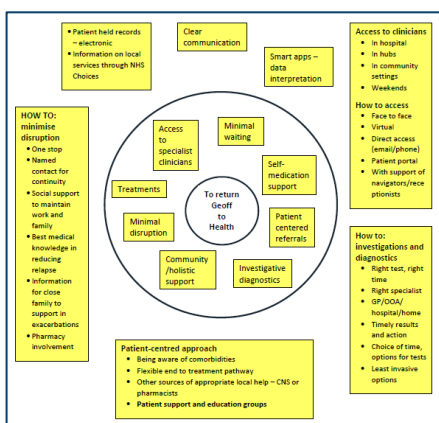
It's important to focus on the intention of the outpatient appointment rather than focus on the process in the first place. Workshop attendee.

The following is our analysis of what SHHCP staff and stakeholders shared.

Understanding

It is recognized that people attend outpatient services for a number of reasons. Outpatient services are provided in many settings by multi-professional clinicians supported by other staff. Patients may have a symptom that requires a diagnosis, a diagnosis or conditions that needs expert management, they may be undergoing monitoring of a long-term condition or have a flare up. We also know that people with multiple conditions may end up seeing multiple specialists as well as their GP.

1. Long term condition management



Purpose: To maintain long-term health, through diagnosis and treatment

Main requirements: Easy access to expert advice / the ability to seek advice when required / support to live with my condition / reassurance and information from experts on my personal condition through good monitoring and interpretation of results / knowing other people with the condition and how they manage

Q. What can go wrong?
A. There is a culture in some specialties that they need to see everyone, this perception needs to be changed with an acknowledgement that things could be done differently. Staff member interviewed during site visit.

4. Support functions



Purpose: to enable a consultation with a relevant expert to shape the development of management of treatment plans

Main requirements: Ease of access to advice / real-time management of demand and capacity / coordination of care / putting the patient in control and trusting them / transport when and where it's needed / minimize travel and time / support for virtual clinics / consistency of processes with flexibility to meet individuals needs / confidence that the system will monitor a patients progress / common language and consistency of information, information hubs / Integrated IT / appropriate physical environment

Q. *What are the elements that could be improved?*

A. *Surely there must be something nearer to home for me than having to travel such a long distance? Patient interviewed during site visit.*

The RCP believes that support functions play a vital role how services work and service design in whichever area of clinical practice it is undertaken. However, the opportunity for these functions to be the focus of redesign is often overlooked.

What do patients and professionals' value?

The RCP explored this issue in our policy focus in 2018 'Our Future Health'. This is explored in the podcast <https://ourfuturehealth.rcplondon.ac.uk/podcast/value-in-healthcare/>. Patients and professionals value most a supportive and constructive human interaction when that is required, and as little disruption to their daily lives as possible. These are important principles to be considered when redesigning outpatients.

Key enablers to redesign:

- SHHCP will have devolved responsibility for health and care from NHS England and DHSC. This will enable more radical redesign by "breaking the rules".
- There was a very clear passion and commitment from many to be involved in improving care, and to be radical.
- SHHCP has built strong relationships across the system.
- There are many examples of good and innovative practice in SHHCP.
- Planned care principles have been agreed across the partnership.
- Primary Care Networks give an opportunity for locally designed care to meet local needs, and be personal
- Work on the specification for a patient portal for people with cancer is at an advanced stage.
- Innovative access models are already in place or about to be implemented in primary care.
- Telephone access/clinics are already in place and well used in some clinics.
- Consultant Connect is planned to be implemented.

In summary

SHHCP staff demonstrated a strong commitment to want to give best possible care. Patients and services users were highly appreciative of existing outpatient services but all recognised the strains and stresses and the need for redesign. There was universal appetite for easy access to expert advice that is provided based on a person's symptoms and not a single clinical specialty and the ability to access advice and support when it is required rather than based on a predetermined frequency of follow up. A strong desire from both patients and staff was in seeking to create sufficient time for valuable and appropriate human interaction in the development of a plan to keep a person well. The need to maximise the benefits of modern technology was repeatedly mentioned. Further data that provides a view across all elements of outpatient services in Surrey Heartlands, is required to inform the best areas of focus for the next stages

The benefits of outpatient redesign must be measured in terms of long-term value for patients, the population and the environment, not just short-term financial savings.

*Were my parents still with us I can see I would have greatly appreciated a facility like this.
RCP faculty member on visiting the Bedser Hub.*

APPENDICES

- A. Royal College of Physicians' team members
- B. Understand visit programme (08.03.19)
- C. Pre-read material-Understand workshop
- D. Explore and understand presentation slides
- E. SH activity data presentation slides
- F. Structured interview guidance
- G. Personas and scenarios-understand workshop
- H. Workshop themes – Examples of the creation of purpose statements, process maps and purpose and function diagrams from groups participating in the Understand workshop
- I. SH Planned care principles
- J. 16 Principles for Good Outpatient Care
- K. Key Messages from discussion of draft report with Surrey Heartlands Academy

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