

How can digital medical information technologies be successfully introduced to enable effective health care improvement?



A rapid review of existing evidence

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Overview

This review was requested by the Lewisham CCG Clinical Directors to look into how digital medical information technologies across primary, community, acute, physical/mental and social care settings can be successfully introduced to enable effective health care improvement for professionals and patients. Behaviour change was included within the context of the research.

The research team found that the evidence base for digital medical information is still relatively new as this is an emerging field. Many digital projects are still in their infancy without investment into evaluation and this subject has therefore not been as robustly recorded as other areas of research. However one key example has been provided as an appendix deep dive: *The London NHS 111 Patient Relationship Manager*.

In addition the review identified one system-wide study followed by six case studies from the UK and internationally which are relevant and informative. These are summarised in the slides below followed by a conclusion of the process.

Key points to note are:

- This is a topic of national interest. A recent report from the Secretary of State by Dr Robert Wachter is noteworthy: <https://www.gov.uk/government/publications/using-information-technology-to-improve-the-nhs/making-it-work-harnessing-the-power-of-health-information-technology-to-improve-care-in-england>
- Information on why technology projects succeed or fail has been identified. This report from Computer weekly offers a perspective on common reasons for failure. <http://www.computerweekly.com/news/2240106569/Why-do-big-IT-projects-fail-Part-one-The-professionals>
- It is generally accepted that successful projects exhibit similar characteristics. The following document published by the British Computer Society describes the typical characteristics of successful technology implementations. <http://www.bcs.org/upload/pdf/it-enabled-chapter1.pdf>
- For successful development of digital services, the GDS recommends the use of agile development methodologies <https://www.gov.uk/service-manual/agile-delivery/agile-government-services-introduction>
- There are many examples of successfully implemented technology projects. The review has summarised key relevant ones below.

Methodology

The rapid review used mixed methodology combining qualitative and quantitative approaches to capture a broad range of examples.

The first stage used desktop research via academic resources such as the King's Fund, Nuffield Trust, British Medical Journal and Google Scholar. The research team also examined a range of sources such as project reports, stakeholder websites and press releases and then contacted project leads and practices directly to identify the quantifiable impact of the studies and fill in any missing information.

Key studies and their impacts

Page	Study	Key Impact
5	System-wide Study: Cisco Medical Data Exchange Solution	Improved safety and quality of patient care through better information, including error reduction and avoidance of duplication in medical procedures and tests
7	Case Study 1: Supporting services for older people through sharing information	Of those patients who had a preferred place of death (PPD) documented, 77.4% achieved their PPD (72.3% achieved their first PPD and 5.2%, who changed their minds, their second PPD).
8	Case Study 2: Integrated Digital Care Record Success Story. Safer hospital, Safer Wards Technology Fund: Bradford and Airedale	Patient benefits include improved care coordination and a greatly improved patient experience
9	Case Study 3: Intermediate Care: Case Studies Bristol: Connecting Care	Improving referral management – enables professionals to make a more well-informed judgement on a course of action required
10	Case Study 4: Success Story Nursing Technology Fund Devon Partnership NHS Trust May 2015	Increased face to face time with people with a learning disability who use the service. Improved flexibility and productivity.
11	Case Study 5: Integrated Digital Care Record Success Story. Safer hospital, Safer Wards Technology Fund Cumbria CCG	Faster turnaround of assessments in social care and community based health and care services
12	Case Study 6 : Holyoke Medical Centre Creates an HIE and Shares Patient Data Using Iatric Systems Clinical Document Exchange	More informed treatment decisions and better coordination of care
13	Conclusions	Not applicable
14	Appendix: London NHS 111 Patient Relationship Manager	Not applicable

System-wide Studies

System-wide Study: Cisco Medical Data Exchange Solution

Background and Case for Change:

Design and execute limited deployment Electronic Health Record project for 30,000 citizens in Geneva

Meet highest requirements for data protection, functionality, and ease of use to improve quality of care while reducing costs

The Solution:

Cisco Medical Data Exchange Solution (MDES), with Tiani Spirit interoperability software

Identity and access management components from Swiss Post Solutions to protect medical data

A portal for healthcare professionals, where clinicians and other providers can access patient records from across the canton via the MDES.

Implications for patient experience and outcomes:

- Improved safety and quality of patient care through better information, including error reduction and avoidance of duplication in medical procedures and tests
- Ability to access patient data securely, regardless of location, system type, and data format
- Patients able to grant access to their records to specific healthcare entities, which helps ensure patient privacy

Implications for workforce:

- Enhanced coordination of all activities, processes, and personnel involved in healthcare ecosystem

Conclusion:

The integration of a patient record has allowed the staff to be able to share a care record giving a more inclusive treatment approach to care

Case Studies

Case Study 1: The adoption of Coordinate My Care in North West London

Background:

Coordinate My Care (CMC) is an urgent care-planning tool, which provides care plans for those at the end of life.

The ability to capture and share information across the patient pathway is critical to any sustainable model of integrated end of life care. In the past that has not always happened in London.

Quantified Impact : Of those patients who had a preferred place of death (PPD) documented, 77.4% achieved their PPD (72.3% achieved their first PPD and 5.2%, who changed their minds, their second PPD).

The Solution:

The result is that any trained professional in the acute or community sector can set up a CMC record for any patient, regardless of diagnosis, who is identified as being in the last year of life. Each patient gives consent for a CMC record and this electronic record reflects ongoing end of life care discussions and advance care plans so that all care providers are kept up to date.

The CMC record can be accessed 24/7 through a central password-protected secure internet connection used by the NHS. This allows professionals access only to that information which is relevant to them and their geographical areas of work.

CMC integrates end of life care pathways both in and out of hours, including GPs, community nurses, community palliative care teams, hospitals, hospices, social workers, London Ambulance Service, 111, intermediate care and nursing/care homes.

Impact:

The CMC end of life care service is reaching patients with generic and specialist palliative care needs. More patients are dying in the community and fewer are dying in hospital compared to ONS data for the city.

Case Study 2: Integrated Digital Care Record Success Story. Safer hospital, Safer Wards

Technology Fund: Bradford and Airedale

Background and Case for Change:

Health and social care organisations across Bradford and Airedale district envisaged a health and care economy that brought together primary care, secondary care, mental health and social care partners, but understood that to achieve this would be costly and complex.

The Solution:

The system that will facilitate the shared record is TPP's SystemOne, already implemented in many organisations and soon to be implemented in others including Adult Social Care services following the Technology Funding.

Upon consent to share being established, mental health services in the district will also be connected to the "pooled record".

E-referrals, e-discharges and electronic consultations are already in widespread use and patients' records are accessible by partner organisations

Implications for patient experience and outcomes:

Patient benefits include improved care coordination and a greatly improved patient experience

Implications for workforce:

Staff benefits include Reduced administration time, real-time, dynamic care records

Organisational Benefits include Improved discharge process between health and social care, improved flexibility and the ability to deliver a long term vision

Reference:

<https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiFtPT2qozQAhVHicAKHWxyCfMQFggdMAA&url=https%3A%2F%2Fwww.england.nhs.uk%2Fdigitaltechnology%2Fwp-content%2Fuploads%2Fsites%2F31%2F2015%2F09%2Fidcr-success-story-bradfrd.pdf&usg=AFQjCNHo7kCbGf8MIACzLMYri1Pcfx7Eg&bvm=bv.137132246,d.d2s>

Case Study 3: Intermediate Care: Case Studies

Bristol: Connecting Care

Background and Case for Change:

Across the South West Region, (and in common with many health and social care economies across England), care is provided by many different organisations in both health and social care and typically, care records are not connected and the IT systems of the various organisations can't link up with each other. When information is not shared between health and social care professionals, the efficiency of services and the ability to provide integrated care can be compromised.

The Solution:

Connecting Care is the new way of safely sharing health and social care information between health and social care organisations in Bristol, North Somerset and South Gloucestershire. It is enabling authorised professionals in hospitals, community settings, GP practices, out-of-hours (OOHs) services to see a single electronic view of information about the person they are caring for.

Implications for patient experience and outcomes:

Reducing admissions – connecting care can support decisions about whether a patient needs to go to hospital or not

Implications for workforce

- Saving time – reduces calls & faxes to GPs, freeing up practice staff to deal with patients
- Improving referral management – enables professionals to make a more well-informed judgement on a course of action required
- Safer prescribing – allows hospital pharmacists to have instant information on GP prescribing
- Saves visits/appointments – Connecting care has real-time information on hospital admissions.
- Connecting care can support decisions on whether a phone call might be more appropriate than a home visit

References:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi6_5Cmq4zQAhWBJcAKHTvwATMQFgggMAA&url=http%3A%2F%2Fwww.nhsbenchmarking.nhs.uk%2FCubeCore%2F.uploads%2FNAIC%2FICCaseStudyBristolConnectingCare.pdf&usg=AFQjCNFOcl0rJ5E65kLJoX3ljbNoJjXz5Q&bvm=bv.137132246,d.d2s

Case Study 4: Success Story Nursing Technology Fund Devon Partnership NHS Trust May 2015

Background and Case for Change:

Prior to the Nursing Technology Fund award, only Speech and Language Therapists and Occupational Therapists had access to iPads, but had reported great results, observing noticeable improvements in self-esteem, confidence and involvement from people with learning disabilities.

Utilising handheld technology in order to better support people appropriately was the key driver behind the successful application to the Nursing Technology Fund.

The Solution:

The wide range of applications available, both to buy and free of charge, allows nurses to be more creative and to put people with a learning disability right at the centre of their own care. Interactive maps encourage engagement and curiosity, whilst film-making, music and writing apps can be used to create dynamic journals which provide a sense of accomplishment and can record progression.

Implications for patient experience and outcomes:

- User friendly technology which puts patients in control, at the centre of their care

Implications for workforce

- Increased face to face time with people with a learning disability who use the service. Improved flexibility and productivity.
- Improved outcomes for people who use the service

Implications for technology:

- Every learning disability nurse successfully using an iPad for clinical and therapeutic use.

Conclusions:

- The inclusion of an IT solution within this care setting has allowed patients to be put at the centre of their own care.

References:

<https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj9rKrFq4zQAhVMIsAKHYozA11QFggbMAA&url=https%3A%2F%2Fwww.england.nhs.uk%2Fdigitaltechnology%2Fwp-content%2Fuploads%2Fsites%2F31%2F2016%2F06%2Fidcr-success-story-devon-may15.pdf&usg=AFQjCNHafGUbo-XBeTCnLunzUIZanQDC0A&bvm=bv.137132246,d.d2s>

Case Study 5: Integrated Digital Care Record Success Story. Safer hospital, Safer Wards

Technology Fund Cumbria CCG

Background and Case for Change:

NHS trusts nationwide face significant patient flow challenges concerning patient referrals to appropriate areas of social care community and mental health services.

The ability to track e-referrals in real time, thereby enabling proactive management of blockages in patient flows and providing transparency between senders and receivers.

The Solution:

Cumbria CCG sought an innovative e-referral and resource matching system that would ultimately incorporate all health and care organisations across Cumbria.

The objective was to have a single system that could integrate with providers EPR to ensure a consistent approach to the sending of e-referrals

Implications for patient experience and outcomes:

- Faster turnaround of assessments in social care and community based health and care services.

Implications for workforce

- Quicker and easier referral system with peace of mind and audit trail.
- Improved data quality, timeliness of patient flow, effective use of resource and cost reduction

Conclusions

The use of an e-referral system has meant that the patient flow within Cumbria has improved giving a better care journey through treatment.

Quantified Impact : 900 e-referrals registered per month

Case Study 6: Holyoke Medical Centre Creates an HIE and Shares Patient Data Using Iatric Systems Clinical Document Exchange

Background:

Holyoke Medical Centre is a full-service hospital in western Massachusetts. Continuity of care is an ongoing challenge for patients, especially for those who receive treatment from a variety of facilities and providers.

When a patient came to Holyoke Medical Centre, hospital physicians were able to access the patient's record in the hospital's Healthcare Information System (HIS) but not the patient's history with outside caregivers.

The Solution:

The hospital chose Iatric Systems Clinical Document Exchange to aggregate clinical data from its HIS system. Holyoke can now deliver the CDE document on demand to patients and caregivers in a readable summary format.

Holyoke Medical Centre is also using Clinical Document Exchange to share patient data with its community HIE, which makes patient information available to participating healthcare providers where and when they need it.

Implications for patient experience and outcomes:

- Clinical Document Exchange allows caregivers to access a much more complete picture of patient health, leading to more informed treatment decisions and better coordination of care.

Implications for workforce

- Clinical Document Exchange has supported Holyoke Medical Centre's goal of meeting three Meaningful Use Objectives while providing significant patient benefits during transition of care or emergencies.

Implications for technology:

- As the hospital continues building out its HIE, Currently approximately 60 providers have signed up, and Holyoke Medical Centre is working with an additional 25 providers to connect to their HIE.

Conclusions:

The integration of a patient record has allowed the staff to be able to share a care record giving a more inclusive treatment approach to care



Conclusions

The majority of the studies found by the rapid review team were case studies published by organisations conducting an evaluation of their own work. Although further research is required around evaluation of this field in general, a deep dive has been included of the *London NHS 111 Patient Relationship Manager* below that outlines one way digital medical information technologies can be successfully introduced to enable effective health care improvement.

Learning from all studies indicates that digital technologies can transform existing ways of working making them more efficient from a health and care perspective and a better experience from a patients perspective.

Key findings from the review show that:

- The development of a care plan for those at the end of their life has meant patient information is always up to date and can be shared with partners. In addition, most patients are now dying in their preferred place of death.
- The creation of an integrated care record has brought together primary care, secondary care, mental health and social care partners, and has led to improved discharge process between health and social care, improved joint working overall, and greatly improved patient experience.
- The use of hand technologies like ipads can transform interactions with specific communities such as the learning disabled. Where this has been used, nurses have seen an increase in self esteem and confidence and levels of interaction with their clients
- The implementation of an e-referral system has meant that the patient flow has improved giving a better care journey through treatment.

Overall research indicates that digital technologies do enable effective health care improvement.

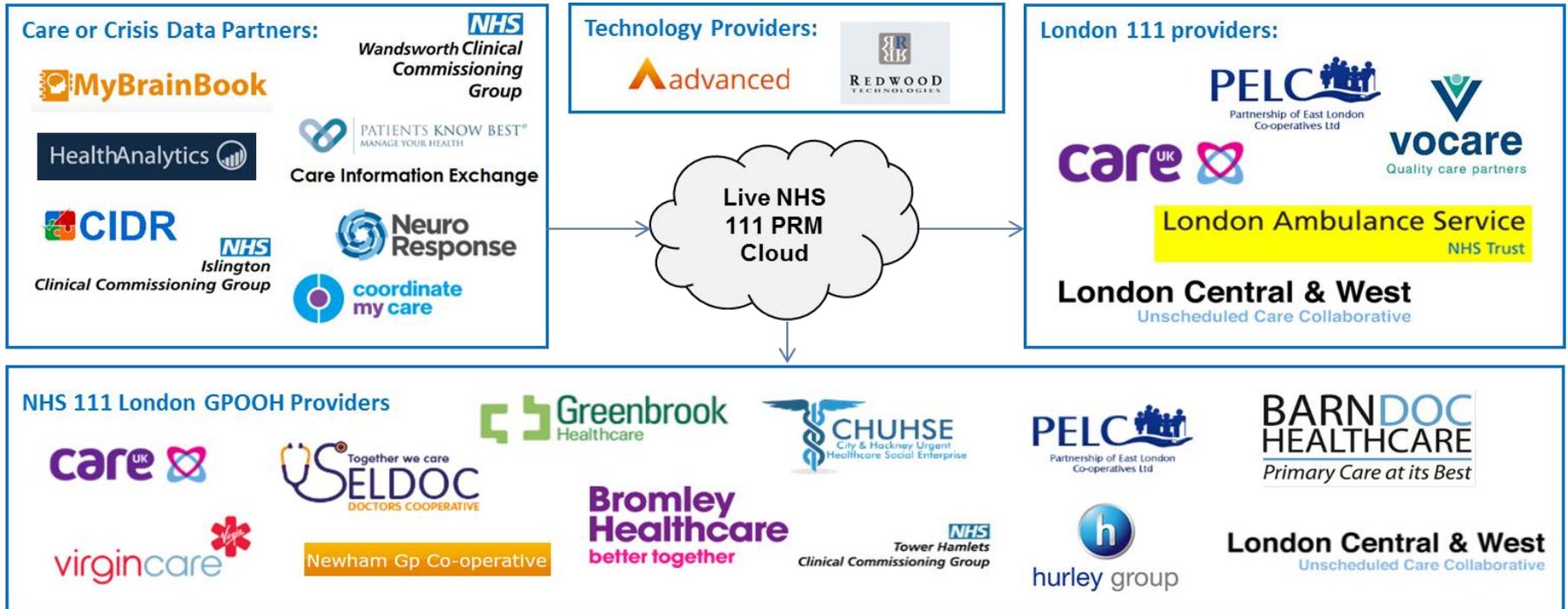
If you would like any further information please contact: natalia.proctor@nhs.net

Appendix

Deep Dive: London NHS 111 Patient Relationship Manager

Partners

The London NHS 111 Patient Relationship Manager is a live digital system which was designed to improve the experience of Londoners who call 111 across the capital by unlocking pertinent patient data and channeling this confidential information safely to clinicians in NHS 111, GP out of hours and the London Ambulance Service in real-time to deliver more coordinated care focused on patients' preferences.



This network of stakeholders is underpinned by Commissioners, Clinical leads, 32 CCGs, U&EC networks and London IUC Team.

An independent evaluation partner (London CLAHRCs in partnership with NELCSU and the Picker Institute) has been commissioned to complete an academic evaluation to assess patient and user experience, effectiveness and economic impact on the whole system.

Summary: Key 3 Benefits of the PRM



Intelligent 111 call routing to maximise operational efficiencies and intelligently direct callers to the correct skillset within the right 111 provider:

- Sending complex callers directly to medically-trained clinical staff who can better serve their needs (rather than speaking first to non-clinical call handling agents and then bouncing to clinical staff – improving patient experience and rationalising operational call flow)
- Routing repeat callers back to the previous 111 provider they had spoken to and so minimising the need for callers to repeat information given in previous calls. Those with worsening conditions are routed to the top of the 111 queues and those who are asymptomatic are routed to an administrative agent to relieve pressure from call handling staff.
- Routing callers with urgent dental needs to an administrative agent for accelerated triage and onward referral to a dedicated dental provider. Improving the 111 call routing to maximise operational efficiencies and intelligently direct callers to the correct skillset within the right 111 provider:

Access to Care / Crisis Records:



- Enabling clinicians in Integrated Urgent Care to view crisis / care plan information (which includes end of life, complex and long term conditions) in real time, supporting their clinical decision making and following patients' preferences.
- Supporting NHS 111 providers offer an improved level of 'personalisation' ensuring patient's care requirements are fulfilled.
- Providing ambulance crews with a succinct summary of a patient's crisis care preferences using their existing technology infrastructure within the ambulance vehicles to support clinical decision making en-route or at the scene.

NB: An initial NHS 111 proof of concept pilot in 2014/15: Developing a Digital 111 Service Access to Records and Online Access Evaluation Report found that there was a positive impact for the patient experience and the wider U&EC system - "From callers who had a Special Patient Note or Crisis record available the evidence shows that they received lower urgency dispositions compared to those without this additional information. This was particularly significant for older patients where people aged 85 and over were five times more likely to have their enquiry completed by NHS 111".

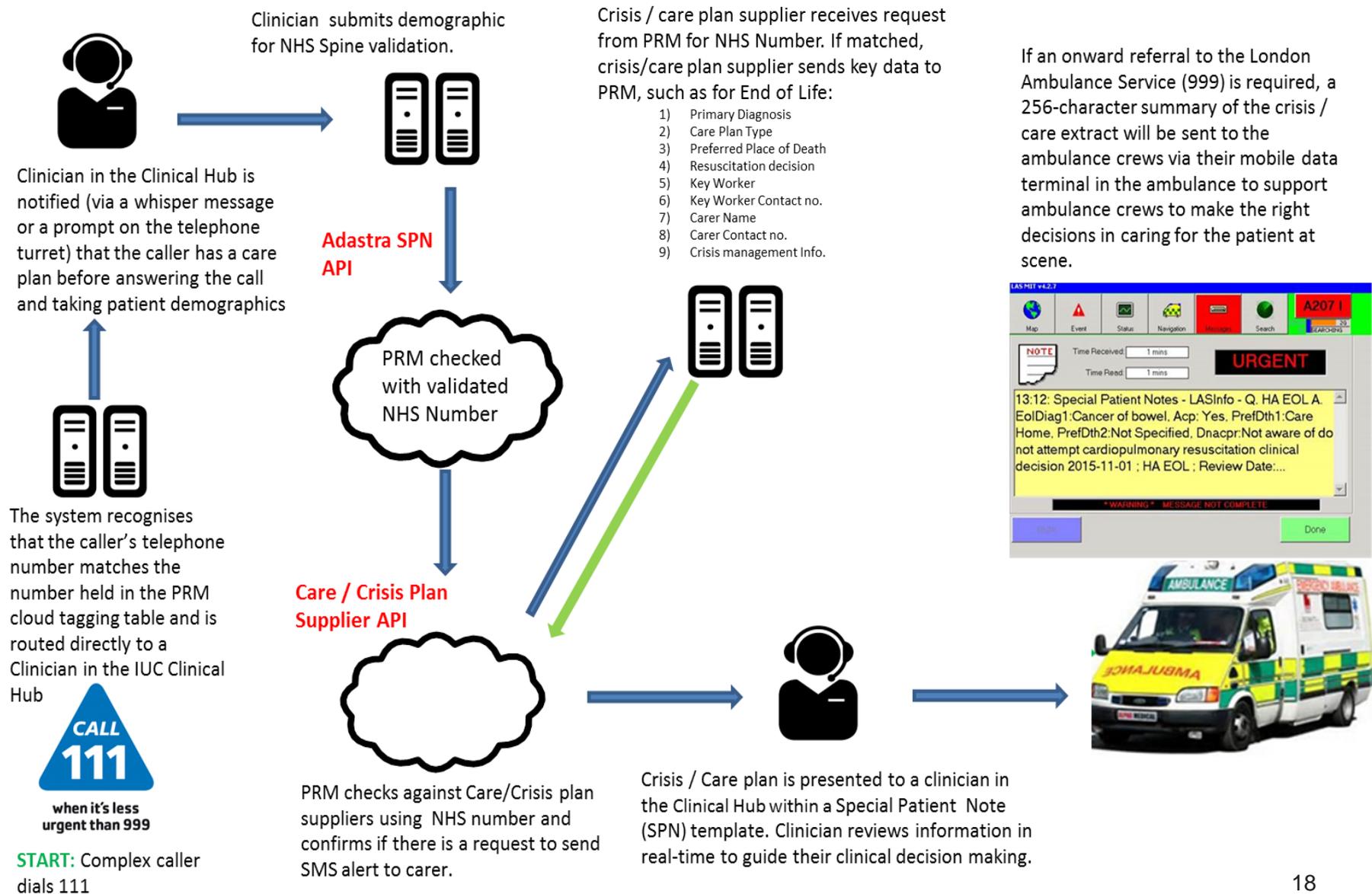
Real-time Dashboard / System Resilience / Commissioner & Surge Lead Information Repository



- An interactive dashboard provides commissioners and London Integrated Urgent Care leads with real time monitoring of 111 performance to support system resilience.
- Call balancing mechanism to mitigate unexpected surges in 111 calls or emergency incidents / significant issues
- Collection of patient outcome information to inform UEC system –trends and surges in specific symptoms for conditions such as Flu or Norovirus to enable identification of any spikes in disease prevalence and allow implementation of local action to minimise the impact on the wider system.

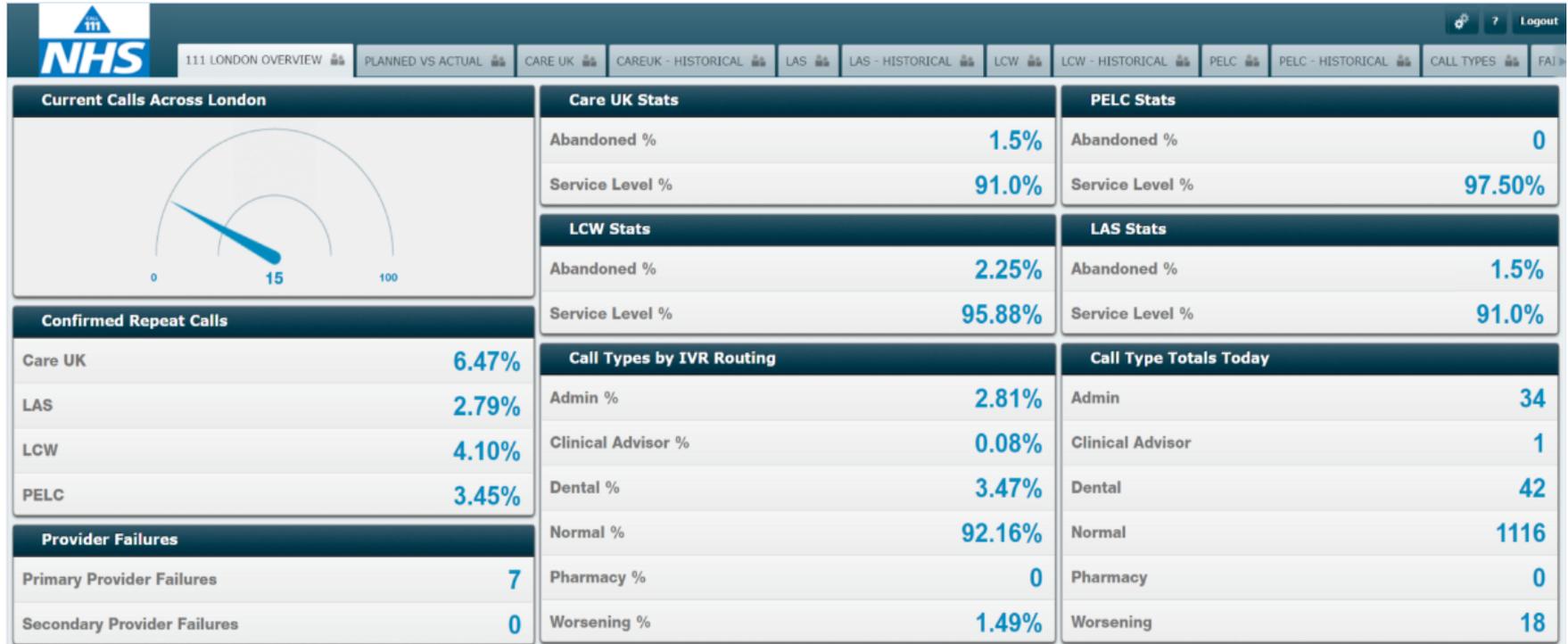
What is the PRM?

Improved London Patient Data flow through the PRM



Supporting System Resilience

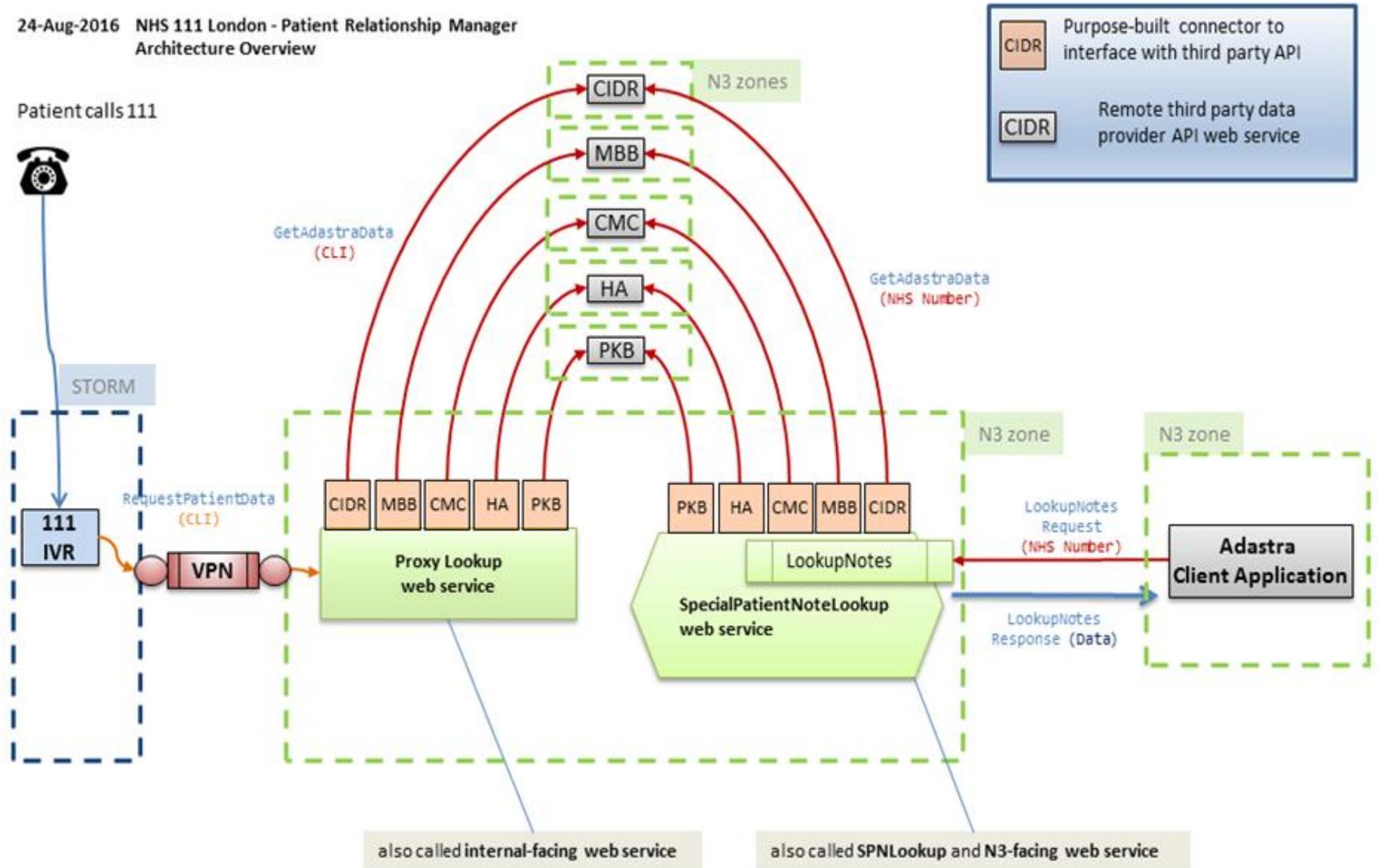
An interactive and real-time dashboard supports Integrated Urgent Care system resilience and clinical safety across London by providing in-depth analysis of 111 London call volumes and performance.



The PRM dashboard functions as a support tool during periods of stress on the Integrated Urgent Care system by monitoring actual call volumes against expected volumes by provider and identifying variations in cases of flu, diarrhoea and vomiting symptoms in each CCG area across London. The PRM has the capability to support call diversion between 111 providers in London to mitigate operational pressures and maintain access for patients.

PRM Technical Architecture

The technical integration between Redwood and Adastra when retrieving care plan information from crisis / care plan supplier and presenting to the 111 clinician is represented in the below image:



How do we know that the PRM has been successful?

Whilst early reports from 111 clinicians have been positive, we have commissioned the London CLAHRCs in partnership with NELCSU and the Picker Institute to complete an evaluation to assess patient and user experience, effectiveness and economic impact on the whole system.

Benefits to Patients



- Patients will receive more personalised care and advice, particularly for those whose crisis / care records are available to 111 who are directly routed within 111 to the relevant clinician
- Patients calling within 96 hours of a previous call will be saved repeating their information
- Patients' care information can be sent to urgent and emergency care providers

Benefits to Staff



- Clinicians can use crisis and care information from more provider systems to guide their clinical conversations and decisions
- On-site clinicians, including paramedics, have key data items such as conveyance, medication and other data, including cardiac resuscitation decisions, critical to safety of care
- Out-of-Hours GPs can assure greater continuity of care with a patient's regular GP

UEC System-wide benefits



- Supported by previous evaluation, fewer referrals to the Ambulance service and Emergency Department admissions for complex / high-risk patients as their care preferences can be accessed and followed
- Larger proportion of referrals to out-of-hospital services (primary, community and social care services, including Mental Health, Community Response and Crisis teams)

High Level Evaluation Interim Report of Initial Progress (Delivered August 2016)

Scope of detailed evaluation of the extended Pilot (March 2017)

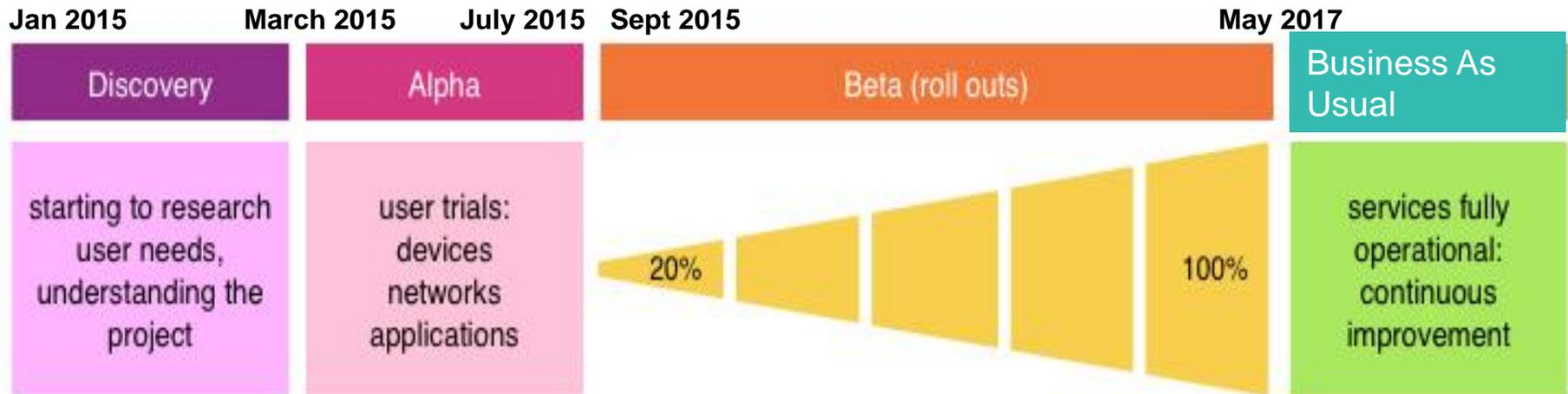
How was the PRM Developed?

How was the PRM Developed?

Background:

A technology supplier (Redwood) was procured to support the iterative development of a viable technical solution through a series of **agile Beta phase roll outs** from September 2015. The objective was to produce a live, working system to improve the 111 patient experience in the Urgent & Emergency Care services.

The pilot went live within 3 months and the Patient Relationship Manager now intelligently routes all London 111 calls for all four 111 providers in London; connecting with local partners so that clinicians can access crisis and care plans in real-time.



Agile project management focussed on the scope in manageable chunks governed by fortnightly sprints and allowing clinical feedback from across the Urgent & Emergency care system.

What is Agile Project Management?

The history of agile is rooted in product development in the Manufacturing Industry and LEAN processes. The Agile Manifesto was formally published in 2001 to structure and define the methodology, which now permeates system implementation programmes in all industries.

The Agile Manifesto (2001)

Individuals and interactions

over

Processes and tools

Working software

over

Comprehensive documentation

Customer collaboration

over

Contract negotiation

Responding to change

over

Restricted by a pre-defined plan

“While there is value in the items on the right, we value the items on the left more”

- Agile is a flexible and interactive approach to researching, designing and delivering solutions that validate and meet user needs
- Agile is iterative and incremental development, enabling the gradual emergence of a functioning and validated solution
- Rather than defining all requirements “up front”, scope is broken down into manageable chunks and delivered in “sprints” which enable teams to gather feedback on what has been delivered. This can be used to refine, enhance or reprioritise the solution on an on-going basis

Benefits of Agile

The Urgent & Emergency Care system is under immense pressure and therefore ensuring clinicians across the system were engaged and committed to the delivery of the solution was critical to its success. Historic IT implementations have evidenced what can happen when insufficient clinical buy-in and a 'top-down' approach is adopted to deliver digital change. The complex London provider and commissioner landscape within a small geographic area at a time of strategic flux, moreover, meant that the development of the NHS 111 Patient Relationship Manager had to continuously respond to evolving clinical and operational priorities.

Iterative development through agile project management has enabled:

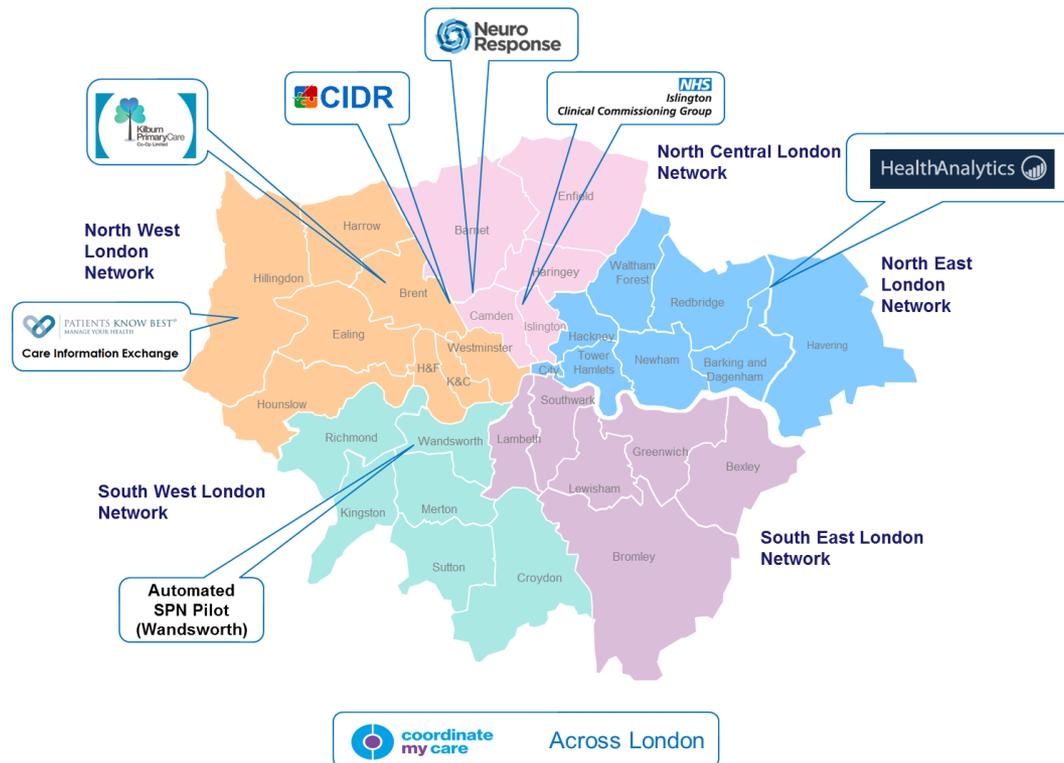
- A more collaborative approach to tackling digital implementation challenges with third party technology vendors
- Clearer communication lines across organisational and hierarchical boundaries
- Technical blockers to be flushed out on a daily basis through a structured daily stand up call
- Greater control over the development of the product by physically reviewing the solution at the end of every sprint cycle
- Adoption of a user-centred design approach which absorbs feedback from patients and clinicians

The benefits of using Agile on the programme have been widely recognised through Learning & Development evaluation as well as feedback from a successful application to the King's Fund: Digital Health & Care Congress 2016.

PRM Examples

Using the PRM to deliver Local Pathway Clinical Hubs

The Patient Relationship Manager offers a number of opportunities to support local pathway and specialist flows for patients with complex health needs. These innovative local pathways demonstrate how the PRM will be able to support greater provision of care for callers with complex needs as NHS 111 becomes the single entry point to integrated urgent care services.



The Patient Relationship Manager is currently integrated with data providers which enables approximately **15,000 care / crisis records** to be retrieved across London. In parallel, we have worked with London GPOOH providers to ensure that **48,000 Special Patient Notes** across London are aligned to **standard templates** restructured to allow 111 to electronically forward **key crisis data** to the **LAS MDT and wider UEC services**

Supporting Londoners with Complex Needs (Examples)

The London Integrated Urgent Care (IUC) team have been using the digital technology which the Patient Relationship Manager provides to support the roll out of specialist services to particular groups of patients using the 111 phone service.



NeuroResponse is a model of care which gives patients with complex neurological conditions better management of their care through an advice line staffed by specialist nurses and designated clinical pathways minimising emergency department attendance.

Live



CMC is a clinical service delivering digital multi-disciplinary urgent care planning focused on coordinating urgent care around a patient's preferences and clinical needs. CMC callers are routed directly to clinicians within NHS 111 to better support the complex needs of these patients.



The **Kilburn Primary Care Hub** offers complex or housebound patients who may require an enhanced level of care access to a GP home visit service through calling NHS 111.

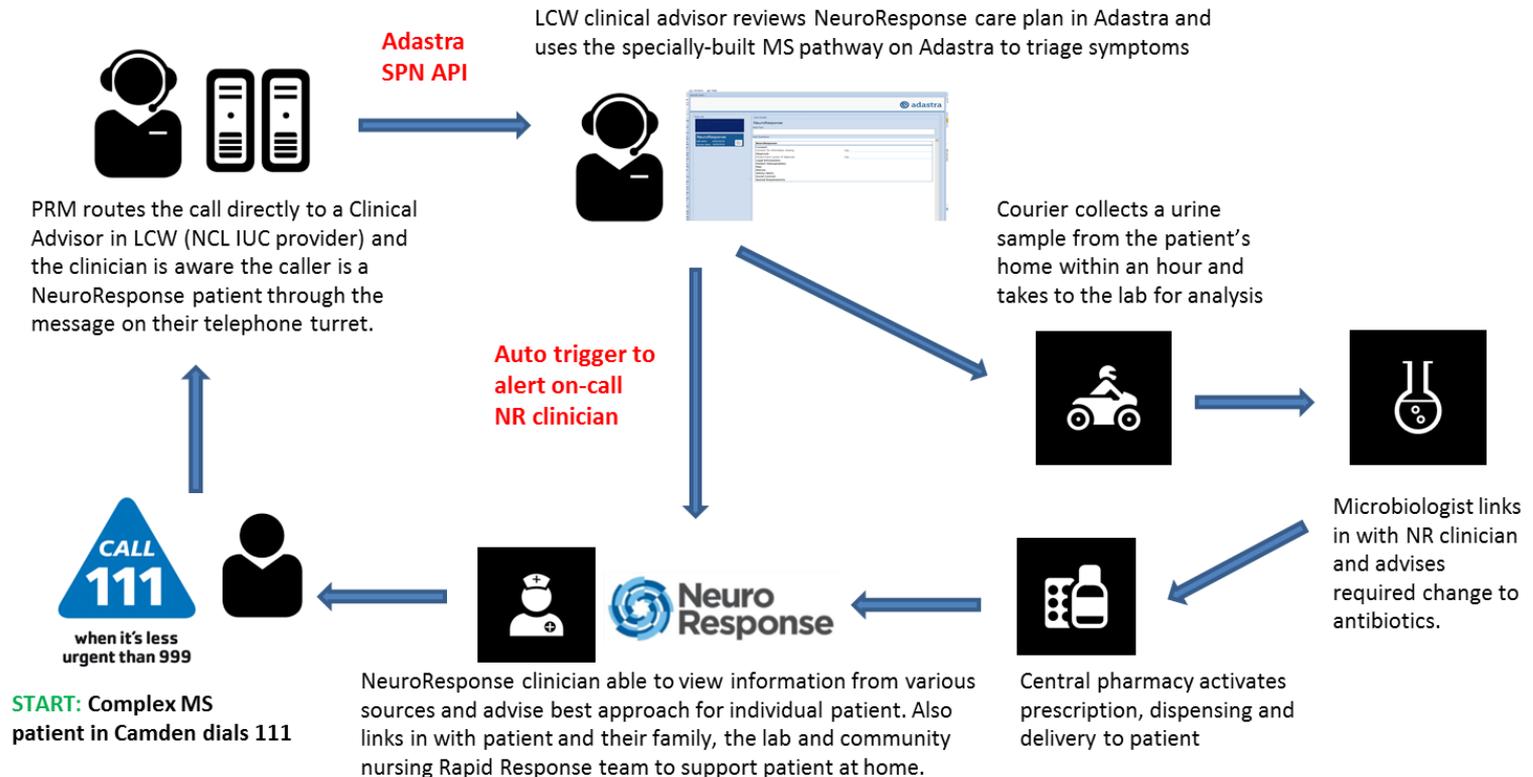
Live

Care Information Exchange



The **Care Information Exchange** aims to support person-centred, integrated health and social care in NWL by providing individuals with access to their clinical data and the ability to share that information with relevant health care professional securely.

NeuroResponse is a model of care which gives patients with complex neurological conditions better management of their care through an advice line staffed by specialist nurses and designated clinical pathways minimising emergency department attendance. The PRM recently went live with a new specialised MS Pathway in conjunction with the LCW 111 and Neuroresponse services which offers complex MS patients 24/7 access to a specialist care through NHS 111.



A patient recently went through this new care model end to end and fantastic feedback received from the patient's daughter to confirm that without this model in place, the patient would have needed to be hospitalised:

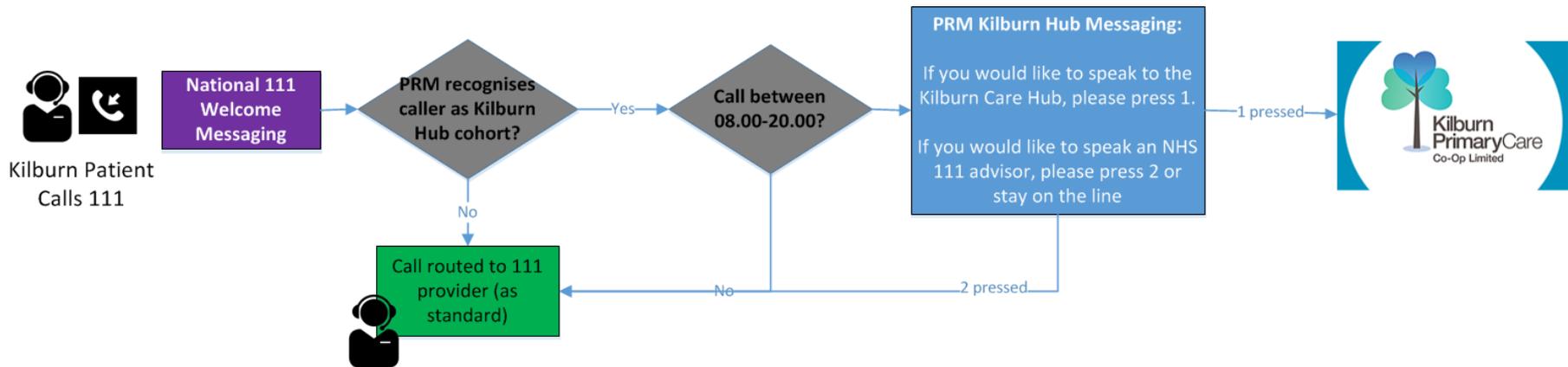
"Thank you, I know if it wasn't for you Dad would be in hospital by now. Thank you so much, looking at him you wouldn't know he is ill, he is talking, joking, no redness in his face, urine clear, he looks great and I am sure he will continue to get back to himself, thank you for being there for us, seriously this is the first time ever changed the catheter outside of routine procedure, Dad will come on leaps and bounds, perfect, thank you again."

Kilburn Hub went Live: Tues 7th June 2016

The Kilburn Primary Care Hub is a new service which is available exclusively to patients who may require an enhanced level of care because they have complex conditions or are housebound patients and therefore require a GP home visit.

Eligible patients for this enhanced service, which is led by local HPs and aims to avoid unnecessary ambulance calls out and hospital visits, were identified through analysis of the EMIS housebound codes in conjunction with local practices.

For this cohort of complex patients and their carers, it means they simply call 111 and are offered a specialist service.



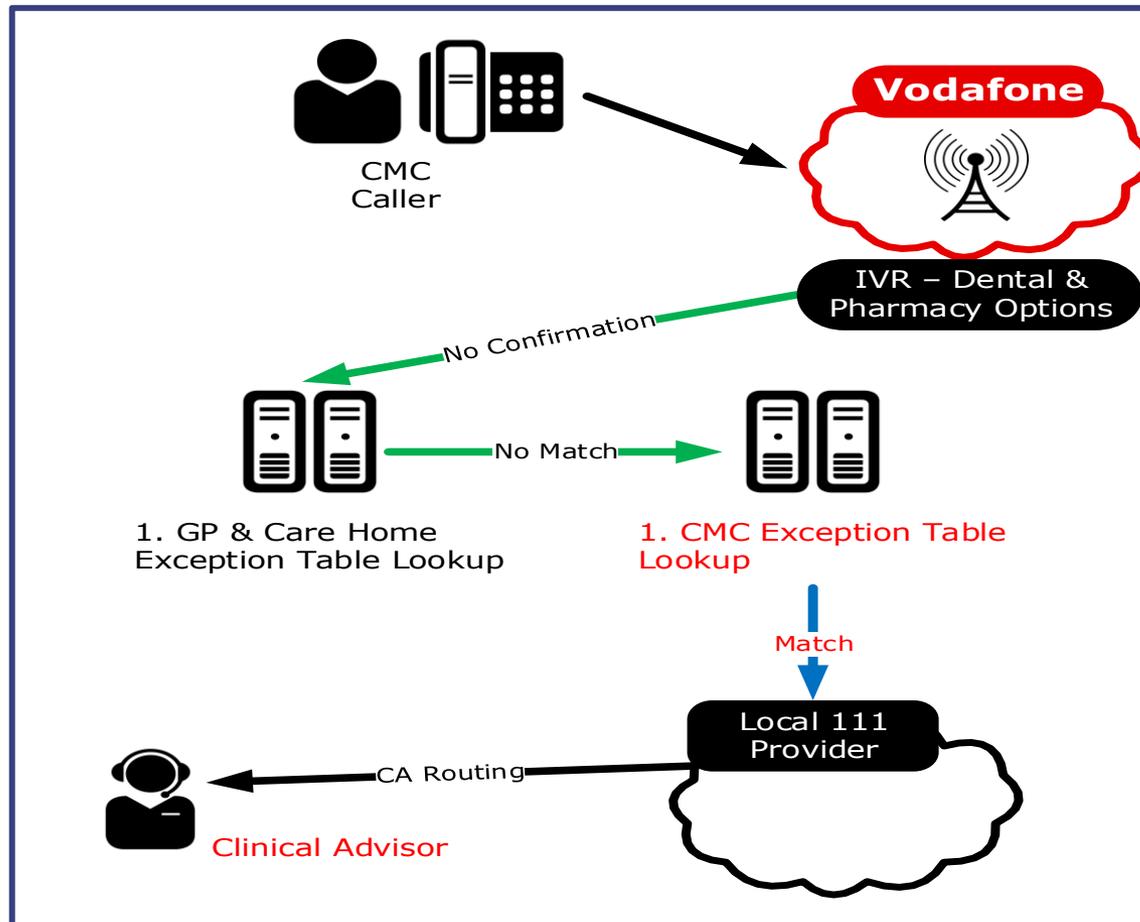
NB: The Kilburn Hub is initially answered by an administrator (with red flag training) who arranges for a clinician to call back within the hour.

Coordinate My Care (CMC) Routing

Background:

Callers with Coordinate My Care (CMC) care plans are routed directly to a Clinical Advisor with NHS 111, who can see in real time crisis / care plan information to support their clinical decision making and enable a clinician to follow the agreed plan of care.

This provides an enhanced level of 'personalisation' by ensuring patient's unique care requirements are fulfilled, and improves overall patient experience.



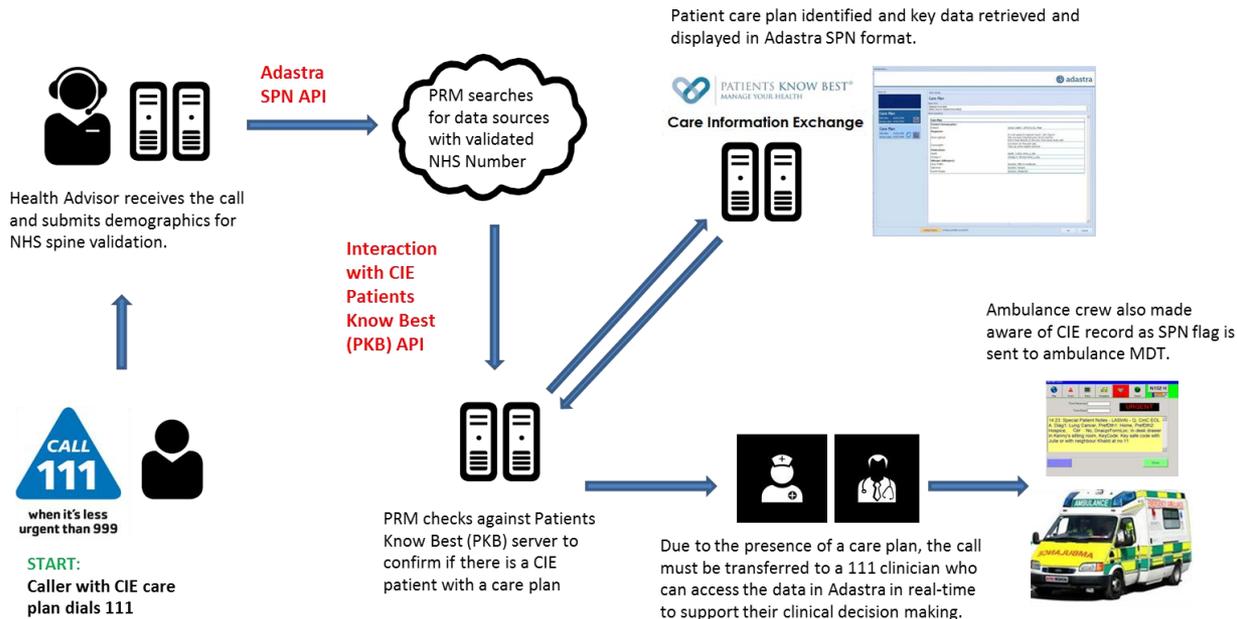
Care Information Exchange via PKB

Background:

The Care Information Exchange aims to support person-centred, integrated health and social care in NWL by:
giving individuals access to information about their care held by different health and social care providers
allowing individuals to share that information with health and social care professionals
providing secure messaging, shared care planning, and symptom tracking for individuals and professionals

The programme has the potential to involve GPs from eight CCGs, social care organisations, and acute, mental health and community trusts across North West London.

The Patient Relationship Manager has developed technical linkages to retrieve patient data for a pilot in Hillingdon - If a patient with a Hillingdon care plan who has consented to sharing contacts 111, the PRM is able to identify that a care plan exists and displays to the clinician in the 111 provider (usually expected to be Care UK in NWL) in the existing Adastra SPN format.



NB: Care Information Exchange also working with Advanced (Adastra) to extract data summary for the patient's encounter with Integrated Urgent Care services and capture record in their plan.

Using Special Patient Notes improves outcomes for patients in Integrated Urgent Care:

- Where information is provided to 111 in the form of special patient notes, callers are 50% less likely to have an ambulance dispatch and 80% less likely to have an ED referral than their Peers (Delliote review 2014).
- The Kings Fund and the Nuffield Trust reviewed the outcomes in London of SPNs. It found callers over the age of 85 with an SPN were 5 times more likely to have their call closed within 111 and 5 times less likely to have a referral to an Ambulance Dispatch than comparable callers without an SPN.

Special Patient Notes are currently created via inefficient manual processes

A pilot is currently underway to integrate the 111 Patient Relationship Manager with GP Systems so that Special Patient Notes can be automatically populated. Allowing for much simpler creation. Once the note is populated the GP would be able to publish enabling the PRM to pull the note for visibility by 111/Integrated Urgent Care. By enabling single auto click to populate patient information from GP systems allowing electronic automatic retrieval by the urgent care services, which will yield the below benefits:

Benefits:

1. Much easier for the GP to create with automated population of specific fields within the SPN direct from clinical systems and thereby removing the very manual process undertaken currently by GP Practices
2. No manual processing of Special Patient Notes by the IUC service removing the current process of GP OOHs manually entering the Special Patient Note on Aداstra
3. Data can be automatically populated from clinical systems and GP just needs to publish the record within their clinical system
4. Implementation for practices is quick and easy
5. Data is sent on demand between providers so no need to chase out of date notes

Background:

Camden Integrated Digital Record (CIDR) is an electronic record linking health and social care information from Camden General Practices, University College London Hospital, Royal Free Hospital, Central North West London NHS Trust (Community Care), Camden and Islington (Mental Health), Royal Marsden NHS Trust (Coordinate My Care) and London Borough of Camden (Adult Social Care) to improve care in Camden.

When a patient with a Camden CIDR record contacts 111, Integrated Urgent Care service staff will be made aware of data that exists in the portal through flagging which advises if the data is for information purposes, or action (mandatory log-in to view data) based on clinically agreed red flags.

