

Innovations in sexual health provision: technology's role in tackling inefficiency and supporting service development

The state of the UK's sexual health is a major issue for the NHS. Although 2010's report from the Health Protection Agency recently highlighted a marginal decrease in reported cases of STIs (dropping by 1% compared with 2009 figures), there was still a staggering 418,598 new STI diagnoses made in England alone. The report also identified that the peak age for contracting an STI is between 19 and 20 for women and 20-23 for men, and that around 10% of 15-24 year olds treated for an STI will be re-infected within a year. This, accompanied with the much publicised teen pregnancy rate, which is currently the highest in Western Europe, creates an incredible demand for effective sexual health provision.

However, there are barriers to creating effective services and perhaps the most prominent, in light of public sector austerity measures, is the current financial climate. Yet by embracing technology to tackle inefficiencies in existing services or to help develop appropriately tailored new services, costs can be cut and provision improved.

The Inform Sexual Health application has been developed in partnership with senior sexual health consultants in order to deliver fast and tangible results relating to: opening up access to services, supporting service delivery, speeding up service analysis and facilitating service development.

OPENING UP ACCESS FOR IMPROVED HEALTH OUTCOMES

Targeting the hard to reach social groups associated with sexual health means making services available at times and locations convenient to the patient; thereby making

attendance for often embarrassing conditions as quick and easy as possible. And it was this ethos that has recently prompted a major shake-up of the sexual health services in Stoke on Trent, as Sue Scott, principal health improvement specialist of NHS Stoke on Trent's Directorate of Public Health, explains:

"Historically, Stoke on Trent's sexual health service has been spread over several locations, with different services offered at different clinics. This not only caused confusion for patients, who were unsure of which clinic to attend for their specific need, but also caused problems for the numerous patients who present with multiple conditions, as clinicians had no choice but to refer them on to other services. This meant that accessing the care required was prolonged, which obviously had a massive impact upon both patient experience and the cost of provision."

To improve access to services, NHS Stoke on Trent made the bold decision to integrate all of its sexual health services into one central community setting, and by doing so create a one stop shop where all sexual health needs can be met, backed up by ongoing prevention advice. But the bringing together of services from a range of existing providers, including private organisations, meant tackling the problem of multiple stand-alone legacy and paper-based systems. Sue comments:

"To function as a fully integrated service it was clear that the technology supporting our service delivery also had to be integrated. In the past, prior to IT integration, too much of our resource had been spent completing paperwork and collecting data - resource that

would have been better spent treating patients.

"We are attempting to develop and deliver a truly integrated one stop sexual health service to meet the current and future needs of the local population. To futureproof service delivery it is imperative to invest in technology which is capable of improving patient experience, drive in efficiencies and release staff time to focus upon patients. I believe that this is the way forward to achieving an overall improvement in the sexual health of the local population and that we will quickly see a return on our investment in the Inform technology."

The overall project, which is being delivered by public sector transformation experts Tribal Group PLC, utilises the Inform framework to enable the sexual health service to triage the patient level of need to the right medical personnel in the required medical environment, manage patient records and patient flows and provide data reporting. The onsite kiosks will interface directly with patients to provide information, low level issuing, check in and appointment booking. Access will be improved further with a patient portal on Stoke on Trent's website, which will also offer an appointment booking functionality.

As technology becomes an ever present part of our everyday lives and people from all backgrounds and age brackets utilise it regularly for weekly food shops, booking holidays and checking in at airports, it seems only natural that health provision embraces the new way patients wish to access information and manage their health. A primary way sexual health services can open up access and reach notoriously hard-to-reach groups is through

The Inform Sexual Health application delivers a better patient experience and cuts down on admin

the internet. Having a strong online presence and a user-friendly patient portal can make booking appointments, communication with the clinic and checking results far more appealing to the patient and cost effective to the clinic. The typical demographic utilising sexual health services, including HIV clinics, have grown up surrounded by technology - and the anonymity it offers matters to patients.

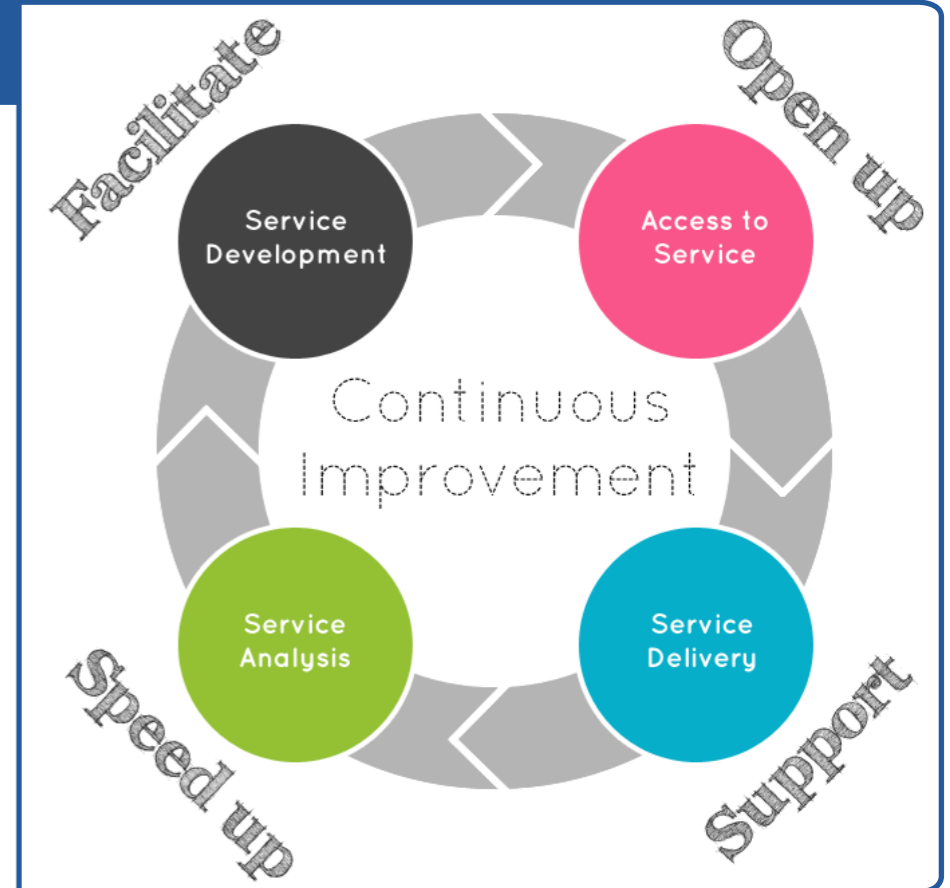
DELIVERING A MORE EFFECTIVE SERVICE

A key theme highlighted in the recent next stage review plans for the NHS is that of promoting patient experience. And the first step in the process of improved patient experience is ensuring the patient is directed to, and then receives, the most appropriate level of care, and is neither waiting for excessive time periods nor passed from pillar to post in the process.

Increasing the number of clinic locations, and opening hours alike, is pointless if services available or the competencies of staff on duty fail to match patient requirements. The universal goal of improving patient experience fails, and the investment of increasing physical access is wasted, if inefficiency in planning and a drastic lack of visibility prevail. The Inform technology offers a solution to this problem and a cost effective means of mitigating the risk of sexual health services failing to deliver.

A one size fits all approach to health services of any kind is unrealistic and delivering sexual health provision is no different. One way technology can promote improved service delivery is by ensuring the required service is available at the required location. This can be achieved simply by matching clinician competencies with treatments required during the appointment booking stage.

Sexual health professionals are qualified in different areas: some are able to offer HIV counselling but unable to prescribe medication, others can test for STIs but are unable to provide pregnancy advice. Therefore the type of care that can be delivered by a health outlet is entirely dependent upon the clinical staff present on any given day. Having the ability to match appointment bookings with locations, and the staff competencies available, not only removes the cost associated with inappropriate



bookings but facilitates a better experience for the patient.

The Inform Sexual Health application facilitates better service delivery by providing users with a holistic view of the services that are available in each clinic. This is achieved by storing individual clinicians competencies, which in turn allows the patient to select the most appropriate appointment level that they require. This level of control allows patients, via triage, to automatically book the most appropriate level of care available through the use of automated technologies. This creates a more reliable means of matching patients with services and frees up resources for service staff.

The Self-service technology is another innovation that can improve the overall patient experience by reducing waiting times and assisting with way-finding. Self-service technology, which patients of all walks of life are familiar with, thanks to its uptake in supermarkets and airports, offers a confidential method of checking into a clinic for the patient, and helps reduce the burden of administration for the clinic.

ACCURATE DATA CAPTURE AND ANALYSIS

Before existing services can be developed or new ones implemented, it is imperative that

the unique problems associated with any given area are correctly identified and scrutinised. Without accurate data collation and analysis, service managers and commissioners risk stabbing in the dark when it comes to attempting to create effective services. The traditional method of analysing data stored within paper-based patient records is time and labour intensive and the results are often untrustworthy. Thus, taking into consideration that clinics are paid by results, each inaccurate record of activity incurs a financial penalty in addition to the associated cost of the inefficiency.

Technology has the ability to remove this barrier to effective service improvement by automatically storing accurate patient information each time the patient is seen by a clinician. Meaningful data can then be analysed at the click of a mouse and services tailored to a specific area's requirements. For instance, if a high volume of patients from a particular geographical area were requesting the morning after pill, the technology would quickly help commissioners identify the trend, enabling them to implement educational and delivery outreach services designed to promote the use of contraception.

To enhance the sophisticated level of data scrutiny, the Inform system incorporates

mapping capabilities from leading software analytics consultancy, Beacon Dodsworth. A visual illustration of services provided over a set period of time, is more compelling than a simple graph or spreadsheet and provides a far better understanding of the health needs of local communities and populations, by identifying trends and patterns in order to target health improvement more effectively. By incorporating Beacon Dodsworth's mapping and analysis functionality, the Inform system can create detailed maps highlighting each sexual health hotspot and allow users to drill down into an individual patient's record.

This technology is not new to healthcare and is being used in other areas to overcome similar challenges. Beacon Dodsworth's geographical information system is used by Derbyshire NHS Mental Health Services Trust

to achieve their aim of providing an effective, accessible and modern Mental Health Service. The ability to develop services to meet client need and maximise service efficiency is essential in achieving this goal.

Through the use of this product, Derbyshire Mental Health is able to plot and analyse service locations and facilities against patient attendance data, their referral location and their specific needs to establish and evaluate patterns and densities. These patterns help plot mental health inequalities in terms of geography where no services, facilities or resources are available to a particular ward or postcode and in terms of individuals, where access to services may be restricted for certain groups of people. This not only allows the Trust to target resources better by providing relevant help and education to areas identified

as most at risk, but is used to influence the Trust's plans for future build locations, service provisions and resource allocation. This in turn leads to improvements in administration efficiency and staff useage improves the routing of referrals in line with the NHS operating framework whilst improving patient experience and outcomes.

Another instance where accurate data collation is crucial is within a HIV clinic. Automation, through the use of Inform's functionality, will enable users to check results, identify trends based on these results and provide a holistic view of the whole situation. This in turn will allow the operation of the clinic to become more efficient and proactive and ultimately help reduce the spread of the disease through promptly identifying disease clusters and emerging trends.

Allowing technology to lend a helping hand in relation to collecting meaningful data not only plays an important role in assisting service development but facilitates more efficient research by enabling quick access to specific patient information. For example, patients who satisfy the inclusion criteria for a particular study can be identified by simply clicking a few options and pressing the return key, rather than having to manually read through endless sets of notes or clinic letters.

FACILITATING SERVICE DEVELOPMENT

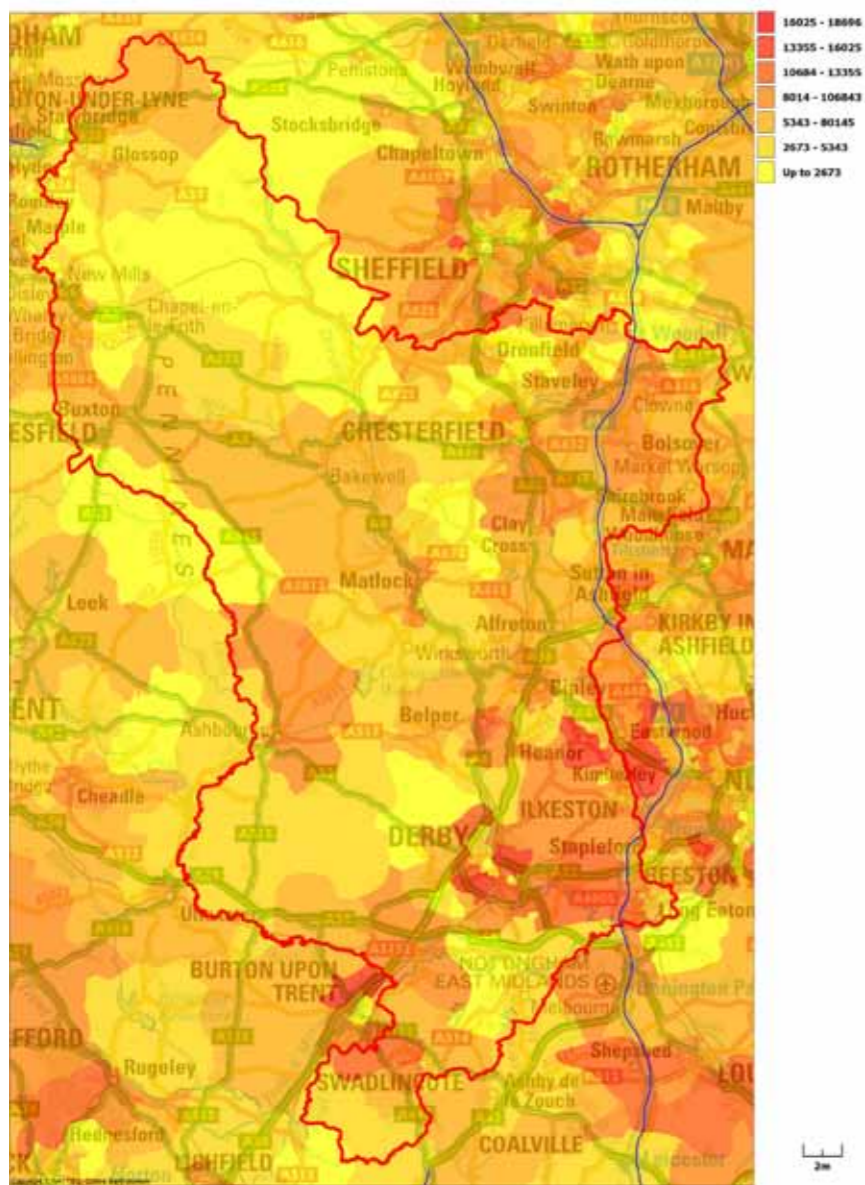
Today, NHS budgets are perhaps at their most stringently guarded since the organisation's inception. So when it comes to meeting the national improvement objectives through service development, financial investment of any level must be able to demonstrate a tangible return on investment, through the creation of a realistic and well researched business case.

On first consideration, investing in technology to improve, expand or develop services can appear an unnecessary expense. However, upon closer inspection, the benefits of moving from a paper-based or static appointment booking system, to a sophisticated yet user-friendly electronic model become obvious.

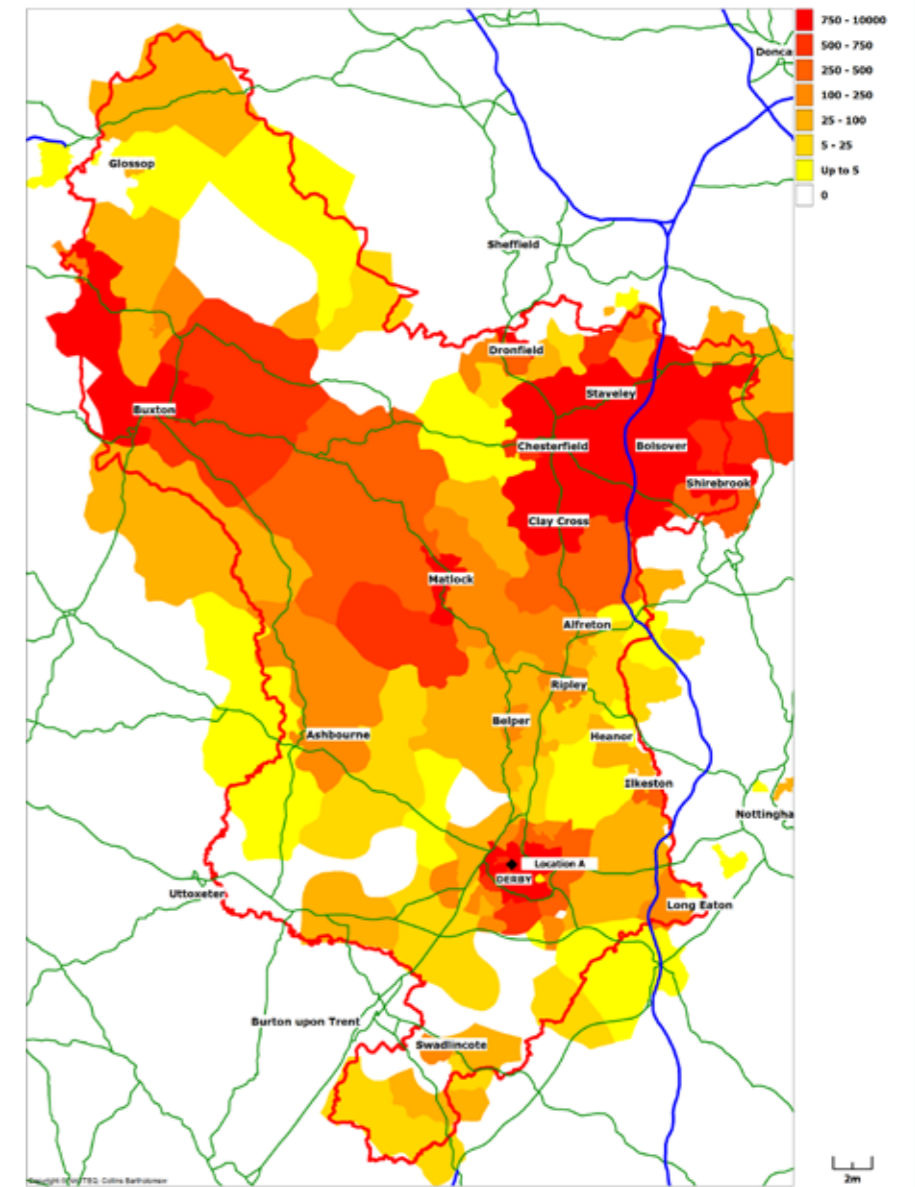
Technology has the power to facilitate service development. A HIV clinic, for example, deals with a large percentage of follow up patients:

Population density for adults aged 16+ in a given geographical boundary

Adult Counts Hot Spots



Location of patients attending Clinic 1, anonymised to ward level



these are patients who will need to visit the clinic regularly to be monitored and prescribed medication – varying from twice a year to twice per month depending upon the stage and severity. Cumbersome legacy systems in place in a majority of HIV clinics only provide appointment booking functionality and leave clinicians reliant upon paper-based patient records for the medical history and a variety of software packages for the rest of the clinical information. This not only contributes to the general administration and staffing costs of the clinic but also runs the risk of reducing the actual clinic capacity, due to delays associated with locating paper based records, missing or misfiled results or even patients being booked into the wrong appointment slot. In turn, this can have financial implications not just for the clinic, but for the Trust as a whole.

Gabriel Schembri, a consultant in GU medicine at Manchester Royal Infirmary, has been working alongside a team of developers at Inform to create an application specifically designed to enhance efficiency and improve patient care in a HIV clinic setting. Drawing upon his clinical experience within the HIV field, Gabriel has been able to provide an insight into the problems experienced by physicians and patients during an HIV clinic, and work with Inform to create solutions to these problems.

A significant difficulty highlighted by Gabriel is that of quick and reliable access to all the bits of information required during the consultation, including recent and past test results, vaccination history, sexual history, letters from other clinicians and the patient's drug history. This is solved easily with Inform's secure platform, which enables authorised users to immediately navigate to the specific data group required, similar to navigating through a well designed web page. There are however a number of other areas that the Inform platform will help HIV clinics improve so that the expected efficiency savings can be delivered.

Investigations can be requested directly through the Inform interface, eliminating the need to fill in multiple forms and the possibility of labelling errors. Test results can be updated automatically within a specific patient's record, which in turn eliminates filing errors.

Abnormal results can be highlighted for further action by a clinician, based on a number of pre-defined parameters. Resistance mutations, both recent and historical, can be analysed automatically by tapping into the Stanford database directly to ensure the most up to date interpretation. The Framingham cardiovascular risk calculation can be done automatically using the patient's demographic data and the latest laboratory results. Alerts can be set up for vaccinations and cervical smears. Reminders can be sent automatically to patients who have appointments the following week, or to those who have failed to attend. The system is also highly customisable and can be tailored according to the needs of the service.

Gabriel comments: "It's essential that clinics function as efficiently as possible to ensure that the maximum number of patients are seen and that they all receive the highest

possible standard of care. Unfortunately, out-of-date systems can often make this goal harder to realise and in many cases prevent it from happening altogether. The Inform HIV application understands the barriers to streamlined services and provides the solution to the problems of disjointed data capture, a lack of quick access to patient records, lengthy manual analysis and a lack of patient interactivity. I'm confident that HIV clinics using Inform's technology will benefit from improved working practices and a reduction in administration costs."

To find out more about Inform Sexual Health and how it can help improve the effectiveness of sexual health services, or to request a demonstration, please contact:

Susan Bunn
Tel: 01285 657516
or visit the Inform website at www.informsexualhealth.co.uk