



The Wirral Chlamydia Screening Programme



Excelicare is a powerful toolset-based application that allows the creation of highly tailored clinical systems to reflect the complex working patterns of clinicians across the healthcare spectrum. It incorporates advanced telecommunication, multi-media and decision support technologies within a clinician-friendly Electronic Patient Record (EPR) framework. Currently in use in several sites across the NHS in Scotland and England, it provides support to clinicians in diverse areas of care.

Implementations span complex cancer care across a region-wide network, remote monitoring of COPD patients living at home, to blood pressure, diabetes and colposcopy clinics, demonstrating its wide and varied scope of use. In December 2005, Excelicare was chosen as the National Generic Clinical System for the NHS in Scotland.



Genital Chlamydia trachomatis infection is the most commonly diagnosed bacterial sexually transmitted infection and the number of diagnoses in genitourinary medicine (GUM) clinics has been steadily rising since the mid 1990's. As most cases are asymptomatic, large proportions remain undiagnosed and the annual cost of Chlamydia and its consequences in the UK is estimated to be more than £100 million.

Dr Jenny Hopwood, Consultant in Sexual Health and Lead Clinician for the Wirral Chlamydia Screening Programme and Dr Harry Mallinson, microbiologist have worked on research into Chlamydia for over 20 years and were instrumental in identifying the possibility of testing in the community.

After recommendations made by an Expert Advisory Group on Chlamydia Trachomatis, the Department of Health (DH) funded a pilot study to determine the feasibility and acceptability of opportunistic chlamydia screening. Two pilot sites were set up in The Wirral and Portsmouth which subsequently led to the establishment of the National Chlamydia Screening Programme (NCSP) in 2002.

The Wirral has since become a key reference site within the NCSP and has led the way in terms of developing innovative solutions to help streamline the operational day to day process of running the Chlamydia Programme within its region. To assist with this in 2003 the Wirral chose the AxSys Technology Excelicare product to provide the platform on which its Chlamydia Screening and Management Information System (CS&MIS) would be based.

The Pilot Chlamydia Screening Programme

The Pilot Programme was driven by Dr Jenny Hopwood and was based at St Catherine's Hospital, Birkenhead which also acted as the treatment centre for the region. Testing was offered to all sexually active young men and women attending a range of healthcare settings. Acceptance and uptake of testing was high (more than 75%) and approx 50% of the eligible population aged less than 25 years were tested between September 1999 and August 2000.

"To demonstrate the benefits of the Programme and measure the incidences of the disease, the collection of data was imperative," commented Dr Jenny Hopwood. "The Pilot also highlighted the need for effective communication between the laboratory, where samples were tested, and the treatment centre."

Whilst the Pilot was running it became apparent that providing a Chlamydia Screening Service would be very labour intensive without an effective IT system. In terms of collating documentation and following audit procedures it was a slow and laborious task with the system they had in place. After an analysis of the departmental procedures it became evident that a more effective computerised

management and audit system would be required to maintain standards of service delivery and patient care and to provide the building block upon which the Sexual Health Services could grow.

NCSP Roll Out

After the successful Pilot Studies at Wirral and Portsmouth, the DH decided to proceed with the roll out of the NCSP. It was to be rolled out in phases to allow for managed growth and implementation began with an initial 10 programmes with a further 16 rolled out in 2004 bringing screening coverage to 25% of all Primary Care Trusts. The DH set generic standards for each screening programme and information delivery requirements so that they could be monitored and evaluated.

To overcome the technical issues the DH devised an IT system that was to be utilised by the Wirral's Pilot Chlamydia Programme.

"We had to use a computer system called CPS (Chlamydia Pilot Screening). It was clearly unsatisfactory and was developed from an IT, not a clinical perspective and was costing us extra time and money," commented Dr Jenny Hopwood.

"Subsequently the advice from the DH was that each screening area should develop its own IT system and CPS was abandoned. We sought advice locally and were put in touch with AxSys, who had the clinical and strategic approach which we required to help us develop our own system."

A fundamental aspect of improving the delivery of patient care is the facilitation of multidisciplinary collaboration and the effective sharing of information. The Collaborative Care model, which also involves patients in their own self-care, is widely recognised as a method of delivering consistent, high quality healthcare resulting in improved outcomes for patients.

AxSys Technology, the organisation behind Excelicare, was set up by experienced doctors who recognised the benefits of the Collaborative Care model in their own clinical practice and realised that a flexible communication oriented clinical information system

would be a key element in its successful delivery. The provision of smart tools to deliver the right information at the right time and place to the right people was felt to be as important as the face-to-face encounter in the traditional healthcare model.

Excelicare was conceived as a solution for Collaborative Care and its underlying architecture has been designed to support this new mode of healthcare delivery. It is also underpinned by standards in data management and has the ability to integrate effectively with existing healthcare IT systems.



Development of the Chlamydia Screening and Management Information System

The Wirral Screening Programme adopted an initiative to design its own CS&MIS and a project team of clinical and administrative staff was set up in 2003 driven by Dr Jenny Hopwood. The objectives were:

- > To streamline the screening process and enhance service provision
- > Reduce administrative time used by clinicians
- > Improve patient access to the Chlamydia service
- > Facilitate clinical governance and audit
- > Integrate the solution into the existing IM&T infrastructure.

"The chlamydia system we were using was labour intensive and was running the risk of the programme becoming increasingly paper based. Despite this we still continued to operate satisfactorily and deliver a good service. To avoid falling standards we had to find a solution that would enable us to streamline the operational day to day processes, maintain the effective management of patients and reduce the time in which it was taking to collate relevant data for the delivery of six monthly audit reports for the DH," commented Dr Jenny Hopwood.

In the development of a solution the project team established very strict criteria as to features the CS&MIS had to include, such as; a familiar, friendly and consistent interface, ability to capture, store and view multimedia in a variety of formats; ability to email patient data and merge it directly into the record; facility to enable clinical audit and governance and a comprehensive reporting module.

The Final Solution

The Excelicare product now provides an integrated computer system for Chlamydia and related genito-urinary diseases. The system was set up based on completing 10,000 tests per year covering the population of Chester and Wirral and currently 400 to 500 patients are screened every month.

The Excelicare server was set up at the Chlamydia Department, St Catherine's Hospital which acts as the base for the Screening Programme. External sites, including a treatment centre at Chester, are linked to this centre giving clinical and administrative staff access to a single database containing all patient records.

"AxSys didn't blind us with IT jargon like so many other companies had done. They knew and understood the issues so just got on and developed the system in accordance with our needs and requirements," commented Dr Jenny Hopwood. *"It was a really collaborative approach and we identified everything before implementation."*

The module used for the Screening Service was developed using Excelicare's Designer Toolkit meaning that all information is captured at each patient event. Starting with the screening sample, all test results are delivered electronically back to the chlamydia office which generates automatic prompts for the patient to be notified so that the correct course of action is taken for either negative or positive results. This ensures that correct treatment protocols are followed whilst documenting the clinical care pathway. Management of the care process via the system means that patient notes are available on the desktop where and when required. Excelicare's Report Manager is used everyday as it provides a constant record of what stage the patient is at in their treatment plan and enables data collection for audit and reporting purposes.

Realisation of Benefits

Automating the process of data collection at the point of care has dramatically improved data quality which has had a positive bearing on audit and governance. The improvement in patient care is demonstrated by the fact that 95% of positive patients are now informed of results within two working days of results being issued from the laboratory.



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"We achieve high standards by measuring ourselves against set targets. We could not do this before Excelicare arrived as we could not retrieve any meaningful information from the old computer system," states Dr Jenny Hopwood. "It's a much smoother process now, no more manual letters and staff have more time to complete their responsibilities and deal with the patients."

Efficiency and productivity of the screening service has improved ten fold as well as the quality of data recorded. The main highlights include improved care through greater accuracy of patient information, improved access to the services offered and faster patient turnaround through rapid processing of records and test results.

"Excelicare has been revolutionary. We can now easily collate information that has to be delivered in six monthly reports for the DH. This now takes hours rather than days," comments Dr Jenny Hopwood. "We can now compare figures across the region and monitor where there is a growing prevalence of the disease."

Now and the Future

"The Wirral's Chlamydia Screening Programme has been a success and there is no doubt that awareness of the infection has increased. We are confident that we are now able to meet the goals and objectives set by the NCSP and the development of the CS&MIS based on Excelicare has been fundamental in this achievement," states Dr Jenny Hopwood.

"We fought to get Excelicare and I am glad that we did as a good programme depends on good, sustainable IT. The development of CS&MIS has helped to introduce some standardisation across the NCSP and I am encouraged by the fact that a number of Screening Programmes are looking at the Excelicare solution."