



North West London Cardiac Network

PROJECT TO REDUCE WAITING TIMES FOR INTER-HOSPITAL TRANSFERS (CARDIOLOGY INTERVENTION & CARDIAC SURGERY)

All organisations are asked to consider and endorse this paper. Implementation of this project will allow establishment across all North West London organisations of a secure, robust, transparent and auditable electronic system for assessing and referring patients requiring in-patient Cardiology intervention. Once agreed by Trust Lead Clinicians and managers, Chief Executives will be asked to endorse full implementation of the project within their respective organisations.

BACKGROUND

Significant work has been underway across the North West London Cardiac Network (NWLCN) to find ways to reduce delays for patients who have been admitted as emergencies with a cardiac condition and who are then identified as requiring transfer to a treating centre for either an Interventional Cardiology Procedure e.g. Angiography, Angioplasty, Pacing or for cardiac surgery.

Such patients are typically referred from a local hospital (Type A) to a specialist receiving hospital (Type B).

Type A: Main referring centres across NWL

1. Chelsea and Westminster Hospital
2. West Middlesex University Hospital
3. Ealing Hospital
4. Central Middlesex Hospital (part of NWL NHS Trust)
5. Northwick Park Hospital (complex Angioplasty, Pacing and Surgery only – also forms part of NWL NHS Trust)
6. Charing Cross Hospital (part of Hammersmith Hospitals NHS Trust)
7. Hillingdon Hospital

Type B: Main receiving centres across NWL

1. St Mary's Hospital
 2. Hammersmith Hospital
- Royal Brompton & Harefield NHS Trust:**
3. Royal Brompton Hospital
 4. Harefield Hospital

95% of residents within North West London who develop a cardiac condition receive treatment at one of the Type A or Type B centres. However, due to their specialist nature, it should be noted that all of the receiving hospitals (Type B) also take patient flows from outside of the North West London Network.

PRESENT SITUATION

One stream of the work aimed at reducing waiting times for this patient group has involved Cardiologists working together to agree and share a common format for referring Cardiology patients across the North West London Cardiac Network in order to ensure equity of access. This common approach enables a) the consistent assessment and risk stratification of patients across

the Network, b) the centralised collection of robust audit data, c) the re-direction of patients to a centre with lower waiting times when bottlenecks occur within particular centres.

To date, a standardised referral form has been agreed and is being implemented by centres across North West London. However, due to existing IT limitations for tracking patients in many of the organisations, the only available mechanism for implementing this at present is via a paper based referral system with all the limitations this holds.

The NWLCN wishes to design and develop a new more efficient process, using web technology and with the security of the NHS net to transmit referrals electronically across the Network.

This project brief predominantly focuses upon Cardiology referrals. However, it is also anticipated that Cardiac Surgery referrals may also be addressed via this IT solution at a future stage.

CURRENT PROCESS

There is an established process by which patients are referred from Type A hospitals to Type B hospitals. The efficiency of the process affects the length of the waiting time. In general terms, the process involves five steps:

1. Admission: Referring hospital admits patient, establishes a diagnosis and requests transfer for further treatment.
2. Referral: Referring hospital completes NWLCN Referral Form (NWLCN RF) and faxes it to the receiving hospital (or telephones if urgent). A second copy will be faxed to the NWLCN Scheduler (once they are in post from August 05).
The receiving hospital keys in the NWLCN RF data into an access data base or similar, checks bed status and when able, provides a date for transfer to the referring centre. Some centres have pre-agreed "transfer slots" each week and select which patients from their centres should be transferred. In such circumstances, the referring centre only sends the referral information through 24/48 hours prior to planned admission.
3. Transfer: The patient is transferred to the receiving hospital and the date of admission is logged.
4. Procedure: The patient undergoes a cardiac procedure.
5. Discharge: The patient is sent home or back to the referring centre.

This paper based referral system has a number of inefficiencies:

- * Data is entered twice by both the referring and receiving centres
- * Referrals are often lost with referring centres awaiting dates to transfer their patients when receiving centres claim not to have received the referral; this causes further delays to patients.
- * Referring centres do not have direct access to the waiting list data at the receiving Trust and therefore have to call daily to ascertain where patients are on the waiting list.
- * The process generates significant workload for all concerned and is not robust
- * The point at which the patient is deemed "fit for transfer" is not routinely logged. The "fit for transfer" event is the point at which the waiting time clock should start ticking. Without this information, waiting times often appear worse than they are.
- * Overall, there is insufficient information to inform improvements in care for this group of patients.

THE OBJECTIVE

The NWLCN aims to cut waiting times for this patient group. To do this effectively, it must first know what the true waiting times for patients at each stage of the pathway actually is. Once this information is available, the NWLCN will be able to channel patients quickly and easily to the Cath Lab with the shortest waiting list. This will involve a two phase approach:

1. Collecting data
 - * Identifying the key areas for improvement within the referral process: Clinical and Non Clinical key performance indicators (KPI)
 - * Determining what reports are necessary to reveal the status of the KPIs
 - * Collecting sufficient KPI data to produce the reports
2. Identifying and reducing waiting times
 - * Learning from the reports where the bottlenecks are
 - * Allocating patients efficiently (switching them to their second choice hospital if necessary)
 - * Feeding results back to the process managers

THE STRATEGY

The intention is to create a new and improved Patient Referral System (PRS) which can be implemented in the receiving centres. In the first instance, this may have to be piloted within one of the receiving centres.

This will have a number of advantages:

- * Data need only be recorded once, either at the referring hospital or at receiving hospital.
- * Data collected will be available online at all points within the process, (enabling organisations to view waiting time data at each centre directly), with the proviso that referring hospitals will initially be limited to their own data.
- * The clinical teams on the ward or cath lab (whichever is appropriate) will be able to easily prioritise patients waiting for a procedure.
- * The quantity and quality of the data recorded will permit uniquely comprehensive studies to be made across the Network, resulting in research papers that can be circulated to the advantage of the rest of the NHS.

THE NEW PATIENT REFERRAL SYSTEM

The primary features of the new PRS will be:

1. Online. Everyone involved in the process will be able to view and manipulate process data in real time.
2. Secure. Access will be password controlled.
3. Resident on the NHS intranet. The PRS will be developed on a development server and, when ready for live testing, will be uploaded to the NHS' mirror server ready for transfer by the NHS to their in-house server. Individual Trusts will be able to use existing web technology without the need to buy additional functionality and software.
4. Error proof. A checking mechanism will ensure fields are completed properly, e.g. if the period between events is longer than a pre-defined optimum the PRS will require an explanation. Dropdowns will be used wherever possible, e.g. for drugs and for the more common reasons for delays, backed up where necessary by free text fields. Safeguards will be used to avoid duplicating patients, e.g. listing existing records that are similar demographically to a new record. An alert system will flag any delay that is in excess of a set time.
5. A data repository. A pool of answers to approximately 100 questions per patient, from which data can be downloaded and crunched offline.

Once data has been entered, it will be rendered 'read only' where appropriate and there will be an audit trail showing every entry and edit.

THE DATA REPOSITORY

The information collected and recorded will include the contents of the NWLCN RF, and some additional features:

- * Referring hospital details
- * Patients personal details and demographics
- * Date of admission to referring hospital
- * Angiogram data on each patient: the condition requiring transfer, major complications, previous interventions and reasons for referral
- * Priority level of each patient: the patient's TIMI risk score
- * The 'fit for transfer' time of each patient
- * The current status of each Cath Lab: bed availability
- * The final waiting time of each patient
- * The outcome of each patient's journey through the system
- * The accuracy of the initial assessment

Data will be filterable online:

- * By patient. The report will show, for example, the complete pool of patients across the region at any moment in time, ranked by level of urgency. This would allow receiving hospitals to eventually "draw down" patients when their waiting lists are below a predetermined trigger level.
- * By hospital. This report will make it easy to constrain a referring hospital to their own data.
- * By event. This report will make it easy to see what is in the pipeline.
- * By calendar time period. This report will be useful for showing trends during a particular period of observation.
- * By longest/shortest waiting time. This report will make it easy to locate best /worst practice.

Other reports will be run offline, for example on:

- * The overall accuracy of each hospital's initial assessments
- * Numbers of patients at each point within the process
- * Average number of patients transferred
- * The average waiting time between each event
- * The average final waiting time for all patients

THE INTENDED OUTCOME

The new PRS will involve seven events, a new event (fit for transfer) being introduced at point 4 and another at point 7 (Follow-up). Data is logged online at each event.

1. Admission: Referring hospital admits patient, establishes a diagnosis and requests a transfer for further treatment.
 2. Referral: Referring hospital enters data online. It then checks online the status of bed availability at the receiving hospitals, selects the one which will incur the least delay and books a bed. The receiving centre acknowledges the booking and allocates the patient a slot for a day or more.
 3. Transfer: The patient is transferred to the receiving hospital and the date of admission is logged online.
 4. Fit for transfer: The patient is logged as being fit and ready for the procedure.
 5. Procedure: The patient undergoes a Cardiac Procedure
 6. Discharge: The patient is sent home or back to the referring hospital.
 7. Follow-up: A record is made of each patient's condition after a set period of time.
- * All hospitals will have access to their own data, enabling personal benefit to be gained from inputting the data. This will be of benefit to organisations in terms of assessing length of stay, waiting times and specific clinical indicators.

Before full roll out across the Network, this project will need to be piloted on a smaller scale covering one health community to ensure viability. Assuming project aims can be met within required timescale and within the allocated budget, recommendations on roll out across the Network will be made to the NWLCN Board.

DEVELOPMENT SCHEDULE

The NWLCN Scheduler is due to commence employment on 1 August 2005. The new PRS will need to be completed as close as possible to this date.