

MEDWORXX UNDERPINS HIGHLY SUCCESSFUL CASE MANAGEMENT MODEL AT ROYAL LIVERPOOL

Utilisation management data helps multi-disciplinary ward teams reduce LOS and clear obstacles to efficient and timely patient flow.

BACKGROUND

EXPLORING NEW APPROACHES TO HEALTHCARE QUALITY

The Royal Liverpool and Broadgreen University Hospitals (NHS Trust) is one of the largest and busiest hospital trusts in the North of England, with an annual budget of over £400 million, 750 beds, 5,600 directly contracted staff and over 650 staff in hosted/contracted services.

The Trust consists of three facilities: the Royal Liverpool University Hospital, which focuses on acute care and electives for more-complex patients with co-morbidities; the Broadgreen Hospital, a diagnostic and treatment centre providing outpatient care and routine elective procedures; and the outpatient Liverpool University Dental Hospital.

In addition to providing medical, surgical, diagnostic, rehabilitation and therapy services to a local catchment area that includes more than 80% of Liverpool's 430,000 residents, the Trust receives patients from far and wide because of its specialty areas, including renal transplant and dialysis, cancer services, infectious diseases and pancreatic units.

CHALLENGE

The Challenge

Reduce
Excessive
Lengths of Stay

Management at the Royal Liverpool and Broadgreen University Hospitals Trust (RLBUHT) was concerned about the excessive Lengths of Stay (LOS) they were experiencing, which was resulting in a shortage of available inpatient beds and thus congestion in the Emergency Department. This, in turn, meant that patients were waiting longer to be admitted and for treatment to start, which impacts the patient experience and possibly the outcome.

For one thing, the country's Payment by Results funding model is based on shorter stays and does not reimburse hospitals for the cost of extra patient days. In addition, the Trust was finding it challenging to meet the NHS' Emergency Access Target – if a patient attends the Emergency Department, the facility has only four hours in which to get the patient seen, diagnosed, treated and a decision made to either admit or send the patient home. A decision to admit requires an available bed, otherwise the patient may be stuck in Accidents and Emergency (A&E) departments.

“Although we were managing to meet this target, it was always a big challenge to juggle capacity, demand and availability,” exclaims Trish Armstrong-Child, Deputy Director of Operations at RLBUHT.

Further compounding the situation, Royal Liverpool will soon be moving into a new facility which, consistent with the UK’s drive toward more ambulatory and community-based care delivery, will have considerably fewer beds. It was clear that RLBUHT management needed to address the LOS issue and optimise bed utilisation in general.

“In order to manage with far fewer beds, we knew we had to look at new models of care, and implement them now to ensure they are effective before we get into the new hospital,” says Armstrong-Child, who goes on to say that it was important for them to get away from their traditional view of what the problems were and to find out what was actually happening. Management was keen to understand what the community delays were in moving patients out of the hospital and into community-based care and how they could work with community partners to speed up this process. They also wanted to identify hospital-based delays and how to be systematic about managing those also.

PATIENT FLOW AUDITS YIELD INDISPUTABLE RESULTS

To get a clear picture of bed utilisation, particularly with respect to LOS and problems with patient flow through the hospital and into the community, the Trust engaged the services of ModelAdvice DC Consulting Ltd. to perform a baseline Patient Flow Diagnostic assessment.

ModelAdvice is a local UK firm that focuses primarily on patient flow, providing consulting, advice, guidance and assessments for the NHS and other healthcare organizations, and helping them implement technology to smooth patient flow.

The report from the initial, baseline assessment revealed many community delays that leave patients in acute care beds who could have gone home or into the community for intermediate care. Although a number of recommendations resulted, the focus coming out of that audit was on establishing the Trust’s Delayed Transfer of Care team and bringing the three main stakeholders together – Acute Care (the Trust), Community Partners and Social Services – to collaborate on managing patients and clearing away obstacles to accessing healthcare services in the community. The goal was to speed-up patient discharge from the hospital for patients assessed to be clinically stable and no longer requiring acute care.

“When we did the first audit and saw the data, we pretty much knew what the issues were but it was quite startling to see this done in a methodical way where you can’t argue with the data,” says Armstrong-Child.

Two years later, a follow-up assessment was conducted by ModelAdvice to see if actions undertaken as a result of the initial assessment had any impact. In addition, staff were interviewed about coordination, admission-avoidance and discharge planning strategies, about which there were concerns that changes resulting from the first audit had not been sustained. The study revealed that there had been only a one-day LOS reduction in Medicine, minor reduction in the number of patients waiting for community facilities and no change in the A&E admission rate or the percentage of patients in acute care.

“Even though we achieved a small measure of success in reducing LOS, there was still opportunity for further improvement and a need to ensure the changes we made were sustainable, all while seeing that patients continue to be cared for in the right setting by the right people,” states Armstrong-Child.

Retrospective
Coordination &
Admission-Avoidance

The Solution

CASE MANAGEMENT & MEDWORXX TOP RECOMMENDATION LIST

It was determined that a more consistent, pro-active and process-driven approach to managing patient flow was required, incorporating the whole system, both internal to the hospital and across the community. The Trust decided to adopt two strategic recommendations made by ModelAdvice – adoption of a Case Management approach to managing patient flow, and the use by Case Managers of the Medworxx Utilisation Management (UM) system.

Collaboration Between Case Management & Medworxx Patient Flow

In Case Management, each acute care patient is assigned a Case Manager immediately upon admission to the hospital. The Case Manager's role is to work proactively with the Ward Sisters/Matrons, Consultants, Nurses and Allied Health Professionals, as well as with Community and Social Service partners, to coordinate each patient's care stream and move the patient toward clinical stability and discharge.

Medworxx UM, the tool recommended by ModelAdvice for the Trust's Case Managers, is based on a short, daily assessment of each patient, using predefined 'criteria sets' corresponding to the patient's type of illness, to identify the patient's current status (e.g. needs acute care, ready for discharge, suitable for alternative levels of care) and to indicate whether service delays or blockages to patient flow are due to physician, hospital or community reasons.

"In a well-run utilisation management environment, it's possible to achieve an "Admit from A&E" rate of less than 20%, through the combined use of Case Management and Medworxx," claims Karen Dunwell, Director of ModelAdvice. She goes on to explain that in hospitals not using Case Management or not having the benefit of Medworxx Criteria Sets to help A&E clinicians make effective admit/no-admit decisions, the admission rate can far exceed 25%, resulting in a significant number of patients ending up in acute care beds that do not require that level of care.

MEDWORXX REFLECTS UK SYSTEM

It turns out that in addition to using Medworxx for the RLBHHT patient flow assessment, ModelAdvice regularly uses it when conducting similar assessments for other NHS Trusts.

"It was an easy decision for us to use the Medworxx UM for RLBHHT and our other UK customers because US-based tools are very 'payer-centric', while the Canadian-based Medworxx product is very patient-centric and thus much like the UK system," suggests Dunwell.

Dunwell points out further advantages of using Medworxx UM in the UK when she says the metrics with Medworxx are just spectacular, explaining that the data collection allows the user to easily identify why a patient is not moving forward in the flow and clearly distinguish the reason as being either a physician-related reason, such as waiting for a consultation or for a lab exam that has been ordered, a hospital-related delay, such as a required physiotherapy or dietary assessment that has not been conducted, or a community-related delay, such as a patient needing funding for home care or a delay in getting a long-term-care bed.

Use of Medworxx by ModelAdvice during the follow-up patient flow assessment gave members of the

Trust an opportunity to see its use and benefits first hand. As a result of this and ModelAdvice recommendations, the Trust chose to implement the Case Management model and Medworxx UM.

“With the help of our IT people, we had already been analysing other tools available in the market, but we found Medworxx UM to be very adaptable to our organization and compatible with the UK healthcare system,” says Armstrong-Child.

The Approach

Case Management at RLBH started with a ‘big bang’, with 14 Case Managers assigned to inpatient Medicine and General Surgery units throughout the hospital at the same time. Some were new hires, while others were experienced nurses seconded from existing staff positions. With the help of Model Advice, Case Managers were given a three-week induction into the case management model and the operation of the Trust, including a week on the wards, meeting and working with the clinical teams.

Empower Case Managers

The Medworxx team, working with the hospital’s IT team, installed the servers and Medworxx software and created an interface with the hospital’s Patient Administration System (PAS), from which Medworxx draws patient demographic data. A few minor challenges caused by some unique aspects of the PAS were easily overcome through Medworxx configuration.

Medworxx training, which was provided mainly to Case Managers, who would be the ‘super users’ conducting the daily patient assessments, entering assessment data into the system and generating reports, was also provided for clinical leads, case management leads and IT. It consisted of classroom-style sessions as well as hands-on sessions using PC workstations available in the IT suite. The training took two days, and was followed by an exam for Medworxx Certification.

“The Medworxx clinical consultant who did the training was simply exceptional,” says Armstrong-Child. “The Case Managers always receive her warmly because she has ‘been there and done that’ all before, which resonates very well with nurses when you are teaching them something new.”

During this period, Medworxx staff also led a one-day session in which Case Managers, physicians and other patient flow stakeholders from Medicine & General Surgery, along with community input, helped configure the Medworxx “Reasons for Delays” to match common practice within their units. It would be used as the basis for the daily assessment of patients on those wards to determine their care status – still needs acute care, ready for discharge, etc.

“All of the training and initialisation went smoothly; and right after that, we simply threw the switch and went live with the Medworxx tool and Case Managers began patient assessments,” says Armstrong-Child, enthusiastic about the transition.

MEDWORXX INTEGRATION HELPS ENSURE “GOOD DISCHARGES”

A critical ingredient in the successful use of Medworxx at RLBH was the integration of the tool and patient data by Case Managers into the hospital’s existing operational processes, including daily rounds, discharge processes and collaboration with community and social services agencies.

Each day on the wards, for example, Case Managers assess each patient, enter the assessment data into Medworxx and, armed with that data, meet with the multi-disciplinary team to discuss each patient's status and identify patient flow obstacles that need to be cleared or alternative actions that can be taken.

And each day in the community, Case Managers use Medworxx data as the basis for conducting bed 'huddles' with community partners and social services agencies – an effective approach adopted from the Canadian system – to discuss the simplest and most expedient plan of action for managing each patient out of acute care and into their home or an alternate care environment.

To assist with both these hospital- and community-based processes, RLBUHT assigned two additional Medworxx-related responsibilities. One is a 'strategic lead', playing the role of Medworxx system administrator in working with Case Managers and IT to produce Medworxx reports and analyse the data for patient flow trends. The other is an 'operational lead' who works with Case Managers and community representatives to optimise patient flow from the hospital into community care.

The hospital is always careful, however, not to focus too much on just getting a patient out of an acute care bed as quickly as possible, but rather on managing the patient well and with a longer-term view, in order to avoid a re-admit, for which hospitals are often penalized financially.

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Case Managers use
Medworxx data as the basis for
conducting bed 'huddles'

"There is no point pushing patients out the door to reduce LOS if they are just going to end up back at your door again later," stresses Armstrong-Child, adding that the Medworxx software helps them manage this by identifying the hardest patients to discharge or the patients with long-term conditions. "The Case Manager's fundamental role is to ensure that everything is in place for the patient to go back into the community and, with the help of the patient care status data in Medworxx, to ensure that the patient is stable and a discharge for the patient is appropriate – a 'good discharge'."

The Results

CASE MANAGERS SPARK CULTURAL SHIFT

In spite of the proverbial "change management" challenge on the wards – the natural reluctance for people to change and their concern about the personal impact of that change – the presence of Case Managers on the multi-disciplinary teams at Royal Liverpool has been well-accepted. They have begun to change the hospital's culture by asking direct questions about why patients are being managed in a particular way and what alternatives there are to keeping patients in hospital beds.

"I think Case Managers have been very good at facilitating quality care and appropriate discharges, and they are being recognised for bringing that skill to the wards and for identifying blockages, especially for breaking down some of the delays in long-term, complex cases," contends Armstrong-Child.

And with the help of Medworxx data on the wards, clinical staff and Case Managers now have cold hard facts to work with rather than having to rely on anecdotal evidence regarding the causes of patient flow delays and why patients aren't always being managed the way they should be.

According to ModelAdvice's Karen Dunwell, the first six or seven months of results for Royal Liverpool indicate that they will hit their target of the reduced occupancy level required in preparation for their move into the new hospital.

"Case Management, supported by the Medworxx utilisation tool, has been the one startling change the Trust has made that has glued all the disparate players together into one cohesive unit – consultants, nurses, therapists, patients, families – all understanding what the journey is ahead, the estimated length of the journey and where the patient is going to go once their acute phase has ended," says Dunwell.

She quickly adds that Primary Care Trust managers, family practitioners, Social Services and other community providers can now also be added to this cohesive stakeholder unit because of sustained efforts by RLBUHT to ensure they all understand how the hospital's Case Managers, equipped with Medworxx criteria sets and data, are going to work, what that means to them, what the objectives are and how the Trust expects them to work collaboratively and cooperatively within this new system.

THE NUMBERS HELP TELL THE STORY

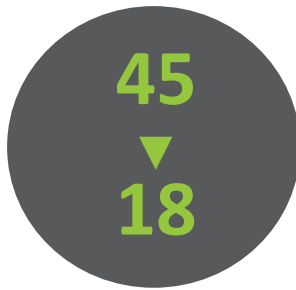
Overall, Case Management and Medworxx at RLBUHT are helping reduce Lengths of Stay, which has its obvious benefits, including improving the patient experience – patients feel more informed and in control during their stay and about what is going to happen after discharge.

"My department did some work on soliciting patient feedback regarding what they thought of the Case Management system, and in most cases, patients feel more involved in their discharge," reports Armstrong-Child.

A key aspect of the Trust's success has been recognising they cannot manage patients just within the four walls of the hospital, but rather they need to get true collaboration and integration within the community, where downstream providers and step-down hospitals are often too clogged to receive patient transfers.

"Together, Case Managers and Medworxx unplugged the drain in the downstream facilities and shook up the community providers where there were delays in transferring patients to alternate levels of care," states Dunwell. "The Case Managers were there, pushing those transfers and clearing away unnecessary delays."

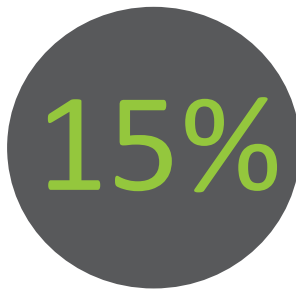
Some example results help to show improvements in patient flow and bed utilisation:



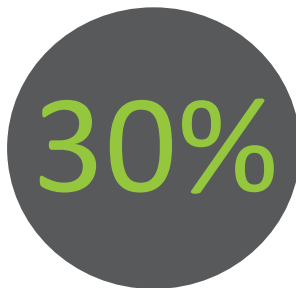
Over a one-year period, the average number of patients on the Ready for Discharge list dropped



Over a one-year period, the average cumulative Ready for Discharge Days also dropped



Increase in respiratory patient throughput volume and LOS reduced from 10.5 days to 9.7



Increase in the number of referrals into community beds, indicating better utilisation of existing intermediate care capacity

“For me personally, I think we’re not yet where we need to be with the transition and improvements in our key performance indicators, but that’s ok – it’s about making small, sustainable progress,” says Armstrong-Child.

POSITIVE RESULTS FUEL PROGRAM EXPANSION

The Royal Liverpool Trust is so encouraged by the results achieved through the Case Management-Medworxx model that it approved indefinite ongoing funding for the original 14 Case Managers as well as 14 more to cover remaining inpatient wards.

“Consultants on the initial 14 wards have been so supportive of the Case Managers and impressed by what they were doing for them and their patients that colleagues on other wards were anxious to have the Trust implement this model there as well,” reports Armstrong-Child.

The hospital will next implement be expanding use of the ACTIV Criteria Set for Medicine & General Surgery to the Broadgreen Hospital, and also looking at the possibility of implementing the Rehabilitation Criteria Set.

“Over the past few years, I’ve had occasion to use all the competing tools extensively, but Medworxx is very definitely the best for the NHS, enabling providers to work seamlessly with the community and payers to identify and target the common bottlenecks and gaps in the patient journey,” proclaims Dunwell.

Trish Armstrong-Child wraps up the story on behalf of the Trust with a piece of new news. “We just went live in our Care of the Elderly ward, and, thanks to Medworxx, we are able to send very detailed reports to the directorate management team, with data that helps address bed-request pressure points on a daily basis.”