

# THE USE OF DAILY PATIENT ACCESS METRICS TO IMPROVE SYSTEM PERFORMANCE



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**Editor's Summary:** In *The Use of Daily Patient Access Metrics to Improve System Performance* a team from London Health Sciences Centre describes the development of four web-based suites that helps the organization monitor and make decisions regarding patient flow. There are different sets of daily metrics for different parts of the hospital, for example, one for the emergency department, another for inpatient acute care, as well as unit specific metrics and a dynamic graphic trending tool. The data is available at 7:00 AM each day. It is coupled with visual cues in the form of a green/yellow/red traffic light system that helps to assess the metrics against given goals and alert the teams to potential difficulties.

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<b>Purpose:</b>	The “Daily Metrics” project was designed to provide near real-time, web-based information to support daily decision making in an automated and transparent manner. Prior to the project, this type of information was not available in the organization on a daily basis nor had it ever been consolidated into a single source. Day-to-day information to facilitate understanding of patient access and flow was centralized in Bed Management.
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<b>Context:</b>	The need for the project arose out of a corporate lack of information to immediately address bed access issues. In addition, the organization was participating in a Patient Access and Flow Initiative and these Initiative Teams required data to monitor their progress in improving patient flow. The project filled a longstanding information void in the organization: relevant data, updated daily and available in a single repository. It has grown to be an integral component of day-to-day hospital management.
<b>Population group:</b>	Daily metrics are provided for the emergency department population and the inpatient population.
<b>Patient flow entry and end points:</b>	As a patient access and flow tool, the Daily Metrics tools were designed to show status and alert of bottlenecks at numerous points along the continuum of care. For example, the metrics reveal how long admitted patients in Emergency are waiting for an inpatient bed, the metrics count the number of patients in ICU with ward transfer orders and the metrics show – overall and by unit – the percentages of discharges by 11:00 and by 14:00.
<b>Description/approach:</b>	<p>A unique approach was utilized in this project as it focused on the patient flow from the intake source, the ED, through the admission processes to the inpatient unit and disposition. This was one of the first times that work spanned across programs/ departments to address the issues that were interdependent.</p> <p>The Daily Metrics consists of four web-based deliverables that are updated automatically each day at 07:00:</p> <ol style="list-style-type: none"> <li>1. Daily Metrics related to Emergency Department Activity</li> <li>2. Daily Metrics summarizing overall Inpatient Activity</li> <li>3. Daily Metrics providing unit-specific metrics</li> <li>4. A dynamic Graphical Trending Tool</li> </ol> <p>All deliverables use Red/Yellow/Green ‘stoplight’ colouring to indicate how each metric is performing relative to a set goal.</p>
<b>Tools and tactics:</b>	<p>In addition to the four web tools described above, a repository of the daily data was created for further trending and analysis. These backend tables can be accessed by Decision Support staff.</p> <p>In the design phase of the Daily Metrics, certain elements were identified for inclusion that simply weren’t currently available. We decided to invest the time to build these structures so that they could feed the Daily Metrics. We did this for ALC cases and for cases waiting in regional hospitals for access to our centre.</p>
<b>Measurement approach:</b>	By itself, the Daily Metrics suite of tools cannot improve patient flow. Its value, however, is in the information it can provide to help identify sources of bottlenecks and in its usefulness and timeliness as an evaluative tool for projects that are attempting to influence access and flow.

<p><b>Impact/evaluation:</b></p>	<p>The project’s primary benefit is its relevance. We invested time in understanding which data would be helpful on a daily basis and spent time building data capture systems in order to obtain previously unavailable data specifically for inclusion on the Daily Metrics.</p> <p>A second benefit of the project is its timeliness. Updated data is available each morning at 07:00. A third benefit is its transparency. Staff members and physicians at all levels of the organization have the same access to the information.</p> <p>The Daily Metrics suite of tools has challenged pre-conceived ideas about the causes of patient flow bottlenecks and has focused all levels of the organization on measuring performance and making improvements to reach a common goal. Patient flow is everyone’s responsibility.</p>
<p><b>Observation/discussion:</b></p>	<p>Within the hospital, the Daily Metrics has been instrumental in illuminating patient access and flow issues – in a transparent and timely way. It is viewed and used by all levels of staff.</p> <p>We have received positive feedback from Ministry officials and other hospital administrators.</p>
<p><b>Critical success factors/lessons:</b></p>	<p>Anticipate scrutiny and questioning of the data. Test the Metrics thoroughly before release but recognize the inherent challenges with using real-time data. To help – we built a 7-day refresh for many data elements so that any corrections in live systems would be corrected in the back-end tables for future analysis and trending work.</p>
<p><b>Limiting factors:</b></p>	<p>Data entry errors are a challenge. Increased support to improve data quality and maintain the system would be helpful.</p>