Objective With over 50 acute medical referrals per day at Royal Bolton Hospital, an efficient and safe acute medical take process is crucial to maintain high standards of clinical care. The existing process involved multiple non-communicating patient lists to track referrals. It also relied on manual data entry – resulting in patients being missed for clerking or not being identified for senior review – thereby missing national targets. A quality improvement project was designed to i). assess the functionality and safety of the current medical referral process and ii). develop a safer and more usable referral and patient tracking system.

Methods A new automated electronic Acute Medicine Referral List (AMRL) was outlined by the trust’s IT team and clinicians. It was designed to integrate into the existing Electronic Patient Record (Allscripts).

The new AMRL system integrates into existing clinical practices of A&E and AMU clinicians. Clinical performance data from the pre-existing process and the new AMRL were benchmarked against Society of Acute Medicine Quality indicators, and analysed to assess the impact on the medical oncall team’s working patterns, patient flow and patient outcomes.

A pre-intervention benchmark audit cycle (7 days of admission data) was carried out in February 2020. The AMRL and referral process was subsequently implemented in November 2020. Following an interim spot audit and user survey, minor refinements were made to the AMRL. Two post-intervention audit cycles (7 days of admission data) were then performed in January (6 weeks post intervention) and April 2021 (5 months post intervention).

Results Since introducing the electronic AMRL, patients waited less time for medical clerking (x 00:13 hours) and senior review (x 04:58 hours). There was also a 6.4% increase in the proportion of patients clerked within the 4 hour target window. When looking at weekend data, the impact of AMRL is more marked. The waiting times for medical clerking and consultant reviews at the weekend have improved by 25.1% and 26.1% respectively. There was a significant increase in the proportion of patients being reviewed by a consultant within 14 hours. This improvement was sustained through multiple audit cycles.

Overall, there was a measurable improvement in clinical performance against the national clinical quality indicators. The average hospital length of stay reduced by 1.3 days, equating to a reduction of approximately 15,600 total occupied bed days per annum.

Conclusions The introduction of the Acute Medicine Referral List, a single consolidated electronic patient list and referral process, has improved standards of care and patient flow within the organisation. Timely senior decision making has prompted earlier discharges and a reduction in overall inpatient length of stay – resulting in an estimated cost saving of £3.1 million.

The AMRL demonstrates how the unification of both patient referral listing and workflow systems can improve standards of patient care and experience. The primary reasons for success of the AMRL include: 1) the ability to integrate within established clinical and workflow systems and 2) stakeholders were responsive to feedback from end users, addressing pitfalls promptly to continuously improve on the systems usability and functionality.