

Reducing inappropriate investigations for minor lower limb cellulitis

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Problem Statement

Patients with mild lower limb cellulitis have **high numbers of lower limb X-rays (XR)s and blood cultures** performed. These likely unnecessary investigations may be carried out due to legacy practices and **lack of guidance or lack of awareness** of updated guidelines. This in turn results in **higher costs of care**.

Project Aim

To reduce the percentage of patients with lower limb XR and blood cultures performed for the SGH Cellulitis Value Driven Care defined population* from **68.8% to 50%** and **73% to 60%** respectively over a period of 3 months.

Lessons Learnt

1. Changing human behavior requires time and effort. Instead of correcting behavior, a culture of patient safety should be nurtured.
2. Procedures and investigations may not be necessary to guide treatment. There is an overuse of X-rays as diagnosis within Cellulitis patients and there can be continuous efforts to reduce overuse. SGH has launched the Choosing Wisely campaign, using this project as one of its success stories.

Potential Solutions

SCM (Sunrise Clinical Manager) order sets for DIM and DEM were created incorporating cellulitis management guidelines, to improve accessibility to relevant information and guide appropriate clinical management. An educational roadshow was implemented, with sharings at department briefings and via outreach through email and TigerConnect. Educational posters containing links to guidelines were also created and placed in the ward medical officer rooms and A&E consultation rooms both as a visual reminder and to facilitate accessibility to guidelines via the use of QR codes.

SCM Order Set

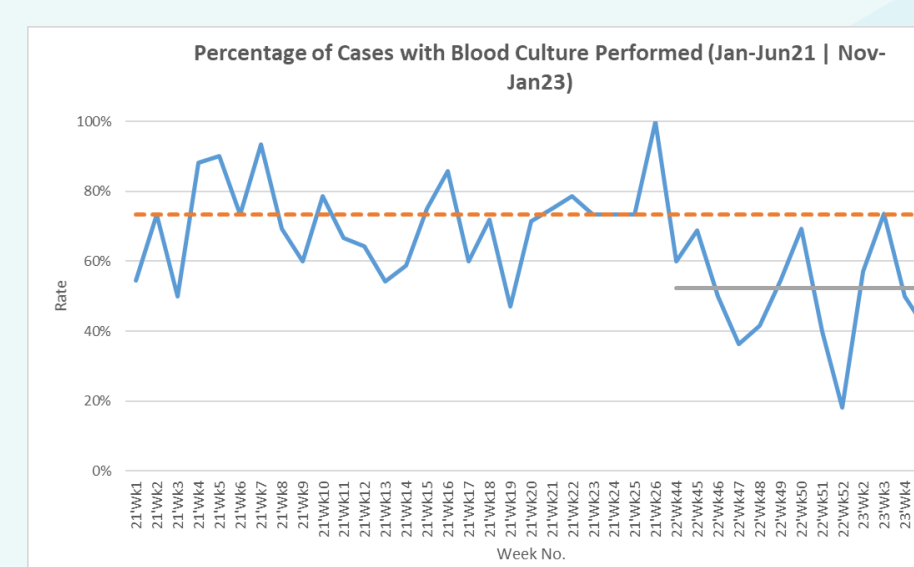


Educational Poster (DIM version)

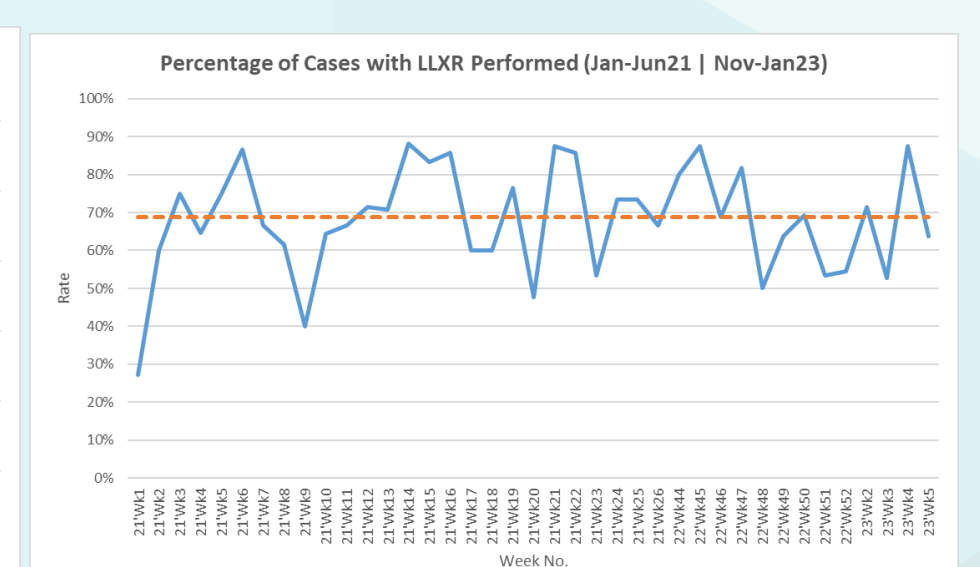
Outcomes & Impacts

- **Reduction in percentage of cases with blood cultures** done from a baseline median of 73.3% to a post-intervention median of 52.3%.
- No change observed for percentage of cases with LL XR performed.

**Total number of XR and blood cultures done were used as a surrogate – not feasible to do manual chart review to determine appropriateness of investigations for each case.*



Weekly % of cases with blood cultures performed



Weekly % of cases with LL XR performed