HASSLE-FREE ACCESS TO EMERGENCY HAND SERVICE

Orthopaedic Surgery 1, Acute & Emergency Care Centre 2, Operations 3, Peri-Operative Services 4 Khoo Teck Puat Hospital

BACKGROUND
Access to emergency hand services has been sub-optimal. From Jan to Apr 2018:

<table>
<thead>
<tr>
<th>Number of A&amp;E patients referred to Hand Clinic with urgent lead time (&lt;5 days)</th>
<th>Number of patients lost to hand service follow-up</th>
<th>Number who attended the Hand Clinic as First Visit (FV)</th>
<th>Number seen within 5 days</th>
<th>Number seen after 5 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>24/58 (41%)</td>
<td>34/58 (59%)</td>
<td>19/34 (55.9%)</td>
<td>15/34 (44.1%)</td>
</tr>
</tbody>
</table>

ANALYSIS OF ROOT CAUSES

Limited Hand Clinic slots preclude appointments within 5 days
Emergency Hand Services shared with Emergency General Orthopaedics

When the urgent Hand Clinic appointment could not be met, it impacts:

- **Patient Care**
- **Patient’s waiting time**
- **Patient’s satisfaction**

AIM

Provide rapid access to specialised Hand care in Emergency setting

Achieve 95% compliance rate for urgent hand specialist assessment (within 5 days)

METHODOLOGY

- Design and development of a prototype urgent hand service (Hand Hot Clinic) via a collaborative process between expert panel of Orthopaedic Hand Service and A&E Care Centre
- Key features of Hand Hot Clinic:
  - Located at A&E, Mondays-Fridays from 5pm-9pm
  - Hand doctor on call readily available to assess and manage urgent hand injuries
  - Specialized Hand consultation given to all hand injuries during Hot Clinic hours

SOLUTION: Hand Hot Clinic Workflow

![Hand Hot Clinic Workflow Diagram]

RESULTS

- % of patients requiring urgent Hand Clinic referral (<5 days) who were seen by Hand Clinic Doctor in 5 days
  - Before implementation (Jan-Apr 2018): 55.9%
  - After implementation (May-Dec 2018): 96.2%

  - 18 out of 34 patients
  - 376 out of 391 patients

- The lead time (in days) for urgent Hand Clinic referrals (<5 days) at 50th and 95th percentiles & average
  - Before implementation: 50th percentile: 4.3 days, 95th percentile: 9.7 days, Average: 6.7 days
  - After implementation: 50th percentile: 1.7 days, 95th percentile: 3.1 days, Average: 2.7 days

  - Average lead time reduced by 4.3 days (71.7%)

PROJECT IMPACT

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance to lead time for urgent Hand Clinic referral (&lt;5days)</td>
<td>Compliance increased from 55.9% to 96.2%</td>
<td>Higher rate (96.2%) of timely care for patients who require urgent review by Hand Clinic Doctors</td>
</tr>
<tr>
<td>Overall lead time for the urgent Hand Clinic referral</td>
<td>The reduction in time are: 50th percentile: from 5 days to 1 day 95th percentile: from 12 days to 5 days Average: from 6 days to 1.7 days</td>
<td>Average lead time reduced by 4.3 days per patient, means shorter waiting time.</td>
</tr>
</tbody>
</table>

SUSTAINABILITY

This project has been well-received by patients and staff. It has now been integrated into Hand Surgery Service with formal allocation of manpower to sustain the Hand Hot Clinic in the weekdays. To further enhance the service and provide comprehensive coverage to urgent hand injuries, the Hand Hot Clinic will be extended to include weekends and will have a designated room in A&E.

CONCLUSION

Using a designed and developmental methodology, we were able to produce a rapid prototype emergency service for hand surgery. This has resulted in a viable expansion of our Hand Surgery Service following a successful field study with resultant significant improvement in delivery of care for emergency hand cases.