



Smart Triage + QI at Jinja Regional Referral Hospital

Digital triaging platform to improve quality
of care for critically ill children

Dr. Harriet Nambuya
Pediatrician
Jinja Regional Referral Hospital



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OF BRITISH COLUMBIA



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Smart Triage at Jinja Regional Referral Hospital:

How did we get here?

Facility use of Smart Triage + QI

2021 - onwards



Smart Triage + QI
Implementation
(2021)

Baseline Data Collection (2020 - 2021)

Study Results

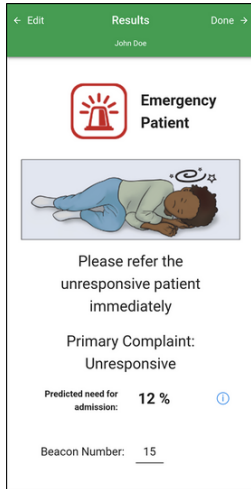
Smart Triage Improves Care

- Since April 2021, **over 16,500 children** have been triaged at JRRH using the Smart Triage platform
- **After implementation of Smart Triage + QI at JRRH:**
 - The time to IV antimicrobials **reduced by 17% for emergency cases**
 - Overall **admissions rate reduced by 34%**

How did we get here?

Data-Driven Quality Improvement

Data collected for QI using the Smart Triage Platform



Smart Triage App: Risk Stratification
Demographics, Signs & Symptoms, Vital signs, Anthropometrics, Triage Category



Smart Spot System: Patient Location and Treatment Tracking
Waiting times, time to treatment

Kat Pallot Clinician Dashboard April 1st, 2022 | 9:53:57

Current Patients Viewing: All Rooms

Search:

Priority	Time	Location	Family Name	Given Name	Sex	Age	Presenting Complaint	Room
⚠	14:52	Emergency Room	Provia	Sharika	F	2 y	Fevers, flue	
⚠	2:25:38	Waiting Room 1	Apio	Nantale	F	6 m	Reports of fever	1
⚠	2:15:32	Emergency Room	Apio	Kaikara	M	10 m	Restlessness	2
⚠	24:11	Lab/ Pharmacy	Nakazibwe	Atuhire	F	10 m	Body rash	
	3:17:41	Waiting Room 1	Busingye	Maria	F	4 m	Fevers	2
	1:44:22	Consultation Room	Mukwaya	Akello	M	1 y	Fevers	1
	1:36:49	Consultation Room	Nabulime	Mukasa	M	4 y	High grade fevers	1
	1:13:23	Lab/ Pharmacy	Nayebare	Ochen	M	1 y	Common cold, cough and fever	2
	1:11:43	Lab/ Pharmacy	Icha	Namazzi	F	2 y	Fevers	2

Data-Driven Quality Improvement



- **85 staff members trained in QI**
- **QI Champions held regular meetings to identify goals and improve communication between care points**
 - Care points included: Clinicians, Nurses, Triage, Emergency, Nutrition Unit, Pharmacy, Laboratory, Record Department, Administration.
- **Data collected using the Smart Triage system was used to**
 1. Identify problems and bottlenecks
 2. Measure outcomes
 3. Simplify reports and communications

Example: Time to treatment for emergency cases

Problem

Delayed
treatment times
Mean time to
treatment: 5.1
hours



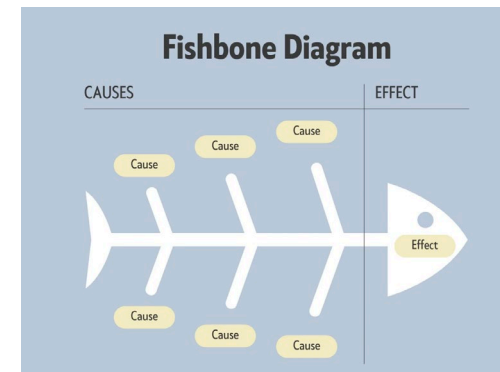
Target

No emergency
cases receive
treatments in
over 4 hours

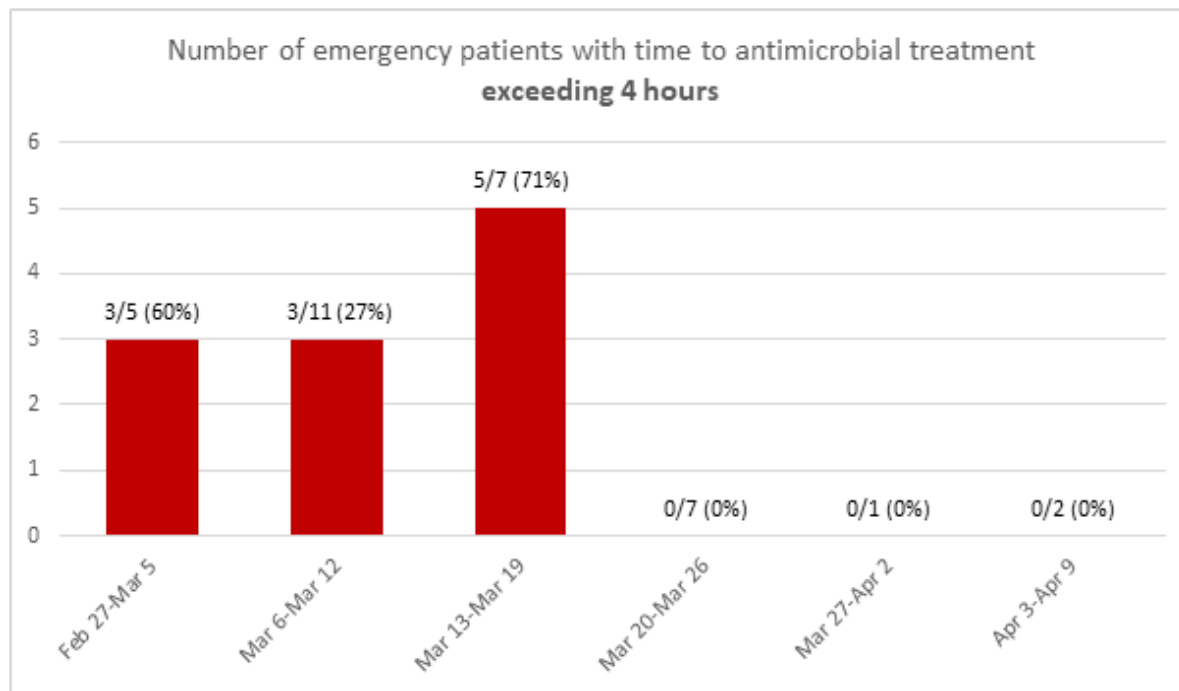


Root causes

Identify the
causes of delayed
treatment and
brainstorm
solutions



QI Report example using Smart Triage Data



Successes:

- Measurable and easily interpreted
- Target was reached
- Overall time to treatment continued to decrease

Barriers:

- Loss of momentum over time (strikes, staff motivation)

Data-Driven Quality Improvement



➤ Initiatives aimed at reducing treatment time at JRRH:

- Colour-coded benches for emergency cases
- Change in patient flow:
 - Emergency cases taken straight to emergency room, staff or volunteer to carry samples to the lab instead of patient waiting at lab
- Stock out lists updated daily to improve communication between departments and between staff and caregivers, reduce time lost due to miscommunication
- Emergency medicine cabinet



Data-Driven Quality Improvement



➤ **Other QI Goals and Initiatives and JRRH:**

- All children attending the OPD should be triaged
- Improved vital signs assessment among triaged patients
- Nutritional algorithm and dashboard to improve detection of SAM and MAM cases
- Improve resource allocation by treating patients based on risk category (Emergency and Priority patients seen first).
- Increase the hours that triage is performed at the facility.
- Ongoing training of staff and caregivers on the importance of triage and QI

Health Worker Perspectives



15 staff members at JRRH trained in Smart Triage + QI interviewed

- Smart Triage allows them to more accurately identify children who needed emergency care but did not show obvious signs

“This digital approach helped us a lot to pick those who are not overt, those are occult, the cases of children who come and are not obviously physically seen as in danger.”

- Data collected during triage can guide treatment decisions

“I feel it is very important to us because for us, as we are looking at the dashboard, we are seeing that this patient is coming with this type of severe malnutrition. So, we get prepared to that particular type of malnutrition... For example, the glucose which we are going to give, we get ready with the milk.”

- Colour-coded system improves management of patient, including identification and prioritization of emergency cases

“It has helped in a way that if I see a child putting on a red lanyard, even if I have someone there with yellow, I will have to tell them, “First order, because I need to send this one as fast as possible, you know. So it has helped me to attend to emergencies better as compared to before.”

Barriers to Sustainability



- Server space
 - Need to have clinical data hosted at the MOH servers
- Current/Future integration with EMR
 - Seamless care