Waiting Time in Children's Emergency Department Port Moresby General Hospital

Diploma in Child Health

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Introduction

- Emergency departments worldwide serve as entry points with prompt and effective response to save patient lives.

- Time of Arrival-doctor/patient contact is Critical.

- Waiting Time assess the Efficiency & Efficacy of Triage System on basis of Severity of Illness

Australasian Triaging System

CATEGORY	CATEGORY 1	CATEGORY 2	CATEGORY3	CATEGORY 4	CATEGORY 5
TIMES	0-1 MIN	10 MINS	30 MINS	60 MINS	120 MINS

Background

- 2015 formerly COPD became Children’s Emergency Department
- Range of Cases seen include Paediatric Medical, Surgical , Ophthalmology & ENT
- A minimum 3 doctors and 7 nurses rostered per shift
- Total Attendance 5552 May-July 2018
- Total Admitted over the study Period 802 (14.5%)

Literature Review

1. 2004:
   - S.R Brujins L.A Wallis on “Effect of Introduction of Nurse Triage on Waiting Times in a South Africa Emergency Department.”
   - The Cape Triage System
   - Waiting Time significantly reduced 237min to 146 min
2. 2008:
   - John Tsiperau, Prof John Vince on “The Management Paediatric patients in General Emergency Department in Papua New Guinea” assessed 7 different components.
   - Waiting time of arrival to assessment & waiting time between assessment & treatment.

Aim

Determine the waiting time in Children's Emergency Department in Port Moresby General Hospital

Objective

1. Determine the Current Waiting Time from
    - ➢Time of Arrival to Triage
    - ➢Time of Arrival to Assessment By Doctor
    - ➢Overall Waiting Time (Arrival – Disposition)

2. Determine the proportion of children waiting longer.

3. Determine the waiting time admitted children.

Methods

- Prospective Observational Study
- Duration of study: May to July 2018
- Inclusion criteria: All new patients screened by CED nurses
- Data was analysed using Excel

Methods

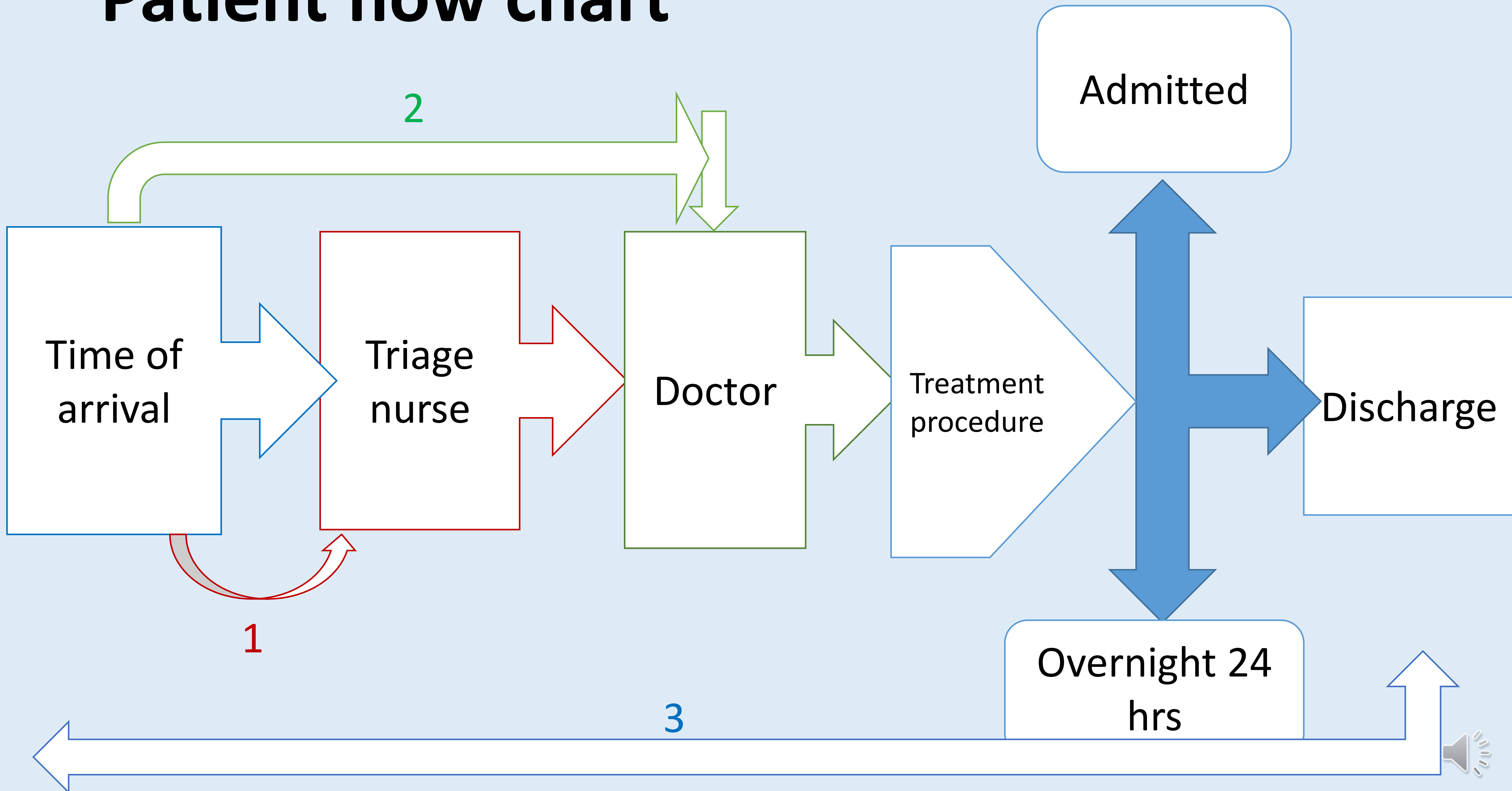
Definitions of Times assessed:

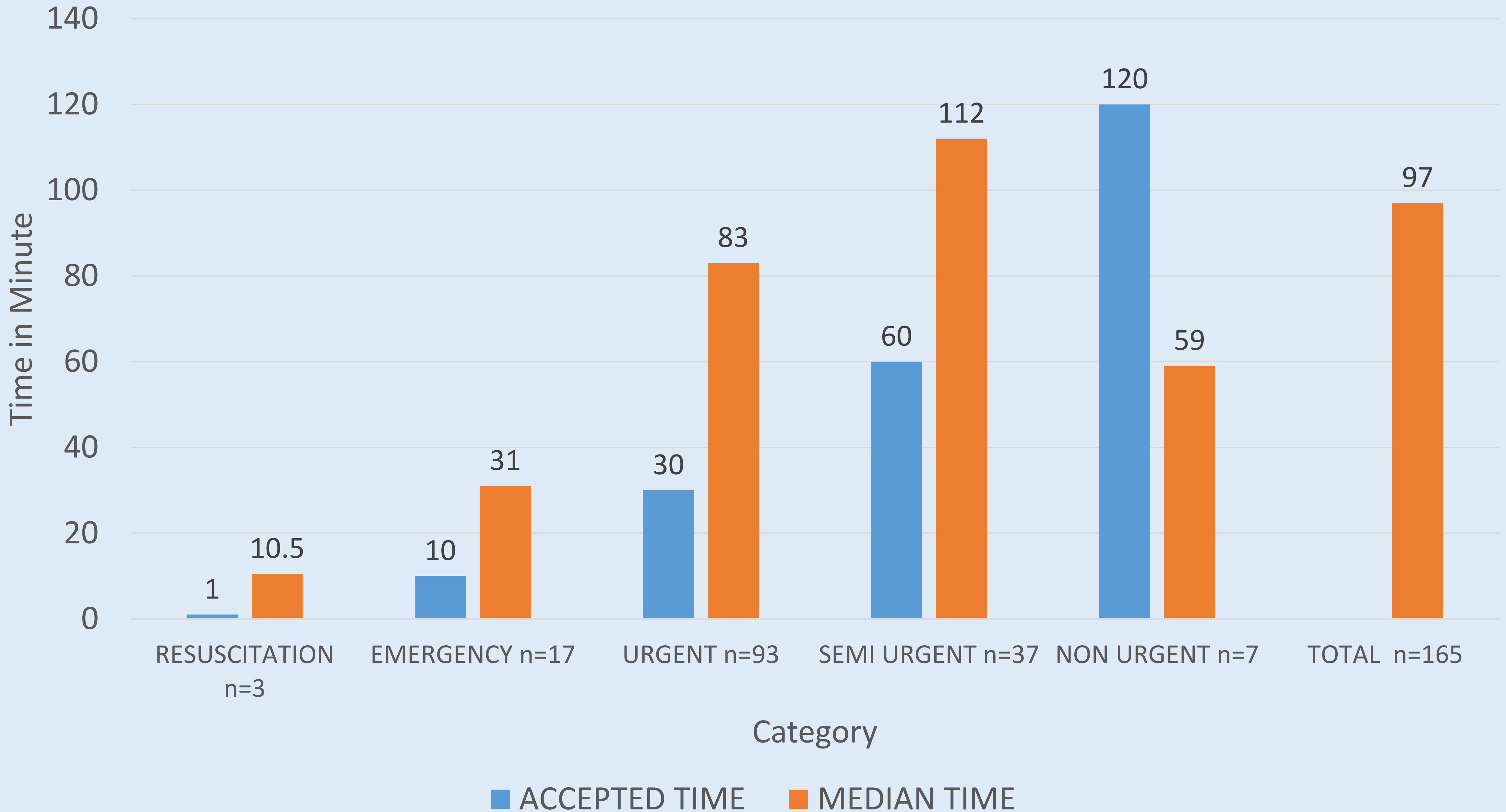
- Reference point was from the Time of Arrival
- Time of Triage –Arrival--------→Nurse 1st contact(triage)
- Time of Assessment: Arrival---→ 1st Assessment by Doctor
- Overall Waiting Time: Arrival---→Disposition

Methods

- Triage Nurse assigns patient a category
- The nurse than assigns patients to the Doctors
- Data collection: done by 4 doctors using standardised questionnaire
- Recruiting doctor assessed & managed accordingly.
- Illiterate guardians/parents: times recorded by doctor or nursing officers.

Patient flow chart




Overall Waiting Time
Time in Minute
140
120
100
80
60
40
20
0
1
10.5
10
31
30
83
60
112
120
59
97
RESUSCITATION n=3
EMERGENCY n=17
URGENT n=93
SEMI URGENT n=37
NON URGENT n=7
TOTAL n=165
Category
ACCEPTED TIME
MEDIAN TIME

Results

SECTIONAL COMPARISON OF WAITING TIME

CATEGORY	TRIAGE	DOCTOR	TREATMENT
1	0	15	19
2	19	44	56
3	15	100	123
4	15	126	143
5	17	71	68
OVERALL	15	96	117

TIME (min): 0, 20, 40, 60, 80, 100, 120, 140, 160

CATEGORY

TRIAGE DOCTOR TREATMENT

Results

- Total recruited: 165
- Average overall WT: 119 mins (≈ 2hrs)
- 56% of all recruited patients waited longer than accepted times
- 96% of patients in category 1 & 2 waited longer than accepted
- Sectional times: most patients seen within 30 minutes (Acceptable)
- 34 % of all admitted patients waited longer than accepted.

Admitted Patients

Minute	Category1 n=3	Category 2 n=12	Category 3 n=18	category 4 n=6	All Admitted n=39
Median	11	31	136	130	136
IQR	13-24	28-59	40-175	120-250	34-170
% patients attended within accepted time	0%	17%	22%	27%	61%

Discussion

- **Comparative analysis of waiting time**

Time of arrival to treatment	Australasian (Minutes)	Dr J Tsiperau 2008 n 107	This study 2018 n=165	SA emergency 2004 n=325 Cape Triage
OVERALL		60 (IQR 25-110)	97 (IQR 63-160)	146 (137-155)
CATEGORY 1	0-1	60 (IQR15-110)	13 (IQR13-23)	60 (28-48)
CATEGORY 2	10	60 (IQR30-121)	40 (IQR7.5-20)	119(105-133)
CATEGORY 3	30	50 (IQR20-90)	85 (IQR55-140)	155 (172-226)

Discussion

- Patients still wait longer than the acceptable time.
- Category 1 and 2: A reduction in WT was noted
  - Times still outside of best practice
- In comparison to other developing countries – we fair better.

Discussion

- No definitive guideline for Paediatric Emergency for Papua New Guinea

- Triaging knowledge varies

- Lack of Specialist Paediatric or Emergency Physician cover delay critical decision by Registrar

Conclusion

- More than half (56%) of all children attending children's emergency department wait longer than the accepted times.

- Critically Ill children (Category 1 and 2): waited longer (96%)

- 34% of all admitted children waited longer than accepted.

Study Constraints

- Limited Time to do Study
- Clocks and timers stolen
- Poor manual recording system
- Missing questionnaires –patients took home

Recommendations

Short Term

- Increasing the staffing capacity
- Point Prevalence Survey with Intervention
- Design a Triage System that suits our setting

Long Term

- Children's Emergency Distinct Unit within Paediatric Department
- Design Protocols & Procedures for Children’s Emergency

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Data collection team

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- Dr Venao Seta
- Dr Gordon Pukai
- Sr Rapea & ced staff
- My family

Reference:

- John Tsiperau, Prof John Vince and Prof Nakapi Tefuarani ; The Management of Paediatric Patients in a General Emergency Department in Papua New Guinea; 2008; Dept of Emergency Medicine, Port Moresby General Hospital; Division of Clinical Sciences, School of Medicine and Health Sciences, University of Papua New Guinea
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- S.R.Bruijins, L.A.Wallis , V.C Burch: Effect Of Introduction of Nurse Triage on Waiting Times in a South African Emergency Department; Division of Medicine of Cape Town and Stellenbosch University, South Africa; Emergency Med J, 2008 :25; 395-397.

PROCEEDURE ROOM

DOCTOR CONSULTATION ROOM

ISOLATION ROOM

OBSERVATION WARD

RESUSCITATION BED

WAITING BENCH

CLERK DESK

NURSE TRIAGE TABLE

WAITING AREA

TREATMENT ROOM

SPARE ROOM