

Russell Maharaj ¹, Callista Jumrattie ², Claire Ramcharan ², Phaedra Rampersad ³, Anderson Singh ³, Saleem Varachhia ²

¹ Princes Town District Health Facility Emergency Department, ² San Fernando General Hospital Emergency Department, ³ Siparia District Health Facility Emergency Department
rusrgm01@gmail.com

Introduction

Internationally, there is a paucity of data on length of time to be triaged (pre-triage time) as well as no studies to date performed in the Caribbean.

The San Fernando General Hospital (SFGH) is the largest public medical facility under the South-West Regional Health Authority (SWRHA).

The 5-level categorical scale, Canadian Triage and Acuity Scale, (CTAS)(Figure 1) is implemented to assess the severity of incoming patients' conditions and assign treatment priorities.

Level 1 – Resuscitation
Level 2 – Emergent
Level 3 – Urgent
Level 4 – Less urgent
Level 5 – Non urgent

Figure 1 - Canadian Triage and Acuity Scale

However, the length of time that patients wait to be triaged is unknown i.e. there is a need to assess the length of time taken to see a nurse ¹.

The Cellma system is used to register patients at the SFGH Emergency Department. This software is used to record patient demographics, presenting complaints, CTAS level, arrival times and triage times.

Objective

To assess the pre-triage times from patient arrival at the department to completion of triage for each level of the Canadian Triage and Acuity Scale (CTAS).

Method

- Data collection was done for the period January 2018 to December 2018.
- A Microsoft Excel file (Figure 2) of Cellma data for the period was analysed with a population sample size of 66,101 patients.

A	B	C	D	E	F	G	H
Cellma Barcode	Sex	Age Group	Arrival	Triage	Arrival to Triage Time (mins)	Complaint	Triage Level

Figure 2 – Headings of Columns from the Cellma Microsoft Excel File

Results

- The primary endpoint was calculating the median, mean and mode ATT (arrival to triage time in minutes) for each CTAS level.
- 111,926 is the actual total number of patients that came to the ED for 2018.
- Cellma has data entered for 59% of patients (66101 / 111926)

- Level 3 cases represented the most common triage level coming to the ED with 38,436 patients which represents 58.1% of all cases (Figure 3)

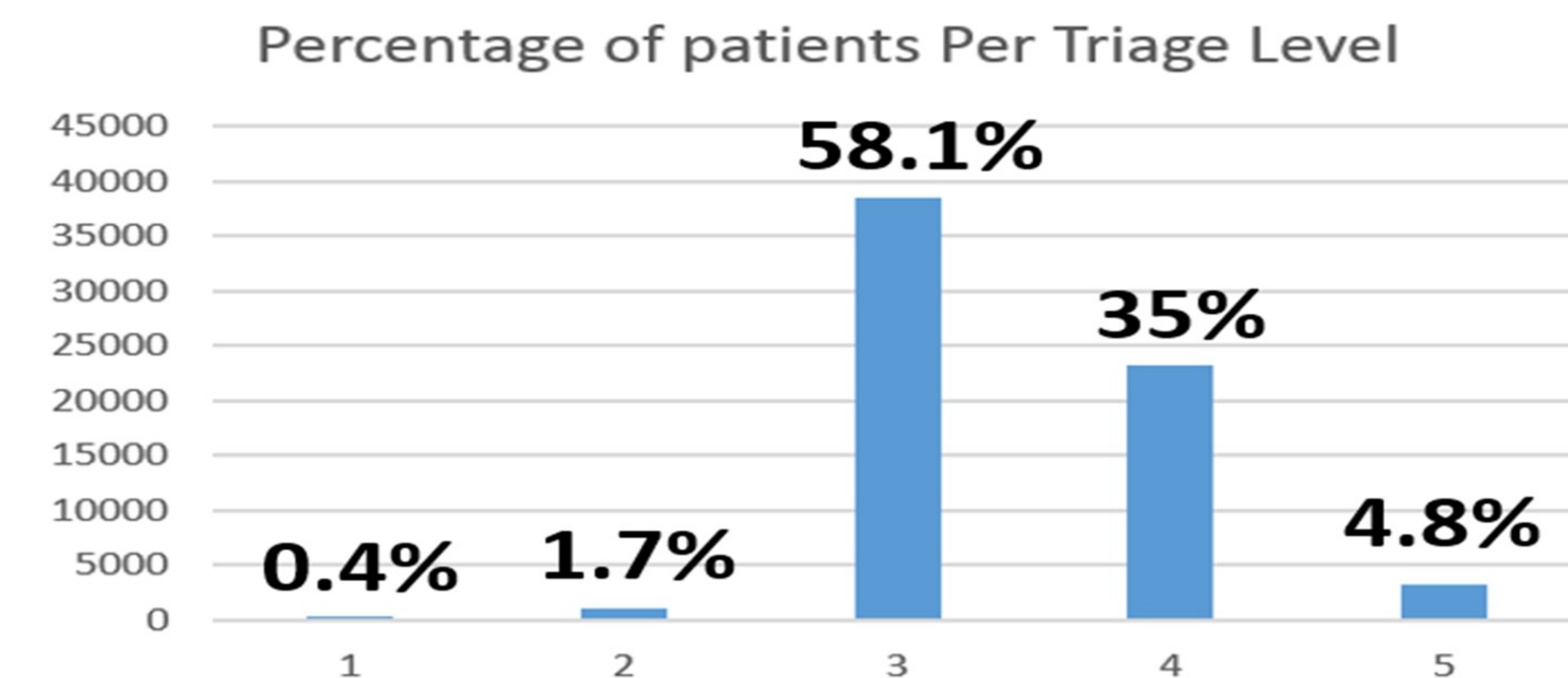


Figure 3 – Bar chart representing Percentage of patients per CTAS Level

	level 1	level 2	level 3	level 4	level 5
median	2	2	2	3	3
mode	2	2	2	2	1
mean	6.28125	6.07791	9.244422	12.84673	13.89767

Figure 4 – Table representing median, mode and mean arrival to triage times (in minutes) for each CTAS level

- The median time for pre-triage time was between 2-3 minutes for all cases despite CTAS level based on Cellma data (Figure 4).
- More than 1000 cases took more than 8 hours to be triaged.

Conclusion

The median time was 2-3 minutes while the mean time was ~6 minutes for level 1 and ~14 minutes for level 5 (by eliminating negative times and cases with ATT > 8 hours) (Figure 4).

There is a significant discrepancy with number of patients coming to the ED and the actual number that is being recorded on Cellma. Level 3 cases represented the most common triage level which represents 58.1% of all cases.

The triage process and data entry into the Cellma system needs to be reviewed urgently to ensure appropriate documentation of arrival and triage times while recording data for all patients visiting the ED.

References

1. Christopher Houston, Leon D. Sanchez, Christopher Fischer, Kathryn Volz, Richard Wolfe, **Waiting for Triage: Unmeasured Time in Patient Flow**, West J Emerg Med. 2015 Jan; 16(1): 39–42. Published online 2014 Dec 8. doi: 10.5811/westjem.2014.11.22824