



WAITING TIMES AT PUBLIC SECTOR EMERGENCY DEPARTMENTS

By Phua Hwee Pin¹

ABSTRACT

This paper compares patient volumes and waiting times at Emergency Departments of public sector general hospitals, and highlights the variation in waiting times for patients with medical conditions of different levels of severity.

INTRODUCTION

Emergency Department services are provided round the clock at public sector general hospitals viz. Alexandra Hospital (AH), National University Hospital (NUH), Tan Tock Seng Hospital (TTSH), Singapore General Hospital (SGH), Changi General Hospital (CGH)².

PRIORITY LEVEL

At Emergency Departments, medical care is not always provided on a first-come-first-served basis. Patients are prioritised based on the severity of their medical conditions³. There are generally four priority levels as shown in *Table 1*.

Table 1: Definition of the 4 Priority Levels used at Emergency Departments

Priority Level 1 (P1) - Critically Ill and require resuscitation

Patients are either in a state of cardiovascular collapse or in imminent danger of collapse and require immediate medical attention.

Examples: Multiple major injuries, head injury with loss of consciousness, severe shortness of breath, unconsciousness from any cause

Priority Level 2 (P2) – Major Emergency

Patients are usually unable to walk and are in various forms of distress. Although they appear stable on initial examination and are not in danger of imminent collapse, the severity of their symptoms requires very early attention, failing which early deterioration of their medical status may occur.

Examples: Limb fractures and joint dislocation, persistent vomiting, severe back pain, renal colic.

Priority Level 3 (P3) – Minor Emergency

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² KKH's emergency department sees only children. NUH also has a dedicated children's emergency department. However in this report, for purposes of comparability, we have omitted these two children's emergency departments.

³ Classification is based on the assessment of the initial complaints and initial provisional diagnoses.

These patients are able to walk. They have mild to moderate symptoms and require early treatment.

Examples: All sprains, mild constant abdominal pain, fever with cough for several days, insect stings or animal bites (patient is not in severe distress), superficial injuries with or without mild bleeding, minor head injury (alert, no vomiting), foreign bodies in ear, nose or throat, urinary tract infections, headaches.

Priority Level 4 (P4) - Non Emergency

Example: Old injury or condition that has been present for a long time.

P1 patients are attended to immediately and P2 patients will be seen ahead of P3 patients. P4 patients are attended to after P1 – P3 cases are cleared.

VOLUME OF PATIENT VISITS

Total volume by hospital

Nearly 500,000 patient visits were recorded at the five public sector general hospital Emergency Departments in 2004. TTSH's Emergency Department had the highest number of patient visits, more than 370 patients daily. AH's Emergency Department had the lowest number of patient visits (*see Table 2*).

Table 2: Total Patient Visits at Emergency Departments of Public Sector General Hospitals 2004

Hospital	Number of Patient Visits	Average Daily Number of Patient Visits	% Total Emergency Attendance
TTSH	137,100	376	27.5%
CGH	129,590	355	26.0%
SGH	113,388	311	22.8%
NUH*	71,920	197	14.4%
AH	46,084	126	9.3%
Total	498,082	1,365	100.0%

Note:

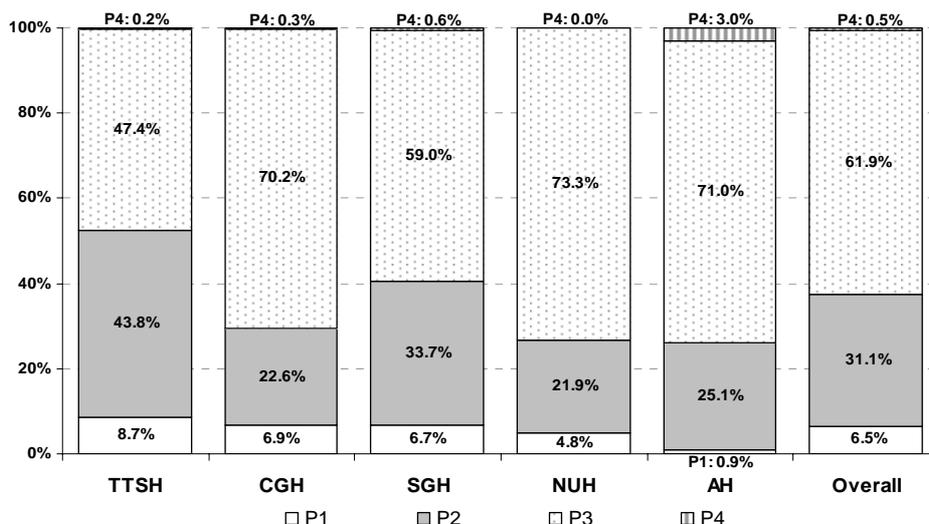
* The figure for NUH in this table as well as subsequent figures excludes patients seen by its children's emergency department

Total volume by priority level

Overall, nearly two thirds of all patient visits (62%) were P3 cases, while P2 cases made up about a third (31%). P1 cases account for another 6% of patient visits and a small minority of the attendances (less than 1%) were classified as P4 cases.

The profile of patient visits by priority level at each hospital is presented in *Figure 1a*. More than half of TTSH's patient volume (52%) were P1 and P2 cases, well above the public sector average of about 38%. It also has a higher proportion of P1 cases (9%) compared to the public sector average of 6%.

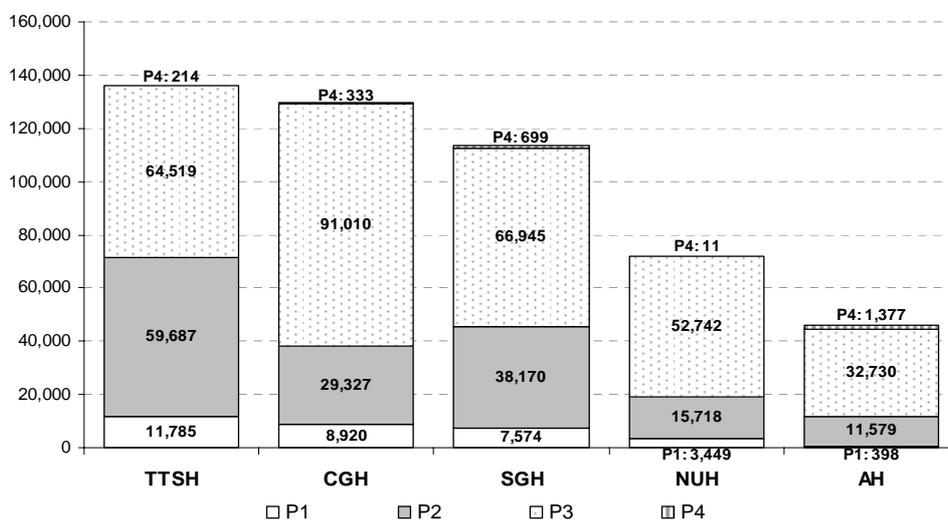
Figure 1a: Distribution of Patient Visits at Emergency Departments of Public Sector General Hospitals by Priority Level, 2004



Note: Figures for TTSH exclude 895 febrile patients who were managed separately while figure for NUH excludes children emergencies.

In terms of absolute numbers, TTSH’s Emergency Department also had the highest volume of P1 and P2 attendances (71,000) followed by SGH (46,000) (*see Figure 1b*). P1 and P2 patients require more resources and urgent attention. CGH had the highest number of P3 patients (91,000), which is 36% higher than the volume seen in SGH (67,000), which has the next highest P3 attendances.

Figure 1b: Volume of Patient Visits at Emergency Departments of Public Sector General Hospitals by Priority Level, 2004



Note: Figures for TTSH exclude 895 febrile patients who were managed separately while figure for NUH excludes children emergencies.

PATIENT WAITING TIMES

Estimated Patient waiting time by priority level

The waiting times were obtained from a survey of patient attendances at each Emergency Department between 1st Nov 2004 and 7th Nov 2004⁴.

P1 patients do not have to wait as they are transferred directly upon arrival to the resuscitation room for immediate attention.

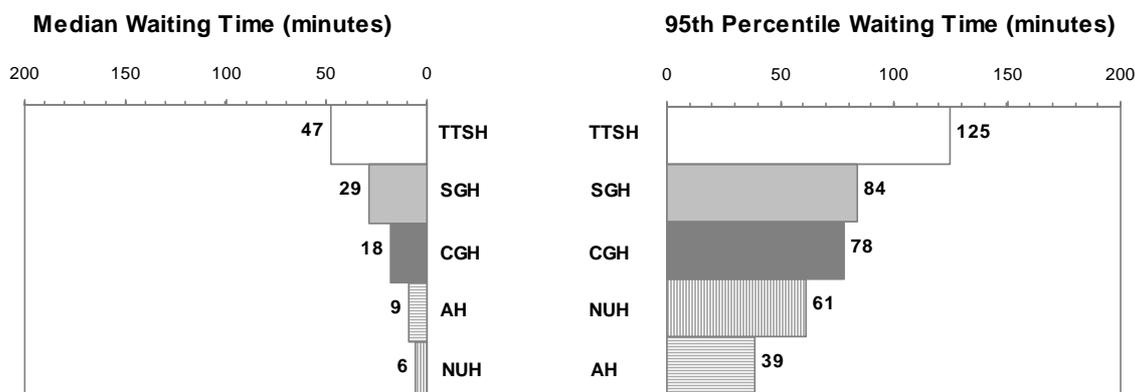
P2 patients (see Figure 2a)

For P2 patients, following triage, preliminary treatment (e.g. setting up a intravenous line) is started by experienced nurses. They are then kept under observation while awaiting definitive treatment by their doctor.

In most hospitals, the median (50th percentile) and 95th percentile waiting times were less than 30 minutes and 90 minutes respectively.

The exception was TTSH which had the longest median and 95th percentile waiting time of 47 minutes and 125 minutes respectively.

Figure 2a: Median and 95th Percentile Waiting Times for P2 Patient Consultation at Emergency Departments of Public Sector General Hospitals, 1st – 7th Nov 2004



Notes:

Median waiting time: 50% of the patients sampled waited this long or less, 50% waited longer.

95th percentile waiting time: 95% of the patients sampled waited this long or less, 5% waited longer.

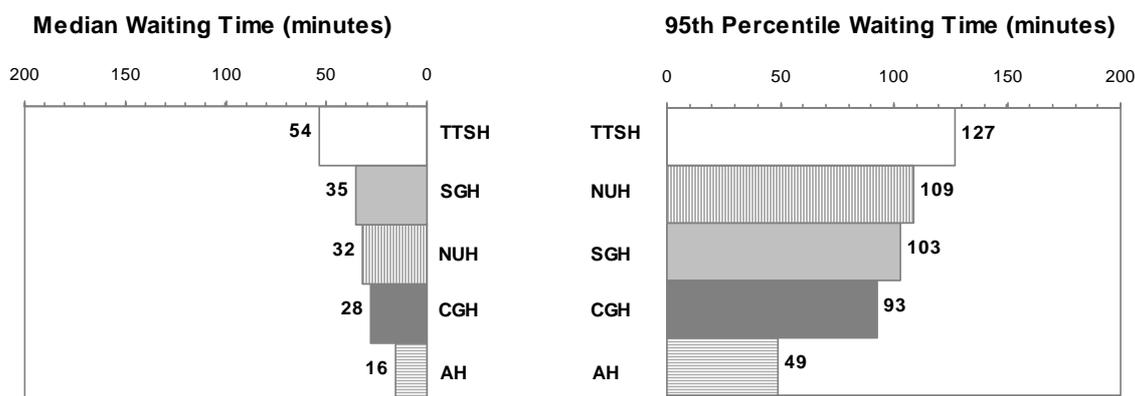
⁴ Surveys on waiting times at the emergency department of the public sector hospitals are conducted once every quarter. The most recent survey findings available is for the period 1st Nov 04 - 7th Nov 04. Waiting time is computed from the point of registration till the start time of consultation with the doctor.

P3 patients (see Figure 2b)

The median (50th percentile) waiting times in all hospitals were below 35 minutes, except for TTSH where it was 54 minutes.

The 95th percentile waiting times for P3 patients in TTSH was slightly over 2 hours, while waiting times experienced in other public general hospitals ranged from 49 to 109 minutes.

Figure 2b: Median and 95th Percentile Waiting Times for P3 Patient Consultation at Emergency Departments of Public Sector General Hospitals, 1st – 7th Nov 2004



Notes:

Median waiting time: 50% of the patients sampled waited this long or less, 50% waited longer.

95th percentile waiting time: 95% of the patients sampled waited this long or less, 5% waited longer.

CONCLUSION

P1 patients need immediate medical attention and all are attended to immediately upon arrival at the Emergency Department.

P2 patients are triaged, started on preliminary treatment by experienced nurses and kept under observation while awaiting definitive treatment by their doctor. The Nov 04 survey showed that median waiting times for P2 patients were less than 30 minutes in all public sector hospitals except for TTSH.

P3 patients' median and 95th percentile waiting times were longest at TTSH (54 and 127 minutes respectively) and shortest at AH (16 and 49 minutes respectively).

P1 and P2 patients should seek treatment at the nearest emergency department. P3 patients would also need medical attention early but can choose to see their family physicians or attend an Emergency Department.

If P3 patients opt to seek treatment at an Emergency Department, they may find this paper useful, as they contemplate which hospital's Emergency Department to go to. An awareness of the waiting times experienced by others would also help set their own service expectations.

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At the other end of the spectrum, P4 patients do not require the services of the Emergency Department and should seek treatment from their GPs or at polyclinics. By doing so, they avoid waiting unnecessarily or tying up resources at Emergency Departments.

Feedback to MOH

If you have any comments or questions on the information paper, you can email us directly at moh_info@moh.gov.sg. Alternatively, you can also fax or write to us at:

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