

21 April 2021

Auckland DHB
Chief Executive's Office
Level 12
Building 1
Auckland City Hospital
PO Box 92189
Victoria Street West
Auckland 1142
Ph: (09) 630-9943 ext: 22342
Email: ailsac@adhb.govt.nz

Re: Official Information Act request – Modelling an emergency department operations

I refer to your Official Information Act request dated 1 April 2021, requesting the following information:

My name is Biwen Qiao, and I am a Master student studying in the University of Auckland (student number# 154644636). I am currently working on my dissertation that is related to modelling an Emergency Department operation. Therefore, I would like to request some general information about Auckland DHB Emergency Department, under the Official Information Act 1982 (the Act). I have listed my questions here:

- 1. How does the Auckland DHB Emergency Department operate differently before and after Covid-19? In other words, if currently a patient enters the ED, what are the (additional) steps required to complete his/her ED journey, such as screening, sanitising etc.?**

Screening/Triage:

- For patients entering via the front door, a tent was erected outside the Emergency Department (ED) for screening. All staff in this area wore (Personal Protective Equipment) PPE. Patients were first directed to a hand washing station. They then entered the tent where they registered and a nurse asked a series of screening questions. They then received a risk category and were then moved to Triage if they had no risk or directed to a pre-prepared room in ED if there was risk. A Perspex screen was also erected at Triage.
- As the alert levels dropped, the screening tent was removed and screening occurs at Triage. A hand sanitizer station is set up at the entrance. Patients are screened and triaged by the Triage Nurse from behind a Perspex screen. The screening form is placed in all patient notes.
- Patients arriving by ambulance are screened and triaged by a Triage Nurse who remain in a separate room and screened through a Perspex screen. The ambulance officers then move the patient to the appropriate room.
- Urgent and unstable ambulance arrivals bypass triage to resuscitation area (resus) and are met by a team in full PPE if there is any risk or the risk is unknown. This is to prevent any delays in getting to a resus bed.

Treatment/Management:

- Patients with a Covid risk are placed in single rooms. Patients with high risk or requiring aerosol generating procedures or high flow oxygen are placed in negative pressure rooms.
- These single rooms and the corridor outside these rooms are closed off to other patients, visitors and staff not providing direct care.
- Separate nursing stations are set up outside rooms where patients with a Covid risk are located including PPE stations where staff are required to don and doff PPE before and after entering a room.
- ED has 2 negative pressure rooms and processes were set up to isolate the Resus area should numbers increase. A separate Resus area was set up for patients with no risk.
- Patients with a Covid risk receive a Covid swab taken in ED.

General:

- In patient rooms and around ED, additional hand sanitiser is available.
- All staff in ED wear hospital grade face masks. N95 masks are also used when seeing patients who met the N95 mask criteria.
- Acrylic screens are set up in front of the receiving area in ED and clerical area.
- The electronic tracking system lists the screening result which mean that staff entering a room know what PPE is required.
- Cleaning activities have increased. Every room with a Covid risk patient are cleaned to an appropriate standard. Additional cleaners are used and based in ED to ensure rapid turnover. Rooms are restricted while this occurs.

2. Are there any additional beds or rooms prepared for COVID-19 isolation? If so, how many?

No additional beds were created in ED. However, ED repurposed areas to manage patients who were Covid positive or had Covid symptoms.

3. How many ED physicians and nurses are presented per shifts, and how long is one shift?

ED Physicians:

- 9 to 11 doctors are rostered on 0800-2400
- 4 to 6 doctors are rostered 2400-0800
- Doctor's shifts are 10 hours long.

Nursing:

- Shifts are various lengths between 4 and 12 hours
- During the day between 19 and 22 nurses are rostered on duty and overnight there are approximately 17 nurses rostered on.

4. What are the current PPE stocks in Auckland DHB Emergency Department?

The management of PPE stocks is managed centrally, not by ED.

5. What is the average number of daily presentations of patients per day in 2020?

- When lockdown began, numbers into ED dropped. Therefore the average for 2020 does not represent a typical year for Auckland DHB's Adult Emergency Department.

- Note these figures are for the Adult Emergency Department (this data does not include Children's ED).
- Some patients referred directly by primary care are placed in the Clinical Decision Unit (CDU) (bypassing ED) and are therefore shown separately.

AED		Triage 1	Triage 2	Triage 3	Triage 4	Triage 5	Not Triaged	Total per Month	Average per Day
2020	Jan	301	1183	2632	2368	223	9	6716	217
2020	Feb	256	1110	2440	2210	195	10	6221	222
2020	Mar	284	1029	2199	1762	152	6	5432	175
2020	Apr	180	794	1576	968	105	12	3635	121
2020	May	272	1073	2189	1466	94	11	5105	165
2020	Jun	238	1176	2512	1783	109	9	5827	194
2020	Jul	278	1315	2759	1674	107	7	6140	198
2020	Aug	263	1239	2562	1514	103	7	5688	183
2020	Sep	263	1160	2485	1502	91	6	5507	184
2020	Oct	242	1360	2770	1934	89	10	6405	207
2020	Nov	284	1318	2705	1919	120	4	6350	212
2020	Dec	318	1273	2833	2077	167	5	6673	215
	Total 2020	3179	14030	29662	21177	1555	96	69699	191

Table 1: Number of Patients placed in AED per month for 2020 by Triage and Total and Includes Calculated average per Day.

CDU		Triage 1	Triage 2	Triage 3	Triage 4	Triage 5	Not Triaged	Total per Month	Average per Day
2020	Jan		21	752	324	8	12	1117	36
2020	Feb	1	18	745	299	4	15	1082	39
2020	Mar	1	15	673	275	17	15	996	32
2020	Apr		14	767	232	4	20	1037	35
2020	May		26	718	205	5	21	975	31
2020	Jun	1	23	775	262	2	14	1077	36
2020	Jul	1	26	864	230	6	13	1140	37
2020	Aug	2	28	869	226	4	10	1139	37
2020	Sep	2	16	867	192	3	18	1098	37
2020	Oct		16	861	231	3	11	1122	36
2020	Nov		29	848	235	2	10	1124	37
2020	Dec		33	874	252	7	17	1183	38
	Total 2020	8	265	9613	2963	65	176	13090	36

Table 2: Number of Patients placed Directly in CDU per month for 2020 by Triage and Total and Includes Calculated average per Day. Does not include transfers from AED to CDU.

6. Among all the ED patient arrivals, what is the percentage of patients arriving by ambulance?

		AED % Ambulance, or Air	CDU % Ambulance, or Air
2020	Jan	27%	17%
2020	Feb	27%	17%
2020	Mar	30%	19%
2020	Apr	36%	20%
2020	May	34%	20%
2020	Jun	32%	20%
2020	Jul	31%	16%
2020	Aug	32%	17%
2020	Sep	31%	19%
2020	Oct	30%	19%
2020	Nov	28%	14%
2020	Dec	28%	16%
	Total 2020	30%	18%

Table 3: Percentage Arriving in AED and CDU by Ambulance or Air.

7. Among all the patient arrivals in 2020, can I please get the approximate patient numbers of each triage category, from triage 1-5?

Shown in Tables 1 and 2

8. What is the total time each type of triage patient spent in the ED, in 2020?

- Note that the time spent in ED is affected by many things not just triage category.
- The following table has added the total ED length of stay for patients in ED and divided it by the number in each category.
- This data does not include CDU.

	AED Only	Triage 1	Triage 2	Triage 3	Triage 4	Triage 5
2020	Jan	265	306	347	267	191
2020	Feb	285	301	335	256	184
2020	Mar	272	277	304	220	130
2020	Apr	234	266	261	196	102
2020	May	269	270	284	224	126
2020	Jun	250	266	292	225	144
2020	Jul	241	276	292	223	159
2020	Aug	249	294	299	221	128
2020	Sep	238	269	285	223	133
2020	Oct	241	280	312	244	158
2020	Nov	304	286	311	248	163
2020	Dec	277	277	315	250	160

	Total 2020	262	281	305	237	154
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Table 4: Time in Minutes that a Patient Spent in AED based on Triage, calculated by the Total ED Length of Stay Divided by the Total Number in Each Triage Category.

You are entitled to seek a review of the response by the Ombudsman under section 28(3) of the Official Information Act. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the Auckland DHB website.

Yours faithfully



Ailsa Claire, OBE

Chief Executive of Te Toka Tumai (Auckland District Health Board)

