Pacific patients' reasons for attending the emergency department of Counties Manukau for non-urgent conditions

Catherine J Yang, Vanessa Selak, David Schaaf, Vili Nosa

ABSTRACT

AIM: To determine Pacific patients' reasons for Emergency Department (ED) use for non-urgent conditions by Pacific people at Counties Manukau Health.

METHODS: Patients who self-presented to Counties Manukau ED with a non-urgent condition in June 2019 were surveyed. Responses to open-ended questions were analysed using a general inductive approach, in discussion with key stakeholders.

RESULTS: Of 353 participants with ethnicity reported, 139 (39%) were Pacific, 66 (19%) Māori and 148 (42%) were non-Māori non-Pacific, nMnP. A total of 58 (42%) of Pacific participants had been to their general practitioner prior to presenting to the ED; this proportion was similar for Māori (19 [30%]) and nMnP (59 [40%]) (p=0.215). The most common reasons for ED attendance among Pacific (as well as other) participants were 1) advice by a health professional (41%, 95% CI 33–50%), 2) usual care unavailable (28%, 20–36%), 3) symptoms not improving (21%, 14–28%), and 4) symptoms too severe to be managed elsewhere (19%, 12–26%).

CONCLUSIONS: Multiple reasons underlie non-urgent use of EDs by Pacific and other ethnic groups. These reasons need to be considered simultaneously in the design, implementation, and evaluation of multi-dimensional initiatives that discourage non-urgent use of EDs to ensure that such initiatives are effective, equitable, and unintended consequences are avoided.

Presentations to Emergency Departments (EDs) in New Zealand[1,2] and internationally[3] are increasing at an unprecedented rate. While most ED presentations are for urgent conditions, a substantial proportion is for conditions regarded as non-urgent. The proportion of ED presentations that are non-urgent is rising in New Zealand and across the world.[4,5] Non-urgent ED presentations are considered by some to be unnecessary, costly, avoidable, and better managed in a primary care setting.[6]

Māori and Pacific people experience substantial health inequities[7] and are high users of EDs. In 2019/2020, 20.6% of Pacific and 21.7% of Māori reported having been to the ED in the past 12 months compared with 14.9% overall.[8] High ED use by Pacific people in New Zealand has been highlighted in previous literature.[9,10] At Counties Manukau (CM) Health, Pacific patients are the highest ED users, comprising 21% of the catchment population but 34% of all ED presentations.[11] The Pacific Health team of CM Health sought to determine the key reasons for Pacific patients' high use of the ED for non-urgent conditions, from the perspective of Pacific patients themselves.

Method

The CM Health Pacific Health Team undertook a cross-sectional survey of patients who self-presented with a non-urgent condition to CM ED. CM ED operates 24 hours a day, throughout the year, inside Middlemore Hospital. On arrival to the CM ED (as with all other New Zealand EDs), all patients' urgency of diagnosis and treatment is classified according to the Australasian Triage Scale (ATS). This scale has categories ranging from one (most urgent) to five (least urgent). Recruitment for the survey was opportunistic. Members of the Pacific Health Team approached potential participants while the participants were waiting to be seen in the ED. The survey was conducted from Tuesday, 18 June to Saturday, 22 June 2019 during two time periods: office hours (11 am to 2 pm) and after hours (5 pm to 10 pm).

Survey inclusion criteria were: 1) the patient had self-presented to the ED without a referral letter or previous arrangement to be seen directly by an inpatient specialist team, 2) the patient was present in the waiting room during the survey period, 3) the patient was categorised as ATS 4 or

5 (i.e., non-urgent), 4) the patient agreed to participate in the survey, and 5) the patient provided their ethnicity in the survey.

The survey (see Appendix 1) was a structured questionnaire in English with a combination of closed- and open-ended questions that was read out to participants, with the interviewers translating the survey questions to Samoan or Tongan if needed. The questionnaire was based on one used in a previous survey of CM ED patients with ATS 3–5.[12] Interviews were conducted in a private room or in an area that was curtained off. Participants' responses were recorded on paper by the interviewers in English. If the patient could not answer the survey questions, the survey could be completed by an accompanying person on their behalf. Alternatively, the accompanying person could translate for the patient.

The study was registered with the CM Health Research Office (CM Health #1292). Ethics approval for Catherine Yang to analyse the anonymised data (stored securely on the CM Health server) for her dissertation was obtained from the Auckland Health Research Ethics Committee (#3341).

Analysis

Participants were classified as Māori, Pacific and non-Māori non-Pacific (nMnP) based on total response output. While the survey was able to capture multiple ethnicities, no participant ethnicity was classified to more than one ethnic group, meaning that ethnic groups were mutually exclusive. Quantitative data (socio-demographic characteristics, general practitioner [GP] access) were presented as numbers and proportions by ethnic group. Chi-squared tests were used to determine whether proportions were statistically significantly different (two-sided p-value of <0.05) between ethnic groups.

Pacific participants' answers to the following three free-text questions, on why they went to the ED for non-urgent conditions, were analysed, using the general inductive approach:[13]

1. Can you tell us how you ended up in ED today and did not go to your GP/Family doctor?
2. Is there a reason why you didn't contact your GP or make an appointment to see them? (If the participants had not tried to contact their GP or GP nurse that day)
3. Why didn't you go to an after-hours clinic?

No pre-specified prompts were supplied for these (or any other) questions. Questions 1 and 3 don't infer a requirement to provide a specified number of reasons. Question 2 infers a single reason ("is there **a** reason"), though data captured was not restricted to a single reason. Categories were created and finalised after validation with CM Health Pacific Health Team interviewers. All participants' responses (irrespective of ethnicity) were then classified to all relevant categories (i.e., one participant's response could be classified into more than one category). Wald (normal approximation) 95% confidence intervals (CIs) were used to determine whether proportions were statistically significantly different between ethnic groups.

Chi-squared tests were performed by, and CIs were obtained from, the Open Source Epidemiologic Statistics for Public Health online calculator.[14]

Results

A total of 357 participants completed the survey, of whom 353 reported their ethnicity. Among the participants with ethnicity reported, 139 (39%) were Pacific, 66 (19%) Māori and 148 (42%) were non-Māori non-Pacific, nMnP. Two participants identified with more than one ethnicity. In both cases, the two ethnicities they identified with were neither Māori nor Pacific, so these participants were both classified as nMnP. No Pacific participant identified with more than one Pacific ethnicity. More than half (58%) of Pacific participants identified with Samoan ethnicity, followed by Tongan (24%), Cook Island (12%), Niuean (4%), and other Pacific ethnicities (3%).

There were no significant differences in gender, employment or residency status by ethnic group. (Table 1). Mean age increased from 28.6 years for Pacific (SD 27.4), to 34.8 years for Māori (SD 24.1) and 42.4 years for nMnP participants (SD 29.5).

Nearly all Pacific participants (n=135, 98%), as well as Māori (95%) and nMnP (97%) stated they had a usual GP. Only 7.5% of Pacific (and a similar proportion of Māori, 8.8% and nMnP, 12.3%, p=0.500) developed symptoms on the same day as their presentation to the ED. A large proportion (n=59, 42%) of Pacific participants had been to their GP before presenting to the ED. This was not statistically significantly different for Māori (n=19, 30%) or nMnP (n=59, 40%) (p=0.215).

A total of nine categories represented the reasons 329 participants (93%) had attended the ED for non-urgent conditions (Table 2). Responses for

the remaining 24 participants could not be classified because their response related to their presenting complaint rather than health service access (n=21) or their response was too brief to be able to be interpreted (n=3).

Among the responses that were able to be classified, the most frequently reported reason for attending the ED for a non-urgent condition among Pacific participants was that they were advised to do so (41%, 95% CI 33–50%). This was also the most frequently reported reason for ED attendance by Māori (30%, 18–42%) and nMnP (35%, 27–43%), and 95% confidence intervals for the proportion reporting this reason (as with other reasons) by ethnic group overlapped (Figure 1).

Discussion

This cross-sectional, opportunistic survey of patients who self-presented to CM ED in June 2019 with non-urgent conditions found that 58 (42%) of Pacific (and similar proportions of Māori [30%] and nMnP [40%], p=0.215) participants had been to their GP prior to presenting to the ED. The most common reasons for ED attendance with a non-urgent condition among Pacific (as well as for Māori and nMnP) participants was advice by a health professional (41%, 95% CI 33–50%), (2) usual care unavailable (28%, 20–36%), (3) symptoms not improving (21%, 14–28%), and (4) symptoms too severe to be managed elsewhere (19%, 12–26%).

This study indicates that healthcare providers are a frequent driver of Pacific people's non-urgent use of the ED, that most Pacific people are aware of the need to seek alternative healthcare providers, that there are barriers to Pacific people using usual care for unplanned healthcare concerns and that findings were similar for Māori and nMnP CM ED patients. The findings of this study are largely consistent with previously published literature on the reasons for Pacific peoples' use of EDs for non-urgent conditions, including studies from New Zealand[10,12,15] and the United States of America.[16,17]

New Zealand EDs are insufficiently funded to provide large volumes of non-urgent care,[18–20] have not been adequately resourced to keep up with increasing volumes of urgent, as well as non-urgent, presentations,[21–23] and have been subject to ongoing competing priorities for health service investment.[24] Even with the New Zealand health system reform and consolidation of district health boards into a single entity, it is unlikely that there will be sufficient funding to adequately expand EDs to keep up with ever-increasing demand. Further, it is unlikely to be feasible to train and retain enough healthcare workers to keep up with the increasing number of patients under the current model of care.[25] There are also arguments against EDs accommodating all of this increased demand in the first place,[6] particularly when a substantial proportion of the demand is for non-urgent conditions, which Manatū Hauora – Ministry of Health says should be assessed and treated in primary care.[26] The rising number of presentations and the limitations in ED expansion have led to an unsustainable situation for both patients and staff over the past few years, with consequently overcrowded EDs, unacceptable waiting times and burnt out staff.[27]

Strategies to address this mismatch between ED capacity and demand have attempted to redirect people presenting to EDs with non-urgent conditions to alternative providers. Three main types of strategies have been implemented: 1) providing alternative acute care options to which GPs and ambulances can direct patients (such as Canterbury's Community-Based Acute Care Service[28] and Hawke's Bay's Hospital at Home initiative[29]), 2) educating the public about the need to keep the ED free for genuine emergencies,[30–32] and 3) redirecting patients presenting with non-urgent conditions at the front door. An example of the latter approach is Emergency Q™, an app in use at CM Health as well as other providers across New Zealand.[33] This app gives patients real-time data on waiting times at their nearest ED alongside other after-hours clinics in the area to encourage people to use other services. In some areas, there is the ability for the ED to issue vouchers through the app for free consultations at after-hours clinics and taxi chits to get to those clinics.[11]

The patient-directed initiatives appear to have been developed with a number of implicit underlying assumptions. These are that patients have limited awareness of alternative healthcare providers and have presented to the ED without seeking alternative care first. These initiatives also appear to assume that cost and transport are significant factors in patients presenting to EDs. In order to be effective at appropriately and equitably reducing the demand on EDs, the underlying assumptions of the initiatives—both explicit and implicit—need to be concordant with the underlying reasons driving patient presentation to the ED with conditions that may have been better managed elsewhere.

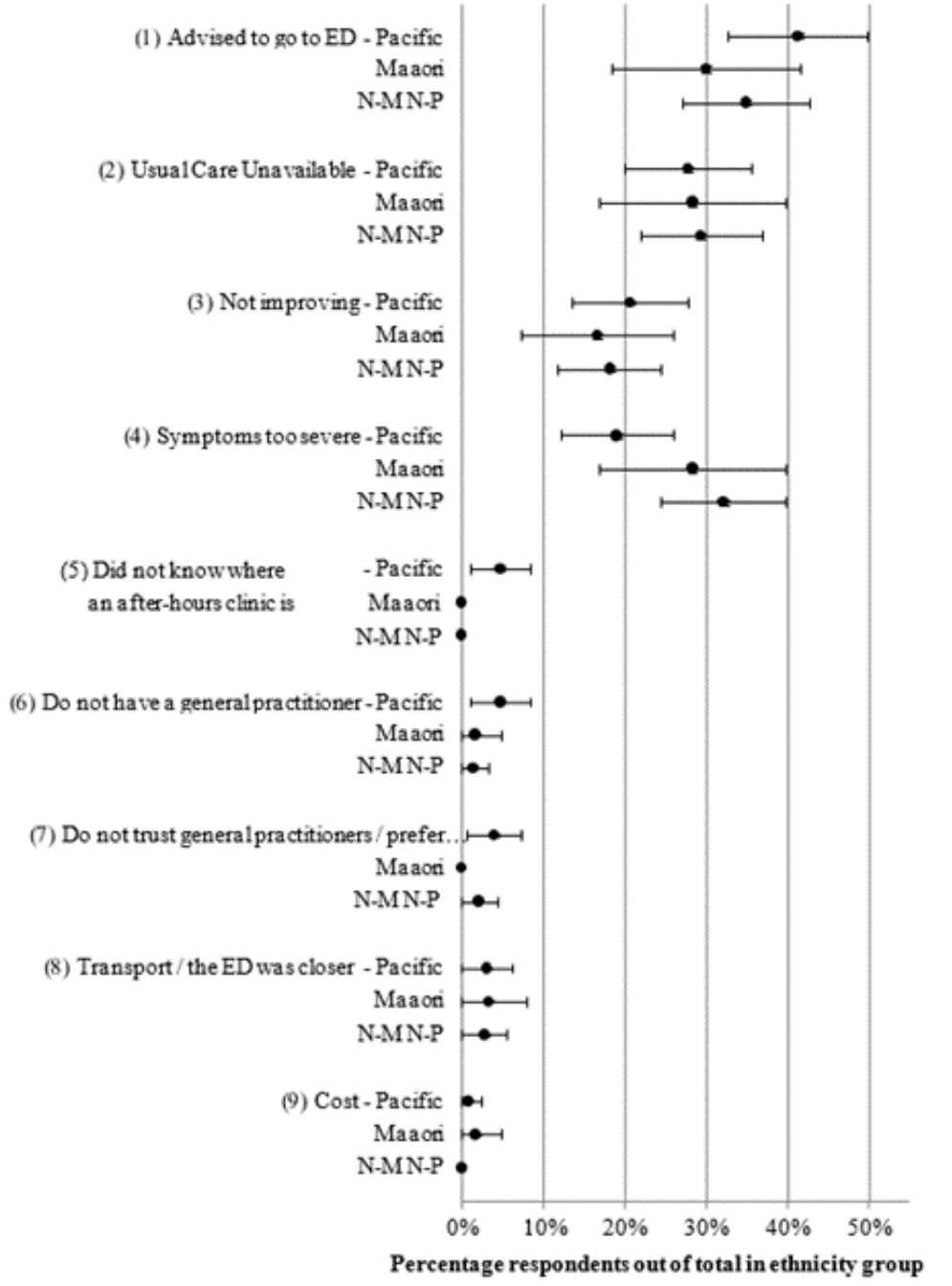
Table 1: Socio-demographic characteristics by ethnic group.

Characteristic	Pacific	New Zealand Māori	Non-Māori non-Pacific	P-value (Chi-square test)
	n=139	n=66	n=148	
	n (% of those with available data by column/ethnic group)			
Gender				
Female	70 (50%)	27 (41%)	76 (51%)	0.340
Male	69 (50%)	39 (59%)	72 (49%)	
Missing	0	0	0	
Age group				
0–14 years	51 (42%)	22 (35%)	31 (22%)	0.000
15–65 years	48 (39%)	36 (58%)	67 (48%)	
>65 years	23 (19%)	4 (6%)	42 (30%)	
Missing	17	4	8	
Employed				
Yes	30 (22%)	17 (26%)	48 (32%)	0.057
No	109 (78%)	48 (74%)	100 (68%)	
Missing	0	1	0	
Residency				
Yes	138 (99%)	66 (100%)	142 (96%)	0.340
No	1 (1%)	0 (0%)	6 (4%)	
Missing	0	0	0	

Table 2: Reasons for going to the ED by ethnic group.

Reasons (more than one could be assigned to each individual)	Pacific	New Zealand Māori	Non-Māori non-Pacific	Total
	N=126	N=60	N=143	
	n, % of those with available data by column/ethnic group (95% CI)			
(1) Advised to go to ED	52, 41% (33% to 50%)	18, 30% (18% to 42%)	50, 35% (27% to 43%)	120
(2) Usual care unavailable	35, 28% (20% to 36%)	17, 28% (17% to 40%)	42, 29% (22% to 37%)	94
(3) Not improving	26, 21% (14% to 28%)	10, 17% (7% to 26%)	26, 18% (12% to 25%)	62
(4) Symptoms too severe	24, 19% (12% to 26%)	17, 28% (17% to 40%)	46, 32% (25%, 40%)	87
(5) Did not know where an after-hours clinic is	6, 5% (1% to 8%)	0	0	6
(6) Do not have a GP	6, 5% (1% to 8%)	1, 2% (0% to 5%)	2, 1% (0% to 3%)	9
(7) Do not trust GPs/prefer the ED	5, 4% (1% to 7%]	0	3, 2% (0% to 4%)	8
(8) Transport/the ED was closer	4, 3% (0% to 6%)	2, 3% (0% to 8%)	4, 3% (0% to 6%)	10
(9) Cost	1, 1% (0% to 2%)	1, 2% (0% to 5%)	0	2

Figure 1: Reasons for going to the ED by ethnic group, % and 95% CI.



Note. N-M N-P: Non-Maaori Non-Pacific

Our study, as well as other studies that have investigated the reasons for non-urgent ED use among Pacific,[10,12,15–17] as well as general[34,35] populations, suggest that some of these assumptions are not correct. Without concordance between the assumptions and the true drivers, initiatives to keep EDs free may have a negative impact on equity. Potential unintended consequences might include a) turning away patients with truly ED-level health needs, b) redirected patients not seeking further care so that their condition deteriorates until critical, and c) patients are reluctant to seek healthcare in the future because they felt unwelcome during this encounter. These risks are likely to be magnified in populations that have been underserviced and marginalised already by the current healthcare system, such as Māori and Pacific in New Zealand.

The findings of our research are consistent with those of a cross-sectional two-part survey that was conducted over a 2-week period in late November 2012 and mid-July 2013. This survey was set in 11 Accident and Medical clinics (A&Ms) and six EDs in the Auckland region, as part of an evaluation of an A&M initiative in which patient co-payments for medical visits to participating A&Ms, some of which had opening hours extended, were subsidised.[36] A total of 540 A&M (25% Pacific) and 447 ED (22% Pacific) patients were surveyed by university researchers. While they found patient choice between A&Ms and EDs was influenced by a range of factors, including "*convenience, proximity to care, confidence (particularly in ED), access to transport, and cost (particularly for quintile 5 patients)*," they noted the importance of "*interface between services is an important contributory factor*".[36] They further noted that:

> *"A key factor is referral and advice by a health professional to a particular care provider. GPs often advise people to attend ED as a safe option. Many if not most referrals are appropriate, however some ED staff respondents highlighted GP referral as a common reason for what they saw as inappropriate ED attendance."*[36]

To our knowledge, this is the largest Pacific-led study that has directly asked Pacific patients themselves why they presented to the ED for non-urgent conditions. The study used both quantitative and qualitative methods. In addition, the study focused on the perspective of patients by asking them directly, using open questions, on why they had used the ED, with no limit on the number of categories into which they could be classified. The study had a specific focus on the perspective of Pacific patients through its design, implementation and interpretation by the Pacific Health Team of CM Health and oversight of this analysis by a senior Pacific health researcher (Vili Nosa).

The limitations of the study are that the survey was conducted for operational service delivery improvements, and not intended for research, which may limit the generalisability of findings to other populations. There was potential for selection bias. Data were not available on how many patients were approached or declined to participate, and how they may have been different from those that did participate. Staff involved in the survey did observe that many patients who declined to participate were unable to do so because they were in pain. Responses may have been subject to social desirability bias, as data were collected in the ED, which can be a highly stressful environment, by members of the Pacific Health Team, who may have been perceived as having authority over participant care. Social desirability bias may have been compounded for Pacific participants as interviewers were also members of the Pacific community. In addition, there was the potential for misinterpretation of data for participants (information bias) where this was provided by an accompanying person on their behalf, as well as where translation was required, which was not undertaken by official interpreters. Unfortunately, no data were available to determine the extent to which data were provided indirectly (either by an accompanying person and/or via translation), though it was observed by staff that administered the survey that most adults completed the survey themselves. It should be noted that in the case of children, completion of the survey by their caregiver or parent is appropriate here because it is them (not the child themselves) who would have made the decision to attend ED. Finally, data collection coincided with the onset of winter when health services tend to experience peak demand due to seasonal increases in influenza-like illness. Findings of this cross-sectional study may therefore not necessarily reflect the performance of the health system during non-peak periods.

Despite the limitations noted above, this research is significant, because when considered with previously published literature, it identifies a potential discrepancy between the assumptions

made behind current ED turnaround initiatives to redirect patients away from the ED and actual need. Multiple drivers underlie non-urgent use of EDs by Pacific and other ethnic groups. These drivers need to be considered in the design, implementation, and evaluation of initiatives that discourage non-urgent use of EDs to ensure that such initiatives are effective, equitable, and unintended consequences are avoided.

More broadly, this research highlights gaps between our primary and secondary health services and underlying systems issues. These systems issues must be addressed in order to meet health system legislative responsibilities, which mandate equitable outcomes for all New Zealanders, including Pacific peoples.[37] Urgent health systems change is needed, including strengthening connections between primary and secondary care (possibly through including primary care in our EDs and increasing the size of our primary care workforce), in order to address the ongoing, substantial and unjust health inequities experienced by Pacific peoples.[7]

COMPETING INTERESTS
Catherine Yang was employed as Acting Manager of Hospital Funding at Counties Manukau Health at the time this research was conducted. Catherine Yang undertook this research under the supervision of Vanessa Selak and Vili Nosa, in partial fulfilment of public health medicine specialist training requirements. Vanessa Selak and Vili Nosa have no competing interests to declare.

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Appendix 1: Survey questionnaire and response options.

Question	Data type	Options (if any)
Gender	Free text	
Ethnicity	Free text	Self-defined; no limits on the number of ethnicities
Residency status	Binary	
Employment status	Free text	
Time of arrival to ED	DD/MM/YY time	
Country of birth	Free text	
Do you have a GP?	Multiple choice	Yes/no/don't know
Have you seen your GP in the last 1–2 days?	Binary	
If yes, what did you see the GP for?	Free text	
Have you tried to contact your GP or GP nurse today?	Binary	1=Yes 2=No
If yes, what was their advice about what to do for health care?	Free text	
If no, is there a reason why you didn't contact your GP or make an appointment to see them?	Free text	
Where does your GP suggest you go for care outside of office hours or in case he/she cannot be contacted?	Multiple choice	1=Accident/Medical/After Hours 2=Emergency care/department 3=Another GP 4=Other
Can you tell us how you ended up in ED today and not go to your GP/family doctor (presenting complaint)?	Free text	
Why didn't you go to Accident & Medical Centres/after hours	Free text	
When did you get sick? (dd/mm/yyyy)	Date	
How did you get here? (mode of transport)	Free text	

Appendix 1 (continued): Survey questionnaire and response options.

Question	Data type	Options (if any)
EC referral: Who referred you to EC today?	Multiple choice	1=Self-referral 2=GP 3=Accidental & Emergency care 4=Family member 5=Healthline 6=Other (explain)
Reasons for other?	Free text	