Preferences and perceptions of patients attending emergency departments with low acuity problems in Hong Kong

因低急性問題到香港急症室求診之病人的感覺及喜好

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**Objective:** To explore why patients in Hong Kong seek medical advice from the emergency department (ED) and to identify the methods by which patients would prefer to be updated on the likely waiting time for medical consultation in the ED. **Methods:** The study recruited 249 semi-urgent and non-urgent patients in the ED of Prince of Wales Hospital from 26th September 2005 to 30th September 2005 inclusive. A convenience sample of subjects aged ≥15 years old in triage categories 4 or 5 were verbally consented and interviewed by research nurses using a standardized questionnaire. **Results:** From 1715 potential patients, 249 were recruited ad hoc (mean age 44 years [SD18]: 123 females). About 63% indicated that an acceptable ED waiting time was less than or equal to two hours, and 88% felt that having individual number cards and using a number allocation screen in the ED waiting area would be useful. Perceived reasons for attending the ED rather than other health care providers such as primary health care or the general outpatient clinic (G OPC) included: a desire for more detailed investigations (56%); a perception that more professional medical advice was given in the ED (35%); patients were under the continuing care of the hospital (19%); and patients were referred to the ED by other health care professionals (11%). Notably, 26% of participants had considered attending the GOPC prior to attending the ED. Patients educated to tertiary level expected a shorter waiting time than those educated to lesser degrees (p=0.026, Kruskal-Wallis test). Suggestions were made on how to provide a more pleasant ED environment for the wait for consultations, which included the provision of a television screen with sound in the waiting area (43%), more comfortable chairs (37%) and health care promotion programs (32%). **Conclusion:** Patients chose ED services because they believed they would receive more detailed investigations and more professional medical advice than available alternatives. Clear notification of the likely waiting times and enhancement of comfort before consultation are considered desirable by patients. Enhanced public education about the role of the ED and making alternatives to ED care more accessible may be useful in reducing inappropriate ED attendances in Hong Kong. *(Hong Kong J Emerg Med. 2009;16:148-154)*

目的：探索香港的病人為何到急症室尋求醫學意見及識別出病人較喜歡的方法去更新在急症室等候醫生診症的大概時間。**方法:** 研究於2005年9月26日至30日期間在威爾斯親王醫院的急症室招募了249名次緊急及非緊急的病人。調查的護士使用標準化的問卷，向一個便利樣本的15歲或以上及傷傷分類4或5的對象，徵求口頭同意並接受訪問。結果：由1715名潛在的參與者中，特別招募了249名（平均年齡44歲[標準差18]， 123名女性）。大約63%表示可接受的急症室等候時間為兩小時或以下，而88%覺得個別號碼咭及在急症室候診區使用電子顯示板號碼是有用的。到急症室而非其他醫療服務者求診，如基層醫療服務或普通科門診，所理解的原因包括：渴望較詳細的檢驗（56%）；感覺上急症室提供的醫學意見較專業（35%）；病人在這急症室正接受持續的護理（19%）及病人被其他醫療服務專

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Introduction

Patients suffering from minor injuries or illnesses often attend the emergency department (ED) for treatment even when they could potentially attend general outpatient clinics (GOPC), or receive primary medical care from family doctors. The reasons for this phenomenon are likely to be multifactorial.

Many patients are willing to wait in the ED for prolonged periods of time despite the availability of other options. The introduction of charges for ED attendances in Hong Kong on 29th November 2002 was expected to decrease the perceived abuse of the ED service and encourage the number of low acuity patients (defined here as triage category 4, "acute but stable condition...", stable vital signs..., can wait for some time" and category 5, "minor and stable condition... wait without deterioration") to use alternative medical services other than an ED.

However, the full impact of the introduction of charges in Hong Kong is difficult to interpret as this change was made just prior to the unanticipated global outbreak of severe acute respiratory syndrome in 2003. Many EDs have experienced continuing decreases in patient attendance during 2004 and 2005. This could potentially be explained by the improving economy and increasing use of private health care facilities, including private family physicians. Alternatively, it could reflect an ongoing concern for the potential risks associated with a trip to the ED (e.g. from infectious disease outbreaks), dissatisfaction with ED waiting times or performance, or the longer term impact of patient fees on attendance.

The impact that these patients make on the workload of the ED is high. A patient who chooses to wait for care for a non-urgent condition in the ED does not only alter his or her own care, but also has an effect on many other patients’ waiting times in the ED.

This can lead to longer and longer waiting times, complaints and frustration to patients, relatives and hospital staff. It also has an important impact on ED staff morale, and it may change ED practice by encouraging staff to take 'short cuts' in patients’ care to try to meet demand and reduce waiting times.

Patients and relatives understandably become frustrated by a perceived lack of information on accurate estimates for the ED waiting time. Improving the information provided to these groups may reduce frustration and possibly the number of complaints received by ED staff.

The aim of this study was to explore why patients seek advice and medical care from the ED rather than other available sources of health care. It further attempts to identify the methods by which patients would prefer to be updated on the likely waiting time for medical consultation in the ED.

Methods

This prospective study was performed in Prince of Wales Hospital (PWH), a 1400 bed university teaching hospital in the New Territories of Hong Kong. The ED has an annual attendance of around 150,000
persons. Of these, 63.9% are triaged into category 4 (semi-urgent) and 5.0% are triaged into category 5 (non-urgent) [data from PWH ED, 2004].

This study used a convenience sample of patients aged 15 years or more who were triaged into category 4 and 5. A convenience sample was selected due to difficulties in systematically sampling patients at times of variable waiting times and patient demand in the ED. No attempts were made to select particular types of patients or to avoid specific patients.

The study was conducted during the day at ad hoc times between 08:00 hour and 18:00 hour during the period from 26 September 2005 to 30 September 2005 inclusive. It was performed by dedicated ED research nurses who undertook face-to-face interviews with consenting participants. A standardised questionnaire was used (Appendix). Verbal consent was obtained prior to participation.

**Results**

There were 1715 ED attendees during the five study days at the sampling times. From these 1715 potential participants, 249 participants agreed to take part in the study. Not every patient was asked, due to time limitations for the research nurses, and therefore the recruited participants formed a convenience sample. The mean age of participants was 44 years (standard deviation 18), and 49% (123/249) were female. Figure 1 shows the educational level of the study participants. Nearly two-thirds of respondents (63.2%) gave the opinion that an acceptable ED waiting time was less than or equal to two hours (Figure 2).

Notably, 53% knew their projected ED waiting time according to their triage category, through observation of the notice board in the waiting hall; 19% of participants did not know their estimated waiting time despite this notice board being clearly visible in the waiting areas; and 88% felt that having individual number cards and using a number allocation screen (similar to that used in some banks and supermarkets) in the ED waiting hall would be useful. Similarly, 53% felt that number cards with number screen outside each consultation room would be useful; and 37% suggested that regular and repeated announcements about the waiting time should be made for different triage categories.

Perceived reasons for attending the ED rather than other health care providers such as primary health care or the GOPC included the desire for more detailed investigations (56%), a perception that more professional medical advice would be given in the ED (35%), patients currently under the continuing care of this hospital (19%) and direct referral by other health care professionals (11%). However, 26% of the participants had considered attending the GOPC prior to attending the ED; 5.7% indicated that they were not aware of the availability of the GOPC service; and 1.2% of the participants chose the ED because they
did not need to pay any fee on account of a waiver due to government social security assistance.

There were no differences in opinions between those who attended the ED for the first time and those who had attended before, except that those who had attended before expected more detailed investigations (12/15 [80%] vs. 84/179 [47%], p=0.035, Mann-Whitney U test).

Those with tertiary level education felt that the maximum reasonable waiting time was shorter than participants in the other three groups, with a mean time of 1.8 hours compared to 2.6 hours for those who could not read or write, 2.4 hours for those with a primary education, and 2.3 hours for those with secondary level education (p=0.026, Kruskal-Wallis test). The range varied from 1 to 4 hours for all four education levels. There were no statistically significant differences between the other three groups.

Participants who could not read or write were much less likely to report seeing the notice board with details of the waiting times on it compared to the other three groups (p<0.001, chi-square test). Increasing educational level was associated with better knowledge of waiting time (printed for each triage category on the patient’s triage card; p<0.001, chi square test).

Suggestions were made on how to provide a more pleasant ED environment for the wait for consultation. These included the provision of television screen with sound in the waiting area (43%), more comfortable chairs (37%) and health care promotion programs (32%).

Discussion

Patients chose to come to the ED rather than GOPC for specific reasons. They feel they will be offered more detailed investigations or given more professional medical advice; they may be cared for by the same personnel (those who have been previously treated at the hospital) or they have been referred to the ED by another health care professional. There is no objective reason to suspect that patients will be given more ’professional’ service in the ED than in the GOPC, but this seems to be the patients’ perception.

According to our study, financial factors are not the major reason for inappropriate ED utilisation. Only 1.2% of the patients chose ED services because of a Comprehensive Social Security Assistance (CSSA) waiver; this means-tested scheme provides cash assistance for the financially vulnerable to increase their income to a prescribed level.4

According to Leung and colleagues,5 78% of their respondents would consider visiting a parallel ambulatory clinic rather than the ED. Leung’s study used the concept of conjoint analysis, which includes a measure of ‘trade-off’, that is, for every decision there is an associated benefit or cost involved.

In our small study, only 26% of the participants had considered attending the GOPC prior to attending the ED, and 5.7% of the patients did not know about the GOPC service, suggesting that insufficient knowledge of the primary health care service may cause patients to utilise emergency services instead. This problem could be solved by promoting information on primary healthcare facilities or other healthcare services and providing public education so that patients can have a greater understanding of the roles and availability of primary health care services. Additionally, the limited service hours of the GOPC and the GOPC’s consultation quota may have had an impact on patients’ decision making, potentially increasing the workload of the ED.

The perceived deficiencies in the notification of waiting times to ED patients could potentially be improved by giving number cards to patients and relatives and providing screens in the waiting hall and outside consultation rooms. Although there were already regular announcements on the waiting times, there were requests for more of these, and repeated announcements. It was also suggested that the announcements should be made in both Chinese and English routinely.
Patients with higher levels of educational attainment (secondary and tertiary) were younger than the other groups, and those with tertiary education expected to be seen after a shorter wait than others. The reasons for this may be due to their higher expectations, more understanding of the emergency care process, and impatience due to personal pressures of work or family. As the proportion of the Hong Kong population with higher levels of education increases, patient expectations and in particular, a desire for shorter waiting times, may increase.

In contrast, the older and less well educated patients seem to accept longer waiting times. They also had lesser access to written information, making it more important for EDs to provide pictorial and verbal communication to elderly patients waiting in the ED.

Patients who had previously attended the ED expected more detailed investigations on a return consultation. While this expectation is reasonable, care must be taken by ED staff to ensure that patients are not extensively over-investigated, thus creating a precedent for patients and raising expectations excessively.

The comfort level for those patients with long waiting times before consultation could be enhanced by providing television screens at a suitable level, more comfortable chairs and health promotion programs. While there is no concrete evidence that these measures would improve patient satisfaction, it seems likely from the responses we received that the introduction of these simple measures may make patients’ experiences more pleasant whilst they are waiting. This has to be balanced against the fact that there is a limited budget and the items provided in the waiting room must be durable and appropriate for an ED waiting area given their constant use throughout the 24-hour period.

The major limitation of our study is that it did not make a direct comparison between the emergency department, general outpatient clinics and private clinics. Another potential criticism is that only 249 patients were recruited; this was a small number, but it was impossible to recruit more patients than this in the timeframe available to the research team. Likewise, ideally we would have sampled patients at all points during the 24 hours of the day, but this was not possible in the present study. Selection bias is possible, but the research staffs were instructed not to target any specific groups of patients nor to ignore any.

A larger sample size and a longer sampling timeframe would be beneficial for similar future studies. Further studies in Hong Kong and beyond would also show if our results are consistent with other centres.

Conclusion

Patients chose ED services because they believed they would receive more detailed investigations and more professional medical advice than available alternatives. Clear notification of the likely waiting times and enhancement of comfort before consultation are considered desirable by patients. Enhanced public education about the role of the ED and making alternatives to ED care more accessible may be useful in reducing inappropriate ED attendances in Hong Kong.

References

2. Hospital Authority of Hong Kong. Accident and emergency department triage guidelines. Hong Kong: Hospital Authority; 1999.
Appendix.

Prince of Wales Hospital accident & emergency department quality of service survey.

<table>
<thead>
<tr>
<th>Study no.:</th>
<th>Patient Sticker</th>
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<tbody>
<tr>
<td>Name:</td>
<td></td>
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<tr>
<td>Age:</td>
<td></td>
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<tr>
<td>Arrival time:</td>
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<tr>
<td>Sex: Male ☐ Female ☐</td>
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Triage cat.: Four ☐ Five ☐

Interview time:
1. How long do you think it is reasonable for someone with your condition to wait to see a doctor?
   1 2 3 4 5 6 >6 hours

2. Have you been told how long you would have to wait to be examined?
   Yes ☐ (answer Q.3) No ☐ (answer Q.4)

3. If so, how long were you told?
   1 2 3 4 5 6 >6 hours

4. Have you seen the notice boards of the waiting time in our department?
   Yes ☐ No ☐

5. Do you know how long you would have to wait according to your category?
   Yes ☐ (answer Q.6) No ☐ (answer Q.7)

6. How long will you wait for according to your category?
   1 2 3 4 5 6 >6 hours

7. What kinds of methods do you think would better help you to know the waiting time?
   - Giving number card and number screen in waiting hall ☒
   - Number screen outside each consultation room ☒
   - Regular and repeated announcements ☒
   - Receptionist/reception counter ☒
   - Others: ☐

8. Why do you still want to seek for medical advice from ED when you know you have to wait for a long time?
   - Excellent medical and nursing care ☐
   - More professional medical advice ☐
   - More detailed investigations ☐
   - High reputation ☐
   - Cheaper than GP ☐
   - Old cases ☐
   - By referral ☐
   - Feeling difficult to get the number card at GOPD ☐
   - Easily accessible e.g. location ☐
   - Waived by CSSA ☐
   - Others: ☐

9. Did you consider attending the GOPD for your consultation?
   Yes ☐ (answer Q.11) No ☐ (answer Q.10)

10. Why did you attend ED rather than GOPD on this occasion?
    - More detailed investigations ☐
    - More professional medical advice ☐
    - High reputation ☐
    - Old cases ☐
    - Easily accessible e.g. location ☐
    - Not knowing the service of GOPD ☐
    - Feeling difficult to get the number card at GOPD ☐
    - Much longer waiting time than ED ☐
    - By referral ☐

11. Would anything help your wait to be more pleasant?
    - Television ☐
    - Health and educational programs/ talks ☐
    - Shows on the screen e.g. road shows ☐
    - Comfortable chairs ☐
    - No comments ☐
    - Others: ☐

   (continued on page 154)
Appendix. (cont’d)

**Other information:**

Educational level: Can’t read or write □ 0  Primary □ 1  Secondary □ 2  Tertiary □ 3

Years of living in Hong Kong: __________

Have you attended ED before? Yes □ 1  No □ 8

Completed time: __________

**Other comments:**