

To Evaluate The Appointment-Based System Introduced In The Emergency Department, Which Enables The Number Of Attendances To The ED To Be Staggered To Maintain Social Distancing In COVID 19 PANDEMIC

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Abstract—

Objective: Our aim was to evaluate the appointment-based system introduced in the Emergency Department for patients, which enables the number of attendances to the ED to be staggered to maintain social distancing in COVID-19.

Setting: The Urgent Care Centre of a large sub-urban Emergency Department, staffed by Emergency medicine doctors, general practitioners, and Emergency nurse practitioners.

Participants: 420 patients, including adults and children of both sexes, who fulfil the criteria were allocated an appointment by the streamer at the front door or advised to attend a walk-in-centre. 404 patients attended their clinic appointments.

Design: Total 24 appointments were allocated for the clinics lasting half an hour each. Inclusion criteria included injuries to knee and below, injuries elbow and below, injuries to shoulder (no deformity), superficial foreign bodies (not ingested), and simple wounds not requiring suturing. Exclusion criteria included under 12 years of age or child with safeguarding concerns, gross deformity of limb, complex wounds, severe pain, wound older than 10 hours, dog bite, dirty wounds, suspected domestic violence, safeguarding issues and septic joints.

Results: A total 420 patients were given appointments by the streamers to these clinics, which were run by senior Emergency Nurse Practitioners (ENPs) (Table 1). Only 16 out of total 420 did not attend in their allocated appointments (Fig 1). Out of 404 who attended only 1 was a follow-up and the rest of the 403 were new patients.

312 patients were assessed and treated by clinicians. 6 patients had debridement of their wounds done; one patient had a splint applied whilst 3 patients had their sutures removed in the clinic (Table 2).

Conclusion: Scheduled appointments can be given to selected patients presenting to ED. This will reduce unnecessary congestion in ED waiting areas. It will also help to reduce COVID 19 cross infections by following social distancing rules.

Keywords— COVID 19, social distancing, Emergency departments, appointments

Introduction

Attendances at emergency departments are highly variable and can be potentially influenced by multiple factors including sporting events¹⁻⁶. An important factor observed to influence

overcrowding is patients presenting with non-urgent complaints to emergency departments.

Risk of transmission remains high in the current COVID 19 pandemics. Social distancing remains an important deterrent in reducing this risk. This was further reinforced by UK government guidelines - to avoid risks of transmission and staying as safe as possible, you should always maintain social distancing with people you do not live with – indoors and outdoors, including in the emergency departments of hospitals. The initial, at the beginning of pandemic across the UK was that the public had to stay 2m (6ft) away from anybody outside of their household. You should still ideally stay 2m (6ft) apart. If that is not possible, individuals are advised to stay 1m (3ft) plus apart in England - and 1m apart in Northern Ireland - with extra precautions such as face coverings and not sitting face-to-face⁷. Hence, overcrowding is a major factor to being able to limit the threat of transmission in emergency departments where suitable space is already a premium.

An emergency department is a medical treatment facility specialising in the management of acutely unwell patients presenting without prior appointment. Inundation of patients with non-urgent complaints can impact avoidable COVID transmission.

To mitigate this, we implemented an appointment-based system for patients who attended the Emergency department. Patients who fulfilled the criteria were allocated an appointment by a dedicated streamer at the front door or advised to attend a walk-in centre. This was observed to greatly reduce overcrowding

and potentially help reduce the risk of COVID 19 transmission.

Patient feedback was taken after introduction of this novel technique to reduce pressures on the Emergency department yielding great reviews

Study Design:

This service evaluation (Local data base ID number 4752 spanned from 6th of July 2020 to 9th August 2020. Patients who fulfilled the criteria were allocated an appointment by the streamer at the front door or advised to attend a walk-in centre. Patients attending after 2100 hours were given appointments after 0800. Patients attending from 0600 were given appointments from 0800 am till 2100. There were half an hour slots for each patient, constituting 24 appointments in 13 hours of total clinic timings (with two half an hour breaks for clinicians factored in).

Inclusion criteria included injuries to knee and below, injuries elbow and below, injuries to shoulder (no deformity), superficial foreign bodies (not ingested) and simple wounds not requiring suturing.

Exclusion criteria were, children under 12 years of age or child with safeguarding concerns, gross deformity of limb, complex wounds, severe pain, wound older than 10 hours, dog bite, dirty wounds, suspected domestic violence, safeguarding issues and septic joints.

Results

From 6th of July to 9th of August 2020, total 420 (Table 1) patients were given appointment by the streamers to these clinics, which were run by senior Emergency Nurse Practitioners (ENPs). Only 16 out of total 420 did not attend their allocated appointments (Fig 1). Out of the 404 who attended, only 1 was for follow-up and rest of 403 were new patients. 312 patients were assessed and treated by clinicians. 6 patients had debridement of their wounds done; one patient had a

splint applied while 3 patients had their sutures removed in the clinic (Table 2).

Actual Numbers:

Month-Year	06Jul-09 Aug 2020
Appointments	420
Attendances	404
New	403
Face-to-Face	391
Phone	0
Procedures	12
Follow Up	1
Face-to-Face	1
Phone	0
Procedures	0

TABLE 1

These are the procedures recorded:

Procedure	Total no
Application of splint	1
Assessment by professional team	312
Debridement of skin	6
Debridement of burnt skin of head or neck	1
Removal of suture from skin	1
Dressing of skin wound	1
Cleansing and sterilisation of skin	1
Removal of suture from skin of head or neck	3

TABLE 2

Discussion

A longstanding issue common to most emergency departments (ED) worldwide is overcrowding, especially so in the UK^{8,9}. ED overcrowding has been shown to have many adverse consequences such as increased number of medical errors, decreased quality of care and subsequently poor patient outcomes¹⁰. Many solutions have been suggested such as the concept of “reverse queueing” (this refers to a situation whereby patients who have had their initial assessment and treatment are then swapped for those waiting to be seen), the use of urgent treatment centres¹¹⁻¹⁴ and the use of ambulatory areas, particularly for medical patients.

The concept of an appointment-based system is entirely new in ED. Most of our scheduled care clinicians are able to action outpatient appointments for their patients as opposed to ED where we have limited control over the flow of patients. Sometimes patients sit for hours in ED waiting rooms to be seen by a clinician. Some of these patients have non-urgent conditions and can wait but due to COVID-19 pandemic, and in keeping with government advice

of social distancing, these patients cannot wait in the ED waiting area.

A study by Abbasi A et al recommended that urgent care centres be established close to emergency departments in view of reducing congestion, as 40% of their patients did not require a hospital admission¹⁵. With this in mind, we believe that there are many patients with non-urgent conditions attending the ED who can be safely given appointments during less busy time to avoid congestion and maintain social distancing.

Review or follow-up clinics have formed a part of Emergency Medicine practice in the UK for many years. Usually they are run by consultants. We introduced an appointment-based system for selected new group of patients who fit the inclusion criteria to avoid congestion in ED waiting rooms and to maintain social distancing due to COVID-19 pandemic. The flow of patients is staggered in such a way that at no time the ED is overwhelmed with patients waiting for hours. Patients are given a choice of either to wait, sometimes outside ED as limited number of patients can sit in the waiting area or to take an appointment where they will be seen within thirty minutes.

Patient satisfaction survey revealed a remarkably high satisfaction rate for this initiative (Figure 1). Considering the popularity of this system with patients and its impact on ED waiting rooms, we recommend that non-urgent conditions in ED patients should be given appointments on the same day to stagger the attendances in such a way where the ED is less congested and a social distance can be maintained to avoid COVID 19 cross infection.

Conclusion: Scheduled appointments can be given to selected patients presenting to ED. This will reduce unnecessary congestion in ED waiting areas. It will also help to reduce COVID 19 cross infections by following social distancing rules.

Feedback from Patients

- The appointment system was easier. Better than sitting in the waiting area. Happy with the treatment.
- Had 2 phone consultations. Advice and phone numbers given in case of any problems. Very good! Felt it worked better. Very satisfied with the treatment I was given.
- Nurse practitioner was male. Had 2 consultations, in 10 mins then an x ray. Overall, in and out within an hour. Extremely impressed!
- A lot better. I was seen straightaway and I was very happy with the treatment.
- Went home as I was given an appointment to come back. I was seen within half an hour. Very happy with the treatment and the system.
- Was seen very quickly and had an x-ray. Impressed with the system.
- Happy with the appointment system. Was seen quickly and had an x-ray.
- My appointment was bang on time. I was seen very quickly. A&E and its staff super!!
- Fantastic! Seen very quickly within half an hour. Had an x-ray, given advice and follow up with the orthopaedics.
- I thought the system worked really well. Was given an appointment quickly. Had an x-ray and was given advice. Very impressed and satisfied.

Figure 1

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Acknowledgement and Contributor Statement

Mr Abbasi conceived the article. The data collection, methodology and initial analysis were undertaken by Mr Abbasi. Mr Ameh did proof reading and editing of manuscript.

Dr Hadeed Abbasi and Miss Maha Abbasi undertook the data review, editing and manuscript preparation

Mr Abbasi is responsible for the overall content and conduct of the study as guarantor

The guarantor accepts full responsibility for the work and the conduct of the study, had access to the data, and controlled the decision to publish.

Article Summary

Strengths.

- Novel way of assessing and evaluating patients presenting to the Emergency department.
- Highly relevant in maintaining social distancing and therefore reducing the risk of transmission of COVID 19 in hospital settings.

Weaknesses.

- Small number of clinic episodes.
- Short study duration.
- Limited follow-up.

Ethical Approval

It is a service evaluation study. No ethical approval required.

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Data Repository

Local database ID 4752