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Surgical assessment clinic - One stop emergency out-patient clinic for rapid assessment, reduced admissions and improved acute surgical service: A quality improvement study

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ABSTRACT

Background: There is increasing pressure on emergency services within the NHS requiring efficient, rapid assessment and management of patients. A subsequent reduction in hospital admissions reduces overall costs with an aim to improve quality of care. At the Royal Shrewsbury Hospital we run a one stop emergency surgical clinic. With strict criteria for admission to this clinic we have established a care pathway for those patients requiring urgent surgical review but not necessarily hospital admission.

Materials and methods: We reviewed our initial referral pathway to the emergency surgical assessment clinic. New guidelines were distributed to the local Care Coordination Centre (CCC) through which GP referrals to the clinic were made. A re-audit carried out 6 weeks later assessed change in clinical practice.

Results: With the introduction of guidelines for referral we significantly increased the percentage of appropriate referrals to the one stop emergency surgical clinic (42.9%–79.4%, p = 0.000017). The majority (75.8%) of appropriate referrals can be successfully managed on an urgent outpatient basis. Appropriate referrals unsuitable for discharge from clinic had genuine reasons for admission such as abnormal results on assessment, or a need for surgery. 97.8% of referrals not deemed appropriate for the clinic were admitted for inpatient management.

Conclusion: By providing suitable guidance for referring practitioners we have optimised our clinic use significantly and improved our acute ambulatory surgical care. We have reduced admissions, provided rapid treatment and have established a service that helps address the ever increasing demand on acute services within the NHS.

1. Introduction

There is increasing pressure on emergency hospital services to provide efficient, rapid assessment and management of patients to reduce hospital admissions, improve patient experience and decrease overall cost. More than half of acute abdominal pain patients who present to the emergency services can be safely discharged home without inpatient treatment. Only 25.8% of patients with abdominal pain attending the emergency department will require surgery [1].

Emergency admissions can impede treatment of elective cases and thereby reduce the overall efficacy of the general surgical service. Over the years there has been a rise in the number of emergency admissions. These have been attributed to increasing illness and frailty linked to an ageing population, increased public expectations leading to more self referrals to NHS care, changes in clinical decision-making and more defensive medicine, increased ability to detect and treat illness, and changes in care outside the hospital such as general practice. There is also a known strong positive correlation between rates of emergency admission and socioeconomic deprivation [2].

At the Royal Shrewsbury Hospital in Shropshire we run a one stop emergency surgical clinic. This aims to bridge the gap between patients that fall between the extremes of urgency of care as well as providing a service to assess those conditions that can be managed acutely but on an outpatient basis and therefore preventing admissions to hospital.

This project aims to optimise referrals to the clinic, and therefore its efficiency.

2. Clinic setup

Alongside our surgical assessment unit (SAU) we run a one-stop

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emergency outpatient surgical clinic. This clinic was set up to allow rapid patient assessment, reduce unnecessary admissions and improve acute surgical service. The on-call General Surgical Registrar assesses all the patients referred to the clinic. Ultimate clinical responsibility is held by the on call Surgical Consultant who is available for advice and patient review where needed. The Registrars receive support from a Health care worker based in the clinic with ECG and phlebotomy skills. Clinicians working in the clinic have access to blood tests; plain radiographs, three ultrasound scans each day; and the ability to book computerised tomography scans for two patients the day following clinic attendance.

The Clinic runs from 0900 to 1500 allowing for a maximum number of 12 patients to be seen throughout the day without fixed appointment times. The clinic runs in an assessment bay separate from SAU with 3 assessment cubicles and a waiting area with receptionist to book patients in.

The patients are referred to the SAU Clinic via a Care co-ordination centre (CCC). If the clinic is full for the day then they can either be booked onto the following day's clinic or referred directly to SAU for assessment/admission. If the CCC is uncertain of patient suitability for clinic (Table 1) then they need to be discussed with the on-call SAU Sister or Surgical Registrar. Patients who are successfully discharged that same day will leave with a summary of undertaken and planned future care for their General Practitioner.

3. Methods

Having run the clinic for 6 months we reviewed our practice as an emergency clinic to ensure appropriate referrals were being made and to confirm optimal utilisation of resources. An initial review of all referrals to the clinic over a 2 week period was undertaken. We reviewed the outcomes of those patients: admission to SAU; discharge with possible outpatient investigations; or given a date for a planned admission for surgical intervention. The surgical sub-speciality was recorded.

The on-call surgical registrar recorded whether they felt the SAU clinic had been the best place for the patient to attend for assessment. For example if the patient was in severe pain requiring parenteral analgesia they required admission for treatment and were not suitable to be seen in ambulatory out patient clinic. This referral was then recorded as not appropriate (Table 1).

After the initial review period, it was clear changes needed to be instigated, therefore the Consultant surgeons in consultation with the surgical registrars created new stricter guidelines for the CCC outlining suitability for SAU Clinic. Once these guidelines had been set into place and running for 6 weeks a further 4 week review of referrals to clinic was undertaken to assess compliance with guidelines and improvement to surgical care.

4. Results

In our initial 2-week review there were 42 presentations to clinic, only 18 (42.9%) patients had been considered appropriate for the clinic. Of these 16 (88.9%) patients had been discharged from clinic. Please see Table 2. This equates to an overall discharge rate of 38.1%.

Table 1
Suitability for attending Surgical Assessment out patient Clinic.

	Suitable for Clinic	Not suitable for clinic
Peritonitic		X
Stable cardiovascular observations	X	
Apyrexial	X	
Unwell patients who will clearly need admission IE septic		X
Patients in severe pain who cannot be managed with simple oral analgesics		X

Following implementation of the stricter criteria patients who would need inpatient treatment and assessment were referred directly to SAU so they could be admitted.

The new guidelines further clarified specific conditions felt to be appropriate/inappropriate for the SAU clinic:

Surgical patients appropriate for referral to SAU Clinic:
- Non specific abdominal pain
- Right iliac fossa pain (HR < 90, apyrexial, no peritonism)
- Biliary colic/mild cholecystitis
- Uncomplicated abscess (systemically well, not diabetic, not immunocompromised)
- Stable rectal bleeding
- Non-tender groin hernia/lumps
- Peri-anal conditions (abscess/haematoma, that could be booked into day case surgery unit to return for surgery the following day)
- Post operative wound complications
- Stoma complications (discuss with stoma nurse first during day time)
- Chronic conditions without acute deterioration (consider elective outpatient appointment)

Patients not appropriate for referral to the SAU clinic, refer directly to SAU:
- Unwell patients clearly requiring admission (E.g septic patients)
- Jaundice
- Bowel obstruction
- Abdominal pain with pyrexia/tachycardia/peritonism
- Bariatric patients (discuss with bariatric surgeons first)
- Tender irreducible hernia
- Diarrhoea and vomiting
- Ischaemic limb

The re-audit after the new guidelines had been introduced demonstrated the following results: 103 attendances to SAU clinic (1 set of notes not found therefore total assessed 102), 81 (79.4%) of the referrals were considered appropriate for clinic, 21 (20.6%) referrals were deemed inappropriate. The new guidelines significantly reduced the number of inappropriate referrals ($P = 0.000017$, Chi^2 test).

Of the inappropriate referrals to the clinic only 1 was discharged on the same day, equating to an admission rate of 95.2% for inappropriate referrals. Of the remaining 81 deemed appropriate referrals, a total of 60 (74.1%) were discharged on the same day (Table 2).

Of the 21 patients who were considered appropriate referrals, the reasons for not being discharged are as follows: 5 abnormal results/observations, 6 admitted for surgery (all abscess's which underwent same day drainage), 3 uncontrolled pain, 4 kept for scan the following day, 3 more serious diagnoses made in clinic.

5. Discussion

The NHS needs to continue to strive to improve the efficacy of healthcare and achieving high value (outcome relative to cost) for patients is fundamental. Reducing hospital admissions and managing a greater number of patients effectively as outpatients is cost effective [3].

Approximately 1000 patients pass through the SAU emergency clinic each year- a large number of patients that will have a significant impact on patient flow and consequent value and delivery of care to the truly acutely ill surgical patient. Johnstone et al. [4] found that a clinical decisions unit for referrals from primary care is safe and effective. Patients were assessed soon after arrival by a senior doctor I.E middle grade staff or consultant. They found that same day discharge rates rose from 13.8 to 18.2%, more patients were discharged within 24 h, and overall there was a 25.3% reduction in emergency surgical