Developing a Day Surgery Trauma Pathway in a Rural District General Hospital

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Abstract

Day Surgery is fast becoming an option for Surgeons when admitting Emergency/Trauma patients who require surgical intervention. By developing a pathway for this process, patient satisfaction may be improved, and there may be more efficient planning of Emergency/Trauma lists with a reduction in length of stay. Following a retrospective audit, identifying potential patients who would have been suitable for emergency day surgery, a new trauma pathway was implemented in Withybush Hospital, a small district hospital in West Wales.

Keywords: Pathway, Emergency, Trauma.

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Introduction

Day Surgery is constantly developing and expanding its boundaries. Over the last few years the emphasis has been on developing Emergency/Trauma pathways for the Day Surgery setting for various procedures [1]. This process benefits both patient and hospital with a shorter length of stay enhancing the patient experience and releasing hospital bed capacity for other patients. The British Association of Day Surgery (BADS) suggests the treatment of emergency surgical cases (including trauma) are ideally performed in a Day Surgery setting [2].

Withybush Hospital's catchment area covers Pembrokeshire, Carmarthenshire and Ceredigion (Hywel Dda University Health Board) in west Wales, and serves a population of around 375,000. However this number increases greatly during the summer months as our catchment area lies within a very popular tourist region. Withybush Hospital is a rural district hospital and currently has 115 Medical beds, 76 Surgical and Orthopaedic beds, and 4 operating theatres including an emergency theatre. The self-contained Day Surgery Unit comprises an operating theatre, treatment room and 11 patient spaces.

Aims

Having reviewed the literature and attended several workshops on the development of Emergency Pathways within the Day Surgery Setting, the decision was made to create such a pathway in Withybush Hospital. However, most successful emergency pathways have been developed in much larger hospitals where the pathway involves a 2nd Trauma/General Surgery team on call, allowing concurrent lists of day surgery and in-patient Trauma/Emergency [3,4]. These models of care also have several dedicated day case lists per week, which allows Trauma/Emergency patients to be booked in advance. Could an emergency ambulatory pathway be created in a small district hospital and remain sustainable with existing resources?

The practice in our hospital for potential day case trauma patients, admitted from A&E or fracture clinic, was rather disorganised. The patient flow team managed these patients and only contacted Day Surgery if there were no inpatient beds with in the hospital. If they had attended A&E they were asked to contact the patient flow team the next day to arrange admission. There was no standard process for the admission of these patients and the route of admission was variable depending on available beds. All trauma patients had their surgery performed on the Main Theatre trauma list.

Methods

The concept of a Day Case Emergency Trauma Pathway was explained to the Trauma and Orthopaedic consultants and received in a positive manner. Thereafter a 'stakeholder' meeting was held to discuss thoughts and ideas. The success of the project required an integrated and enthusiastic team, consisting of: Senior Nurse Day Surgery Ward and Day Theatres, Clinical Lead for Orthopaedics, Senior Nurse Manager Orthopaedics, Trauma Pathway Nurse, Senior Nurse Manager Day Surgery, Anaesthetic lead for Day Surgery, Surgical Nurse (Orthopaedics) Practitioner and Senior Sister Main Theatre, and terms of reference were agreed.

A retrospective audit was conducted to assess the number of successful Emergency Trauma patients treated on a day case basis and how many potential cases could have received day case treatment had a new pathway been implemented.

The new pathway involved the identification of patients, suitable for the day case pathway, at the daily trauma meeting where patients admitted over the previous 24 hours are discussed. After identifying appropriate ambulatory patients, admission is arranged by contacting the patient directly either by the Trauma Pathway Nurse or the coordinator of the Day Surgery Unit. At this stage a patient health screen is conducted by phone to identify any contraindications to ambulatory surgery. This ensures the patient is likely to be fit for theatre and that they are fully informed of their admission process, thereby reducing their anxiety. The trauma list can then be compiled with planned operation details and ward location.

Results

The retrospective audit over an eleven month period showed that 19 patients received their surgery on a day case basis. Only 1 patient was successfully discharged on the day of surgery while 14 stayed overnight.

The injuries requiring surgery are shown in Table 1.

Thirteen patients were admitted with fractures, either upper or lower limb, while the remaining 6 patients sustained soft-tissue injuries only.

Table 1 Sustained Trauma in Day Surgery Pathway Patients and their Outcome.

Modality	N	Same Day Discharge	One Night Stay	Ward Transfer	Hospital Transfer
Upper Limb Fracture	5	1	3	1	
Upper Limb Injury	3		3		
Lower Limb fracture	8		5	3	
Lower Limb Injury	4		2	1	1

The correlation between the type of injury and length of stay is shown again in Table 1. Patients with fractures appeared to have a longer length of stay than those with soft tissue injuries.

A retrospective audit over 5 months February to June 2017 indicated that 37 patients could have potentially undergone day case rather than inpatient surgery following their admission for trauma.

As a result, a new but simple day surgery trauma pathway was instituted as a pilot study as shown in Figure 1. Patients considered suitable for Day case Emergency Surgery were identified at the morning trauma meeting where all patients admitted in the previous 24 hours are discussed. Due to restrictions of staff, the new pathway runs Monday to Friday with weekend admissions admitted to an in-patient facility as before.

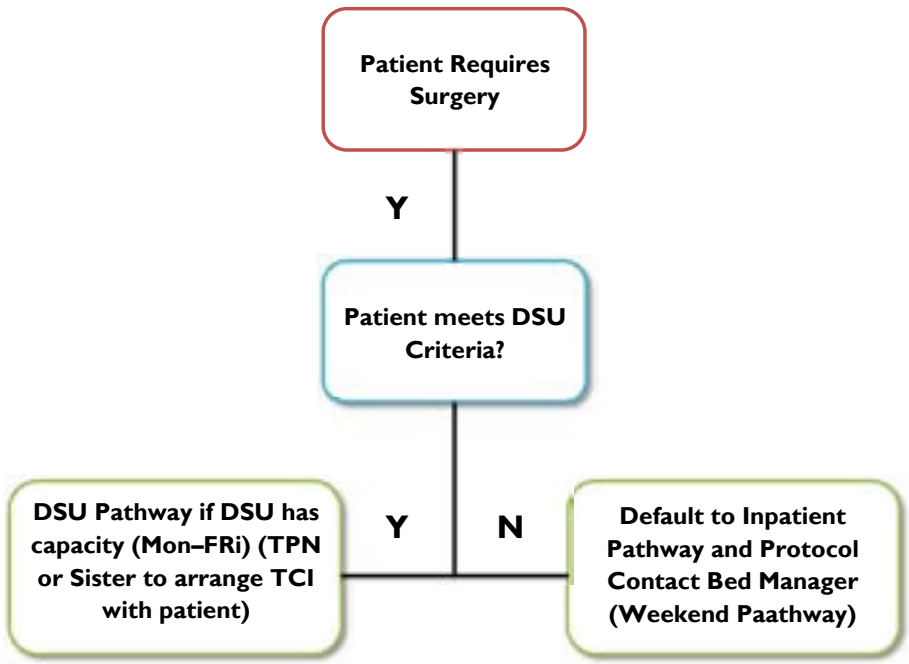
Discussion

The results of the 11 month retrospective audit of same-day discharge of trauma procedures following surgery is disappointing. The reasons for failed discharge include the usual problems of postoperative pain, PONV, and late return from theatre. However the 5 month audit of potential day-of-surgery discharges shows that approximately one patient per week could benefit from discharge on the day of surgery.

While this saving in terms of hospital resource does not seem significant, it constitutes an annual saving of at least 63 in-patient bed days and possibly more if some patients stay more than one night in hospital. In a small district hospital, with seasonal variation in demand due to tourism, any bed-savings are at a premium and any patient who can be diverted through day surgery is beneficial in maintaining patient flow through the trauma department.

By keeping the pathway simple, adoption by clinical personnel is more likely. The key to success of this pilot project is the function of the Trauma Pathway Nurse, liaising with the orthopaedic surgeons and scheduling patients appropriately. As all trauma admissions are discussed at the morning trauma meeting, patients are allocated for immediate surgery or delayed surgery. Patients are also assessed regarding day surgery criteria, and if suitable, allocated early on the trauma list. If surgery can be delayed, the patient can be allocated a day surgery admission the following day and the Trauma Pathway Nurse informs the patient of all relevant instructions regarding

Figure 1 New Day Case Emergency Trauma Pathway.



fasting, location and time of admission. Although this pilot is in its infancy, it is felt that this pathway will standardise the process of the trauma patients within Withybush Hospital and raise patient satisfaction while freeing up inpatient beds and decreasing length of stay. While a dedicated day case trauma list would be the ideal situation, this may not be cost-effective due to variable workload.

The process has been positively welcomed by all the Orthopaedic Surgeons, as prior to the commencement of the pathway there was no standard pathway for minor trauma, leading to frustration and stress in the on-call team. The initial feedback regarding the new ambulatory pathway is positive from both staff and patients, with agreement to list the minor ambulatory trauma patients at the beginning of the operating day. Time will tell if our new ambulatory trauma pathway can create sustainable change in our district hospital.

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