The provision of a trauma bed in theatre recovery and its impact on trauma theatre efficiency.

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PROBLEM DEFINITION

There is multi-disciplinary agreement regarding theatre list efficiency issues at our Trust. Current literature demonstrates the golden patient concept can improve theatre efficiency (1,2). Despite this a recent local audit was unable to improve start time cases (3).

This quality improvement project introduces a surgeon led intervention, a trauma bed in recovery, targeted at getting the golden patient into the anaesthetic room as quickly and safely as possible.

To describe pre-intervention practice a review of data across three months (August – October 2021). 78 patients were included.

- 1. The average patient arrival time to the anaesthetic room was 09:15.
- 2. The mean number of daily cases performed daily was 3.01 cases

AIM STATEMENT

- 1. Primary outcome: improve the time trauma patients arrive in the anaesthetic room (08:45).
- 2. Secondary outcome: increase the number of cases performed per day (>3.5). Chosen as a secondary outcome due to the numerous factors that could influence the efficiency of the trauma list over the course of a day.

INTERVENTIONS

GOLDEN	Rationale: reduce 'sending' times and allow for an
PATIENT	earlier anaesthetic review in closer vicinity to theatre
TRAUMA BED	
IN RECOVERY	
TEAM BRIEF	Rationale: earlier brief, earlier sending
08:20	

KEY STAKEHOLDERS

ORTHOPAEDIC TEAM	Ensure golden patients are prepared according to protocol Ensure early sending of patient with day surgery unit reception team Ensure meeting is conducted promptly
ANAESTHETIC TEAM	Agree to see patients in the recovery bay Agee to earlier trauma meeting start time
DSU NURSING STAFF	Agree to monitor golden patient whilst in anaesthetic bay pre-operatively
DSU RECEPTION STAFFIN	Agree to send for golden patient when prompted on when aware of golden patient designation

PDSA CYCLE 1 + RESULTS

PDSA cycle 1 occurred during a COVID peak; this caused significant delays to trauma hence a further analysis was performed excluding results during this period

Mean time to anaesthetic room	All cases	Cases outside COVID peak
Pre intervention	09:15 (78)	09:15 (78)
Post intervention	09:01 (69)	08:59 (48)
P value	<0.05	<0.05
Mean cases per day	All cases	Cases outside COVID peak
Pre intervention	3.01 (78)	3.01 (78)
Post intervention	3.03 (69)	3.20 (46)
P value	P< 0.45	P< 0.12

Both interventions assessed individually demonstrated a statistically significant improvement in the time for the first patient to arrive in the anaesthetic room



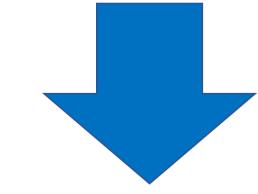
PDSA CYCLE 2 + RESULTS

INTERVENTION Golden patient 'trauma bed' to be used for cases in addition to the golden patient to help reduce delays to other cases

Mean time to anaesthetic room	
PDSA 1 (minus COVID peak)	08:59 (48)
PDSA 2	08:52 (26)
P value	< 0.05
Mean cases per day	
PDSA 1 (minus COVID peak)	3.2 (46)
PDSA 2	3.67(26)
P value	< 0.05

CONCLUSION

- Statistically significant improvement in both outcomes using simple MDT based interventions led by the orthopaedic team.
- Although tailored to local needs can be extrapolated to other trauma units.



NEXT STEPS

- As discussed in an MDT setting, a joint anaesthetic PDSA cycle 3 approach to incorporate anaesthetic interventions
- Implement MDT pre-op paediatric protocol to enable improved paediatric golden patient efficiency (PDSA cycle 1 demonstrated performing paediatric cases first led to a mean of only 2.73 cases daily)
- Aim for team brief time of 08:15



References

1. THE GOLDEN PATIENT: HAS IT MADE A DIFFERENCE? Javed et al https://online.boneandjoint.org.uk/doi/abs/10.1302/1358-992x.94bsupp_xxxvii.efort2011-508#

2. Golden Patient': A quality improvement project aiming to improve trauma theatre efficiency in the

Royal Gwent Hospital' Key et al

3. Theatre efficiency audit, Walters et al

