

# 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

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

## KEY STAKEHOLDERS

<b>ORTHOPAEDIC TEAM</b>	Ensure golden patients are prepared according to protocol Ensure early sending of patient with day surgery unit reception team Ensure meeting is conducted promptly
<b>ANAESTHETIC TEAM</b>	Agree to see patients in the recovery bay Agree to earlier trauma meeting start time
<b>DSU NURSING STAFF</b>	Agree to monitor golden patient whilst in anaesthetic bay pre-operatively
<b>DSU RECEPTION STAFF</b>	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



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### 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#](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



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