

# Costs, beliefs and use of intravenous versus oral paracetamol in an orthopaedic trauma unit

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## Introduction

NICE Guidance recommends that oral paracetamol should always be offered to patients before and after surgery and that intravenous (IV) paracetamol should only be used if the patient does not have a viable oral route (1).

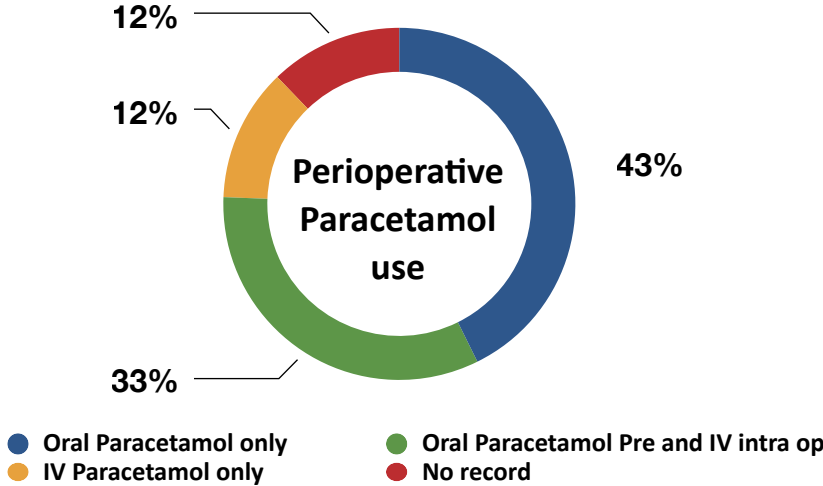
### Aims

- ▶ To Ascertain whether IV Paracetamol is being used perioperatively when oral is more suitable
- ▶ Identify if any potential cost and waste savings can be made.
- ▶ Investigate beliefs amongst ward nursing staff regarding oral versus IV paracetamol.

## Methods

- ▶ We collected data from the drug charts of 83 trauma patients. Choice of paracetamol formulation was recorded where possible alongside timing of doses (intra operatively, pre or post op).
- ▶ An anonymous questionnaire was used to survey nursing staff beliefs in the department.
- ▶ Costing data and estimated annual paracetamol use was supplied by the pharmacy team at Aberdeen Royal infirmary.

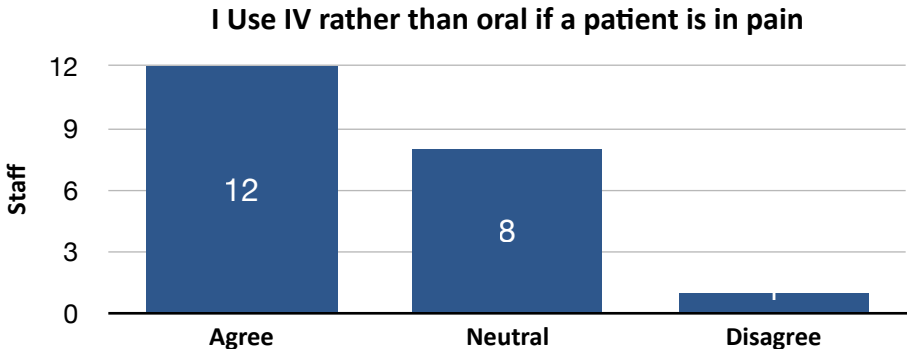
## Results



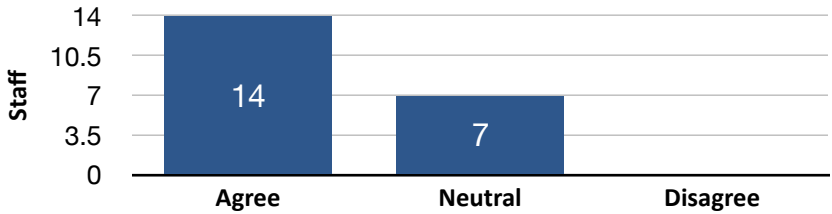
- ▶ **12%** of patients received IV Paracetamol when oral may have been more suitable.
- ▶ **Paracetamol costing** per gram: **Oral £0.01 IV £3.65** (£0.53 IV paracetamol + £3.13 cost of disposable giving set)
- ▶ Possible annual saving of **£917.13** if 12% given oral formulation.

## Key survey results

21 surveys were returned, giving a 100% completion rate.



## IV Paracetamol is more effective than oral for pain relief



- ▶ 4. IV works quicker than oral: Agree (19) Neutral (2) Disagree (0)
- ▶ Please estimate the cost of each formulation (avg estimates) PO (£0.16) IV (£3.69)

## Conclusion

- ▶ Prescribing and use of paracetamol appeared appropriate. However we were unable to provide exact numbers as formulations are not always specified.
- ▶ Intraoperative use and related costs of IV paracetamol administration could potentially be reduced alongside waste.
- ▶ There is a belief amongst nursing staff that IV is superior to oral. Addressing this alongside departmental practice could help reduce cost and waste.

## References

1. Recommendations | Perioperative care in adults | Guidance | NICE [Internet]. Nice.org.uk. 2021 [cited 11 April 2021]. Available from: <https://www.nice.org.uk/guidance/ng180/chapter/Recommendations>

## Acknowledgements

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