

USE OF A PROTOCOLISED ESTIMATED DISCHARGE DATE FOLLOWING HIP FRACTURE SURGERY IMPROVES DISCHARGE PLANNING AND REDUCES LENGTH OF STAY

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PURPOSE

Prior to this service development, senior Physiotherapists observed that estimated discharge date setting for hip fracture patients at daily multi-disciplinary team (MDT) board round was arbitrary and differed significantly based upon which staff members were in attendance that day. A service development was therefore completed to identify an effective and efficient means to use a validated outcome measure to set a protocolised, realistic and evidence-based discharge date on the day of surgery, based upon pre-morbid function.

New Mobility Score (NMS)

| MOBILITY | NO DIFFICULTY | WITH AN AID | WITH HELP FROM ANOTHER PERSON | NOT AT ALL |
|------------------------------|---------------|-------------|-------------------------------|------------|
| Able to get about the house | 3 | 2 | 1 | 0 |
| Able to get out of the house | 3 | 2 | 1 | 0 |
| Able to go shopping | 3 | 2 | 1 | 0 |

RESULTS

In the 4 months since implementation the median length of post-operative stay following hip fracture reduced to 9 days (IQR 16.6 days, n=64) compared with a median of 12 days (IQR 9.6 days, n=58) in the 6 months immediately leading up to the change. Further analysis of the 323 patient notes during the 2016/2017 period found that 84% of patients were functioning at an appropriate level to be discharged on their protocolised EDD (i.e. 4/9/15 days).

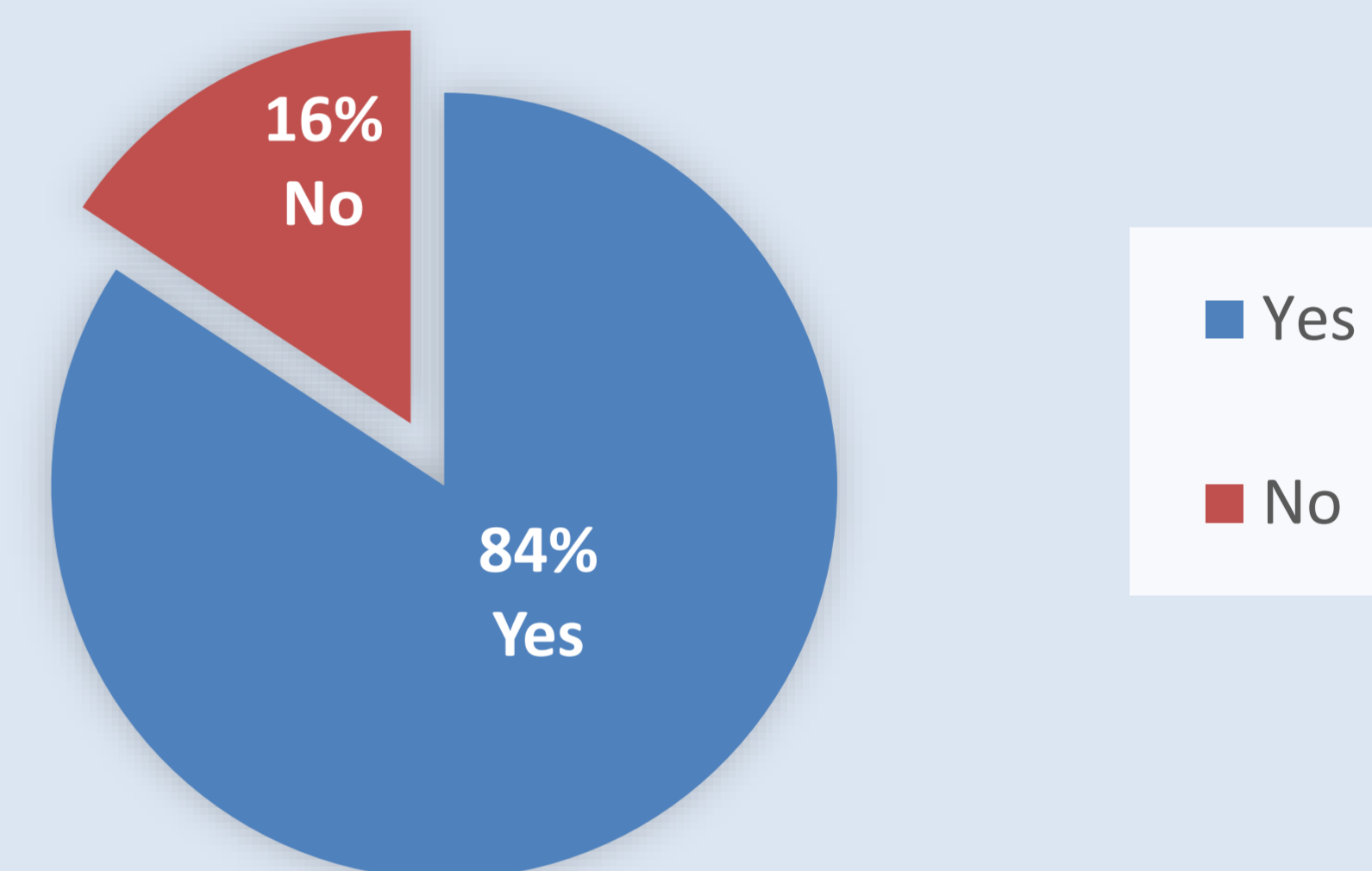
METHODS

A literature review was completed to identify possible methods for reliably predicting post-operative function and length of stay following hip fracture. The New Mobility Score (NMS) was identified as the most appropriate measure to use as it was a quick, validated predictor of post-operative function, reliable with good inter-rater reliability, and readily available to complete pre-operatively, thereby enabling a reliable estimated discharge date (EDD) to be set on the day of surgery. 323 patients over 2 years (2016/17) were then retrospectively scored and grouped using the NMS and these scores were analysed against length of stay. The groupings were analysed for the best fit by King's College Statistician Clare Flach who identified ideal groupings as high level (NMS 9), medium (8 to 2) and low level (1 and 0). The 1st quartile for length of post-operative stay for each group was then used as the EDD i.e. 4 days for high level, 9 days for medium level and 15 days for low level. The service development was shared with the entire MDT and received excellent buy-in from all MDT members and in August 2018 the pre-operative NMS score was implemented as a means of setting reliable EDD's in hip fracture patients.

Estimated LOS Based On NMS

| NMS | 9 | 8,7,6,5,4,3,2 | 1,0 |
|----------------------|-----|---------------|-----|
| Estimated LOS (DAYS) | 4 | 9 | 15 |
| No. OF PATIENTS | 118 | 192 | 13 |

Patients Functioning As Required On Their EDD



CONCLUSIONS

The NMS provides an effective means to set protocolised EDD following hip fracture based upon pre-morbid function has been associated with reduced length of stay. This service development has been incredibly well received by the MDT and provides an effective means to manage patient complexity and can give rise to targeted interventions, rehabilitation and prioritisation to manage this complexity and facilitate a safe discharge in an efficient and predictable time frame.

IMPLICATIONS

This method for stratifying and protocolising patient care following hip fracture could be easily adopted at other centres as a means to improve patient outcomes. It provides a quick and easy framework to set reliable and evidence-based discharge dates on the day of surgery which can assist with prioritisation, resource allocation, pathway flow and expectation management for patients whilst reducing length of stay.

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