

Kay McCubbin (5<sup>th</sup> Year Medical Student)<sup>1</sup>, Dr. Stephen Noble (Project Supervisor)<sup>2</sup>, Dr. Myra McAdam <sup>2</sup>  
 University of Glasgow<sup>1</sup>, Department of Anaesthetics Glasgow Royal Infirmary<sup>2</sup>

## Introduction

The development of post-operative delirium is a good early indicator of infection, fluid and electrolyte imbalance and physical deterioration. [1] Acute confusion, following an operation, can increase hospital stay length and put patients at an increased risk of nosocomial infections, pressure sores and malnutrition. [2] Studies have suggested that although delirium is one of the most common conditions within secondary care it is poorly identified and not managed effectively. [3] To increase awareness and improve the recognition of delirium, NHS Scotland introduced the 4AT/ TIME Bundle to aid the identification of delirium and standardise the initial management. [4]

## Methods

Patients who had an emergency laparotomy or emergency laparoscopic procedure at the Glasgow Royal Infirmary, between November 2017 and November 2018, were identified using electronic patient records. Information was collected on whether patients developed post-operative delirium, by reviewing both medical and nursing notes for clinical features suggestive of hyperactive or hypoactive delirium (Table 1). In addition, records were reviewed to assess whether or not the 4AT/ TIME Bundle was used correctly. The implementation of the 4AT/ TIME Bundle was compared with standards set by the National Institute for Clinical Excellence [2014][5]

Hyperactive Delirium	Hypoactive Delirium
Agitation, disorientation, confusion, delusions or hallucinations	Drowsiness, confusion, lethargy and withdrawal

Table 1 – Clinical features included in review of patient notes [3]

## Results

Of the 136 patients on whom data was collected; 40.5% were male and 59.5% were female. Of the total number of patients included in this audit (n=136); 9 patients (6.6%) developed post-operative delirium and 1 patient (0.73%) had persistent delirium at discharge. Of the patients over 65 (n=55) included in this study, 12.72% developed post-operative delirium, in comparison to only 2.46% of patients under the age of 65 developing delirium (n=81).

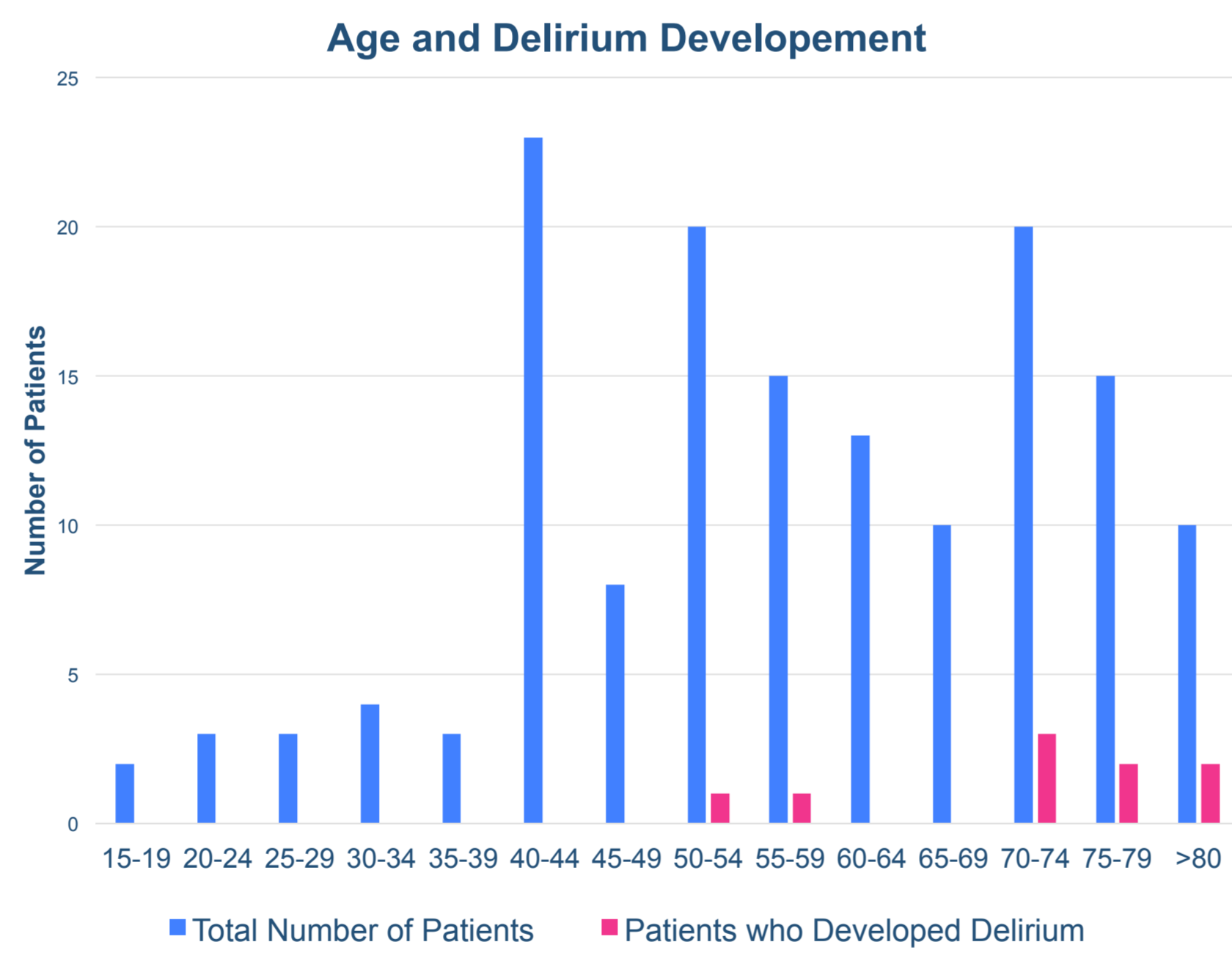


Figure 1 – Graph showing the development of delirium categorised for age

Of the 136 patients included in this audit; 26.5% were screened for delirium in line with current guidelines and recommendations. 60% of patients, over the age of 65 (33 patients), were screened for delirium in line with current guidelines.[5] Of the 9 patients who developed post-operative delirium; 7 patients (77.8%) were screened for delirium using the 4AT/ TIME Bundle.

Criteria	Standard	Compliance
Age >65 years	100%	60%
History of Dementia	100%	75%
Severity of Illness (deteriorating or risk of deterioration)	100%	26.5%
Presentation with Hip Fracture	100%	N/A

Table 2 – Compliance of HDU and Surgical wards with the current criteria for screening patients for delirium outlined in the NICE, British Geriatric Society and Health Improvement Scotland Guidelines on Delirium Identification and Management. [5]

## Conclusion

The majority of patients within this cohort were not appropriately screened for delirium, in line with the current NICE guidelines. Across both the HDU and the surgical wards at the Glasgow Royal Infirmary, the prevalence of delirium is below what it currently assumed to be the prevalence in acute hospital wards (approximately 30%). Hence, changes have to be made to ensure that delirium is effectively identified and managed appropriately, to prevent the development of further complications.

## Recommendations

1. All members of theatre and ward staff should be able to complete the 4AT/ TIME Bundle to assess patients both pre and post operatively for delirium.
2. Due to the high prevalence of delirium post-operatively, the screening criteria for delirium should be expanded to include post-operative patients.
3. All members of healthcare staff should be appropriately trained in identifying delirium and performing a 4AT screen on a patient if they suspect acute confusion.

## Acknowledgements and Approval

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## References

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