

# Submersion Duration and Rapid Rescue Improve Survival In Paediatric Drowning; A Retrospective Study at Paediatric Emergency Department, Hospital Tunku Azizah, 2024

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## Introduction

Drowning is a leading cause of accidental death in children, with outcomes closely linked to submersion duration and the timeliness of rescue efforts. Understanding local patterns and effectiveness is crucial for improving paediatric survival and neurological outcomes.

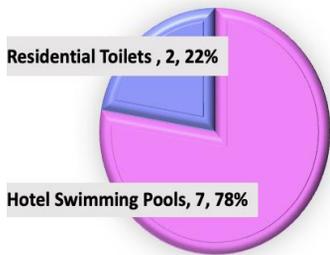
## Methodology

A retrospective review was conducted of paediatric drowning cases presented to the Paediatric Emergency Department of Hospital Tunku Azizah from January to December 2024. Data collected included patient demographics, incident location, submersion duration, presence of supervision, bystander intervention (CPR) and clinical outcomes.

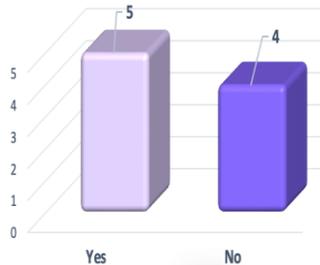
## Results

Over one year, there were total of 9 paediatric drowning cases reviewed. The key results are:

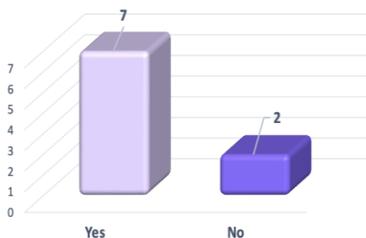
### Location Of Drowning



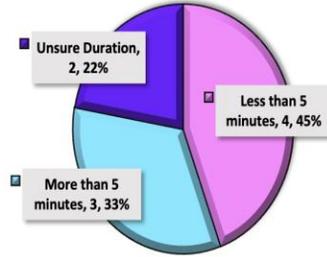
### Availability Of Supervision



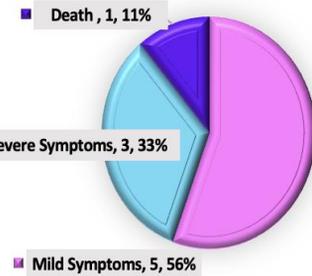
### Immediate CPR Commenced



### Submersion Duration



### Complications



## Discussion

This study reinforces that submersion duration is the primary determinant of outcome in paediatric drowning<sup>1</sup>. Children rescued within 5 minutes of submersion had favourable recoveries, while prolonged submersion was associated with more severe symptoms and complications. Immediate bystander CPR played a pivotal role in stabilizing patients and improving survival, consistent with global evidence<sup>2</sup>. Notably, drowning occurred even with supervision, highlighting the risks of divided attention and the need for vigilant, undistracted monitoring.

## Conclusion

Shorter submersion times and rapid rescue, particularly with bystander CPR, significantly improve survival and neurological outcomes in paediatric drowning. Enhanced public education on focused supervision and CPR training is essential to further reduce morbidity and mortality in this vulnerable population<sup>3</sup>.

### References

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