

## **Suicidal Behaviour in the Paediatric population:**

### **Bridging gaps and offering hope for vulnerable children and adolescents.**

Mental health disorders in children and adolescents account for an increasing number of presentations to emergency departments (ED), and death by suicide/ intentional self-harm remains the leading cause of death for adolescents and young adults in Australia.<sup>1,2.</sup>

Schlichthorst et al. recently published '*Trends in suicide-related research in Australia*' and concluded that despite suicide-related research increasing over the last decade in Australia, there was still much work to be done to prioritise research that focused on high-risk groups. The study highlighted that young people with mental health disorders are considered one of the most vulnerable age-groups.<sup>3</sup> In 2018, suicide was the leading cause of death among Australian children and adolescents aged 5–17, with the majority (78%) occurring in those aged 15–17.<sup>1</sup>

Many families with children and adolescents with suicidal behaviour and mental illness in general experience multiple barriers to accessing and effective health services which adds to their vulnerability. These barriers are often intensified for indigenous and refugee families, socio-economically and geographically marginalised families, as well as families with culturally diverse backgrounds, disabilities and members of the LGBTIQ community.

Through my clinical work in Community Paediatrics, it has been apparent that suicidal behaviour in children and adolescents has been an emerging concern in Tasmania over the past 10 years. Resources and services to adequately care for this vulnerable population are seriously lacking in both hospital and community settings in Tasmania. In 2020 amidst the evolving coronavirus (COVID-19) pandemic, I conducted a pilot study to identify the effect of the COVID-19 pandemic on suicidal ideation/intentional self-harm presentations in the paediatric population to a tertiary emergency department in Tasmania.

Emerging literature at the time showed that social distancing, quarantine, and other measures implemented to control the spread of COVID-19, amplified social isolation, depression and anxiety.<sup>4</sup> For vulnerable groups such as children and adolescents, those with mental illness, disability, low socio-economic status, and children of parents with mental illness (COPMI) there is also a risk of increased family violence, financial stress and reduced access to community and school supports further increasing risk of adverse mental health implications. Globally, it is anticipated that the COVID-19 pandemic will have significant impact on the mental health of young people for years to come.<sup>5</sup>

My retrospective observational study '*Trends in emergency department presentations in the paediatric population with suicidal ideation and self-harm during the COVID-19 pandemic*' used a de-identified tertiary ED dataset from the Royal Hobart Hospital in Tasmania between November 2016 and August 2020.<sup>6</sup> The cohort was identified using ED presentation ICD-10 codes for suicidal ideation/intentional self-harm. There were 651 presentations during the study period. Over the defined period of COVID-19 (March to August 2020) there were 120 cases, which was 120% of the predicted incidence for this period. In these cases of suicidal ideation/intentional self-harm, there were reduced wait and treatment times and presentations via emergency services, but no change in triage category or admission rate.<sup>6</sup>

The study concluded that COVID-19 is contributing to the already increasing number of emergency department presentations with suicidal ideation/intentional self-harm in children and young people in southern Tasmania.<sup>6</sup> This pilot study highlighted that current management of suicidal behaviour in the paediatric population is largely based on crisis management, which provides varied and limited care for these vulnerable young people and their families. The 60% admission rate attests to the ongoing burden on hospital resources, and highlights that in terms of health economics we should be investing in evidenced-based community supports rather than temporary solutions. This justifies the need for further research regarding evidence-based management of suicidal behaviour in children and the formulation of best-practice guidelines. The anticipated long-term impact of the COVID-19 pandemic on the mental health of children and young people only adds to the urgency to devise strategies and implement frameworks to minimise risk for this vulnerable population.

The increasing incidence during the pandemic is on a substantial background increase in mental health emergency department presentations for children and young adults. Australian research by Hiscock et al. found a 46% increase, compared to an increase of 13% for physical health presentations when comparing 2008 to 2014 data.<sup>7</sup> Hiscock et al. also found that 'children who presented with mental health problems were more likely to be triaged as urgent, to present after business hours, to stay longer in the ED, and to be admitted to hospital than those who presented with physical health problems.'<sup>7</sup> This further highlights the need to for efficient and effective care for this vulnerable population.

Tran et al. examined trends in ED presentations with a mental health diagnosis in Australia by jurisdiction and by sex, between 2004–05 and 2016–17 using a National ED care database. They found that there was a 'significant upward trend of mental health presentations across all jurisdictions since 2010-2011'.<sup>8</sup> A key finding of this research was that, for mental illness, children experienced the greatest relative increase in ED presentations across all age groups throughout the entire study period.<sup>8</sup>

The last specifically paediatric Tasmanian study, '*Suicide and self-harm in Tasmanian children and adolescents*' by Tulloch et al., was published in The Medical Journal of Australia in 1994.<sup>9</sup> Given the reported increases of suicidal ideation in the paediatric population nationally it is important for clinicians and service providers to have contemporary data, and clinical strategies to meet the needs of these vulnerable children within the Tasmanian community.

Current literature supports the clinical observation that urgent mental health care for the paediatric population is increasingly provided by staff in emergency departments. Qualitative review of interventions shows the significant variability in experience and skill when providing care for this vulnerable population. Undeniably, there is an urgent need for a structured system and clinical processes to provide evidence-based standardised care for these vulnerable patients and bridge gaps in our current system. The increasing trend of mental health ED presentations in the paediatric population has been long recognised by many who have suggested this may be a function of inadequate and insufficient community-based care for these vulnerable children.<sup>7,8</sup>

My current research stems from the work carried out for my Royal Australasian College of Physicians (RACP) Advanced Training Project which examined the effect of the COVID-19 pandemic on emergency department presentations in the paediatric population with suicidal behaviour/ intentional self-harm. This project was conducted in my home state of Tasmania and has been a catalyst for further research through collaboration across many disciplines (Paediatrics, Emergency Medicine, Child and

Adolescent Mental Health, and Public Health). It brings together organisations (Tasmanian Health Service, University of Tasmania College of Health and Medicine and Menzies Institute for Medical Research) for a structured and cohesive program of research in the area of Child and Adolescent Mental Health and Wellbeing. The goal of my research is to identify and design solutions to minimise the health impact of suicidal behaviours in the Tasmanian paediatric population by establishing an evidence-based standard of care, and advocate for more support services for this at-risk population. These solutions will address the burden on emergency services and hospital admissions and improve the health literacy of vulnerable young people with suicidal behaviour, as well as their families, communities, and the health professionals involved in their care.

Proposed solutions include:

1. Qualitative and thematic review of the interventions and treatments provided by emergency departments, and outpatient services, for the management of these patients.
2. Development of an adaptable framework of best-practice guidelines for the management of suicidal behaviours in the paediatric population
3. Enhance health literacy for parents, carers, schools, and health professionals supporting vulnerable children and adolescents with suicidal behaviours.
4. Advocacy to upskill care-providers and address gaps in service provision for this vulnerable population.

In summary, suicide is the leading cause of death in 15-24 year-olds in Australia.<sup>1,2</sup> There has been a significant upward trend of mental health presentations to EDs in Australia since 2010, with children experiencing the greatest relative increase in ED presentations with a mental health diagnosis across all age groups.<sup>8</sup> Given the current pandemic there is the need to consider this vulnerable population moving forward as previous epidemics have been shown to be associated with increases in mental health presentations,<sup>12</sup> and these presentations are a strong risk factor for suicidal behaviours. Furthermore, suicidal behaviours in the paediatric population presenting to ED for crisis management is a significant burden to the public hospital system in southern Tasmania - both in presentation to ED and the 60% admission rate for inpatient care.

Effective prevention and adequate intervention and support is the most promising strategy for changing the life trajectories of vulnerable children with suicidal behaviour. At a population level, this requires flexible and responsive systems that are equipped to deliver preventive interventions and respond effectively to emerging issues. As a health professional caring for such a vulnerable population, I remain hopeful that we can achieve this in the near future.

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