Early Career Research Award Application Cover Sheet

Entry Title: Developing the Youth Self-Harm Atlas: Mapping self-harm across the nation to inform youth suicide prevention strategies

Name of Applicant: Dr Emily Hielscher

Organisation: Flourish Australia

1.Additional Information (max 400 words)

Suicide prevention strategies in Australia have shifted in recent years, from a national approach to one that is regionally tailored and responsive to local community needs. Previous literature supports the need to understand suicidal behaviour within small-area geographies. However, this body of research has focused on suicide deaths which may not fully capture a complete understanding of prevention needs, and few studies have focused on young people. This is a priority population where urgent action needs to be taken to prevent suicides in Australia.

Dr Emily Hielscher was the Chief Investigator of the Australian Youth Self-Harm Atlas. This was the first nationwide study to examine regional variability of youth self-harm (non-suicidal self-harm and suicide attempts), and related risk and protective factors. This was achieved by statistical modelling and spatial analysis of Young Minds Matter, a nationally representative survey of Australian adolescents (aged 12 to 17 years), and by conducting 15 focus groups with young people with lived experience in geographically diverse areas. Collectively, this mixed methods study intended to identify characteristics of regions with lower and higher youth self-harm and suicide risk, and, in turn, help establish meaningful targets for youth suicide prevention informed by both national data and lived experience.

Overall, there was large regional variation in the prevalence and experience of self-harm (non-suicidal and suicidal) among young Australians, providing further support for the National Suicide Prevention Strategy of a systems-based regional approach. Nationwide spatial analyses of self-harm prevalence provided clear rationale for where future prevention efforts should be prioritised across Australia and how resources should be allocated. This included self-harm clustering identified in metro and regional areas across Northern Territory, Western Australia, Queensland, Victoria, and New South Wales.

Youth mental health, parent unemployment, and socio-economic status were important factors in nationwide modelling and focus group discussions and should continue to be key targets in self-harm and suicide prevention policy/planning. Current findings should assist service planners and policy makers with planning and implementing regionally appropriate prevention initiatives, and in turn, ultimately help target resources where they are likely to have the greatest impact on reducing youth self-harm and suicide.

Beyond the Atlas study, Dr Hielscher has been leading or co-authoring an extensive portfolio of mental health and suicide prevention research for the past decade. This includes 37 publications, Chief Investigator on one international and two national research projects, and development of an extensive network of sector-wide collaborators.

2. Focus (max 200 words)

Dr Hielscher's pivotal research project, the Youth Self-Harm Atlas, illustrates Research Excellence. This project was funded by a Suicide Prevention Australia Innovation Research Grant. From a technical perspective, the study involved specialised, novel techniques across both the quantitative and qualitative aspects of the project. This included small area estimation modelling of nationwide Young Minds Matter data, to produce self-harm estimates at geographies not often available. Using spatial mapping, the team were also able to produce Australian-first visualisations of the relationship between self-harm and mental health (and other factors) across the nation; further advancing our understanding of these relationships. Combining these insights with regionally diverse lived experience voices (via focus groups) added a depth that would not typically be achieved in a purely quantitative or qualitative research project.

From a stakeholder perspective, this study successfully brought together an extensive multidisciplinary team of suicidologists, psychiatrists, biostatisticians, qualitative experts, and service providers. This included a research partnership with Roses in the Ocean, where as part of this project, innovations were developed about safe and compassionate engagement with young people with lived experience of self-harm or suicidality. The Atlas study also demonstrated Excellence via its breadth of dissemination inside and outside of academia.

3. Potential Impact (max 200 words)

The National Mental Health and Suicide Prevention Agreement identifies the importance of strengthening regional planning of suicide prevention initiatives. To achieve this, detailed regional data are needed. The Atlas study directly contributes to filling this data gap, being the first national study to estimate regional variability of youth self-harm and suicidality at geographies not often available to governments and service planners.

The Atlas study's significance and impact has been recognised by (1) a ABC national news story reaching 2.3 million viewers, (2) dissemination of the data/maps on AIHW's national public facing Suicide and Self-Harm Monitoring System website, and (3) inclusion of more detailed data in AIHW's specialised portal accessible to primary health networks and other service planners. Data is currently available at various geographies (from suburb to PHN to state) catering for different stakeholders.

The Atlas study is anticipated to have lasting impacts. It substantially advances our understanding of youth self-harm, and its relationship with socio-economic and psychosocial factors. Ongoing, the study will likely inform local, state, and national-level self-harm and suicide prevention planning via its presence on AIHW's monitoring system, to ultimately, target resources where they are likely to have the greatest impact on reducing youth self-harm and suicide.

4. Consumer's Contribution (max 200 words)

Dr Hielscher has used co-design approaches in each of her major research projects to date. As part of the Youth Self-Harm Atlas project, a research partnership was developed with Roses in the Ocean (the lead Australian organisation for lived experience of suicide) to ensure the voice of lived experience was embedded at all stages, from study conceptualisation to design and delivery of focus group questions/protocols. This included Roses staff (with lived experience of suicidality) leading the recruitment of young people, as well as co-facilitating all focus groups.

Young people with lived experience of self-harm or suicidality were directly involved in the focus group component of the Atlas study. Two young people with lived experience were also involved in a dissemination video explaining the study's findings. Finally, the Atlas data dashboards/maps (developed in partnership with AIHW's geospatial team) were reviewed by an AIHW lived experience advisory group, inclusive of people with lived experience of self-harm and suicidality.

Beyond the Atlas study, Dr Hielscher has co-chaired two research advisory groups (at Flourish Australia, and QIMR Berghofer) where people with lived experience of mental-ill and suicidality act as co-advisors and key decision makers in the research undertaken at these two organisations.

Curriculum Vitae: Dr Emily Hielscher (max 4 x A4 pages)

Response to Eligibility Rules for TheMHS ECR Award

- PhD awarded within 5-years of the award closing date (PhD conferral date: 08/12/2020)
- Hold an Honorary Lecturer Affiliation with the University of Queensland (UQ), at academic Level B
- Am available to attend and present at the 2024 TheMHS Conference, not a previous award winner

Qualifications

- 2020 – PhD in Psychiatric Epidemiology (University of Queensland)
- 2013 – Bachelor of Psychology (First Class Honours) (QUT)

Career Summary

I am a highly productive early career researcher with experience and expertise in several related research areas, using diverse research methodologies. I have been working as a mental health researcher for the past ten years, where my experience ranges from brain imaging research to epidemiological and applied research, including analysing population surveys and designing and evaluating mental health interventions. My research experiences have been varied but are connected by a common goal of improving the mental health of Australians, particularly young Australians.

In 2013, I graduated with First Class Honours from a Bachelor of Psychology from the Queensland University of Technology (QUT) and then worked at the Queensland Centre for Mental Health Research (QCMHR) as a Research Officer on a wide array of topics, including mental health disclosure among young people with first episode psychosis, adolescent population surveys, and carers of people with mental illness. My time at QCMHR ignited my passion for mental health research. I commenced my PhD in 2016, focused on the epidemiology of self-harm and suicide attempts in young people with psychotic experiences. This was conferred from the University of Queensland (UQ) on 8 December 2020. From August 2020 to December 2022, I worked as a Postdoctoral Research Scientist at QIMR Berghofer Medical Research Institute, with an Honorary Lecturer Affiliation (Level B) with UQ. During that time, I led a portfolio of research focused on youth self-harm and suicide prevention, including leading two large and complex national research projects where the voice of lived experience was central. My role involved managing a small team of 3-4 research assistants, as well as supervising two honours students and one masters student.

In addition to my core research work, I have been actively involved in tutoring undergraduate university students, as well as working for national mental health non-government organisations (NGOs). In 2018, I took leave from my PhD studies to work as the Project Manager of Beyond Blue's Mental Health literacy Portfolio, aimed at improving the mental health literacy of the Australian population. This ranged from

conducting and commissioning research projects, managing national marketing campaigns, to developing policy and strategic items. In January 2023, I moved into a Research Manager role at Flourish Australia, a large nationwide mental health service delivering supports to people with severe mental illness in the community. In my current full-time role, I am responsible for the provision of high-quality research, evaluation, and service development activities across the services provided nationwide by Flourish Australia. This ranges from routine data collection through to commissioning and managing large research trials and evaluations conducted in collaboration with external university partners. I am also responsible for further developing strategic research partnerships with universities and other organisations, particularly with a focus on lived experience research and implementation science.

Across the past decade, my research contributions have been formally recognised by several award schemes. For my Psychology Honours thesis, I was awarded the QUT Honours Thesis Prize, for making the most significant contribution to the advancement of knowledge in the discipline. During my time at the Queensland Centre for Mental Health Research (QCMHR), I received the Staff Excellence Award – for innovation, dedication, and efficiency – and my team was also awarded the 2015 West Moreton Hospital and Health Service Achievement Award for excellence in research. My PhD work was recognised with two UQ publication of the month awards and four travel scholarships to support dissemination of my work. In 2019, I was awarded the Black Dog Institute's Black Puppy Foundation Award, a competitive national travel grant ($AUD 5000) awarded annually to one Australian PhD student to fund a research trip to an international mental health conference. The award is judged based on the quality of the awardee's PhD research and their contribution to the field of youth mental health research. Collectively, these awards demonstrate my propensity for producing high quality research, and future potential in mental health and suicide prevention research.

Research Grants and Fellowships (totalling $1.3 million)

My ingenuity, collaborative nature, and desire to seek out and understand the unknown has been recognised in multiple competitive national and international research grants. In 2016, I was awarded the Dr F and Mrs ME Zaccari Scholarship to undertake a PhD at the University of Queensland (UQ). This scholarship is open to national and international PhD candidates who will undertake research into schizophrenia and other allied mental illnesses. The Zaccari Scholarship is highly competitive, awarded to one recipient each round and is valued at $AUD 30,000 per annum. In 2020, I was awarded an Innovation Research Grant from Suicide Prevention Australia (Chief Investigator), valued at $AUD 66,065. The Suicide Prevention Australia Innovation Research Grant is highly competitive, providing funding for researchers at all stages of their career. In 2021, I was commissioned by The Wellcome Trust (Chief Investigator of Youth Mental Health Active Ingredient commission valued at $AUD 83,000) to lead a small team to build on the evidence base for the next generation of approaches for youth anxiety and depression. We were one of 21 teams selected worldwide through an international selection process. In 2022, I was invited as an Associate Investigator on a NHMRC Cohort Study application (Chief Investigator A: Philip Batterham) focused on identifying transitions from suicidal ideation to attempts via a population cohort study. This application was successful, attracting $1.1 million dollars in research funding from the federal government.

Publications (37 publications, 17 as first author)

I was awarded my PhD just over three years ago (in December 2020) and have already published 37 peer-reviewed journal articles (17 as first author), many in the field of youth mental health and suicide prevention. All these articles have been published in the past eight years, demonstrating my ability to establish a rapid track record. The impact of these publications is also notable, where most have been published in mid-to-high impact journals and 24 have been cited ten or more times. Some notable, first author publications include my first PhD publication, a systematic review on psychotic experiences and self-injurious thoughts and behaviours which was published in the prestigious journal Psychological Medicine (impact factor(IF):6.9), a leading international journal in the fields of psychiatry and clinical psychology. Another key first-author publication was an epidemiological analysis of the Young Minds Matter (YMM) survey, Australian's most comprehensive survey on youth mental health. This was published in the Australian and New Zealand Journal of Psychiatry (IF:4.6), the leading psychiatry journal of the Asia-Pacific region. I was also invited to lead a systematic review for the Behavior Therapy journal (IF:3.7) special issue focused on interoception and suicidality. The lead publication of the Youth Self-Harm Atlas project (entitled: "*Australian Youth Self-Harm Atlas: Spatial modelling and mapping of self-harm prevalence and related risk and protective factors*") is also of note, published (in press) in Epidemiology and Psychiatric Sciences (IF:8.1), the leading international journal for innovative research articles in mental health services and epidemiology.

In addition to research publications, I have co-authored seven (three as first author) reports for government and for national and international NGOs, including Mind Australia, Suicide Prevention Australia, and the UK Wellcome Trust.

Impact of Research

In terms of research metrics, the H-index is a standard scholarly metric of an individual's scientific output and impact. It is focused on the number of publications that have been cited, and how often, compared to those that have not been cited. I currently have a H-Index of 17, H10 Index (i.e., number of publications with 10 or more citations) of 24, and overall, 672 citations to date (Google Scholar, 16/04/2024). According to online guidelines, an average H-index is between 1 and 5 for a PhD student, between 2 and 17 for a Postdoc, between 4-35 for an Assistant Professor, and 30+ for a Full Professor. These guidelines are indicative that my H-Index is at the upper end for an Early Career Researcher (either a PhD student or Postdoc).

Beyond standard metrics, my research has demonstrated impact via its uptake and use outside of an academia. Three key examples include: (1) publishing the Australian Youth Self-Harm Atlas's data and maps on AIHW's public facing nationwide Suicide and Self-Harm Monitoring System website; (2) providing guidance to ANROWs on their public facing evidence portal, as guided by my first-author systematic review on healthy romantic relationships among young people; and (3) co-leading a COVID and youth mental health research project that informed Queensland and Victoria state government strategies. My research has also demonstrated impact via extensive engagement and partnerships with national stakeholders (including Suicide Prevention Australia, headspace, youth-led design companies) and international

stakeholders (including Indian-based youth mental NGOs and service providers). My work's impact is also illustrated by its direct engagement with young people with lived experience of mental-ill health and suicidality. For example, as part of the Wellcome Trust Commission, I led the formation of a Youth Research Advisory Committee where young people were co-advisors on a 12-month research project.

Finally, the impact of my research is demonstrated via (1) the level of interest in my research from local and national media channels (including stories and interviews with ABC, Channel 7, and Brisbane Times) (see supplementary material), (2) invitations to be a guest speaker or panellist at six national and international conferences, and (3) invitations to lead publications for special issues for international journals. The latter included an invitation to write an article for a special issue focused on the relationship between interoception and suicidality. The special issue editor was Professor Thomas Joiner, a world leading expert in suicide prevention research.

Collaborations, Community Engagement, and Professional Involvement

I have an extensive track record of building collaborations and partnerships with a diverse range of stakeholders, including young people with lived experience of mental illness, carers, academics, policy makers, marketers, as well as mental health NGOs. A key example is the research partnership that I developed with Roses in the Ocean, Australia's leading suicide prevention NGO. My team worked together with Roses on the Youth Self-Harm Atlas project, where we co-designed and co-facilitated focus groups with young people with lived experience. I also developed a partnership with AIHW for the Atlas project, where our team worked with their geospatial unit to finalise and publish the Atlas maps onto their monitoring system website. As part of the Wellcome Trust Youth Mental Health Commission, I developed an international research partnership with Scarf India, a Chennai-India based mental health NGO. Our respective teams worked together to co-facilitate youth advisory groups (in Australia and India) focused on sense of purpose. In addition to these partnerships, I developed collaborations with a large network of metro and regional-based youth mental health NGOs throughout my QIMRB Postdoctoral role, including headspace, Open Doors Youth Service, Reframe/Community Links, and Roseberry QLD.

My current Research Manager role at Flourish Australia also involves extensive stakeholder engagement with internal staff (e.g., clinician, peer workers, marketing departments), as well as external collaborators. The latter largely involves commissioning and managing large research trials and evaluations with university research groups (across Flinders University, Sydney University, and University of Newcastle), as well as broader engagement with state governments and PHNs.

As part of my wider professional involvement, I have presented at over 20 conferences and government/PHN meetings. I was previously chair of QIMR Berghofer's Youth Research Advisory Committee. I am currently chair of Flourish Australia's Lived Experience Research Advisory Committee, a committee guiding the strategic research direction of this nationwide mental health organisation. I am also a current member of the ALIVE Lived Experience Research Collective, and the Capacity Building Subcommittee of CRESP – Centre for Research Excellence in Suicide Prevention.

Referees (maximum 1 and ½ A4 page)

Referee 1: Letter provided (next page)

Name: Professor David Lawrence

Referee 2: Additional referee who may be contacted by phone.

Name: Professor James Scott

Role: Professor of Psychiatry (University of Queensland) and Research Group Leader (Queensland Children's Hospital and QIMR Berghofer Medical Research Institute)

Relationship to applicant: PhD Primary Supervisor (2016 to 2020) and Manager (2020 to 2020). Co-investigator across many research projects including the Australian Youth Self-Harm Atlas

Phone: [redacted]

Email: [redacted]

Curtin University

Faculty of Health Sciences School of Population Health

[redacted]

17 April 2024

To whom it may concern,

Dr Emily Hielscher — Reference in support of application for TheMHS Conference Early Career Research Award

I am very pleased to write in support of Dr Emily Hielscher's application for the TheMHS Early Career Research Award. I am Professor of Mental Health in the School of Population Health at Curtin University. I was the project leader for *Young Minds Matter*, the Australian Child and Adolescent Survey of Mental Health and Wellbeing and am currently leading an ARC Linkage Grant *Reducing self-harm and suicidal behaviours in young people in WA* in partnership with the WA Department of Education, Youth Focus, and the Stan Perron Charitable Foundation. I have been collaborating with Dr Hielscher since 2017 when she investigated self-harming behaviours in young people with psychotic experiences using *Young Minds Matter*, and more recently I was a co-investigator on Dr Hielscher's Suicide Prevention Australia (SPA) Innovation Research Grant creating the *Youth Self-Harm Atlas*.

The National Mental Health and Suicide Prevention Agreement identifies the importance of strengthening regional planning of suicide prevention initiatives. To achieve this, detailed regional data are needed. The *Youth Self-Harm Atlas* directly contributes to filling this data gap, being the first national study to estimate regional variability of youth self-harm and suicidality at geographies not often available to governments and service planners. Overall, the study provides a clear rationale for where future prevention efforts should be prioritised across Australia and how resources should be allocated. The project's significance and impact has been recognised by (1) an ABC national news story, (2) dissemination of the project's data and maps on AIHW's public facing Suicide and Self-Harm Monitoring System website, and (3) inclusion of more detailed data in AIHW's specialised data portal accessible to primary health networks and other service planners.

Dr Hielscher is a highly capable, productive early career researcher and an emerging leader in youth mental health and suicide prevention. She is diligent, hard-working, and prolific, having co-authored 37 peer-reviewed publications even though she only completed her PhD in 2020, including 17 papers as first author. Her skills, passion, and commitment have already been recognised through the award of the Dr F & Mrs ME Zaccari Scholarship to undertake her PhD studies, an SPA Innovation Research Grant awarded in 2020, and international research funding from the Wellcome Trust in 2021. She is strongly committed to co-design with people with lived experience. She has used co-design approaches in each of her major research projects to date, and has developed a close working relationship with *Roses in the Ocean*, the lead Australian organisation for lived experience of suicide. She has developed effective procedures for supporting people with lived experience to participate in the co-design process, to create safe spaces for open collaboration and co-design to take place. Co-design with *Roses in the Ocean* was one of the keys to the success of the *Youth Self-Harm Atlas* project.

Dr Hielscher completed her PhD in 2020 examining suicidal behaviour and non-suicidal self-injury in young people with psychotic experiences. More recently she has been leading work as the Chief Investigator on the *Australian Youth Self-Harm Atlas*, which was recently completed. This innovative project combined insights from spatial analysis of *Young Minds Matter* data with focus groups with young people with lived experience of self-harm and suicidality. As part of this project, she developed a partnership with the Australian Institute for Health and Welfare (AIHW) to provide access to The Atlas through the National Suicide and Self-Harm Monitoring System. She also built collaborative networks with a number of youth mental health organisations across Queensland and New South Wales. She is committed to undertaking applied and translational research with direct relevance to young peoples' lives.

Dr Hielscher is talented and industrious with a strong work ethic. She is collaborative and works constructively and effectively with others and has positive relationships with all stakeholders she works with. She is respected and valued by her team, and is a patient, empathetic, adaptable, and inclusive research leader. She demonstrates an ongoing commitment to producing impactful mental health research via her recent appointment to a Research Manager role at Flourish Australia, a large national non-government organisation providing supports to people living with severe mental illness in the community.

I have no hesitation in recommending Dr Hielscher as a very worthy recipient of the TheMHS Conference Early Career Research Award. I commend her achievements on the highly impactful *Youth Self-Harm Atlas* project and across her career to date.

Kind regards

David Lawrence
Professor of Mental Health

Supporting Material (maximum 2 x A4 pages)

1. Snapshot of the Youth Self-Harm Atlas maps. Published on the Australian Institute of Health and Welfare's Suicide and Self-Harm Monitoring System Website

   https://www.aihw.gov.au/suicide-self-harm-monitoring/data/geography/youth-self-harm-atlas



Above is snapshot from Youth Self-Harm Atlas on AIHW website. It shows primary health network (PHN)-level 12-month self-harm prevalence estimates (2019). Prevalence estimates available on AIHW website at SA3, SA4, PHN, and state-level.

2. National ABC Story on the Youth Self-Harm Atlas

https://www.abc.net.au/news/2022-11-23/australian-study-maps-youth-self-harm/101685248



3. Atlas Study Dissemination Video, co-produced with Chief Investigators, Roses in the Ocean, and young people with lived experience. Entitled "*youth self-harm prevalence mapped across Australia*"

   https://www.youtube.com/watch?v=Se-kZMq6ru4





4. Atlas Study Results Summary on Suicide Prevention Australia's website

   https://www.suicidepreventionaust.org/mapping-the-regional-variability-of-non-suicidal-self-harm-suicide-attempts-and-related-risk-and-protective-factors-in-australian-adolescents-to-inform-suicide-prevention-strategies/

5. Other Relevant Websites

- Emily Hielscher's Google Scholar Profile: https://scholar.google.com.au/citations?hl=en&user=X7b48wQAAAAJ&view_op=list_works&sortby=pubdate
- Youth Self-Harm Atlas Summary Report: https://espace.library.uq.edu.au/view/UQ:2090e31
- Roses in the Ocean research partnership page: https://rosesintheocean.com.au/what-we-do/evaluation-research-and-innovation/
- Suicide Prevention Australia Innovation Research Grant funding announcement: https://www.suicidepreventionaust.org/emily-hielscher/
- Announcement of Black Puppy Foundation Travel Award: https://clinical-research.centre.uq.edu.au/article/2019/11/youth-mental-health-researcher-recognised
- Life in Mind Summary of Youth-Self-Harm Atlas results: https://lifeinmindaustralia.imgix.net/assets/src/uploads/AIHW-Suicide-and-Self-harm-Monitoring-System-data-release-28-Sept-2023.pdf
- QIMR Berghofer's Summary of Youth-Self-Harm Atlas results: https://www.qimrberghofer.edu.au/news/national-study-shows-youth-suicide-prevention-requires-localised-approach-2/