QUEENSLAND INJURY PREVENTION KNOWLEDGE HUB PROPOSAL

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CONTEXT

Injury has an enormous cost to the Queensland community being the leading cause of death in 1-44 year olds (1). Over 2200 Queenslanders died in 2015 as a result of an injury, the main causes of injury death being suicide, falls and transport crashes (2). Injury causes a substantial burden on the healthcare system, with almost half million injury hospitalisations in Australia each year (3), the top three main causes of hospitalisation being related to falls, transport crashes, and assaults (for men) and intentional self-harm (for women). Queensland has the second highest injury hospitalisation rate in Australia (with 2014 per 100,000 population) (4). Furthermore, injury is the leading cause of emergency department presentations, accounting for approximately 30% of all presentations, with an estimated 407,680 injury-related emergency presentations in Queensland alone in 2014/15 (5).

HISTORY OF INJURY PREVENTION MANAGEMENT IN QUEENSLAND

Recognising the significant burden injury has in the Queensland community, the Queensland Trauma Plan was developed between 2001 to 2006 (and launched in 2006) with funding from the Motor Accident Insurance Commission (MAIC) with the aim of coordinating trauma initiatives throughout the State to improve the treatment, management and outcomes of trauma. The research project, funded by the Motor Accident Insurance Commission (MAIC), commenced as an initiative of the Queensland Ambulance Service and the Australian Centre for Prehospital Research. The plan utilised data generated by the research and was developed under the leadership of the Queensland Trauma Committee of the Royal Australasian College of Surgeons through the combined efforts of a large number of clinical and academic stakeholders involved in trauma care and research across the trauma care continuum. In summary, the main strategies outlined in the trauma plan to improve the Queensland trauma system were (6, 7):

- Development of major trauma services and trauma clinical networks;
- Linking trauma clinicians/researchers with policy makers via a Statewide Trauma Clinical Network and a Queensland Injury Prevention Council;
- Facilitation of expanded trauma data collection to support quality improvement;
- A more coordinated approach to trauma care education and research;
- Improved trauma rehabilitation/reintegration services.
The Statewide Trauma Clinical Network (STCN) was established in 2007 to guide the implementation of the plan and the improvement of trauma services in Queensland. The Queensland Injury Prevention Council (QIPC) was established in 2008 to provide strategic advice regarding prioritisation of prevention initiatives as well as oversight for an injury prevention research grant scheme and capacity building for the injury prevention workforce in Queensland. However, support for and funding of the QIPC was ceased in 2012 and the committee was disbanded with a change of government. This left a significant gap in the availability of evidence and processes to prioritise prevention activities, monitor performance and inform decision making.

In lieu of a formal QIPC, in 2013 a group of interested stakeholders (including academics, clinicians, and community safety advocates) formed a new network in an effort to keep the momentum going on injury prevention advocacy in Queensland. This Network was named the Queensland Injury Prevention Network (QIPN) and was chaired by Professor Peter Leggett (JCU) and Professor Vivienne Tippett (QUT), with secretariat support provided by Associate Professor Kirsten Vallmuur (QUT). The intention of the Network was to continue build on the foundations in injury prevention laid by the QIPC and to consolidate relationships with public sector stakeholders, and peak industry and professional groups at a local, State and national level. The Network aimed to be a guiding body on injury prevention in Queensland, and provide a collaborative expert forum to discuss injury prevention issues in Queensland and develop shared agendas for injury prevention research, education, and activity. The QIPN operated through a series of meetings and email correspondence throughout 2013 and 2014, and hosted a community forum on cycling injuries in early 2014. However, in the absence of funding, resources and a formal government reporting structure, it was not possible to maintain the functions of the Network beyond the initial two years.

A review of the status of the Queensland Trauma Plan undertaken in 2013 (8) summarised the progress against the original injury prevention goals of the trauma plan and the goals and status (in 2013, though there has been no little to no change to the current day) are provided in brief below:

1. Establish a mechanism for coordinating and overseeing injury control in Qld – Status: Not commenced.
2. Set up Ministerial Committee for Trauma – Status: Not endorsed by Cabinet.
3. Set up QIPC to advise Ministerial Committee – Status: Partially commenced but ceased.
4. Govt departments to determine their priorities for injury control programs for their respective departments – Status: Not commenced.
5. Establish infrastructure to provide surveillance and data analysis capability to support QIPC – Status: Partially implemented.
7. Increased funding for young driver education and training – Status: Partially implemented.
8. Increased capability in injury prevention by training and additional positions – Status: Not commenced.
10. Ensuring strategic focus on injury prevention in ATSI community – Status: Partially implemented but ceased.
11. Increased funding for research and programs for falls in elderly – Status: Partially implemented but ceased.
CURRENT STATUS OF INJURY PREVENTION MANAGEMENT IN QUEENSLAND

While the QIPC and QIPN had both ceased operation by 2015, there are several committees/groups in Queensland which focus on specific injury prevention areas and/or have a broader injury prevention purview as part of their Terms of Reference. While these different groups often operate in isolation from one another with little sharing of information/collaboration between groups, there have also been some examples, past and current, of groups working across the silos to inform injury prevention strategies.

Over the last few years there have been a series of Safer Road, Safer Queensland forums which have included industry, community organisations, government, researchers and other peak bodies to work together to identify opportunities for improving road safety and reducing injury and death from road trauma. These forums have informed several strategy documents including the current road safety strategy 2015-2021.

The Consumer Product Injury Research Advisory Group (CPIRAG) is a multiagency group established in 2011 supported by the Consumer Product Safety Unit within the Office of Fair Trading, which is comprised of academics, government regulatory, prevention and policy departments, industry, medical practitioners and community safety organisations. The purpose of this group is to provide an evidence base to support product safety policy, to work collaboratively with key stakeholders to promote the value of injury data for prevention policy, and understand the nature and seriousness of consumer product injury, and to provide advice to government/industry/community/media on product safety issues.

The Royal Australasian College of Surgeons Queensland Trauma Committee has a commitment to reduce the frequency and severity of injury and injury-related death, and has injury prevention as one of the important areas of advocacy. The Trauma Committee meet bi-monthly and core areas of interest include on-road and off-road trauma, rural trauma, alcohol-related trauma, and trauma in the elderly.

There are also a number of other groups/committees which focus on different aspects of injury prevention in Queensland including the various government taskforces and interagency groups (such as those focused on suicide, domestic violence, quad-bike safety, alcohol-related harm, serious road injury etc), research groups (such as the BDHP trauma committee, the Road Safety Research Network), and advisory panels (such as the Department of Child Safety Child Death Review Panels, the Electrical Equipment Safety Committee of the Electrical Safety Office) to name a few.

JAMIESON TRAUMA INSTITUTE: OBJECTIVES, SCOPE AND ACTIVITIES

The establishment of the Jamieson Trauma Institute (JTI) was announced at the Royal Brisbane and Women’s Hospital Symposium on 16 November 2017. The Institutes’ development has been strongly supported by the Motor Accident Insurance Commission with the establishment of a joint QUT/MNHHS Principal Research Fellow position which commenced on 7 January 2017. This Institute is named after Dr Kenneth Grant Jamieson (1925-1976) who was the first neurosurgeon at the Brisbane Hospital and Children’s Hospital in 1956. Dr Jamieson was one of Australia’s most distinguished Neurosurgeons best known for his clinical care of patients with head injuries and his research on changing patterns of head injuries and care given. Dr Jamieson was involved in research to include seat belts in cars, wearing of bike helmets, blood alcohol testing, and road safety strategies.

JTI was established to be a Statewide research facility and situated at Metro North/RBWH where collaboration and partnerships are being established with: the Motor Accident Insurance Commission; our University partners; Brisbane Diamantina Health Partners; the RBWH Trauma Service; ICU; Orthopaedics; Rehabilitation; Burns, Trauma and Critical Care Research Centre; QH Clinical Skills Development Centre; QIMR - Berghofer; ADF Professor of
Key collaborative areas will be developed around point of care support for rural and remote trauma; prehospital management; rehabilitation; R&D to improve trauma care; trauma data analytics unit, with links to the Trauma Data Warehouse; Queensland Burns and Trauma Quality Assurance Committee and Queensland Injury Prevention. Data will be fundamental to the Institute. It is critical that to build on the current, often siloed data systems and develop a new, unique, consolidated Queensland trauma data warehouse which is accessible and integrated to enhance clinical care, quality review, research, continuous service improvement and reporting.

JTI will represent a unique collaboration of service partners and industry, striving to advance trauma prevention, research, systems, and clinical management to deliver the best possible care for people who suffer a traumatic injury, be it those treated at the Royal Brisbane and Women’s Hospital or other facilities across Queensland and Australia. While contributing to the national and international evidence, the Institute will play a key role in determining unique solutions to the unique trauma issues facing Queensland, such as our geography and how we bring trauma expertise closest to the point of traumatic injury.

EVIDENCE FOR INJURY PREVENTION: THE QUEENSLAND TRAUMA DATA WAREHOUSE PROJECT

The current work being undertaken within Queensland Health to establish Business Intelligence Warehouses will provide a significant resource in the future for the work of the QIP-KHUB. Trauma was viewed as one of the critical use cases (one of five) to form part of the Business Intelligence Warehouses aimed at delivering both technical and information management infrastructure to allow the reporting of clinical data from the ieMR and other relevant sources for use in improving clinical quality (known as the ‘Trauma Data Warehouse’). The Queensland trauma system requires a modern, integrated, coordinated and highly automated trauma data solution to meet the strategic and operational needs of contemporary emergency health service providers and trauma clinicians. The current systems are disparate and lack any coordination or centralised reporting functionality. The purpose of the Trauma Data Warehouse project is to integrate data across the continuum of trauma care in Queensland to facilitate system level audits and support state-wide trauma quality improvement, inform trauma and injury prevention policy, and enable research to improve the care and outcomes of injured patients in Queensland. More specifically, the four key aims of data warehouse are to:

1. **Facilitate quality improvement for trauma services by:**
   - Establishing, monitoring and evaluating process and outcome indicators across the State;
   - Identifying variation in clinical care pathways, treatment patterns, and patient outcomes;
   - Starting routine collection of patient reported outcome measures to enhance the comprehensiveness of outcome measures.

2. **Determine effective and efficient practices by:**
   - Comparing actual costs of treatment with current payments made for the complete patient journey;
   - Combining data on patient health outcomes with costs of services provided to identify variation in cost effectiveness between facilities/HHS’s.

3. **Link patient information across their journey of care from pre-hospital to rehabilitation outcomes across multiple service providers and across multiple information systems and retrospectively/prospectively to:**
   - Improve data collection coordination, efficiency, accessibility, and cost effectiveness;
   - Avoid manual data entry and duplication of data entry;
   - Improve the quality of data through verification of concordance of data across systems;
   - Provide a comprehensive view of patient journey to support other business needs.
4. Inform injury prevention policy and practice by:
   • Examining injury trends, patterns and regional variations across sociodemographic groups and over time to identify appropriate agencies to respond;
   • Identifying high frequency, high severity, and high cost causes of injury to prioritise prevention initiatives and to evaluate the efficacy of interventions;
   • Enabling readily accessible coordinated aggregate data and reports to promote, monitor and evaluate of injury prevention initiatives.

PROPOSED QUEENSLAND INJURY PREVENTION KNOWLEDGE HUB

While there is a range of different activities being undertaken by different groups in the injury prevention space, there is no centralised coordination of the activities, knowledge, contacts, and priorities of these different groups. There is no one-stop shop to gain an understanding of the myriad of agencies involved in injury prevention, the areas of high activity or the gaps in prevention activity in Queensland. There is limited information on any government website specifically providing injury prevention resources and links apart from the Workplace Health and Safety website which provides some information about hazards at work and injury prevention resources for the workplace, and falls injury prevention resources on the Queensland Health site from the Stay on Your Feet Program.

As such, the JTI proposes to establish a Queensland Injury Prevention Knowledge Hub (QIP-KHub). The intention of the QIP-KHub is to provide a knowledge base for injury prevention in Qld to facilitate the coordination, sharing and dissemination of knowledge and activities from key injury prevention organisations, committees and groups across Queensland.

The core objectives of the QIP-KHub’s are to:
1. To provide a central platform which coordinates and disseminates data, research, resources, expertise, and activities around injury prevention in Queensland.
2. Strengthen collaborations between injury prevention researchers, policy makers, clinicians, practitioners, industry and the community.
3. Leverage and share expert knowledge from academic, government, non-government and industry partners regarding both emerging hazards and ongoing issues of concern.
4. Through QIP-KHub partners and collaborative relationships, facilitate communication and translation of research to relevant stakeholders to inform injury prevention activities.
5. Build injury prevention capacity at the local, State, and national levels through mentoring, networking, research and educational opportunities for interested parties.

The core proposed activities of the QIP-KHub’s are to:
1. Develop and maintain a list of injury prevention expertise in Queensland (individuals, committees, organisations, foundations, research groups, community groups etc).
2. Maintain an up-to-date repository of injury prevention committee activities and key priorities in Qld.
3. Produce a regular snapshot newsletter to consolidate and disseminate information about committee activity, injury prevention events, and injury data and research updates.
4. Facilitate an annual injury prevention collaborators showcase to engage academic, government, non-government and industry partners to share their key priority areas and challenges and provide networking and collaborative opportunities.
NEXT STEPS

We would like to receive your feedback on the proposed QIP-KHub as well as using this opportunity to scope your interest in being involved. We have designed a short 5 minute survey to record your views and register your interest and the link was provided in the email which was distributed with this paper. If you have any trouble accessing the survey, please email Kirsten Vallmuur at Kirsten.vallmuur@health.qld.gov.au.

REFERENCES