

Proposal for research regarding quad bike accidents for Midland Trauma Research Centre (MTRC)

The increased availability and use of quad bikes, especially within the farming sector, has resulted in an increase in serious injuries over the past decade. The financial and personal burden of such injuries are areas of concern for New Zealand and Australia [ref]. The Midland Trauma Research Centre (MTRC) is situated in Waikato Hospital, a provisional level 1 trauma facility in New Zealand. [ref = MTS website] The centre collects a broad range of information on all patients admitted to Hospital in the Midland Region, including those related to quad bike incidents. . As a result, it is ideally placed to undertake in depth statistical research to analyse the range of factors related to injuries from quad bike incidents.

While the statistical analysis is crucial to understanding the range of the problem and provides us with critical information, it is also important to inquire into the more subtle attitudinal aspects that continue to drive the quad bike injury rate. We propose to analyse both objective statistical data and subjective accounts of the contributing influences. The MTRC collects valuable statistical data that is rigorously analysed to provide the big picture, in this case, about quad bike incidents, their number, severity, geographic and demographic characteristics and outcomes, etc.

Quad bike injuries are strongly associated with particular age groups of 15-24 years, 35-40 years and a major age-related peak in the 55-70 year age group (see Figures 1, 2 & 3). These groupings may give prevention agencies targets for interventions to reduce injury rates. In addition to demographic and geographic profiling, we will inquire qualitatively into the experience of quad bike users related to these incidents. By understanding their experiences, we may gather rich information that helps us to understand some of the precipitating factors as understood by the users themselves.

The MTRC has therefore devised a three-phase approach to inquiry. The proposed research combines the following three separate phases:

- 1) Detailed statistical analysis of data collected on admissions to MTRC because of quad bike incidents;
- 2) An exploratory qualitative inquiry into the attitudes of older (>55) farming quad bike users towards safety and risk related to quad bike accidents;
- 3) A person centred design focused on quad bike accidents as a 'wicked' problem. Each phase of the research therefore has a different focus that will contribute to greater insight into this issue.

2. Qualitative inquiry

Research Question: 'How do older farming quad bike users navigate risk in relation to quad bike accidents?'

Methodology: Qualitative Inquiry using focused ethnography

Participants: Two groups of male farmers who use quad bikes on the farm, aged >55. One group who have experienced a quad bike incident (n=5) and one group who have not (n=5).

Data gathering: Face-to-face semi-structured interviews lasting one to two hours that will be recorded with permission and transcribed.

Analysis: Iterative and cyclic process using NVivo software. Attention to both micro and macro aspects of the phenomena through an emphasis on context.

Figure 1. Quad Bike related Trauma in Midlands 2012-2015 by Age and Gender (n = 175)

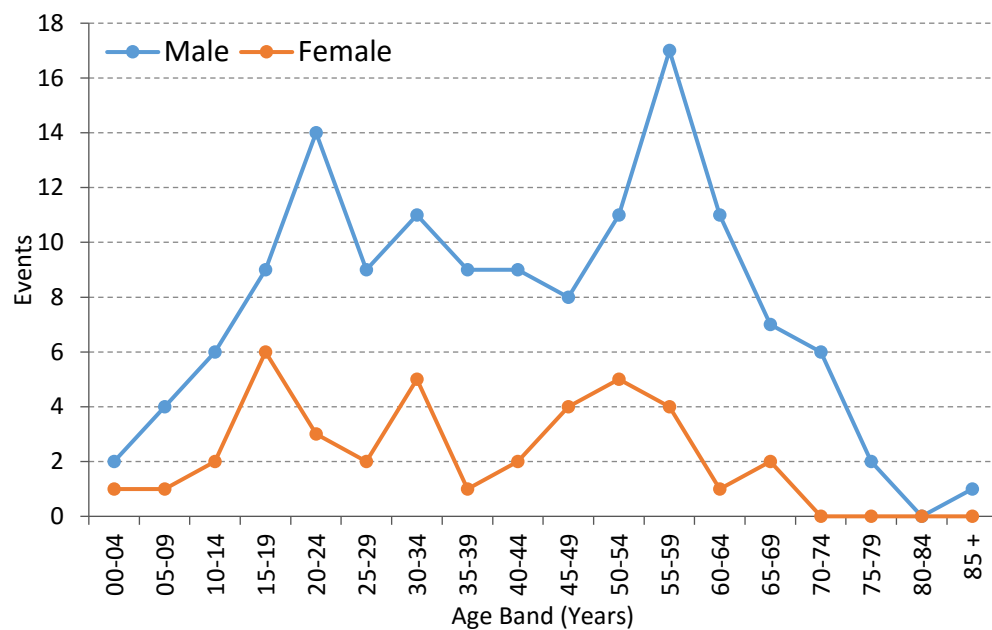


Figure 2. Quad Bike related Injury Midland Region 2012-2015, by Age and Major (ISS \geq 13) or Minor (ISS \leq 12).

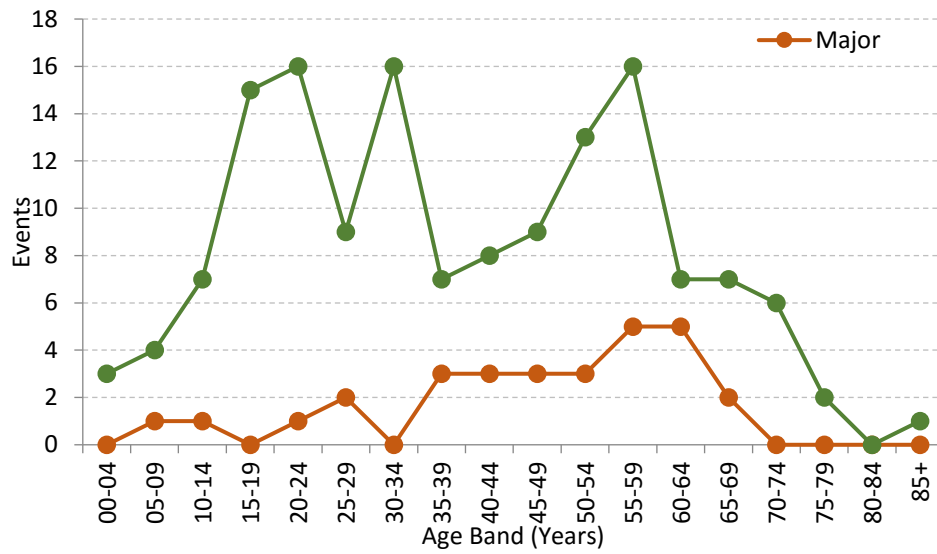


Figure 3. Quad Bike related Trauma in Midland Region 2012-2015, by Age and Injury Activity ($n = 175$)

