

Creating a culture for Quad bike safety: The wicked problems of occupational quad bike use in Northern Queensland.

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Take Home Points



- Are being used extensively in Far North Queensland for a variety of activities, such as mustering, weed control, & transport
- Quad bikes are seen as a critical piece of equipment.
- Understanding of risk not clear.
- Attitude towards safety is variable.
- Further work is required to create a culture of safety

Background and rationale



- Quad bikes are a leading cause of non-intentional injuries and fatalities on Australian Farms (Lower et al. 2012)
- No previous work explore quad bike in North West Outback Queensland
- Exploration of the nature of use and attitudes to quad bike safety in North West Outback Queensland (McBain-Rigg et al. 2014)
- Discussions with national and international industry partners and health professionals in Mount Isa in 2012 (*Are You Remotely Interested in Prevention? Creating a Culture of Safety Remote Health Conference - Mount Isa Centre for Rural and Remote Health (MICRRH) James Cook University*).
- Mount Isa Statement on Quad Bike Safety (Franklin, Lower, Knight 2014).

Methods



- Exploratory phase of research, mixed methods
 - Focus groups
 - Regulators
 - Retailers
 - Quad bike users/Farmers (occupational)
 - Individual interviews
 - Users/Farmers
 - Health professionals
- Conducted from 2011 to 2012
- Nvivo 9 TM utilised for data management and analysis reporting
- Inductive thematic analysis conducted
- Ethical approval: H4336 JCU HREC

Key findings



- 6 key themes emerged from the focus groups and interviews.
 - Attitudes toward ATVs
 - Experience with ATVs
 - Use of ATVs in occupational settings
 - Incident narratives and injury types
 - Community Impacts
 - Attitudes toward prevention measures

THEMES: Attitudes and experience of quad bikes

Subtheme	Quotation
Attitudes toward injury occurrence	<i>"...Probably going too fast or getting in situations where they probably should try and stay out of I suppose..."</i>
Attitude toward riders who have incidents	<i>"The difference is that the younger group are more likely to be involved in a recreational incident, that's opposed to the older group are actually doing some work..."</i>
Attitudes toward kids and quads	<i>"...kids get on things, they go flat strap, they don't see danger. Kids just do not see danger."</i>
Ease of Use	<i>"...They are an excellent mobility vehicle...we know many old farmers, male and female, who just love them. They wouldn't be able to do without them."</i>
Discussions relating to ATV use, i.e. rider status, rider confidence	<i>"...you see what people can do with them and it bloody makes your hair stand on end..."</i>

THEME: Use of ATVs in occupational settings

Subtheme	Quotation
Alternative vehicles	<i>"...Some jobs you just have to have the quad bike. Like out in the channel country, you cannot muster...on a two wheel bike...a side by side, you have to have that quad."</i>
Change of use	<i>"...if it does end up going to a rural property, it's not generally for recreational use, it's for work use. And then vice versa as well, those who buy for recreational use wouldn't necessarily use it for work..."</i>
Maintenance	<i>"...Yeah just regular - change the oils and that. There's not much more you can do to them these days..."(Farmer)</i>
Modification	<i>"...I haven't got a proper rollover bar but I do have a frame I've built over the top - it sort of more a sunshade."</i>
Rationale for purchase	<i>"...Well if you want to ride like a lunatic you're going to buy a big one. If you just want to run around you only buy a medium sized one. So that's about the basis of it..."</i>
Turn-over	<i>"...Probably three maybe four [years]..."</i>
Who is using quads	<i>"...No just me and my mate - his wife and his son - who's only got one arm and he rides one of them..."</i>

THEME: Incident narratives and injury types

Subtheme	Quotation
Incident Narratives	<p><i>Facilitator: "...Have you heard of any other accidents?</i></p> <p><i>Interviewee: Yeah, I've heard of a fair few, yep, some fairly serious.</i></p> <p><i>Facilitator: What were these people doing at the time of the accident?</i></p> <p><i>Interviewee: They're mostly doing the same thing, chasing cattle with a fair bit of pace up, yep..."</i></p>
Injury types	<p><i>"There's been serious spinal injuries and leg injuries and things like that, that we know of"</i></p>
Injury types by way of relation to use of alternative vehicles	<p><i>"Quad bikes are more severe than two wheelers. Horses are a different thing. I suppose actually, a horse and a quad bike often falls on the patient, whereas a two wheeler it's more often that the clients get thrown off and hit by the bike"</i></p> <p><i>(Interview, Female Health Professional, 2011).</i></p>

THEME: Community Impacts

Subtheme	Quotation
Cost to family and local business	<i>"...heard of a couple of really bad ones [accidents] happening to people, but most of them they just...struggle through it and keep going."</i>
Staff impacts – additional training needs	<i>"All I can say is that living out here and having an understanding of how the injury occurs and how you have to rehabilitate it is significantly useful."</i>
Staff impacts – costs to services	<i>"...if it's a severe injury then they get flown out, so I don't have them in [hospital] at all, unless they come back as a rehab patient."</i>

THEME: Attitudes toward prevention measures

Subtheme	Quotation
Quad bike rider training	<i>“..I don’t think training works, I’m anti training because of the dynamics of the quad bike and the environment...”</i>
Personal Protective Equipment (PPE)	<i>“Yeah I think we should become a bit more conscious about it though because you’ve only got to fall off once and hit yourself in the head yeah you become a statistic...”</i>
Prevention activities	<i>“...I think it comes down to awareness and education.”</i>
Responsibility for prevention	<i>“...I don’t know if they can be prevented...Probably workplace training in the use of ATVs prior to being put on one and letting them go. Maybe certification or license where used in industrial areas...”</i>
Inductions	<i>“...if you were someone running the induction, you've been on the land awhile, so you know what's right and what's wrong, and how you're gonna get damaged.”</i>

THEME: Attitudes toward prevention measures (Continued)

Subtheme	Quotation
Role of manufacturers	<i>“[Manufacturers] would be very interested in those products that are creating injury, in so much of design faults, or whether through braking or suspension or the overall product design.”</i>
Role of retailers	<i>“A car dealer doesn't make you get defensive driving courses so no, I think it's up to the person buying the machine to make sure they use it safely...”</i>
Roll bars	<i>“There's good and there's bad points but probably more bad than good is all I can think...”</i>
Terrain	<i>“..Here it's all uneven ground so you're riding in grass so you can't even see what's in front of you. So you can't prepare to react, and bang on wheel goes and the handle bars just speed out of your hand.”</i>

Quotes about Prevention

- “... *helmets are hot...*”
- “...*it was mentioned to me the other day that the actual terminology all terrain, people do think they can take it anywhere, when really that isn't the case...*”
- “...*Training isn't the key to fix this problem, it's one little element. It might actually take the edge off, but it won't actually solve lots of other issues...*”
- “...*A lot of the big companies are now going, no helmet, no job ...*”

THEME: Legislation measures as prevention activity

Subthemes	
<p>User perspectives</p> <ul style="list-style-type: none">• Concern about increased regulation• Development of locally specific policies	<p><i>“...people get worried as soon as you talk about bringing something in as law...they get defensive straight away”</i></p> <p><i>“The children...have to wear a helmet. For the adults, we don’t...”</i></p>
<p>Health professional perspectives</p>	<p><i>“redesign helmets ...probably workplace training...licensing where they are used in industrial areas”</i></p>
<p>Retailer perspectives</p>	<p><i>“But we don't get the data, the data is... passed to the retailers through the manufacturers. So we're all tarred with the same brush...”</i></p>
<p>Regulator perspectives</p>	<p><i>“Our investigation would be more comprehensive if it was a worker working at a workplace, but given it’s a family member, it is a cursory glance ...to provide education to the family...they’ve already suffered and received a bad outcome.”</i></p>

Conclusions and future research

- Key messages:
 - Used for a wide variety of activities
 - Found to be a useful addition (when used appropriately)
 - People know they are dangerous but continue to use
 - People confused about appropriate safety measures
- Future direction
 - Greater evidence about what works for prevention
 - Greater understanding of use and alternate solutions
 - Communication strategies for improving behaviour / safety

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