



The impact of an education program on nurses' recognition and response to deteriorating patients

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Information regarding location, population, SCHHS size



- The Sunshine Coast Hospital and Health Service
- Serves an approximate population of 390,000
- Covers approximately 6,093 square kilometres
- One of the fastest growing populations in Queensland



Evidence: Local and international

1 Need to standardise early recognition and rapid response to patients whose condition is deteriorating

2 Need to enhance nurses' ability to anticipate & recognise changes in patient status

3 Increased complexity of care lends renewed urgency to this challenge

4 When to prioritise and communicate clinical urgency

5 Rising patient acuity and decreasing length of stay contribute to an environment that challenges even experienced nurses

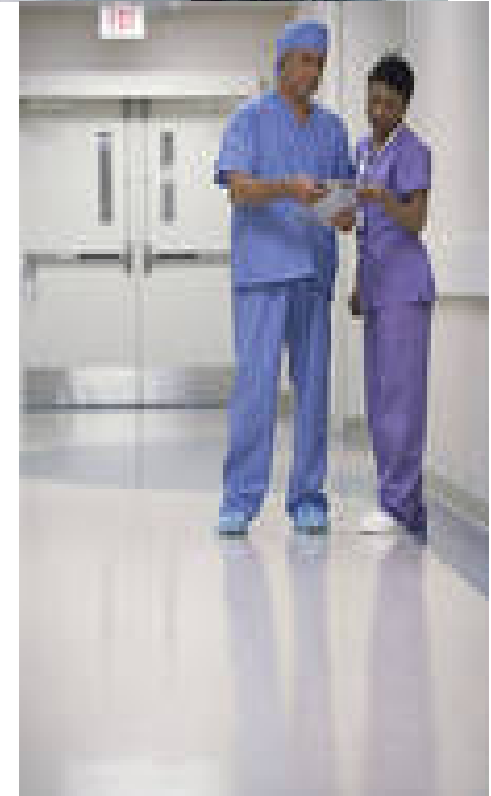


Problems detected

Within the Sunshine Coast Hospital & Health Service



- ✓ 1 Uncertainty about when to call for help
- ✓ 2 Inadequacy of handover, communication between staff and documentation
- ✓ 3 Over dependence on automatic monitoring
- ✓ 4 Obs recorded & acted on by staff who may not *understand clinical relevance*



A need for change.....

- Patient safety can be **greatly** improved
- Some patients who are or become acutely unwell receive **suboptimal care** McQuilkin et al 1998, Seward et al, 2003, Scholes, 2007.
- Many complications or harm events are **avoidable**
- Studies have demonstrated that 60-65% of primary events investigated (deaths, cardiac arrests) were preceded by abnormal physiology which **was often documented but not reported** Hillman et al, 2001, Krause et al 2004, Smith et al 2006.
- We *can positively impact* on rates of patient harm and death



Systems & Strategies available:

- ☐ **MET – Graded response strategy**
- ☐ **ADDS-Adult Deterioration Detection System**
- ☐ **MEWS**
- ☐ **Rapid Response systems**
- ☐ **Physiological Track & Trigger systems**
- ☐ **Critical Outreach Nurses**
- ☐ **Communication tools...SBAR, ISBAR**

Australian Health Care Standards

Standard 9 Recognising & Responding to Clinical Deterioration in Acute Health Care



- Introduced in Queensland in 2011 to ensure patient deterioration is recognised promptly and appropriate action is taken



- Establishing recognition and response systems
- Recognising clinical deterioration and escalating care
- Responding to clinical deterioration
- Communicating with patients and carers

Queensland Adult Deterioration Detection system

Q-ADD5

1

Introduced to Public Hospitals in 2011 via a State Reference Group

Other processes in QLD include:

2

- CEWT
- MEWT
- + entry into Emergency departments

Adult		Date													
		Time													
Respiratory Rate (breaths / min) Measure for a full minute	E	≥ 36												≥ 36	E
	3	35												35	3
	2	31-34												31-34	2
	1	21-30												21-30	1
	0	13-20												13-20	0
	E	≤ 8												≤ 8	E
O₂ Saturation (%)	0	≥ 98												≥ 98	0
	1	95-97												95-97	1
	2	90-94												90-94	2
	3	≤ 84												≤ 84	3
O₂ Flow Rate (L / min) <small>RA Room air NP Nasal prongs PP Flow mask BS Simple bubble</small>	3	> 11												> 11	3
	2	> 5-11												> 5-11	2
	1	2-5												2-5	1
	0	< 2												< 2	0
Blood Pressure (mmHg) Score systolic BP	3	≥ 200												≥ 200	3
	2	190s												190s	2
	1	180s												180s	1
	0	170s												170s	0
	1	160s												160s	1
	0	150s												150s	0
	1	140s												140s	1
	0	130s												130s	0
	1	120s												120s	1
	0	110s												110s	0
	1	100s												100s	1
	2	90s												90s	2
E	80s												80s	E	
1	70s												70s	1	
0	60s												60s	0	
Heart Rate (beats / min)	E	≥ 140												≥ 140	E
	3	130s												130s	3
	2	120s												120s	2
	1	110s												110s	1
	0	100s												100s	0
	1	90s												90s	1
	0	80s												80s	0
	1	70s												70s	1
	0	60s												60s	0
	E	50s												50s	E
Temperature (°C)	2	≥ 39.5												≥ 39.5	2
	1	38.5-39.4												38.5-39.4	1
	0	38-38.4												38-38.4	0
	1	37.5-37.9												37.5-37.9	1
	0	37-37.4												37-37.4	0
	1	36.1-36.9												36.1-36.9	1
	0	35.1-36												35.1-36	0
	2	34.1-35												34.1-35	2
Consciousness If necessary, wake patient before scoring	0	Alert												Alert	0
	1	Voice												Voice	1
	E	Pain												Pain	E
		Unresp.												Unresp.	
TOTAL Q-ADD5 SCORE															
Intervention	(eg. 'A')														<input type="checkbox"/> Tick box if modifications in use

Initial response to introduction

(Funded and directed by Queensland Government State wide group)

Results

1

Expected results following information sessions and roll-out *did not occur*



Data collection

2

Measured by calculation of numbers of MET and Code Blue calls



Key Stakeholder Review

Nursing and medical representatives: action following poor results

Strategies:

1

- Interdisciplinary collaboration
- Collegial endorsement of processes
- **Process made mandatory for all clinicians**
- Involvement of entire interdisciplinary group to collectively resolve practice issues

Identified Barriers:

2

- Previous interdisciplinary miscommunication
- Role responsibilities
- Clarity of purpose of QADDs form
- Perceived devaluation of clinicians' critical thinking ability



Deteriorating Patient Workshop program

Workshop
pre-reading

Workshop
attendance

Three Months
post workshop
questionnaire



Deteriorating Patient Workshop Program
February 2014
Clinical Training Room, Auditorium, SCHHS



0825 - 0830
Welcome and House Keeping

Short Sim overview
0830 - 0845
Mark Kelly

Program Overview
Dr Bev Duff
0845-0900

0900 - 1000
Cardiac emergencies:
Shane Convey DEM

1230-1300
Cardiac Scenario enactment

1030 - 1055
Morning Tea

1055 - 1125
Important links between PRE calls, Code Blues, ISBAR & QADDs forms
Russell Gooch

1125 - 1230
Respiratory emergencies:
(Lung dysfunction, Oxygenation)

Dr Bev Duff
Respiratory scenario enactment
1230 - 1300

1300 - 1340
Lunch
1340 - 1510

Neuro emergencies:
Including *scenario enactment*
Mark Kelly

1510 - 1600

Putting it all together: Scenario enactment
Debriefing and reflective feedback
Documentation summary

Mark Kelly & Nurse Eds

1600 - 1615
Program Summary and Evaluation



Identified Pathways to Improvement



- Education: regular workshops using simulation, debriefing and reflective feedback
- Support and guidance with nurse clinicians by ward coaches and educators
- Continual review of processes with interdisciplinary clinician input
- Modification of Q-ADDs tool

Ensuring workshop attendance has an impact on improved patient outcomes



Educational strategies:

Clinical coach and
Nurse educator
framework

Overlap
education
programs

Review and
feedback
sessions

Other learning goals:

To integrate early detection
of deteriorating patient
principles into all:

- Simulation sessions
- Leadership training
- Orientation programs



Incorporating Critical Incident principles

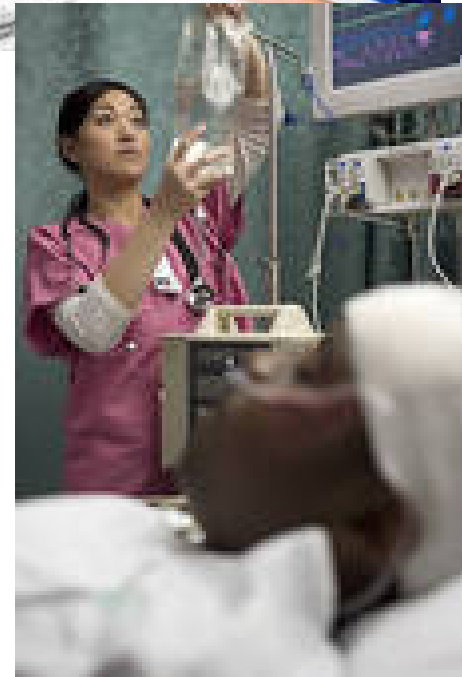
Recognise

Task management

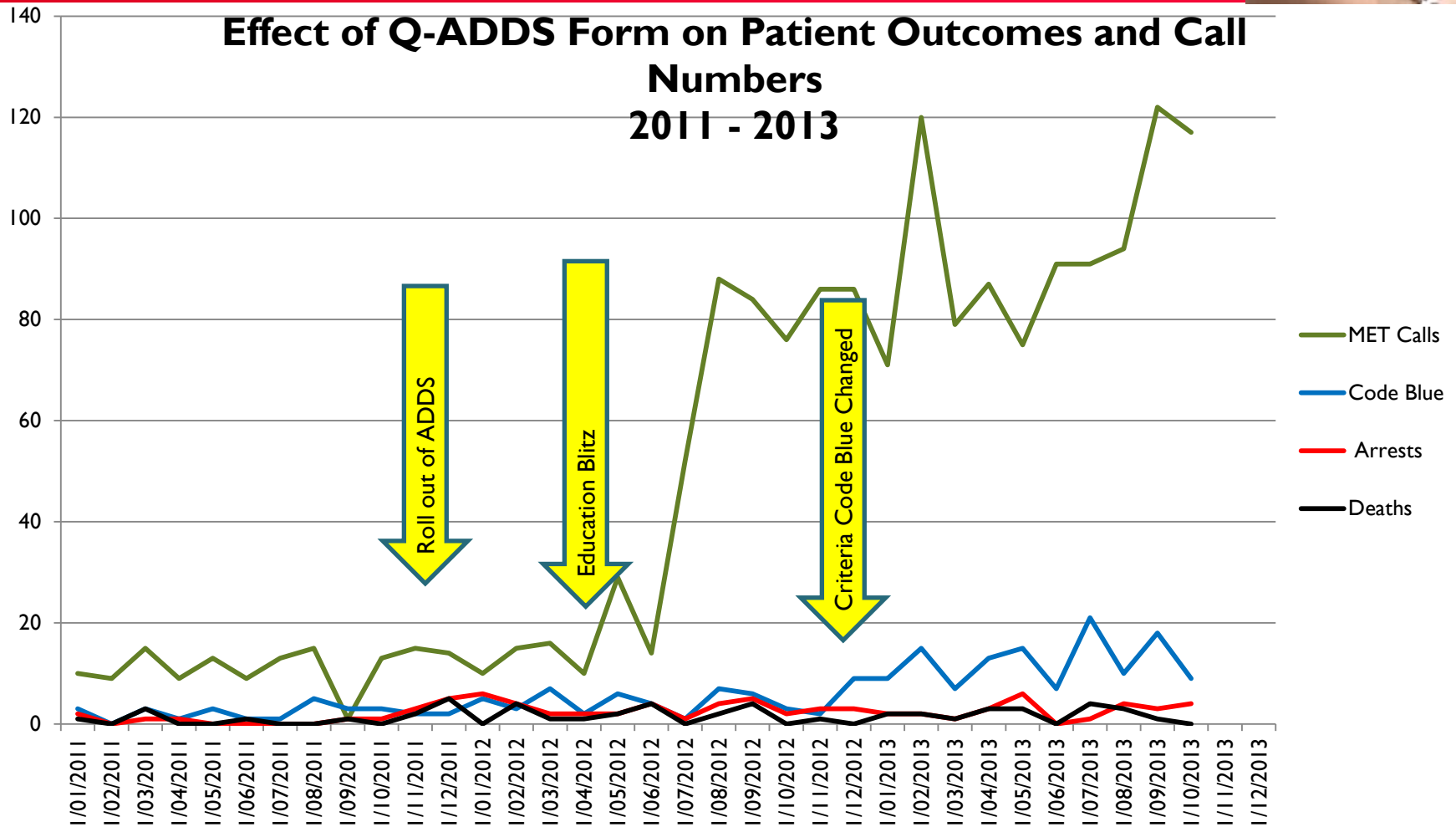
Situation Awareness

Teamwork

Decision Making -
COMMUNICATE



Graph showing data demonstrating marked increase in calls

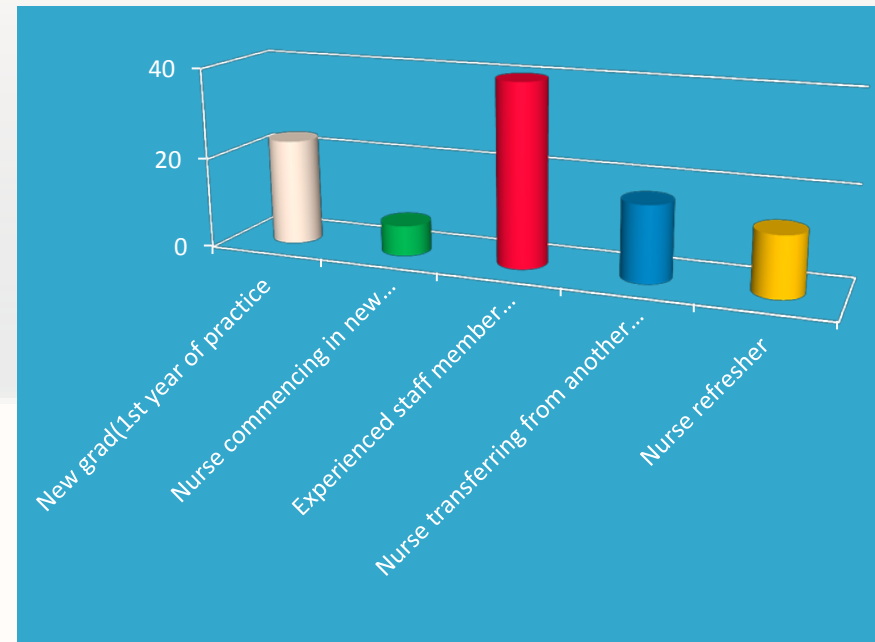


Study Demographics



- New grad (1st year of practice)
- Nurse commencing in a new setting in same facility
- Experienced staff member wanting an update
- Nurse transferring from another facility/organisation
- Nurse refresher

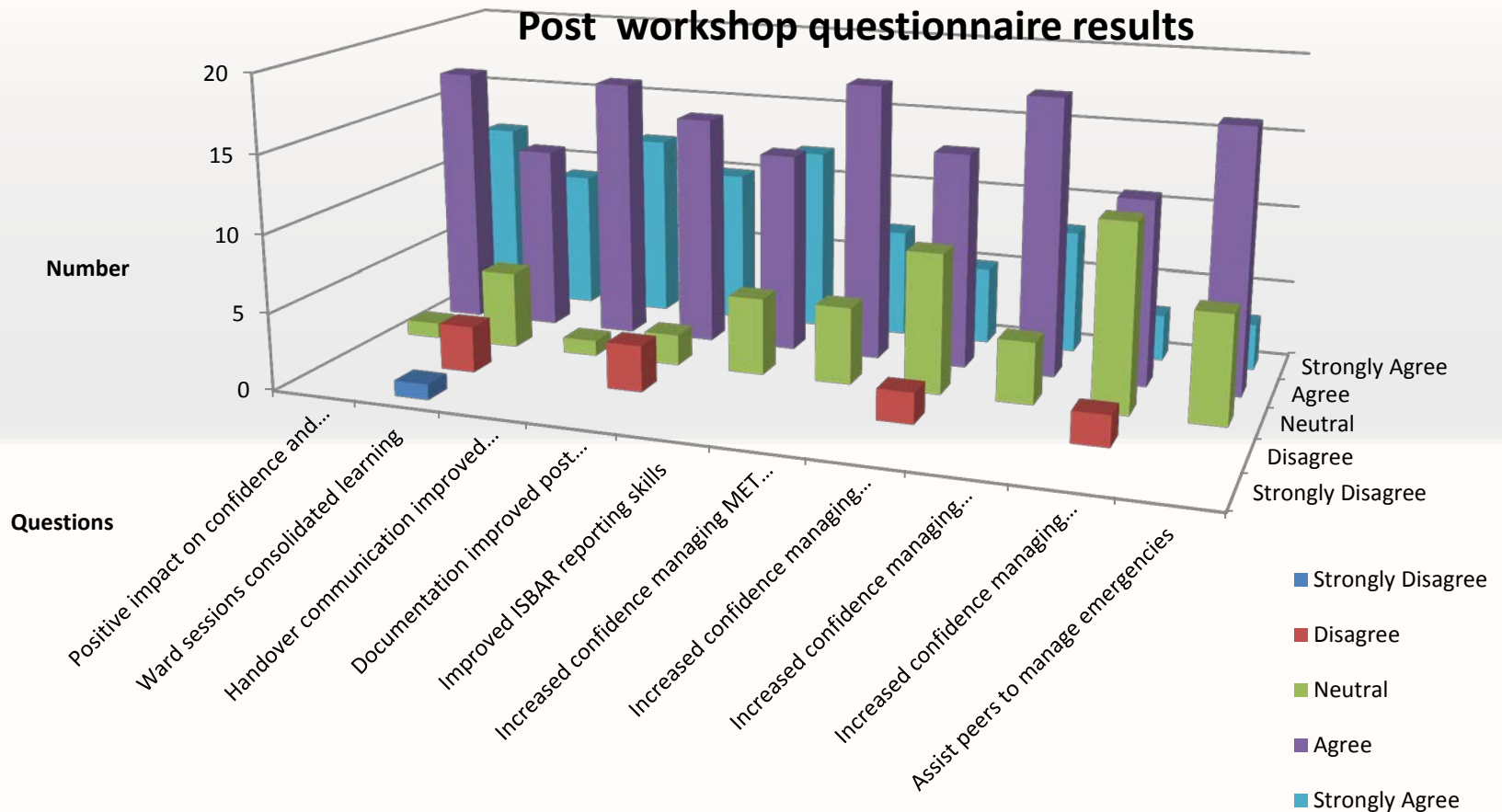
Staffing category



There is a statistically significant difference in levels of confidence with managing code blue situations between different categories of staff (Chi square (df) = 24.3 (12); p=0.018). Experienced staff are more confident than other staff.

Questionnaire results

Three months post workshop feedback



Post Workshop feedback

Self reported practice changes implemented in clinical practice as a result of participating in workshop

1

'Greater awareness of detecting unstable patients: understanding how systems all connect and effect each other'

2

'Looking at the individual not the equipment; not afraid to ask questions to define outcome'

3

'Recognition of deterioration; being more diligent in prevention; early notification; increased monitoring'

4

'Paid much closer attention to respiratory rate as a clinical indicator; particularly useful on night duty when patient asleep and other indicators (visual or pt activity) absent'

Post Workshop feedback contd;

Self reported practice changes implemented in clinical practice as a result of participating in workshop

5

'Documentation practice and communication skills have improved greatly'

6

'Check neuro obs at CBH with oncoming staff'

7

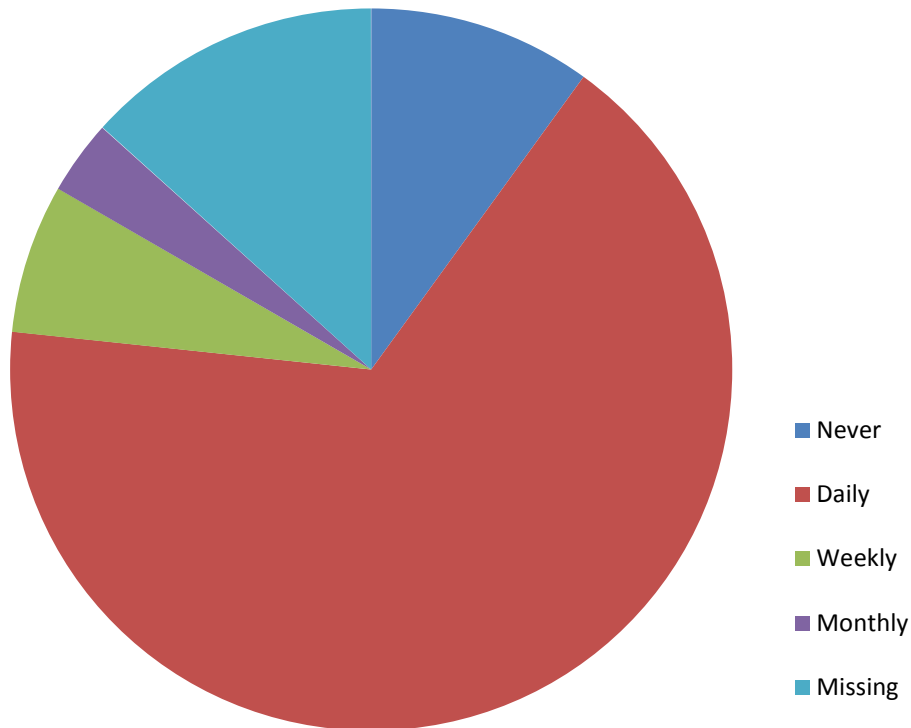
'Much more confident when using ISBAR to call a doctor about a patient'

Questionnaire results

Assessment of patients using primary and secondary survey



Use of primary & secondary survey
assessment techniques



Percentages

Daily	=	66.7%
Weekly	=	6.7 %
Monthly	=	3.3 %
Never	=	10 %
Missing	=	10 %

Future research

Collaboration with Sunshine Coast University.

Permission given to use interstate survey tool.

Conduct observational studies.

