SOUTH AUSTRALIAN
MEDICAL EDUCATION & TRAINING
HEALTH ADVISORY COUNCIL

Interns' Experiences and Preparedness to Attend Code Blacks in South Australia

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On behalf of: **The Doctors in Training Committee for the South Australian Medical Education and Training Health Advisory Council**

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Contents

Executive Summary

The South Australian Medical Education and Training (SA MET) Health Advisory Council ('the Advisory Council') has oversight of prevocational training in South Australia. The Doctors-in-Training Committee (DiTC) of the Advisory Council provides advice and recommendations to the Council from a student and trainee medical officer (TMO) perspective.

The DiTC became aware of anecdotal intern concerns regarding Code Blacks (scenarios where an agitated / violent person in a hospital requires an urgent review with security assistance). The DiTC, with the help of SA MET staff, conducted a survey of 2015 interns and made relevant enquiries of South Australian universities and hospitals regarding their training for Code Blacks.

A total of 93 interns completed the survey (37% of the total intern population). In summary, a total of 53% of respondents did not agree that they felt confident managing Code Blacks, especially at the beginning of the year. A total of 70% of respondents indicated they did not feel confident addressing the legalities associated with chemical and / or physical restraint. There were concerns regarding the adequacy and accessibility of protocols to guide TMOs and there were other concerns regarding working with other staff in managing Code Blacks.

The DiTC reviewed the results of the survey and enquiries and has made the following recommendations for further consideration by Council:

1. Increased practical training for Code Black scenarios for final year medical students, interns and residents (including authoritative instruction regarding legalities and simulation training if possible).

2. Increased site-specific education / induction regarding Code Blacks including (a) intended roles for members of the Code Black team, (b) ensuring all intended members of the Code Black team actually attend Code Black calls, and (c) increasing awareness for medical officers regarding who to contact for after-hours support with difficult Code Blacks.

3. Increased awareness / accessibility of existing protocols (including consideration of a 'Code Black lanyard card' as a quick reference guide for TMOs

4. Consideration of a unified Code Black protocol to standardise approaches to chemical and physical restraint across SA Health.

5. Improved protocol guidance for TMOs regarding legalities around restraint.

1. Introduction

The SA MET Health Advisory Council (the Advisory Council) has oversight of prevocational training in South Australia. The Doctors-in-Training Committee (DiTC) works under the purview of the Advisory Council and provides advice and recommendations to the Advisory Council from a student and TMO perspective. Committee functions include receiving feedback fromTMOs (all prevocational medical doctors including interns) about relevant training, safety and quality matters and advocating to health services on these issues.

Internship is a transformative period of a junior doctor's life. The transition from student to a practising medical professional leads to a significant increase in responsibilities for the intern. Appropriate support systems and structures must be in place and these arrangements underpin the success or failure of an internship year.

'Code Blacks' refer to scenarios where an agitated person within a facility threatens themselves, staff or visitors. They are typically attended by a senior nurse, security personnel and one or more medical officers. Chemical and / or physical restraint can be required to safely manage such situations. Interns are often required to respond to Code Blacks within facilities and, in some facilities, are the only medical officers to attend.

In 2015 the DiTC began a review of intern involvement in Code Blacks after becoming aware of anecdotal intern concerns. The review sought to (a) further understand intern anxieties regarding Code Blacks, (b) identify if such concerns more widespread, and (c) seek to develop some recommendations that could address any identifiable problems.

2. Method

The review involved a survey of interns, an analysis of available SA Health protocols, and discussions with relevant Local Health Networks (LHNs) and Universities regarding intern / medical student training.

In November 2015, a weblink to an online survey was circulated to interns in South Australia through staff at LHNs, peers, social media and the SA MET website. The survey was open from 9 November until 31 November. Survey questions addressed the following areas of interest:

- Frequency with which interns attend Code Blacks
- Confidence in managing Code Blacks
- Confidence in navigating legalities associated with restraint
- Experiences of the accessibility and adequacy of hospital protocols for Code Blacks
- Education and training for Code Blacks

The survey is attached in the Appendix. Quantitative data were analysed for frequencies, variation across respondent groups and any other significant factors. Qualitative data were analysed for emerging themes.

Relevant hospital protocols were identified through online searches and emailed requests to education and training units within facilities. Hospital protocols that were identified were reviewed against three criteria:

- Does the facility have a protocol for the general approach to Code Blacks?
- Does the facility have protocols regarding the use of chemical sedation?
- Does the facility have protocols regarding the use of physical restraints?

Universities were emailed and requested to provide details about the training and education they provide to medical students in this area. LHNs were emailed and requested to provide details of any training provided to interns in this area.

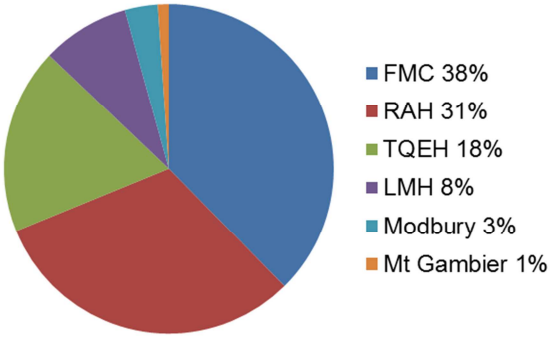
3. Results

3.1 Survey Respondent Characteristics

A total of 93 interns responded to the survey, representing 37% of the total intern population.

Survey respondents were distributed across six of the seven facilities in South Australia where interns are employed, see Figure 1. In South Australia, interns are employed at seven facilities: Royal Adelaide Hospital (RAH), the Queen Elizabeth Hospital (TQEH), Flinders Medical Centre (FMC), Modbury Hospital, Lyell McEwin Hospital (LMH), Mt. Gambier Hospital, Women and Children's Hospital. Interns posted to Repatriation General Hospital and Noarlunga Health Services consider themselves 'employed' by FMC.

Figure 1. Employment location of survey respondents



Survey respondents report that interns are usually the only medical officers to respond to Code Blacks at RAH and FMC. A variety of medical officers respond to Code Blacks at TQEH. Interns do not typically attend Code Blacks at Modbury and LMH (see Appendix Table 2).

Respondents expressed views on interns attending Code Blacks via open text qualitative fields. One respondent commented:

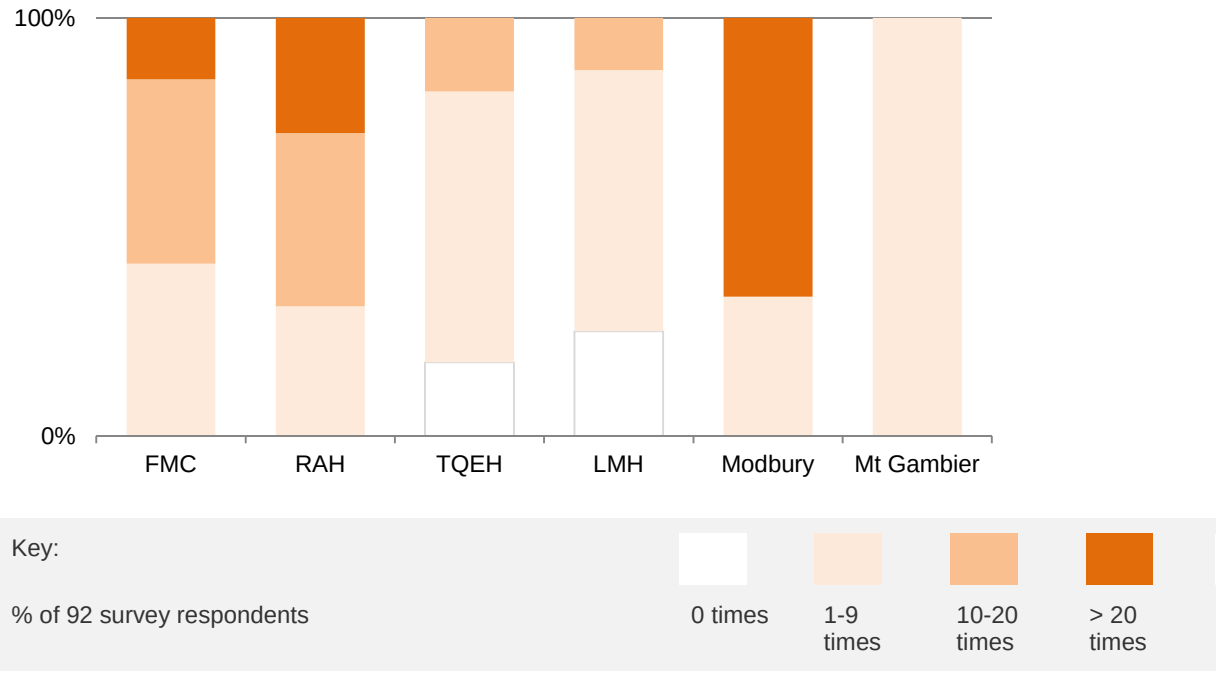
> *'Most [Code Blacks] are mundane and can be managed by an intern.'* (Intern, FMC)

Three survey respondents felt that another medical officer should support the intern in some capacity in responding to Code Blacks. One respondent felt that support from a Resident Medical Officer would be particularly useful at the beginning of the year. One respondent said it had been especially useful to be the 'secondary medical officer' supporting the medical registrar.

> *'[Attending a Code Black] is quite a demanding, stressful, and time-consuming task that will be better tackled with two doctors making decisions, [rather] than one newly qualified intern struggling to calm a patient down.'* (Intern, FMC)

The frequency of intern attendance at Code Blacks is shown proportionally by facility in Figure 2. A total of 95% (87/92) of respondents had attended at least 1-9 Code Blacks in the year. A total of 16% (15/92) of respondents reported attending over 20 Code Blacks in the year (see Appendix Table 3).

Figure 2. Number of times Interns attended Code Blacks in 2015 by facility



3.2 Intern confidence in managing Code Blacks

A total of 53% (48/90) of survey respondents did not agree that they felt confident in managing Code Blacks (see Figure 3). When interns were not required to attend Code Blacks, they reported no confidence in managing them in future:

> *'It was daunting to be the medical provider for the acutely aggressive patient that was a danger to staff.'* (Intern, FMC)

> *'Interns are not required to attend Code Blacks at NALHN, [therefore] I have zero confidence in my knowledge to manage these acute situations.*' (Intern, LMH)

Conversely, a total of 47% (42/90) of survey respondents agreed that they felt confident to manage Code Blacks (see Figure 3).

> *'I'm quite comfortable with [Code Blacks] now, after medical nights and AMU, but was certainly unprepared [at the beginning of the year]!'* (Intern, FMC)

Other respondents also noted that confidence was lower at the beginning of the year.

> *'At the beginning of the year I felt very inept at handling Code Blacks alone.'* (Intern, FMC)

> *'These can be a nightmare when you have had no training and no experience.'* (Intern, FMC)

3.3 Intern confidence in navigating legalities associated with restraint

A total of 70% (64/91) of survey respondents did not agree that they felt confident in addressing the legalities associated with using chemical and / or physical restraint for a patient upon whom a Code Black had been called (see Figure 3).

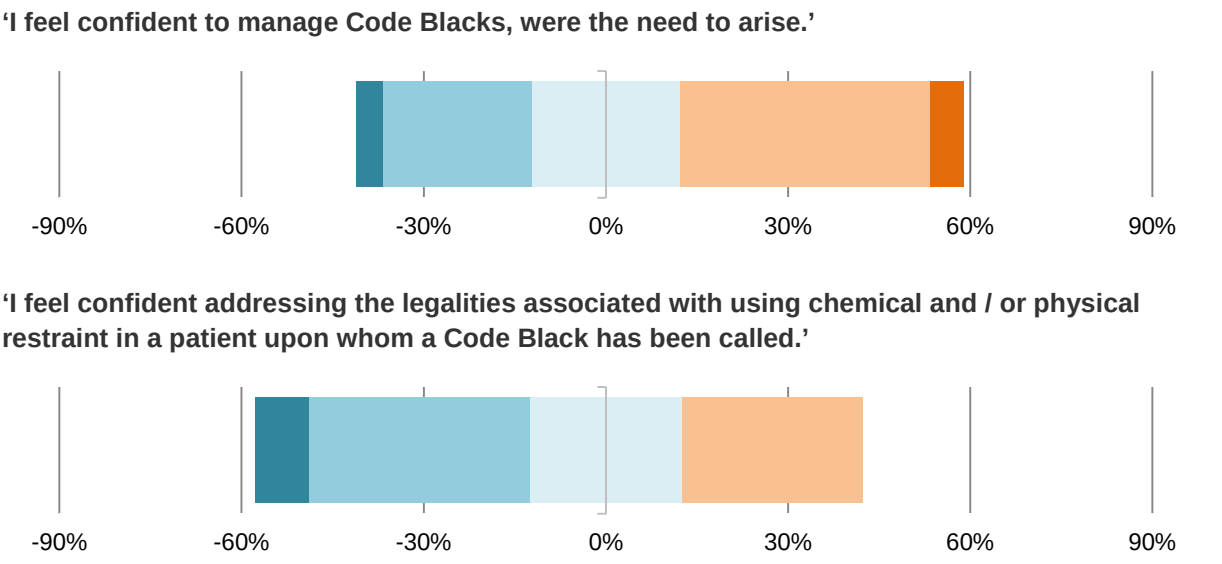
> *'This is a legal minefield… My colleagues and I are dealing with the legal grey area of physical and chemical restraint every single day.'* (Intern, RAH)

Respondents noted the following challenges with the relevant legalities:

- *'I do not understand the laws surrounding chemical restraint and when it is legal to administer medications without / against the patient's consent.'* (Intern, LMH)
- *'Every teaching session has emphasised the importance of avoiding physical restraints, however [physical restraints] are still used...*' (Intern, FMC)
- *'I have come across a lot of different information on whether patients with an acute delirium need to be placed under an ITO or whether the [Consent to Medical Treatment and Palliative Care Act] is appropriate.'* (Intern, RAH)

One respondent felt they would benefit from the development of *'practical, simple to understand policies'* regarding the relevant legalities, while another respondent felt that additional teaching around physical restraint was needed.

Figure 3. Intern confidence to manage code blacks and associated legalities: Graphical Representation of Likert Scale Survey Responses



3.4 TMO views on the hospital protocols for Code Blacks

A total of 76% (69/91) of survey respondents agreed that they were aware of local hospital protocols for handling Code Blacks, see Figure 4. One respondent noted difficulty in locating the protocols.

> *'Protocols exist but finding [the] most recent one quickly is hampered by poor websites, search tools, old documents, multiple websites.'* (Intern, TQEH)

A total of 56% (51/91) survey respondents agreed that hospital protocols provided adequate information on the use of chemical restraint, see Figure 4. However, one respondent noted:

> *'It would be useful if the protocol included not just dose ranges, but how often it is safe to give them if the first dose is unsuccessful.'* (Intern, FMC)

A total of 90% (82/91) of survey respondents did not agree that hospital protocols provided adequate information on the use of physical restraint, see Figure 4. One respondent noted:

> *'I have not yet seen a guideline regarding use of physical restraints.'* (Intern, FMC)

In general, 56% (51/91) of survey respondents did not agree that hospital protocols provided adequate information overall, see Figure 4.

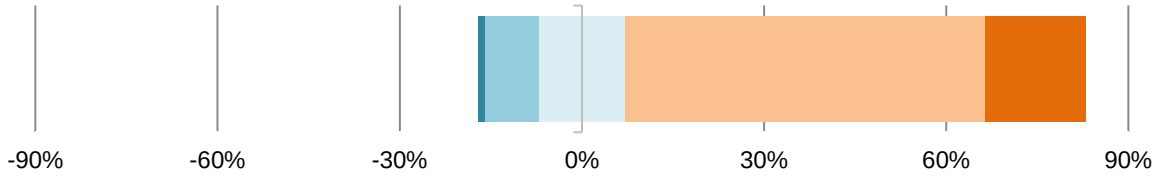
Several respondents noted instances where practice appeared to be in contravention of protocols:

- *'[There appeared to be a] disconnect between protocol and practice (e.g. Rx for geriatric review if IM meds used).'* (Intern, TQEH)
- *'[I felt] hindered by ward and Code Black nursing staff that (sic) are not aware of current guidelines / want a quick, easy option such as hard shackling a patient'* (Intern, RAH)
- *'Particular physicians prefer different regimes for the use of haloperidol in patients with dementia or delirium and have suggested a slower approach.'* (Intern, RAH)

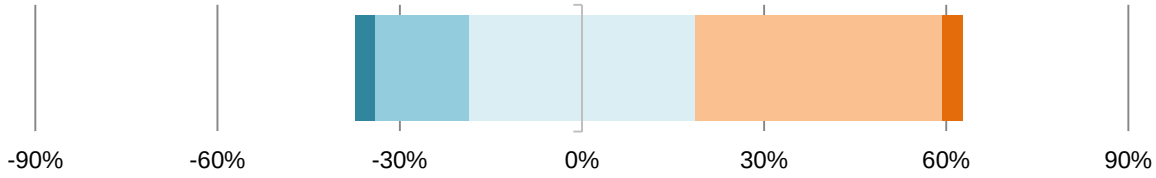
Survey respondents suggested changes to the protocols, such as raising the threshold for calling a Code Black and including the requirement for a prior offer to the patient of a cup of tea and sandwich.

Figure 4. Intern awareness and adequacy of information in hospital protocols: Graphical Representation of Likert Scale Responses

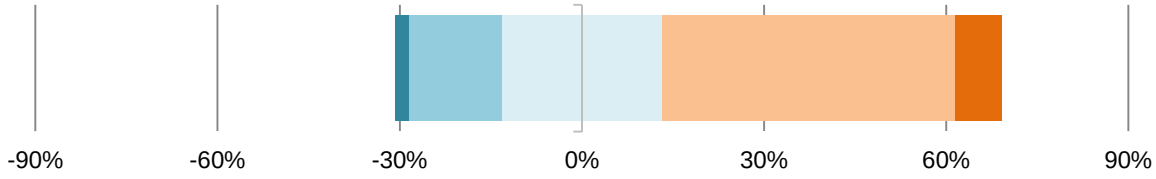
‘I am aware of the local hospital protocols for handling Code Blacks’



‘My local hospital protocols provide adequate information to enable me to handle Code Blacks.’



‘My local hospital protocols provide adequate information regarding the use of CHEMICAL restraint in agitated / violent patients’



‘My local hospital protocols provide adequate information regarding the use of PHYSICAL restraint in agitated / violent patients’

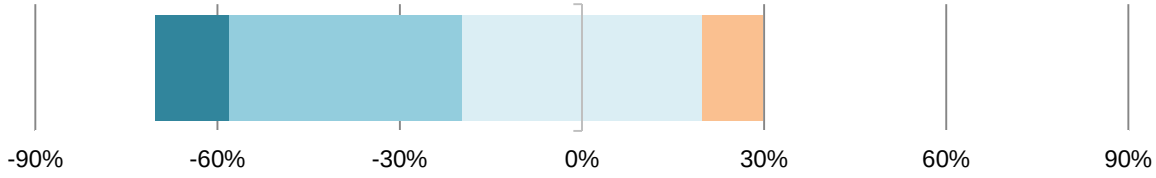
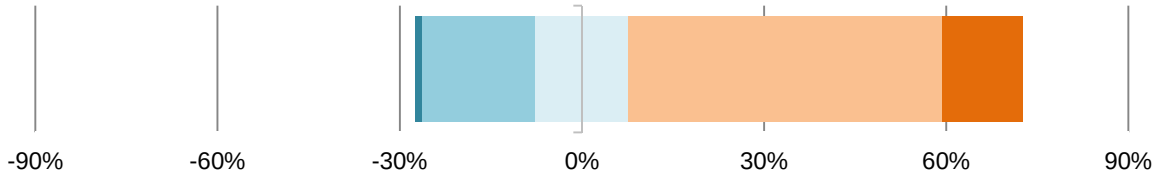


Figure 5. Intern knowledge of who to contact for support during Code Blacks: Graphical Representation of Likert Scale Responses

‘I know who to contact if I am unsure how to manage a patient upon whom a Code Black has been called’



3.5 Challenges working with other staff in responding to Code Blacks

A total of 65% of respondents agreed that they know who to contact if unsure of how to manage a Code Black (see Figure 5).

Respondents described instances of difficulties working with other staff to manage Code Black situations. Challenges included a lack of support, a lack of clarity around roles, feeling pressured and poor communication (see Figure 6). Several respondents observed a lack of education in other medical officers and fields, including psychiatry registrars and Code Black nurses.

Other respondents reported receiving helpful support from other staff; including help with 'de-escalating' the situation and providing advice (see Figure 6)

Figure 6. Intern experiences with other staff responding to Code Blacks

Instances of respondents having challenges working with other staff members:

- *'Nursing staff put a lot of pressure on me to chemically restrain patients when it is highly inappropriate. I have been asked to prescribe IM or IV medications for patients who are sitting on their beds talking quickly, because the nurses were afraid the patient would pull out their IV cannula.'*
- *'I have had issues with psychiatry registrars on multiple occasions providing no useful guidance, asking me as the Code Black intern to directly contact the psychiatry consultant on-call that day, psychiatry consultant then saying he does not authorise the use of physical restraint, Code Black nurses and ward nurses then initiating use of physical restraint despite this.'*
- *'Once I administered the injection and was told the nurses are supposed to'*
- *'My main criticism is the amount of times I arrived at a Code Black and the patient was already being physically restrained by security. In those situations (4) I promptly asked the security to un-restrain the patient and the situation usually de-escalated without chemical intervention. I felt it was unnecessary as the patient was not physically aggressive (verbally).'*
- *'Ward nurses not following 15 minutely agitation score and keeping a calm patient physically restrained as they 'might become agitated again' meaning I as cover intern had to continually review patient to make sure they were not being restrained for too long.'*
- *'Code Black nurse escalating to the CEO of CALHN without first informing me or the medical registrar on call about a case of a patient who was detained and absconded multiple times despite security guards.'*
- *'I find so many staff aggravating patients and escalating situations.'*

Instances of respondents being supported by other staff members:

- *'Many Code Black situations are managed by security and nurses without the doctor needing to do anything other than sign for the chemical restraint used.'*
- *'The security team are generally very helpful and have often de-escalated the situation before I arrive, especially with the delirious oldies.'*
- *'Medical registrar on call usually very helpful at Code Blacks with chemical restraints and dosages etc.'*

3.6 Intern education and training for Code Blacks

A total of 95% of survey respondents did not agree that Medical School training prepared them for handling Code Blacks (see Figure 7). A total of 56% (52/93) survey respondents attended the University of Adelaide and 40% (37/93) attended Flinders University (see Appendix).

A total of 71% of survey respondents did not agree that local hospital teaching prepared them for handling Code Blacks (see Figure 7).

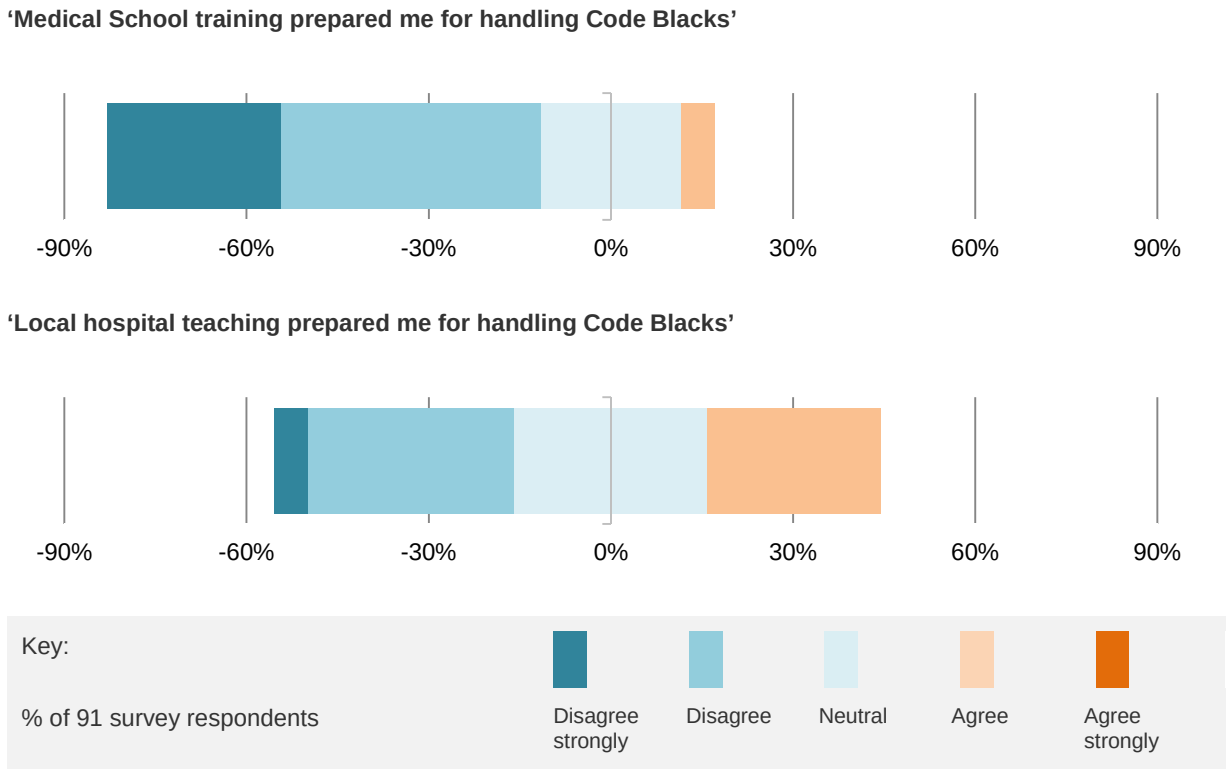
Survey respondents expressed that they learned skills and gained confidence through actual experience attending Code Blacks. One respondent said the nursing and security staff had been particularly helpful in their acquiring of skills.

> *'I have attended Code Blacks during my medical nights rotation. I feel, like anything, the more you go to the more comfortable you get.'* (Intern, FMC)

> *'There were certain things about Code Blacks that I learned about during an actual Code Black.'* (Intern, FMC)

Survey respondents expressed a strong desire for further training in responding to Code Blacks. Respondents mentioned the ideal opportunities for training as orientation to the hospital and orientation to general medicine. They also expressed a preference for the training method of simulation.

Figure 7. Intern ranking of value of education around Code Blacks: Graphical Representation of Likert Scale Responses



Survey respondents identified areas that they felt they would benefit from further information and training in:

- The most appropriate choice and dose of medicine
- Placing patients with acute delirium under an ITO or invoking the Consent to Medical Treatment and Palliative Care Act
- Managing patients who are ‘refusing PO meds, not "highly" agitated but are putting self or others at risk or refusing treatment or observations’
- Definitions of 'arousal' and 'agitation'.’
- Indications and management of physical restraint, including the need for consent from family members, need to advise family members of the decision, and strategies for monitoring and reviewing use of restraints
- The legalities and practical aspects of using physical restraints
- Managing delirious patients, for instance not arguing with them

3.7 Adequacy of Hospital Protocols

Figure 8 summarises whether relevant protocols were identified at each facility. Protocols are listed in full in Appendix Table 9 and reviewed in full in Appendix Table 10.

Protocols, when in place, were generally accessible online. Any protocols that may have been missed through this data collection method would not be considered easily accessible to TMOs attempting to urgently deal with acutely agitated patients. Therefore, a protocol that is not rapidly identifiable and accessible equates to the absence of a protocol for TMOs in Code Black situations. Protocols were not reviewed for Country Health SA, or the Adelaide Prevocational Psychiatry Program.

Most protocols provide specific advice on chemical sedation for agitated patients with specific agents, doses and contraindications. However, there is marked inter-site variability in the classes of agents used, which may be confusing for doctors that move between LHNs. Similarly, most LHNs / facilities have policies regarding the use of physical restraint (in terms of the practicalities and the frequency of medical officer reviews). There is very limited advice provided on the legalities involved in the chemical / physical restraint of patients, with the exception of NALHN (Reference Number OWI00336).

Figure 8. Relevant Protocols identified by LHN (see Appendix for full review)

		Does the site have a protocol for the general approach to Code Blacks?	Does the site have protocols regarding the use of chemical sedation?	Does the site have protocols regarding the use of physical restraints?
SALHN	FMC	✓	✓	✓
	RGH		✓	
CALHN	RAH	✓	✓	✓
	TQEH	✗	✓	✗
	WCH	✓	✗	✗
NALHN	LMH	✓	✗	✓
	MH	✓		

3.8 Education and Training provided by Universities and LHNs

One of the Medical Schools in South Australia (of a possible two) provided information on relevant education and training provided to medical students (see Appendix Table 11). Sections of the curriculum from the University of Adelaide do address topics related to responding to Code Blacks.

Four facilities (of the potential seven) reported offering training in relevant knowledge and skills (see Appendix Table 12).

4. Discussion

Responding to a Code Black appears to be a potentially intimidating prospect for approximately half of interns. Even more intimidating is the prospect of addressing the associated legalities associated with chemical and / or physical restraint.

Support for these interns takes the form of hospital protocols, which are easily accessible in some facilities but harder to source in others. Facilities do appear to provide sufficient general guidance on the management of Code Blacks. The protocols that interns are aware of provide adequate information regarding the use of chemical restraint, but less adequate detail regarding use of physical restraint. There is significant variability between facilities' protocols for chemical sedation of agitated patients. It may be desirable to consider the development of a unifying, evidence-based protocol for chemical restraint in agitated patients.

Interns are further supported by being aware of a staff member they could contact if they are unsure of how to handle a situation. Some interns have experienced nursing and security staff that are supportive and helpful. Some interns experienced significant challenges working as part of a Code Black team with other staff. Challenging issues included unclear communication channels, overlapping roles and differences of views regarding how to manage situations.

There is the potential for interns to be prepared with relevant knowledge and skills for Code Black situations and feel more confident through education and training, however this is not occurring. Interns did not feel at all prepared by their Medical School education and training to face Code Black situations. They felt slightly prepared by their hospital training in this area.

5. Recommendations

Recommendation 1:
Increased practical training for Code Black scenarios for final year medical students, interns and residents (including authoritative instruction regarding legalities and simulation training if possible).

Recommendation 2:
Increased site-specific education / induction regarding Code Blacks including (a) intended roles for members of the Code Black team, (b) ensuring all intended members of the Code Black team actually attend Code Black calls, and (c) increasing awareness for medical officers regarding who to contact for after-hours support with difficult Code Blacks.

Recommendation 3:
Increased awareness / accessibility of existing protocols (including consideration of a ‘Code Black lanyard card’ as a quick reference guide for TMOs).

Recommendation 4:
Consideration of a unified Code Black protocol to standardise approaches to chemical and physical restraint across SA Health.

Recommendation 5:
Improved protocol guidance for TMOs regarding legalities around restraint.

Glossary

DCT – Director of Clinical Training

EDMS – Executive Director Medical Services

Intern – Postgraduate Year 1 trainee not in a Vocational Training Program

LHN – Local Health Network

LMH – The Lyell McEwin Hospital

RAH - Royal Adelaide Hospital

TQEH - The Queen Elizabeth Hospital

FMC - Flinders Medical Centre

MEO – Medical Education Officer

Appendix

Data Tables

Table 1. Survey respondent distribution across facilities

	RAH	TQEH	FMC	Modbury	LMH	Mt Gambier	Total
Respondents	29	17	35	3	8	1	93

Table 2. Medical officers that usually attend Code Blacks by facility

	RAH	TQEH	FMC	Modbury*	LMH	Mt Gambier	Total
Intern	29	6	34	2			71
RMO		5					5
Medical registrar (BPT)		6		1	7		14
Other					1	1	2
							92

*The DCT has confirmed that Interns are not included in the Emergency Response Team (ERT) at Modbury

Table 3. Frequency of intern attendance at Code Blacks over the year

	RAH	TQEH	FMC	Modbury	LMH	Mt Gambier	Total
0		3			2		5
1-9	9	11	14	1	5	1	41
10-20	12	3	15		1		31
>20	8		5	2			15
	29	17	34	3	8	1	92

Table 4. Intern confidence to manage Code Blacks and associated legalities

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
I feel confident to manage Code Blacks, were the need to arise.	6% (5)	41% (37)	24% (22)	25% (22)	4% (4)	100% (90)
I feel confident addressing the legalities associated with using chemical and / or physical restraint in a patient upon whom a Code Black has been called.	0	30% (27)	25% (23)	36% (33)	9% (8)	100% (91)

Table 5. Intern awareness and adequacy of information in hospital protocols for handing Code Blacks

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
I am aware of the local hospital protocols for handling Code Blacks.	16% (15)	59% (54)	14% (13)	9% (8)	1% (1)	100% (91)
My local hospital protocols provide adequate information to enable me to handle Code Blacks.	3% (3)	41% (37)	37% (34)	15% (14)	3% (3)	100% (91)
My local hospital protocols provide adequate information regarding the use of CHEMICAL restraint in agitated / violent patients	8% (7)	48% (44)	26% (24)	15% (14)	2% (2)	100% (91)
My local hospital protocols provide adequate information regarding the use of PHYSICAL restraint in agitated / violent patients	0	10% (9)	40% (36)	38% (35)	12% (11)	100% (91)

Table 6. Intern knowledge of who to contact for support during Code Blacks

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
I know who to contact if I am unsure how to manage a patient upon whom a Code Black has been called.	13% (12)	52% (47)	15% (14)	19% (17)	1% (1)	100% (91)

Table 7. Intern ranking of preparedness by education around Code Blacks

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Medical School training prepared me for handling Code Blacks	0	5% (5)	23% (21)	43% (39)	29% (26)	100% (91)
Local hospital teaching prepared me for handling Code Blacks	0	29% (26)	32% (29)	34% (31)	5% (5)	100% (91)

Table 8. University Attended by Respondents

	University of Adelaide	**Flinders University**	**Other**	**Total**
Respondents	52	37	4	93

Table 9. Protocols around Code Blacks, by Facility

RAH	• Challenging Behaviours - Escalation Plan [hyperlink] (under review will replace Behaviour Management Agreement and Code Black Medication Protocol) • Code Black: Personal Threat (Activation of the Emergency Response Team) Incorporating Medication Protocol [hyperlink] • Disturbance Caused by Visitors [hyperlink] • Personal Security [hyperlink] • Restraining A Patient (Excluding Hard Shackles) [hyperlink] (will be retired) • Restraining A Patient With Hard Shackles [hyperlink] (will be retired) • Restrictive Practices - Minimisation of [hyperlink] (under review will replace Physical Restraint Techniques) • Security Assistance [hyperlink] (will be retired) • Staff Assault : Management of [hyperlink] • Use Of Restraint or Seclusion for the Management of Patients [hyperlink] (will be retired)
TQEH	• Unknown
SALHN	• Code Black Response Guidelines & Medication Protocol [hyperlink]
Modbury	• Modbury Hospital - Code Black personal threat Procedure [hyperlink] • Modbury Hospital CODE BLACK STANDBY [hyperlink]
LMH (some NALHN)	• LMH - CODE BLACK - Personal Threat [hyperlink] • Emergency Department Management of Acute Agitation in Adults [hyperlink] • Aggression Management Procedure [hyperlink] • Gilles Plains GP Plus Super Clinic CODE BLACK - Emergency Response [hyperlink] • GP Plus Health Care Centre (HCC) Elizabeth CODE BLACK - Emergency Response [hyperlink] • Mental Health - Duress System - Wondakka CRC [hyperlink] • Playford Primary Health Care Centre CODE BLACK - Emergency Response [hyperlink]
MGDHS	• 'Code Brown" policy for the physical restraint of violent patients • No other policies for medical restraint, currently working with Mental Health to develop one.
WCH	• WCH brief Notes on 'code black personal threat' (copy available)
TAPPP*	• SA Health Policy on Preventing and Managing Challenging Behaviours [hyperlink] • Adelaide Metro Mental Health Directorate - Restraint and Seclusion Procedure (copy available) • Rural and Remote Mental Health Service Emergency Sedation Medication Guidelines (copy available)

*TAPPP does not have intern positions, but does have PGY2+ positions

Table 10. Review of Hospital Protocols on Code Blacks

		Does the site have a protocol for the general approach to Code Blacks?	Does the site have protocols regarding the use of chemical sedation?	Does the site have protocols regarding the use of physical restraints?
SALHN	FMC	SALHN-wide OWI	Site-specific for FMC. The guideline addresses four potential causes of Code Blacks and advises on chemical restraint for each. Generally benzodiazepines appear to be favoured.	SALHN-wide OWI. This gives generic advice but does not detail legalities.
	RGH		Site-specific for RGH. The guideline provides separate flow charts, suggests agents and doses, and favours benzodiazepines or atypical antipsychotics as first-line options.	
CALHN	RAH	Site-specific for RAH	There are two protocols identifiable for the RAH. One guideline is for Code Blacks and the other is for severe behavioural disturbance in ward patients. The former preferences benzodiazepines and atypical antipsychotics while the latter preferences typical antipsychotics.	Site-specific for RAH. This details a step by step process for using physical restraint but does not detail legalities.
	TQEH	Unable to locate general policy on managing code blacks (however CALHN-wide staff assault protocol does exist)	Site-specific for TQEH. There was previously known to be a guideline that advised on agents / doses. However, at the time of conducting this review, we were unable to locate any protocol despite extensive efforts.	Unable to locate a specific policy
	WCH	Site-specific protocol for WCH on reporting of patients / family found with weapons and prohibited substances. Site-specific brief notes on actions in Code Black.	Unable to locate any specific protocols	Unable to locate any specific protocols
NALHN	LMH	Site-specific for LMH (but analogous to MPH protocol)	Unable to locate a specific policy. An OWI references a guideline for chemical sedation of agitated patients, but this was unable to be accessed. We were able to identify an ED guideline outlining different sedative options depending on the cause of agitation which could be applicable to ward patients.	NALHN-wide OWI. This explains the legalities in some detail. There is also a specific policy on restraint for mental health consumers.
	MPH	Site-specific for MPH (but analogous to LMH protocol)		

Table 11. Education provided to medical students around Code Blacks

University of Adelaide	While medical students are at the University of Adelaide, they receive education and training in: • delirium in older patients (lecture), • managing delirium (small group tutorial), • managing alcohol withdrawal (small group tutorial), • managing aggression and applying the mental health act (small group tutorial) • relevant aspects in prescribing sessions e.g. pharmacological sedation • managing agitated and aggressive patients (simulated scenarios) • practical participation in emergency and Code Black calls with an intern (during a medical internship attachment)
Flinders University	While medical students are at Flinders University they receive training and education in: • Delirium and dementia (Presentation) The session discusses delirium and dementia. Key features of each disorder will be discussed including diagnostic approach. Year level: 2 • Introduction to cognition and dementia (Lecture) This lecture is an introduction to the week's topic of Cognition and Dementia. Topics covered include an outline of the content and structure of the week. Year level: 2 • Dementia (Presentation) This session will cover types of dementia, symptoms, diagnostic tests, therapies and supports. Year level: 2 • Psychosis (Lecture) This lecture is on psychosis. The phenomenon of psychosis will be discussed along with various disorders associated with psychosis. Year level: 2 • Acute psychiatry (workshop) This workshop introduces students to emergency presentations of acute psychiatric illness. It provides some guidelines for history taking and mental state examination, management and information about the Mental Health Act and treatment orders. Students will also go through a number of case studies highlighting common acute psychiatric presentations. Year level 2 • Risk assessment (Lecture) This lecture is on psychiatric risk assessment. Topics covered include how to take a comprehensive risk assessment for suicide and self-harm. In addition important considerations of risk assessments are outlined. Year level 2 • Miss V Fleet (Problem-based learning) This case involves an elderly woman who undergoes surgery for bowel obstruction. Treatment is complicated by pre-existing chronic illness and post-operative confusion. On the day after surgery, an RN on the surgical ward report to the surgical ward round that that Miss Fleet appears confused. At that time Miss Fleet's speech is slurred and she doesn't know where she is. Over the course of the day Miss Fleet becomes increasingly agitated and keeps trying to get out of bed. That night Miss Fleet starts being verbally abusive to the ward staff and soon afterwards pulls out her IV. The CN calls you to come and give Miss Fleet something to make her quiet. Year level 3 • Delirium (small group discussion) Students attend a tutorial on delirium. Year level 3 • Delirium/Dementia (competency-based learning) Students will participate in a CBL on Delirium & Dementia. Year level 3.

Table 12. Training provided to interns by facility

	RAH	TQEH	FMC	Modbury	LMH	Mt Gambier
Relevant training provided to interns	Session on code black during intern orientation. Also one session dealing with the agitated/confused patient.	Presentation during orientation on how to manage a code black	Workshops as part of intern orientation run con-jointly by psychiatry and aged care. - sessions as part of the intern lunch time tutorial on management of delirium by geris and how & when to restrain / detain patients from psych.	Instruction on self-protective behaviour and dealing with aggression as part of intern orientation. This is reinforced airing the tutorial program with a session on management of the acutely disturbed patient.	None reported	Session on code black and non-violent behaviour intervention as part of intern orientation. PGY2s are also offered a session.

Intern Survey

Thank you for taking a few minutes to complete this survey.

This survey is conducted by the SA Medical Education and Training (SA MET) Unit on behalf of the Doctors in Training Committee of the SA MET Health Advisory Council.

Your responses will remain anonymous and de-identified.*

The information you provide will be forwarded to the Doctors in Training Committee to determine the support structures in place for junior doctors in dealing with Code Blacks.

Code Blacks and use of chemical and physical restraint in acutely agitated / violent patients are common scenarios that face junior doctors. They are often difficult situations with multiple confounders in clinical decision making. The SA MET Doctors in Training Committee has been asked to comment on the processes and support structures in place for junior doctors in dealing with Code Blacks.

* Which medical school did you attend?

What is your current level of training?

- ◯ Intern
- ◯ Prevocational TMO (PGY2+)
- ◯ Trainee (I'm in a college program)
- ◯ Registrar
- ◯ Other

* Which network are you currently employed in?

* Which hospital is your primary site?

* At [Q2], which medical officers are usually required to attend Code Blacks?

* Approximately how many code blacks have you attended this year?

◯ 0 ◯ 1-9 ◯ 10-20 ◯ >20

* To what extent do you agree with the following statements:

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I feel confident to manage Code Blacks, were the need to arise.	◯	◯	◯	◯	◯
I know who to contact if I am unsure how to manage a patient upon whom a Code Black has been called.	◯	◯	◯	◯	◯
I feel confident addressing the legalities associated with using chemical and / or physical restraint in a patient upon whom a Code Black has been called.	◯	◯	◯	◯	◯

* To what extent do you agree with the following statements:

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Medical School training prepared me for handling Code Blacks	◯	◯	◯	◯	◯
Local hospital teaching prepared me for handling Code Blacks	◯	◯	◯	◯	◯

* To what extent do you agree with the following statements:

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I am aware of the local hospital protocols for handling Code Blacks.	◯	◯	◯	◯	◯
My local hospital protocols provide adequate information to enable me to handle Code Blacks.	◯	◯	◯	◯	◯
My local hospital protocols provide adequate information regarding the use of CHEMICAL restraint in agitated / violent patients	◯	◯	◯	◯	◯
My local hospital protocols provide adequate information regarding the use of PHYSICAL restraint in agitated / violent patients	◯	◯	◯	◯	◯

Is there anything else you would like to add regarding Code Blacks? This is optional.

Thank you very much for completing this survey