

**AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE**

TRIM D14-27589

**TRAINING AND COMPETENCIES FOR
RECOGNISING AND RESPONDING TO
CLINICAL DETERIORATION**

**CONSULTATION REPORT AND OPTIONS
FOR ACTION**

NOVEMBER 2014

1. INTRODUCTION

The National Safety and Quality Health Service (NSQHS) Standards were developed by the Australian Commission on Safety and Quality in Health Care (the Commission) with consumers, clinicians, technical experts and policy makers. The purpose of the NSQHS Standards is to reduce harm to patients, improve quality of care and provide a mechanism for the consistent application of accreditation across the health system. Assessment to the NSQHS Standards tests that systems are in place to ensure that minimum safety and quality requirements are met. From 1 January 2013 all public and private hospitals and day procedure services need to be assessed to the NSQHS Standards if they are to provide health services to the public.

There are ten NSQHS Standards, including *Standard 9: Recognising and Responding to Clinical Deterioration in Acute Health Care* (Standard 9). The intent of Standard 9 is to ensure that a patient whose condition is deteriorating is recognised promptly, and appropriate action is taken. Criteria within Standard 9 relate to:

- establishing organisation-wide systems for recognising and responding to clinical deterioration
- recognising clinical deterioration and escalating care
- responding to clinical deterioration
- communicating with patients and carers.

Within Standard 9 Action 9.6.1 requires that ‘the clinical workforce is trained and proficient in basic life support’. As health services have put in place systems to address this action questions have arisen about whether training in basic life support is the appropriate mechanism for ensuring that the clinical workforce has the skills required to recognise, escalate and respond to clinical deterioration.

Given the lack of definitive evidence to guide the Commission in this matter, between March and June 2014 the Commission undertook a consultation process about the skills and knowledge needed to recognise and respond to clinical deterioration, particularly with regard to the requirements of the NSQHS Standards. The aim of the consultation process was to seek advice about:

- what core skills, knowledge and competencies are required for all clinicians providing acute patient care to recognise deterioration, escalate care and provide an initial response until expert help arrives
- how initial and ongoing competence should be assessed
- who should be required to undergo mandatory training in the core skills, knowledge and competencies related to recognising and responding to clinical deterioration in acute health facilities
- when, how and how often this training should occur
- what mechanisms are, or should be, in place to ensure that such training occurs, and that the skills, knowledge and competencies are maintained.

A consultation paper was sent to over 300 organisations with an invitation to provide a written submission. It was posted on the Commission’s web site and emailed widely.

2. CONSULTATION FINDINGS

Ninety-nine written submissions were received in response to the consultation paper. The submissions came from a range of stakeholders including individuals, public and private health service organisations, professional colleges, and state, territory and federal agencies (Table 1). Almost half of the submissions came from hospitals, Local Health Networks, hospital groups and clinical networks.

Table 1: Submissions received by type of organisation

Type of organisation	Number of responses
Hospital, Local Health Network, private hospital group, clinical network	45
Individual	18
College, peak body and professional association	16
Government department	13
Other	7
Total	99

Most submissions provided detailed information about the current approach to training within their organisations, and this varied widely. Overall, there was a lack of consensus about what minimum standard of training should be required, and whether or not this would include basic life support (BLS). The feedback obtained from the consultation is summarised in this section under three broad headings: training, demonstrating and maintaining competency, and mandating training through the NSQHS Standards.

Training

Training for recognising and responding to clinical deterioration varied between organisations and even between sites in the same health service. A wide range of specific courses and programs were identified. Within some organisations both recognition and response to clinical deterioration and basic life support training were mandatory for clinicians as part of their ongoing employment. Elsewhere, only training in basic life support was mandatory. Some organisations maintain that competencies for recognising and responding to clinical deterioration are a prerequisite for clinical practice. In the private sector, training is generally only mandatory for staff employed by the hospital and not for doctors and other health professionals who are not employed. Across the board, services report higher level mandatory training requirements for clinicians providing critical care or working in specialist areas.

Competencies for recognising and responding to clinical deterioration that were commonly listed in the submissions included:

- knowledge of the common physiological signs for detecting deterioration

- recognition of clinical deterioration
- interpretation of vital signs and other abnormal physiological parameters
- knowledge of local escalation processes and skills in graded assertiveness
- capacity to provide initial care (within an agreed scope of practice) until help arrives
- communication, handover and documentation
- interdisciplinary teamwork.

Several respondents also highlighted the need for clinicians to recognise dying and to be able to discuss end-of-life issues with the patient, family, and carers.

A number of issues were considered to have an impact on the skills and knowledge required by clinicians. These included the:

- type of health service
- level of care being provided
- scope of practice for individual clinicians
- frequency of engagement with patients whose condition deteriorates.

Remoteness was also cited as a factor influencing what training is provided. It was pointed out that in remote areas staff numbers are often limited and there is a need for clinicians to have more advanced training. Some respondents indicated that an additional set of skills and competencies is required for clinicians who work with paediatric and obstetric patients.

Basic life support

Many submissions listed basic life support training as a fundamental component of training for recognising and responding to clinical deterioration, although the general view was that competence in basic life support was not sufficient to adequately recognise and respond to clinical deterioration.

There were a number of submissions where the value of basic life support as a core skill was questioned. For example, one submission stated that:

Currently we still insist on annual competency checks for all staff on BLS (clinical and non-clinical) however this is more from established practice and historical tradition than evidence based or legislative requirements.

Central Queensland Hospital and Health Service

A number of respondents made comments about basic life support being an 'end stage' intervention. One submission noted that basic life support is an intervention to provide initial care to a patient who has deteriorated, rather than a competency for recognising and responding to clinical deterioration. It was argued that accurate clinical assessment and escalation of observed deterioration can prevent the need for resuscitation. Another submission expressed the view that basic life support is necessary to manage 'an end point in clinical deterioration', but to make significant improvements in patient outcomes, much earlier detection and response to deterioration is required.

Who needs training?

The majority of submissions indicated that all clinicians who provide direct patient care should have at least a minimum standard of training and competency for recognising and responding to clinical deterioration, and that no clinician should be exempt.

However respondents also noted the difficulties of achieving universal training, particularly given issues related to access and resources. Numerous respondents suggested that a tiered approach could be taken towards training, where different levels of competence for individual professional groups and different care settings could be considered. One respondent suggested that training and competency requirements should be recommended for all clinicians, and mandated only for initial responders and emergency response teams.

A number of respondents suggested that non-clinical staff (such as administrators and corporate staff) should be exempt from training and competency requirements, particularly if they were working in a large health service where expert help was readily available. Others suggested that non-clinical staff should be familiar with their organisation's emergency protocols and systems and the process for escalating care or calling for expert help.

Respondents suggested that the assessment of competence, rather than the type of training, should be the key focus and that refresher training should depend on the frequency with which skills and knowledge are used. Some respondents argued that recognising and responding to clinical deterioration should be practised daily by clinicians, negating the need for training. Experienced critical care clinicians, in particular, were thought unlikely to benefit from repeated training because they maintain their skills and knowledge through regular care of deteriorating and potentially unstable patients.

An issue was also raised in some submissions about the differences between public and private hospitals and how doctors are engaged. In private hospitals, doctors are frequently not employed or contracted by the hospital and therefore not considered to be employees or part of the 'workforce' regulated by the hospital. In light of this, some respondents expressed the view that it was not reasonable to expect private hospitals to be responsible for providing training to doctors who are not employed by the hospital. Some respondents also asked for more clarity over the definitions used by the Commission in the NSQHS Standards in relation to 'workforce', 'clinical workforce' and 'employed'.

How training is provided

It was generally suggested that training in recognising and responding to clinical deterioration should have both theoretical and practical components, although many health services indicated that there are challenges to delivering such training. These challenges include time, resources, and ensuring that trainers are adequately prepared, available, and can deliver high-quality teaching.

Training for recognising and responding to clinical deterioration is currently provided by clinical nurse educators, specialists in acute care such as intensive care liaison nurses, resuscitation coordinators or trained coordinators for specific courses such as DETECT and COMPASS. For smaller or remote organisations with no accredited trainers on site, training is generally delivered by educators from another site or a registered training organisation. Respondents reported variations between trainers in terms of their qualifications and teaching skills.

It was commonly reported that theoretical training components are provided online, to increase staff accessibility to training and to reduce costs. Several submissions expressed some doubt about whether this is an effective approach in terms of achieving meaningful learning outcomes. Other submissions discussed the evidence that face-to-face practical training with virtual patients and high fidelity simulation can contribute significantly to

improvements in clinicians' knowledge and behaviours, but also pointed out the resource intensity associated with such methods.

Blended learning programs were also suggested to be beneficial as they provide flexibility in program delivery, cater for different learning styles and shorten face-to-face teaching time, and therefore time away from work. An interdisciplinary approach for practical training was also considered important by many respondents in order to improve participants' understanding of each other's roles and their ability to work as a team.

Demonstrating and maintaining competency

The majority of respondents stated that ongoing competency in recognising and responding to clinical deterioration should be monitored, however there was little consistency in current practice, and little consensus regarding the practicalities of how this should be achieved. Assessment of competency in recognising and responding to clinical deterioration, like training, currently varies widely in terms of process and according to the setting.

Respondents commented that as Australia has no standardised training requirements for recognising and responding to clinical deterioration, it is difficult to assess prior learning. It was evident that training, and the level of training required, varied greatly between jurisdictions and healthcare professions, with many respondents reporting that they used a range of training programs, which they adapted and applied differently depending on their needs. To address this variability, some submissions recommended the development and agreement of national competencies relating to recognising and responding to clinical deterioration, with assessments being certified so that prior learning could be recognised.

Some services reported conducting a one-off assessment of competence at employment, and others assess clinicians' skills during annual training. In other organisations, staff attend training in recognising and responding to clinical deterioration on a one-off basis and there is no formal assessment process. Organisations reported various methods of competency assessment including theoretical quizzes, simulations, and clinical reviews of actual events. Private organisations reported that most doctors were generally considered to be exempt from competency assessments because these organisations did not consider that they were responsible for providing ongoing education to clinicians who they do not directly employ.

A number of submissions noted the roles of the Australian Health Practitioner Regulatory Authority (AHPRA), the National Boards, and the professional colleges in standards of training and practice. However, it was reported that it is currently challenging to be assured of a clinician's competence on commencement of employment. For example, one submission noted that during training for some nursing undergraduates, competency assessments occur as a random 'hurdle'. As a result, student and new nurses can commence clinical placement without having been directly assessed in the competencies required for recognising and responding to clinical deterioration.

Some submissions suggested that requirements for reassessment of competence should be determined through local risk assessment and take into account the level of practical exposure clinicians had to deteriorating patients. Clinicians who regularly use skills in recognising and responding to clinical deterioration as part of their practice were considered less likely to need refresher training or repeated assessments. Respondents also pointed out that there is little evidence for the efficacy of annual competency.

Repeated assessment of competence has been demonstrated to only prove competence at that moment in time, and is therefore of minimal benefit to the clinician, patient or organisation.

Australian College of Critical Care Nurses

It was suggested that clinicians should be responsible for providing evidence of their competence through mechanisms such as professional portfolios. Performance reviews, self-assessment and continuing professional development processes were also recognised by respondents as important ways to identify and address issues around competence.

Mandating training through the NSQHS Standards

Sixty two submissions expressed a view about whether requirements for training in recognising and responding to clinical deterioration should be included in Standard 9. Of these, 43 submissions (69% of those that expressed a view, and 43% of the total number of submissions) considered that training for recognising and responding to clinical deterioration should be mandated under Standard 9. Reasons for this view included:

- that it would ensure the investment that was needed to support the training at an organisational level
- that it would assist in establishing national consistency across the health sector
- unless it was mandated training would occur in an ad hoc, inconsistent and 'lowest common denominator' way
- that this training was critical for the safety and quality of care for patients
- that this was the best way of ensuring the adequacy of standards.

These respondents generally expressed the view that it was not only basic life support that should be mandated; broader skills and knowledge regarding recognising deterioration and escalating care were also necessary. It was not considered appropriate to mandate any particular training program as flexibility to meet organisational needs was required.

Respondents also considered that requiring training in Standard 9 was not the only mechanism that was needed to ensure that clinicians are able to properly recognise and respond to clinical deterioration. In particular, the role of AHPRA and the National Boards regarding professional standards of training and practice was thought to be critical to ensuring that clinicians can properly recognise and respond to clinical deterioration. In their submission AHPRA indicated that most of the National Boards were reviewing core registration standards, including requirements for continuing professional development. AHPRA indicated that they would be keen to work with the Commission in this area.

There were 19 submissions (31% of that expressed a view and 19% of the total) that did not consider that training for recognising and responding to deterioration should be mandated under Standard 9, or raised concerns about this approach. Reasons for this view included:

- the costs of delivering mandated training that may not provide improve patient outcomes
- that a national mandate would result in a 'one size fits all' approach that did not take into account organisational needs and differences
- that a focus on mandated training placed an unnecessary focus on compliance rather than system improvement and ongoing review and learning
- that there is insufficient evidence of the value of basic life support or other training to warrant a mandate through Standard 9

- that it was the responsibility of clinicians to maintain their own competence, particularly for doctors working in private hospitals who were not employed
- that the requirements are addressed through other means, such as jurisdictional policy.

A number of these submissions suggested that a risk-based approach was needed to establish the training requirements for clinicians. For example, one submission suggested that it may be more beneficial to:

...mandate that health services review training requirements using a risk-based methodology and can demonstrate a structured, considered approach, reflecting local needs, population etc has been taken to determining education and training requirements.

Alfred Health

There was agreement among these respondents about the importance of AHPRA, and some respondents generally considered that it was more appropriate for AHPRA to specify the competencies required of clinicians than for the Commission to mandate these through the NSQHS Standards.

Elements of a potential multi-factorial approach were suggested in some submissions. This approach was based on:

- having basic skill requirements included in requirements for registration
- having ongoing and regular training requirements included in mandatory continuing professional development requirements
- hospitals and health services taking responsibility for ensuring that clinicians meet professional registration requirements for competence when they commence employment; understanding their organisational risks; and identifying and managing performance issues.

3. DISCUSSION

When considering the consultation feedback as a whole, it is clear that there is substantial variation in current approaches to training for recognising and responding to clinical deterioration in acute care. It appears that current approaches are based mostly on expert opinion and historical practices. There is general agreement about the list of topic areas that should be included in training, but little in the way of specific guidance regarding the core competencies or essential skills that are needed as a minimum standard. In addition, despite a great deal of detailed feedback about current practices, there remains an absence of evidence or consensus about how training should be provided, and who should be responsible for measuring and maintaining clinicians' competency.

One of the areas where there was general agreement was that properly recognising and responding to clinical deterioration and ensuring the safety of patients requires more than competence in basic life support. Skills and knowledge in recognising deterioration, interpreting abnormal vital signs and escalating care were considered to be essential. Some submissions indicated that it would be useful to develop a nationally agreed set of competencies or learning outcomes for recognising and responding to clinical deterioration.

There was also agreement that AHPRA and the National Boards have an important role in professional standards of training and practice, including in areas relevant for clinicians in recognising and responding to clinical deterioration. The Commission intends to liaise with AHPRA and the National Boards on these issues. However it is also worth noting that health services can use existing credentialing processes to set requirements for the skills and knowledge of clinicians working within their facilities.¹

An area where there were significantly different views related to whether or not training about recognising and responding to clinical deterioration should be mandated in the NSQHS Standards. Broadly, there were three main views on this issue:

1. Health services have a role in training clinicians to recognise and respond to clinical deterioration and there is benefit to patients as a result. Submissions expressing this view were generally focussed on the content of training, and the methods for providing it. Many submissions expressing this view raised issues around the need for a tiered approach to training that takes into account the scope, role and location of particular groups of clinicians. The majority of submissions expressing this view indicated that it was useful for the Commission to mandate training in the NSQHS Standards to ensure that resources were directed to meet this requirement.
2. There is currently an absence of evidence regarding what skills and knowledge are essential requirements for recognising and responding to clinical deterioration, how best to provide such training, or what the costs and benefits are. The example of basic life support training was used in a number of submissions to highlight the lack of improvement in patient outcomes from in-hospital cardiorespiratory arrest despite the enormous costs of training and equipping the health workforce to respond. The submissions expressing this view indicated that it was not appropriate for the Commission to mandate specific training for recognising and responding to clinical deterioration without evidence of benefit.

¹ Action 1.10.1 of the NSQHS Standards states that 'A system is in place to define and regularly review the scope of practice for the clinical workforce'.

3. Clinicians are responsible for maintaining their own competence, and therefore it is not appropriate for the Commission to mandate that health services are responsible for training the clinicians who work in them. It was suggested that AHPRA should incorporate requirements for maintaining competence in the necessary skills for recognising and responding to clinical deterioration into the registration process. A number of the submissions expressing this view were from private healthcare organisations where the doctors working in their organisations are not employed, and are contracted by their patients. One respondent stated that it was not the primary role of private hospitals to provide training or assess competence of doctors working in their facilities.

The NSQHS Standards

The NSQHS Standards are designed to ensure that health services have systems in place to ensure that minimum standards of safety and quality are met and that patients receive safe care. These systems include systems for ensuring that clinicians have the appropriate qualifications, skills and knowledge to provide safe and high-quality health care.

Generally the NSQHS Standards do not specify particular competencies that need to be achieved by clinicians and others working in health services. However in some instances, where specific skills are deemed essential for meeting basic safety and quality requirements, the NSQHS Standards have specified that health services have an obligation to ensure that clinicians and others have the necessary training to provide safe care to patients. This is relatively straightforward in cases where there is incontrovertible evidence of the link between training in a concrete and specific task such as hand-washing, and a patient safety benefit such as a reduction in healthcare associated infection rates. It is not so straightforward where the evidence is unclear, or where training is less concrete and specific, as is the case regarding recognising and responding to clinical deterioration.

There is evidence that indicates that there are persistent issues regarding the ability of clinicians to recognise and respond to clinical deterioration early in its clinical course, and it is clear that patient harm can result from these failures.² While there are general provisions in the NSQHS Standards about accessing training,³ this evidence suggests that a specific focus on recognising and responding to clinical deterioration may be needed.

Where a view was expressed, most of the submissions were in favour of the Commission including actions about training for recognising and responding to clinical deterioration in the NSQHS Standards. Although concerns were raised in a number of submissions about the value of training in areas such as basic life support, there is now growing evidence that the introduction of rapid response systems that encourage early recognition of deterioration and prompt action are associated with improved outcomes.⁴ However the variation revealed in

² Donaldson LJ, Panesar SS, Darzi A. Patient-safety-related hospital deaths in England: Thematic analysis of incidents reported to a national database 2010-2012. *PLOS Medicine* 2014; 11(6): e1001667.

³ Action 1.4.4 states that 'Competency-based training is provided to the clinical workforce to improve safety and quality'.

⁴ Chen J, Ou L, Hillman KM, Flabouris A, Bellomo R, Hollis SJ, Assareh H. Cardiopulmonary arrest and mortality trends, and their association with rapid response system expansion. *Medical Journal of Australia* 2014; 201: 167-170.

this consultation about what the core competencies should be in this area suggests that it is not appropriate for the Commission to include requirements about specific training or competency requirements in the NSQHS Standards.

An alternative approach suggested in a number of submissions is to require health services to demonstrate that they have systems in place for ensuring that their clinicians are appropriately skilled. A recommendation of this sort would also require the Commission to be more specific about what types of skills and knowledge are needed to properly recognise and respond to clinical deterioration. While there was some support for the development of a national set of competencies in this area, this could also be achieved through the existing *National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration*.

4. RECOMMENDATIONS

Responsibility for ensuring that clinicians have the skills and knowledge needed to recognise and respond to clinical deterioration is shared between individual clinicians, regulatory agencies, training providers, standard-setting organisations, and health services. This shared responsibility, together with the available evidence, the feedback obtained through the consultation process, and consideration of the role of the Commission and the purpose of the NSQHS Standards, have influenced the options available for the Commission to move forward in this area.

It is recommended that:

1. The Commission should continue to include requirements in the NSQHS Standards regarding the need for clinicians to have the skills and knowledge to be able to properly recognise and respond to clinical deterioration.
2. The Commission should revise Action 9.6.1 for the next version of the NSQHS Standards. The revised action should require health service organisations to have in place systems for ensuring that all clinicians who provide care to patients have the skills and knowledge needed to properly recognise and respond to clinical deterioration, as appropriate for their role, and the risk profile of the organisation.⁵
3. The Commission should extend the timeframe for the application of Advisory A13/05 until the introduction of the next version of the NSQHS Standards.⁶
4. The Commission should review and potentially revise the *National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration* to specify the skills and knowledge required for clinicians working in different roles, and reference this in resources to support the NSQHS Standards.
5. The Commission should consider whether the NSQHS Standards sufficiently address the need for everyone working in a health service, irrespective of their role or employment arrangements, to know how to trigger a call for emergency assistance.
6. The Commission should liaise with AHPRA, the National Boards, colleges, universities and other training providers about the feedback from this consultation and the potential to include relevant competencies into registration and ongoing professional development requirements, and university and other curricula.

⁵ This proposed approach to Action 9.6.1 would then have a similar form to that of the current Action 9.6.2, which states that 'A system in place for ensuring access at all times to at least one clinician, either on-site or in close proximity, who can practise advanced life support'.

⁶ Advisory 13/05 concerns the assessment of training requirements for credentialed medical and other clinical practitioners and visiting medical officers. For Action 9.6.1 is requires that health services provide evidence that:

- a comprehensive organisational risk analysis of basic life support training needs has been undertaken
- a plan has been developed to ensure that the clinical workforce can initiate appropriate early interventions and respond with life-sustaining measures in the event of severe or rapid deterioration
- training in basic life support is available for the clinical workforce. It is anticipated the initial focus will be on employed nursing, allied health and medical staff.

The intent of Recommendation 2 is that it covers all clinicians working in a public or private hospital or day procedure service, irrespective of their employment or contractual arrangements. This means that for private hospitals the expectation would be that they would need to have systems in place to be sure that all doctors providing care in their facilities are appropriately skilled and qualified to recognise and respond to clinical deterioration, according to their role and the risk profile of the organisation, even if they did not provide this training or assess competency. This could potentially be done as part of existing credentialing processes.

As part of a wider process of reviewing the NSQHS Standards the Commission will be reviewing the definition of 'clinical workforce' and other associated definitions.

The Commission is also currently mapping the skills, knowledge and behaviours required across the NSQHS Standards. The results of this activity will inform the implementation of these recommendations.

SUBMISSIONS RECEIVED

1. Indian Ocean Territories Health Service
2. Individual
3. Individual
4. Individual
5. South West Hospital and Health Service, Queensland
6. Individual
7. Individual
8. Individual
9. NSW Clinical Excellence Commission
10. Individual
11. Individual
12. Southern NSW Local Health District
13. Individual
14. SA Maternal and Neonatal Clinical Network
15. Northern Adelaide Local Health Network
16. Northern Sydney Local Health District
17. ACT Health
18. Australian College of Rural and Remote Medicine
19. Mackay Hospital and Health Service, Queensland
20. Australian Government Department of Health
21. SA Local Hospital District
22. Western Private Hospital, Victoria
23. Women's and Children's Health Network, South Australia
24. Hunter New England Local Health District, NSW
25. Justice Health and Forensic Mental Health Network, NSW
26. Royal Australasian College of Surgeons
27. Government of WA Department of Training and Workforce Development
28. The Australian Council on Healthcare Standards
29. South Metropolitan Health Service, Western Australia
30. Individual
31. Townsville Hospital and Health Service, Queensland
32. Mater Health Services, Queensland

33. Individual
34. Western District Health Service - Hamilton Base Hospital, Victoria
35. Healthscope
36. Manning Hospital, NSW
37. Cape York Hospital and Health Service, Queensland
38. Deakin University
39. Australian Day Hospital Association
40. South Eastern Sydney Local Health District
41. Department of Health and Human Services – Tasmania
42. Department of Health – Victoria
43. Northern NSW Local Health District
44. RESUS4KIDS
45. Ramsay Health Care
46. Individual
47. Individual
48. Mater Hospital, Sydney
49. Central Queensland Hospital and Health Service
50. Australian College of Critical Care Nurses
51. Eastern Health, Victoria
52. Darling Downs Hospital and Health Service, Queensland
53. Australian Resuscitation Council
54. WA Country Health Service
55. Nursing and Midwifery Office, WA Department of Health
56. Private Hospitals Association Queensland
57. Carers WA
58. Australian College of Nursing
59. TAFE SA, Government of SA
60. Royal Prince Alfred Hospital, NSW
61. Women's Healthcare Australasia
62. Children's Healthcare Australasia
63. The Royal Children's Hospital Melbourne
64. Allied Health Professions' Office of Queensland
65. ANZICS and College of Intensive Care Medicine of Australia and New Zealand
66. Individual
67. Victorian Statewide Paediatric Observation & Response Chart Project Team

68. Performance Activity and Quality Division, WA Department of Health
69. Australian Day Surgery Council
70. Country Health SA Local Health Network
71. Calvary
72. Dietitians Association of Australia
73. Mansfield District Hospital, Victoria
74. TAFE NSW
75. Australian and New Zealand College of Anaesthetists
76. TAFE QLD
77. Lifehouse, NSW
78. Northeast Health Wangaratta, Victoria
79. Individual
80. Individual
81. Tasmanian Health Organisation – South
82. The Royal Australasian College of Physicians
83. Northern Health Clinical Deterioration Governance Committee - The Northern Hospital, Victoria
84. Gold Coast Hospital and Health Service
85. Illawarra Shoalhaven Local Health District, NSW
86. Australian Private Hospitals Association
87. Australian Medical Association
88. Child and Adolescent Health Service – WA Department of Health
89. Safety and Quality Branch – SA Health
90. Individual
91. Austin Health, Victoria
92. Statewide Intensive Care Clinical Network - QLD Health
93. Nursing and Midwifery Office, Queensland
94. Sydney Local Health District
95. Individual
96. Alfred Health, Victoria
97. St Vincent's Health Network, NSW
98. Australian Health Practitioner Regulation Agency
99. Australasian College for Emergency Medicine