Submission
No 56

THE IMPLEMENTATION OF PORTFOLIO COMMITTEE NO. 2 RECOMMENDATIONS RELATING TO WORKFORCE ISSUES, WORKPLACE CULTURE AND FUNDING CONSIDERATIONS FOR REMOTE, RURAL AND REGIONAL HEALTH

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Chair, Legislative Assembly Select Committee on Remote, Rural and Regional Health

Conflict of interest declaration
I am a member of the Human Factors Expert Advisory Group at the CEC.
I am a former employee of NSW Health.
I am the Director of 'Human Factors Consultancy' (ABN 88650899237).
The views and opinions I present in this submission are my own.

9th February 2024

Inquiry into the implementation of Portfolio Committee No 2: Recommendations relating to workforce issues, workplace culture and funding considerations for remote, rural and regional health.

Dear Dr McGirr,

Thank you for this opportunity to share my ideas on reform.

Key points

- In this submission, I present a series of recommendations that will improve the linked triad of organisational culture, staff wellbeing and patient safety.
- Critical to the success of these initiatives, is funding for broader integration of human factors science into NSW Health.
- Application of the principles from human factors science, enhances work processes, reduces inefficiencies and errors and improves quality of care delivery.
- There is an urgent need to improve the non-technical skills of the NSW Health workforce, as every day preventable deaths occur in public hospitals. Contributing to many of these deaths is a failure of non-technical skills, such as communication, situational awareness and decision making. (1,2).
- The return on investment for training in non-technical skills is known to be high (3).
- It is time to invest in the professional development of and wellbeing of staff; there will be no reform of culture without such intervention.

Definitions

Human Factors is a scientific discipline that produces knowledge to redesign healthcare systems and processes and improve patient safety and quality of care. Human Factors is not a separate agenda or programme, it is a way of thinking that should be incorporated as part

of the design of processes, jobs and training. The discipline encompasses several domains including task, process and systems analysis, non-technical skills, user centred design and the human-machine interface. In healthcare, patient safety is the focus of these domains.

Non-technical skills represent the constellation of cognitive and social skills, exhibited by individuals and teams, needed to reduce error and improve human performance in complex systems.

Non-technical skills include;

- effective communication
- error investigation and prevention
- high performance teamwork
- leadership and followership
- fatigue, stress and workload management
- emotional intelligence
- risk assessment
- situation awareness
- decision making

My background

I began my career as a radiographer in the UK. I then qualified as a sonographer, before training in medicine and medical education in Australia. For the majority of my 40-year career, I have worked as an emergency physician and retrieval consultant in regional and rural centres.

My interest in human factors science arose out of my desire to improve my own performance as a doctor. It was also driven by my seeking answers to managing my own, at times, excessive workload, fatigue and stress. I was surrounded by colleagues who were experiencing burnout or physically and mentally struggling and by patients who were suffering due to system failures. At the same time, we had an executive team whose actions appeared to be almost solely driven by key performance indicators that were in turn driven by the health services' funding model.

I experienced the job satisfaction and enjoyment of working in a high performance team during my eight years of helicopter and ambulance retrieval work. I was curious to learn more from the aviation industry about Crew Resource Management (now called Human Factors). I translated many of the ideas I had learned into my clinical practice with surprisingly good results. I knew that there had to be a better way of practising. Soon afterwards I did a placement in the Anaesthetics department, where I learned many non-technical skills that I had not seen practised outside the operating theatres. It was not long before I teamed up with several pilots, nurse and cabin crew educators, a paramedic and a

few local hospital doctors, who shared my interest in Human Factors. Together, we have spent almost a decade developing, refining and running non-technical skills training programmes and lobbying for the integration of human factors science into healthcare.

Work to date

- Development of 'Emergency Protocols' (Robertson/Hall). These Emergency Protocol handbooks received three NNSW LHD Quality awards in 2018 (4).

- Trial of Emergency Protocols in Simulation Training (TEMPIST trial) (5). This trial demonstrated a 54% reduction in critical errors when the Emergency Protocols handbook was used to diagnose and manage medical emergencies in a simulated hospital setting. (Hall/Robertson/Rolfe/Passey/Pascoe/Pit) (5).

- Audit of 75 NSW Health adverse patient event RCAs looking at the cases retrospectively through a human factors science based lens (Hall). This demonstrated that time and time again there were failures of communication and other non technical skills. The words 'improve communication' written as part of RCA recommendations fall into empty space and change does not usually happen without formal non-technical skills training.

- Design and production of Advanced Emergency Performance Training (ADEPT) course. This introduced the principles of human factors science and gave participants opportunity develop and practise their non-technical skills in team settings, within a simulation lab.
  (Hall/Robertson/Lock/Ewing/James/Aspinall /Pascoe/Steenson)

- Design and production of the 'Ground School' Non Technical Skills training course – run mid pandemic at the request of former NNSW LHD CE Mr Wayne Jones with the aim of rapid non technical skills training for a trial sample of hospital staff. (James/Hall/Smith/Robertson).

  This *ab initio* 'Ground School' non-technical skills course trained 102 staff including nurses, allied health professionals, doctors, clerks, ward persons, administrators and security officers, via zoom conference, mid pandemic. Uniquely, the course blended staff wellbeing measures with non-technical skills training. This course has been externally evaluated.

- During the pandemic, Captain Stuart James, a human factors expert and 737 pilot, and I, were tasked by our Chief Executive to deliver human factors education, non-

technical skills training and individual career coaching and mentoring, to 13 key leaders involved in the NNSW LHD pandemic response.

We provided almost 400 hours of support over 3 years to these members of the nursing, allied health, medical and executive teams. Participants were shown how to apply a human factors lens to the problems they faced and encouraged to apply the principles of human factors within their own daily workplace practice. We learned a great deal by listening to and working with this group.

This project could not be externally evaluated due to confidentiality requirements. At the request of the participants, some of their de identified testimonials are included in the 'Ground School' book. Below are a few excerpts that have been reproduced with the permission of participants.

"We have covered everything from how to look after ourselves, like elite athletes, so that we are 'fit to run the race', to how to build high performance teams that achieve great things for our patients, and ensure patient safety".

"For me personally this (Human Factors training and mentoring) has been career saving. I was in a state of discombobulation – I really could not see my way forward in my current health position. Charlotte and Stuart have gently educated, encouraged and challenged me to be a better clinician".

"Human Factors has been one of the best professional development programmes I have been involved in. It has led to greater understanding of my own health, thinking and decision making and how these influence outcomes at work"

"I highly recommend Human Factors mentoring for all employees of NNSWLHD. As an allied health clinician of sixteen years I feel confident in my clinical/technical skills. Through the Human Factors mentoring I was taught how to enhance my non technical skills: things such as conflict resolution and decision making. I have used these skills in both my professional and personal life. This mentoring has enhanced my leadership and management skills and I am so grateful that I had the opportunity to be part of it".

"Having the opportunity to undergo Human Factors mentoring has been work-life changing for me. The situational awareness and decision making modules were particularly eye opening. I have tackled and managed things that I could not have contemplated a year ago and I feel empowered enough to think that anything is possible."

Barriers and Obstacles

Sourcing funding for all of this of work has been indescribably difficult and at times impossible. Our Human Factors team has even been told to 'fly under the radar' as any spending not directly on patient services is considered by some executives, within the organisation of NSW Health, to be wasteful. This short-sighted thinking by our leaders ignores the need to address the hundreds of preventable deaths that almost certainly occur within our Australian public hospitals each year. It ignores the increasing levels of stress and workload that healthcare workers started to experience long before the pandemic began. These stressors have resulted in many experienced clinicians leaving their jobs completely. Tragically, this loss to the workforce has also included some deaths by suicide.

Our work is currently completely stalled by a lack of funding.

I have personally attended NSW parliament twice and briefed Ministers Hazzard and Park directly on the positive impact that Human Factors integration would have on the healthcare industry. Minister Hazzard showed great interest in our work and invited our team back to the Ministry of Health to meet with himself and the leaders of the pillars of NSW Health. Under the leadership of Chief Executive Carrie Marr, the Clinical Excellence Commission prepared a white paper on Human Factors that many of us contributed to following a 'learning day' meeting in Sydney in 2020. Since that time, to date, the pillars have not developed or funded any state wide, face to face, training programs in non-technical skills.

In November 2023, I presented our work to Minister Park in NSW state parliament and it was refreshing to find out that that he and his team are prioritising cultural reform in the interests of staff wellbeing and patient safety.

In December 2023, I was advised that NNSW LHD could not longer fund our Human Factors work and for this reason, my own contract would not be extended beyond January 2024.

RECOMENDATIONS

SAFETY

1. **Address the basic governance architecture of NSW Health.** The governance structure of NSW Health is overly complex. It needs to be re designed, properly engineered, streamlined, updated and restructured. Innovation at an organisational level is near impossible to achieve, as currently there are so many different sectors,

departments and committees. This is also daunting for frontline healthcare workers and members of the public who want to share their ideas and experiences around safety, with those at the top of the organisation. Issues that should take weeks to resolve, can and do, linger for years within the current system. The urban based, separated 'pillars' of NSW Health, appear to compete for funding and this fact alone does not promote collaboration. In 2024, it seems odd that clinical excellence, digital health information, innovation and education operate out of different departments.

2. **Recruit and retain staff.** Healthcare workers in regional, rural and remote NSW have not had many of their most pressing needs addressed and it appears that little has been achieved in terms of attracting more health care workers to these areas. The safest way to provide healthcare for any community is to facilitate direct access to qualified healthcare providers. Healthcare workers who elect to work in regional, rural and remote areas are often isolated and have an increased need for professional development and professional support. Digital on line training modules do have a place but they are no substitute for human to human interaction. Who has time to write a reflection, in an on line module, that it is likely no one else will ever read?

3. **Inform the public.** Increase awareness and access to the REACH system (6) that allows patients and their families/carers escalate their concerns regarding care delivered within hospital settings.

4. **Resource new initiatives appropriately.** For example, The SEIPS model (7) being introduced within NSW Health will require changes to hospital governance and organisational structure in order to succeed. Systems are complex in healthcare. Human factors expertise with appropriate funding will be critical if this model is to function effectively.

5. **Create a Human Factors Department in all of the larger urban and regional hospitals**. Current patient safety units are under-staffed and under-funded.

6. **Respond to increasing risk.** With the increasing use of artificial intelligence and machine learning in medicine, there is need to have a Human Factors led safety team that can respond quickly to error. Automated algorithms can speed up processes of service delivery but harm at an enormous scale is also possible. For example, imagine the consequences, if there is an error in the report sequencing of 1000 CT brain studies that have been machine read.

7. **Unite experts in Human Factors.** There are many groups working in this field but efforts are not coordinated. Human Factors will soon become a new health

speciality. There are models we can look at. A NSW 'Centre of Excellence for Human Factors in Healthcare' is suggested as the next step. This could be regionally based.

8. **Make the sharing of safety-critical information faster.** There is need to improve the speed of sharing of information regarding adverse events and safety breaches. A 'real time' and readily accessible, dashboard collating data is required.

9. **Reduce reliance on email communication in hospitals.** Where possible pick up the phone or go and physically see the person you want to communicate with. Emails are required for the sending of attachments but a chain of more than 3 emails is perhaps a sign that a direct conversation is indicated. Most clinicians do not have protected time to read emails during their shifts and they should not be expected to read work emails outside of their working hours. Phone texts should be reserved for urgent or critically important notifications.

10. **Audit meetings.** Decrease the number, size and duration of meetings that are held in our public hospitals. Meetings are very expensive to run in terms of salary cost per hour. Only those that really need to attend should be invited. Meeting outcomes must be tracked. Healthcare workers are not trained in how to conduct/chair meetings unless they have received the necessary non technical skills training elsewhere. Many good ideas go unheard as meetings tend to be dominated by a few individuals. Clinicians are taken away from patient care when they attend meetings. Executives and managers with continuous back to back meetings, quickly lose touch with the needs of the clinical workforce.

11. **Improve team briefing skills.** All clinical staff must know how to deliver effective safety briefings. Reporting of incidents is to be encouraged and enabled. This is covered in non-technical skills training.

12. **Address workforce fatigue**. Recognise and respond to the fact that fatigue is a common cause of errors. Fatigue mitigation and management must be given high priority within the organisation. Safe rostering is critical to patient safety.

13. **Train all administrators, executives and healthcare workers in non-technical skills**. No exceptions. Chief Executives and all other LHD executive team members must be trained in Human factors. They need to undergo formal training in non-technical skills, in order to understand and promote the training for their staff. This will help executive teams appreciate that such training is not a 'just another one off training course '– it is a means of changing thinking and thus changing behaviours. Any intervention to upscale non-technical skills training across NSW Health will not succeed without the full leadership support and understanding of executive teams.

14. **Make work spaces safer.** The provision of a psychologically safe working environment is mandated by law but it will not happen without interventions including annual competency training and assessment in non-technical skills. A 'Just culture' is reliant on the provision of psychological safety.

15. **Look after healthcare workers who are impacted by serious patient events.** Staff who are directly involved in serious patient adverse incidents, often feel devastated. It has been observed that they may themselves become 'the second victim. If they are struggling to cope, their support needs to be increased and most importantly maintained, during and after, the investigation processes.

16. **Teach healthcare workers how to form high performing, rapidly assembled teams.** High performance teams can be generated and mobilised quickly (even if staff have never met) - if all members of the team have had prior non-technical skills training.

17. **Rehearse.** Rehearsal is an import part of the conduct cycle. This has been neglected in recent years. Contrary to popular belief, rehearsal is usually inexpensive and relatively quick to perform.

18. **Enforce the code of conduct.** Breaching of the code of conduct needs to have more defined consequences for staff. Reminders of the code of conduct should be delivered at least, annually. Expert led, annual competency testing in non-technical skills will help with remediation of poor behaviours and showcase better ways of interacting.

19. **Fund professional development.** This could be a cost neutral process. Reducing the exodus of experienced staff and reducing error and thus the number medico-legal compensation payouts, will generate large cost savings that can be redirected to patient care and the professional development of staff.

20. **Offer permanent positions instead of short term contracts.** This is required to give the organisation stability and to increase the psychological wellbeing and commitment of staff. Locums and agency staff are very expensive. Having so many staff temporarily 'acting' in positions is detrimental to the day to day running of the hospitals and puts patients at risk.

CULTURE

1. **Bring back trust, respect and accountability.** This process will require action from 'the top down' and from the 'grassroots' level, up. The correct 'levers to pull 'will vary between teams and departments but the first step is to identify and target those behaviours that would have the greatest impact if put into practice by a significant proportion of the workforce.

2. **Make non-technical skills training mandatory.** Our patients deserve the best care. Technical skills and non-technical skills are of equal value in ensuring the best possible outcome for patients. The introduction of annual, non technical skills training and competency assessments will allow proper rehearsal and contribute significantly to the promotion of good team dynamics and behaviours.

3. **Make it easier to identify the seniority of hospital clinical staff.** It has become difficult to identify 'who is who' in the hospital work force and to determine what their level of seniority is. If 'scrubs' are the chosen attire then sticking to one colour for each profession is essential and this must be standardised across all Australian hospitals. Embroidered names and roles can be difficult to read on scrub uniforms. Perhaps, standardisation of the font size and colour would be helpful. 'Rank' epaulettes on uniforms should be introduced to assist in the identification of seniority levels. In operating theatres, caps need to display an individual's first name, profession/job title and have a means of identifying seniority. Dress code matters. Healthcare workers take pride in wearing smart uniforms and the public find them useful to identify who is who. Most importantly, well designed uniforms assist with speedy role allocation during emergency situations.

4. **Review middle management roles.** The middle management layer in NSW Health is way too large. This has led to a diminution of trust and an escalation of poor behaviours such as micromanagement and bullying. Front line workers are well trained and deserve more autonomy. Good clinicians are often promoted into non clinical middle management roles without recognition that such roles require a completely different skill set. Again, non-technical skills training would assist with this transition. Middle management should be seen as a chosen and valued career path, not merely an avenue for 'escaping from shift work'.

5. **Break down communication barriers.** Executives and front line workers need to get to know one another. Regular walkabouts by executives assist with this process and

allow obstacles to care delivery to be directly observed and acted upon in a timely manner. Many executives have lost touch with the realities of clinical care delivery and front line workers often do not appreciate the type and level of work that executives do to keep the hospital services functioning. Both parties would be well served by more regular contact.

6. **Realise the major importance of rosters.** Rostering patterns and regular leave breaks are critical to the wellbeing of shift workers and those with a high on-call burden. Fatigue mitigation and management needs to be prioritised within NSW Health. Rosters as delivered (not as originally written) need to be regularly externally audited, to identify staff picking up unsafe amounts of overtime and to check for fairness of leave allocation, shift distribution and adequate levels of supervision.

7. **Decrease rates of bullying.** Bullying will never be totally eradicated but we can make it much make harder for perpetrators, with some simple system level changes. Examples include the ending of the single line manager model, the ending of the yearly performance appraisal, (to be replaced by more regular check-ins) and the re-design of work spaces so that they are psychologically safer.

8. **Harness the skill set of natural leaders.** All departments have 'natural leaders' who may not be the most senior person on duty but are the 'go to person', when staff are looking for help from a friendly, knowledgeable and supportive colleague. These natural leaders function as role models within our hospitals and they should be recognised and rewarded accordingly. They lead by example and must be encouraged to call out any poor or bullying behaviour that they witness. Such early intervention, at the time of incidents, is essential.

9. **Address the wellbeing of healthcare workers.** Periods of burnout are almost inevitable for clinicians with high levels of responsibility and prevention strategies need to be prioritised. Ironically, healthcare workers often fail to identify that they are themselves, exhausted and perhaps physically or mentally unwell. Shift workers have higher rates of chronic disease and their fatigue levels can result in poor but convenient food choices. A yearly visit for a medical check up with their own GP should be strongly encouraged and perhaps even mandated. Pilots must be passed as fit to fly, yet we allow surgeons to operate and physicians to manage complex patients without any objective check of their fitness to do so.

10. **Retain older workers.** Our ability to perform certain tasks deteriorates with age yet experienced clinicians have wisdom that must be harnessed. We need to make changes to professional career paths to recognise that age does make some things, like shift work much harder to do. There is need to bring in some state wide

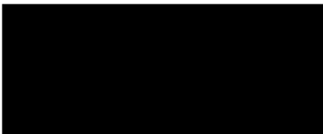
organisational rules so that older workers can be encouraged to stay in the healthcare work force. Perhaps for example, no one should be required to do night shift duties after the age of 50. Experienced older workers can be great role models and mentors. Junior staff benefit from having better supervision. Effort must be made to retain a greater proportion of older, more experienced, healthcare workers.

11. **Note that the regions have changed.** Our regional areas now have larger populations and as a result hospitals have grown in size. This has led to the building of multistorey tower blocks. Clinicians from one department are less likely 'bump into' staff from another department as they work on separate levels. Administration teams often do hybrid work. We know that once a department has more than 150 staff it is likely that you will not know the names of all those within your department. Green spaces and communal eating areas for staff have been given a low priority in hospital design. All this has led to a breakdown in communication and culture. Greater effort is now required to network within our hospitals and this can lead to feelings of disconnection and isolation. It is harder to ask for the assistance of another member of staff when you have never met them. Simple ideas such as football competitions and hospital barbeques do help but we will need many more creative measures to facilitate better communication and networking.

12. **Give more positive feedback.** Healthcare workers are highly trained in their technical skills and patient outcomes are usually good. We concentrate on what goes wrong but fail to analyse why things go well. This ('safety 2') process lies within the domain of Human Factors. Healthcare workers need more reminders of the many positive patient outcomes that resulted from their care.

In this submission, I have highlighted some constructive and achievable ideas for change that will help to improve staff wellbeing, patient safety and culture.
I am happy to discuss any of these suggestions in greater detail. I have many more.

Human factors science has much more to offer the healthcare industry. In this submission, I have barely scratched the surface of what it can deliver.



Dr Charlotte Hall.

References/Links

1. Roberts J. Republicans turn health reform into a revolution. BMJ. 1995 Jun 10;310(6993):1490. doi: 10.1136/bmj.310.6993.1490a. PMID: 7787592; PMCID: PMC2549926.
2. Hogan H, Healey F, Neale G, Thomson R, Black N, Vincent C. Learning from preventable deaths: exploring case record reviewers' narratives using change analysis. J R Soc Med. 2014 Sep;107(9):365-75. doi: 10.1177/0141076814532394. Epub 2014 Apr 29. PMID: 24781159; PMCID: PMC4206622.
3. Moffatt-Bruce SD, Hefner JL, Mekhjian H, McAlearney JS, Latimer T, Ellison C, McAlearney AS. What Is the Return on Investment for Implementation of a Crew Resource Management Program at an Academic Medical Center? Am J Med Qual. 2017 Jan/Feb;32(1):5-11. doi: 10.1177/1062860615608938. Epub 2016 Jul 9. PMID: 26419392.
4. https://hnc.org.au/news-story/emergency-protocols-project-wins-quality-award/
5. Hall C, Robertson D, Rolfe M, Pascoe S, Passey ME, Pit SW. Do cognitive aids reduce error rates in resuscitation team performance? Trial of emergency medicine protocols in simulation training (TEMPIST) in Australia. Hum Resour Health. 2020 Jan 8;18(1):1. doi: 10.1186/s12960-019-0441-x. PMID: 31915029; PMCID: PMC6950852.
6. https://www.cec.health.nsw.gov.au/keep-patients-safe/reach
7. Carayon P, Schoofs Hundt A, Karsh BT, Gurses AP, Alvarado CJ, Smith M, Flatley Brennan P. Work system design for patient safety: the SEIPS model. Qual Saf Health Care. 2006 Dec;15 Suppl 1(Suppl 1):i50-8. doi: 10.1136/qshc.2005.015842. PMID: 17142610; PMCID: PMC2464868