
Surgeon Wellbeing and Performance

“Physician or surgeon wellbeing is a state of personal fulfilment and engagement that leads to joy in one’s practice and connection to why one entered health care and surgery as a profession in the first place.”

The National Academy of Medicine

Introduction

This Case Study explores the development of a program on ‘Non Technical Skills’ (NTS) expertise amongst ophthalmology trainees in Victoria, Australia.

The program was designed and developed through a collaboration between The Royal Victorian Eye and Ear Hospital (RVEEH) and The Mind Room.

Ongoing specialist NTS training was developed and incorporated into the hospital’s five-year Ophthalmology (Eye Surgery) Program for surgical registrars.

The program was delivered through a mix of facilitated workshops, exercises and experiences, accompanied by ongoing coaching and support.

This case study explores the matching of the mental health, wellbeing, mental skills and performance expertise of The Mind Room to an identified training need in a specialized industry.



Background

Studies have shown that most surgical errors occur due to deficiencies in the non-technical skills of the surgeon rather than their technical ability.

A literary review found that communication to be a causative factor for 43% of errors made in surgery. Teamwork, and situational awareness were identified as critical competencies of health care workers to ensure patient safety.

There is a need to evolve thinking around education in the medical profession from purely equipping students with technical skills, to recognising the value of non-technical skills, and incorporating them into training.

Dr Jacqueline Beltz is the Director of Training for Ophthalmology in Victoria, based at the Royal Victorian Eye and Ear Hospital.

Currently the ophthalmology program involves five years of specialist training.

Dr Beltz identified the pressing need to educate trainees in high performance mental skills, particularly in ophthalmology due to the stressful nature of eye surgery, where stakes are high and decisions need to be made quickly, creating a lot of pressure on surgeons to perform.

It is the NTS such as situational awareness, decision making, communication, teamwork, and leadership that are drawn upon most during times of high pressure and responsibility, such as during a surgical complication.

Equipping students with these NTS will be a new and challenging endeavor as generally these skills do not transfer easily, have traditionally not been well or actively taught and have previously only incidentally been gleaned from excellent mentors during training.

The Mind Room practice was chosen to be part of the Eye and Ear NTS program due to the valuable experience and knowledge of their team, and particularly their founder, Dr Jo Mitchell. The geographic location is also convenient to the Eye and Ear Hospital, who are also seeking to build on their community collaborations.

Identifying and Meeting Training Needs

During Dr Beltz own studies, and practising as an ophthalmologist, she found surgical training a really stressful experience, and found it took many years of operating before she was able to get to a level to enjoy surgery.

Dr Beltz' experience led her to observe that what separates the good from the excellent surgeons is 'the mind, not the hands', and prompted her to figure out a way to integrate high performance and mind training into ophthalmology training from the start.

To be equipped for the future our trainees need the surgical knowledge and skills that we have always taught and been taught, but also the mindset and attitudes that encourage growth, evolution and also capacity to continue on and excel in a career that can be very demanding.

Another prompt that made me realise training needed to change, relates to the actual culture and challenge of training and working in the medical field. It's a difficult and all consuming career with high rates of burnout and mental illness.

Training is brutal with long hours of work with high responsibility followed by many hours of study and challenging examinations with high failure rates. I wanted to protect trainees from this culture in some way, but also wanted to figure out a way to improve the culture and expectations of medicine.

Surgeon Specific Needs

The first step in creating the program was to address the mental skills training for second year surgical registrars.

These needs were identified by Dr Beltz by drawing on her own experience, and several thorough needs assessments in relation to different aspects of the surgical training program over the last few years considering:

- An outline of the problem
- What is currently being done
- What factors are having effect
- What ideally should be done
- What are the differences between current and ideal approaches?

The particular challenges and environment that surgical trainees face were also identified, with Issues including performance and social anxiety from presenting in front of a group, balancing work and family life, surgical complications, self doubt and a high-risk, fear driven, highly emotional hierarchical operating environment.

Azuara-Blanco et al identified some unique differences in ophthalmic compared to other surgical specialties in terms of the NTS requirements.⁴ These were:

- High volume and turnover of cases
- Most cases are performed under local anaesthesia
- Usually day surgery, reducing interaction time between surgeon and patient
- Reliability on highly specialised equipment as well as trained nursing staff and technicians
- Elderly patient set with often multiple comorbidities

Program Collaboration

The Mind Room design and deliver bespoke workshops, sessions and courses for a broad range of workplaces and organisations.

The sessions draw on evidenced-based mind sciences delivered by highly skilled psychologists who share practical ideas, exercises, tools and inspiration to enable people to work well, live better and perform at their best as an individual or team.

Dr Beltz was seeking specialist expertise to help educate trainees in mental health, wellbeing and performance mental skills. She describes the beginnings of the program collaborations with Dr Jo Mitchell from The Mind Room:

Jo provided the scientific explanations for the hunches that I had and her knowledge, experience and skills were so inspiring when it came to imagining how far we could go with our program.

Aims

The program would cover effective leadership, situation awareness, decision making, communication, teamwork, and the development of personal resource factors, which will lead to better surgical procedures and visual outcomes for countless patients.

mental wellbeing of our trainee surgeons and future ophthalmologists, hopefully reducing the incidence of burnout.



We also need to learn to manage the pressure associated with these high expectations, in order to continue with the commitment and desire required to continue to perform at such a high level. We must look after ourselves and each other if we are to serve our patients well.

Adaptation of courses

The focus was developing non-technical skills to develop and equip the students with mental processes and resources above and beyond their discrete surgical skills.

non-technical aspects of surgical training and development of personal resource factors to draw on if problems arise during a procedure.

Program Delivery

The course was taught in person, and included briefing, group activities, and then debriefing. There are brief didactic components, however most of the content was delivered in an interactive, discussion-based format, with some purely practical components, such as mindfulness exercises and guided meditation.

Outcomes

Dr Beltz is in the process of gaining ethical approval for empirical study of the benefits of mind training on students, but in the meantime has observed that the program has contributed to 'a culture of thoughtful, excellent, and thriving surgeons at our organisation and within our professional group'.

One factor that I always consider is the experience of our nursing staff in the operating theatres. About a year into the new program, one of our nurses actually asked me what we were doing differently in training.

She had noticed that trainees were coming into the operating room already confident, knowing how to use the microscope and set up the equipment and that suddenly one of the traditionally most difficult steps of the operation had become so much easier for the trainees.

Our students are now making more values based decisions. They are considering different factors when choosing jobs or sub-specialties and carefully making their choices.



Most recent trainees under the program are preparing to perform well ahead of their examinations, with the help of psychologists and that is what I really think is the most significant change.

Trainees have realised that it's their mental state, mindset and behaviours that often lead to success or otherwise, and they are striving for high performance in this area.

Conclusion

The Eye and Ear second year program has been able to address important deficiencies in NTS training, and also aim to raise awareness of their importance.

Overall this training has contributed significantly to the wellbeing of trainee surgeons and future ophthalmologists, with improvements in communications, decision making and performance seen in those who have completed the program.

Dr Beltz reported that all trainees have now been trained in the basics of acceptance commitment training (ACT) and appeared to appreciate and accept its value as part of surgical training. Dr Beltz said:

“The program has contributed to a culture of thoughtful, excellent, and thriving surgeons at our organisation and within our professional group.”

“Trainees have realised that it's their mental state, mindset and behaviours that often lead to success or otherwise, and they strive to perform in this area.”

Since the program, Dr Beltz observed that our young surgeons actively study complications, their management and how to keep calm, make decisions and perform well under those difficult circumstances.

They demonstrate greater presence and clarity of communication in surgery. As well as better self-reflection and values based decision making when it comes to choosing jobs or sub-specialties.

Dr Beltz also noted earlier and more proactive preparation for exams and surgery by trainees. She described the trainees who went through the program as:

“Outstanding humans that are going to make a lot of difference for patients and for ophthalmology in the future.”



led by The Mind Room psychology team.

The GenEye conference program provided an outlet to start the discussion about what it takes to be a high performing surgeon. These discussions highlighted the importance of mind skills, especially the ongoing need for surgeons to mentally look after themselves and each other, to continue in their demanding positions.

Dr Beltz found that wider acceptance of NTS has made it easier to integrate mind training into their general surgical training.

The 'Mind Skills' 2-day Program

Following the GenEye experience and using the input from Dr Beltz and her team, Dr Jo Mitchell, from The Mind Room, initiated the design of a 2-day bespoke training program. Dr Beltz said:

“Jo provided the scientific explanations for the hunches that I had and her knowledge, experience and skills were so inspiring when it came to imagining how far we could go with our program.”

Purpose

The program purpose was to sustain or improve the wellbeing and performance of trainee surgeons and reduce the incidence of burnout.

The program was created for the high pressure environment trainees perform in and to develop their NTS to stay focussed and motivated to do their best for themselves, their team and their patients.

The course covered self and situational awareness, decision making, communication, effective leadership, teamwork, and the development and utilisation of personal resource factors. It was primarily informed by Acceptance and Commitment Training (ACT), Coaching and adult learning principles.



Format

The program format was a small group (n=10 to 12), in-person, experiential and cooperative learning experience focused on transferable knowledge and skills for any context the trainees find themselves in. It was delivered over two-days of approximately 5-hours per day, with a shared lunch at the end of each day..

The course included briefing, self-reflection, group activities and discussion. There were brief didactic components, however most of the content was delivered in an interactive, discussion-based format, with some purely practical components, such as mindfulness exercises, values exploration and guided visualisations.

Attendees

The primary audience were second year Ophthalmology surgical trainees, with a selected group of senior registrars and fellows also attending, including Dr Beltz. The senior staff were asked to take a coaching role in the conversations, asking questions to draw out trainee experience and providing timely context specific work life examples that related to the mind skills training.

Learning objectives

Learning objectives that shaped the training experience included improved psychological wellbeing and performance of surgical trainees by:

- Understanding and developing attention and self-reflection skills (i.e., mindfulness).
- Improving psychological flexibility, or the ability to notice internal experience (thoughts, sensations and feelings) and adapt our behaviour to meet the situational demands.
- Noticing, understanding and managing the relationship between thoughts, feelings and behaviour and how they impact wellbeing and performance.
- Clarifying professional and personal values and goals.
- Identifying organisational and contextual issues that challenge or promote valued living and performance.
- Creating a growth mindset for peak performance.
- Cultivating self-compassion and acceptance for wellbeing and performance.
- Developing a tailored, personal wellbeing and performance plan.



Outcomes

Dr Beltz is in the process of gaining ethical approval for empirical study of the benefits of mind training on students. In this pilot phase, limited structured and unstructured qualitative feedback data was collected.

The overall training experience ratings sat at 94 to 97% satisfaction across the two initial groups. Anonymous participants feedback surveys included comments such as:

“Very impressed by the two days, how it was run and evidenced-based approach.”

“Thank you for a fantastic experience, it was eye opening!”

“An incredible overview of a very complex concept. It was life changing! Thank you.”

“It is not everyday that I have the opportunity to check in with myself and realise my goals and work on self compassion. Thank you very much for running this course.”

Dr Beltz reported that all trainees have now been trained in the basics of acceptance commitment training (ACT) and appeared to appreciate and accept its value as part of surgical training. Dr Beltz said:

“The program has contributed to a culture of thoughtful, excellent, and thriving surgeons at our organisation and within our professional group.”

“Trainees have realised that it’s their mental state, mindset and behaviours that often lead to success or otherwise, and they strive to perform in this area.”

Behaviours observed by Dr Beltz included earlier and better performance preparation for exams and surgery by trainees.



Since the program, Dr Beltz observed that our young surgeons actively study complications, their management and how to keep calm, make decisions and perform well under those difficult circumstances.

They demonstrate greater presence and clarity of communication in surgery. As well as better self-reflection and values based decision making when it comes to choosing jobs or sub-specialties.

Dr Beltz also noted earlier and more proactive preparation for exams and surgery by trainees. She described the trainees who went through the program as:

“Outstanding humans that are going to make a lot of difference for patients and for ophthalmology in the future.”

In terms of program co-design and delivery, the format of having it led by a wellbeing and performance expert, with guidance and context specific examples provided by the eye surgeons, was an important strength. Having a respected surgical lead in the room who could talk the language of the trainees, while not intimidating or shutting down open conversation, was key to success.

Progress Since 2019

A covid-interrupted period meant training was delayed and adapted for a virtual delivery in 2020.

In 2021 an additional 4-hour learning module was developed and delivered virtually called “Preparing to Perform”. This module took a deeper dive into mind skills for trainee performance preparation for study and work.

The training in 2022 was delivered in-person at the Australasian Society of Cataract and Refractive Surgeons (AUSCRS) Conference, and a 90-minute “Navigating Change” module developed for support staff.

Having parts of the Mind Skills program delivered in a more public fashion during a conference, generated interest and conversation in the AUSCRS community.

It is hoped visible delivery of this training will generate greater acceptance and engagement in NTS training within surgical training. There has been a noted increase of demand from other medical disciplines, beyond eye surgeons, for this and related NTS training.



In 2023 and beyond training will continue with a hybrid model of delivery (online and in-person) to suit the circumstances. We look forward to a return to the GenEye and AUSCRS conferences.

Table 1: Program Format and Delivery 2019 to 2022

Delivery	Program Name	Audience	Location
2019	Mindful Performance - Taster Experience (20 min)	Trainees, Registrars, Fellows & support staff	In person, GenEye Conference
2019	GenEye Mind Skills (2x5 hrs)	Second Year Trainees & Senior Registrars	In person, The Mind Room
2019	GenEye Mind Skills (2x5 hrs)	Second Year Trainees & Senior Registrars	In person, The Mind Room
2020	GenEye Mind Skills (4 x 2.5hrs over 2 weeks)	Second Year Trainees & Senior Registrars	Virtual
2020	GenEye Mind Skills (4 x 2.5hrs over 2 weeks)	Second Year Trainees & Senior Registrars	Virtual
2020	GenEye Mind Skills (4 x 2.5hrs over 2 weeks)	Second Year Trainees & Senior Registrars	Virtual
2020	GenEye Mind Skills (4 x 2.5hrs over 2 weeks)	Second Year Trainees & Senior Registrars	Virtual
2021	Preparing to Perform (4 hrs)	Third Year Trainees & Senior Registrars	Virtual
2022	Preparing to Perform - Short (90-min)	Third Year Trainees & Senior Registrars	In person, AUSCRS conference
2022	Navigating Change (90-min)	Surgical Support Staff	In person, AUSCRS conference



Conclusion

The GenEye Mind Skills training program for second year trainees has addressed important deficiencies in NTS training. It has raised greater awareness and acceptance by the surgical community of NTS training.

Overall this training has contributed significantly to the wellbeing of trainee surgeons and future ophthalmologists, with improvements in communications, decision making and performance seen in those who have completed the program.

It is hoped the ongoing commitment to Mind Skills training will contribute to a surgical community that prioritises personal, team and organisational wellbeing and performance in a meaningful and sustainable manner.

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