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## Correspondence: Letter to the Editor

# Facilitating resilience in the return to surgical practice

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take a median of 45 weeks to clear the backlog of operations resulting from COVID-19 disruption.<sup>1</sup> Therefore pressures placed on the surgeon by different levels, including top-down organisational pressures to perform complex cancer surgeries in higher volume to address any patients waiting longer than is optimal, are likely to result in higher stress and performance issues.<sup>3</sup> Additionally this workload may be amplified by the treatment of potentially more advanced surgical presentations due to delays, challenging anatomy and unexpected complications, time pressures and distraction, and unfamiliarity in team members.<sup>3</sup>

## Introduction

It is estimated that 82% of benign surgery and 38% of cancer surgery was delayed or cancelled during the peak of the COVID-19 pandemic.<sup>1</sup> Optimising surgeon factors in the return to the operating room following interruptions during COVID-19 is therefore essential. Nontechnical human factors (HF) skills are defined as 'the cognitive, social and personal resource skills that complement technical skills and contribute to safe and efficient task performance including situational awareness, decision-making, communication, teamwork, leadership, and management of stress, fatigue and disturbances.'<sup>2</sup> The study of error in high-risk environments and industries has revealed that HF and nontechnical skills are essential for improving error-free performance.<sup>3</sup> Stress, fatigue, and tiredness, effective team working, communication and leadership have all been identified as core factors leading to human-related error.<sup>4</sup> Surgeons' technical skills may be consolidated easily and on return to practice and may reach pre-interruption proficiency with little requirement for acclimatization.<sup>3</sup> However, the return of non-technical skills and other HF including effective teamworking might not be as easy.<sup>3</sup> For many surgeons and trainees, COVID-19 will have brought one of the longest interruptions to practice and continues to increase anxiety both professionally and personally.<sup>5</sup> We explore challenges to the surgical workload and decision making and present implementations to facilitate a safe return to surgical practice.

## Surgical workload

Prior to the COVID-19 pandemic, studies demonstrated that workload in surgery across multiple specialties continued to increase, to a potentially unsustainable level.<sup>6</sup> There is objective evidence for detrimental impact of workload on surgical performance and patient outcomes, with increased risk of complications being directly linked to the total number of hours a surgeon operates per day.<sup>7</sup> If countries increase their normal surgical volume by 20% post-pandemic, it would

## Surgical decision making

Optimal decision making is affected by both capability and workload. When workload exceeds capability, the risk of errors and making dangerous decisions is high.<sup>3</sup> Surgeons have previously relied on rule-based and protocol-driven decision making strategies which are now disrupted.<sup>8</sup> Previously well classified presentations to the surgical service such as abdominal pain can now present under the wide spectrum of COVID-19 infection, leading to unfamiliar presentations and management.<sup>9,10</sup> Even the simplest change in established pathways, such as adding COVID-19 swabs or consent to checklists, can cause substantial disruption which may even lead to cancellation. The re-introduction of complex decision making may further increase surgical workload in the context of more multidisciplinary meetings and patient conversations.

## Embracing the experience

Throughout the COVID-19 pandemic there has been much good and bad, and both aspects should be acknowledged in terms of representing human experience. Openly discussing negative experiences may help with coping mechanisms and can include embracing negative emotions of fear and grief that may be able to be channelled into constructive action to improve patient care.<sup>11</sup> The additional exploration of positives may also aid in promoting self-development and aid in response to future coping mechanisms, which may still be required throughout further peaks of COVID-19.<sup>11</sup>

Surgeons should be encouraged to engage in positive, responsive communication with any team members who have any uncertainty and stress. Reassurance should be given that there are no expectations of surgical trainees to perform to a certain standard, and that the senior surgical team are available at all times. Additional training and mentoring can be offered where possible in order to ensure that all surgeons from the most junior to the expert senior are supported. The surgeon can also instil inspiration and optimism into their

team and can express compassion and gratitude, which can help foster a sense of purpose in team members and build professional identity.<sup>12</sup> Mindful implementations should be encouraged by the operating surgeon, such as active and meaningful debrief, which has been demonstrated to reduce cognitive workload in turn improving further surgical performance.<sup>13</sup>

### Encouraging individual awareness and reflection

Surgeons are trained to be resourceful and resilient, ‘bouncing back’ and growing stronger following challenges, however the capacity to respond to stress as a healthy process may be overwhelmed.<sup>14,15</sup> Over a thousand healthcare workers who have been studied following caring for COVID-19 patients reported experiencing symptoms of depression, anxiety, insomnia, and psychological distress which were exacerbated by overwhelming workload and feelings of being inadequately supported.<sup>16</sup> Stress and fear can give rise to pressures which encourage unfavourable behaviours. In scenarios where surgeons are unkind to each other or other staff members there is often an associated regret and damage to both present and future working relationships.<sup>17</sup> Furthermore, the persistent increase in pressure may lead to an increased frequency of uncivil events which could propagate burnout within the workforce.<sup>17</sup>

Effective reflection encouraged by surgical trainers can promote situational awareness, dilemma recognition, emotional intelligence, challenging assumptions, and appreciation of perspectives.<sup>18</sup> Surgeons could consider small group collaborative reflection with or without COVID-19 lived experiences, in order to develop professional identity formation and transformative narrative sharing connections.<sup>12</sup>

### Responding skilfully to stress

Surgery is a physically demanding profession which requires the optimisation of the surgeon through a multi-faceted approach. Beyond emotional resilience, it is important to encourage physical health benefits through nutrition, exercise, sleep hygiene, and lifestyle structure in order to both improve surgical practice and cultivate resilience. A core component of resilience and wellbeing is the adoption of a healthy lifestyle, which has been challenged during the COVID-19 pandemic.<sup>19</sup> Individual lifestyle factors such as hydration, nutrition and adequate rest time should be ensured to optimise care provision for the patient.<sup>4</sup>

Surgeons are in a position to encourage strategies to allow regulation of feelings and insight into moral and current state of mind. This could be in the form of methods of mindfulness such as meditation to manage stress, increase awareness of good moments, and re-energise.<sup>20</sup> Other forms of therapeutic interventions could be exercise and movement therapy, yoga or tai chi, or reflective writing. These practices can help the surgical team to share a human connection to refuel for future challenges and to adapt to respond skilfully to stressors rather than simply reacting, which can enhance resilience.<sup>20</sup>

### Recognising and acting upon the need for help

Surgical practice has traditionally functioned through hierarchical and well-established systems which at times do not promote flexibility in order to deliver a consistent standard of care. An environment which flattens hierarchy and allows surgeons to ask for help without suffering in silence is essential to promote well-being and avoid burnout.<sup>17,21</sup> If a difficult scenario arises, any grade of surgeon should be able to raise concerns and divert from the traditional hierarchical arrangement of surgical practice. It is essential to pause, to re-assess the situation and to encourage regrouping of the team for harmonious practice.

It is important for a no-blame culture to continue throughout, with a pragmatic approach to error and debrief, and evolving pathways with organisational and clinician investment.<sup>4</sup> This is pertinent from all grades ranging from medical students volunteering in the pandemic all the way to organisational level leaders.<sup>22</sup> Community and social support is key and surgeons should support a positive environment through encouraging engagement within work, developing relationships within the team, cultivating meaning and motivations in the working day, and creating achievement that instils a sense of accomplishment.<sup>11,17</sup> Combining supportive treatment of all surgical team members and recognition of the essential work undertaken could have immense benefit to the healthcare workforce.

### Surgeons as leaders and educators

Strong leadership that is felt to be honest and trustworthy can foster resilience within teams and can give opportunities for all members to understand difficult pathways and contribute to decision making.<sup>8</sup> Leadership is also essential for the logistical aspects of practice ensuring care for the surgical team through sickness or self-isolation and to ensure all staff members have access to basic needs, physical health protection, and early intervention for personal health issues. The promotion of co-operative working with a strong social structure has been found to produce more resilient teams who can navigate complex problems in healthcare organisations.<sup>23</sup>

Educational aspects of leadership should not be forgotten even within a disaster as this will aid in maintaining professional identity and capitalise on learning opportunities the COVID-19 pandemic will bring which can strengthen surgical trainees. A balance should be met between exposure of trainees to COVID-19 associated risk and the necessity of patient exposure for surgical trainees to learn. This should be guided by not only public health measures but also by the oversight of senior surgeons. Surgeons as leaders and educators should create a supportive environment for healthcare professionals to voice their capabilities and to ensure safe surgical practice.<sup>4</sup> It is also essential that surgeons are seen as leaders to patients, in order for them to trust in processes and pathways that are in place in a transparent and open environment, in which they can be re-assured that their best interests are taken into account.

## Ethical approval

Not required.

## Role of the study sponsors

Not required.

## Statement of independence of researchers from funders

Not required.

## Patient and public involvement statement

None.

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## Contributorship statement

JA, RJD, and PAB undertook conceptualisation of this article. JA drafted and revised the manuscript. RJD and PAB guided critical revisions. RJD and PAB approved final manuscript for submission.

## Transparency declaration

JA as lead author affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

## Declaration of competing interest

All authors have completed the Unified Competing Interest form (available on request from the corresponding author) and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years, no other relationships or activities that could appear to have influenced the submitted work.

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