



# Medical Research in the department: Lessons Learned from the pandemic

**Name: Roel Beltran Castillo**

**Affiliation: Sydney Adventist  
Hospital**



# State of Surgical Interventions Worldwide

310,000,000  
major surgeries  
performed each  
year\*



\*Dobson GP. Trauma of major surgery: A global problem that is not going away. Int J Surg. 2020 Sep;81:47-54. doi: 10.1016/j.ijsu.2020.07.017. Epub 2020 Jul 29. PMID: 32738546; PMCID: PMC7388795.

# Estimated average surgical instruments used

15,190,000,000

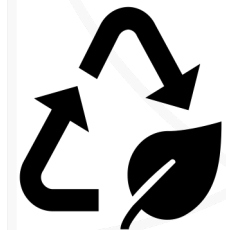
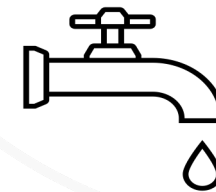
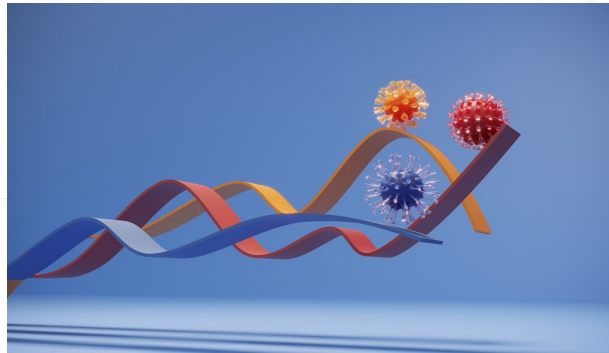
About 49 instruments  
are used per  
procedure in  
cardiothoracic cases\*



\*Knowles M, Gay SS, Konchan SK, et al.: Data analysis of vascular surgery instrument trays yielded large cost and efficiency savings. J Vasc Surg. 2021, 73:2144-2153. 10.1016/j.jvs.2020.09.043 (photo included).

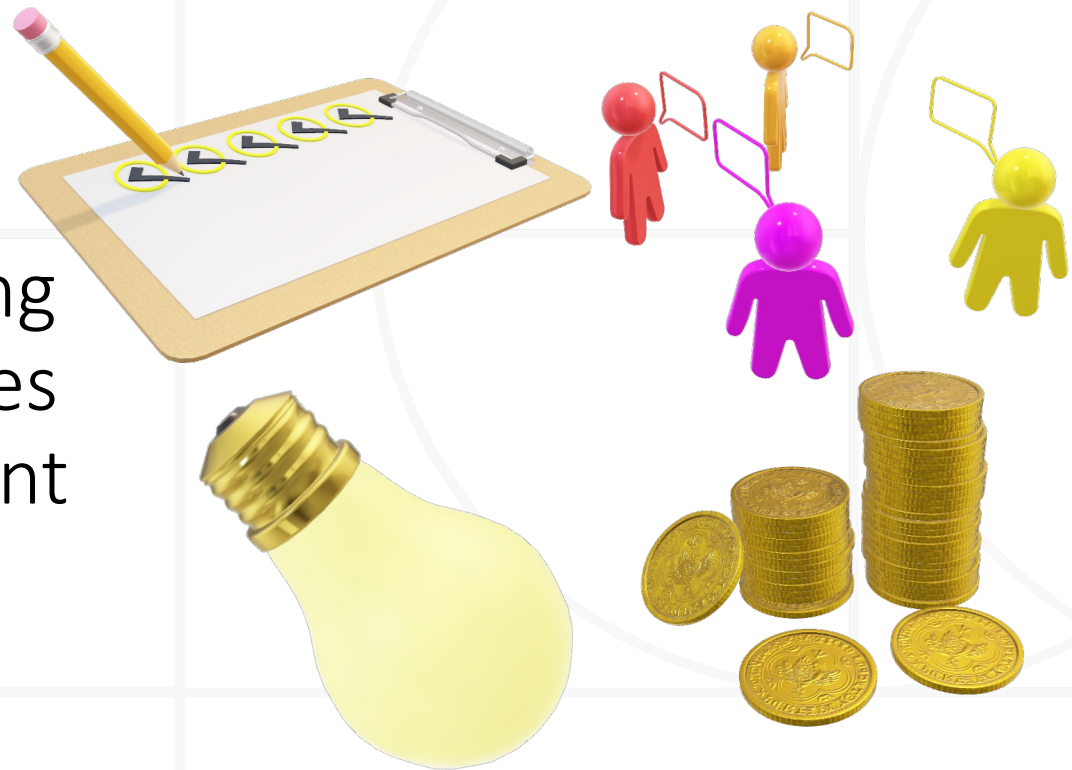
# Reprocessing Unit for Medical Devices

1. Infection Control
2. Clinical Support
3. Quality and Risk
4. Sustainability



# Reprocessing Unit for Medical Devices

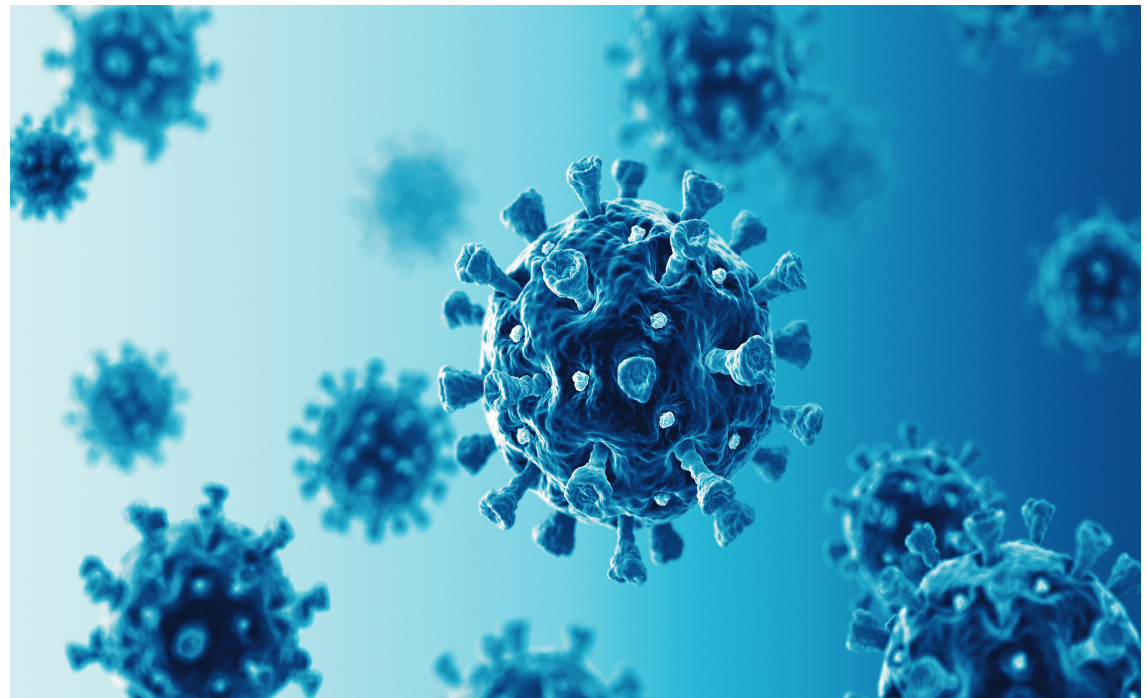
1. Compliance
2. Education and Training
3. Systems and Processes
4. Resource management





A lot of people are expecting this

As of 16 March  
2023, about  
4,487,553 died  
directly related to  
the pandemic\*



\* [Mortality Analyses - Johns Hopkins Coronavirus Resource Center \(jhu.edu\)](https://www.jhu.edu/coronavirus/mortality-analyses)

# State of Mental Health: During Covid

At least 1 in 4  
healthcare workers  
reported anxiety,  
depression or  
burnout symptoms\*



\* [World failing in 'our duty of care' to protect mental health and well-being of health and care workers, finds report on impact of COVID-19 \(who.int\)](https://www.who.int/news/item/18-05-2020-world-failing-in-our-duty-of-care-to-protect-mental-health-and-well-being-of-health-and-care-workers-finds-report-on-impact-of-covid-19)

# What is Mental Health?

A state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community.\*



\* <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response#:~:text=Concepts%20in%20mental%20health,and%20contribute%20to%20their%20community.>



# Coping Mechanisms

Reduction in stress due to a sense of camaraderie and teamwork, as well as when sharing jokes or humour with colleagues.\*



\* Rose, S., Hartnett, J. and Pillai, S., 2021. Healthcare worker's emotions, perceived stressors and coping mechanisms during the COVID-19 pandemic. *PloS one*, 16(7), p.e0254252.



# Communication

Clear communication and specialised training on handling COVID-19 patients could reduce anxiety from the perceived unfamiliarity and uncontrollability of the hazards involved.\*

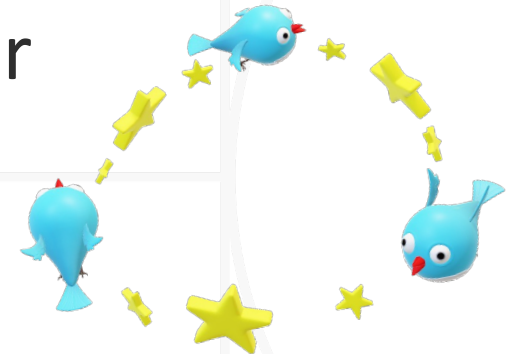


\*Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V.G., Papoutsis, E. and Katsaounou, P., 2020. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, behavior, and immunity*, 88, pp.901-907.



# Resilience and self care

HCWs resilience is mainly born out of their professional identity, collegial support, effective communication from supportive leaders along with flexibility to engage in self-care and experiences of growth.\*

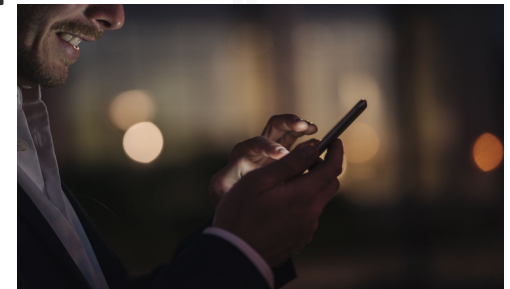


\*Curtin, M., Richards, H.L. and Fortune, D.G., 2022. Resilience among health care workers while working during a pandemic: A systematic review and meta synthesis of qualitative studies. *Clinical psychology review*, 95, p.102173.



## Social Media: Pros and Cons

Social connections with colleagues, loved ones, formal supports and the wider community are maintained while physical distancing, supports a sense of being in this together while managing adversity.\*



\*Curtin, M., Richards, H.L. and Fortune, D.G., 2022. Resilience among health care workers while working during a pandemic: A systematic review and meta synthesis of qualitative studies. *Clinical psychology review*, 95, p.102173.

# Conclusion



Healthcare workers' work performance and mental health are associated with positive mental health outcomes and are directly related to increased productivity and decreased disability costs.\*



\*Nowrouzi-Kia B, Sithamparanathan G, Nadesar N, Gohar B, Ott M. Factors associated with work performance and mental health of healthcare workers during pandemics: a systematic review and meta-analysis. J Public Health (Oxf). 2022 Dec 1;44(4):731-739. doi: 10.1093/pubmed/fdab173. PMID: 34056663; PMCID: PMC8194873.

Intrinsic rewards, workplace communication and acknowledgement of their work are positive resources for their mental health. Self-care was highlighted as a possible solution for the challenging moments in this essential workforce.\*



\* Kotera, Y., Ozaki, A., Miyatake, H., Tsunetoshi, C., Nishikawa, Y., Kosaka, M., Tanimoto, T., 2022. Qualitative Investigation into the Mental Health of Healthcare Workers in Japan during the COVID-19 Pandemic. International Journal of Environmental Research and Public Health 19, 568. <https://doi.org/10.3390/ijerph19010568>

# References

- Ghahramani, S., Kasraei, H., Hayati, R., Tabrizi, R. and Marzaleh, M.A., 2023. Health care workers' mental health in the face of COVID-19: a systematic review and meta-analysis. *International Journal of Psychiatry in Clinical Practice*, 27(2), pp.208-217.
- Vizheh, M., Qorbani, M., Arzaghi, S.M., Muhidin, S., Javanmard, Z. and Esmaeili, M., 2020. The mental health of healthcare workers in the COVID-19 pandemic: A systematic review. *Journal of Diabetes & Metabolic Disorders*, 19, pp.1967-1978.
- Woon, L.S.C., Sidi, H., Nik Jaafar, N.R. and Leong Bin Abdullah, M.F.I., 2020. Mental health status of university healthcare workers during the COVID-19 pandemic: A post-movement lockdown assessment. *International journal of environmental research and public health*, 17(24), p.9155.
- De Kock, J.H., Latham, H.A. and Cowden, R.G., 2022. The mental health of healthcare workers during the COVID-19 pandemic: a narrative review. *Current Opinion in Psychiatry*, 35(5), pp.311-316.
- Wong, A.H., Pacella-LaBarbara, M.L., Ray, J.M., Ranney, M.L. and Chang, B.P., 2020. Healing the healer: protecting emergency health care workers' mental health during COVID-19. *Annals of emergency medicine*, 76(4), pp.379-384.
- Shaukat, N., Ali, D.M. and Razzak, J., 2020. Physical and mental health impacts of COVID-19 on healthcare workers: a scoping review. *International journal of emergency medicine*, 13, pp.1-8.
- Buselli, R., Corsi, M., Veltri, A., Baldanzi, S., Chiumiento, M., Del Lupo, E., Marino, R., Necciari, G., Caldi, F., Foddis, R. and Guglielmi, G., 2021. Mental health of Health Care Workers (HCWs): a review of organizational interventions put in place by local institutions to cope with new psychosocial challenges resulting from COVID-19. *Psychiatry research*, 299, p.113847.
- Fattori, A., Cantù, F., Comotti, A., Tombola, V., Colombo, E., Nava, C., Bordini, L., Riboldi, L., Bonzini, M. and Brambilla, P., 2021. Hospital workers mental health during the COVID-19 pandemic: methods of data collection and characteristics of study sample in a university hospital In Milan (Italy). *BMC Medical Research Methodology*, 21(1), p.163.

# References

- De Kock, J.H., Latham, H.A., Leslie, S.J., Grindle, M., Munoz, S.A., Ellis, L., Polson, R. and O'Malley, C.M., 2021. A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. *BMC public health*, 21(1), pp.1-18.
- Chatzittofis, A., Constantinidou, A., Artemiadis, A., Michailidou, K. and Karanikola, M.N., 2021. The role of perceived organizational support in mental health of healthcare workers during the COVID-19 pandemic: a cross-sectional study. *Frontiers in Psychiatry*, 12, p.707293.
- Vanhaecht, K., Seys, D., Bruyneel, L., Cox, B., Kaesemans, G., Cloet, M., Van Den Broeck, K., Cools, O., De Witte, A., Lowet, K. and Hellings, J., 2021. COVID-19 is having a destructive impact on health-care workers' mental well-being. *International Journal for Quality in Health Care*, 33(1), p.mzaa158.
- Talevi, D., Socci, V., Carai, M., Carnaghi, G., Faleri, S., Trebbi, E., di Bernardo, A., Capelli, F. and Pacitti, F., 2020. Mental health outcomes of the CoViD-19 pandemic. *Rivista di psichiatria*, 55(3), pp.137-144.
- Tiete, J., Guatterri, M., Lachaux, A., Matossian, A., Hougardy, J.M., Loas, G. and Rotsaert, M., 2021. Mental health outcomes in healthcare workers in COVID-19 and non-COVID-19 care units: a cross-sectional survey in Belgium. *Frontiers in Psychology*, 11, p.612241.
- Liberati, E., Richards, N., Willars, J., Scott, D., Boydell, N., Parker, J., Pinfold, V., Martin, G., Dixon-Woods, M. and Jones, P.B., 2021. A qualitative study of experiences of NHS mental healthcare workers during the Covid-19 pandemic. *BMC psychiatry*, 21(1), p.250.
- Kotera, Y., Ozaki, A., Miyatake, H., Tsunetoshi, C., Nishikawa, Y., Kosaka, M. and Tanimoto, T., 2022. Qualitative investigation into the mental health of healthcare workers in Japan during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(1), p.568.
- Liu, Z., Wu, J., Shi, X., Ma, Y., Ma, X., Teng, Z., You, X., Zhang, Y., Zhang, W., Feng, Z. and Long, Q., 2020. Mental health status of healthcare workers in China for COVID-19 epidemic. *Annals of global health*, 86(1).

**Merci, dank U, dank je wel,  
danke schon**

