MEDICAL IMAGING—LETTER TO THE EDITOR

Impact of COVID-19 lockdowns on registrar reporting volumes in a Melbourne teaching hospital

Dear editor,

During the COVID-19 pandemic, there was a reduction in diagnostic imaging throughout Australia¹ and reports of reduced trainee reporting.^{2,3} In 2020, Melbourne experienced a prolonged lockdown, and we investigated one aspect of the potential impact on registrar training by assessing annual reporting rates. This included 12 registrars in training Phase 1 (years 1–3) and 6 in Phase 2 (years 4–5). All registrars remained on-site.

Report numbers were extracted from the Radiology Information System. There was a 17% decrease in total departmental studies performed from February to October 2020, compared to 2017–2019. For ease of interpretation, registrar-reporting numbers were annualised to estimate mean studies per year. During 2020, the estimated annual reporting rate decreased by 15% (2017–2019: mean 6706, SD 2348; 2020: mean 5719, SD 1781; P = 0.12) (Fig. 1).

Overall, the largest mean decrease for all trainees was a 33% reduction in registrar-performed interventional ultrasound procedures (2020: mean 69, SD 30; 2017–2019: mean 103, SD 96; P = 0.15), and 20% decrease in CT reporting (2020: mean 2226, SD 1035; 2017–2019: mean 2782, SD 1482; P = 0.14). MRI reporting increased by 15% (2020: mean 217, SD 133; 2017–2019: mean 189, SD 217; P = 0.61) and ultrasound by 5% (2020: mean 513, SD 343; 2017–2019, mean 488, SD 268; P = 0.15).

Subgroup analysis was performed stratified by phase of training. MRI reporting for Phase 1 trainees increased by 89% (2020: mean 144, SD 92; 2017–2019: mean 76, SD 78; P = 0.02). Fluoroscopic procedures for Phase 2 trainees decreased by 41% (2020: mean 94, SD 36; 2017–2019: mean 159, SD 51; P = 0.009).

Decreased imaging volumes due to COVID presents uncertainty for trainees with experiential requirements to achieve college fellowship.⁴ Reassuringly, even at a lower estimated annual reporting rates in 2020, registrars should still meet minimum training requirements. This is important as trainees may need to complete much of their training under similar circumstances. Although the overall mean reporting rate decreased, this allowed junior registrars the time to report significantly more MRIs than previously. This shows the adaptability of a flexible consultant and trainee group.

Our institution proactively instituted measures to mitigate reduced reporting, including aiming for all studies to be primarily reported by registrars, with consultants co-reading. This strategy may have partially obviated potential decline



Fig. 1. Box-plot showing mean annualised estimate of registrar-reporting volume from February to October in 2020 compared with 2017–2019 (minimum, 1st quartile, median, third quartile, maximum).

in reporting volume. Other adjuncts increased, such as online didactic teaching, small group tutorials, viva practice and re-reads of interesting cases.⁵ Increased familiarity with electronic platforms meant tutorials were more accessible to trainees who were on external rotations. Opportunities to prioritise research projects were also presented. While these factors helped mitigate the situation, it is unknown how they substitute for real patients in the longer-term.

Despite the lockdown, the reduction in estimated average reporting rates was modest and not statistically significant. The hospital and our trainees adapted well to the situation, still achieving experiential training requirements while ensuring trainees gain a rounded experience in order to practice radiology at the high standard expected by our patients.

Conflict of interest

A/Prof W Clements is an Editorial Board member of JMIRO and a co-author of this article. To minimize bias,

they were excluded from all editorial decision-making related to the acceptance of this article for publication.

Funding

There was no funding for this study.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

JACOB GIPSON MBBS¹ D ROBIN LEE BRADMEDIMG¹ WARREN CLEMENTS BBIOMEDSc(HONS), MBBS, FRANZCR, EBIR^{1,2,3} D ¹ Department of Radiology, Alfred Health, Melbourne,

Victoria Australia, ² National Trauma Research Institute, Melbourne, Victoria Australia and ³ Department of Surgery, Monash University Central Clinical School, Melbourne, Victoria Australia E-mail: j.gipson@alfred.org.au

doi: 10.1111/1754-9485.13353

References

- Sreedharan S, Mian M, McArdle DJT, Rhodes A. The impact of the COVID-19 pandemic on diagnostic imaging services in Australia. J Med Imaging Radiat Oncol 2021. https://doi.org/10.1111/1754-9485. 13291
- Veerasuri S, Vekeria M, Davies SE, Graham R, Rodrigues JCL. Impact of COVID-19 on UK radiology training: a questionnaire study. *Clin Radiol* 2020; **75**: 877.e7–14.
- Odedra D, Chahal BS, Patlas MN. Impact of COVID-19 on Canadian Radiology Residency Training Programs. *Can Assoc Radiol J* 2020; **71**: 482–9.
- The Royal Australian and New Zealand College of Radiologists. Radiodiagnosis training program curriculum: experiential training requirements [Internet]. 2014 [cited 7 Jun 2021.] Available from URL: https://www.ranzcr.com/trainees/clinical-radiology/ curriculum
- Lanier MH, Wheeler CA, Ballard DH. A new normal in radiology resident education: lessons learned from the COVID-19 pandemic. *Radiographics* 2021; **41**: E71–2.