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Adapting to change: exploring perceptions and demands of the coronavirus (COVID-19) workforce changes – an Australian multi-institutional radiation oncology survey

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ABSTRACT

Objective. To evaluate the perceptions of the coronavirus disease 2019 (COVID-19) initiated workplace strategies implemented in radiation oncology departments across Australia. **Methods.** A multidisciplinary team from Princess Alexandra Hospital developed a survey to address the impact of the pandemic strategies on areas such as patient care, staff education, well-being, flexible working arrangements, and research. The survey was conducted from November 2020 to April 2021. **Results.** Out of 210 respondents from seven institutions, 45% reported burnout and 57% experienced work work-related stress. A significant majority of respondents were in favour of continued remote work (86%, 131/153). Radiation oncologists identified administrative or non-clinical work (92%, 34/37), telehealth clinics (32%, 12/37), or radiation therapy planning (22%, 8/37) as suitable for remote work. Additionally, 54% (21/39) of the radiation oncologists plan to use telehealth more frequently, with 67% (26/39) feeling more confident with the technology. The majority (81%, 171/210) of participants favoured continuation of hybrid in-person and virtual meetings. Virtual solutions were adopted for quality assurance activities (72%, 118/165) and 52% (60/116) indicated preference for ongoing utility of virtual platforms. However, 38% (79/210) of the respondents expressed concerns about the negative impact on junior staff training. **Conclusion.** These findings reveal a strong inclination towards technological advancements and remote work arrangements to enable flexible working conditions. Our study suggests the need for ongoing reforms, focusing on improving clinical service delivery efficiencies and enhancing job satisfaction among clinicians.

Keywords: burnout, COVID-19, radiation oncology, remote access, telehealth, well-being, work from home, work–life balance.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has impacted the health industry, including cancer care, in an unprecedented manner. Risk management of vulnerable oncology patients resulted in urgent, major workflow modifications including creating new triaging strategies to minimise compromise in critical cancer care delivery while mitigating the risk of exposure to COVID-19.[1–3] Individual states and hospitals rapidly adapted small and large scale strategies such as redeploying staff to COVID-19 wards, working in teams to minimise cross-contact and physical relocation of cancer care units.[4]

Many aspects of cancer care changed dramatically during the COVID-19 pandemic, requiring clinicians to rapidly adapt to this new working environment. Telehealth was widely adopted, multi-disciplinary meetings were changed to virtual platforms, and the recommendations to shorten the overall treatment period by using a hypofractionated approach was widely implemented.[5] Concerns were raised regarding negative impacts of the pandemic on radiation oncology trainees, such as reduced on-site supervision and reduced opportunities for international post-fellowship training.[6]

As we enter the post-pandemic phase, there is a need to explore the effect of these widespread changes on clinicians and consider what strategies should be continued. The aim of this study was to evaluate staff perceptions of COVID-19-related workplace changes and the impact on their well-being.

Methods

Study design and setting

This was a multi-institutional survey conducted across multiple radiation oncology institutions in Australia. The hospitals invited to participate included the Princess Alexandra Hospital (Ipswich Road Campus, Raymond Terrace Campus), Townsville University Hospital, Chris O'Brien Lifehouse, Crown Princess Mary Cancer Centre Westmead, Blacktown Cancer and Haematology Centre, and the Alfred Health Radiation Oncology Unit. This project was granted an ethics application exemption by the Metro South Research Committee at Metro South Queensland Health institutions. Individual sites also obtained relevant ethics exemptions or approvals as deemed necessary. The survey was conducted with all staff members invited to participate (23 November 2020 to 31 April 2021).

The survey was developed collaboratively with contributions from each occupational group at Princess Alexandra Hospital (medical, nursing, allied health, radiation therapy, physics, and administration). The stages of survey development followed the clinician survey recommendations developed by Burns and colleagues.[7] The key areas agreed by the multi-disciplinary team to explore included patient care, education, and quality assurance (QA) processes. Additionally, the influence of pandemic response on work–life balance, issues around remote working options as well as various occupation-specific questions were considered critical information to capture. Upon the creation of the initial set of questions, the questions were further categorised and refined by the aforementioned investigators at Princess Alexandra Hospital. The draft pilot was then sent out to volunteers from each participating hospital encompassing all occupational groups (i.e. radiation therapists, radiation oncologists, and allied health) for review and further comments. The responses allowed further refining of the survey by removing redundant questions and revising questions to improve clarity. The redrafted survey was sent for further pilot testing with a selection of prospective volunteers from all occupational groups. Feedback was sought with regards to content validity, usability of survey, test–retest reliability, internal consistency, and interrater reliability. After these two rounds of survey review, the survey was finalised and ready for dissemination.

Data collection and analysis

Invitations were distributed to radiation oncology departments across Australia, and seven tertiary institutions agreed to participate. An investigator from each hospital then invited their department staff for voluntary participation via emails and posters. The survey (Supplementary material file S1) was conducted via Microsoft Forms, an online platform provided at all participating institutions which also allowed anonymity and security of responses by allowing respondents to answer only via their institutional accounts.

The survey data was analysed in Excel using descriptive statistics to report responses for each question, with the questions divided into four main themes (i.e. well-being, working from home and remote access, education and QA, and communication). The statistical package R (version 4.1.1) was used to create bar charts for graphical representation of selected survey questions. A sub-group analysis was then performed using descriptive statistics to report survey responses for radiation oncologists and radiation therapists separately.

Results

A total of 210 responses were received (Table 1). There were 127 (60%) respondents from Queensland and 70 (33%) from New South Wales. More than half of the respondents were female (69%, 145/210) and 170 (81%, 170/210) were employed full-time. Radiation therapists were the most common professional group who participated (48%, 101/210), followed by medical (19%) and medical physics (13%, 27/210). Almost all of the respondents (99%, 207/210) worked at metropolitan hospitals (Brisbane, Sydney, or Melbourne), with only three from a regional centre.

Well-being

Almost half of respondents (45%, 94/210) agreed or strongly agreed with feeling burnout at work, with 57% (120/210) reporting feeling stressed at work (Fig. 1). Over half of respondents reported no change in their work–life balance (53%, 111/210), with 20% (43/210) reporting an improvement and 23% (51/210) disagreeing that their

Table 1. Respondent characteristics.

Respondent characteristics (n = 210)	Number (%)
Gender	
Male	60 (29%)
Female	145 (69%)
Non-binary	1 (0.5%)
Prefer not to answer	4 (2%)
Age (years)	
<25	6 (3%)
25–35	65 (31%)
36–45	83 (40%)
46–55	31 (15%)
55–65	24 (11%)
66+	1 (0.5%)
State of work location	
New South Wales	70 (33%)
Queensland	127 (60%)
Victoria	13 (6%)
Hospital	
PA Hospital, Ipswich Road Campus (ROPAIR)	95 (45%)
PA Hospital, Raymond Terrace Campus (ROPART)	29 (14%)
Townsville Hospital	3 (1%)
Blacktown Cancer and Haematology Centre	15 (7%)
Chris O'Brien Lifehouse	23 (11%)
Crown Princess Mary Cancer Centre Westmead	32 (15%)
Alfred Health	13 (6%)
Employment status	
Full-time	170 (81%)
Part-time	40 (20%)
Employed prior to COVID-19 pandemic	
Yes	200 (95%)
No	10 (5%)
Professional group	
Administration	20 (10%)
Allied health	10 (5%)
Medical	39 (19%)
Registrar (n = 11)	
Consultant or Fellow (n = 28)	
Medical physics	27 (13%)
Nursing	13 (6%)
Radiation therapy	101 (48%)

work–life balance had improved. In terms of workplace communication, over half of respondents (50%, 106/210) stated that their workplace communicated about the risk of stress and burnout, but only 39% (81/210) felt supported by their workplace to prevent stress and burnout. Only 40% (85/210) of respondents reported that their workplace introduced interventions to support their well-being.

Working from home and remote access

The majority (72%, 151/210) of respondents did not have remote access before COVID-19, which was quickly reversed during the pandemic, with remote access being offered during COVID-19 for 73% (154/210) of respondents (Fig. 2 and Supplementary Table S1). There were 74% (155/209) of respondents who reported that their institution supported working from home, and of these 86% (131/153) expressed preference for an ongoing option of remote working. However, the majority of respondents did not work from home (53%, 81/154). Those who did work from home typically did either 2–3 days (18%, 29/154) or 4–5 days (18%, 29/154). Of those who were not supported to work from home, many respondents (68%, 36/53) expressed preference for their departments to explore working from home. In terms of the positives of remote working, the majority enjoyed reduced travel (89%, 185/208) and improved safety from COVID-19 (81%, 168/208). The negatives of remote working included reduced contact with colleagues (76%, 159/208) and IT issues (53%, 111/208).

Education and quality assurance

There were 38% (79/210) of respondents who believed their early career junior colleagues were negatively impacted by departmental changes made during the COVID-19 pandemic, while 31% (65/210) were unsure (Supplementary Table S2). Many respondents reported that departmental education services had stopped during COVID-19 (61%, 128/210), with the majority of respondents having weekly education sessions prior to COVID-19 (55%, 116/210). Professional development activities were commonly cancelled because of COVID-19 (76%, 157/205), with 91% (163/180) able to access an alternative version of professional development activities. Respondents reported that QA activities commonly continued during COVID-19 (79%, 165/210), with remote/virtual solutions employed for 72% (118/165) of these. Of those using remote/virtual solutions, 52% (60/116) would prefer using virtual solutions to complete QA activities. Many respondents (68%, 58/85) could see remote/virtual solutions being beneficial as part of their research/trial.

Communication

With regards to virtual meetings, 41% (87/210) of respondents were neutral to preferring virtual meetings versus

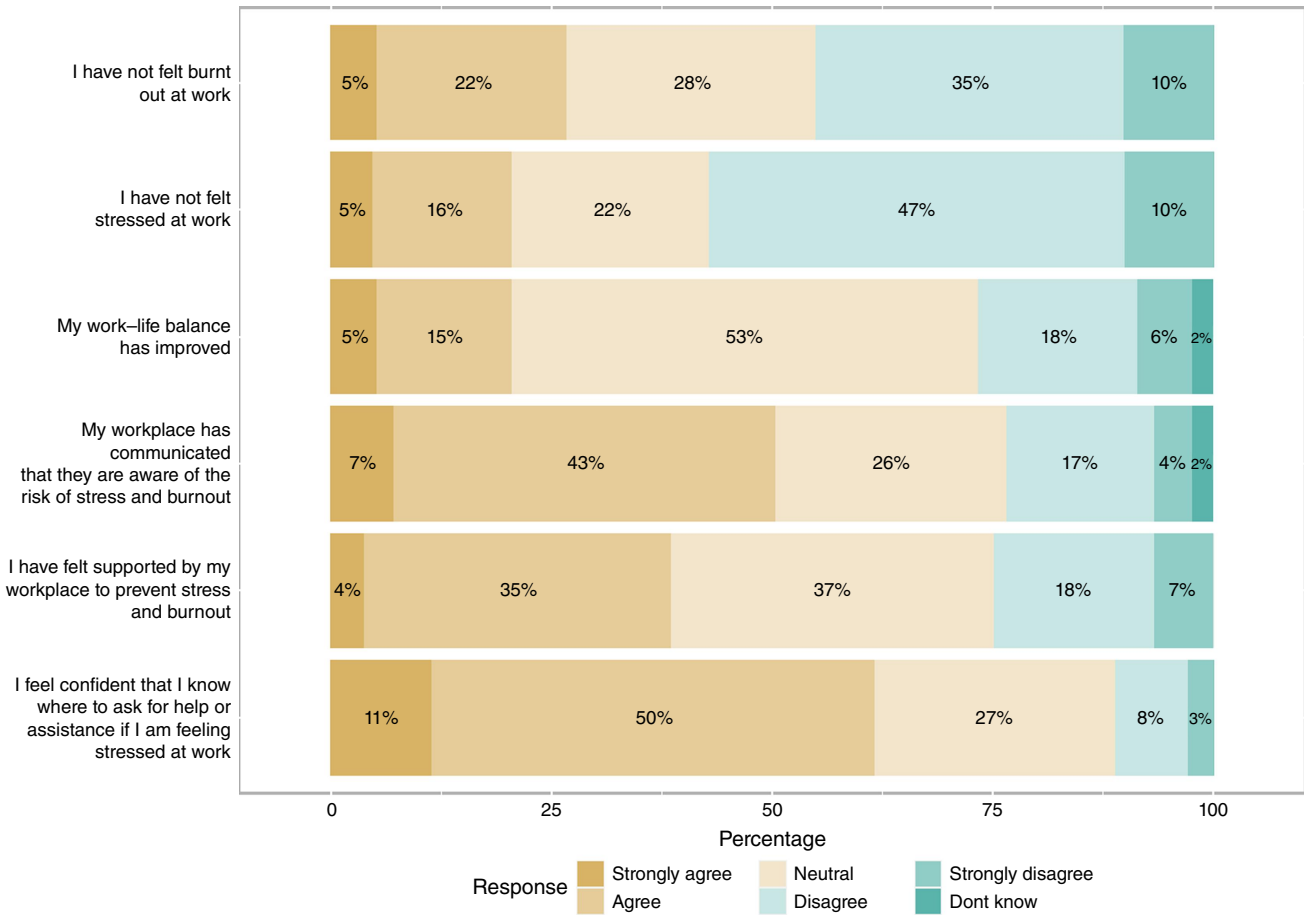

Fig. 1. Well-being survey questions.

face-to-face meetings. The majority (81%, 171/210) agreed or strongly agreed that they would prefer changing a few of the face-to-face meetings to virtual meetings, but 55% (116/210) disagreed or strongly disagreed that they would be open to changing all the meetings to virtual meetings.

Medical (radiation oncologists)

Of those radiation oncologists who participated in this study, 54% (21/39) agreed or strongly agreed that they will use telehealth more frequently after COVID-19, and 67% (26/39) agreed or strongly agreed that they feel more confident using telehealth (Fig. 3). There were mixed opinions among radiation oncologists on whether they thought that telehealth consultations were preferred by patients, with 51% neutral (20/39) and 23% (9/39) agreeing. Many radiation oncologists disagreed or strongly disagreed that they needed to alter radiation prescriptions because of COVID-19 (49%, 19/39). There was overwhelming support (87%, 33/38) among radiation oncologists and trainees for remote working to continue after the pandemic. Positives of remote working included flexibility in hours worked (77%, 30/39), reduced travel (87%, 34/39), fewer interruptions/ increased productivity (69%, 27/39), and improved work–life balance (69%, 27/39). The main issues with remote working were reduced contact with colleagues (85%, 33/39), IT issues (62%, 24/39), and communication difficulties (38%, 15/39). Staff identified their preference for remote work as admin/non-clinical (92%, 34/37), with telehealth clinics (32%, 12/37) and planning (22%, 8/37) the next most common. Of the 11 trainees who responded, 55% (6/11) thought that COVID-19 slightly worsened their training experience overall, and 64% (7/11) thought that COVID-19 had or potentially will affect their completion date.

Radiation therapists

Due to the in-person nature of patient care for radiotherapy, many radiation therapists (84%, 85/101) had not previously had a work from home option. During the first months of the COVID-19 crisis, these figures reversed with 84% (84/101) of radiation therapists having remote access. Eighty-nine respondents reported that their institution supported working from home (88%) and many (81%, 71/88) favoured this option to continue. Specifically, 76% (77/101) of radiation

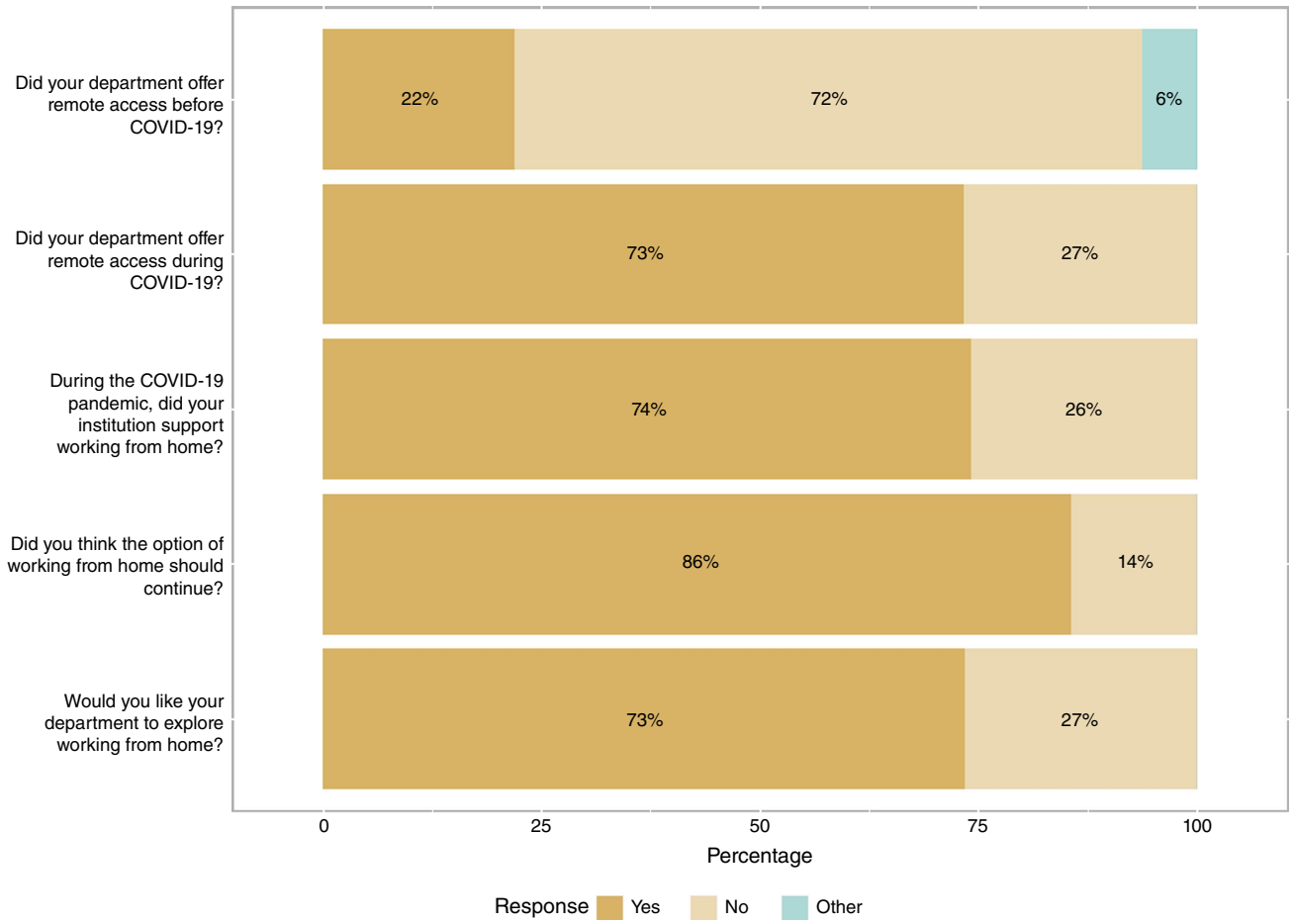

Fig. 2. Working from home and remote access. Footnote: 'Other' refers to respondents who answered 'don't know' or 'some/limited access'.

therapists found that COVID-related change in communication was felt to be effective.

Discussion

The COVID-19 pandemic has led to significant workforce adaptations, and many departments resorted to adopting strategies to allow staff to work from home. This study highlights a strong desire in the radiation oncology community to continue work from home arrangements into the future. This has been reflected in the literature, with a study from the USA finding that 74% of study respondents either were somewhat or extremely satisfied with a work from home policy.[8] Medical staff reported a preference for admin/non-clinical work (94%) as a remote work option, followed by telehealth clinics and then planning. The positives of remote working included reduced travel time, safety from COVID-19, and flexibility in hours worked. A study by Hoffman *et al.* suggested that working from home may also reduce rates of burnout.[9] Given the prominence of burnout within the workforce reported in this study (45%), the effects of working from home on staff well-being and burnout should be investigated further as the post-pandemic phase begins.

Many institutions have published their experiences using telehealth as an essential part of patient care delivery, both prior to and during the COVID-19 outbreak.[10,11] Telehealth was recommended as a primary way of communication during the COVID-19 outbreak, and most departments are conducting both new consultations and surveillance visits via telehealth.[11] Benefits have already been realised in early studies, such as decreased appointment cancellation rates, increased patient and clinician satisfaction, and increased rates of peer-reviewed cases prior to commencing radiotherapy.[10,12,13] One of the biggest limiting factors to widespread telehealth use has previously been clinician acceptance, which has increased during this pandemic.[14] A study conducted in the USA found that telehealth consultants were widely accepted by patients and clinicians, particularly for follow-up visits rather than on-treatment reviews.[15]

This study highlights that staff well-being remains a prominent issue, with 45% of respondents reporting burnout

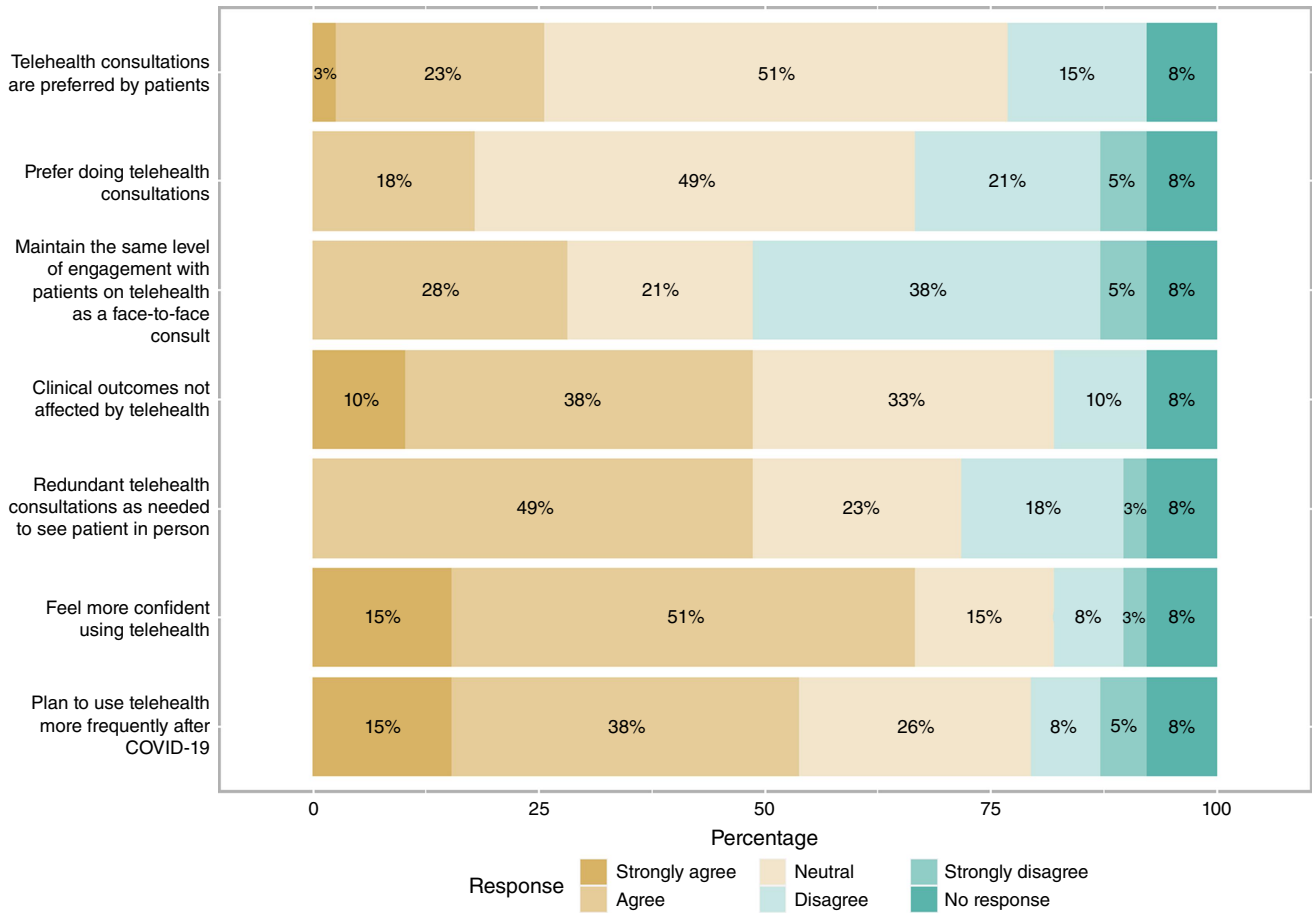

Fig. 3. Medical professionals opinions on telehealth.

and 57% stressed at work. The impact of the pandemic on staff well-being, particularly stress and burnout, has been highlighted as a cause for concern worldwide (in addition to existing high burnout and stress in the oncology community). Another Australian study conducted during the pandemic found a high prevalence of moderate to severe burnout (71%) and mild to severe depression (57%) and anxiety (60%) in all medical practitioners.[16]

The specific impact of the pandemic-induced work changes on medical trainees was observed in this study with many respondents raising concerns that their early career junior colleagues were negatively impacted by pandemic-induced changes such as cancellation of weekly education sessions. Of the limited number of trainees who participated in this study, more than half (55%) reported that their training experience was adversely impacted. Other studies have also demonstrated that junior clinicians within the department reported negative impacts on learning secondary to factors such as reduced clinical load and general stresses from the pandemic.[17,18] While studies have found that online educational activities were generally well received by respondents, there are some drawbacks such as a lack of networking opportunities.[19] It is likely that into the future there will be a combination of online and in-person educational opportunities offered to trainees. Further research should be conducted to specifically explore the impacts of the pandemic on trainees and how these experiences can be utilised to optimise delivery of educational activities into the future.

While a cross-sectional survey-based study design was able to capture valuable information across multiple institutions, there are inherent limitations that exist. These include selection, non-response, and recall bias. Furthermore, the response rate of the survey was not able to be captured. Approximately half of the respondents were from one metropolitan institution in Queensland and therefore the results may not be generalisable to an international or interstate audience, acknowledging that there were significant variations in COVID-19 precautions between states in Australia. An in-depth evaluation into the causes of behavioural and perception changes in response to the pandemic response could not be performed. This study was not powered to analyse differences in responses between different health professional groups (e.g. medical, physicists, and radiation therapists) and analyses were not conducted to determine if any differences exist. Future studies could consider

specifically investigating the ongoing effects of the pandemic and how this varies between occupational groups.

Although the COVID-19 pandemic represented a time of significant disruption for all healthcare workers, it is imperative that we consider the lessons learned during this phase and how it may shape the way we deliver healthcare for the benefit of both the workforce and patients. There is a strong desire for the radiation oncology workforce to have more flexible working arrangements with the option to work from home, particularly for admin or non-clinical work. Two of the tertiary hospital departments participating in this study (Westmead and Princess Alexandra) have trialled and adopted remote working options for radiation oncologists post pandemic. All departments have continued hybrid model virtual meetings and the majority continue to utilise telehealth for providing clinical consults to improve access to specialist services for patients in regional and remote Australia.

Conclusion

The workflow in radiation oncology departments has changed significantly since the initiation of the COVID-19 pandemic. This study is one of the first to assess radiation oncology healthcare worker attitudes towards the work changes initiated during COVID-19, including remote working, telehealth, and impact on well-being. Core findings include staff preference to be supported to do remote work, increased clinician acceptance of telehealth use, and ongoing high levels of stress and burnout in this population. In this study, we identified a range of benefits that could potentially contribute to the well-being of clinicians and operational efficiencies and quality of patient care. Future directions include publishing more in-depth results from each occupational group, and evaluating the impacts of the work practice changes implemented during and after the COVID-19 pandemic.

Supplementary material

Supplementary material is available online.

References

1 Mayor S. COVID-19: impact on cancer workforce and delivery of care. *Lancet Oncol* 2020; 21(5): 633. doi:10.1016/S1470-2045(20)30240-0

2 Simcock R, Thomas TV, Estes C, *et al.* COVID-19: Global radiation oncology's targeted response for pandemic preparedness. *Clin Transl Radiat Oncol* 2020; 22: 55–68. doi:10.1016/j.ctro.2020.03.009

3 van de Haar J, Hoes LR, Coles CE, *et al.* Caring for patients with cancer in the COVID-19 era. *Nat Med* 2020; 26(5): 665–671. doi:10.1038/s41591-020-0874-8

4 Ku M, Morgan T, Malbon A, Bartram T, Cavanagh J, Halvorsen B. Provision of a consistent national approach to radiation therapy workforce protection measures in Australia during the COVID-19 pandemic. *Aust Health Rev* 2020; 44(4): 535–539. doi:10.1071/AH20094

5 Milch V, Wang R, Der Vartanian C, *et al.* Cancer Australia consensus statement on COVID-19 and cancer care: embedding high value changes in practice. *Med J Aust* 2021; 215(10): 479–484. doi:10.5694/mja2.51304

6 Ong WL, Weerasinghe C. Radiation oncology training in Australia and New Zealand during and beyond the COVID-19 pandemic – lessons learnt and opportunities for improvement. *J Med Imaging Radiat Oncol* 2021; 65(6): 826–828. doi:10.1111/1754-9485.13245

7 Burns KE, Duffett M, Kho ME, *et al.* A guide for the design and conduct of self-administered surveys of clinicians. *CMAJ* 2008; 179(3): 245–252. doi:10.1503/cmaj.080372

8 Ma TM, Parikh NR, Philipson RG, *et al.* Experience of Telemedicine Visits in Radiation Oncology During the COVID-19 Pandemic: A US National Survey and Lessons Learned for Incorporating Telemedicine Post-COVID-19. *Adv Radiat Oncol* 2023; 8(1): 100924. doi:10.1016/j.adro.2022.100924

9 Hoffman KE, Garner D, Koong AC, Woodward WA. Understanding the Intersection of Working from Home and Burnout to Optimize Post-COVID19 Work Arrangements in Radiation Oncology. *Int J Radiat Oncol Biol Phys* 2020; 108(2): 370–373. doi:10.1016/j.ijrobp.2020.06.062

10 Hamilton E, Van Veldhuizen E, Brown A, Brennan S, Sabesan S. Telehealth in radiation oncology at the Townsville Cancer Centre: Service evaluation and patient satisfaction. *Clin Transl Radiat Oncol* 2019; 15: 20–25. doi:10.1016/j.ctro.2018.11.005

11 Slotman BJ, Lievens Y, Poortmans P, *et al.* Effect of COVID-19 pandemic on practice in European radiation oncology centers. *Radiother Oncol* 2020; 150: 40–42. doi:10.1016/j.radonc.2020.06.007

12 Patrick HM, Hijal T, Souhami L, *et al.* A Canadian Response to the Coronavirus Disease 2019 (COVID-19) Pandemic: Is There a Silver Lining for Radiation Oncology Patients? *Adv Radiat Oncol* 2020; 5: 774–776. doi:10.1016/j.adro.2020.06.016

13 Pilar A, Gravel SB, Croke J, Soliman H, Chung P, Wong RKS. Coronavirus Disease 2019's (COVID-19's) Silver Lining-Through the Eyes of Radiation Oncology Fellows. *Adv Radiat Oncol* 2021; 6(1): 100527. doi:10.1016/j.adro.2020.07.004

14 Wade VA, Eliott JA, Hiller JE. Clinician Acceptance is the Key Factor for Sustainable Telehealth Services. *Qual Health Res* 2014; 24(5): 682–694. doi:10.1177/1049732314528809

15 Gutkin PM, Prionas ND, Minneci MO, *et al.* Telemedicine in Radiation Oncology: Is It Here to Stay? Impacts on Patient Care and Resident Education. *Int J Radiat Oncol Biol Phys* 2020; 108(2): 416–420. doi:10.1016/j.ijrobp.2020.06.047

16 Smallwood N, Karimi L, Bismark M, *et al.* High levels of psychosocial distress among Australian frontline healthcare workers during the COVID-19 pandemic: a cross-sectional survey. *Gen Psychiatr* 2021; 34(5): e100577. doi:10.1136/gpsych-2021-100577

17 Darafsheh A, Lavvafi H, Taleei R, Khan R. Mitigating disruptions, and scalability of radiation oncology physics work during the COVID-19 pandemic. *J Appl Clin Med Phys* 2020; 21: 187–195. doi:10.1002/acm2.12896

18 Pilar A, Gravel SB, Croke J, Soliman H, Chung P, Wong RKS. COVID 19's Silver lining - through the eyes of radiation oncology fellows. *Adv Radiat Oncol* 2020; 6: 100527. doi:10.1016/j.adro.2020.07.004

19 Eriksen JG, Boldrini L, Gershkevitsh E, *et al.* Postgraduate education in radiation oncology during the COVID-19 pandemic - What did we learn? *Tech Innov Patient Support Radiat Oncol* 2022; 24: 73–77. doi:10.1016/j.tipsro.2022.09.008

Data availability. The data that support this study will be shared upon reasonable request to the corresponding author.

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