

# Addressing leadership communication, parenting demands and mental health challenges: a mixed-methods case study of clinical and translational scientists during COVID-19

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## ABSTRACT

**Background** In March 2020, academic research centres in Colorado were closed to prevent the spread of COVID-19. Scientists and research staff were required to continue their work remotely with little time to prepare for the transition.

**Methods** This survey study used an explanatory sequential mixed-method design to explore clinical and translational researcher and staff experiences of the transition to remote work during the first 6 weeks of the COVID-19 pandemic. Participants indicated the level of interference with their research and shared their experiences of remote work, how they were impacted, how they were adapting and coping, and any short-term or long-term concerns.

**Results** Most participants indicated that remote work interfered with their research to a moderate or great degree. Participant stories illuminated the differences of remote work prior to and during COVID-19. They described both challenges and silver linings. Three themes that highlight the challenges of transitioning to remote work during a pandemic were: (1) Leadership communication: 'Leadership needs to revisit their communication strategy'; (2) Parenting demands: Parents are 'multitasked to death' every day and (3) Mental health challenges: The COVID-19 experience is 'psychologically taxing'.

**Conclusions** The study findings can be used to guide leaders in building community, resiliency and support productivity during current and future crises. Potential approaches to address these issues are proposed.

## BACKGROUND

The COVID-19 pandemic has challenged the health, safety and livelihood of citizens worldwide. In the USA, federal and local governments declared health emergencies to limit the spread of COVID-19.<sup>1</sup> In March 2020, the Governor of Colorado implemented a mandatory statewide stay-at-home order.<sup>2,3</sup> Across Colorado, offices, schools, laboratories and businesses were closed and citizens were instructed to remain home except for crucial activities.<sup>2</sup> For the first time, Colorado-based clinical and translational scientists and research staff were asked to continue their research from home. Those in leadership positions were asked to support researchers and staff who had minimal experience with remote work and were dealing with the personal, family

## WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Clinical and translational scientists were asked to work from home during the first months of the COVID-19 pandemic to ensure the continuation of vital research.
- ⇒ It is known that leadership response is critical in times of crisis.

## WHAT THIS STUDY ADDS

- ⇒ This study indicates that leadership communication along with attention to parenting demands and mental health challenges were factors that supported or hindered scientists working from home.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE, OR POLICY

- ⇒ Leaders at all levels have a responsibility to foster community, belonging and wellness during times of crises.

and societal stressors of living and working during a pandemic. With no time to prepare, researchers and staff rushed to create home offices while leaders looked to each other and to national organisations for guidance. During this time, there were concerns that stay at home orders would delay vital scientific research,<sup>4</sup> as leaders and staff struggled to adapt to remote work.<sup>5</sup>

Remote work is common in many professions, but not standard practice for clinical and translational scientists and staff. This is because clinical scientists work directly with human subjects or on materials of human origin, such as tissues, specimen and cognitive phenomena. Translational scientists apply discoveries generated during laboratory research and preclinical studies to the development of trials and studies in humans. The existing remote work literature primarily focuses on employees who volunteer to work outside of office settings.<sup>6</sup> This group seeks remote work opportunities to increase work-life flexibility,<sup>7</sup> reduce commute times<sup>7</sup> and reduce office distractions.<sup>8</sup> Though many benefits are reported, voluntary remote workers also report increased feelings of social and professional isolation, missed informal learning opportunities and decreased support from leaders, peers and institutions.<sup>7</sup> Takeaways from this body of literature



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are that leaders must assume more responsibility for community building, creating learning opportunities and making staff successful when working from a distance.<sup>9</sup>

For clinical and translational scientists and staff newly working from home during COVID-19, establishing new methods of leading, managing, communicating and collaborating was critical. Simultaneously, these scientists and staff learnt how to share a workspace with roommates or family while navigating the uncertainty of the pandemic, and providing social, emotional and homeschooling support to children.<sup>10</sup> To ensure vital scientific research continues throughout the COVID-19 pandemic and in future emergencies, it is essential to explore how this novice group of remote workers adapted and were supported by leadership in the early weeks of the crisis. Recent work illustrates that leadership response can be critical in times of crisis, but it is unknown how leadership responds to the COVID-19 pandemic impacted clinical and translational scientists.<sup>11 12</sup> The objective of this paper is to describe early pandemic work experiences of Colorado clinical and translational scientists and staff. Using this understanding, we propose solutions to foster community, belonging and wellness among scientists and other professionals working remotely.

## METHODS

### Design and setting

This study employed an explanatory sequential mixed methods research design (quantitative → QUALITATIVE=explanation), which included a quantitative survey with qualitative open text items.<sup>13</sup> The qualitative results built better understanding of the quantitative survey findings. Due to the time sensitive nature of this work, the survey used a convenience sample consisting of members of the Colorado Clinical and Translational Sciences Institute (CCTSI). The survey methods have been previously published.<sup>14</sup> In brief, the CCTSI is a Clinical Translational Sciences Award site funded by the US National Center for Advancing Translational Sciences to provide resources to support basic, translational and clinical researchers to move scientific discoveries to clinical innovations.<sup>15</sup> Based at the University of Colorado Anschutz Medical Campus, the CCTSI partners with multiple hospitals and academic institutions. Four invitations to participate in the survey were sent to current CCTSI members (eg, faculty and staff of the multiple partner institutions) over the age of 18 years old (n=5067). The survey opened 28 April 2020 and was available until 11 May 2020.

### Remote work survey

Survey questions were drawn from the remote work literature,<sup>16–18</sup> experiences posted to Twitter (#remote work; #WFH) in the first weeks of COVID-19, and the authors' personal experiences with remote work. The following demographics were captured in the survey: Respondent's age, professional credentials, gender, faculty investigator level, CCTSI partner site and prior remote work experience. Participants rated the extent to which remote work during COVID-19 interfered with their research activities (ie, does not interfere, interferes somewhat, interferes to a great extent). The survey included an optional open text prompt asking respondents to: 'Please share how you are doing during the COVID-19 pandemic. In your story, please consider including information on: How remote work during the COVID-19 pandemic has impacted you; How you are adapting; How you are coping; Your concerns in the short and long term.'

## Statistical and qualitative analyses

Survey data were exported from RedCap to SPSS (IBM, V.27) for descriptive analyses of the quantitative data and to ATLAS.ti Scientific Software for the qualitative data. The data were stratified by the extent remote work during COVID-19 interfered with research activities. Responses to the open-ended question were analysed using iterative, inductive–deductive content analysis to identify themes.<sup>19 20</sup> Initial code categories were based on factors related to work structures (eg, leadership, communication, workspace and infrastructure), expressions of emotions and facilitators/barriers to working remotely. Inductive codes were used to identify emergent ideas and were added throughout coding. Consensus was reached using a team-based approach.<sup>20</sup> Three analysts (CL, BC and HG) group coded 20% of responses and discussed points of disagreement. Analysts met weekly to discuss their own expectations of the data and record any biases they might have due to their own remote work experience.<sup>19</sup> Analyses continued with emergent themes, with attention to differences between groups who reported none, somewhat and great interference with their research. These conversations included a discussion of biases, reactions to the data and how biases may have contributed to analysts' interpretation of interview content.

## RESULTS

Of the 5067 current CCTSI members, 322 (6%) responded to the survey and 260 (5%) completed the open text item. Most participants were female (n=198, 76%), 21–73 years old (mean=42 years), with a PhD (n=117, 46%), master's (n=63, 25%) or practice doctorate (MD, PharmD, JD) (n=39, 14%). The most frequent research role reported was faculty investigators (n=135; 52%) at the assistant professor level (n=52; 39%), followed by research clinical staff (n=82; 32%). Very few respondents reported experience working from home; 51% (n=133) had never worked remotely and 27% (n=69) reported working remotely only once a week prior to the pandemic. Only 11% (n=28) had previously worked from home >2 days a week. Remote work during COVID-19 was reported by 44% (n=113) of participants to somewhat interfere with their research. For 33% (n=85), remote work interfered to a great extent (table 1).

### Qualitative findings

Participants' stories illuminated the difference between working from home prior to COVID-19 and working from home during COVID-19. A female research clinical staff summarised it as, 'We are not working from home, rather working through a pandemic.' Despite the challenges they faced, many participants described silver linings and interest in continuing to work from home after the pandemic. We identified three themes related to the CCTSI members experiences transitioning to remote work during the first weeks of COVID-19: leadership communication, parenting demands, and mental health challenges.

#### Leadership communication: 'leadership needs to revisit their communication strategy'

Many participants described concerns over their university, department and team communication during the early weeks of COVID-19. Many who experienced great interference with their research voiced disappointment with the lack of comprehensive plans and clear communication. A female, faculty investigator voiced the concern of many, 'Leadership needs to revisit their communication strategy to something a little more transparent, fact-based and timely,' Some shared that the difficulties they were

**Table 1** Summary of survey responses (n=260)

Questions and responses	N	%
What is your age? Mean (median)	42.9 (41)	
Gender (N=260)		
Female	198	76.2
Male	61	23.5
Prefer not to answer	1	0.4
Non-binary	0	0
Degree (N=257)		
PhD	117	45.5
Masters	63	24.5
Practice doctorate (MD, PharmD, JD)	39	15.2
Bachelors	37	14.4
Associates	1	0.4
Faculty investigator role (N=134)		
Assistant professor	52	38.8
Associate professor	34	25.3
Professor	31	23.1
Instructor/senior instructor	14	10.4
Other	3	2.2
Research role (N=260)		
Faculty investigator	135	51.9
Research clinical staff	82	31.5
Research administration	20	7.7
Non-faculty investigator	19	7.3
Research support staff	4	1.5
CCTSI partner site (N=260)		
University of Colorado Anschutz Medical Campus	203	78.1
Children's Hospital Colorado	67	25.8
University of Colorado Hospital	24	9.2
University of Colorado Boulder	19	7.3
University of Colorado Denver	15	5.8
Colorado State University	10	3.8
Rocky Mountain Regional VA Medical Center	7	2.7
Denver Health	5	1.9
Kaiser Foundation Research Institute	5	1.9
National Jewish Hospital	2	0.8
Prior to the remote work recommendation for COVID-19, how many days a week did you work from home? (N=260)		
0 days	133	51.1
1 day	69	26.5
2 days	30	11.5
3 days	9	3.5
4 days	5	1.9
5 days	9	3.5
6–7 days (Monday-Friday, plus some weekends)	5	1.9
To what extent does remote work during COVID-19 interfere with your ability to conduct your research activities? (N=260)		
Does not interfere	62	23.8
Interferes somewhat	113	43.5
Interferes to a great extent	85	32.7
CCTSI, Colorado Clinical and Translational Science Institute.		

experiencing had not been fully acknowledged, causing uncertainty about how teams were to continue working from home. For example, a faculty investigator shared her frustrations, 'I feel this situation was presented as 'temporary' and that we were in crisis mode. However, now that we're 6 weeks in and there's

no clear end in sight—I would appreciate if leadership would reflect that and start providing plans.' Another female faculty investigator mentioned that unclear communication regarding current expectations and plans caused unnecessary stress and anxiety, 'Having the [leadership] email come out and then the more detailed plan emailed a day later created panic, confusion and fear.'

Many organisations instituted hiring freezes during this time. Participants voiced frustration and lack of understanding with this blanket policy and how it impacted their work. A female non-faculty investigator shared, 'A major concern is that we are not allowed to hire more people to conduct our program's research... It is very frustrating that while we have grant funds for personnel, we are not able to use them.' Another female faculty investigator wrote 'I bring in millions of grant funding... these decisions are going to hurt many investigators like myself...'

Communication from team leads and mentors specific to research activities, career and personal health were viewed as absent by some or confusing by others. A female faculty investigator shared, 'There's been no communication acknowledging the impact that this situation has on those of us that are dependent on human subject data or what the plan may be moving forward.' Another female faculty investigator indicated, 'I had to stop working on my grant because my teaching workload tripled to switch my class online with a very short notice. Not sure what to expect from the leadership regarding this and how promotions will be managed.' A female research clinical staff commented on frustrations with lack of communication from her mentors, 'Without any communication from mentors, I am only guessing at the expectations and goals.'

Many participants described receiving mixed messages. The times were acknowledged as challenging, but researchers were also encouraged to maintain productivity. A female faculty investigator shared; 'It often feels like leadership is simultaneously telling us to take care of ourselves and our families but also emphasizing how much productivity matters.' In some cases, there was no communication, as described by a research clinical staff member, 'Was doing fine until furloughed. I understand the need, but not to receive a personal phone call from department chair to show concern or express confidence shows lack of concern and respect for employees.'

Examples of support from front line or team leaders came from those who reported minimal research interference. A research clinical staff member shared, 'My principal investigator is incredibly helpful and encouraging, has come up with new ways and systems to facilitate productivity, regularity, and consistency in our team ...' A faculty investigator noted, 'My supervisor has been very understanding and flexible with when I get my work done...' and a research administrator expressed, 'I truly feel that my work is valued by my bosses.' This suggests that communication from front line, team leaders can have a significant positive impact on individuals.

### Parenting demands: parents are being 'multitasked to death' every day

Participants with children described challenges working from home while parenting. Attempts to maintain productivity and work-life balance was exhausting for many, as expressed by a female faculty investigator, 'Society thrust new responsibilities on parents with remote learning. This means we are multitasked to death every day.' Another female faculty investigator shared, 'I am caring for a young daughter—any time that is not in structured meetings or telehealth encounters is spent caring for her.'

A male faculty investigator echoed this experience, 'Overall, I have been much less productive than if I was not having to balance childcare with getting work done.'

Participants with children also discussed how they were impacted by the closure of day care centres, schools, sports and child activity programmes. A female faculty investigator explained, 'The pandemic has... taken away many of the things that allowed me to work previously: loss of school and activities for kids...' Another faculty investigator described wearing many hats, '...I am in mom-mode 24/7 now. I spend my days bouncing between being a full-time chef, housekeeper, 7th grade teacher, 5th grade teacher, classroom manager, and school counselor.'

Remote learning was a significant stressor because schools were not prepared, and many children could not manage their own learning. As a female faculty investigator shared, 'I have a first grader and I am now responsible for her education. I feel like every day I have to choose between ignoring my work or her school.' Parents shared that supporting the educational and emotional needs of their children was a priority, but stressful. A female faculty investigator summed it up for many, 'I am frazzled, constantly distracted and stressed... Every day is a failure of some sort.' Multiple participants expressed concerns over the long-term loss of childcare options. A female faculty investigator shared, 'The thought of kids at home all fall too strikes fear. How long can we work a job that takes more than full time anyways AND home school 3 other people.'

The differential burden of parenting on job types and genders was a frequent topic. A female faculty investigator explained, 'My spouse is also in healthcare, but because I do research and have more flexibility for where I can work, the childcare responsibility and schooling falls on me.' Another female faculty investigator reflected, 'COVID has exacerbated the usual 'second shift' imbalances on me as the wife in a two academic physician household...' The professional impact on women working full-time and parenting full-time was a notable and recurring concern, and lack of leadership acknowledgement of the situation exacerbated participants' stress. A female faculty investigator shared, 'In the longer term, I am concerned that I won't be able to publish as much as my colleagues, that I won't be able to compete for research grant funding that my colleagues are applying for, that my department will have to cut funding and reduce my salary and that will have serious impacts on my family's financial well-being.' To maintain some productivity while parenting, many reported working long hours, as described by a female faculty investigator, '... I'm losing sleep staying up late to get any work done that might require more focus and attention than I can give during the day. I haven't gone to sleep before midnight in weeks...'

Poor communication from leadership was often mentioned with regards to parenting and work during COVID-19. A female faculty investigator shared, 'there has been little acknowledgement about how this situation has impacted my research or my personal life. (We are now balancing 2 full time jobs and 3 kids with no school/childcare.) [...] There's been no communication acknowledging the impact that this situation has on those of us that are dependent on human subject data or what the plan may be moving forward. I am anxious about what the future looks like. I feel incredibly vulnerable as an assistant professor and fearful that I will have limited progress for my grants as well as for tenure.' A female research clinical staff member described her challenges with productivity and family life, '... I feel like I am working constantly and that the boundaries between home and work are nonexistent. There seems to be an assumption that people have more time to engage in this work but having a young

child at home and a spouse who is also working from home often means that I have to work in short bursts or at random times. I am fearful that if I do not 'prove my worth' and indicate that I am constantly available that I will be furloughed.' A female research administrator described a work structure that allowed for flexibility between work and childcare, 'I feel luckier than a lot of people that I am in a situation in which I can work from home and mostly be productive while also caring for my children ... I also am very lucky to work in a unit that prioritizes flexibility, and grants a lot of autonomy to my job.'

### Mental health challenges: the COVID-19 experience is 'psychologically taxing'

Almost all participants who expressed negative impacts on their mental health also reported some or great interference with their research. The pandemic and working from home generated anxiety about their own health and safety, along with concerns for family and colleagues. A female faculty investigator shared, 'I have found the whole COVID experience to be extremely psychologically taxing as I worry about the health of my family.' A female research clinical staff expressed, 'I am worried about my coworkers inside and outside the hospital and how they are dealing with things.' The stay-at-home restrictions were challenging for those who live alone, 'I live alone and was fairly isolated before the pandemic, so not being able to go to work and interact with coworkers and study subjects as normal has been very difficult. My mental health is definitely suffering. [...].'

The many unknowns surrounding the COVID-19 pandemic were a significant stressor, as described by a female research clinical staff, 'I was unable to get significant amounts of work done for at least the first 2–3 weeks of work from home because my mind could not settle on the work because my non-work life was filled with uncertainty, stress, and fear.' While a female faculty investigator described: 'There are good days and bad days, and no way to predict which one is coming next [...] It is difficult to lead a group when there are so many unknowns.' A lack of communication about returning to work was a stressor for some participants. A female faculty investigator shared her worries that she would be asked to return to work in unsafe conditions due to messaging from her leadership, 'I just couldn't live with myself if I exposed my family member to the virus because of work. This makes it tough to figure out the timing of returning to the clinical spaces, especially when my PIs seem to be a bit annoyed that we are all still at home and 'have it easy' as one stated. It is difficult to have this discordant experience with the [principal investigators].'

Notably, several participants also reported improved mental health during remote work. These participants were also those who reported no interference with their research. Many in this group reported decreased stress, as noted by a research clinical staff, 'I have actually felt less stressed and happier since I've been working at home.' A female faculty investigator shared that she experienced reduced stress and had more time for non-work activities, 'I have loved this change for my family [...] No stress of driving into work, don't feel spent by the end of the day, and get to see my family more. I am a happier, more balanced person, despite the worries COVID-19 has introduced into daily life.' Some participants described the role of supportive leadership in their positive work from home experience. A female faculty investigator stated, 'I am VERY lucky. I can easily do 100% of my work from home (and actually prefer this)—feeling extremely supported by supervisors and administration to continue working from home as long as I need. I feel far more productive

here than I do commuting.’ These participants expressed their wishes to continue working from home after the pandemic. A female research clinical staff member stated, ‘Given that the staff has proven their ability to work remotely, I am hopeful that a regular work from home policy will be put in place after the pandemic has diminished.’

## DISCUSSION

We identified three themes related to remote work during the first 6 weeks of the pandemic response in the USA. These included leadership communication, parenting demands and mental health challenges. There were notable differences in expressions of positive and negative emotions between those who reported no interference with their research and those who reported some or great interference. These differences highlight that for some, the move to remote work during COVID-19 was merely a bump in the road. For others it was a life-changing, stressful event. The population in this study was unique for they could not effectively conduct their research from home. They work with laboratory specimens or patient populations to whom there was no access. However, their experiences provide lessons that are generalisable to remote workers during a time of crisis. Here, we discuss our findings and share actions and implications for leader communication across healthcare and science to build community, resiliency and support productivity during current and future crises, and to support those who continue to work remotely or in hybrid contexts as workplaces reopen.

Remote work in the time of COVID-19 looked and felt different than remote work before the pandemic. Specifically, remote work during COVID-19 was mandatory and occurred during a worldwide crisis. Most existing literature is in the context of occasional remote work that is largely voluntary.<sup>21</sup> As a result, previously perceived benefits did not represent the experience of those who suddenly moved to full-time remote work during COVID-19. While respondents indicated both positive and negative experiences, there was a clear need for more support for newly remote workers to help address their individual challenges. The literature provides guidance on building great teams that applies during times of unrest and uncertainty.<sup>22</sup>

Many in our sample described infrequent or inconsistent communication regarding decisions that impacted their research and their careers. Front line or team leaders who work directly with staff are in a unique position to promote employees’ sense of belonging, connection and support<sup>23</sup> by allocating time on meetings to check-in with colleagues and recognising their efforts. Even brief, ad hoc conversations can be helpful.<sup>24</sup> Organisational leaders are responsible for effective crisis management, which requires effective planning and coordination skills as well as the ability to communicate clear consistent messages in an empathetic manner.<sup>25</sup> Communication by all levels of leaders should be frequent, timely and accurate and distributed through mediums used by the target audience.<sup>26</sup> In pre-pandemic remote work, social support was a strong predictor of work success and satisfaction.<sup>21 27</sup> Social support is likely more critical during COVID-19 due to the social isolation experienced while physical distancing. As workplaces continue to adapt to new conditions and in some cases move towards a hybrid remote/in person model, leaders at every level should focus on effective communication and building community within and between teams.

Many participants reported anxiety about the pandemic and the impacts on their mental health. There were many sources of anxiety during COVID-19 and no easy solutions.<sup>28</sup> Leadership can support the well-being of employees by actively listening

and acknowledging group concerns.<sup>28</sup> While some groups, such as working parents, faced additional stressors, the strategies to support them and build resilience are the same. Leaders can decrease anxiety by being visible and present, openly sharing their personal experiences, and connecting with teams rather than dictating.<sup>29</sup> Checking in with staff and providing them time to check in with family or friends can reduce stress and afford brief moments of recovery to build resilience.<sup>30</sup> Further, leaders can share mental health resources developed by national or local partners (eg, Mental Health UK, the US Centers for Disease Control or local public health departments), invest in local solutions designed by and for staff (eg, on-line wellness sessions) and routinely encourage participation.

Finally, many of our participants discussed concerns around productivity and work-life balance. There was a common perception that remote work during COVID-19 had created ‘extra time’.<sup>31</sup> However, this did not account for the additional responsibilities (eg, childcare, homeschooling) and new work (eg, Zoom meetings)<sup>32</sup> thrust on remote workers during the pandemic. To alleviate concerns about productivity and work-life balance, front-line leaders can help employees identify priorities, set achievable goals, minimise busy work and establish high-quality communication channels within the remote workplace.<sup>33</sup> Ensuring remote workers have autonomy in their day-to-day work can help employees manage career and family responsibilities.<sup>34 35</sup> Work autonomy can also decrease pandemic-related loneliness by increasing proactive behaviours such as initiating or engaging in online interactions and developing creative solutions to problems.<sup>21</sup> Strategies like prebriefing and postperformance huddles that allow groups to plan together and coordinate actions can also support community and productivity.<sup>36</sup> These sessions work best when supported by leadership and work for teams with stable or rotating membership.<sup>37</sup> Finally, leader-staff partnerships can help identify programmes to support work-life balance, such as local options for affordable and accessible childcare programmes for infant to school age children.

Other strategies, like enhanced monitoring, may hinder productivity during COVID-19. While in some instances monitoring can reduce procrastination, in the pandemic context, excessive monitoring may increase the perceived imbalance between ‘take care of yourself’ while ‘maintaining productivity’.<sup>21</sup> Despite the expectation that research continued during COVID-19, many scientists and staff expressed a short-term need to change expectations due to the extreme upheaval caused to society from the pandemic. To support expectation setting during evolving crises, leaders could challenge themselves to adopt new practices including modelling the way, inspiring a shared vision, challenging current processes, enabling others to act and encouraging the heart.<sup>12</sup>

## Limitations

The current study is a cross-sectional design conducted in the USA and represents a snapshot of participants’ experiences during the first 6 weeks of the COVID-19 pandemic. Further, our small (6%) convenience sample consisted predominantly of female respondents. This may have influenced the results due to the over-representation of responses from working women and/or those who were negatively affected by the pandemic. Thus, our findings may not be representative of all CCTSI members. Further, participants responses about leadership communication challenges were not always linked to a specific level of leader (eg, university president, dean, department chair, principal investigator), limiting interpretation. The

research team maintained open dialogue during the analyses and manuscript writing to assess the effect of our experiences as female scientists, new to remote work, with children at home and working within a large academic healthcare system with multiple levels of leaders and communication pathways. We minimised potential biases by reviewing findings with male colleagues, those with previous remote work experience, and those who worked across the clinical and translational spectrum.

## CONCLUSIONS

Our findings reflect a growing body of work that acknowledges the challenges of remote work during COVID-19 and adds important perspectives of clinical and translational scientists and staff. Most of our participants were first-time remote workers, and many were caring for children while trying to continue their research. Scientists and staff may require individualised attention from front-line leaders and mentors, including collaborative planning for how they can progress in their careers while accounting for the unique stressors of the pandemic. Further, our findings suggest that clear and consistent communication, as well as empathy and presence, are critical to maintain morale and mental health. Finally, the structures built during the COVID-19 pandemic can continue to foster remote or hybrid work for clinical and translational scientists when the pandemic ends. Specifically, front-line leaders should continue to support flexible work arrangements, and focus on individual and group health by hosting community activities (on-line or in-person). Organisational leaders should continue to support wellness and work-life programmes to ensure the health and satisfaction of their highly skilled and valuable workforce.

The COVID-19 pandemic and transition to remote work caused significant challenges to many, but lessons learnt during this time have the potential to create a more flexible, engaged and supported workforce. Future research should evaluate organisational and employee impacts of hybrid work on diverse professional groups to determine if the new normal is beneficial to individuals and society.

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