Mitigation of the gendered impacts of the COVID -19 pandemic on the medical research workforce

WiSPP appreciates that in this disrupted time, there are numerous considerations for medical research leaders working to support and protect their workforce from the potential impacts of the COVID-19 pandemic. “We are all in this together” is the rallying call of our political leaders and whilst the COVID-19 pandemic undoubtedly impacts on all individuals, some will experience inequities more severely than others.

To ensure that the pandemic response from organisations is as inclusive as possible, WiSPP has collaborated with its Equity in Medical Research Alliance to provide this brief position paper on the major risks and opportunities presented by the pandemic, and a suggested framework of key mitigation strategies.

Loss of productivity disproportionately affecting women

Risks:

Female researchers are at risk during this time of being disproportionately restricted in their capacity to undertake their paid work. There are early signs of gendered loss of productivity through this pandemic with journal submission data suggesting that it is disproportionately affecting women (1). Loss of productivity, specifically those that are currently considered as essential metrics for success, will negatively impact women’s capacity to obtain funding for research projects and succeed in promotions, both in the immediate term and with an accumulative effect over years as their track records are impacted.

Women risk disproportionate effects on productivity for several reasons depending upon their home situation, their role at work, and their position in decision-making hierarchies:

- Social distancing measures introduced to control the transmission of COVID-19, such as working from home and school closures, will have a differential effect on women who currently provide most of the informal care (62 percent) within opposite sex partnership with children (2). One of the caregivers may have to compromise if the other has a ‘higher’ level of responsibility; and too often, women will be forced to take this on.
- It is well established that women are disproportionately allocated or take responsibility for tasks that impact on their productivity and are not as valued in performance evaluations (3). During COVID-19 this might include redeployment to assist in managing the pandemic, pastoral care for vulnerable students and staff and taking on of routine lab tasks to reduce numbers in the lab and ensure safety of staff.
- Studies suggests men are more at ease with self-promotion than women, which contributes to the well documented disparity in promotions and pay (4). In the context of COVID-19, this could manifest as not promoting their work (in the case of students and postdocs) or the work of their team (in the case of group leaders) as ‘essential’. There is potential for a gender gap in researchers who have been able to progress essential lab work compared with those who have experienced disruption resulting in immediate and longer term productivity loss.

Mitigation:

Data is essential to understanding any potential gendered impacts of COVID-19. In the many studies that are or will be undertaken to assess the impact of COVID-19 on productivity, gender should be included to determine whether the impact is gendered. Importantly, gender must be recognized as an intersecting component of wider structural inequalities (age, disability, race/ethnicity and Indigeneity, migration status) (5).

In collaboration with members of our EMRA network, WiSPP has developed a suggested survey template of data that need to be considered at this time. We provide the survey as an appendix to this position paper. The survey has been developed in Qualtrics. For access to the online survey for your organisation to use as a basis to tailor to your needs, contact the WiSPP Project Manager on alice.tinning@florey.edu.au

Some ways organisations can mitigate the risk immediately and into the future:

- It is important to ensure all researchers are supported to work more flexibly in their paid work, allowing men and women to contribute equally to unpaid domestic work during this unprecedented time.
- Where decisions are made within an institution regarding redeployment or categorisation of 'essential' research, a gender lens should be applied, assessing the gender of both the person to be redeployed, and their manager.
- Assessment of career disruption statements due to COVID- 19 for funding applications and promotions will need to take into consideration how gender roles and norms have been reinforced or disrupted throughout the COVID-19 outbreak and its responses.

Opportunities:

***Normalising caring*.** Beyond the immediate negative impacts, it is possible that the situation will bring some residual positive outcomes on social norms that could contribute to greater equality. Throughout the crisis, the medical research sector has widely adopted flexible work arrangements. Through this experience we now know that this model of working, which allows for greater balancing of work and care responsibilities, is possible. Scientists may become more likely to host virtual meetings, or to enable people to join from remote locations. Equally, for families where both parents are home through this period juggling work and child care, fathers assuming primary or shared caregiver roles may have knock-on impacts on the division of labour and entrenched gendered roles post-crisis. **These shifts will need to be intentionally built on and solidified** (6).

More inclusive access to journal editors. An implicit norm in academic publishing is that publishing opportunities are facilitated by the informal socialisation of new stories at conferences, whereby academic editors meet with the attendee researchers (disproportionately advantaging senior researchers without carer responsibilities). In the current absence of scientific conferences, journals are beginning to provide formal pitch opportunities that are open to all (7). This has the potential to dramatically level the playing field, and should be embraced with strong support for EMCRs to take up (including pitch mentoring).

Reduced demands for manuscript acceptance. Journals are now making statements like this from J. Exp. Med: "Recognizing that it will not be feasible for some time to do non–COVID-related experiments in many, we will allow authors to add a section in the discussion regarding experiments requested by the reviewers that the authors cannot perform under the circumstances". This recognition that life gets in the way of research highlights what has often been the case for women in research (e.g. due to pregnancy, relocation for partner's work, loss of funding). Efforts could be made to ensure that we continue this recognition in publications after COVID-19.

Differential impact on productivity on established versus early/ mid-career researchers

Risks:

With 60 percent of senior positions in medical research held by men (8) the differential impact on productivity for established versus early/mid-career researchers is also a gendered one.

- The response to the pandemic has entailed a substantial reprioritising of experiments, reallocation of team tasks and effectively a redesign for many scientific roles. These changes could be far easier for a large research group to absorb, and so the need for this disproportionately disadvantages smaller labs (For instance, a large team might have two with overlapping expertise, who can share the load on essential experiments).

- Similarly, large labs and established investigators are far more likely to have papers ready to be written up, whereas an early/mid-career researcher is more likely to work on only one or two projects that are not yet ready for publication.
- Established researchers are more likely to have funding from different sources with greater resilience to the impact of a downturn in productivity. Of particular concern is the situation of an EMCR whose primary support is their own fellowship. This support cannot be deferred, but if the fellow is prevented from producing because of carer responsibilities or lack of access to the lab, their chance of renewal will be hindered. As funding opportunities are delayed or cancelled, the lost opportunity has more impact upon EMCRs or researchers with already limited funding, and might well lead to a loss of these people from the system.
- EMCR researchers are more commonly at a life stage in which they have caring and home schooling responsibilities. This means that they are more likely to be negatively impacted by school closures and experience reduced productivity during the pandemic (ability to participate in meetings, submission of competitive grant applications), compared to senior researchers.

Mitigation:

Evidence across sectors demonstrates unquestionably that policies that do not consult women or include them in decision-making are simply less effective, and can even do harm. **It is essential to ensure women's equal representation in all COVID-19 response planning and decision-making** (9).

There are several practical ways to mitigate the risks for early and mid-career researchers:

- With the easing of restrictions and the staggered return to the lab, prioritisation of the needs of vulnerable teams should be considered.
- Institutions could specifically target EMCR fellowship holders for ongoing financial support to overcome this potential gap in funding opportunities.
- Automatically extend eligibility requirements by one year for time-limited opportunities such as promotions and grants (10).
- Institutions could support the access of new approaches to pitching research articles to EMCRs.
- As part of the redeployment exercise, institutions could assess what activities EMCRs and carers require to keep their work on track, and provide appropriate help. This can include editing, figure generation etc for manuscripts and grant applications.
- Efforts could be made to ensure maximum reward for redeployed staff and students – for instance, where they provide routine services, try to mould the experience as a career development opportunity by including them in strategy and teams where possible.

Opportunities:

***Flexible work*.** The need for the reallocation of team tasks and responsibilities and redeployment activities, has presented an opportunity to re-design the nature of scientific work. With the gradual return to the workplace and ultimately the return to full capacity there is an opportunity to **collectively reconceptualise a new "normal" for the scientific workforce.**

Many organisations that were previously reluctant to encourage flexible work or job sharing have now incorporated these, and could now take this opportunity to assess the impact on productivity and staff/manager satisfaction. Similarly, working from home, and including off-site members in meetings, is now standard practise, which increases flexibility. The blending of work and family necessitated by working from home has often been made public, often by senior and successful scientists of all genders. **These practices create an inclusive culture, and should be deliberately sustained post-COVID-19.**

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APPENDIX 1
Mapping the impacts of the COVID -19 pandemic on the medical research workforce

Q1. Using this scale of negative to positive, please tell us how have the changes associated with COVID-19 impacted your:

	Extremely negative					Neither positive or negative				Extremely positive
	-5	-4	-3	-2	-1	**0**	1	2	3	4	**5**
Lab work											
Publications											
Grant applications											
Conference/seminar presentations											
Promotion of your work											
Opportunities for leadership											
Management of students											
Management of direct staff											
Undergraduate teaching											
Access to professional support services (finance, ordering, grant support, research services, animal facilities, platforms)											
Interactions with colleagues											
Stress and mental health											
Feeling of career stability											
Personal financial stress											

Q2. Please comment on anything has been particularly disruptive to you during COVID 19

Q3. Please comment on unexpected benefits to you during COVID 19

Q4. Please comment on any initiatives taken by your workplace or others that have been particularly effective at supporting you during this time:

Q5. What state/territory/country are you located in?

- ☐ Victoria
- ☐ Queensland
- ☐ New South Wales
- ☐ Northern Territory
- ☐ South Australia
- ☐ Western Australia
- ☐ Tasmania
- ☐ New Zealand

Q6. Gender Identity

- ☐ Male
- ☐ Female
- ☐ Non Binary
- ☐ Self-described (please describe - description is optional)_____
- ☐ Prefer not to say

Q7. What is your current employment status?

- ☐ Full –time in medical research
- ☐ Part-time in medical research
- ☐ Not employed in medical research
- ☐ Studying as higher degree research student

Q8. What are the terms of your employment?

- ☐ Permanent
- ☐ Contract
- ☐ Casual
- ☐ Self - employed
- ☐ NA
- ☐ Other (please specify) _____

Q9. If on contract, how long do you have remaining on the term of your contract?

- ☐ Less than six months
- ☐ Six months
- ☐ One year
- ☐ Two years
- ☐ More than two years

Q10. What type(s) of organisation do you work for?

- ☐ Government research organisation
- ☐ Health service/Healthcare provider
- ☐ Medical research institute
- ☐ Private sector company
- ☐ University
- ☐ Other (please specify)- _____

Q11. What type(s) of research do you undertake?

- ☐ Commercialisation
- ☐ Public Health
- ☐ Health Services Research
- ☐ Clinical Medic Science
- ☐ Basic Science
- ☐ Other (please specify)_____

Q12. What is your career stage?

☐ Early ☐ Mid ☐ Established

Q13. Are you responsible for a research team or lab?

- ☐ Yes (If yes, please tell how many people are in your team) _____
- ☐ No

Q14. If responsible for teaching duties, what percentage of your time was allocated to teaching commitments?

0 10 20 30 40 50 60 70 80 90 100

Before COVID 19	
During COVID 19	

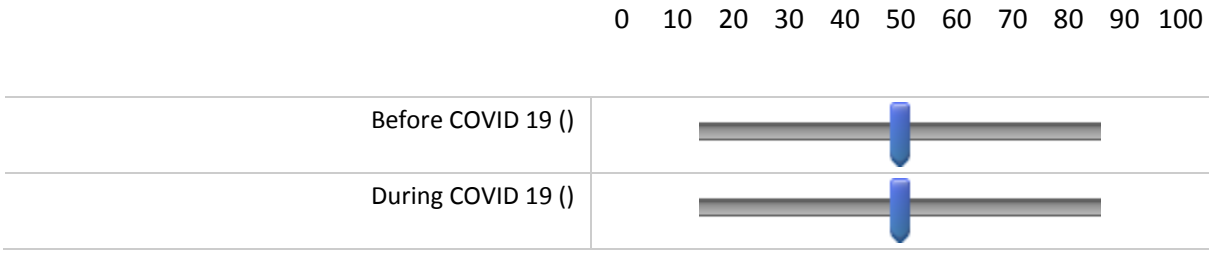
Q15. Do you have dependents in your care?

- ☐ Yes
- ☐ No

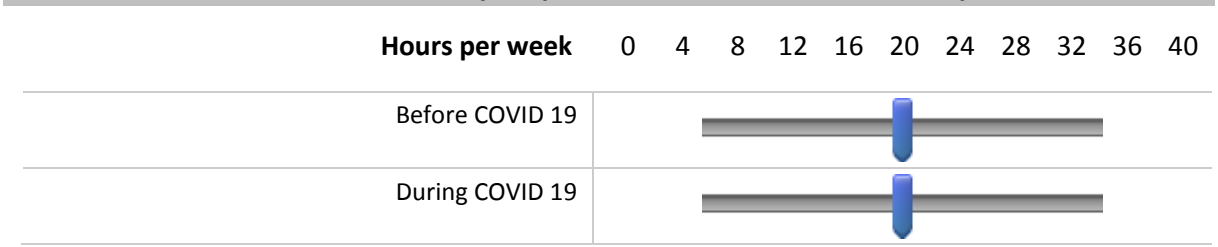
Q16. If you have dependents in your care, how many?

Q 17. If you have dependents in your care how many hours per week was/is spent on caregiving?

Q14 **If you have dependents in your care how many hours per week was/is spent on caregiving?**



Q18. What was/is the estimated time you spend on domestic chores in hours per week?



Q19. Please tell us when your affiliated university transitioned to online teaching.

Q20. Please tell us when/if your Institution shut down lab based research.