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Gender equity in the medical technology sector

Report to the Medical Technology Association of Australia (MTAA)



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EXECUTIVE SUMMARY

Compared to the wider workforce, women are underrepresented in STEM industries, including in the medical technology (MedTech) sector and related industries (Pettersson, Talley, Pritchard, Karbe, & the HBA E.D.G.E. in Leadership Study Team, 2007; Shepherd, 2018). Cognisant of this problem, the study aims to understand the barriers and enablers to achieving gender equity in MedTech and to provide guidance to industry leaders on the practices and strategies that are key to promoting gender equity.

Findings are based on interviews with 55 employees from 14 MTAA member organisations conducted during 2020. The intention is to continue this research by using insights gained from these interviews for a broader survey of MTAA member firms. The report provides detail on the emergent themes from these interviews, presented as macro, meso and micro barriers and enablers to gender equity.

The data reveal a belief that while [macro \(societal level\) barriers](#) to gender equity persist, with gender and “ideal worker” norms still holding women back, macro factors, such as generational and societal attitude changes, are enabling progress. The consequences of the COVID-19 pandemic were positive and negative for women, with some taking on a “double-load” while working from home, while others reported a significant normalisation of flexible work, a process believed to be an important enabler of gender equity.

At the [meso \(industry level\)](#), barriers included a limited talent pipeline, the current representation of women in leadership roles and some customer segments that were male dominated. By contrast, interviewees believed that the sector is making the business case for gender equity, creating formal recognition of the issue and in some cases engaging with higher education providers to enable positive change.

At the [micro \(organisational level\)](#), barriers to gender equity included poor organisational culture and ownership of the gender-equity agenda and/or awareness of formal policies designed to ensure it. The data summarised as organisational-level enablers illuminated perspectives on [good or “best practice”](#) summarised around four themes.

Recruitment & promotion	Talent development	Measurement & leadership	Flexible & supportive HR practices
<ul style="list-style-type: none"> • Gender balanced slates & panels • Gender neutral job descriptions • Focus on talent vs experience • Diagnosing why women don't apply. 	<ul style="list-style-type: none"> • Leadership development targeted to women • Mentoring • Succession planning • Measurable targets 	<ul style="list-style-type: none"> • Driven by senior leadership rather than HR. • KPIs measured and tracked. • Forums & working groups 	<ul style="list-style-type: none"> • Facilitating flexible work for all. • Supportive leave options. • Showcasing women & men taking up these initiatives

An important characteristic of the study design was its focus on management practice. The practical focus is manifest in the question, what really matters? Overall, our analysis suggests that the following elements are [what matters most](#) for gender equity in MedTech organisations – presented as six **Principles for Management Practice**.

Principle 1	<u>Measurement matters</u> : Gender goals must be measured
Principle 2	<u>Formalisation matters</u> : Gender goals must be formalised.
Principle 3	<u>Articulation of the business case matters</u> : Gender equity is good business.
Principle 4	<u>Flexibility matters</u> : Like it or not, flexible working matters.
Principle 5	<u>Normalisation matters</u> : Within and across organisations, the normalisation and profiling of equity matters.
Principle 6	<u>Job design matters</u> : Rethinking the ‘traditional’ role and how organisations present job design in recruitment and promotion matters to the talent pool.

BACKGROUND

In 2018, the Medical Technology Association of Australia (MTAA) held a workshop with six of its member organisations in an effort to “to lead the debate and promote the benefits of gender diversity in the workplace” (MTAA, 2018, p. 3). As a part of this process, there was recognition that gender diversity would:

1. Impact positively on medical technology (MedTech) business results.
2. Help address the predicted skills shortage in the sector.
3. Reflect an evolving customer base in which an increasing number of senior medical roles are held by women.
4. Assist in redressing gender disparities in the sector as an ethical imperative (MTAA, 2018)

To further progress these objectives, the MTAA partnered with the University of Newcastle and Macquarie University to undertake a research study that aimed to:

1. Understand the barriers and enablers to achieving gender equity in MedTech.
2. Understand the practices that support the achievement of gender equity in MedTech.
3. Provide sector specific guidance regarding the practices and strategies that are most important for gender equity in MedTech organisations irrespective of size.

RESEARCH TEAM

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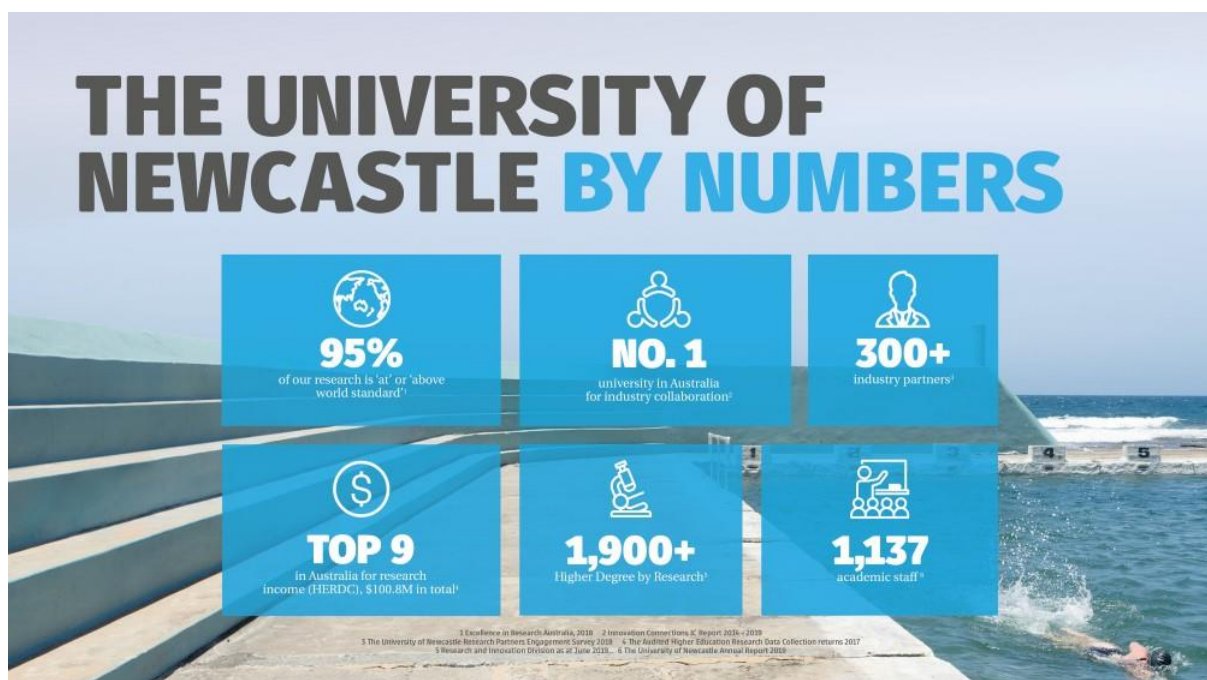
Rebecca Mitchell (PhD) Professor of Organisational Psychology. Director Health and Wellbeing Research Unit @ Macquarie University [HoWRU](#)

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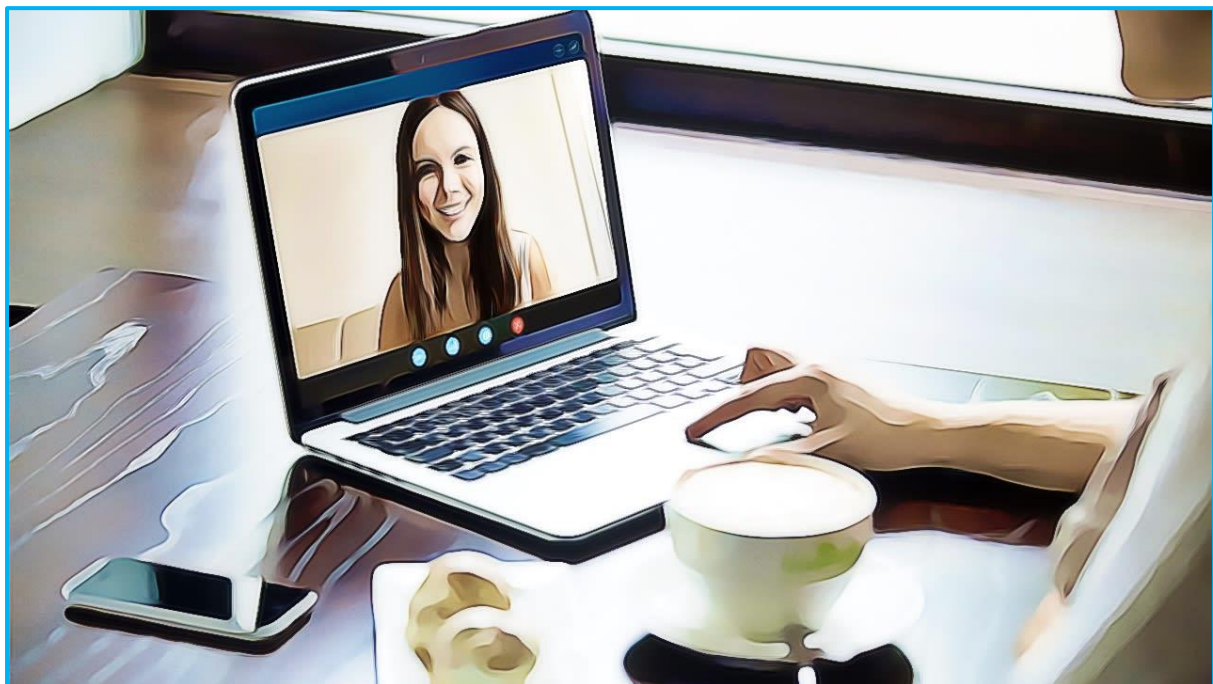
Caragh Brosnan (PhD) Associate Professor of Sociology, University of Newcastle.



METHOD & STUDY SAMPLE

The research project uses a sequential, mixed method design, incorporating both qualitative (interview) and quantitative (online survey) data collection. The first phase of the project involved conducting detailed interviews with a sample of key stakeholders, enabling the researchers to collect rich descriptions of individual experiences, social processes, and the policies and practices which impact gender equity within different organisational contexts (Gephart Jr, 2004). The findings from the interviews will inform the development of the second stage of data collection - an anonymous, online survey which will be distributed to a broad sample of employees within the MedTech sector in 2022. The survey items will be developed in conjunction with the MTAA, and will include for example, multiple-choice questions relating to demographic information, work-family conflict, career satisfaction and aspirations, turnover intentions, and perceived organisational support. This online survey will facilitate access to a larger sample of participants compared to what can be achieved via interviews, and the researchers will use statistical analyses of the survey responses to assess cause-and-effect relationships (Johnson & Onwuegbuzie, 2004). Collecting data from both interviews and an online survey provides greater insights about complex phenomena compared to what can be achieved using a single research method, therefore more robustly informing future policy and practice for the sector (Johnson & Onwuegbuzie, 2004; Molina-Azorin, 2016).

Here we report findings from the first stage of the study, based on interviews with a total of 55 employees from 14 MTAA member organisations conducted during the period from February to October 2020. Each participant voluntarily consented to take part in a confidential, anonymous interview which was audio recorded and transcribed. All except four of the interviews were conducted using Zoom. The research protocol was approved by the University of Newcastle Human Research Ethics Committee (No. H-2019-0345).



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Interviewees were asked questions about their perceptions on the key issues relating to gender equity, what strategies their organisation has implemented, and the barriers and enablers to the achievement of gender equity. Interview transcripts were thematically analysed, with coding undertaken by three researchers independently and their findings

compared for reliability (Braun & Clarke, 2006). This coding process required the research team to accurately summarise the key themes (as presented throughout this report), but also to engage in an increased level of abstraction based on these themes with the goal of concluding on what matters most for gender equity in organisations. With these insights a large-scale measurement of what matters is achievable (stage 2) and evidence-based principles for good management practice can be established.

Nine of the firms involved in the study were classified as large, and five as small to medium sized based on Australian Bureau of Statistics definitions (ABS, 2002). Just under three-quarters of the interviewees were female (74%). Forty percent of the sample were chief executive officers or senior managers, 40% were middle managers, and 20% were human resources (HR) managers. On average, we interviewed 4 people in each participating organisation. The detailed characteristics of the study sample are presented overleaf in Table 1.

Table 1: Study sample characteristics							
Company Code	Size	Gender		Employee Category			
		Male	Female	SM/CEO	MM	HR	Total
Company A	LGE	1	4	2	2	1	5
Company B	LGE	0	1	0	0	1	1
Company C	LGE	0	3	1	1	1	3
Company D	SME	2	2	1	2	1	4
Company E	SME	3	4	4	2	1	7
Company F	LGE	0	2	0	2	0	2
Company G	LGE	2	2	2	1	1	4
Company H	SME	0	4	3	1	0	4
Company I	LGE	2	2	3	0	1	4
Company J	LGE	1	4	2	2	1	5
Company K	SME	1	4	0	4	1	5
Company L	SME	1	5	4	1	1	6
Company M	LGE	0	1	0	1	0	1
Company N	LGE	1	3	0	3	1	4
Total		14	41	22	22	11	55

Legend Company size: SME <200 employees, LGE 200+ employees in Australia, using ABS definitions (ABS, 2002).
Employee category: SM/CEO – Senior manager/chief executive officer; MM – middle manager; HR – human resources manager

FINDINGS

The barriers and enablers to achieving gender equity in the sector have been categorised as macro (societal), meso (industry-wide) and micro (organisational) factors and are summarised in figure 1 on page 7. This framework reflects the most logical broad categorisation of the interview data.

In terms of macro (societal) barriers, leadership, and gender norms continue to undermine the achievement of gender equity goals. These relate to, among other things, the embeddedness

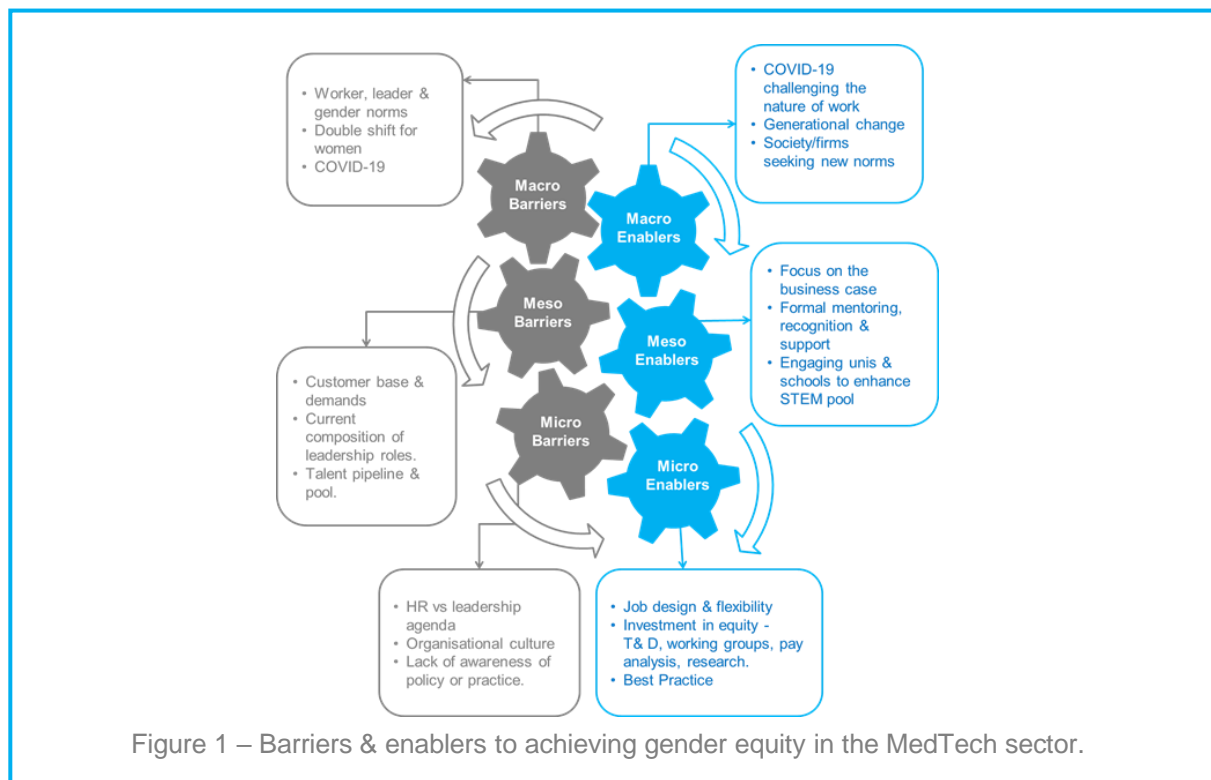
of masculinised ‘ideal worker norms’ and the second shift that women often carry in addition to their paid work commitments.

COVID-19 emerged as both a key enabler and barrier. Although participants experienced work intensification and additional burdens associated with home-schooling during lockdowns, a positive impact has been the normalisation of remote and flexible working for both women and men and a perceptible reimagining of what work needs to be done and where.

Industry wide (meso), barriers to women’s progression were related to male-dominated customer groups and the composition of leadership teams. In particular, in this sample women’s roles in leadership teams were often in HR or regulatory affairs functions, with few women in senior commercial roles, which interviewees believed impacted the relative weight of women’s voice in decision-making. Importantly, it was recognised that women are opting out and not aspiring to senior leadership roles. Meso (industry-wide) enablers included a growing focus on the business case for gender equity, formal mentoring, recognition and support for women, and partnerships with education providers to foster the development of women in science, technology, engineering, and mathematics (STEM).

Specific micro (organisational-level) barriers included delegation of gender equity responsibilities to the HR function rather than being a senior leadership imperative, lack of awareness of gender equity programs and initiatives, cultural barriers, unconscious bias, and push back against flexible working arrangements beyond the COVID-19 crisis. Organisational enablers of gender diversity have been presented as examples of best practice from across the 14 organisations involved in the study and include a variety of specific recruitment, talent management & development, leadership and supportive HR interventions.

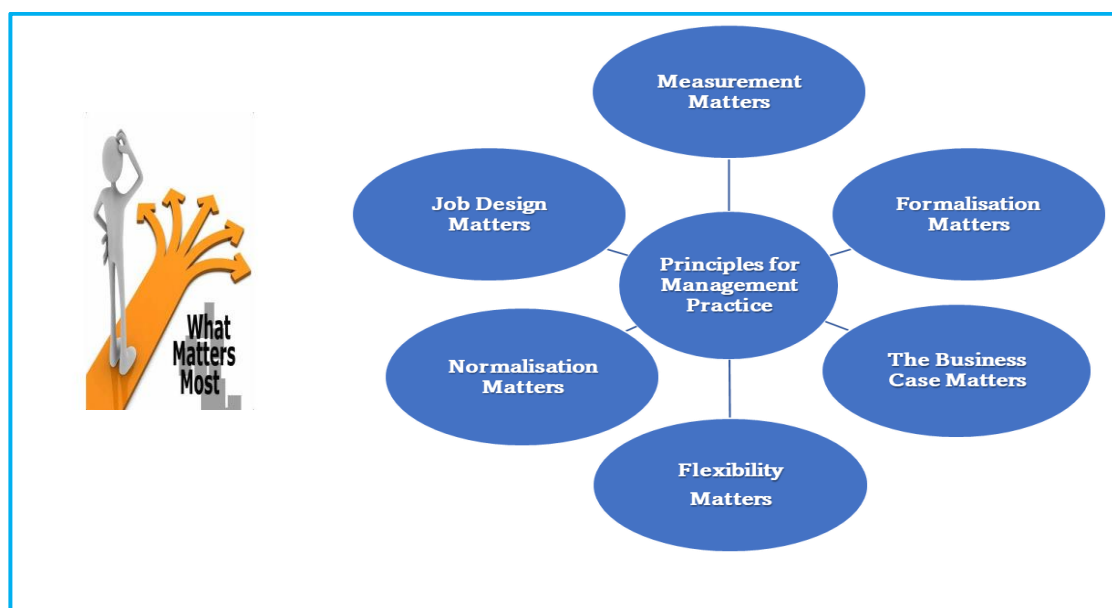
These findings are presented in detail below, with representative quotes and examples from interviewees illustrating each of the themes. In line with ethical guidelines, any identifying information from quotes and examples has been removed to preserve the anonymity of interviewees and their employing organisations.



What really matters?

An important characteristic of the study design was its focus on management practice. The practical focus is manifest in the question, what really matters? What organisational practices or management principles could be derived from this data, to help progress gender equity in MedTech organisations irrespective of size? Academic findings that might progress management thinking are important; actionable findings that can be translated across diverse organisations are more important. Guided by this tenet, the research team engaged in an increased level of abstraction based on the themes presented throughout this report to conclude on what matters most for gender equity in organisations. These conclusions are presented as principles for management practice - principles robust enough to be applicable across a variety of MedTech organisations. Concluding from the data (the voices of 55 interviewees across 14 MedTech organisations), what really matters?

- **Principle 1: Measurement matters:** Gender goals must be measured. Whether in recruitment, selection, promotion or as a management KPI, measurement matters.
- **Principle 2: Formalisation matters:** Gender goals must be formalised. Formalisation can be as ambitious as leaders KPIs or as symbolic as gender equity being on the agenda, formally discussed or a factor for consideration in the firm's formal human resource development efforts.
- **Principle 3: Articulation of the business case matters:** While the social desirability of equity motivates, the better the linkage between this motivation and the business case, the greater opportunity to leverage the firm's resources towards gender equity goals.
- **Principle 4: Flexibility matters:** Like it or not, flexible working matters. While socially constructed values may still impact who takes-up flexible working options, any initiatives to facilitate it were ubiquitously viewed as critical to realising gender equity.
- **Principle 5: Normalisation matters:** Within organisations, flexible working, parental (rather than maternal leave) and other supportive HR practices need to be normalised, not implicitly gender focused. Across organisations, the normalisation and profiling of equity as a priority at every level of the organisation and its ecosystem matters – because gender attitudes in the ecosystem matter.
- **Principle 6: Job design matters:** Rethinking the 'traditional' role and how organisations present job design in recruitment and promotion matters to the talent pool.




Barriers & enablers

Macro (societal) barriers & enablers

Worker, leadership & gender norms

Workplaces in STEM industries are traditionally bound to ‘ideal worker norms’ (Mickey, 2019), where employees – especially those in leadership roles - are expected to work long hours, be willing to travel or relocate for work, and prioritise work over other external commitments (Kelly, Ammons, Chermack, & Moen, 2010). Such norms can translate to male employees being reluctant to take extended parental leave (Crabb, 2019) or women’s career progression being stymied by maternity leave or part-time employment (Ladge, Humberd, & Eddleston, 2018). Women can be further burdened by the mental load associated with domestic and caring responsibilities (Crabb, 2019; Ruppner, 2019). Interviewees in this study reinforced how these leadership and gender norms continue to have an impact on careers and work in the medical technology sector. Table 2 provides some illustrative comments by interviewees.

Table 2: Barriers - worker, leadership & gender norms	
Leadership norms	You can't do managing director as a part-time job (CEO). And he [a senior manager] actually took a step back, because he felt he couldn't manage work life balance (Senior Manager).
Gender norms 	Almost overwhelmingly... women will take parental leave and it will be somewhere between six and 12 months generally. In the case of men who are recent fathers, they are taking between two weeks and maybe six weeks, so it's a very different dynamic (CEO). There's that very traditional expectation that women will be the ones looking after children and you mightn't have problems being successful in the leadership role, but you're the one who has to stay home when one of the children is sick every time (CEO).
Mental load of domestic and caring responsibilities	We both work full time but then who wears the mental load, that's me...So physically he [my husband] does pickups, he does all the grocery shopping, all the cooking, a lot of the cleaning...but when it comes down to the mental load of remembering everything that's going on, that's me (HR manager).

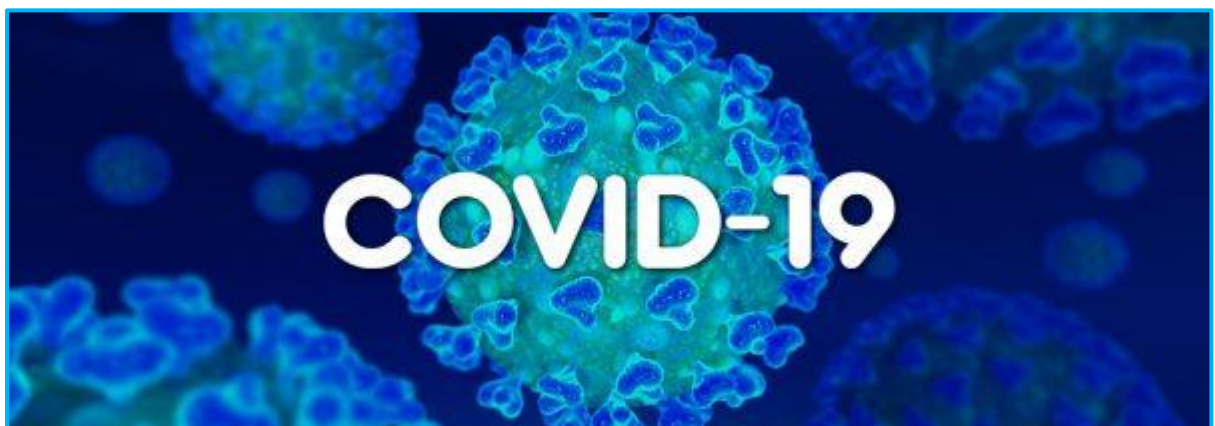
COVID-19 as a barrier & enabler

COVID-19, and the transition to working from home (WFH) had both negative and positive impacts on gender equity and employee wellbeing. One interviewee from a global organisation described how work had intensified with back-to-back Zoom meetings, with expectations that they should be available around the clock. Although employees working remotely or flexibly report higher levels of job satisfaction and commitment, there is evidence such arrangements can result in work intensification (Kelliher & Anderson, 2010). Participants also recounted the challenges they experienced juggling work responsibilities while home schooling younger children, which is borne out by recent research that suggests that women have been disproportionately affected by COVID-19 and WFH, taking on more unpaid work (Wood, Griffiths, & Crowley, 2021) with concomitant reductions in their paid work capacity (Finkel, 2020; Ruppner, Collins, & Scarborough, 2020). Importantly, one CEO highlighted that having more men than women returning to the office has the potential to dampen women’s voices in meetings, if more women continue to work remotely.





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On a positive note, our findings reveal that COVID-19 has normalised remote and flexible working (Wood et al., 2021), with repeated accounts from our interviewees that productivity and collaboration had been maintained while WFH. Many have enjoyed eliminating or reducing commuting times and being able to effectively balance home and work commitments. Most importantly, interviewees indicated that attitudes and workplace culture around flexible work had changed. COVID-19 had pushed male and female colleagues to embrace flexible and remote working. While some male interviewees acknowledged a reevaluation of how effective WFH could be, the changing perceptions of WFH led to some female interviewees feeling less “guilty” for using their company’s flexible working arrangements. Longer term, this has the potential to shift mindsets about the nature and design of work as well as leadership norms. Job design that is outcome rather than time or location focussed, and that challenges the embeddedness of ‘ideal worker norms’ and consequently has the potential to significantly advance gender equity in the sector (Kelly et al., 2010).



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Table 3: COVID-19 – as both a barrier and enabler.

<p>COVID-19 barriers</p>	<p>So there's Zoom meetings, conference calls, phone calls, usually so much back-to-back and even that part of it is tiring because there's the expectation now in the global organisation that you're on the phone and online 24 hours a day (Senior manager).</p> <p>I think the pressure for those of us that were home-schooling, a lot of it was probably the pressure we put on ourselves because you knew you weren't putting enough for an eight-hour day when you are trying to juggle young children and home-schooling (Middle manager).</p> <p>I think the males will probably transition back to the office sooner and if we then start getting groups of males sitting around together, it's very easy for the female voice not to be heard...there is banter and side conversation, and the person joining in the Zoom call or the individuals, it's a little bit harder for them to get their voice equally heard (CEO).</p>
<p>Remote working success stories</p> 	<p>When it's been tabled at a LT [lead team] level around roles within that [operational side of the] business being flexible, it's felt that it couldn't happen...I think that view has definitely changed now since COVID because they're pretty much all remotes (Senior manager).</p> <p>In the beginning [we] had some trust concerns there about if you don't see them, you can't control them and if they're not in the office, where are they? ...Then fast forward to today it's totally changed. There's 100 percent trust, the work is being done (Senior manager).</p> <p>I did a survey and...most people actually really enjoyed working from home. They were more productive, that it saved some time and money for the commute (CEO).</p>
<p>Challenging mindsets about the nature of work</p> 	<p>One thing that it's absolutely reinforced to us is that we need to challenge our thinking about not just the nature of where and how work can be done, but also the types of roles that traditionally we would have said, "It has to be done in Head Office"...You can throw that rule book out the window because I think what we've been able to demonstrate in the last three months [during COVID] is that provided you use the tools correctly, and provided people have a mindset around how you stay engaged, communicate ...in a remote environment, you can absolutely make it effective (CEO).</p> <p>I still talk to females who even through this flexibility thing they talk about oh at least I don't feel guilty now...because everyone's at home there's no guilt... so, and I think by males doing that it would create more of a norm (HR manager).</p> <p>And I don't think it'll be about where a person is when they're working or what hours they're working...[and fewer] females self-selecting out because they don't feel that they can manage everything, they can then see well actually I can do it because I can manage it in a different way to get the outcome (HR manager).</p>
<p>Challenging leadership norms</p>	<p>That's definitely been a shared learning, especially from senior leaders who have been doing a lot of travelling and sit on the phone through the night and sacrifice going to school concerts or sporting events with their kids so even though all of that was reduced during that time just the impact of being there is the takeaway that people have gone through and they want to hold on to as they start to come out of that (Senior manager).</p> <p>We have three of our commercial leaders, all blokes...and people do visibly kind of see that level of travel that they do...I think they'll learn a little bit out of COVID to be quite honest and that should significantly reduce. And maybe that's where we need to use COVID as another lever to kind of move this forward (Senior manager).</p>

Generational Change

There are positive signs from our participants that younger fathers wish to be more involved in their families lives and are therefore more interested in and accepting of longer parental leave and flexible working. Research has also shown that Australian men assumed more responsibility for childcare and household demands during the COVID-19 lockdown (Ruppanner, Collins, Landivar, Scarborough, & Tan, 2021). Potentially, this signals a generational shift away from the masculinised 'ideal worker norm' (Kelly et al., 2010) with a recent study suggesting that flexible and family-friendly human resource practices could foster leadership aspirations for both women and men (Fritz & van Knippenberg, 2018).



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Table 4: Generational change

Views on parental leave	But what I've found is that, let's say the men, first time fathers perhaps, in their late 20's, early 30's, taking advantage of some of those opportunities to spend more time at home. I can't think of anybody in our organisation who has taken the role as the primary carer though, to be honest, and taken the full parental leave; it's generally been, "Can I take a month off, six weeks off?" (CEO).
Views on caring	Like, you know, [men] playing a bigger role now in families I think's only going to help us, right. I truly believe that because it won't be a female thing, right, it'd be a family thing (HR manager)

Meso (industry) barriers & enablers

Customer base & demands

Interviewees reflected that the medical technology workforce has traditionally mirrored the customer base which usually comprises male surgeons, particularly in the orthopaedic discipline. The surgery profession has had challenges associated with sexism, harassment, bullying, inflexible careers and long hours (Royal Australian College of Surgeons, 2020) and these are issues that can also confront the medical technology workforce working in operating theatres or responding to physician demands. In particular, sales and technical personnel need to manage the unpredictable hours associated with fulfilling customer expectations, and this is difficult for parents with caring responsibilities.

Table 5: Customer base & demands

<p>Male-dominated customer base</p>	<p>Our customer base is overwhelmingly men, and I'm convinced that ...because the best salespeople tend to mirror their customers; they either do it consciously or subconsciously, and I'm sure that that is reflected in the way that your organisation is structured (CEO).</p> <p>I think historically, our orthopaedic business was very much male-aligned because that mirrored the customer base...I think that's gradually shifting, though it's probably been one of the areas of the business that's been harder to engage in the gender equity and the D and I [diversity and inclusion] dialogue (HR manager).</p>
<p>Managing difficult/sexist customer interactions</p>	<p>So, we have had instances that I've heard of where that has happened [sexual harassment in the operating theatre], but mostly it comes down, I think, to the individual and then how comfortable they are at managing that conversation. As I'm talking about it, it's probably an area where we can further support (HR manager)</p>
<p>Unpredictable hours</p>	<p>So basically the physicians are calling them out ...[and], sometimes they could get a call out late at night...[for] an emergency call. Or they might need to do a weekend call out ...But there are a lot of females in those [business] groups because there's that clinical patient care, you know they love that connection, they love the impact that they're having but it impacts their personal life, right. So there is a sacrifice and a juggle and there's no perfect solution on supporting them yet (HR manager).</p>

Composition of leadership teams and male-dominated functions



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In Australia, women comprise only 27 percent of STEM-qualified professionals in the private sector (Finkel, 2020). Interviewees explained that there are very few women working within engineering and technical services within the industry, and that being the sole female in a function brings particular challenges.

In the medical products and pharmaceutical sectors in the United States, women make up more than half of entry level positions, yet there is a steep decline in the proportion occupying the most senior roles in organisations (McKinsey & Company, 2018). The issue of highly qualified women either leaving or failing to progress past a certain point is so common that it

has been deemed the “leaky pipeline”. This is common to STEM, medical technology, and related industries such as biotechnology, biomedical engineering and pharmaceutical (Blackwood, 2019; Hill, Corbett, & Rose, 2010; McKinsey & Company, 2018; NCSES, 2019). Such data echoes the observations of our participants, that a gender balance exists at the lower levels, with very few women occupying top management roles. Notably, women’s representation within the top management team in our sample was often in the HR or regulatory affairs functions which for some was viewed as sub-optimal. Importantly, it can also limit women’s career paths, as it was reported that managing directors and CEOs are usually sourced from commercial functions. Critically, most women interviewed are not aspiring to senior leadership roles with indications that this is due to family and caring responsibilities or a lack of female role models, but much more data needed to explain the key determinants within the sector.

Table 6: Composition of leadership roles & male-dominated functions

<p>Some functions male-dominated</p>	<p>The orthopaedics industry is a little bit hard to get used to in that I find that there are more males...You often go into meetings thinking there’s going to be a gender imbalance...I know that I feel when I walk in there that I’m different (Senior manager).</p> <p>Our tech services team, so we have about I’d say 40 technical service engineers or biomed and ignoring the admin team, one is a female. Females are definitely underrepresented in supply chain and they’re definitely underrepresented in manufacturing (Senior manager).</p> <p>If we do land these women into these roles [in male dominated functions], how we support them in that role and...to make them feel like they have a voice and are being listened to (Senior manager).</p> <p>We would really need to make sure we bring a group of females in all at once. I think it would be very hard to be the single female in a team of 40 engineers (CEO).</p>
<p>Pyramid effect, particularly in commercial roles</p>	<p>The biggest thing that we have identified through some working groups has been one, our workforce is 50/50 male/female. I suppose it’s what you see across organisations, it’s like the triangle effect that as you move through the career or leadership channels it drops off (HR manager).</p> <p>Our frontline are our sales reps; that is about 50:50 female...And for whatever reason, the attrition rate at the regional sales manager, your area sales manager, your sales director level, and then beyond, the attrition rate is there. I don’t know that the issue is necessarily that we’re not hiring women who are really smart, savvy commercial professionals, but for whatever reason, they don’t progress into the management ranks (CEO).</p> <p>I think our potential next-level leaders, we’ve actually got a pretty good mix of male/female there, but I just don’t see it actually coming through like our last few promotions into that commercial leadership team have all been male as opposed to female, even though we’ve got them sitting ready at that next level (Senior manager).</p>
<p>Leadership team composition</p> 	<p>Where we have women on our leadership team, they’re not in what you would consider to be the hard commercial roles. We’ve got people who run functional parts of the team, so whether it be HR, our quality, or regulatory, and...the business unit leaders, at the moment they’re all men, all of them...but overwhelmingly the managing director will be picked from your commercial leaders, your business unit leader (CEO).</p> <p>I’m here because I’m a nice diversity measure and HR is nice and fluffy and [the CEO] can say I’ve got a woman on my executive team. Am I participating at the same level as them? No...So at the top level we’re just as bad as other bad companies out there. You’ve got your token, we’re doing a good thing, we’ve got a woman (HR manager).</p>

Table 6: Composition of leadership roles & male-dominated functions

Women not aspiring to senior leadership roles	<p>The leadership talent female group identified [in our survey] that pretty much they don't have any further aspirations...[some] couldn't see how they could manage family and manage the responsibility at the next level...Or some of them talked about reference, that they don't have many female leaders around them as role models to show them how it can be done (HR manager).</p> <p>I've had a lot of conversations with team members and other women who have said I wouldn't want your job. I wouldn't want to have all this after hours calls and I wouldn't want to have that role of work travel under normal circumstances. All those things that come with that job, I don't want that (CEO).</p>
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Talent pipeline & pool

There were several barriers related to the talent pipeline identified by interviewees: the time needed to train in field sales roles and impact of maternity leave, potentially leading to unconscious bias; the limited STEM female talent pool; and importantly, the lack of awareness by outsiders (particularly young people) of the career opportunities available in the medical technology sector.

Table 7: Talent pipeline & pool

Training lag in business units	<p>In some of our business units, it would take somebody 12 months to be trained up before they can be effective in the field. So if you have somebody that takes a 12-month mat [maternity] leave, and you want to backfill that role, essentially the person you bring in isn't going to be trained up until that person is now returning from mat leave...I don't know whether then that becomes an unconscious thought process when they're recruiting and/or promoting (Senior manager).</p>
Narrow talent pool	<p>The other thing I think is just in general in MedTech...in that we look at engineering roles or science roles which are typically feeders into MedTech companies...If there's not a lot of females coming through with that initial background that we're looking for, that impacts who we are bringing into the organisation as well (Senior manager).</p> <p>And I think that has been active recruitment [of females] ...Then when we do get them, we do actively try to move them into leadership roles if they have the right potential, but I also think a lot of folks are after them so they're hard to come by and hard to keep (Senior manager).</p>
Low profile of MedTech sector	<p>So it's only unless people have a need for our technology and our products, then maybe there's a whole population out there who...just aren't aware and so that's probably why the industry is probably a little bit in bit of a bubble (HR manager).</p> <p>Getting into [this] industry, it's not actually well-known and I think that's something that we could probably do at a college and/or Uni when people go through biomedical and all those types of degrees and so on...In particular, when I speak to young women, they actually feel that that's a pathway that they would love to take, but don't know about it (Middle manager).</p>



Meso (industry) enablers

Among industry-wide enablers which were considered to advance gender equity were a focus on the business case for diversity, formal mentoring and development for women aspiring to senior roles, and partnerships with universities and schools to foster the next generation of women in STEM.

Table 8: Meso (industry) enablers



<p>Focus on the business case</p> 	<p>It's not a gender issue it's a business issue and as long as we focus on it as a business issue we don't have to worry about quotas, we don't have to worry about the gender piece because that will actually be a natural by-product of the business issue (Senior manager).</p>
<p>Formal mentoring, recognition & support</p>	<p>We did a survey of the women in the organisation, an anonymous survey, and they identified that they would love to have more access to... [training and development in] executive presences, negotiation skills, assertiveness (CEO).</p> <p>Part of the recommendations were to look at the existing [leadership development] module and include some additional, more soft-skilled type modules that address some of the feedback we got from the female survey around building confidence, finding a voice, things like that (Senior manager).</p> <p>I had a lot of support from the GM that was ahead of me at [former company] and was a female. She was a very, very strong supporter and very, very good mentor for me (Senior manager).</p> <p>I think probably what would help is more examples of women in leadership roles...If they have a female CEO, I think both having those role models and those women who show the next generation (CEO).</p>

Table 8: Meso (industry) enablers

<p>Partnering with universities & schools</p> 	<p>So, we're going to start to look at doing more partnering with some of the university sector, the graduate school sector as well...I know that when you look at university entrance now, particularly in some of the disciplines that we would typically looking to hire from, that there's now a much greater representation of women in that group as well (CEO).</p> <p>We award [university] scholarships and we run mentoring workshops where we get [company] employees in (HR manager).</p> <p>So they paired me up with two biomed engineering students from the [college] and so I've been mentoring them for probably nine months now. It's going really well (Senior manager).</p>
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Micro (organisational) barriers

Leadership, policy & practice

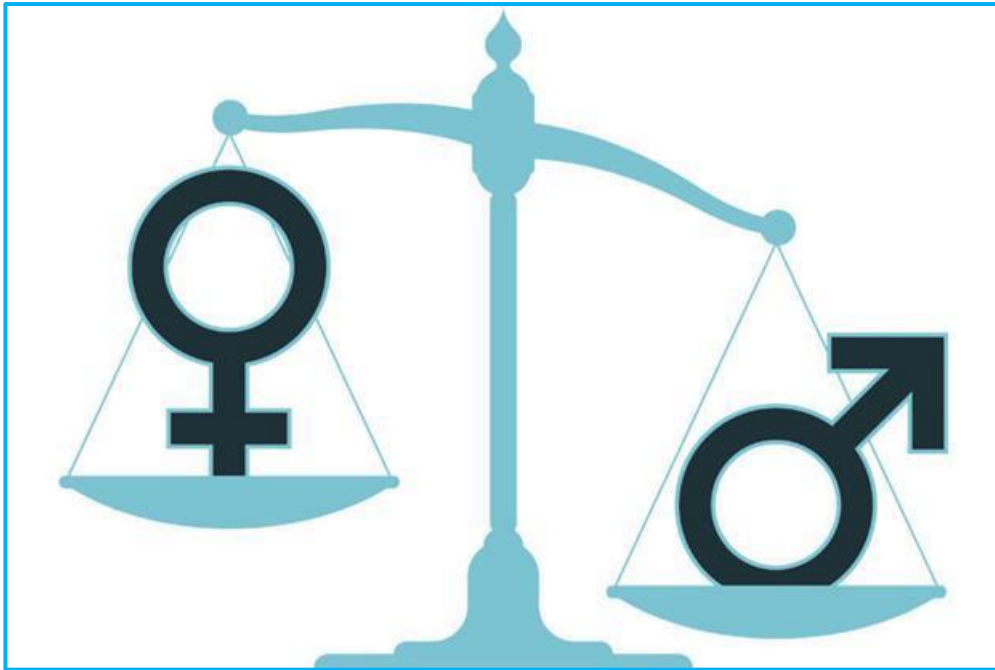
Participants considered that assigning responsibility for gender equity to the HR function, downplayed the critical nature of the issue. In some instances, this led to gender equity becoming labelled a 'tick box exercise' associated with token events and for Workplace Gender Equality Agency reporting compliance. Others noted that gender equality policies and procedures were not effectively disseminated, while managerial discretion led to inconsistencies in practices across organisations.

Table 9: Leadership, policy & practice

<p>HR vs Leadership agenda</p>	<p>It's obviously HR initiated being pushed down through the company, she would probably say we're ticking all the right boxes and doing all the right things, engagement, collaboration and on the path to talk about things that matter to people...but for me I haven't really connected with that so for me I don't feel that we're there yet (Senior manager).</p> <p>It really does need to be across the business initiative and not just look to HR to own and make things happen (Senior manager).</p>
<p>Lack of awareness of policy, practice; impact of managerial discretion.</p>	<p>I guess my answer to you is that if there are policies that talk about this stuff [gender equity] I don't know because it hasn't really been made public...Are there any policies that talk about flex, job sharing, I don't think so. I think it's all just left up to the manager's discretion (Senior manager).</p> <p>I know and the thing I worry about is that we have International Women's Day initiatives, and we stand up there and we talk about bias and how to believe in ourselves as women, but...I don't see it being breathed in communications every day, I don't see it on websites (Senior manager).</p> <p>I think there's definitely more openness to it [part-time work] ...but it's still very manager dependent. You know some General Managers don't like it at all and don't see the benefit of it at all (Middle manager.)</p>

Cultural barriers & unconscious bias

Some of the participants observed that their organisational culture was not conducive to raising issues of perceived gender inequity. This occurred even at senior leadership levels. Others spoke about the "boys' club" mentality operating at senior levels, and that it was difficult for the female voice to be heard, particularly when discussing "soft" issues such as people and culture. On a positive note, interviewees did report improvements over time, such that cultural barriers were perceived to be less now than earlier in their careers, so progress is being made.



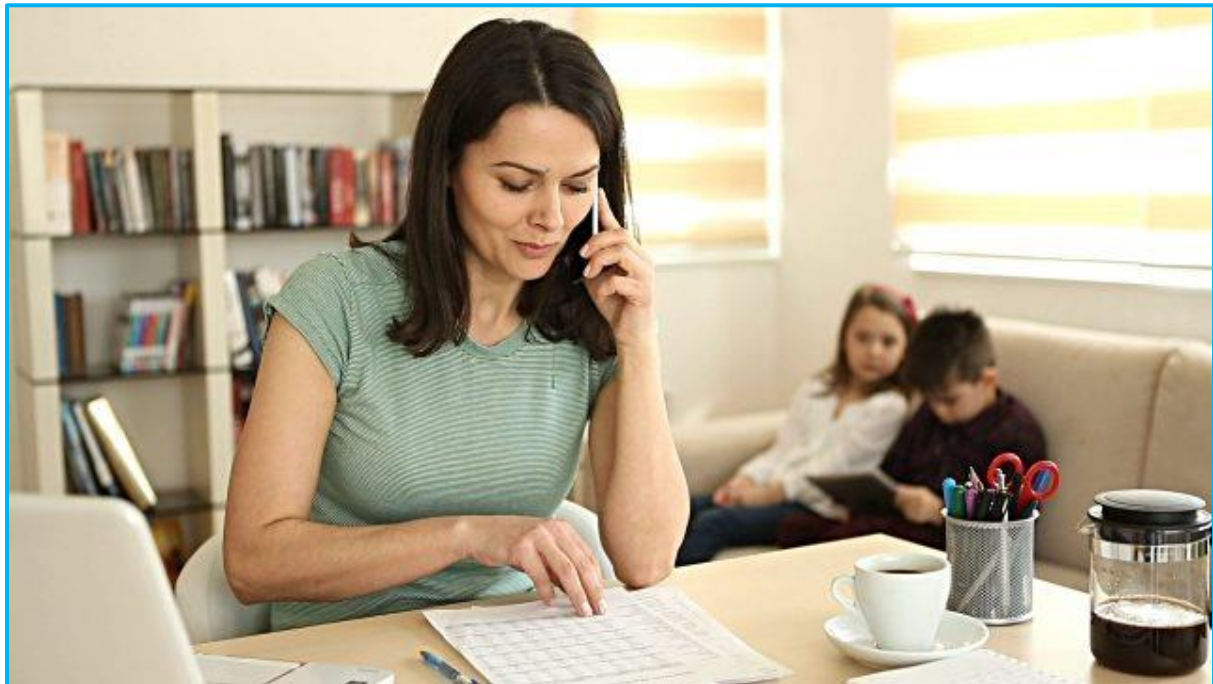
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Other research indicates that gender biases have been shown to persist even in fields where women’s representation has improved significantly. Research by Begeny, Ryan, Moss-Racusin, and Ravetz (2020) demonstrates that “managers who think bias is no longer an issue in their profession are, perhaps ironically, the key drivers of bias” (p.6). This highlights that “employing the best person for the job”, even when there is good gender balance, can perpetuate unconscious biases. Moreover, unconscious bias training alone is limited in its capacity to change behaviour; ideally, it should be one element of an organisational strategy to promote inclusive cultures (Atewologun, Cornish, & Tresh, 2018).

Table 10: Cultural barriers & unconscious bias

Organisational culture	<p>It’s [gender equity] not an issue of discussion [in the senior management team]. I’d have to say I’d be actually scared to bring that up in that environment. My fear would be from don’t be silly or ridiculous or the fear of being dismissed (Senior manager).</p> <p>It actually felt like a real boys’ club back then and I think it’s improved 500% (Senior manager).</p>
Female voice	<p>And we do have an HR director in there, she does sit at these meetings but even her voice is there but it’s not heard...I find it quite dismissed...as soon as we [the women] start to speak about the people and culture and soft stuff I find that to them when they receive the message it’s all gobbledegook (Senior manager).</p> <p>And being the only female in that environment it is hard to get voice in, so all of those usual you know getting past football chat, all those you know annoying day to day type things that come up in those sorts of environments (Senior manager)</p>
Unconscious bias	<p>Because I want the best person for the job and not a woman. Not necessarily a woman. I want the best person for the job....You know I think because we have a good gender balance here, there’s really no need to encourage more women to join the organisation (CEO).</p> <p>The unconscious bias testing generated a lot of discussion because people were very, very surprised in their results. That was only short lived. I’d say within the few weeks after it and then anything, new training was rolled out about something else or we brought in a new product and it kind of fell by the way side (HR manager).</p>

Challenges to flexible working



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Traditionally, it is women who work in non-standard work patterns to enable them to manage the dual responsibilities of work and caring (Ruppner & Meekes, 2021). There were examples cited where a focus on parents had prompted complaints from non-parents, and where flexibility granted to mothers had generated divisions and tension in a team.

There is also some evidence of continued resistance to flexible and remote working beyond the COVID-19 crisis, with concerns raised about the impact on organisational culture. Recent research by the Boston Consulting Group has highlighted that while 63 percent of employees surveyed prefer a hybrid of remote and office-based work, only 40 percent of employers supported hybrid models in the long term. This has obvious implications for employers attracting and retaining talent in the face of skill shortages (Mattey, Russell, Sibilio, & Wong, 2020).

Table 11: Challenges to flexible working

Flexible working focussed on parents or mothers	There was one team where there was a lot of flexibility for mothers coming back from having children and it created two teams within that one group...[they] felt like they were being treated differently (HR manager). International Women's Day last year, it was all focused on parents at work, probably to the detriment of some people who complained that they're not parents (HR manager).
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Table 11: Challenges to flexible working

<p>Resistance to flexible or remote working</p>	<p>There's some leaders that feel that the only reason it's working now is because everyone is working remotely. But then if you change to a model where some people are remote and some are in the office, you probably don't get the same effect (Senior manager).</p> <p>There are some that aren't necessarily as onboard with flexibility in our sales organisation where they feel that things have been tried in the past and have not been successful, and therefore we can't do it again. ...I think we need to spend time understanding why it wasn't successful and are there hurdles we can overcome (Senior manager).</p> <p>I had one of the senior people in the organisation say to me recently that because no one was in the office on a Friday, they felt that that might be impacting the culture of the organisation (HR manager).</p>
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The organisations involved in this study described a range of policies and practices that were effective at advancing gender equity goals. The examples of best practice from across these sample organisations are described briefly in the following section.

Examples of best practice (enablers)

Leadership & measurement

Best practice in the sample of MedTech organisations was typified by a gender equity strategy that was owned and driven by the top management team, often supported by parent company goals. Measurement and benchmarking were reported as key, alongside sustained efforts to reduce the gender pay gap. Women in STEM industries, while earning more on average than women in the workforce as whole, are still subject to a gender pay gap which cannot be wholly explained by parental leave or a greater propensity for part-time work (Maume, Heymann, & Ruppner, 2019; Office of the Chief Scientist, 2016; Pharma Australia Gender Equity (PAGE) Group, 2018).

Establishment of forums and working groups that involved “women & men as allies” as well as a cross section of employees were viewed as essential.

Table 12: Leadership & management




<p>Senior leadership team driven</p>	<ul style="list-style-type: none"> • Often supported by global focus of parent company • Gender equity goals owned and driven by the senior leadership team (not just HR) and carving out time in leadership team meetings (e.g. setting policy, reviewing metrics, discussion of senior staff recruitment and succession planning). • Recognition of a need to measure and review trends against equity goals to gauge “Are we moving the needle? And are we moving that consistently?” (CEO)
<p>Measurement & benchmarking</p> 	<ul style="list-style-type: none"> • Benchmarking against WGEA Employer of Choice criteria and undertaking a gap analysis. • Tracking gender balance for each level and in each functional area of the company. • Tracking the number of women in succession plans. • Analysing gender differences in engagement and how that is trending over time. • Setting goal of 40% female leadership (middle managers). • Tracking the number of females slated for every role as well as the percentage of females that are shortlisted.

Table 12: Leadership & management

<p>Pay equity analyses</p> 	<ul style="list-style-type: none">• Pay inequities addressed at each remuneration review has reduced the pay gap significantly over 2 years. Bonuses and other benefits for each level are currently being reviewed for consistency.• Ensure that women that have taken career breaks are not disadvantaged in remuneration reviews (and awareness of the cumulative impact of that).• Pay equity analysis examining tenure, experience, role etc. (not gender) using regression analysis. This analysis has resulted in salary corrections for both male and female employees.
<p>Employee Forums/Working Groups</p> 	<ul style="list-style-type: none">• Establishment of working groups (with volunteers representing different levels in the organisation and including men and women) to review development programs, opportunities and organisational policy and their impact on gender equity goals.• Supporting networking groups and events for female employees.• “Women and men as allies” (HR manager) in pursuing gender equity. Focus on parents at work and women in STEM.• Women’s network – driving awareness and supporting the executive leadership to identify challenges. Establishment of small, peer mentoring/peer coaching sessions around specific topics e.g. unconscious bias.




Recruitment & promotion practices

Various strategies were adopted by organisations to minimise or eliminate gender bias in their recruitment and promotion practices including working actively with recruitment agencies to ensure that they are aware of gender parity goals, using a range of recruitment channels and aiming for a balanced candidate slates and interview panels.



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Table 13: Recruitment & promotion practices

Partnering with recruitment agencies 	<ul style="list-style-type: none"> Engaging with recruitment agencies to ensure they are aware of gender parity goals; tracking and monitoring that gender parity is being achieved. Asking recruiters to send female candidates even if they are assessed as being 80% qualified (if women undersell themselves in their CV).
Job descriptions & advertising	<ul style="list-style-type: none"> Reviewing job descriptions to ensure they use universally attractive/gender neutral language. Use an algorithm to ensure recruitment advertisement is gender neutral. Advertising on Facebook groups/LinkedIn - women in tech, or men in tech, or tech professionals (if appropriate). Highlighting flexible working, school hours, part-time options in advertisements if available for the particular role. Reviewing employer branding to make the company look attractive to female candidates in the market.
Candidate slates 	<ul style="list-style-type: none"> Aiming for a candidate slate that is gender balanced. HR presenting gender 'blind' résumés to managers for consideration. Aiming for a candidate slate that is gender balanced but recognising that have one female candidate may be all that is achievable in male dominated professions (e.g. engineering)
Interview panels 	<ul style="list-style-type: none"> Aiming for an interview panel that is gender balanced. Unconscious bias training for interviewers but needs revisiting/reinforcement "How do we ensure that it's continuing to live in the organisation?" (Senior manager).
Assessment of candidates	<ul style="list-style-type: none"> Talent is prioritised over experience i.e. based on the core (unteachable) talents that characterise success in a particular role.

Talent management & development

Best practice examples included leadership development programs involving an equal number of women and men, as well as programs specifically targeting high potential female candidates. Other initiatives included succession planning and career development addressing historical gender disparities, internal mentoring programs and partnerships with schools and universities sponsoring women in STEM disciplines.

Table 14: Talent management & development


Leadership development	<ul style="list-style-type: none"> Aiming to have equal representation on leadership development programs. Sponsoring a few high potential women in external training programs/university courses. Specific leadership development programs for women including outdoor team challenges.
Succession planning & career development 	<ul style="list-style-type: none"> Ensuring that there is transparency around the job specifications for senior roles and providing free online training courses and webinars to support individual development. Aim for even representation of women and men in talent identification process. Ensuring that talent reviews lead to clear action plans, and that these are reviewed and tracked. Talent review program – reviewing the ratio of females to males in each of the segments. Aim for a representation of 40% female, 40% male, and 20% floating in succession plans.

Table 14: Talent management & development

Mentoring - internal	<ul style="list-style-type: none">• Voluntary programs with mentors/mentees of either gender. Important to have strong female leaders also mentoring males.• Establishing a mentoring program with 65% female representation to address low numbers of women in senior leadership roles.
Mentoring & sponsorship - external	<ul style="list-style-type: none">• Partnerships with the university sector, particularly targeting postgraduate students.• Global scholarships for PhD students; scholarships and mentoring workshops involving company leaders for high potential (mostly female) STEM undergraduates.• Informal mentoring of female biomedical engineering students by a female leader via one of the university colleges.• Working with schools to provide young women with work experience opportunities in MedTech. The program gives them exposure to various roles in different parts of the business and in doing so promotes the profile of the industry

Flexible/supportive human resource practices

Chief among gender equity initiatives, were ‘reason neutral’ flexible working practices that included all employees. Noteworthy too were the organisations that had widespread flexible and remote working prior to the COVID-19 crisis, supported by a focus on outcomes and a culture of trust. Paid parental leave policies and support varied, with some organisations actively encouraging men to take longer parental leave.

Some MedTech firms are promoting a healthy work-life balance by putting boundaries around work during leave and at weekends and promoting when senior leaders take time out to attend their children’s school events.

There are also examples where employees have been supported in managing difficult interactions with customers and training provided to enable sales teams to manage customer demands and reduce expectations of around the clock availability.

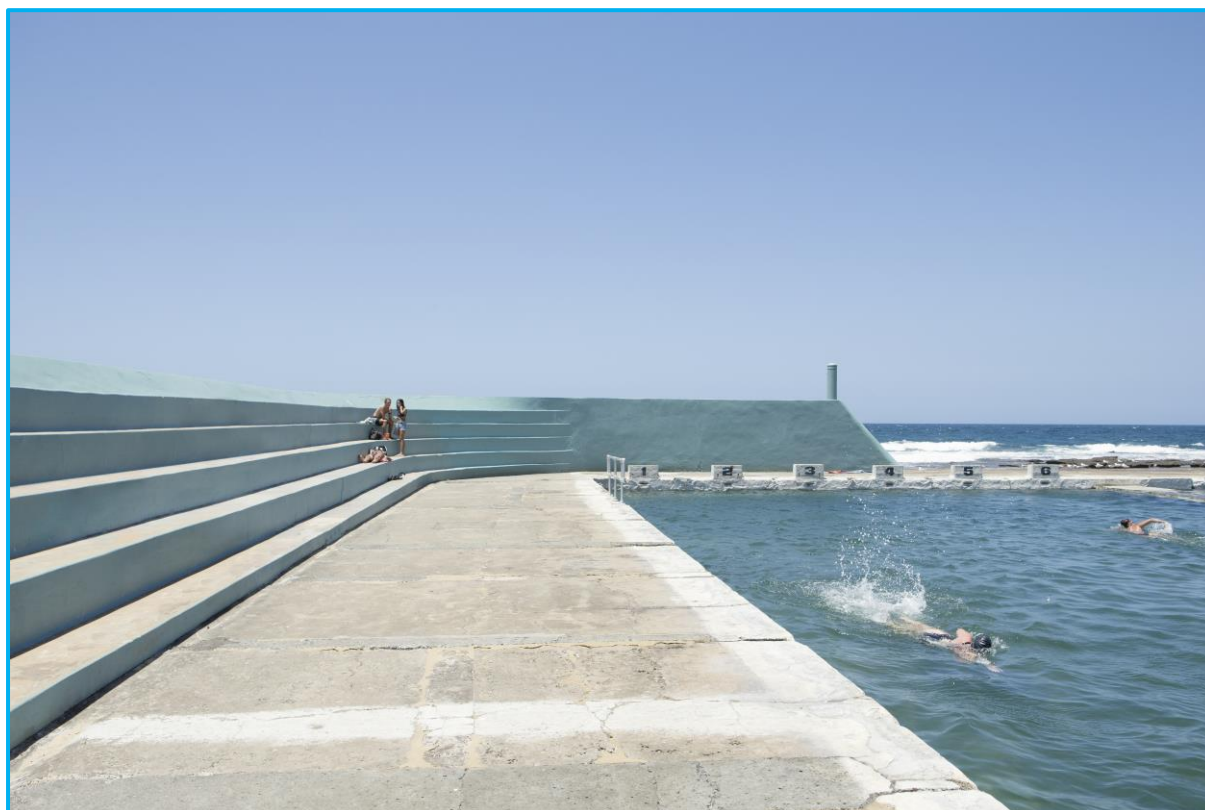


Table 15: Flexible & supportive human resources practices



<p>Flexible & remote working</p> 	<ul style="list-style-type: none"> • COVID-19 has been the impetus for reflecting on the nature of where and how jobs can be done, even senior leadership roles. • Acceptance and support for remote working in the long term (likely a hybrid model); trust that productivity is being maintained. • Flexible working options available for all and reason neutral (e.g. personal goals, carer's needs, study, volunteer work). Moving away from the norm of being only available for mothers returning from maternity leave or for parents. • Policy that reinforces that managers need to be open to considering flexible working options for any employee. • Male leaders on reduced and part-time hour arrangements. Showcasing men working part-time. • Flexibility and reduced hours widely available and taken up by men (although fewer numbers than women). • Showcasing of two female sales managers successfully job sharing. • Very flexible about where roles are located even before COVID. • Help desk runs from 7 to 7 and expanded the team to provide more flexibility with the roster (this was supplemented by staff working out of Asia). This enabled people to work a shift that they prefer wherever possible or request to have a day off or flexibility for things like school pick up or school drop off or attending their child's special event. • Recognising when part-time employees are working additional hours consistently and paying them for that.
<p>Parental leave</p>	<ul style="list-style-type: none"> • 18 weeks paid parental leave for the primary care giver and two weeks for the secondary care giver (the latter available anytime in the baby's first year). Also pay superannuation when the primary care giver and provide them with all their work-related equipment while they are on leave. • Offering eight-weeks' paid parental leave for men, to be taken in one or two blocks. • Men having access to twelve weeks' parental leave and actively encouraging them to use it. • Paid primary parental leave of 14 weeks. • Very flexible in transition to work arrangements following maternity leave, which has significantly increased retention. • Primary carers' leave open to either gender – paid for 12 weeks and up to 40 weeks unpaid. Showcasing it when men do take it up.
<p>Other leave policies</p>	<ul style="list-style-type: none"> • Flexibility to purchase additional leave or cash out leave entitlements. • Additional 10 days carers' leave per annum
<p>Supporting healthy work-life balance</p>	<ul style="list-style-type: none"> • Encouraging employees to use an 'out of office' notification that they won't be accessing their emails whilst on leave; senior leaders actively promoting work-life balance and modelling behaviour for others e.g. not emailing and not being available over weekends. • Family culture where "you're open in terms of who you are and your circumstances and what you need" (HR manager). • . • "[The executive team] are putting boundaries around their own lives and celebrating that with their teams...And even calling out, you know they took a day off or they finished work early and they're going to attend their daughter's recital or they're you know, they're actually promoting what they're doing" (Senior manager).

Table 15: Flexible & supportive human resources practices

<p>Supporting interactions with customers</p> 	<ul style="list-style-type: none"> • Using male leaders as advocates to engage with male orthopaedic surgeons (customers) about the need to be inclusive, and what is appropriate and inappropriate behaviour. • Working with hospitals if there are issues with bullying and harassment of sales representatives Recognition that delivering on customer expectations in the business units can lead to work intensification, with the potential for poor work-life-balance and burnout. The company ran education sessions for sales representatives on using negotiation skills and managing customer expectations without needing to compromise on outcomes.
<p>Rethinking job design</p>	<ul style="list-style-type: none"> • Job design is focussed on outcomes and not hours in the office. • “It doesn’t really matter where you work, as long as you get your work done” (HR Manager). Supported by a high level of trust which is one of their core values.

Where to from here?

EQUITY

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¹ Workplace for Gender Equity Agency (WGEA) 2019



Partner with University of Newcastle

This study is, by design, a two-part story. The research team (at the University of Newcastle and Macquarie University) in collaboration with the MTAA, set out to conduct a small exploratory qualitative study (part 1) that would provide in-depth insights into gender equity issues in MedTech organisations. These insights could in turn be used to inform management practice on best practice principles and a broader study measuring the frequency and impact of gender equity initiatives across a larger population of organisations (part 2). The sample for part 1 of this study (the qualitative interviews reported on here) almost doubled in its size during data collection – why? Because more organisations and interviewees wanted to participate, sharing their good practices and their experiences. This is a testament to the importance of this topic in this sector and a credit to the 14 MTAA member organisations and 55 interviewees who wanted to be involved and progress this research agenda.

As managers and scholars, we now want to move passed the 'gender blind' to a 'gender bilingual' approach to managing gender equity and the MTAA is our lead partner in this. Armed with in-depth insights from this report, a broader survey of the sector can help us do that - a survey that will integrate discrete choice analysis with industry wide measures of the insights gained thus far. Everything we do in organisations and every path of our careers involves a choice. With the application of statistical methods to study the choices made by individuals and organisations, we can better understand how organisational practices impact women's career choices and progression and how organisations choose, not just what seems right, but what matters.

There are also exciting possibilities to co-create innovative pilot HR programs to expedite the translation of our findings into management practice.

Gender equality is a precondition for good business and human resource management. As the MedTech sector evolves and management practice with it, so too must this research agenda.

We thank the MTAA for their continued support and seek the support of the organisational leaders reading this report to progress this agenda.

*Watch
this
space!*

References

- ABS. (2002). *1321.0 - Small Business in Australia, 2001*. Canberra, ACT Retrieved from <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1321.0>.
- Atewologun, D., Cornish, T., & Tresh, F. (2018). *Unconscious bias training: An assessment of the evidence for effectiveness. Research report 113*. Equality and Human Rights Commission Retrieved from https://www.ucd.ie/equality/t4media/ub_an_assessment_of_evidence_for_effectiveness.pdf.
- Begeny, C. T., Ryan, M. K., Moss-Racusin, C. A., & Ravetz, G. (2020). In some professions, women have become well represented, yet gender bias persists-Perpetuated by those who think it is not happening. *Science advances*, 6(26), eaba7814-eaba7814. doi:10.1126/sciadv.aba7814
- Blackwood, A. (2019). How Medtech can address the gender imbalance. Retrieved from <https://www.hee.co.uk/blog/how-medtech-can-address-the-gender-imbalance>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Crabb, A. (2019). *Men at work: Australia's parenthood trap*: Schwartz Publishing.
- Finkel, A. (2020). *Rapid Research Information Forum: The impact of the COVID-19 pandemic on women in the STEM workforce*. Retrieved from Canberra, ACT: <https://www.science.org.au/sites/default/files/rrif-covid19-women-stem-workforce.pdf>
- Fritz, C., & van Knippenberg, D. (2018). Gender and leadership aspiration: The impact of work-life initiatives. *Human Resource Management*, 57(4), 855-868. doi:10.1002/hrm.21875
- Gephart Jr, R. P. (2004). Qualitative Research and the Academy of Management Journal. *Academy of Management Journal*, 47(4), 454-462. doi:10.5465/AMJ.2004.14438580
- Hill, C., Corbett, C., & Rose, A. S. (2010). *Why So Few? Women in Science, Technology, Engineering, and Mathematics*. Retrieved from <https://files.eric.ed.gov/fulltext/ED509653.pdf>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, 33(7), 14-26. doi:10.3102/0013189x033007014
- Kelliher, C., & Anderson, D. (2010). Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, 63(1), 83-106. doi:10.1177/0018726709349199
- Kelly, E. L., Ammons, S. K., Chermack, K., & Moen, P. (2010). Gendered Challenge, Gendered Response: Confronting the Ideal Worker Norm in a White-Collar Organization. *Gender Soc*, 24(3), 281-303. doi:10.1177/0891243210372073
- Ladge, J. J., Humberd, B. K., & Eddleston, K. A. (2018). Retaining professionally employed new mothers: The importance of maternal confidence and workplace support to their intent to stay. *Human Resource Management*, 57(4), 883-900. doi:10.1002/hrm.21889
- Mattey, C., Russell, R., Sibilio, N., & Wong, D. (2020). *The expectation gap in the future of work: Employee vs. Employer sentiment and the emerging division of Australian organisations*. Retrieved from <https://www.bcg.com/en-au/publications/2020/understanding-the-expectation-gap-in-the-future-of-work-australia>
- Maume, D. J., Heymann, O., & Ruppner, L. (2019). National Board Quotas and the Gender Pay Gap among European Managers. *Work, Employment and Society*, 33(6), 1002-1019. doi:10.1177/0950017019864509
- McKinsey & Company. (2018). *Women in the Workplace: 2018*. Retrieved from <https://womenintheworkplace.com/>
- Mickey, E. L. (2019). When Gendered Logics Collide: Going Public and Restructuring in a High-Tech Organization. *Gender & Society*, 33(4), 509-533. doi:10.1177/0891243219830944
- Molina-Azorin, J. F. (2016). Mixed methods research: An opportunity to improve our studies and our research skills. *European Journal of Management and Business Economics*, 25(2), 37-38. doi:10.1016/j.redeen.2016.05.001
- MTAA. (2018). *Women in MedTech: A report on current practices to promote gender diversity*. Retrieved from https://www.mtaa.org.au/sites/default/files/uploaded-content/newsletter-content/wimt_report_2018_final_26_04_2018_web.pdf
- NCSES. (2019). *Women, Minorities and Persons with Disabilities in Science and Engineering*. Retrieved from <https://ncses.nsf.gov/pubs/nsf19304/>.
- Office of the Chief Scientist. (2016). *Busting myths about women in STEM*. Canberra: Australian Government Retrieved from <https://www.chiefscientist.gov.au/wp-content/uploads/OCS-paper-13.pdf>.

- Pettersson, A. K., Talley, A. C., Pritchard, B., Karbe, M., & the HBA E.D.G.E. in Leadership Study Team. (2007). *The Progress of Women Executives in Pharmaceuticals and Biotechnology: A Leadership Benchmarking Study Abstract*. Retrieved from https://www.hbanet.org/sites/hba/files/docs/Research_Studies/EDGE-White-Paper-Abstract-v2.pdf
- Pharma Australia Gender Equity (PAGE) Group. (2018). Special interest group of Medicines Australia Australian pharma keen to go 'from good to great' on gender equity: CEO representation, job flexibility and pharma industry pay gaps provide focus for new ideas [Press release]. Retrieved from <https://www.medianet.com.au/releases/166140/>
- Royal Australian College of Surgeons. (2020). *Survey report: Breaking barriers; developing drivers for female surgeons*. Retrieved from https://www.surgeons.org/-/media/Project/RACS/surgeons-org/files/operating-with-respectcomplaints/Break-barriers-report_2020.pdf?rev=6d32e206ee4b4d12aa916ec5cb8886d0&hash=5113131E0530FBEDBB D6FACE5B970CD0
- Ruppanner, L. (2019, August 15). Women aren't better multitaskers than men – they're just doing more work. *The Conversation*.
- Ruppanner, L., Collins, C., Landivar, L. C., Scarborough, W., & Tan, X. (2021, February 12). COVID forced Australian fathers to do more at home, but at the same cost mothers have long endured. *The Conversation*.
- Ruppanner, L., Collins, C., & Scarborough, W. (2020, July 21). COVID-19 is a disaster for mothers' employment. And no, working from home is not the solution. *The Conversation*.
- Ruppanner, L., & Meekes, J. (2021, March 8). Flexible work arrangements help women, but only if they are also offered to men. *The Conversation*.
- Shepherd, M. (2018, April 9). The Clogged Pipeline: Women Executives in the Medical Device Industry. *MD+DI Online*.
- Wood, D., Griffiths, K., & Crowley, T. (2021). *Women's work: The impact of the COVID crisis on Australian women*. Retrieved from <https://grattan.edu.au/wp-content/uploads/2021/03/Womens-work-Grattan-Institute-report.pdf>

Appendix 1 - Presentation to the WiMT Committee



**Gender Equity in MedTech:
Interim report to WiMT Committee**

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What we already knew



- There is a significant underrepresentation of women in STEM industries, Medical technology industries, and related industries such as biotechnology, biomedical and engineering when compared to women's representation in the wider workforce. This underrepresentation increases with seniority of roles*.
- We know we can do better.



*Sources – Shepard (2018); Mickey (2019); Paterson et al (2019); McKinsey & Co (2018).



Study Aims (Research Team & MTAA)

1. To understand the barriers and enablers to achieving gender equality in MedTech.
2. To understand the practices that support the achievement of gender equality in MedTech.
3. To provide sector specific* guidance regarding the practices and strategies that are most important for gender equality in MedTech organisations irrespective of size.



*



A mixed-method / two stage project.



Number of interviewees		55		# of interviewees	
CEOs	4	Company A			5
Senior Managers	18	Company B			1
Middle Managers	22	Company C			3
HR Managers	11	Company D			4
Total	55	Company E			7
		Company F			2
Females	41	Company G			4
Males	14	Company H			4
		Company I			4
Female Snr Managers & CEOs	13	Company J			5
Male Snr Managers & CEOs	9	Company K			5
Female HR Managers	11	Company L			6
Male HR Managers	0	Company M			1
Female Middle Managers	17	Company N			4
Male Middle Managers	5	Total			55
		Number of companies			14
		Avg int per company			3.928571429

Yes, Covid19 had an impact. A positive & a negative impact.





Macro (society)

- Worker/leadership/ gender norms
- Double (emotional/work) workloads
- COVID-19
-
- COVID-19 – challenging the nature of / perceptions of work.
- Generational Change
- Society / Firms seeking new norms

Meso (industry)


- Customer Base & Demands
- Current composition of leadership positions & nature of positions of women leaders / roles
- Talent pipeline and pool
-
- Focus on the Business Case
- Formal mentoring / recognition / support
- Top firms engage Unis / Schools to enhance STEM pool

Micro (organization)

- HR vs Leadership Agenda
- Organizational Culture “boys-clubs” even if its “500% better”
- Lack of awareness – of formal policy or mgt discretion
-
- Job Design / Flexibility
- Investment in equity – T&D, working groups, pay analysis, research
- Best Practice


Study Aim 1: Barriers and Enablers






Recruitment & Promotion Practices

- Candidate slate & panel balance
- Gender neutral job description
- Unconscious Bias Training
- HR Presenting Gender-Blind Resumes
- Hold Agencies to Account / 80% qualified pools
- Employer Branding
- Recruiting focused on talent vs experience
- Informal diagnostics on when females don't apply.




Talent Management & Development

- Balanced leadership development programs
- Women only programs (specific needs).
- Mentoring programs
- Sponsoring high potential women in external training programs/unis.
- Talent Mgt / Succession plans with a gender lens @ multiple levels.
- Targets (not quotas) for gender balance.



Measurement & Leadership


- Parent Company Focus
- Leadership agenda
- Gap Analysis & KPI setting & tracking
- Pay Equity Analysis @ all levels + accounting for breaks
- Analyzing gender attrition & engagement
- Articulating the Business Case
- Working Groups / Mentoring / Network Groups



Flexible / Supportive HR Practices

- Flexible working
- Leave – Parental, & Carer leave.
- Formalizing working group / policy suites
- Championing and awareness raising – role models (both genders).
- More part time work roles.
- Training needs analysis.
- Support in managing the customer interface.
- Rethinking job designs.. (WIP)

Study Aim 2: Identifying good/best practices



What helps Vs What really matters in Med Tech?

Articulating what matters in a way that is adaptable to size/product etc.



- **Measurement matters** – Gender goals must be measured
 - **Formalisation matters** – Gender goals must be formalised
 - **Articulation of the business case matters** –The tighter that linkage the greater opportunity to leverage the firm’s resources.
 - **Flexibility matters** – like it or not, flexible working really matters.
 - **Normalization matters** - this is where men play a key role (leadership matters, but we need to make this less about the leader’s “talking point in the report”, and more about the normalization of say **flexible** working and the normalization of gender equity as a priority at every level the ecosystem).
 - **Job design matters** - can we make the job less ‘traditional’ and sell that in recruitment (this will increase the pool that firms are struggling to create).
 - **Profile-raising matters** – there are still people unaware of initiatives and others are inspired – this is where all your work already has an impact.
- » **Gender attitudes in the ecosystem matter** – investors, customers, suppliers, talent, distributors, competitors, government etc - ecosystem involved in the delivery of a ~~product~~ goal (gender equity).



Study Aim 3: What really matters in MedTech?



Where to from here?

This study is, by design, a two part story – part one is still a work in progress, but that work is worth sharing in a way that helps the MTAA and it’s members?

- ***Our question to you is how best to share and how best to have an impact / gain buy-in while doing so?***

As scholars we want to move passed the ‘gender blind’ to a ‘gender bilingual’ approach to managing gender equity & the MTAA is our lead partner in this.



Gender Blind

This is what men always tell me that they don't care about gender "only competent men"



Gender Bilingual

What we need a manager who understand gender differences and learn to manage competently across them.



Thank you!
Questions, suggestions, comments
for the research team?

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