Breaking Barriers, Building Bridges

Why Sex and Gender Equity and Diversity Matters for the Nephrology Workforce and for Patient Outcomes

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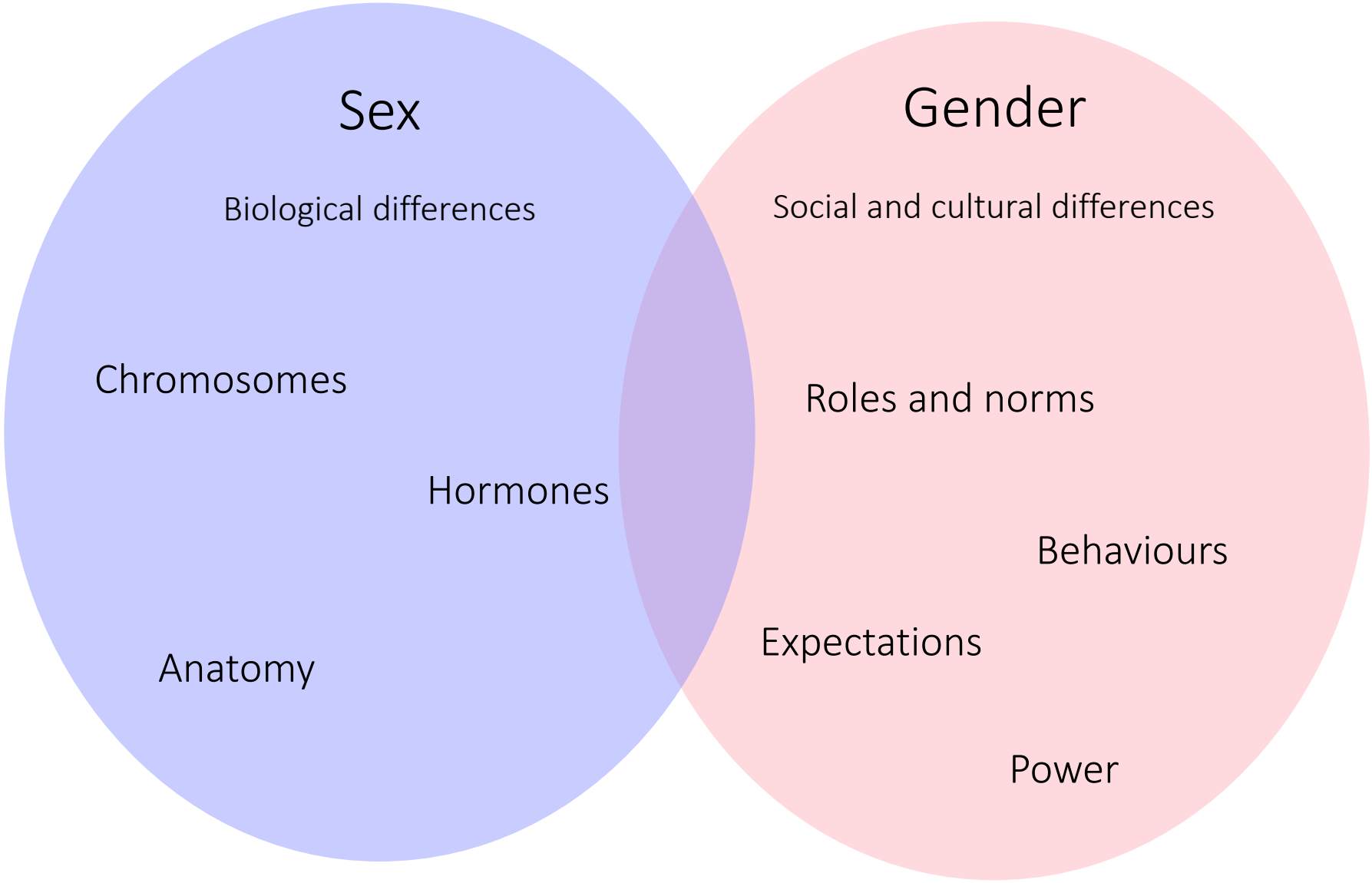
Sex vs Gender: What is the difference?



Sex vs Gender: Intersectionality

Intersectionality recognises that there are multiple sources of disadvantage than can co-exist: ethnicity, SES, sexual orientation and other identity markers that can create a complex web of disadvantage.2

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2. Sex and gender inequities for the renal physician workforce
3. Why we need a diverse workforce - physician and patient concordance matters!

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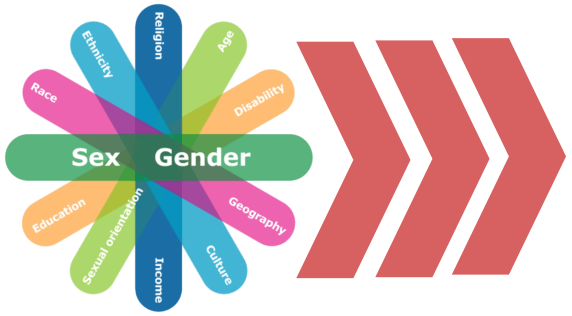
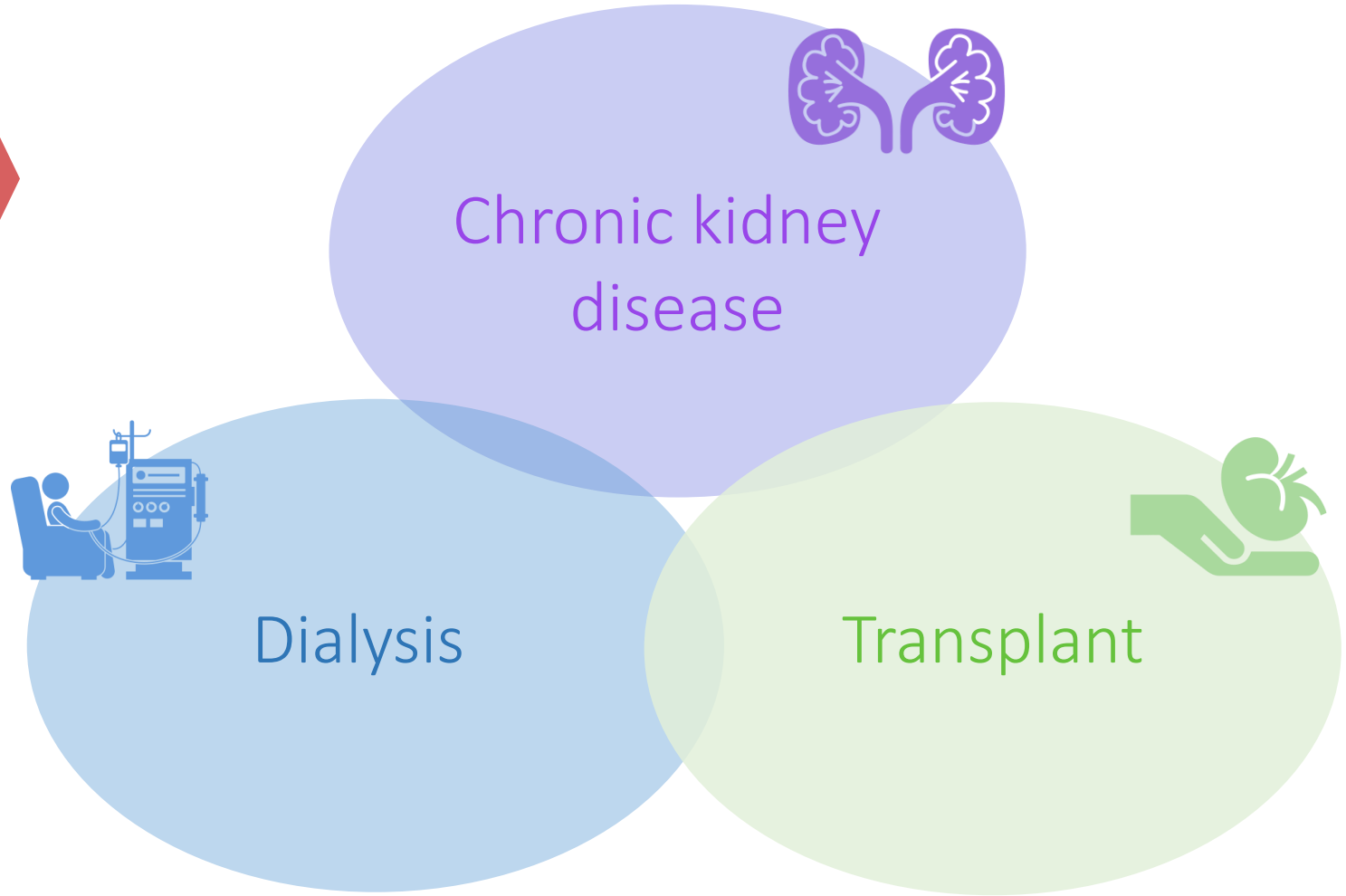
Females are disadvantaged throughout the life cycle of kidney disease





Call for research! We need more sex stratified analysis in CKD

Chronic kidney disease

What we know:

- CKD prevalence: F>M
- Decline in kidney fn: M > F
- Treatment decisions differ.
  - In advanced CKD: Elderly F > M (esp M with partners) choose conservative care

What we don't know

- How sex modifies risk factors and complications of CKD

Map of the current evidence for sex-based differences in risk factors and complications of CKD

		Favours females	Favours males	No sex difference	Unclear
CKD epidemiology & risk factors	Diagnosis of eGFR		✓		
	Age				⌃⌃
	Diabetes	✓		✓	⌃⌃
	Hypertension	✓			⌃⌃
	Obesity		✓		
	Cerebrovascular disease				⌃⌃
	Smoking				⌃⌃
	Socioeconomic status				⌃⌃
Complications of CKD	CKD progression				⌃⌃
	Cardiovascular disease		✓		
	Mineral & bone disease		✓		⌃⌃
	Anaemia		✓		⌃⌃
	Quality of life		✓		⌃⌃
	Cancer				⌃⌃
	Mortality	✓			⌃⌃
	Paediatric CKD				⌃⌃

✓ Strong evidence

✓ Some evidence

⌃⌃ More evidence needed

Source: Wyld, M et al 'Sex-Based Differences in Risk Factors and Complications of Chronic Kidney Disease, Seminars in Nephrology 2022

Females have poorer outcomes than males on dialysis

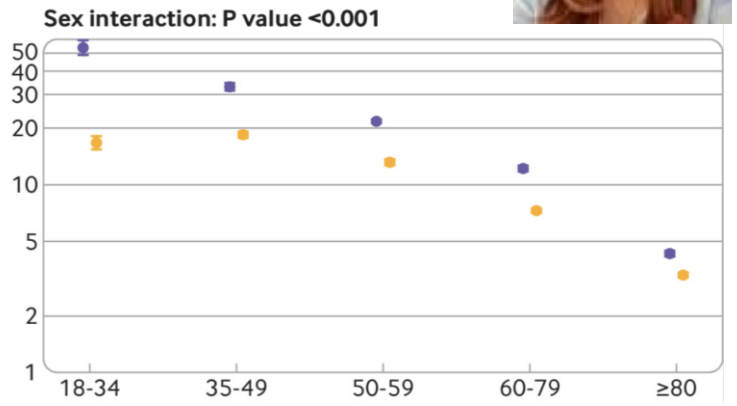
Dialysis

Dr Nicole De La Mata

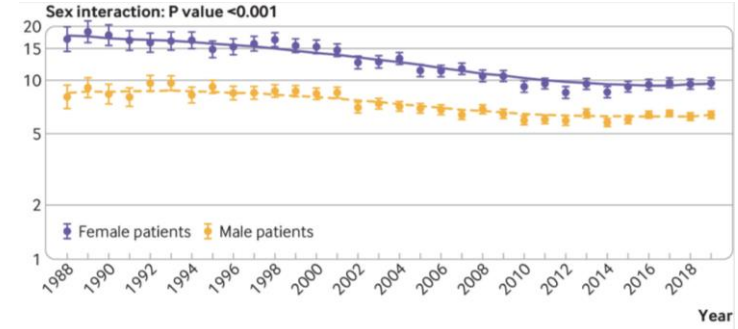
- Females are less likely to be dialysed than males and when dialysed:
  - ↑ late starters with lower levels of fn
  - ↑ rates of withdrawal
- Compared with males, females on dialysis have
  - ↑ *excess* deaths
  - ↑ life years lost
- ↑ Relative cardiac death for females on dialysis > males
- After a CV event, females on dialysis have ↓ rates of cardiac cath and cardiac rehab than males
- HRQoL is ↓ for females than for males & females report ↑ symptom burden and greater symptom severity

Standardised mortality ratios

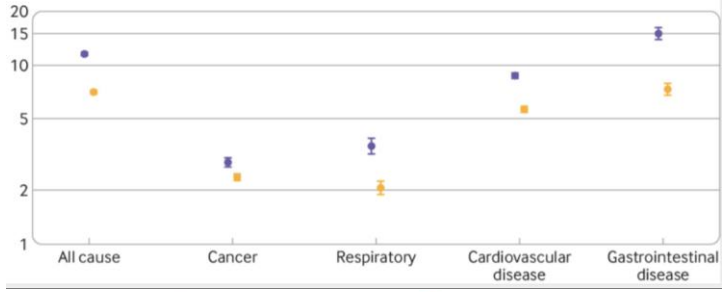
Age



Era



Cause of death



Female patients Male patients

Source: De La Mata, N et al 'Sex differences in mortality among binational cohort of people with chronic kidney disease: population based data linkage study; BMJ 2021
Chan, H et al. Risk Factors for Dialysis Withdrawal: An Analysis of the Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry, 1999–2008. CJASN 2012.

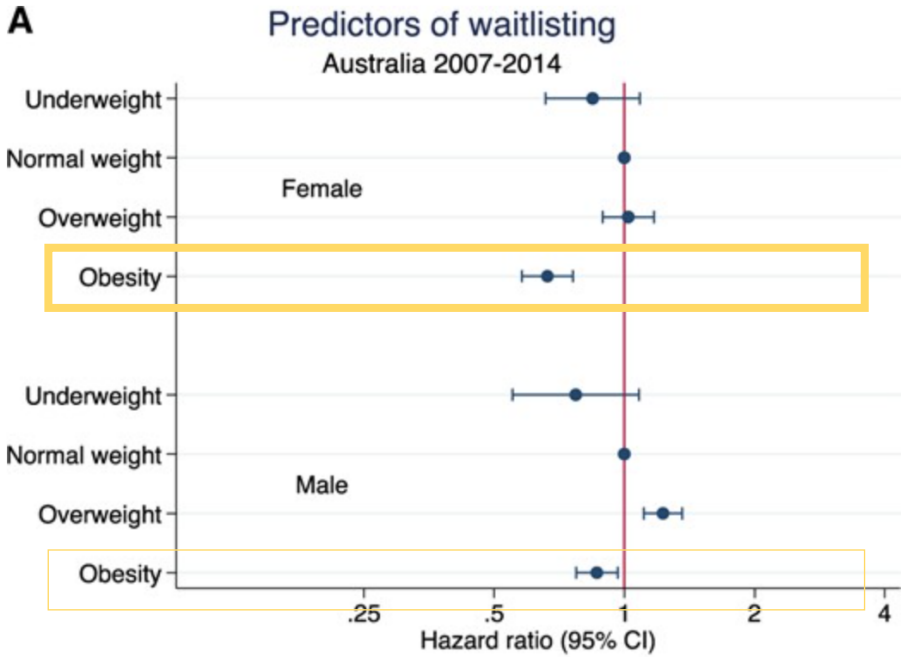
Females have less access to deceased donor transplant

Deceased donor transplant

Dr Maleeka Ladhani

- Females face **hurdles at each step of the process**:
  - Less likely to receive dialysis
  - On dialysis 15% less likely to be waitlisted (fully adj)
  - When waitlisted less likely to be transplanted (though ANZ data on this is limited and role of sensitisation imp. here)
- **Inequity amplified when females have other types of disadvantage**.
  - **Obese** females less access to transplantation than male peers
  - Females 50% less likely to have transplant discussed with them by their physician, **older females** the least likely to have discussions

Relevance of sex and obesity to waitlisting



Source: Sypek, Access to waitlisting for deceased donor kidney transplantation in Australia, Nephrology, 2018, Ladhani, M, 'Obesity and gender-biased access to deceased donor kidney transplantation', NDT 2019

Females also less likely to receive a living donor transplant

Living donor transplant

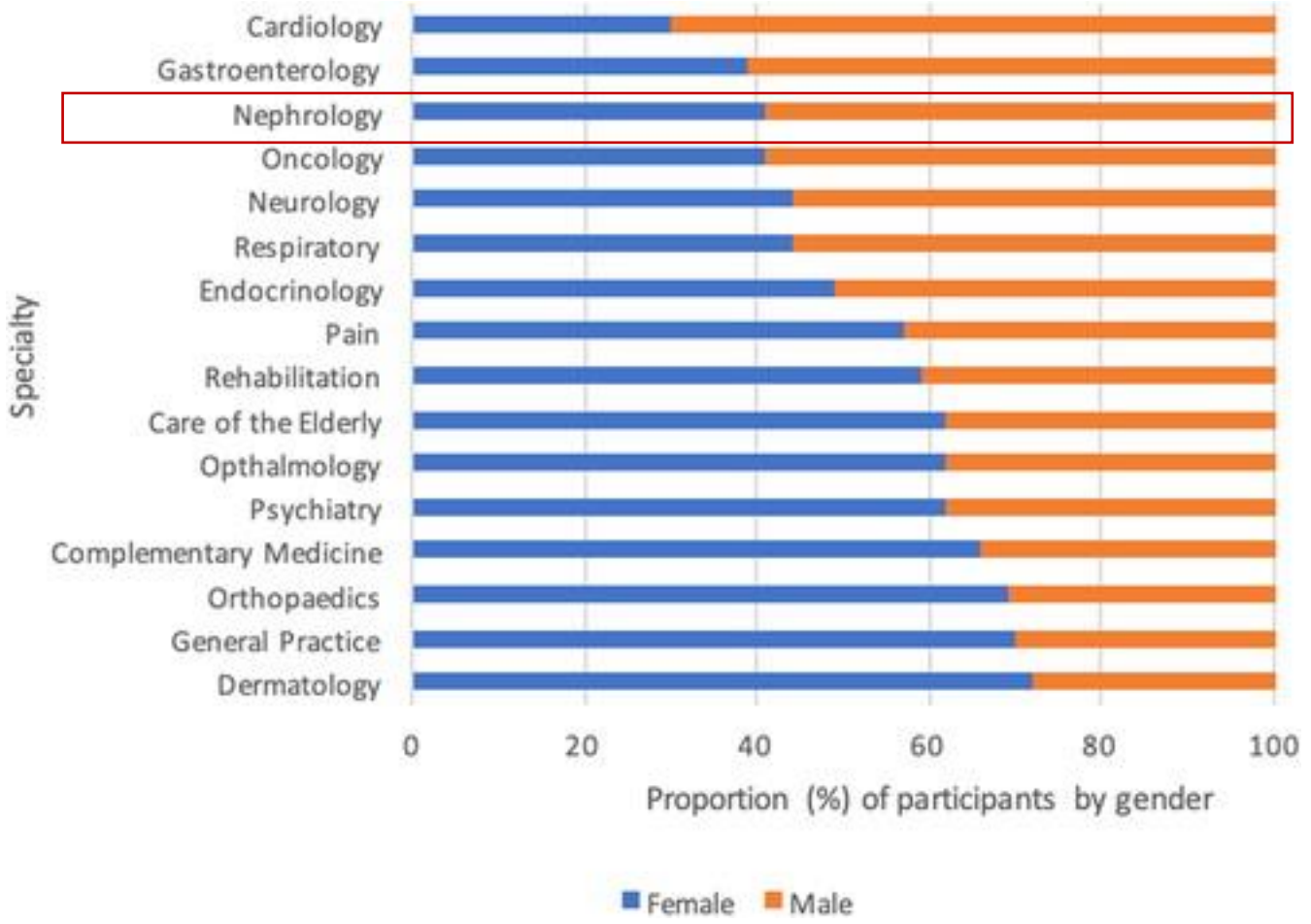
- Australian females have been found to be **16% less likely to receive a living donor transplant** than males (adj).
- Why? Likely a complex interplay of biological and social factors.
  - Biological: pregnancy generated anti-HLA antibodies may contribute to higher levels of sensitisation
  - Social: Cultural and social biases (patriarchal norms). In the UK potential donors were 40% less likely to donate if the recipient was a female rather than a male.
- Females more likely to donate a kidney than males (60:40)

Source: Sypek, Access to waitlisting for deceased donor kidney transplantation in Australia, Nephrology, 2018,

Females are underrepresented in nephrology clinical trials in ANZ and Globally

- A study of 88 published nephrology trials conducted in Australia in 2019
- In nephrology female:male ratio 38:62, p=0.02
- Only cardiology and gastroenterology had more female underrepresentation

Percentage of females:males included in 2019 Australian studies by specialty

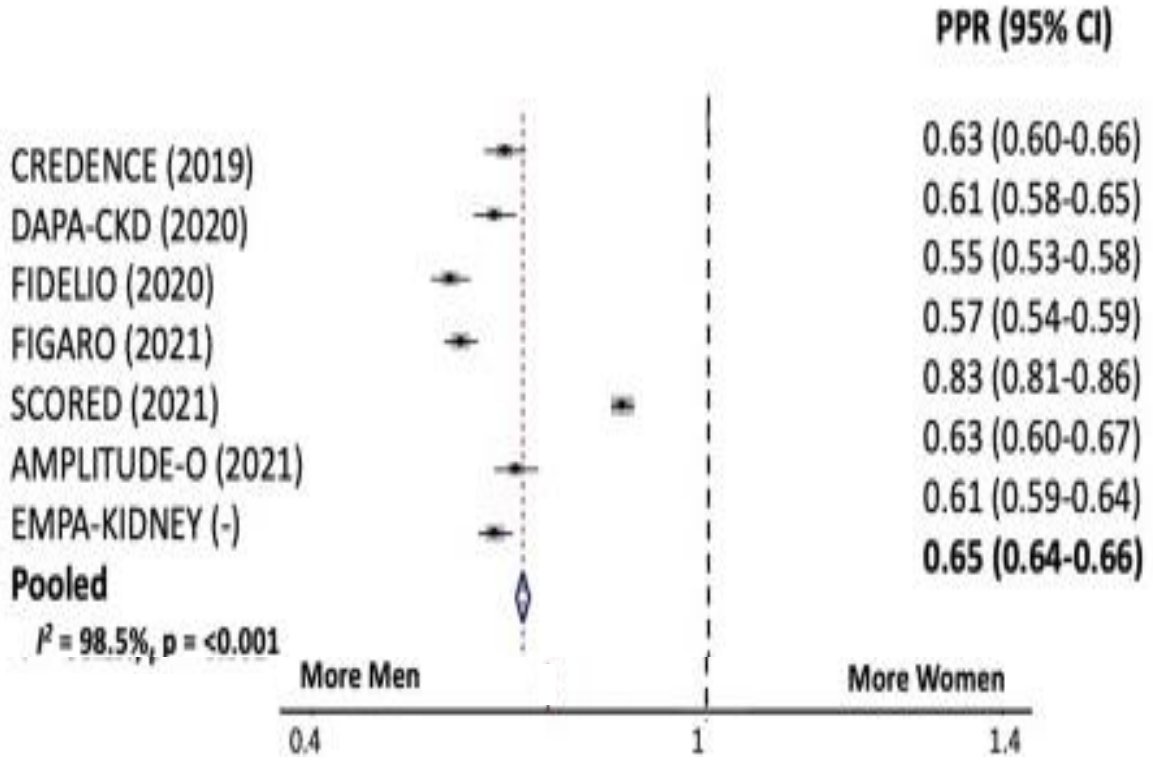


Source: Merone et al, Mind the Gap: Reporting and Analysis of Sex and Gender in Health Research in Australia, a Cross-Sectional Study, Womens Health Reports, 2022

In the high profile recent SGLT2, MRA and GLP1-RA trials females were consistently under-represented

- Recent trials published in NEJM examined for proportion of female participation
  - PPR = Participation to prevalence ratio (% female in a trial / % female in disease state).
  - PPR 0.8-1.2 considered reasonable.
- Pooled PPR 0.65. Females are significantly under-represented in these trials – making sex based comparisons in efficacy +/- AEs challenging

Pooled PPR for females vs. males stratified by chronic kidney disease as part of inclusion criteria



Source: Vinson, Underrepresentation of women in recent landmark kidney trials: the gender gap prevails, KI Reports, 2022

1. Sex and gender inequities for patients with kidney disease
2. Sex and gender inequities for the renal physician workforce
3. Why we need a diverse workforce - physician and patient concordance matters!

A. Gender inequities exist in the nephrology workforce

B. These gender inequities are felt throughout the workforce

C. (Some) progress is being made in addressing these inequities

D. Ongoing work is required to further address and eliminate gender inequities

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Gender inequities are experienced differently throughout a career

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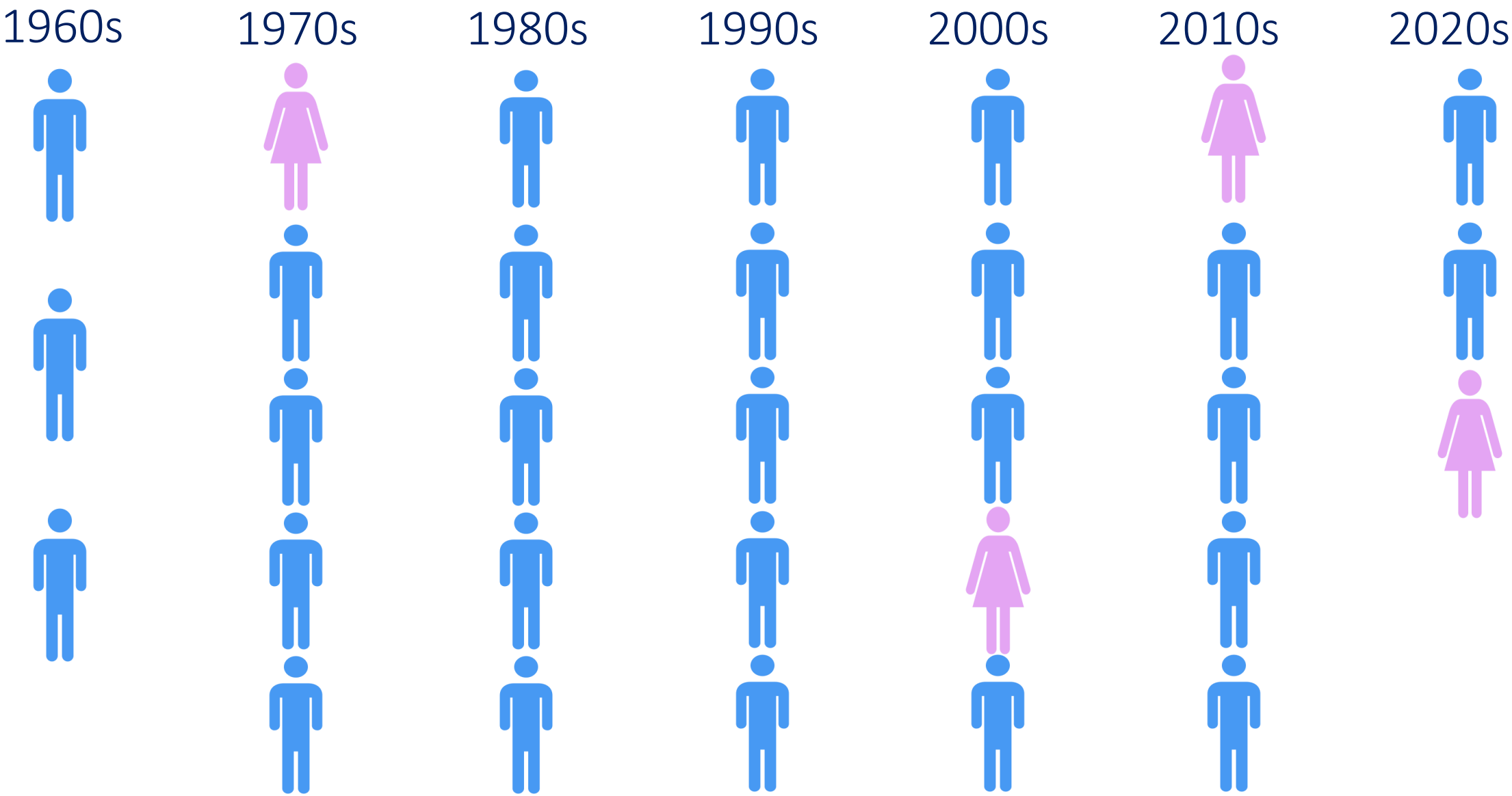
Measures of success for senior workforce

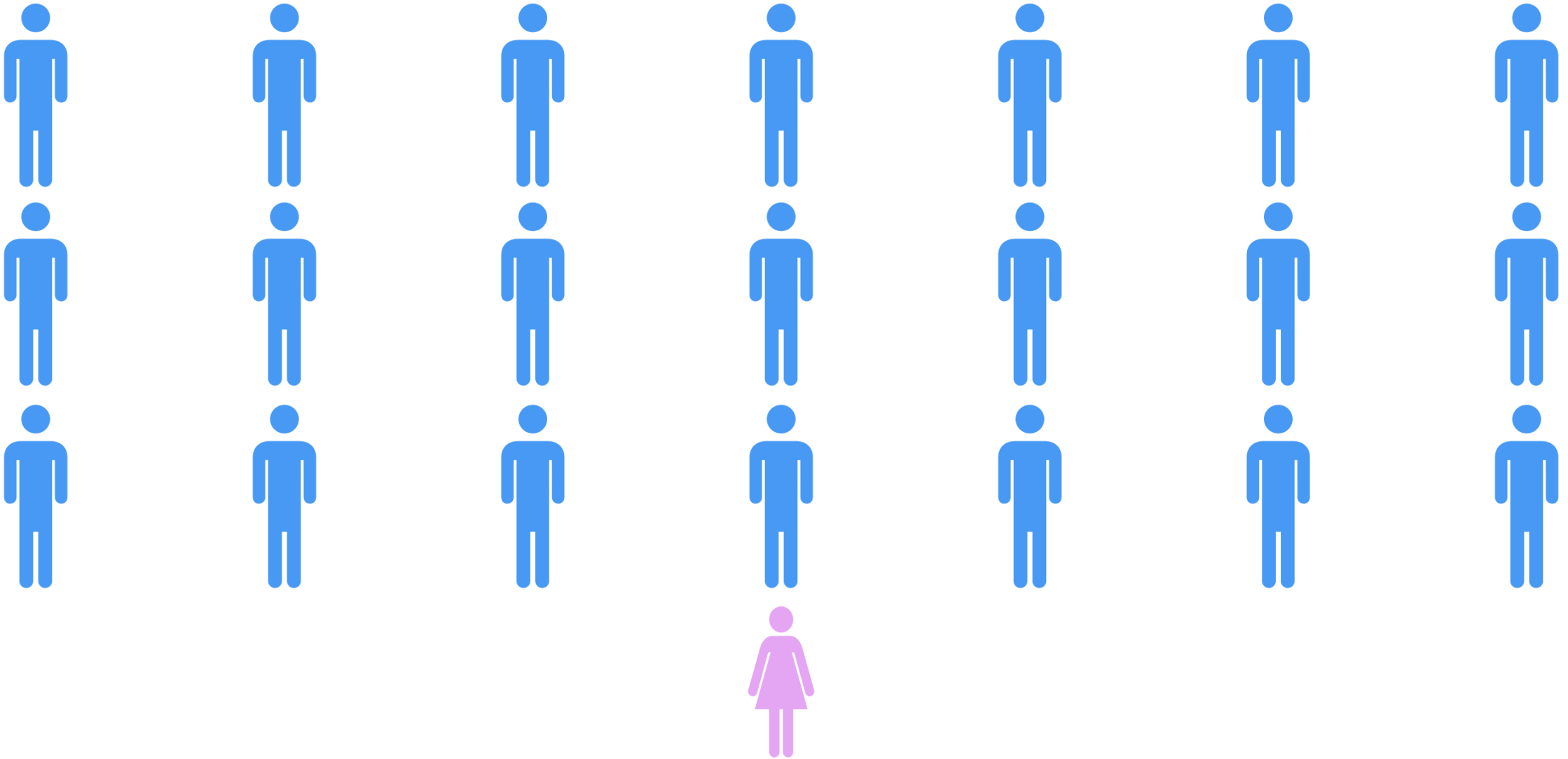
- **Leadership positions** in societies – being president or on council
- **Head of department**
- **Grant funding**
- **Editorship** of journals

Gender composition of ANZSN Presidents



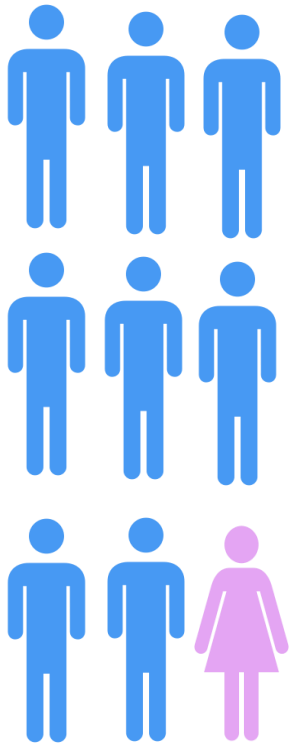
Gender composition of ANZSN Life Members

*"Members who have **contributed materially to the advancement of nephrology**; and rendered **exceptional services** to the Society"*



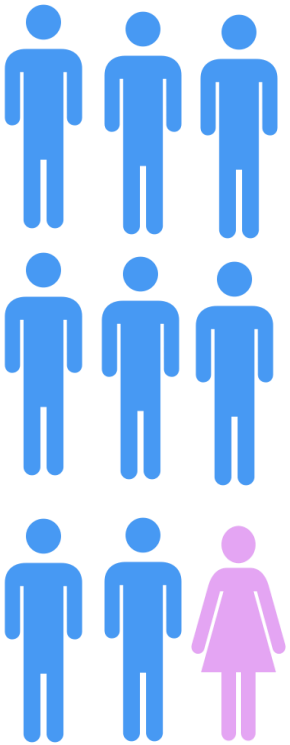
In 2019, there was 1 female on Council (11% of total)

2019



A target was set of 50% by 2022

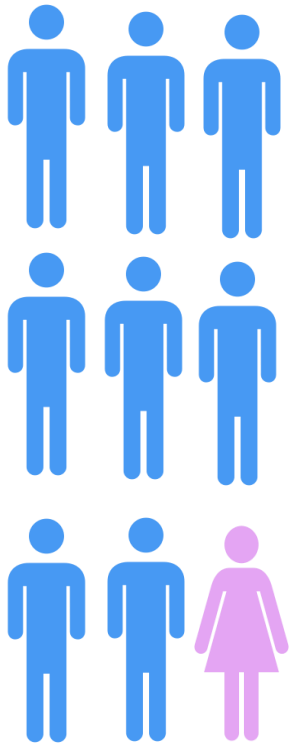
2019



Target of 50% by 2022

In 2023 4/11 elected members are women

2019



THE FUTURE

ANZSN Council Targets

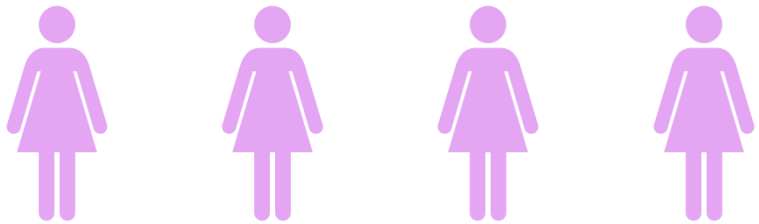
10 Members

2020 : 3-4 Females

2022 : 5 Females

Target of 50% by 2022

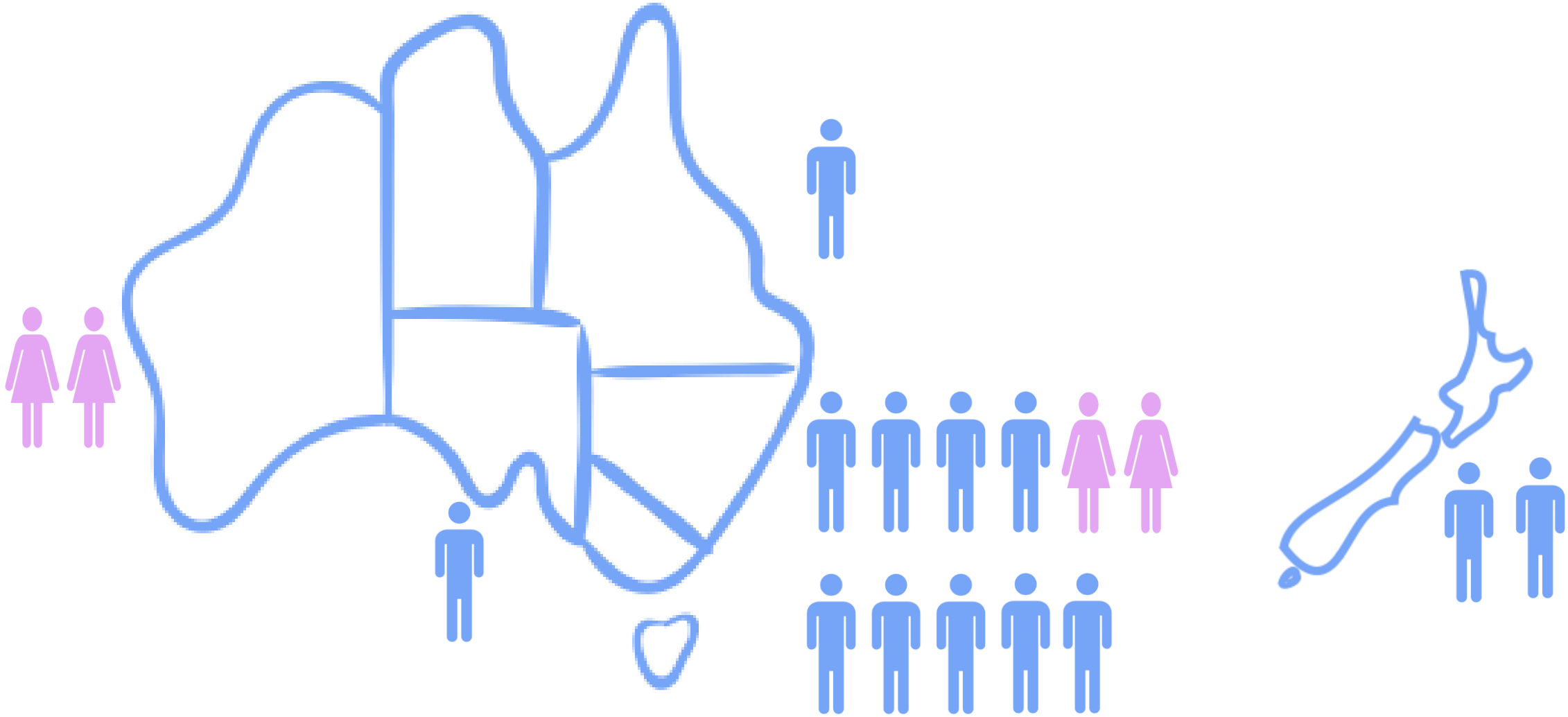
2023



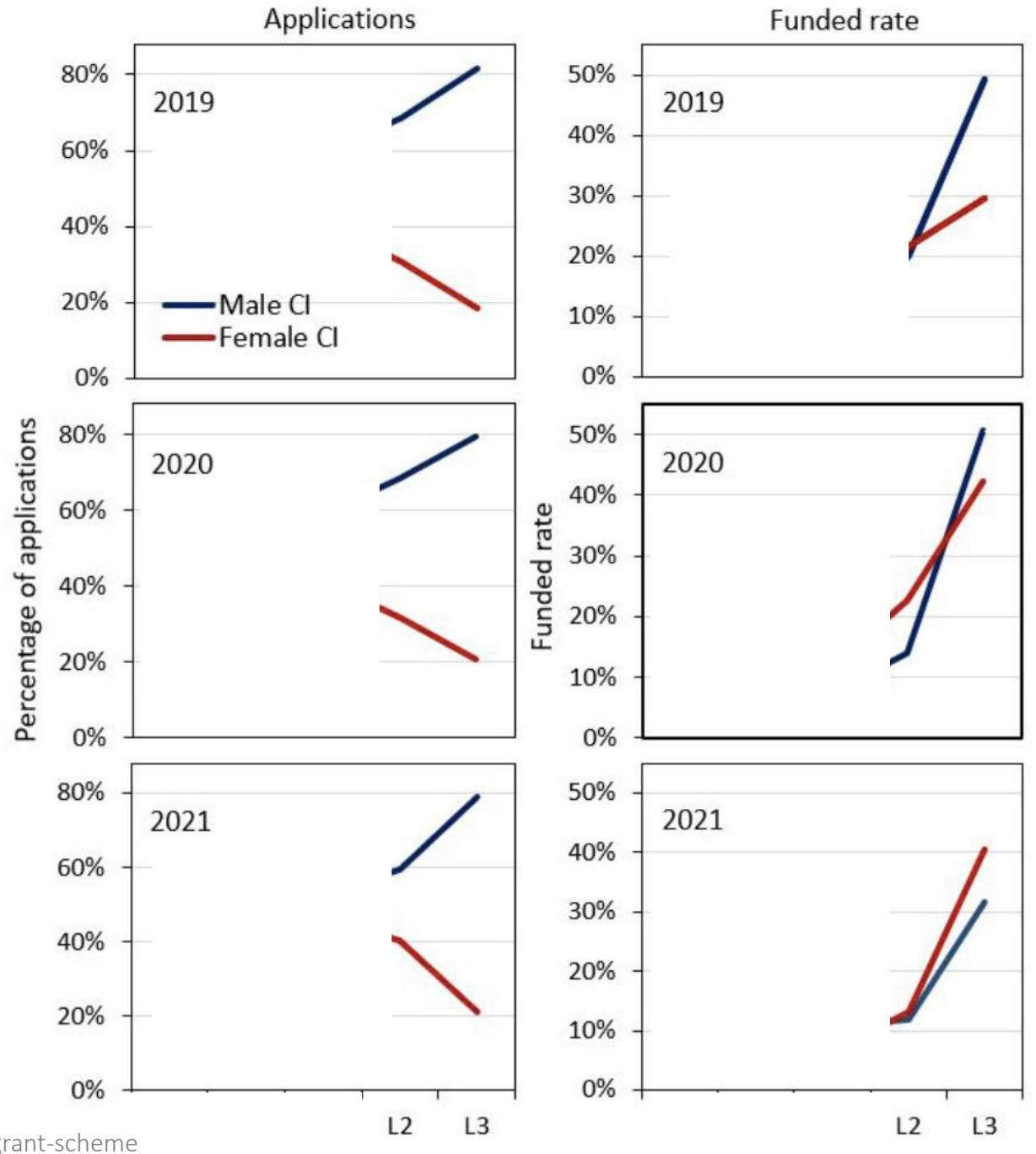
Target not reached.

36% of elected members are women*

Women make up 4/17 Heads of Department at Acute Transplant Centres in ANZ

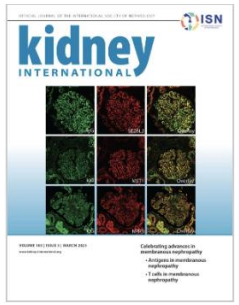


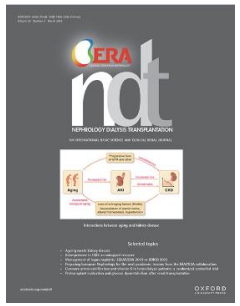
For senior researchers applying for investigator grants, women make up only a small fraction (~20% at L3) of applications

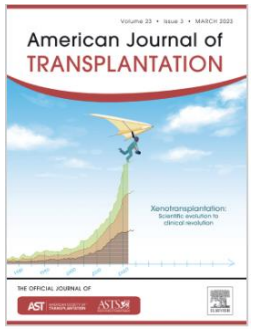


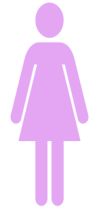
Source: https://www.nhmrc.gov.au/about-us/news-centre/gender-disparities-nhmrcs-investigator-grant-scheme

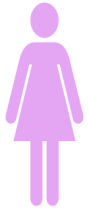
Journal editors are the gatekeepers of science, and this power remains largely in the hands of men

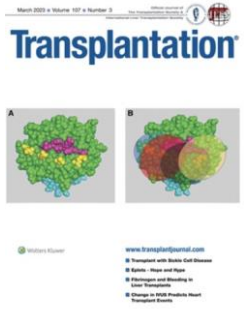


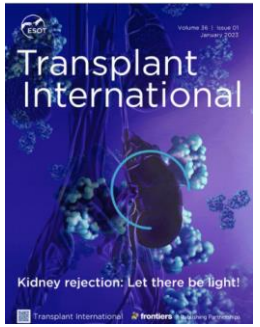












Measures of success for senior workforce

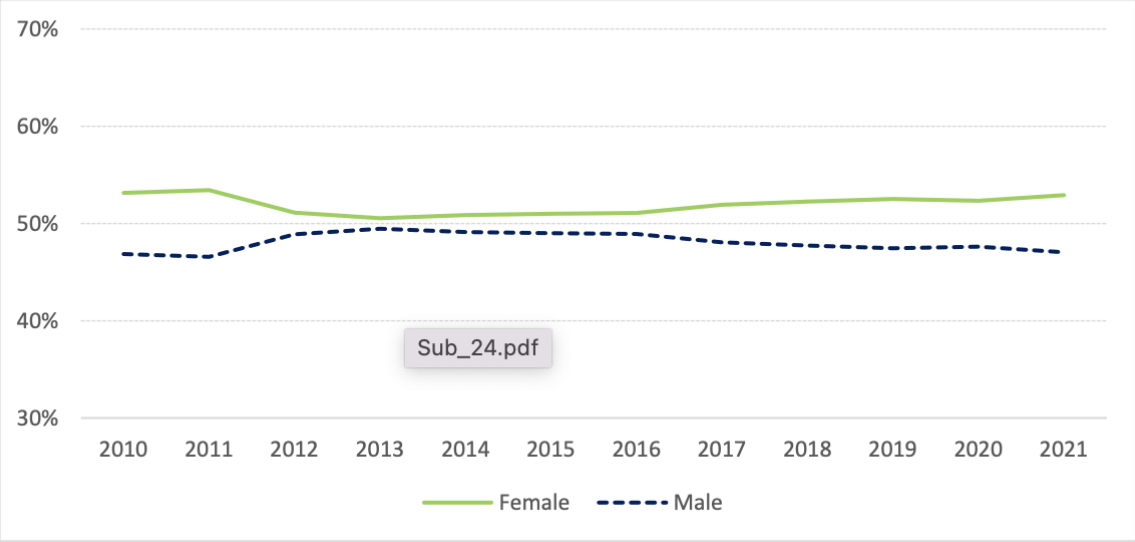
- **Leadership positions** in societies – being president or on council
- **Editorship** of journals
- **Head of department**
- **Grant funding**

The pipeline is strong (and has been for decades…)

In early careers, women are well represented

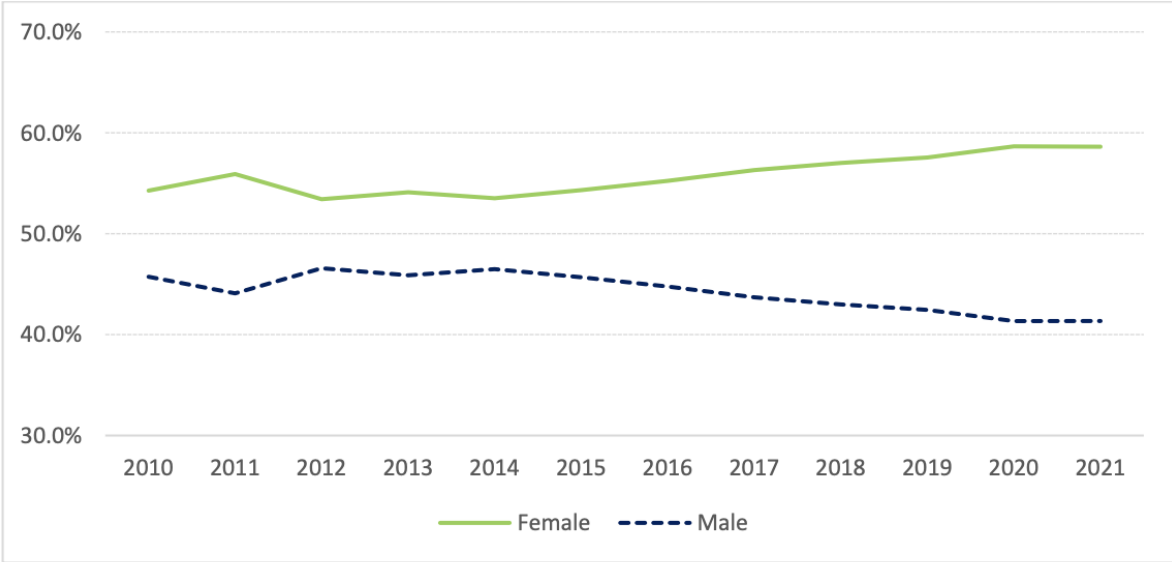
- Women have made up ≥50% of Australian medical students for 3 decades

Figure 18. All enrolments at Australian medical schools – by gender



Note: These figures do not include the small number of students who identified as non-binary / intersex / unspecified

Figure 21. All enrolments at New Zealand medical schools – by gender

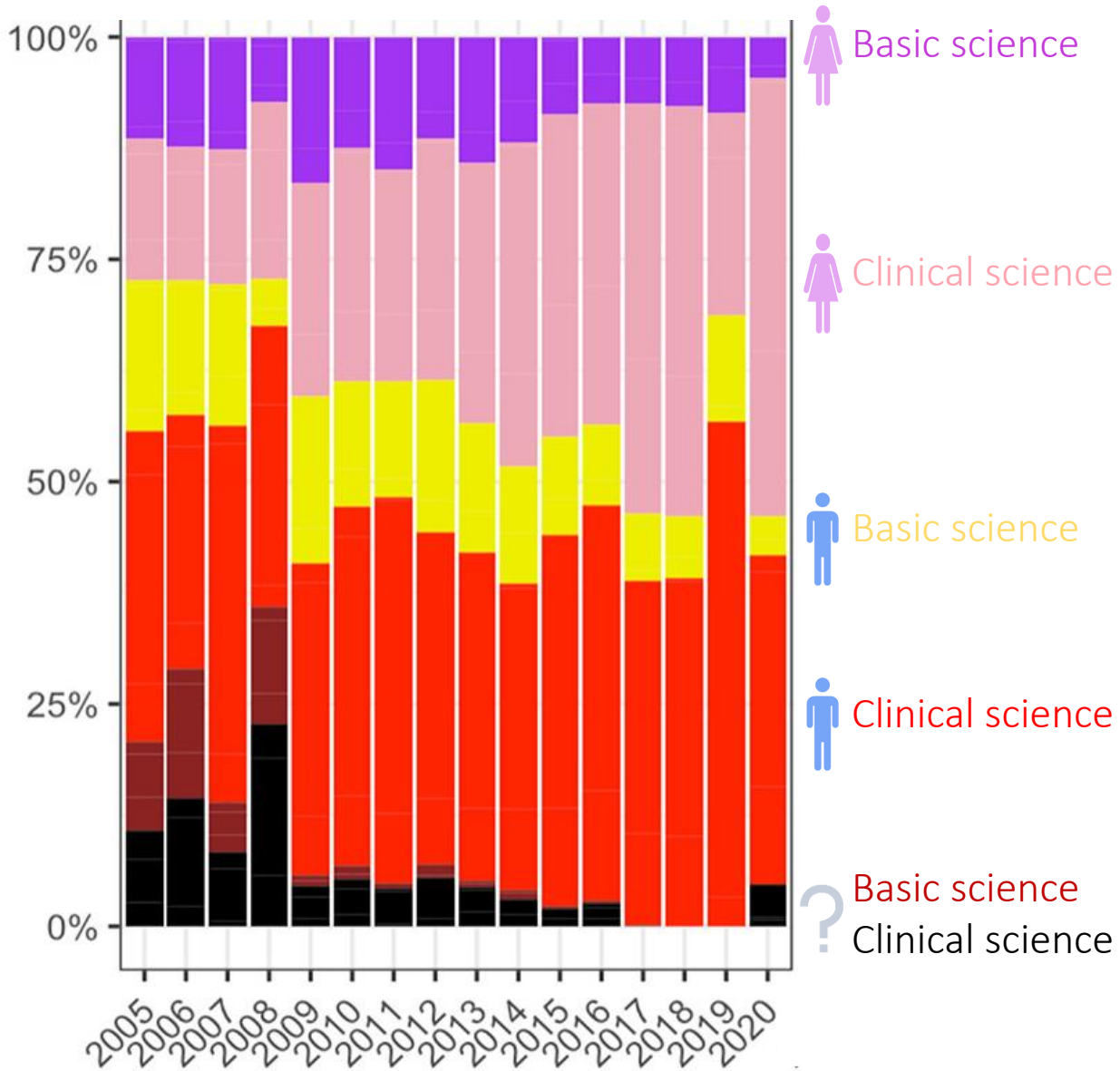


- Of Nephrology trainees in ANZ where sex and gender is known 56% are female

Source: Medical Deans Student Statistics Report 2021

Female first authors at ANZSN have been increasing

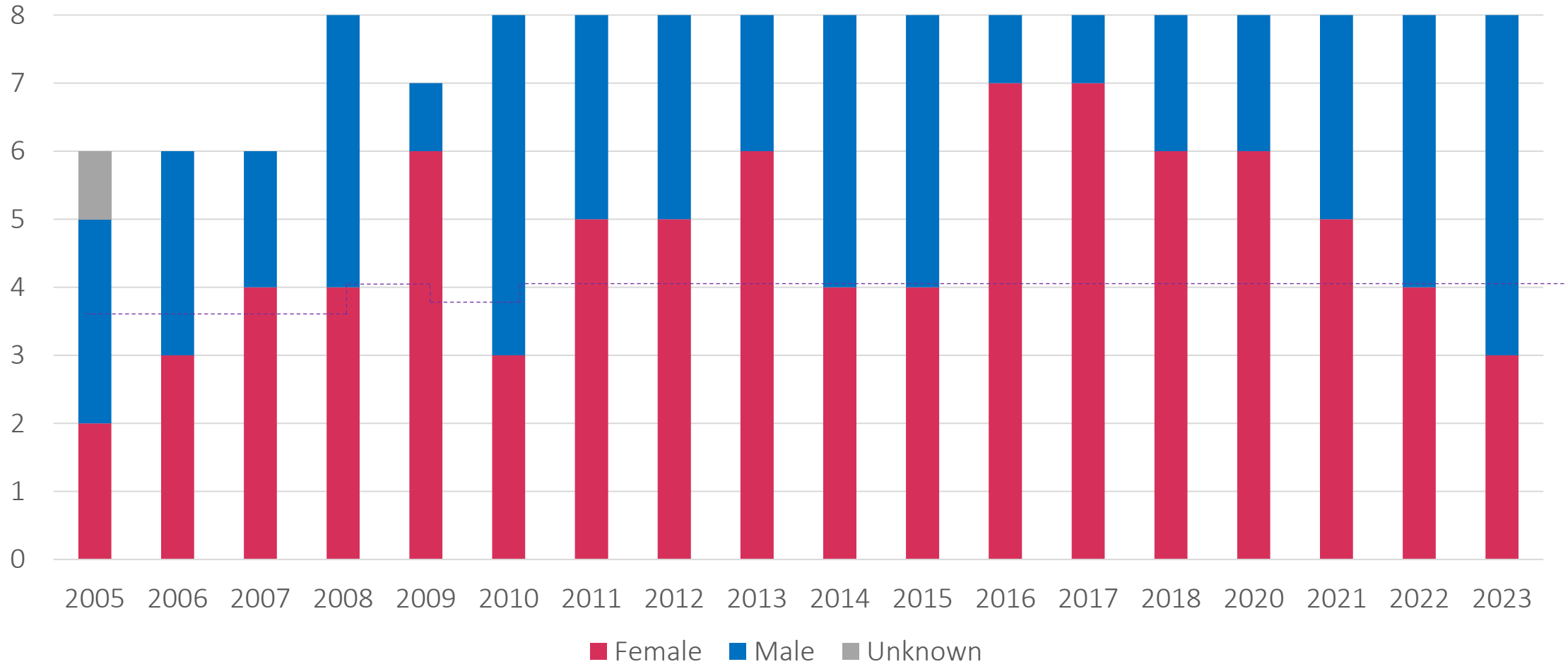
Professor
Natasha Rogers



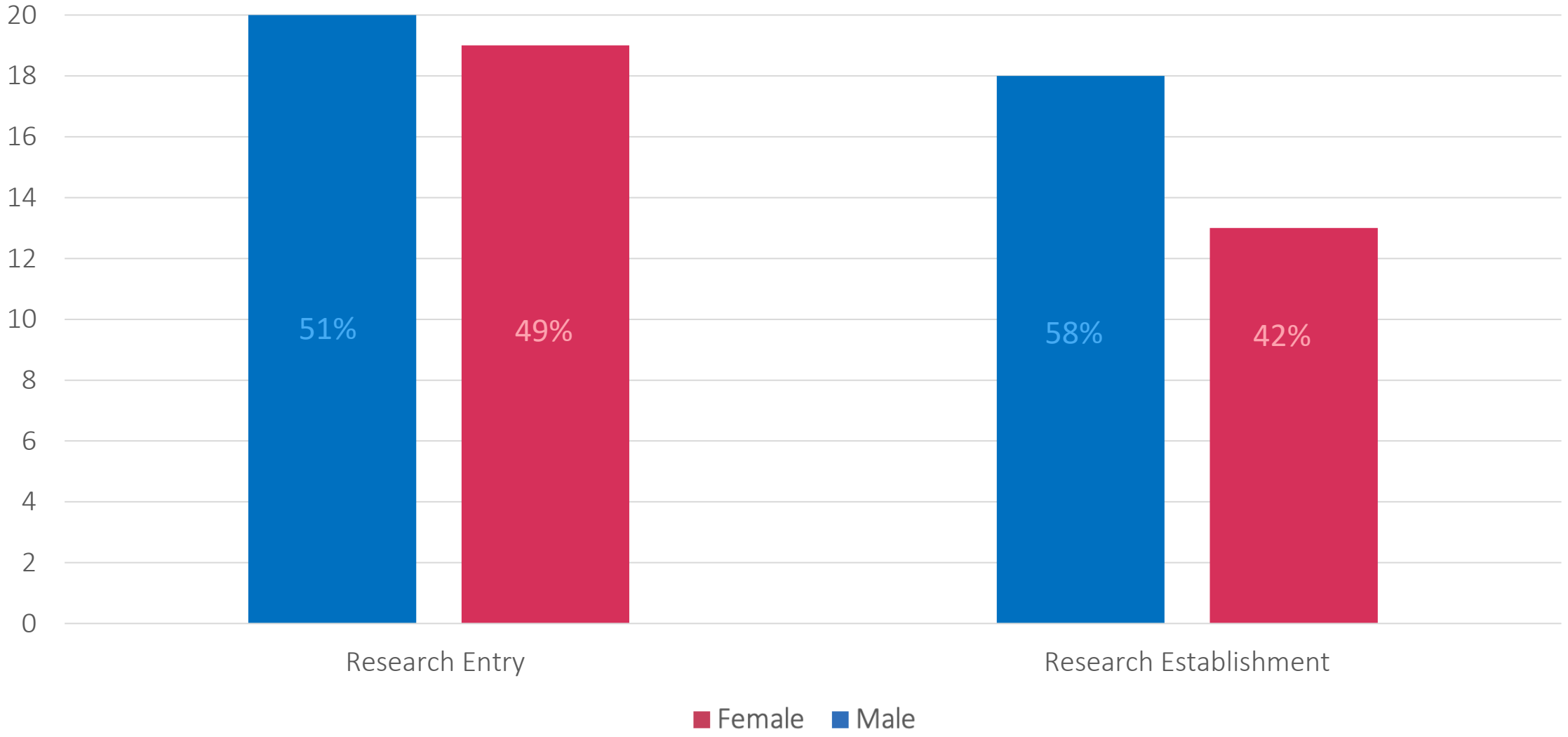
Female first authorship of abstracts at ANZSN ASM rose from **27% in 2005** to **56% in 2020** (p = 0.011)

Source: Purvis et al ' Research trends in Australia and New Zealand Nephrology: basic science and gender equity in peril', Internal Medicine Jnl, 2022

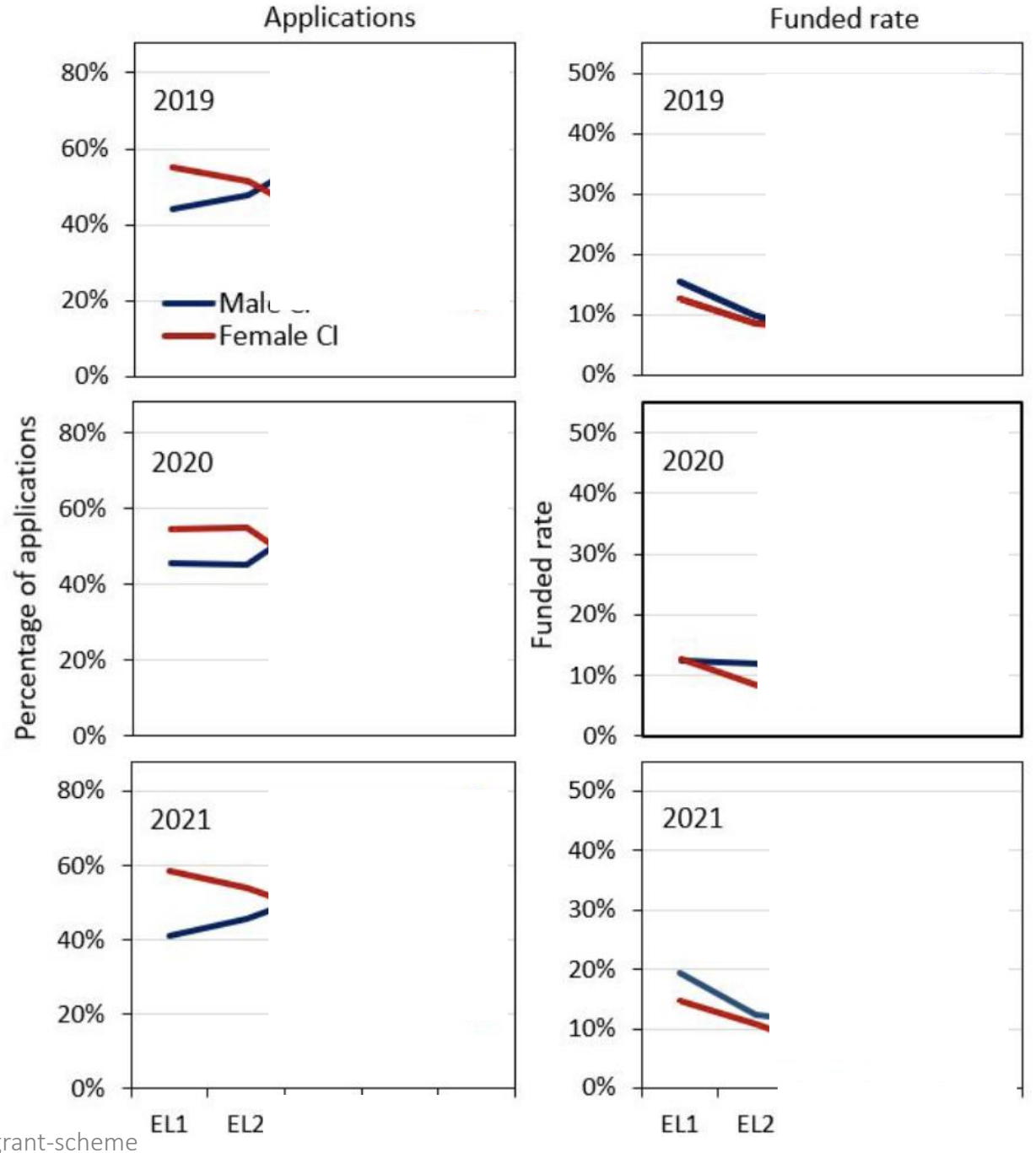
Females have made up 60% of ANZSN YIA Finalists since 2005



Jacquot Fellowships 2014-2023 are well balanced, at the research entry level



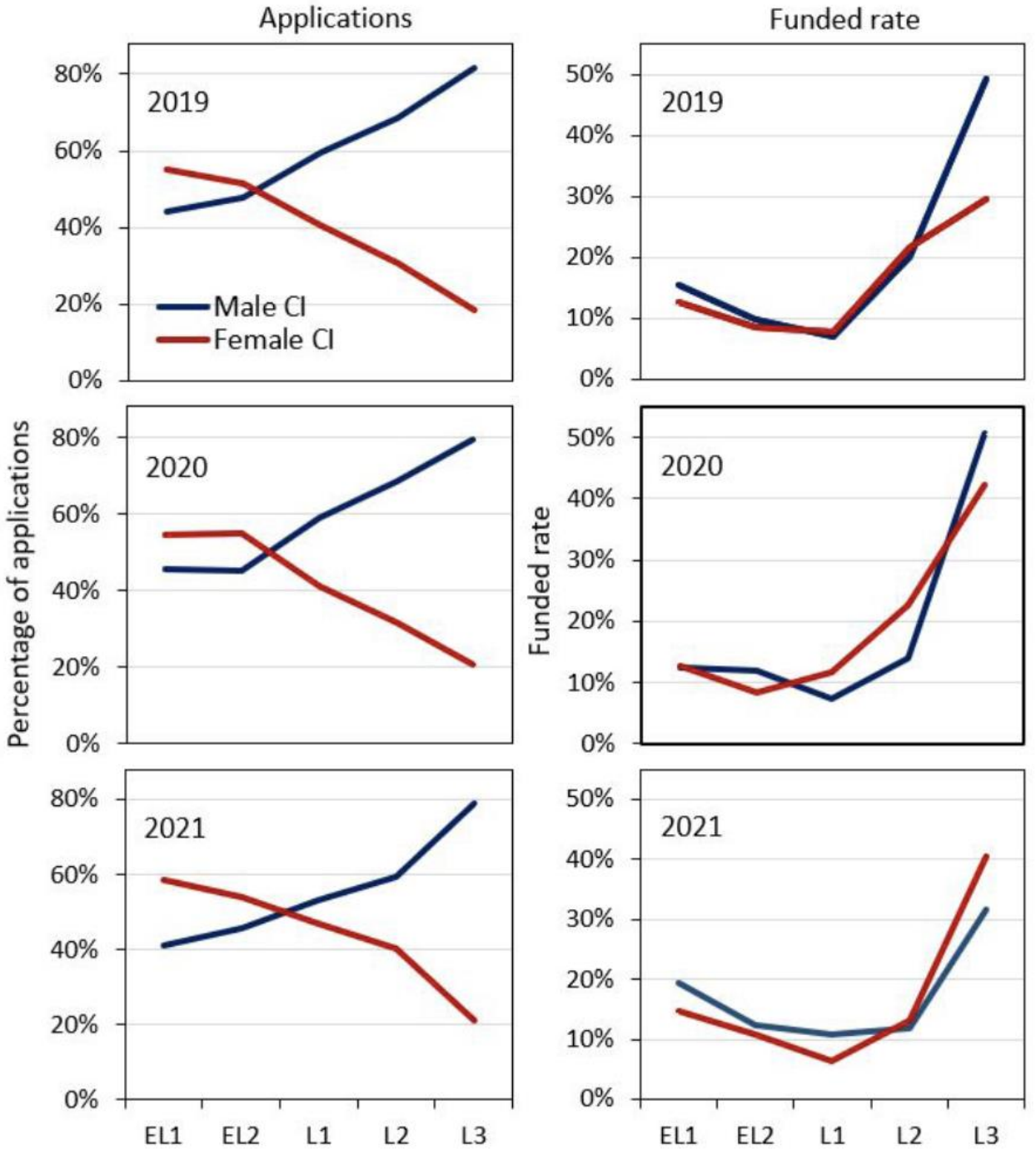
For junior researchers applying for investigator grants, women make up the majority (~60% at EL1) of applications



Source: https://www.nhmrc.gov.au/about-us/news-centre/gender-disparities-nhmrcs-investigator-grant-scheme

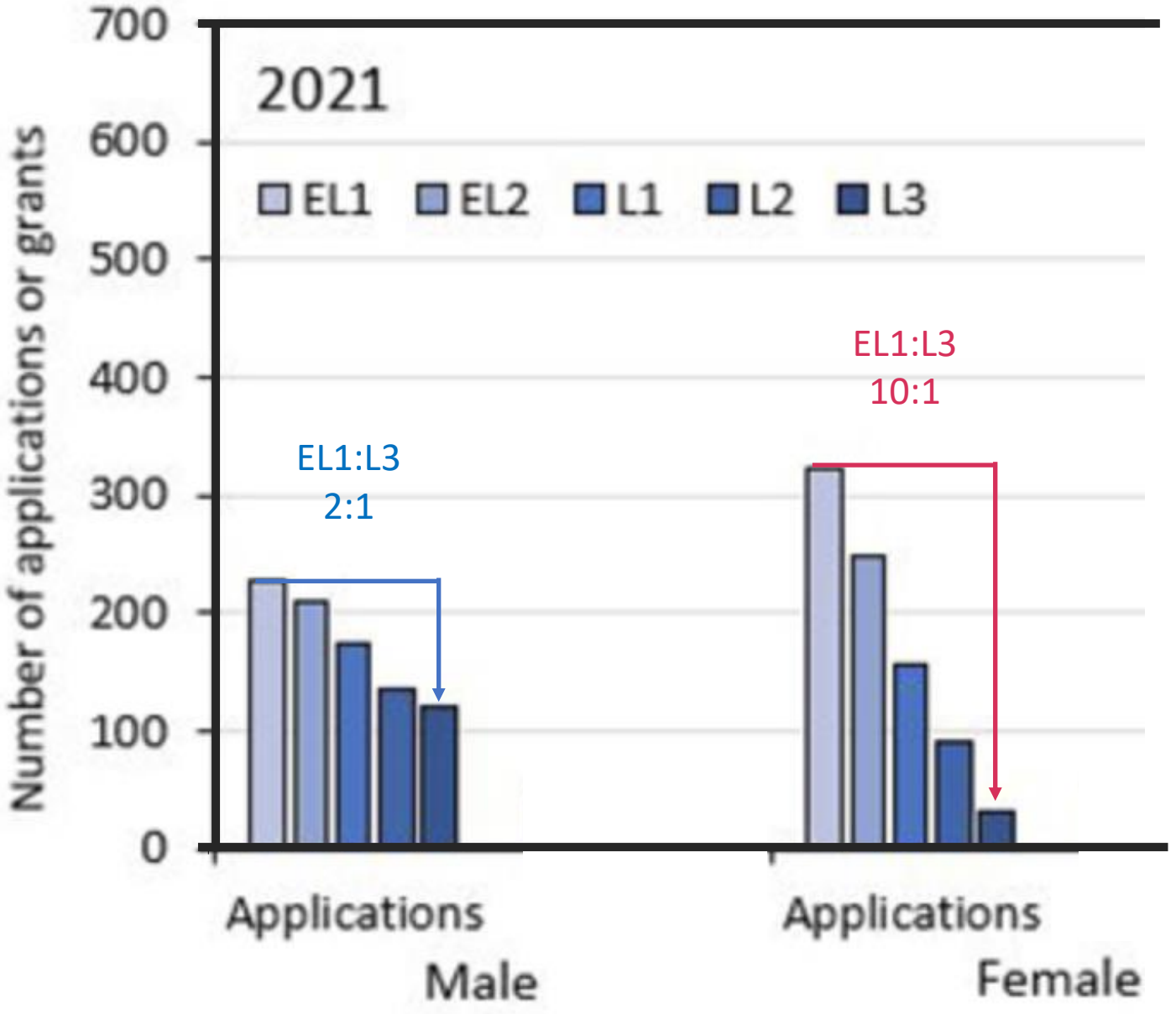
Are mid-career women marginalised in nephrology?

The pipeline starts out strong, but is very leaky



Source: https://www.nhmrc.gov.au/about-us/news-centre/gender-disparities-nhmrcs-investigator

Women are squeezed out of the pipeline during mid-career



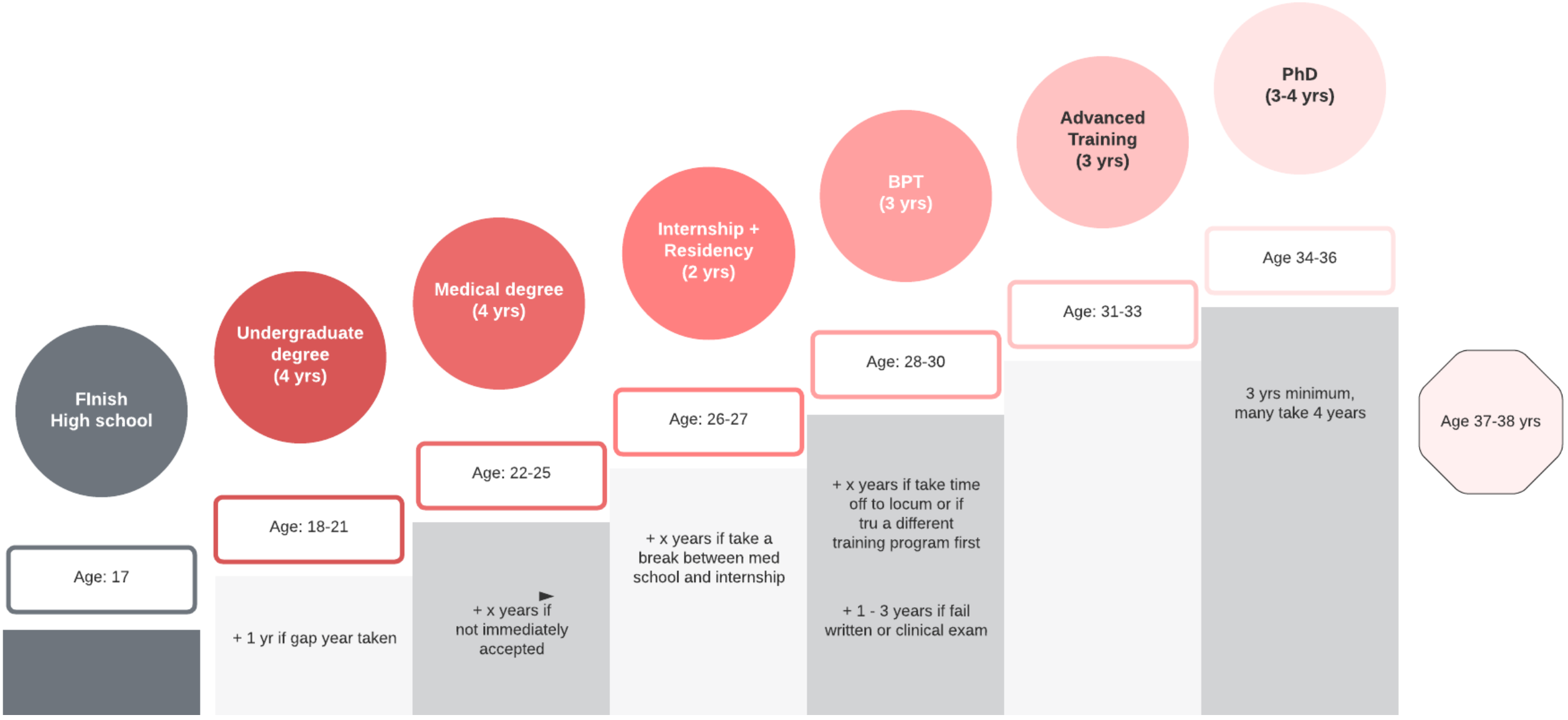
Source: https://www.nhmrc.gov.au/about-us/news-centre/gender-disparities-nhmrcs-investigator-grant-scheme

Barriers to mid career women are well documented

1. Unconscious (and less often conscious) gender bias.
2. Tension between family and career demands, esp in women who delay childbearing to complete training. Women shoulder more caregiving responsibilities than men particularly for young children.
3. Lack of mentorship and sponsorship.
4. Research funding.
5. Workplace culture.
6. … many more.

Source: google images

Tension between family and career demands are particularly acute for clinician researchers



Mentorship and sponsorship are common in early career “Jennifer Fever”

- Phenomenon where early in their careers female physicians/“Jennifers” are not seen as competition, and are trained and mentored by senior men
- Authors had noted that when the issue of the need for more women in medicine is bought up, senior men “Daves” generally bring up residents, advanced trainees (fellows), or very junior consultants

  “You won’t have anything to worry about in terms of women in medicine; you should see the calibre of the women medical students who are entering medical school now.”

- Daves are often very supportive of women at early career stages “Jennifer fever”
- Junior women are pleased with the attention and career guidance
- Medicine sits within a broader culture where women have historically occupied low status positions, and women who are early in their career also occupy low status positions in the hierarchy

Source: Kaatz et al, ’Stuck in the out-group: Jennifer can’t grow up, Jane’s invisible. and Janet is over the hill”, J of Womens Health 2014;23:481-484

Mentorship and sponsorship often dissipate in mid career

- When women advance to more senior levels (“Janets”) where they have competence, experience, and opinions they wish to voice, and a legitimate claim on institutional resources, they are abandoned
- If a Janet in any way threatens a Dave by:
  - Requesting space for research
  - Seeking leadership positions that would put her on par with Dave
- Janet starts getting described by one or more Daves as: “Difficult to work with”, “Not a team player”, Gendered terms eg “strident”
- This myth is then used to justify distancing Janet from the things she needs to succeed
  - Left off key decision making committees
  - Closed out of communication loops where key information is shared
  - Denied access to essential resources needed to sustain/advance her career

Source: Kaatz et al, ’Stuck in the out-group: Jennifer can’t grow up, Jane’s invisible. and Janet is over the hill”, J of Womens Health 2014;23:481-484

Gender inequities are experienced differently throughout a career

“She’s a rising star”

“Difficult to worth with”

“Why don’t we give one of the younger woman a chance”

A. Gender inequities exist in the nephrology workforce

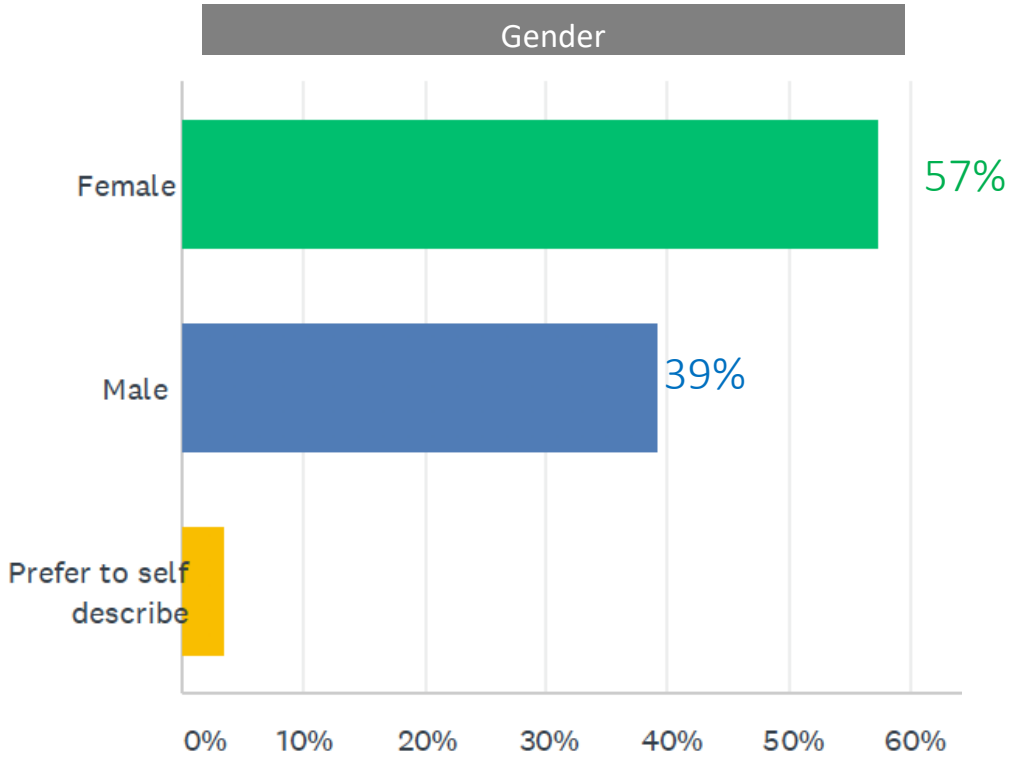
B. These gender inequities are felt throughout the workforce

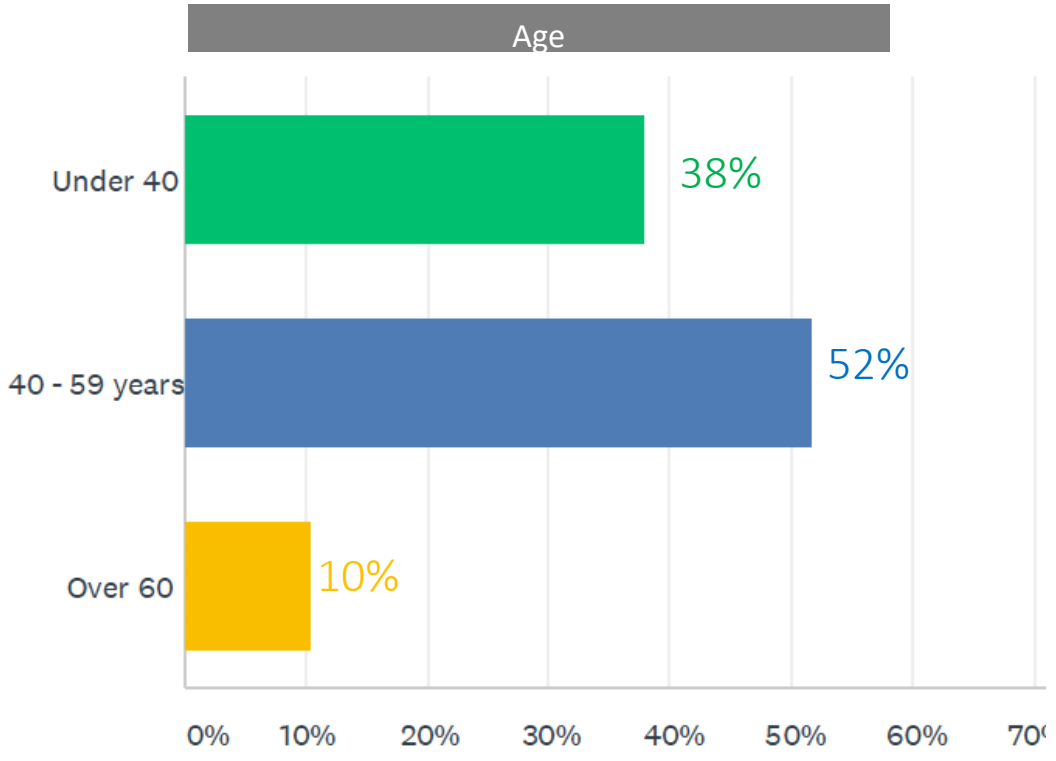
C. Progress is being made in addressing these inequities

D. Ongoing work is required to further address and eliminate gender inequities

In 2020-2021 ANZSN members were surveyed to describe perceptions of equity and identify barriers to equity

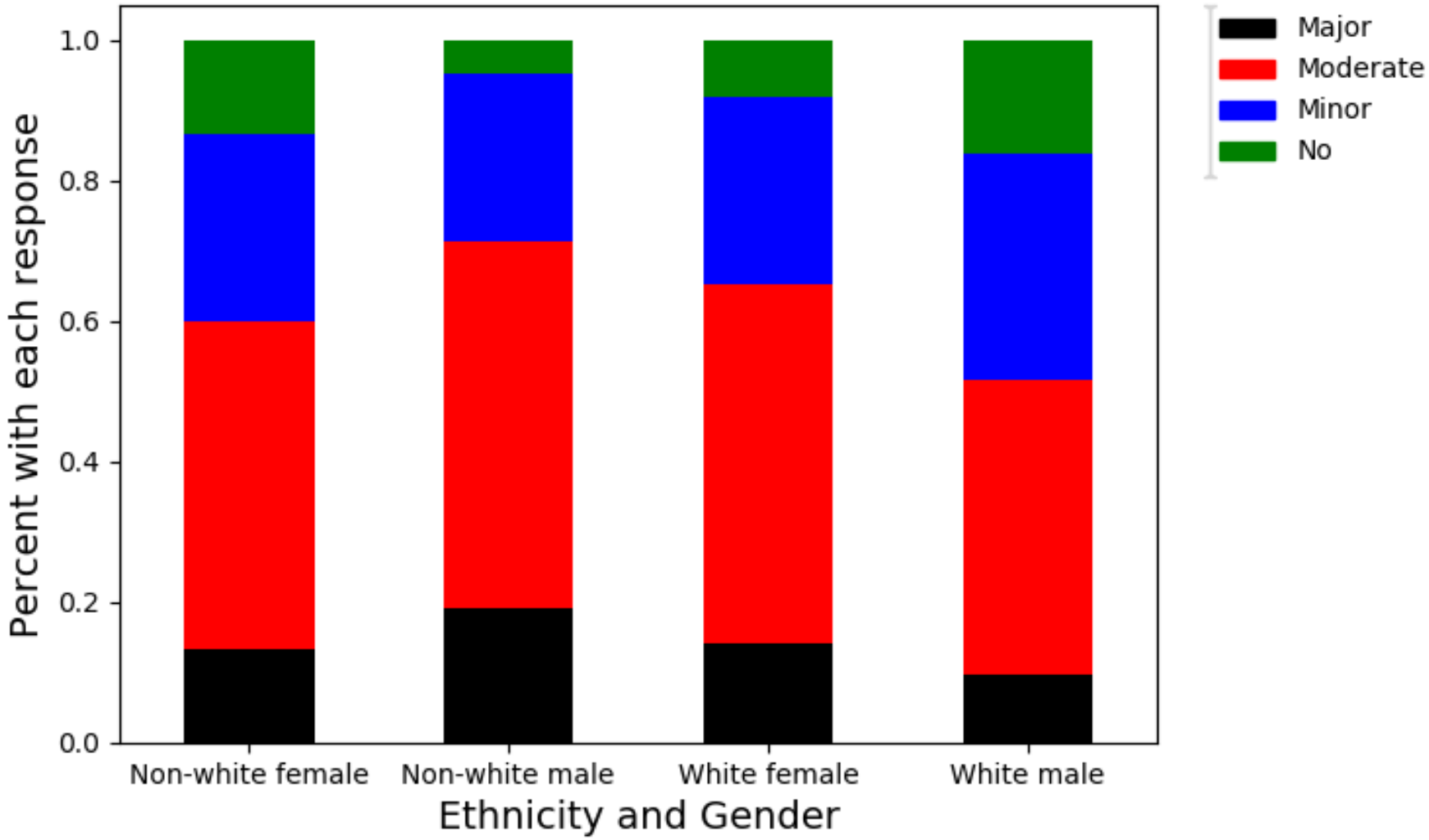
There were 143 participants overall





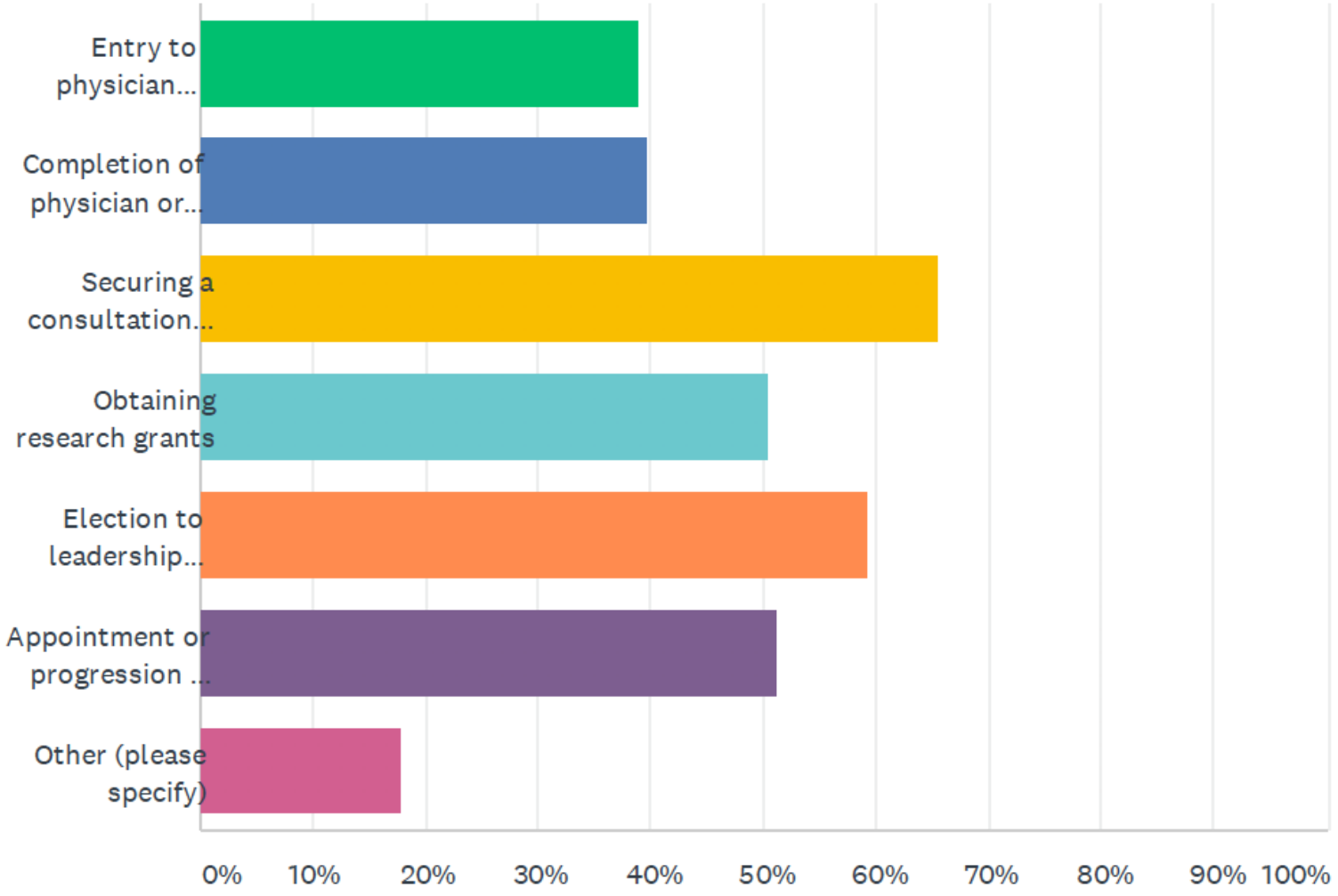
Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

>60% felt there were moderate to major inequities for ANZSN members in their professional life



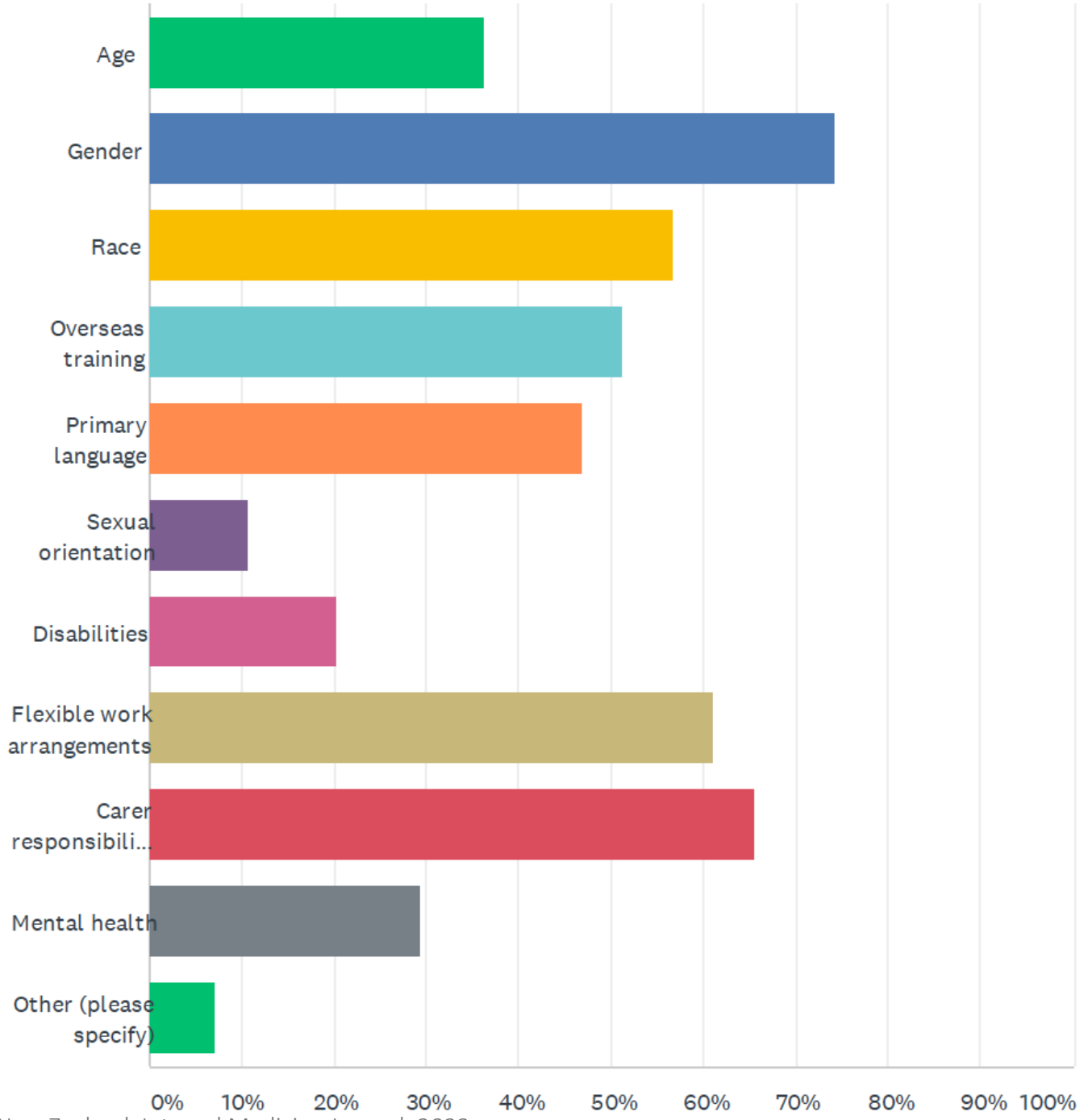
Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

Biggest inequities were felt in securing a consultant job, election to leadership, and obtaining research grants



Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

Respondents felt the major factors driving inequities were gender (75%), caring responsibilities (65%), and ethnicity (55%)



Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

The impacts of inequities in our workforce are profound

Lack of choice

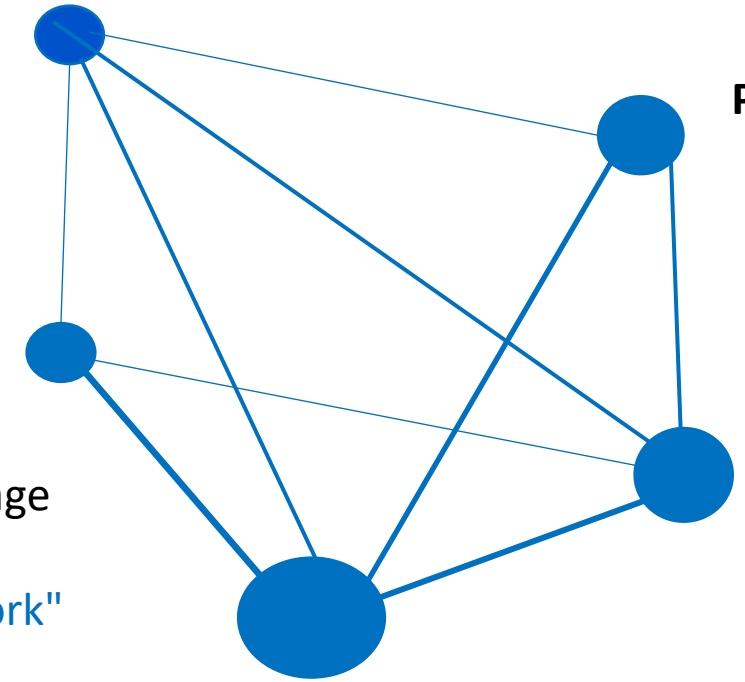
"I just avoided any training at (that) hospital"

Diminished ambition

"Mid level ceiling"

"Lack of self belief reducing courage to go for leadership positions"

"Trimmed ambition to make it work"



Psychological impacts

"Stress and distress."

"Emotional fatigue, physical fatigue, feelings of hopelessness and isolation."

"Significant stress and uncertainty"

Dismissive culture

"Why won't you just stay home and look after the kids till they get to school"

Limited opportunities for advancement

"Delayed career progression"

"Dismissive of achievement relative to opportunity"

"Job opportunities at some centres covertly discriminated against "overseas" trainees. "

Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

A. Gender inequities exist in the nephrology workforce

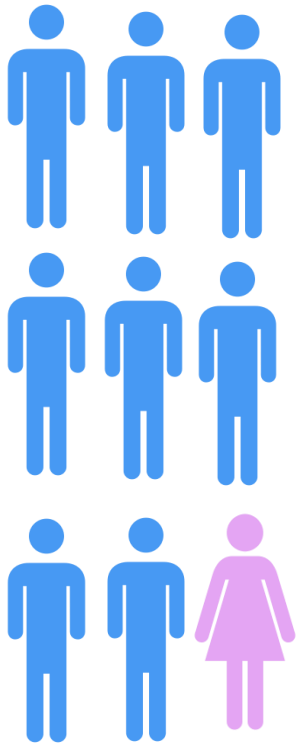
B. These gender inequities are felt throughout the workforce

C. Progress is being made in addressing these inequities

D. Ongoing work is required to further address and eliminate gender inequities

ANZSN Council is far more representative than just a few years ago

2019



THE FUTURE

ANZSN Council Targets

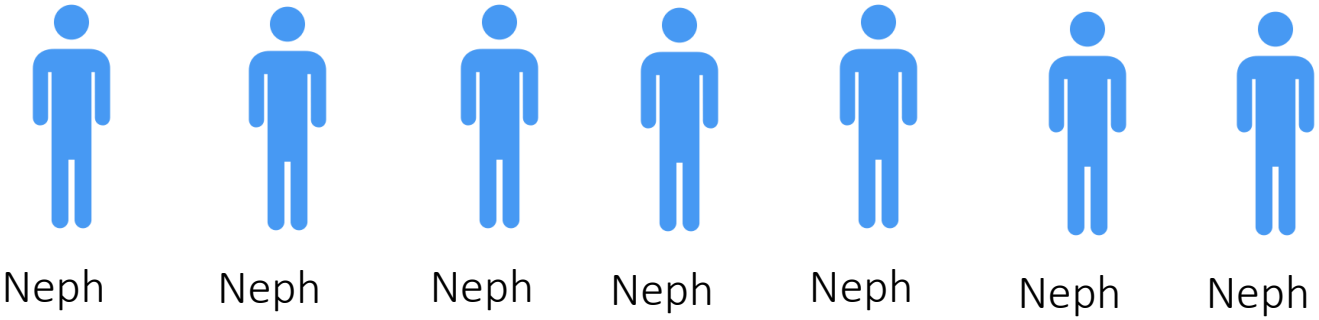
10 Members

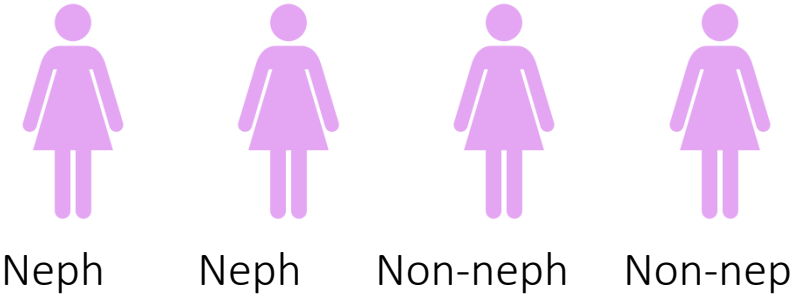
2020 : 3-4 Females

2022 : 5 Females

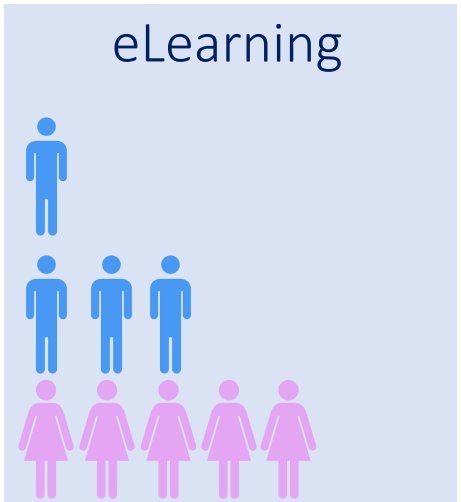
Target of 50% by 2022

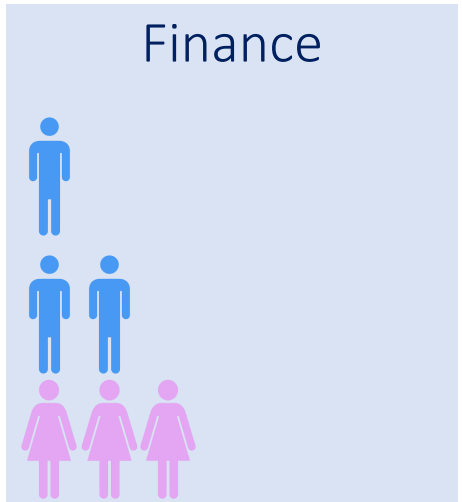
2023

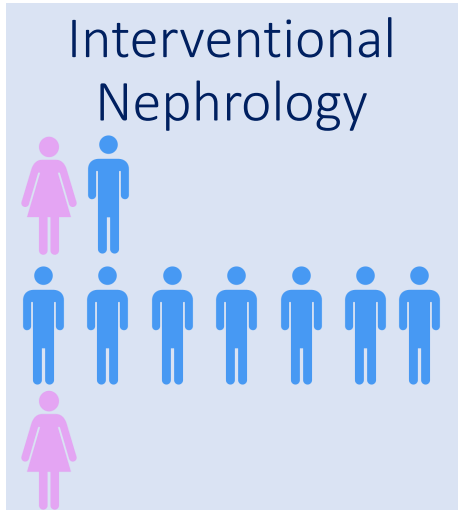


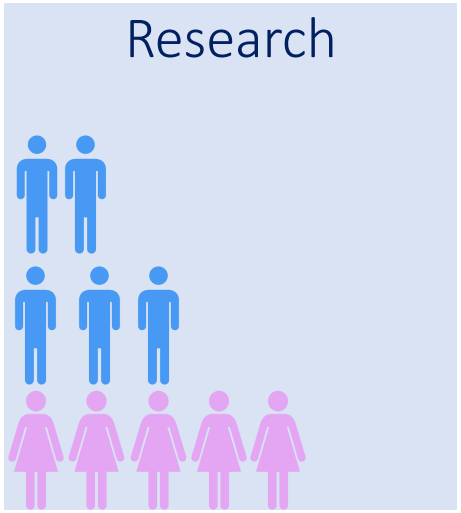


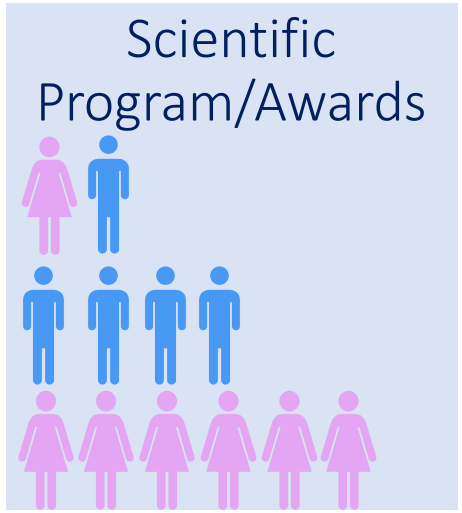
Women comprise 40% of chairs, 50% of deputy chairs and 50% members of ANZSN committees











No more manels!

ANZSN begins to promote more equitable meeting representation

1st survey

Survey on perceptions of inequities due to gender and ethnicity. Not published.

EDI Committee

EDI committee to address intersectional bias and barriers to diverse workforce representation

Childcare Subsidy

ASM provided a subsidy to parents needing childcare. Provided to 20 people. Total cost $10,000.

2015

2017

2018

2019

2020

2021

2022

2023

Gender Equity & Diversity Working Group

ANZSN established the GED working group to advise counsel

Target set gender equity targets for council

2nd Survey

Similar findings of perceived inequities by women and ethnic minorities. Published in 2022.

What next?

A. Gender inequities exist in the nephrology workforce

B. These gender inequities are felt throughout the workforce

C. Progress is being made in addressing these inequities

D. Ongoing work is required to further address and eliminate gender inequities

2020-2021 Survey of ANZSN members: Approaches for the future

No action needed

"No true inequity issues with regards to ethnicity or sex"

"Nepotism and virtue signalling"

"Focus on opportunity and merit,
not radical left agendas like "equity and diversity""

Source: Francis, A 'Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

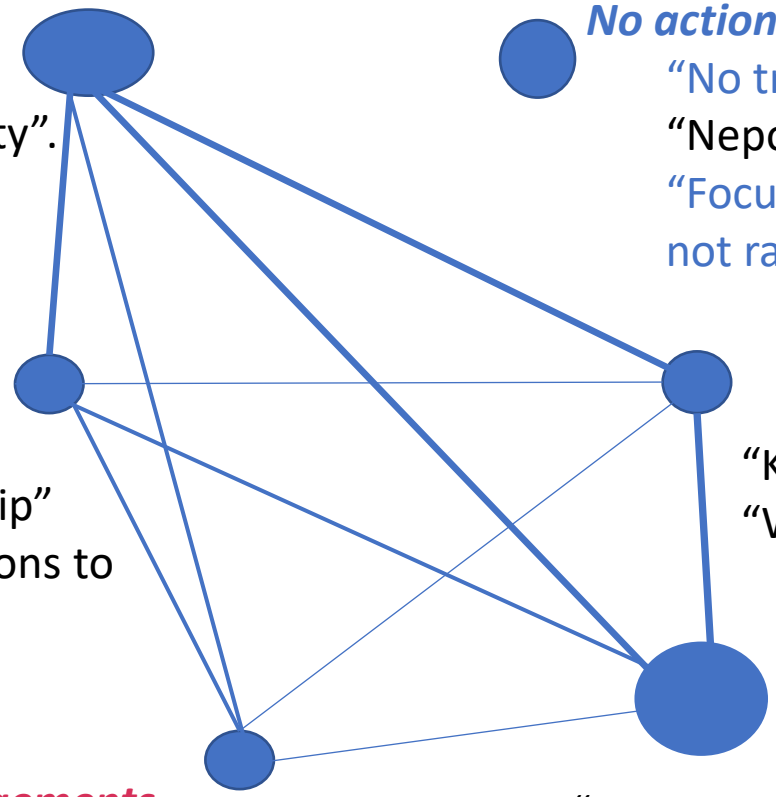
2020-2021 Survey of ANZSN members: Approaches for the future

Promote diverse representation

"Being leaders that practice inclusivity".
“Be less Anglo-centric “
“Identifying barriers“
“New people should come on”

No action needed

“No true inequity issues with regards to ethnicity or sex”
“Nepotism and virtue signalling”
“Focus on opportunity and merit,
not radical left agendas like "equity and diversity”””



Support and mentorship

“Providing support and leadership”
“Prizes that recognise contributions to diversity and equity “

Transparent reporting of data

“Keep track of gender of committee members”
“Work together with RACP and local workforces”

Normalising discourse

“Encouragement and creating a safe space for open discussion”
“Discussion with people who were affected”
“Openly acknowledge these issues“
“Address behaviours that are not acceptable in the workplace“

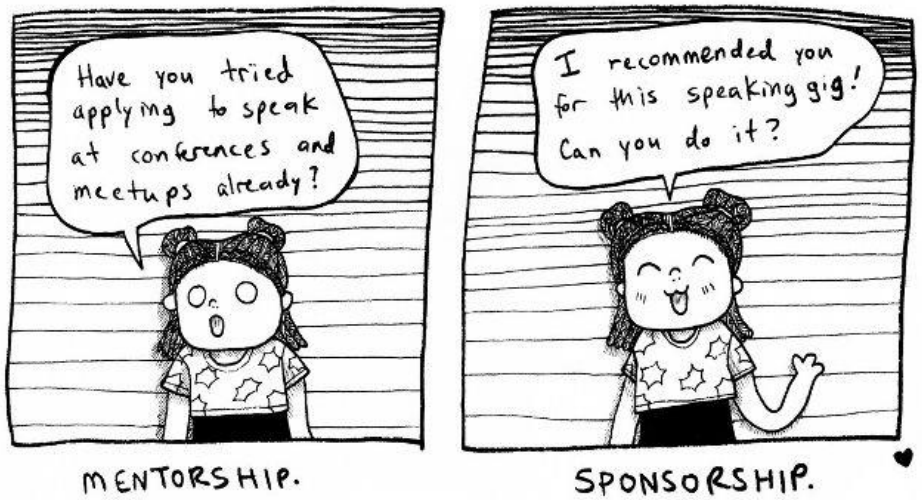
Flexible working arrangements

“Provide certainty in job sharing opportunities”
“Child care responsibilities impact equally
on all parents. Males and females need to be cut some slack”

Source: Francis, A ‘Equity and diversity in the nephrology workforce in Australia & New Zealand, Internal Medicine Journal, 2022.

Mentorship and sponsorship

- Mentorship **and sponsorship** are key
- Some evidence that women are over-mentored and under-sponsored in other fields
- Mentoring in nephrology important given we lack existing infrastructure for this and to (hopefully) transition to sponsorship
- yANZSN/EDI has recently setting up a trans-tasman mentoring program
- **Sponsorship, particularly for mid-career women, is critical**



Source: Illustration by Catt Small

Source: https://www.science.org/content/article/are-conferences-providing-enough-child-care-support-we-decided-find-out

Further opportunities for impact at the departmental level

- Beware micro-inequities: Untitling of women is rampant. A US study of 321 internal medicine Grand Rounds showed men were introduced with their titles 95% of the time, women just 49% of the time ($p<0.001$). Call these out.
- Address unconscious bias: Consider offering unconscious bias training to your department
- Make all eligible people aware of opportunities for membership & leadership
- Understand and report: Collect and analyse internal data on gender gaps (leadership, FTE fractions, pay,...)
- Promote flexibility: Support male and female colleagues to embrace flexible work where they can, encourage men to take paternity leave
- Awareness raising: Journal club, research meeting or other educational session on gender (and other) equity issues

Source: Files JA, 'Speaker introductions at internal medicine Grand Rounds: Forms of address reveal gender bias, J Womens Health 2017; 26: 413-419.

1. Gender inequities for patients with kidney disease
2. Gender inequities for the renal physician workforce
3. Why we need a diverse workforce - physician and patient concordance matters!

Increased workforce diversity increases the opportunity for patient-provider concordance

Patient-provider concordance

Shared demographic characteristics between patient and physician (typically age, ethnicity, SES)

Concordance may impact patient outcomes from:

1. Communication
   - **Patients may feel more comfortable** discussing their symptoms and medical history with a physician who shares key elements of their identity. This can => more accurate diagnoses, and improved patient satisfaction.
   - When patients share the same race/ethnicity with physicians, they report higher trust and satisfaction (although not in all studies)
2. Cultural understanding
   - Greater cultural understanding may enable physicians to **provide more culturally sensitive and tailored care**, leading to better adherence and health outcomes
3. Reduction of implicit bias

Goal: Reducing health disparities

Source: Silver, J et al, 'Physician Workforce Disparities and Patient Care: A Narrative Review', Health Equity, 2019, : Miller, A et al 'The Relationship of Ethnic, Racial, and Cultural Concordance to Physician–Patient Communication: A Mixed-Methods Systematic Review Protocol, Health Communication, 2022.

For females in particular, provider-patient gender concordance matters

- Female patient-provider gender concordance is associated with:
  - Improved surgical outcomes[1]
  - Increased cancer screening rates[2]
  - Increased likelihood of surviving an MI[3]
  - Greater likelihood of recent mammogram[4]
  - Greater survival of stage IV colon cancer[8]
  - Patient satisfaction with primary[5] and emergency[6] care
- Male patient–provider gender concordance was not significant in many studies but was associated with preventative care-focused outcomes, including increased male-specific cancer screening[7]
- Data is limited: few studies, global not in Australia

Source:
1. Wallis, C et al. Association of Surgeon-Patient Sex Concordance With Postoperative Outcomes. JAMA Surgery. 2022; 157(2): 146-156. Zhao C, Dowzicky P, Colbert L, et al. Race, gender, and language concordance in the care of surgical patients: a systematic review. Surgery. 2019;166(5):785-92.
2. Malhotra J, et al. Impact of patient–provider race, ethnicity, and gender concordance on cancer screening: findings from Medical Expenditure Panel Survey. Cancer Epidemiol Biomarkers Prev. 2017;26(12):1804-11.
3. Greenwood BN, Carnahan S, Huang L. Patient–physician gender concordance and increased mortality among female heart attack patients. Proc Natl Acad Sci U S A. 2018;115(34):8569-74.
4. Mendoza-Grey S, Ramos-Muniz J, Armbrister AN, et al. Mammography screening among Latinas: does gender and ethnic patient–physician concordance matter? J Immigrant Minority Health. 2021;23(5):986-92
5. Noro I, Roter DL, Kurosawa S, et al. The impact of gender on medical visit communication and patient satisfaction within the Japanese primary care context. Patient Educ Couns. 2018;101(2):227-32
6. Chekijian S, Kinsman J, Taylor RA, et al. Association between patient–physician gender concordance and patient experience scores. Is there gender bias? Am J Emerg Med. 2021;45:476-82
7. Engler J, Dahlhaus A, Güthlin C. The readiness of German GPs to recommend and conduct cancer screening is associated with patient–physician gender concordance. Results of a survey. Eur J Gen Pract. 2017;23(1):11-9.
8. Ding P, O'Sullivan D, Cheung W. 'P-16 Associations among patient-physician sex concordance, treatment practices, and survival outcomes in a population-based colon cancer cohort', Annals of Oncology, 24S1 S19

What I have showed you today

1. Females have poorer outcomes in kidney failure. They are less likely to receive dialysis, have less access to the deceased donor wait list and are less likely to receive a living donor kidney transplant

2. Gender inequity exists and is causing harm through ought the renal workforce. Things are improving, but there remains a long way to go.

3. Improving diversity in the workforce may yield improved outcomes for females where patient-provider concordance has been associated with improved outcomes

Thank you.

What can we do?

	Advocacy	Research	Education
ANZSN	• Increase awareness in HCP and pts about sex inequities in kidney care (eg through continuing ed, workshops, and seminars). • Petition government & other sponsoring bodies: eg -To ensure trials have pre-specified end-points for F - Enrolment should include a predefined number of F so that trials are powered to address applicability to F	Fund and promote research which: • F in research ≥ prevalence • Sex stratified analysis • Use SAGAR guidelines • Explores the biological & pathophysiological differences in CKD in F (basic science) • Investigates the biological, social, and cultural factors contributing to sex disparities in kidney disease (clinical science) • Include F specific questions eg menopause status, children, OCP use	• Support guideline driven care (in cards this have improved care for F>M as they are less likely at baseline to get GDT) • Support and implement sex-specific recommendations in guidelines once evidence base exists • Educate the medical community, incl GP, endo, and nephrologists regarding CKD frequency, diagnosis, and treatment in F
Department level		• Internal QA/internal data review: How do the department numbers look for transplantation? How many females do you raise transplantation with? etc	• Awareness raising: Journal club, research meeting or other educational session on gender (and other) equity issues