Report of the Workforce Review Committee of the Australian and New Zealand Society of Nephrology (ANZSN) 2017
Table of Contents

Executive Summary ........................................................................................................................................ 3
  Summary of Recommendations .................................................................................................................. 4
Background .................................................................................................................................................. 5
Nephrologist Numbers ................................................................................................................................. 7
Trainee Experience ....................................................................................................................................... 9
Trainee Assessment and Competence ......................................................................................................... 11
Workforce .................................................................................................................................................. 13
  Regional and Rural workforce ..................................................................................................................... 14
  Indigenous workforce ................................................................................................................................ 14
Paediatrics ................................................................................................................................................... 14
Future training directions ............................................................................................................................ 17
Fellowships .................................................................................................................................................. 18
Conclusions ................................................................................................................................................ 19
References .................................................................................................................................................... 20
Appendices .................................................................................................................................................. 21
  Appendix 1: Terms of Reference ................................................................................................................ 21
  Appendix 2: Membership ............................................................................................................................. 24
  Appendix 3: Consultation ............................................................................................................................... 24

Tables and Figures
Table 1: RACP Trainee Numbers .................................................................................................................. 6
Table 2: Nephrology Supply and Demand Projections [adapted from (9)] ................................................. 13

Figure 1. Australian Renal Trainee Growth .................................................................................................. 6
Figure 2 : AHPRA Reported Adult Nephrologists in Australia (6) .............................................................. 7
Figure 3 : AHPRA Reported Paediatric Nephrologists in Australia (6) ....................................................... 7
Figure 4: Number of Trainees and New Renal Transplants ..................................................................... 9
Figure 5: Number of Trainees and Prevalent Dialysis and Transplant Patients ......................................... 9
Figure 6: Trainee reported acute transplant exposure (patients seen) over six months in 2015. .......... 10
Figure 7: Trainee reported weekly outpatient clinics attended over a six month period in 2015 ....... 11
Figure 8 : Supervisors Assessments for Trainees in the Areas of Knowledge and Clinical Judgement
  (x axis; scores; y axis percent of trainees).............................................................................................. 12
Executive Summary

Fifteen years ago there were grave concerns of a shortage of nephrologists in Australia and New Zealand as well as all doctors in Australia. In response, the Australian and New Zealand Society of Nephrology (ANZSN) undertook work to examine the nephrology workforce and future population demands, while at the same time the Australian Government greatly expanded medical student placements. The result seen today has been an explosion in medical graduates, nephrology trainees, and nephrologists.

There have been positives with this change, including a significant increase in nephrologists in rural and regional areas as well as more senior postgraduate doctors working in advanced trainee positions at more sites. At the same time, unforeseen effects have included nephrologists working where they do not have access to dialysis facilities, nephrologists working as general physicians for which they are not trained, and trainees having reduced clinical exposure and lacking competency in various aspects of the curriculum while having significant anxiety about future employment prospects.

Although this imbalance in supply and demand of nephrologists and trainees compared with population needs has been apparent for a while, the dissolution of bodies such as Health Workforce Australia and lack of data about nephrology practice has hindered anyone taking a position on workforce. It is now apparent that oversupply of nephrologist workforce is an issue and all stakeholders, including government, the Australian Medical Association, Royal Australian College of Physicians (RACP), ANZSN, and junior medical staff need to be informed and work to a solution. Furthermore, there is an imbalance between demand for junior medical staff which has increased significantly over time, and senior medical staff which is growing slowly.

Ensuring adequate training quality such that new nephrologists are competent with enough clinical exposure to safely practice as a specialist will also require a review of assessment processes. Creation of post-FRACP fellowships will allow development of increased clinical skills at the same time as filling part of the demand for junior doctor workforce.

Society demands and deserves a high quality and skilled nephrology workforce. Junior medical staff invest a great amount of time and resources in their training, and as such deserve opportunities at completion. There is an urgent need to match the demands of society for nephrologists with the number and mix of trainees. This will require prioritising the needs of society over those of individual renal units while embracing novel junior medical staff workforce solutions.
Summary of Recommendations

- This report be published on the ANZSN website
- ANZSN publish trainee and nephrologist numbers on its website and update annually
- ANZSN and RACP acknowledge that trainee numbers do not take into account future workforce projections/demand. Trainees and supervisors should be informed of this.
- The RACP (with assistance of ANZSN) conduct a broad and thorough survey of Fellows who have completed training supervised by the Advanced Training Committee in Nephrology or Overseas Trained Physician Pathway in Nephrology to include: nephrologist numbers, practice type and location, research, education, and future intentions. This should be repeated periodically (e.g. 3-5 years) to allow change to be measured longitudinally.
- The Advanced Training Committee in Nephrology develop and publish transparent principles of accreditation of training sites that may include reference to the level of clinical exposure required. This may include reference to the renal replacement therapy population, and inpatient and outpatient activity at a site.
- ANZSN ask the RACP to improve supervisor education opportunities and assessment calibration.
- ANZSN and RACP consider the need and method of assessment of minimum standards to complete nephrology training and OTP supervision, with a view to an exit assessment.
- ANZSN should develop and pursue a strategy to engage National and State stakeholders, regional networks and individual renal units to match trainee numbers with future workforce demands, and create training opportunities for non-renal trainees (e.g. general medicine, ICU, ED, urology).
- ANZSN develop a policy on accommodation of overseas trained physicians in workforce estimates and determining appropriate intake.
- ANZSN Council endorses the proposal for structured post-FRACP fellowships, and seeks support from the RACP for such a program.
- ANZSN Council form a working party with the specific aim of creating the business rules for a structured fellowship program; members of the working party to include representatives from units with capacity to run such a program, and also a representative from TSANZ.
- ANZSN Council establishes an implementation workgroup to action this report.
Background

In response to a rapid increase in nephrologists and nephrology trainees over the preceding ten years, the Australian and New Zealand Society of Nephrology (ANZSN) created a committee to review workforce. The primary aims of the committee were to evaluate capacity to train and produce well qualified and skilled nephrologists to meet the needs of the population. Terms of reference are included in appendix 1. Membership of the committee was broad and representative of nephrologists (appendix 2).

Planning for medical workforce was previously managed by Health Workforce Australia (HWA), although this body was abolished in October 2014. In 2014, a report into Australia’s future health workforce was released (1). This report concluded, using a combined model for forecasting, that there would be a future oversupply of doctors (7000 by 2030) and recommended reducing the intake of overseas trained physicians. The report noted most growth has been in adult physicians, paediatricians, general practitioners, and emergency physicians. Other recommendations included increased rural and private practice training positions and developing a hospitalist non-specialist workforce. The Federal Department of Health is now assessing the number and distribution of medical school places to develop policies to correct the undersupply in rural areas (Media Release, Hon Dr David Gillespie, 14/12/16).

The National Medical Training Advisory Network (NMTAN) was formed in response to the document “Health Workforce 2025: doctors, nurses and midwives” (2). NMTAN was initially supported by HWA but more recently by the Federal Department of Health. NMTAN aims to improve the coordination of training, and address the undersupply of doctors in rural and regional Australia, the oversupply of some specialists, and insufficient numbers of generalists (as opposed to subspecialists). It is currently reviewing all medical college’s capacity to train, with the Royal Australasian College of Physicians (RACP) due for review in late 2017.

The issues facing Australia are not unique, and a recent report from Canada has identified that 16% of new specialists cannot find employment while 31% pursue further training and education to improve employability. Many of the issues identified in Canada are similar to Australia. The authors have suggested a general oversupply of doctors in OECD countries (3). In Australia, some have suggested a maldistribution of doctors to healthcare need (junior vs senior medical staff, medical discipline, ethnicity and rural) (4).

The nephrology “workforce” has changed over the last decade. In 2007, a survey was undertaken of the nephrology workforce (based upon ANZSN membership) (5). That survey had responses from 280 of an estimated 355 nephrologists (79% response rate). The estimated nephrology full time equivalent (FTE) workforce was 278 (including responders and non-responders). Only 9% reported primarily working in a regional or remote location. At that stage it was estimated a further 86 FTE were required by 2013.

The concerns about an inadequate nephrology workforce were also apparent in most other areas of the medical workforce. As a result, there was a rapid increase of the number of university places for medical students in Australia, with the number of annual graduating medical students increasing from 1287 in 2004, more than tripling in 12 years, to 3970 graduates in 2016. This number has been
accompanied by an equivalent increase in junior doctors but not by an equivalent increase in training infrastructure and supervisory capacity.

Table 1: RACP Trainee Numbers

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>Basic</td>
<td>585</td>
<td>809</td>
<td>1951</td>
<td>2540</td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
<td>440</td>
<td>690</td>
<td>1469</td>
<td>1973</td>
</tr>
<tr>
<td>Paediatric</td>
<td>Basic</td>
<td>199</td>
<td>173</td>
<td>530</td>
<td>654</td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
<td>147</td>
<td>284</td>
<td>640</td>
<td>799</td>
</tr>
</tbody>
</table>

As seen in Table 1, the RACP has had a comparable increase in the number of trainees. In parallel, there has been an increase in Australian renal advanced trainees (Figure 1). The data do not include (as of 2017) a further 22 overseas trained physicians (OTP) seeking or undergoing assessment to gain registration to work in Australia as a nephrologist as well as 25 renal trainees in New Zealand (personal communication). These ‘hidden’ numbers of Overseas Trained Physicians and trainees clearly represent a significant number to consider and are difficult to predict due year to year variability. Unlike a trainee population, which has a three to six year lag before entering the workforce, OTPs can enter after 12 months if a position is secured. Accredited training sites have increased from 18 in 2000, to 45 in 2016.

Figure 1. Australian Renal Trainee Growth
Nephrologist Numbers

There has been a steady growth in total nephrologist numbers, accelerating more recently as 30-40 registrars complete training annually and OTPs complete supervision. Obtaining data on nephrologist total numbers, hours and type of work is difficult.

The Australian Health Practitioners Registration Authority (AHPRA) reports nephrologist numbers in Australia (6) (figure 2 and 3). The accuracy of this data is questionable, in particular the number of paediatric nephrologists.

Figure 2: AHPRA Reported Adult Nephrologists in Australia (6)

![Australian adult nephrologists](chart)

Figure 3: AHPRA Reported Paediatric Nephrologists in Australia (6)

![Australian paediatric nephrologists](chart)
HWA reported a total 369 nephrologists in 2009 in Australia. The RACP was approached for information, but the data was not provided as it was not considered robust, and RACP did not have a reliable contemporary survey of physicians. There are significant differences between the RACP and AHPRA records with regards total numbers of nephrologists.

The committee also considered ANZSN membership which included 557 nephrologists in 2017 (355 in 2007). However, ANZSN membership does not include all qualified nephrologists, so the committee undertook a manual count. Each member was assigned an Australian state or New Zealand to identify all nephrologists in that area, whether working in nephrology, general medicine, teaching, research, administration or other. The manual count identified in early 2017 there are 598 nephrologists in Australia and 61 in New Zealand, showing that 15.5% of nephrologists were not members of ANZSN.

The ANZSN undertakes an annual ANZSN member survey conducted at the time of renewal of subscription, collecting demographics and future workforce plans. From the above manual count, if there was a 100% response rate, the survey data would represent fewer than 85% of the nephrology working population represented.

In 2016, a total 380 nephrologists completed the survey (approximate response rate of 68%), of which 363 were currently working, 25 were planning to retire in the next 5 years, 90% were working in clinical medicine, 24% were doing some general medicine, 50% were involved in teaching, 11.8% basic research, and 45% clinical research. Mean age was 48.1 years (male 49.9, female 46.2). Most were male (69.7%), 80% were in urban areas, 19% regional, and average working hours was 50/week. There are concerns with this data including the response rate, failure to include the large number of nephrologists who are not members of ANZSN (and therefore possibly not doing nephrology), the inability to break down workload by regions, and no information on individual nephrologists planned weekly work hours in future years.

The ANZSN annual member survey is useful, but the committee notes large societies such as the American Society of Nephrology undertake detailed surveys regarding employment of their Fellows on a regular basis (7). This data can then be used for future planning.

Recommendations:

1. The RACP (with assistance of ANZSN) conduct a broad and thorough survey of Fellows who have completed training supervised by the Advanced Training Committee in Nephrology or Overseas Trained Physician Pathway in Nephrology to include: nephrologist numbers, practice type and location, research, education, and future intentions. This should be repeated periodically (e.g. 3-5 years) to allow change to be measured longitudinally.

2. ANZSN publish trainee and nephrologist numbers on its website and update annually

3. ANZSN and RACP acknowledge that trainee numbers do not take into account future workforce projections/demand. Trainees and supervisors should be informed of this.
Trainee Experience

The increase in trainees in the last decade led to concerns about lack of capacity to train and dilution of clinical experience. This was explored by Amos et al (8) who examined nephrology training from 2000 to 2010 and found a significant reduction in exposure to dialysis patients and procedures, and more trainees working in hospitals that do not perform acute transplantation. Figures 4 and 5 are updated from the Amos publication and show numbers of trainees compared to numbers of new transplant patients and prevalent dialysis and transplant patients (courtesy Dr Phil Clayton, ANZDATA).

Figure 4: Number of Trainees and New Renal Transplants

Figure 5: Number of Trainees and Prevalent Dialysis and Transplant Patients
Along with the clinical exposure, surveys of the competency of trainees as self-assessed after commencing work as a nephrologist has found gaps in some clinical areas, and more marked gaps in management and research skills (9).

There is also significant variation in clinical exposure at different sites when measured by number of Australian trainees at a site compared with the same site’s renal replacement therapy population (transplant and dialysis) as recorded by ANZDATA at 31/12/2014 (range 81 to 494 patients).

When surveyed at the Dialysis Nephrology Transplantation (DNT) meeting (Glenelg 2017), 91% of respondents supported the concept that the Advanced Training Committee in Nephrology (part of the RACP) produce criteria for accreditation of sites based on renal replacement therapy numbers and clinical demands with some allowance for special characteristics (e.g. interventional exposure). This has the potential of limiting the number of training sites but enables clinical exposure necessary for experiential learning.

**Recommendation:**

1. **The Advanced Training Committee in Nephrology develop and publish transparent principles of accreditation of training sites that may include reference to the level of clinical exposure required. This may include reference to the renal replacement therapy population and, inpatient and outpatient activity at a site.**

There is no robust data on chronic kidney disease or acute kidney injury patients managed per trainee. The only measure of clinical exposure is from self-reports of trainees in their RACP supervisor reports. This is unaudited and difficult to interpret. For example, the number of “patients seen” does not detail what interaction the trainee had with the patient, which may vary from a simple interaction to managing a complex admission or as an outpatient over many different visits. It is also unknown if multiple trainees at one site count the same patients.

As an example of the wide variation in clinical exposure, figures 6 and 7 show the clinical exposures from self-reported acute transplant experience and outpatient clinics respectively over 6 months in 2015 by Australian trainees (courtesy Dr Wai Lim)
Trainee Assessment and Competence

Along with measuring trainee clinical exposure, it is important to determine if trainees are competent in their skills. This has been reported by self-assessment (9), where recent new Fellows in nephrology rated training as “well trained”, “some training”, and “little/no training”. This was compared with how important the skills were perceived; “very important”, “somewhat important”, and “not important”. Less than 50% responded as ‘well trained’ in home haemodialysis (41.8%), conservative care (42.9%), automated peritoneal dialysis (38.8%), and assessment of kidney transplant recipients (48%) and living kidney donors (34.7%). Although considered highly relevant to current practice, responses of “well trained” were low for management and research skills, including complaint management (16.3%), private practice management (2%), health system knowledge (14.3%) and regulations (6.1%), ethics approval (23.5%), research funding (11.2%) and quality assurance (26.5%).

Self-reflection is valuable, but the current assessment process requires two supervisors at a site to assess a trainee every 6 months and provide a score from 1 to 5 against a number of measures. A score of 1 is considered “far short of expected standards”, 2 is “short of expected standards”, 3 is “at the expected standard”, 4 is “above expected standard”, and 5 is considered “exceptional”. Figure 8 shows scores given to trainees for a 6 month assessment period (courtesy Dr Wai Lim). It is apparent that few trainees ever receive an unsatisfactory score, and that the majority are scored above average. This suggests a number of possibilities:

1. Trainees are of outstanding quality in general.

2. Supervisors are anxious to give unsatisfactory scores due to concerns about the repercussions in doing so.

3. Supervisors develop a personal relationship with the trainee over time and find difficulty giving unsatisfactory scores, and at the same time tend to give “above expected standard” or “exceptional” scores.
4. While not shown here, there is often wide disparity between the scores of two supervisors for the same training period (personal communication), suggesting differing expectations of supervisors.

It is also noteworthy that attendance at RACP Supervisor courses (across all specialties) is generally unsatisfactory.

**Figure 8**: Supervisors Assessments for Trainees in the Areas of Knowledge and Clinical Judgement

(x axis; scores; y axis percent of trainees)

The reports from supervisors appear to conflict with the self-reported assessment by recently completed trainees.

In 2007 trainees identified difficulty in self-assessment and uncertainty in their skills and knowledge (5). One of the concerns with introducing an assessment during or toward the end of training has been that it would deter trainees from entering nephrology. Now with stronger trainee numbers it may be an ideal time to trial such a system, already implemented in countries such as Canada. The assessment need not be a barrier process but rather a formative examination conducted in the penultimate year so that remediation is possible if necessary. It may be a possibility then that those with high scores and a keenness to pursue research could be permitted to roll their final year into research. Not only would this provide educational rigor and transparency to the training program but enables trainees to feel confident in their training.

**Recommendations:**

1. **ANZSN ask the RACP to improve supervisor education opportunities and assessment calibration**

2. **ANZSN and RACP consider the need and method of assessment of minimum standards to complete nephrology training and OTP supervision, with a view to an exit assessment**
Workforce

It is apparent that the current workforce data is neither comprehensive nor robust. There is uncertainty over where new Fellows in nephrology go to work. A survey found 42% enrolled in a higher degree immediately post-Fellowship and 34% commenced work in a public hospital (9). The same survey found 77% of those who were awarded Fellowship after 2002 had either commenced or completed a higher degree, most commonly for career development followed by a desire to undertake research.

There is uncertainty about how work profiles differ by location, education opportunities, and maintenance of skills and standards. Questions remain around work hours per week now and in the future, and the impact of increased female doctors (37.6% in 2011), and newer generations seeking work life balance.

It is apparent there has been a shift with time from an academic nephrologist/clinician, where now the specialty includes clinician only nephrologists and also those trained as nephrologists but working as general physicians. It seems reasonable to question if the public that requires general medicine care is better served by someone spending much of their advanced training learning about dialysis and transplantation, or a general medicine trainee who has had broad clinical exposure in numerous subspecialties and general medicine. In fact, exposure to kidney disease is a difficulty for general medicine trainees due to many opportunities being filled by renal medicine trainees.

HWA forecast demand for nephrologists in 2018 and 2025 (table 2). Assuming the count of this committee of 598 nephrologists at the start of 2017 is correct; Australia has exceeded demand for nephrologists in 2018 and will reach needs for 2025 by the end of this year (10).

Table 2: Nephrology Supply and Demand Projections [adapted from (9)]

<table>
<thead>
<tr>
<th></th>
<th>2018 (Headcount)</th>
<th>2025 (Headcount)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply</td>
<td>Demand</td>
</tr>
<tr>
<td><strong>Comparison</strong></td>
<td>502</td>
<td>525</td>
</tr>
<tr>
<td><strong>Service and workforce reform</strong></td>
<td>502</td>
<td>467</td>
</tr>
<tr>
<td><strong>Registrar work value</strong></td>
<td>531</td>
<td>525</td>
</tr>
<tr>
<td><strong>Capped working hours</strong></td>
<td>484</td>
<td>525</td>
</tr>
</tbody>
</table>
Regional and Rural workforce

There has long been a maldistribution of doctors, with too many in cities and too few in regional and rural areas. There has also been a disproportionate reliance on OTPs in rural areas. The situation appears to be changing, with 19% of nephrologists reporting practice primarily outside a metropolitan area in 2016 (personal communication, ANZSN annual survey) compared with just 9% in 2007 (5). The manual nephrologist count performed by this committee confirmed significant numbers of nephrologists working outside cities, sometimes in towns without any dialysis facilities.

It is likely the growth in nephrologists outside metropolitan areas is multifactorial:

1. Large increases in nephrology trainees and new Fellows
2. Overseas trained physician intakes
3. Limited vacancies in metropolitan areas
4. Increased exposure to rural and regional medicine through increased sites outside cities accredited for training
5. Efforts of NMTAN, other bodies, and incentives to increase the regional and rural workforce

Although there has been increased supply of nephrologists in regional and rural Australia, accredited registrar positions are mainly in cities. In 2017, only 12 of a total 113 accredited training positions in Australia were at hospitals not situated in the top 10 largest cities in the country (11). While the number of accredited sites outside cities has increased, further growth may assist to increase supply in rural areas as it is acknowledged that training outside cities is associated with an increased chance of working outside cities long term.

The current regional/rural workforce in nephrology does not match the non-metropolitan population, but due to highly specialised services in cities such as transplantation and paediatric nephrology, it is likely there will always be disproportionate nephrology supply in cities. The current situation seems a significant improvement from a decade ago, further complemented by city based nephrologists doing outreach work.

Indigenous workforce

Aboriginal and Torres Strait Islander people represent a disproportionate number of patients with kidney disease. Regrettably, the indigenous medical workforce is very small. The Government, RACP and NMTAN are aware of this mismatch and working to improve indigenous doctor representation across all areas.

Paediatrics

There has been a marked increase in trainee numbers in paediatric nephrology from 2 to 12 over the past decade. There are 22.77FTE paediatric nephrologists spread across 36 physicians in Australia and New Zealand.
Eleven training positions are accredited by RACP within Australia and New Zealand and 4 overseas hospitals (table 3). Other overseas sites may be accredited on an individual program basis. At least 6 months of advanced training must be undertaken in Australia or 3-6 months in New Zealand. Paediatric nephrology trainees must complete 6 months formal training in community paediatrics, adolescent medicine or child psychiatry as part of the 3 years core Nephrology training.

Ensuring breadth and depth of clinical experience is addressed by core training undertaken in at least 2 centres which often requires trainees to move interstate. Additionally trainees are encouraged to undertake part of Advanced or post-FRACP training overseas for 1-2 years.

There is an uncertainty amongst trainees whether they will secure a tertiary nephrology position within the capital city of their choice. Many have elected to complete advanced training in General paediatrics or other subspecialty (e.g. genetics, pharmacology) concurrently, further lengthening training to 5 years or more. Higher research degrees are encouraged and are becoming a requirement for appointment to academic units.

Anecdotally there has been an increase in the paediatric chronic kidney disease population due to increase in population, improved recognition, and change in community attitudes towards offering renal therapy to infants and young children. Whilst there is no clear trend in the incidence of children requiring renal replacement therapy, the prevalent numbers of children (<17yrs) treated for end stage disease has gradually increased over past 20 years, reflecting improved survival (12).

Paediatric nephrology is generally delivered in tertiary centres supported in the community by general paediatricians with or without formal nephrology training. Only a few paediatric nephrologists offer consultation in private rooms and to date none practice without fractional appointment in a tertiary centre.

The work profile for most junior paediatric nephrologists (PN) often involves several employment streams of public and private clinical work, research or teaching. Changing clinical profiles with more flexible work practices of consultant nephrologists have led to most trainees being able to secure some work after completion of post-FRACP clinical training or following research higher degree.

Overseas trained physicians have been recruited on a competitive basis and bring broad perspectives to standard clinical practice. This is particularly valuable within such a small craft group who are at risk of insular practice. The recent changes in immigration policy and visas may limit this valuable opportunity.

A recent worldwide paediatric nephrology workforce survey (13) noted that 54% of Australian and New Zealand respondents reported a mild to severe surplus of consultants with 90% indicating it to be somewhat difficult or very difficult to find a job after training. Recruitment to training positions however was reported as somewhat to very easy. This contrasts with Europe and US where 42% and 52%, respectively, reported a mild to severe shortage of paediatric nephrologists and experience difficulties in recruiting to training positions.

An informal survey of Unit Heads recently indicates that consultant workforce numbers are generally well below ideal and international standards due to shortfall in available funding. There may be some opportunities for junior consultants with retirement or changing work practices of more senior
Report of the Workforce Review Committee of the Australian and New Zealand Society of Nephrology 2017

colleagues, however it is not anticipated that substantial increases in consultant positions will occur unless new funding streams are identified.

Table 3: Paediatric nephrology registrar training positions

<table>
<thead>
<tr>
<th>Location</th>
<th>Hospital</th>
<th>Advanced training positions</th>
<th>Advanced trainees</th>
<th>Nephrology consultant positions (FTE)</th>
<th>Nephrologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney</td>
<td>Westmead Children’s</td>
<td>1 x 12m &amp; 1x6m</td>
<td>3</td>
<td>4.4</td>
<td>6 (1 across both sites)</td>
</tr>
<tr>
<td>Sydney</td>
<td>Sydney Children’s</td>
<td>1 x 12m &amp; 1x6m</td>
<td>2</td>
<td>3.4</td>
<td>5</td>
</tr>
<tr>
<td>Melbourne</td>
<td>Royal Children’s</td>
<td>1 x 12m; 1x 6m</td>
<td>1</td>
<td>2.85</td>
<td>6</td>
</tr>
<tr>
<td>Melbourne</td>
<td>Monash CH</td>
<td>1x9m</td>
<td>1</td>
<td>1.92</td>
<td>3</td>
</tr>
<tr>
<td>Brisbane</td>
<td>Lady Cilento</td>
<td>1 x 12m</td>
<td>1</td>
<td>2.5</td>
<td>4</td>
</tr>
<tr>
<td>Adelaide</td>
<td>Womens’ &amp; Children’s Hosp</td>
<td>1 x 6 m</td>
<td>0</td>
<td>2.0</td>
<td>3</td>
</tr>
<tr>
<td>Perth</td>
<td>Princess Margaret</td>
<td>1 x 6 m</td>
<td>1</td>
<td>1.9</td>
<td>3-4</td>
</tr>
<tr>
<td>Darwin</td>
<td>Royal Darwin</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>Auckland</td>
<td>Starship</td>
<td>1 every 3 years</td>
<td>3</td>
<td>3.6</td>
<td>4</td>
</tr>
<tr>
<td>Completing part of dual RACP training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Singapore</td>
<td>National University</td>
<td>Accredited 12m</td>
<td>0 (1 in 2015 &amp; 16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toronto</td>
<td>Hospital for Sick Children</td>
<td>Accredited 24m</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Future training directions

The committee is of the opinion that there is a mismatch between trainee numbers and future demand for nephrologists. The growth in nephrologists in regional areas, undertaking higher degrees for career development, working as general physicians, and working in areas without access to dialysis, as well as numbers exceeding HWA forecasts, all suggest that more nephrologists are being trained than positions are available. This was also the consensus opinion from the DNT meeting (Glenelg 2017), where 84% responded that there are too many nephrologists being trained and only 6% responded to the contrary. Therefore, currently there needs to be a reduction in training numbers.

There is a mismatch between service demands and training. This reflects the known mismatch between demands for junior medical staff and clinical workload. As a result, increased workload is often filled by creating more training positions. HWA recommended creation of hospitalist non-specialist roles for these workforce demands (1). NMTAN is tasked with increasing generalists rather than sub-specialists. The committee sees an opportunity to open some nephrology advanced training positions to general medicine advanced trainees (or Fellows – see below), intensive care advanced trainees, or other physician specialty advanced trainees. This would both help upskill general medicine trainees in renal medicine, while answering the service demands of departments, and also reducing total nephrology trainees. Furthermore, it may lead to less nephrologists working solely in general medicine, where they have received less training than general physicians.

There has been growth in training networks or state based selection processes over the last years. These recruitment networks could be used to set minimum standards necessary to enter nephrology training, possibly facilitate rural/regional rotations, and ensure a transparent process for applicants. Furthermore, the networks should encourage and facilitate interstate and overseas rotations of trainees.

Overseas trained physicians enter the workforce through an alternate pathway to RACP trainees. Often the process requires satisfactory completion of 12 months in a supervised position at consultant or senior registrar level. Many work for 12 months in a Fellowship and then seek
consultant nephrologist positions. The numbers entering the workforce via this pathway is often less apparent to ANZSN than the RACP trainee pathway. HWA recommended reducing overseas trained physicians.

Recommendations:

1. ANZSN should develop and pursue a strategy to engage National and State stakeholders, regional networks and individual renal units to match trainee numbers with future workforce demands, and create training opportunities for non-renal trainees (eg general medicine, ICU, ED, urology)

2. ANZSN and RACP develop a policy on accommodation of overseas trained physicians in workforce estimates.

Fellowships

The working party supports the concept of structured post-FRACP fellowships to upskill nephrologists who seek additional expertise in defined areas of practice.

A brief description of the proposed Fellowship program is as follows:

- 1 year, post-FRACP Nephrology qualification, offered by designated units
- Combination of clinical and academic focus, with clinical service requirements not to detract from academic aims
- Examples of potential areas include transplantation, dialysis, renal genetics and intervention, and candidates would choose to focus on one area
- Structured program, which would include defined areas of clinical upskilling, plus academic activities including teaching and research projects
- Formal supervision
- Central committee to oversee Fellowship quality, content and assessment
- Enrolment in a higher degree encouraged but not mandated
- Aim is to have an accredited course with a measurable outcome, preferably endorsed by ANZSN and by the RACP
- Encourage interstate or overseas Fellowships to broaden clinical exposure and to facilitate academic collaboration.

The primary purpose of such a Fellowship is to enable Nephrologists to upskill in specific areas, over and above the general training that all receive in Australia and New Zealand. This will include
evidence of their higher level of training, which will enhance their employment prospects and their competence.

Funding of such Fellowships would primarily be the responsibility of the hosting units, although the Society may choose to support as well.

At the DNT meeting (Glenelg 2017), 93% of respondents supported the Fellowship concept.

**Recommendations:**

1. *ANZSN Council endorses the proposal for structured post-FRACP fellowships, and seeks support from the RACP for such a program*

2. *ANZSN council form a working party with the specific aim of creating the business rules for a structured fellowship program; members of the working party to include representatives from units with capacity to run such a program, and also a representative from TSANZ*

**Conclusions**

There has been a significant and rapid growth in nephrologists and nephrology trainee numbers over the last decade. The situation has changed from undersupply to apparent oversupply. There has been a significant improvement in accessibility to nephrologists in regional and rural areas. There are now concerns about training adequacy and exposure, and future employment opportunities.

The committee has proposed what we believe to be a pathway to ensure a sustainable junior medical workforce to meet service demands, while substitution of non-renal trainees or Fellows into registrar positions will improve training and quality for general physicians and nephrologists respectively. Implementation of this plan will require significant work and engagement of government, ANZSN members and the RACP. Failure to act will represent a disservice to the general population, as well as junior doctors and trainees who have invested so many years in their training.
References


2. Health Workforce Australia 2012: Health Workforce 2025 - doctors, nurses and midwives Volume 1


10. Health Workforce Australia 2012: Health Workforce 2025 - doctors, nurses and midwives Volume 3


Appendices

Appendix 1: Terms of Reference

ANZSN Workforce Review Committee

Terms of Reference

1. Role

(a) The ANZSN (Society) Workforce Review Committee (WRC) is a time-limited Working Group of the Council, and provides advice to, the Council (Council).

(b) The WRC aims to develop and promote policy to maintain and foster a sustainable nephrology workforce that best serves and meets the needs of patients with kidney disease.

2. Functions

(a) The WRCs functions are:

(i) to identify important and relevant workforce issues encountered by trainees and nephrologists in ANZ;

(ii) to provide advice to Council on key strategies to improve the potential gaps and barriers in workforce issues in both rural and metropolitan settings;

(iii) to provide advice to Council on the optimal training model for current and future nephrology trainees

(iv) to develop a plan of action including areas requiring more work in the future

(v) such other functions as are reasonably determined by the Council.

(b) Office bearers and members of the Committee must obtain express written permission from the Council or Chair of the Council before purporting to act or communicate on behalf of the Society or Council.

3. Membership

(a) The membership of the WRC should represent the broad renal community. Membership should therefore reflect the diversity of workforce needs of the Society. General members must be ordinary members of the Society.

(b) The WRC must comprise of no less than 7 and no more than 10 members, including ex-officio members, and should include:

(i) 4 ordinary members of the Society (minimum 1 New Zealand representative);

(ii) 1 representative of the Royal Australasian College of Physicians (RACP);

(iii) 1 member of the Australian and New Zealand Paediatric Nephrology Society (ANZPNA)
(iv) 1 trainee representative

(v) 1 rural/regional representative

(c) Proxies can be nominated for ex officio members only. Where an ex officio member is unable to attend a meeting, proxies will be allowed to attend the meeting at the discretion of the Chair.

4. Terms of appointment

(a) All general members will hold office for a maximum term of 12 months.

(b) The Chair must:

(i) be elected by the Council;

(ii) must not be an ex officio member; and

(c) The Chair, in consultation with Council, will select members by invitation.

(d) Members will cease to be a member of the WRC if they:

(i) resign from the Committee by giving one month’s notice in writing to the Chair of the Committee; or

(ii) cease to be a member of the Society.

(h) The Chair may fill a casual vacancy or vacancies occurring amongst the Committee.

5. Meetings

(a) The WRC shall have up to one face-to-face meeting per calendar year.

(b) The Chair may call a special meeting of the Committee to be held by teleconference, with members being given at least seven days notice of the meeting.

(c) The Chair must:

(i) issue the Agenda for a meeting two weeks before the meeting;

(ii) ensure all items are referred for additional advice to appropriate other subcommittees of the Council, where appropriate;

(iii) ensure all discussion items end with a decision or action; and

(iv) nominate an acting-chair from the Committee to act in the Chair’s place, as required.

(d) A quorum of members:

(i) must be present before a meeting may proceed; and

(e) is constituted by five (5) members, including the Chair (or nominated acting-Chair),
(f) The Committee may make a decision by a show of hands, or where demanded by a member entitled to vote, a ballot. The Chair of the Committee will have a deliberative and, in the case of equal votes, a casting vote.

(g) The Committee may make a decision without a meeting if all Committee members sign their consent on a document (which may have counterparts), which states the decision.

(h) No business may be considered at a meeting of the Committee until the minutes of the previous meeting have been confirmed or otherwise disposed of. No discussion of the minutes is permitted except as to their accuracy.

(i) Minutes of a meeting must be confirmed by resolution and signed by the Chair at the next meeting. Minutes confirmed and signed in that way will be taken as evidence of proceedings of that meeting.

6. Secretariat

The Society will provide administrative support to the Chair of the WRC for the operational aspects of the Committee.

7. Reporting

(a) The Chair of the WRC will report to the Council one month prior to the 2017 DNT meeting.

(b) Recommendations and strategic plans will be discussed at the 2017 DNT meeting.

(c) All Committee meeting minutes will be forwarded to the Society.

(d) Additional written reports will be provided to the Council at the Council’s request.

(e) A final report and recommendations will be provided to Council one month prior to the Annual Scientific Meeting in 2017.

8. Confidentiality

All business of the Committee that members should understand is confidential must be treated as confidential. Members are not to disclose any confidential information to anyone outside the Committee and are to treat this material with the utmost care and discretion.

9. Conflict of Interest

(a) A Committee member must declare any conflict of interest annually (and updated as required in the interim) to the Chair if they, their partner or close family friend has a direct financial or other interest which influences, or may appear to influence, proper consideration or decision-making by the Committee on a matter or proposed matter.

(b) In the case of a declared conflict of interest. The Chair must:

(i) determine the nature of that member’s permitted participation, whether that is full participation in the Committee's handling of that issue, capacity to discuss the issue but not to vote
on the issue, a prohibition on discussing or voting on the issue, or departure from the meeting while that issue is being handed;

(ii) advise the person concerned of the Chair’s determination; and

(iii) report the determination to the Committee.

10. Amendments

(a) The Committee may review these Terms of Reference at any time.

(b) The Committee may recommend that these Terms of Reference be altered.

(c) The recommended alteration takes effect on approval by the Council

11. Funding of the Workforce Review Committee

(a) The WRC will develop a budget to Council for discussion and approval.

Appendix 2: Membership

Chair: Dr Nicholas Gray

General Members: Dr Cathie Lane

Dr Fiona Brown

Prof Randall Faull

Paediatrics: Dr Amanda Walker

Trainee: Dr Jenny HC Chen

Rural: Dr Sajiv Cherian

New Zealand: Dr Colin Hutchison

Appendix 3: Consultation

Prof Richard Doherty: Dean of RACP, Member NMTAN

AMD RACP

DNT meeting February 2017