HEALTHfix consulting

MAINTAINING AN EFFECTIVE PROCEDURAL WORKFORCE IN RURAL WESTERN AUSTRALIA

MR KIM SNOWBALL
DIRECTOR
SEPTEMBER 2016

MAINTAINING AN EFFECTIVE PROCEDURAL WORKFORCE IN RURAL WESTERN AUSTRALIA

MR KIM SNOWBALL
DIRECTOR
SEPTEMBER 2016

CONTENTS

ACKNOWLEDGEMENTS

The repeat of the review of the procedural workforce and assessment of the activity projections for the country hospitals would not have been possible without access to the key data holdings from the WA Country Health Service (WACHS) and from Rural Health West. I would like to acknowledge the Chief Executives, Messrs Jeff Moffet and Tim Shackleton for their approval to release the data and also the data administrators, Nancy Bineham, (WACHS) and Rosalie Wharton (Rural Health West), for sharing their data and insights. This was the second time Nancy and Rosalie were troubled by Healthfix Consulting in the last ten years.

The source of the majority of the data on the workforce attributes is from Rural Health West. The citation for this source is Rural Health West (2016) *Western Australia's General Practice Workforce Analysis Update: November 2015*. Perth: Rural Health West.

I would like to make special mention of Dr Anne Karczub, Director Obstetrics, Dr Di Mohen, Obstetrician, Dr Patrick Coleman, Specialist Anaesthetist and Dr Dianne Fakes, GP Anaesthetist, for their generous time to discuss and consider the impacts of the training and mentoring programs in Obstetrics and Anaesthetics in which they are all very closely involved and also discussions about the general status of the workforce. With these individuals involved there is little wonder the procedural workforce has improved so considerably.

Particular mention is made of King Edward Memorial Hospital and the Ramsays Health Group (Joondalup Health campus) for preserving the training programs for procedural General Practitioners over at least the last ten years.

Dr Tony Robins and the WACHS Regional Medical Directors were also generous with their time and gave very detailed feedback in respect to the status and on-the-ground knowledge of the procedural capabilities in each region of Western Australia.

I also received great support from many individual rural doctors who gave generously of their time to inform the review from a very front-end perspective. This was critically important in validating the data findings and better understanding the issues on the ground.

Last, but most importantly, I would like to thank the Chief Executive Officer, Adjunct Professor, Dr Janice Bell, and Board of Western Australian General Practice Education and Training Ltd (WAGPET) for their preparedness and commitment to rural procedural doctors through their decision to initiate this second review.

The funding for the review will not just serve for the benefit or interest of WAGPET, but for the benefit of all interested stakeholders and ultimately the future of rural surgical and procedural services in WA.

Mr Kim Snowball
Director, Healthfix Consulting

1. EXECUTIVE SUMMARY

This report is a reprise of the review conducted by Healthfix Consulting in 2007 entitled *'Maintaining an Effective Procedural Workforce in Rural Western Australia'* and was commissioned by the Western Australian General Practice Education and Training Ltd (WAGPET).

The review assessment basically considered:

- The extent of procedural activity growth since 2007;
- The state of the procedural workforce in 2016 compared to 2007;

The impact of actions arising from the recommendations made in 2007; and

- Further recommendations for action to maintain an effective procedural workforce in rural Western Australia to 2025.

The outcomes from the assessment show a clear improvement in the procedural workforce over the past ten years. While GP proceduralists have remained at the same raw number as in 2007, there has been a major growth in resident specialists across the procedural disciplines working in a shared care model. There has also been an increase in procedural education and training opportunities for General Practitioners and consequently less reliance on overseas recruitment.

Shared care model defined

The rural procedural workforce is essentially engaged in providing a shared care model of service that represents the safest and most accessible clinical service for rural communities. Under this arrangement the care of rural communities and individual patients is shared between GPs and specialists, with the GPs undertaking the bulk of the work, but referring care to the relevant specialist when the risk and/or complexity of the case demands it.

The specialist also supports the GPs in the discipline and sets the appropriate protocols in consultation with the GPs. This approach makes best use of both the GP and specialist resources by sharing the care between them and providing 24 hour coverage in circumstances where a specialist service alone would not be viable.

This model has proven to be both cost effective and safe in respect to the level of complexity and service requirements in rural WA.

The WA Country Health Service (WACHS) is clearly committed to a shared care model of service simply because it offers viability, safety and accessibility for rural communities and this was confirmed in conversations with the WACHS Chief Executive Officer and Regional Medical Directors.

Activity projections matched with workforce

Any assessment of the adequacy of the procedural workforce must also consider the associated projections in procedural work in country hospitals. This was undertaken in 2007 and interestingly, the predicted growth from 2007 to 2016 in procedural activity across country hospitals was reasonably accurate and was about 3% lower than predicted in 2007.

However, this overall result did mask some substantial activity changes during the period. For example, the extent of the growth in the North West was largely unpredicted, but has since returned to more normal growth rates.

The extensive investment in infrastructure in places like Port Hedland, Albany, Busselton, Kalgoorlie and Bunbury has seen many of these centres substantially increase their capability and procedural activity levels, beyond what was expected in 2007. Similarly the State Government has provided a substantial investment in the order of $240m during the last five years to attract and retain doctors in the inland towns of the Wheatbelt region. These have been highly successful initiatives to improve access to rural GPs and procedural services in rural areas.

These changes represent very good news for rural communities who are now receiving substantially improved and more effective procedural services closer to home. This contrasts with the situation in 2007 where an example was cited that only one specialist anesthetist was resident outside Bunbury and Perth.

Overall procedural workforce changes since 2007

There have been a number of significant changes in the profile of the procedural workforce in rural WA since 2007.

These include:

- The number of procedural GPs has remained the same at 190 in 2015 compared to 192 in 2006.
- A significant and compensating increase in resident procedural specialists has occurred over the same period with 79 in 2006 increasing to 96 in 2015 (17 specialists or 25%). These are concentrated in regional centres and primarily work in a shared care model with GPs.
- The increases in the procedural workforce are matched with the growth in procedural activity also heavily concentrated in the regional centres.
- The number of GPs holding both anaesthetic and obstetric skills has fallen from 60 GPs to 21. The majority having ceased obstetrics and retained anesthetics.
- GPs with surgical skills has fallen from 46 in 2007 to 24 in 2015.
- Turnover rates for procedural GPs has fallen and continues to be lower than GPs without procedural skills.
- The primary source of arrival for rural procedural practice are no longer drawn from overseas. In 2005, 70% and 2006, 60% of procedural doctor arrivals in rural WA were recruited overseas whereas in 2015, 45% of arrivals where from overseas. Overseas doctors represent 34.7% of all procedural GPs, but 55% of all rural GPs.

A region by region analysis shows that the major beneficiaries of the improved workforce and improved education and training infrastructure, as recommended in 2007, were the Great Southern, South West, Midwest, Pilbara and Kimberley regions. These seem to be excellent exemplars for effective shared care models across a variety of health service model arrangements. Those in the south combine public and private, while those in the remote north are based on salaried service models.

Impact of actions implemented since 2007

The report released in 2007 by WAGPET described a number of recommended actions needed to address the existing and predicted deficits in the procedural workforce.

This focused largely on:

- Strengthening the shared care model,
- Improving state-based training and education of both specialists and GPs,
- Increasing exposure to rural procedural practice and;
- Reducing the reliance on overseas recruitment to fill the workforce gaps.

The follow up review in 2016 confirmed that all ten of the recommendations from the 2007 report, *'Maintaining an Effective Procedural Workforce in Rural Western Australia'* were implemented, either in whole or in part.

The most successful initiatives have changed the education and training landscape in Western Australia and have been largely responsible for the transformation of the procedural workforce in rural Western Australia. These initiatives include procedural training places at King Edward Memorial Hospital (six places for GP Obstetric trainees) and Joondalup Health campus (four GP Anaesthetic training places including one rotation through Bunbury).

These procedural training programs have been augmented by a mentoring program (administered by Rural Health West). The mentoring is structured so that GP proceduralists have ongoing support when they commence rural practice. Both programs have delivered 96 GPs with either obstetric or anaesthetic skills since 2007.

Success of Obstetric GP training in WA

The approaches to provide local education and training to GPs have been highly successful with 65% of the 56 obstetric graduates or 37 graduates between 2008 and 2015 currently working as GP Obstetricians in rural WA. A further 6 graduates are working in rural centres in other states with Queensland taking four WA graduates. This means that 43 GP obstetricians or 76% of graduates are now working in rural health and two graduates have decided to undertake specialist training.

Interestingly, King Edward Memorial Hospital has also been successfully training specialists who are specifically equipped to work effectively in a shared care arrangement in rural settings. While this is not a clinical skill, it requires a team-focused approach with clear respect and support for the GPs who also undertake work in the discipline.

Based on the expected growth in procedural services, the age profile of the workforce and the need to continue to reduce reliance on overseas recruitment a further two advanced obstetric training posts are warranted.

The two additional posts could be established as dedicated advanced GP training posts at Joondalup Health Campus and at Fiona Stanley Hospital as they have sufficient clinical workload. According to Dr Karczub, Director of Obstetrics at KEMH, to support an advanced DRANZCOG access to sustained and dedicated Caesarian section lists is critical. Either one or two a week over a year or in a more concentrated ten week period as KEMH has done. This would be possible at Fiona Stanley Hospital and Joondalup.

Success of Anaesthetic GP training in WA

The anaesthetic training places being offered through Joondalup has trained 40 graduates between 2005 and 2014. Of these graduates 30 or 75% are currently working in WA rural communities. A further two are now undertaking specialist training. The anaesthetic posts have been a major contribution to sustaining anaesthetic practice in rural areas.

The number of posts seem adequate to maintain the anaesthetic workforce if they are returned to five posts as originally recommended and funded. This should include some further provision for refreshers for rural GPs.

Funding of medical education and training

The current funding arrangements for the provision of education and training of rural doctors involves a combination of Commonwealth funding for specialist training posts and through the Australian General Practice training Program delivered through WAGPET for GP training. The State contributes through funding of interns and many junior doctors as well as for procedural skills such as anaesthetics and obstetrics. The funds for these programs are held by various agencies.

In the case of the procedural work undertaken by rural doctors the training posts have been provided by King Edward Memorial Hospital and Joondalup Health Campus, both funded through the North Metropolitan Health Service.

Up until 2016, WACHS was not recognised as a Primary Employing Health Service, meaning it could not employ its own intern doctors, but could only receive placements and rotations from the metropolitan teaching hospitals.

This has changed in 2016 and WACHS is now able to employ its own intern doctors. This represents a significant change and paves the way for WACHS to take a more direct and active role in the education and training of doctors to work in the WA country hospitals.

Over the past 5 years the WA Country Health Service has invested heavily in providing rural based education and training for doctors. This has involved setting up education infrastructure, including supervision, accommodation and medical educators.

The quality of the teaching and the clinical and social experiences these doctors gain has seen a significantly increased demand for these placements and in turn an increase in the doctors competent and confident to work in rural and remote areas. This is in stark contrast with the past where overseas recruitment was the first and often only recruitment available.

This investment in education and training was accompanied by a collaborative governance effort from all involved in rural medical education and training. Known as the Rural Practice Pathway, this governance arrangement set out to ensure that junior doctors were aware of the opportunities that existed in a career in rural and remote medicine. (see Appendix 1)

The Rural Practice Pathway promoted these careers and made it simple and easy for doctors to navigate through the complex medical training system in Western Australia, without losing sight of the overall aim to work in rural areas. There was mentoring support and advice for doctors interested in working in rural areas in whatever capacity, from GP, procedural GP or sub specialist, if you wanted to work in the country help was at hand. (remembering that some 25% of all medical students have a rural background).

To further accelerate the key achievements in educating and training Australian doctors to work in rural and remote areas, three issues need to be resolved in the funding of that training effort.

First, The funding for the education and training that is specifically directed towards rural doctors needs to be allocated to WACHS. This includes the funding for the GP training posts in King Edward Memorial Hospital and Joondalup Health campus. This would mean that WACHS would contract for this training rather than the North Metropolitan Health service on its behalf.

Second, the development of activity based funding and the move to incorporate teaching and research into the price for activity may have unintended consequences if it were to include medical education and training in WACHS. For example, the majority of WACHS hospitals are block funded as the cost of delivering services in areas with low economies of scale or due to remoteness and higher costs of delivering services is no different for education and training. As a consequence it is important that the existing effort be maintained and the funding provided in a block form as opposed an activity based approach, which is better suited to metropolitan health services.

Third, the review of the procedural workforce has made clear the importance of maintaining effort and aligning the workforce growth with the activity growth. This review has urged steady growth in the level of procedural training by increasing the number of GP Obstetric training posts by two, anaesthetics by one and a focus on Endoscopic training for GPs in areas where waiting times are above normal levels. This will require additional funding and it is suggested that a joint submission between WACHS, WAGPET and Rural Health West for increased training support be developed to secure a fair share of the Commonwealth funding for integrated rural training pipeline announced in February 2016.

Future directions

While this review demonstrated some sound achievements in improving and maintaining the rural procedural workforce, there are emerging challenges that will require continued attention and action by a variety of agencies.

In particular,

- The effort to maintain and increase the education and training of General Practitioners in Obstetrics and Anaesthetics at King Edward Memorial Hospital and Joondalup Health Campus is essential. This is a proven approach with clear evidence that well trained GPs properly mentored will commit themselves to rural practice. It is the maintenance of effort in this area over the past ten years or more that has ensured a steady increase in locally trained GP proceduralists entering and staying in rural practice. The associated reduction in overseas recruitment has been delivered.
- Funding by the State government for the delivery of education and training of rural doctors required to work in rural hospitals, needs to be consolidated and allocated to WACHS. This will ensure that WACHS takes ownership and control for educating and training the workforce it needs. The delivery of training for anaesthetics and obstetrics will still need to be carried out in the metropolitan area, given the volume of clinical work required for good teaching.
- Developing more rural based opportunities for procedural education and training needs to be a future focus, especially considering the growth in medical graduates expected over the next few years, while acknowledging that such a focus needs to be within the overall capacity of medical training.
- A strong and positive affirmation of the shared care model by the WA Country Health Service leadership would be well received and would represent a confirmation that there is a strong and continuing future for GP procedural work in rural WA within a clear clinical governance and shared care arrangement with specialists.

There are some regional differences in access to procedural services and the state of general surgery is less positive. This is particularly the case in Kalgoorlie. There is also a risk in the Wheatbelt where the services are very fragile.

Both Northam and Katanning have curtailed resident obstetric procedural services and the longer this is the case the less likely they are to be revived. This basically leaves Narrogin as the only remaining Wheatbelt Hospital offering 24 hour obstetric services. Narrogin relies on a single General Surgeon for elective work and if that ceased there would be a similar flow on effect on the remaining procedural services.

It is important that the good obstetric service in Narrogin is closely monitored as the Wheatbelt should have a procedural service and Narrogin is in a central geographic location for the service.

Outside these areas the clearest need for additional local procedural surgical services are in the provision of endoscopies. This is an area where an investment in additional training for GPs to service areas not currently served or where waiting times have become too long would be beneficial. It would be focused on reducing waiting times and also reducing the need for people to travel outside their local communities.

This would require at least two training places established under the conjoint committees by the Royal Australian College of Surgeons and the Gastroenterological Society of Australia and the Royal Australian College of Physicians.

The whole area of emergency services in rural WA has also changed dramatically. Since 2007 the introduction of the Emergency Telehealth Service (ETS) has improved the support and back up available for nurses and doctors alike in treating or stabilising patients attending country Emergency Departments. When combined with the introduction of the Southern Inland Health Initiative (SIHI), medical cover and emergency service cover is now more stable, safe and effective.

In the larger centres where more acute conditions present, the general trend is towards a shared care model with GPs providing the service on the floor, while FACEM support is either available through ETS or is provided locally. This approach has improved patient care and enhanced support for General Practitioners.

In these circumstances the FACEM support takes the form of development of local protocols and policies and occasionally the review of cases and presentations. Because of the additional workforce availability of FACEMs there has been a tendency for these specialists to effectively take over and run the emergency service

in circumstances where sufficiently skilled GPs are not available. This has occurred in Kalgoorlie and to a lesser extent in Northam. This can be a very expensive alternative for rural communities and does not always integrate well with the local community medical services.

If a decision is made to move to a specialist-run emergency department then it needs to be planned, funded and organised. It also needs to be clearly understood that doing so will generally mean the local GPs are less engaged in the hospital and will be deskilled over time, so it will be difficult to return to an alternative GP procedural run service.

The ideal objective is to develop the services in such a manner that both GPs and FACEMs are well integrated and work effectively together.

2. RECOMMENDATIONS

While the reprise of the original report made in 2007 on maintaining an effective procedural workforce in rural Western Australia describes a significantly improved situation, several measures should be considered. These measures are designed to continue the momentum and sustained effort since 2007 that has improved accessibility to procedural services in rural communities, reduced reliance on direct overseas recruitment, improved turnover rates and ensured an investment in WA based education and training of rural proceduralists is in place.

RECOMMENDATION 1

The current commitment of six training places in Obstetrics through KEMH should be maintained and expanded by a further two places, both advanced. This could be achieved by having a dedicated advanced post at Fiona Stanley Hospital and one at Joondalup Health Campus. Both locations have the volume of work that can support advanced training. This will provide sufficient obstetric capability to address the projected activity and continue to reduce reliance on overseas recruitment as well as respond to the increased age profile of GP Obstetricians in WA.

RECOMMENDATION 2

The current commitment of five training places at Joondalup Health Campus (with a rotation through Bunbury) should be maintained and expanded to include capacity to offer tailored up-skilling for rural GPs. The current actual training in these funded posts has been four training places rather than the intended and funded five places. Returning to five places would maintain the existing anaesthetic capacity which, if maintained is adequate to meet future needs.

RECOMMENDATION 3

The mentoring program run by Rural Health West, WAGPET, King Edward Memorial Hospital and Joondalup Health Campus for newly practicing rural proceduralists is outstanding and is a large part of the success in seeing trainees ultimately working in rural and remote areas. This should be acknowledged, maintained and promoted for possible adoption nationally.

RECOMMENDATION 4

Funding by the State government for the delivery of education and training of rural doctors required to work in rural hospitals, needs to be consolidated and allocated to WACHS (including anaesthetics and obstetrics training). This approach will ensure that WACHS takes ownership and control for educating and training the workforce it needs. The current funding for medical education and training WACHS also needs to be sustained and continued as a block funded arrangement.

RECOMMENDATION 5

The shared care model should be communicated by WACHS as their preferred model of service across rural WA to respond to the clinical needs of rural communities. The definition of this model being the provision of procedural services, most particularly 24 hour services like obstetrics, anaesthetics and emergency medicine, in a shared arrangement between suitably qualified and credentialed General Practitioners and specialists in the relevant discipline. In circumstances where the procedural activity can support a specialist, resident specialists will be in situ; and in other circumstances the specialist may either be accessible by telehealth or by visiting services. The main role of the specialist is to provide support for the GPs in the discipline and to undertake the higher risk or complex cases on referral.

RECOMMENDATION 6

While the reduced availability of GP surgeons is acknowledged, the most pressing clinical need in rural areas is for Endoscopists and it is recommended that training programs be initiated to train at least two GP Endoscopists per annum for rural locations in which there is no General Surgeon. This would improve access to services and reduce waiting times for people who would otherwise need to travel for this diagnostic/treatment service. This approach will require a joint arrangement through the conjoint committee involving the Royal Australian College of Surgeons and the Gastroenterological Society of Australia and the Royal Australian College of Physicians.

RECOMMENDATION 7

The future support and understanding of the shared care model would be assisted by more widely promoting its inherent quality and safety from the perspectives of WACHS and the responsible professional bodies such as the Royal Australian College of General Practitioners (RACGP) and Australian College of Rural and Remote Medicine (ACRRM).

RECOMMENDATION 8

The outcomes of this review and the achievements of the various organisations that have been instrumental in ensuring an effective procedural workforce in rural WA should be more widely publicised, particularly in the rural media.

RECOMMENDATION 9

Any implementation of the recommendations should be led and directed by the three key agencies involved (Rural Health West, WAGPET and WACHS); and they should use the current structures overseeing the operation of the Rural Practice Pathway (see Appendix 1) to implement the agreed recommendations. The funding for the expanded training posts required should be the subject of a joint submission to the Commonwealth government under its announced integrated rural training pipeline ($93.8m).

3. BACKGROUND AND CONTEXT

Before describing the methodology for this project it is important to provide some context around the medical education and training model in Western Australia and more importantly the clinical service model applying in rural WA. This rural-focused model demands a very different role from its General Practitioners and traditional hospital specialists when compared to metropolitan practice.

An explanation of this model has been included so that those who carry a hospital-focused service model in their minds do not confuse the traditional GP role in metropolitan practices with that of the blended GP community and hospital service role undertaken by rural GPs.

Ultimately, the most appropriate clinical service model required in rural areas is the model we must educate and train our practitioners to work in. The stricter delineation of hospital specialist and GP/community in metropolitan areas does not work well in rural areas. The silos that are so apparent in metropolitan health care are not so apparent in rural areas where often the same doctor is servicing the community or primary care needs as well as hospital care and treatment.

This is both safe and cost effective. However, it requires our specialists to work in a shared care model that involves working with, and respecting the work of, our GP rural specialists within their discipline. This is not always how our specialists and GPs are trained.

The understanding of these differences and the need to have such an approach in rural areas is central to the consideration of this report and its recommendations.

3.1 EDUCATION AND TRAINING TO SUPPORT THE CLINICAL SERVICE MODEL IN RURAL WA

Unlike some other states in Australia, WA still has a shortage of over 950 medical practitioners compared to the national per capita average. WA has the lowest number of GPs per capita and this is especially pronounced in rural and remote WA. We rely more heavily on International Medical Graduates; 38.2% of the medical workforce in WA are International Medical Graduates compared to 26% nationally, and 54% of all country GPs in WA are overseas trained.

The focus in this review was first to acknowledge the important contribution made by International Medical Graduates, many of whom have since been qualified by Australian medical colleges, and to note that further to this acknowledgement these graduates should not continue to be singled out as overseas trained with an underlying meaning that they are somehow less capable than other Medical Practitioners.

The focus in this report is to now concentrate on the level of direct overseas recruitment compared to recruitment of existing registered and qualified practitioners, regardless of where they received their primary degree.

WA is a highly centralised state with 75% of the population living around the capital city of Perth. The remaining 500,000 people live in an area of over 2.5 million square kilometres with only Bunbury, having a population of more than 50,000. This has resulted in difficulties in training doctors from medical students through to GPs and specialist in rural locations. Providing accredited places, clinical exposure and guaranteeing supervision is difficult in these circumstances.

The Rural Clinical School has enabled enhanced rural exposure and its success has shown the breadth of clinical work available for teaching in rural areas. WA's General Practice Training organisation, WAGPET has a regionalised model of training which works closely with the RCS.

Research has shown that the majority of junior doctors make career choices after they have graduated and that the teachers in their prevocational years have a huge influence on these choices. If they are not exposed to rural community practice during this time there is a risk of these careers becoming less popular.

The WA Rural Practice Pathway has tried to combine the ability of junior doctors to have flexibility with a range of options for them to obtain the training they need for country practice.

The previous Prevocational General Practice Placement Program (PGPPP) has been an important part of the rural pathway for GPs in WA; junior doctors could undertake full year rotations in a country town and the PGPPP would be a term undertaken in the same location during that year – this approach was unique to WA. It supported the notion that in the smaller country towns the GPs are integral to the smooth running of the hospitals as well as providing general practice services from either the hospital or their practice rooms.

The PGPPP ceased as a Federally funded program. The WA Country Health Service continued elements of the program in rural rotations under the title of the community residency program (CRP).

Junior doctors need to be exposed to the way the medical model works in these towns in order to be fully informed of exactly what is involved with working as a rural GP. This mirrored the way our GPs actually practice in these same locations.

In essence, this context is the background that led to the efforts in WA to establish both infrastructure and education and training capacity in our rural and regional centres. It was designed to train Australian graduate doctors to work in rural areas and reduce direct overseas recruitment, which had previously been central to the workforce strategy.

This investment has included rotations through our rural hospitals and the establishment of junior doctor positions in the larger regional centres. This means those medical students now have the opportunity to have an exposure to rural practice in the undergraduate years through the Rural Clinical Schools and have the subsequent choice of joining the rural practice pathway where they are supported to gain the skills necessary for rural practice; this can be as a GP with emergency medicine skills and access to increased procedural skills, right through to specialising in a particular discipline.

The rural GPs are largely recognised as specialist generalists, given their need to be able to address a wide range of conditions that are more often referred to hospitals in metropolitan settings. In rural areas they can be safely cared for by a GP in the local hospital. This includes emergency presentations which the rural GPs are expected to address and they have been specifically selected and trained for this purpose.

GP Procedural doctors will be referred to during the course of this report; the difference simply denotes that these GPs have gained the additional recognition from a medical college for their procedural skills, mainly in obstetrics and anaesthetics, but also in surgery and emergency medicine. These doctors are credentialed for the scope of practice, however where conditions might present that are higher risk or more complex than their skills provide, they make the clinical judgement to refer.

4. INTRODUCTION AND METHODOLOGY

During the course of a comprehensive review commissioned by the WA Country Health Service into the rural medical workforce in 2007, *'Engaging Rural Doctors'*, a series of concerns were expressed by rural doctors over the fragility of the procedural workforce and the lack of succession planning and training to ensure a future ongoing supply.

In response to these concerns and with support of nine other stakeholder agencies, WAGPET engaged Healthfix Consulting in 2007 to provide a report on the procedural workforce in rural WA.

The purpose of this review was to provide three key deliverables:

1. A projection of the future procedural workforce in rural WA for the next five, ten and fifteen years based on a "do nothing" scenario compared with the projected need for procedural doctors (based on surgical and procedural demand projections) in rural WA over the same period.
2. A proposed succession plan for the replacement of procedural doctors and recruitment of additional doctors to meet the future work demands from rural communities as at 2006, 2011, 2016 and 2021. This would be based on information gathered from hard data and site visits to identify the gap between the projected workforce and identified needs by each discipline and location.
3. Develop a plan to establish the capacity to provide the required workforce over the next five and ten years, using Australian trained medical graduates and junior doctors with the necessary procedural skills as the preferred supply avenue.

The 2007 report resulted in a range of initiatives and effort to increase education and training capabilities in WA to better supply the future procedural workforce. Much of this combined effort with the WACHS and other agencies has not been evaluated. However, some concerns also emerged about the procedural workforce during the recent independent review of the AGPT program administered and delivered by WAGPET in WA (2015).

Interestingly, these concerns about the fragility of the procedural workforce were anecdotal but consistently raised from a wide range of stakeholders including WACHS, Department of Health, the Commonwealth Department of Health and both the RACGP and ACRRM.

In late 2015, the WAGPET Board approved funding for a project to again examine the procedural workforce in country Western Australia and effectively repeat the work that was undertaken in 2007 to examine the current procedural workforce and

describe what has changed over the previous ten years. The key questions asked were:

- Were the initiatives recommended in 2007 delivered and if so did they improve the workforce situation?
- What have been the trends in the past ten years in respect to current procedural hospital activity and were the projections made in 2007 reliable?
- What have been the trends in respect to the procedural workforce?
- Are there further actions needed by WAGPET or other stakeholders to ensure availability of an ongoing and effective procedural workforce in country WA?

While WAGPET has commissioned the study, it has done so as a sponsor to gather basic evidence and highlight the challenge facing all of the agencies interested in the future of procedural services in country areas.

In essence Healthfix Consulting was asked to repeat and update its work from 2007 and provide any new insight into the trends since 2007 and any remaining issues or actions needed to maintain an effective procedural workforce in WA.

The review methodology was undertaken in three main phases.

PHASE 1

The first phase involved gathering hard data from Rural Health West and WACHS to provide the information on the procedural workforce and on the activity projections for procedural work in rural hospitals in the same form as gathered in 2007.

Fortunately, WACHS CEO Mr Jeff Moffet and Rural Health West CEO Mr Tim Shackleton committed to fully cooperate with the study and provide the hard data required to do the reassessment. It was also fortunate that the staff involved in gathering the data to support the 2007 study were again available in both organisations to assist in the project.

Procedural workforce data was gathered from the 2015 census conducted by Rural Health West; this was collated and assessed by Ms Rosalie Wharton (Rural Health West) and provided to Healthfix Consulting in the same form as the 2007 data collection. As the census data is drawn from voluntary contributions it was supplemented by data on salaried doctors, provided by Ms Renae Poot on behalf of WACHS. This combined data collection provided a sound base for discussion and validation at a regional level.

The procedural activity provided by WACHS included current procedural activity and projections.

While the Hardes data model is no longer used, WACHS was able to draw the information together in the same format and definitions to repeat the analysis done in 2007. The data projections were based on the forecast inpatient activity model as at March 2016 with 2014/2015 as the base year.

PHASE 2

The second phase involved an analysis of the hard data and determination of any clear trends and findings that needed to be validated with stakeholders and compiled into a regional profile for each of the WACHS regions. These findings were first tested with the data administrators to ensure reliable conclusions were being drawn and to assist in understanding the basis for some of the data collection techniques and its reliability. The discussion with the key stakeholders was primarily centred on WACHS with respect to the overall changes in the procedural workforce and looking to better understand the drivers behind the emerging trends.

PHASE 3

Phase three effectively combined the findings from the hard data, any evident trends since 2007 with local knowledge and understanding in the regions and, based on those findings, made recommendations on what further actions may be needed to maintain an effective procedural workforce in country WA. This included discussions within each of the regions to determine any specific regional issues that may need to be accommodated.

5. FINDINGS

The analysis of the rural procedural workforce and its capability to deliver the country based procedural activity now and into the future is the basic premise for this analysis. As a result the accuracy of the country hospital activity predictions into the future is paramount. Without an accurate understanding of the expected activity growth on a regional basis it would not be possible to properly assess the appropriateness and effectiveness of the procedural workforce.

5.1 ACTIVITY PROJECTIONS

The WACHS provided full access to its activity projections for country hospitals and regions. This data includes a range of assumptions about the nature of country activity. For example, it accommodates the newly built hospitals in Albany, Busselton and the redeveloped Kalgoorlie hospital as well as the population changes and projections.

These projections are in five year blocks from 2014/15 to 2025/26. The projections seek to provide an accurate assessment of expected activity based on current knowledge and projections of population and associated health needs. This is not a perfect science and the longer the period for projections the less confidence there is in its accuracy. Nonetheless, it has demonstrated a fair degree of accuracy in predicting the activity projections from 2004/05 to 2014/15 with actual about 3% variation overall.

The activity projections provided for 2014/15 from the 2004/05 base year were remarkably accurate in an overall sense when compared to the actual and subsequent projections undertaken in March 2016. However, variations were apparent region by region and within disciplines.

In order to understand the basis for the various regional and discipline based differences and its impact on procedural workforce some of the major changes occurring in the infrastructure and business model of WACHS were explored.

For example, the significant increase in activity in the Great Southern can be reasonably attributed to the building of the new hospital in Albany and the significant associated increase in locally based specialists. This has seen a marked increase in retention of hospital activity in the region and this was not foreseen in the original activity projections.

Unfortunately, unlike 2007, the private activity couldn't not be separated by procedure or geographically. This means that the data is mainly useful to only look at changes within regions or disciplines. While still useful it cannot be easily compared to 2007.

The regional issues are explored in more detail in the regional analysis.

Table 1: Rural Separations by Public Surgical and Procedural Streams

SEPARATIONS

MSO		SURGERY DESCRIPTION	2014/15	2015/16	PROJECTED 2004/05 FOR 2016/17	2016/17	2021/22	2025/26
PROCEDURAL	02	Interventional Cardiology	287	279	2	196	262	292
	08	Diagnostic GI Endoscopy	7,460	7,997	10,536	8,308	9,406	10,186
	17	Respiratory Medicine	59	61		61	71	80
	19	Non Subspecialty Medicine	1,711	1,966		2,171	2,570	2,878
	26	Dentistry	934	999	3,368	1,027	1,155	1,257
	31	Urology	1,033	1,049	1,719	1,001	1,231	1,369
SURGICAL	02	Interventional Cardiology	9	115	0	115	119	120
	04	Thoracic Surgery	67	63	16	67	79	90
	10	Haematological Surgery	57	56	124	64	79	89
	20	Breast Surgery	361	419	717	395	395	399
	21	Upper GIT Surgery	721	725	871	751	763	756
	22	Colorectal Surgery	605	641	1,568	656	707	739
	23	Head & Neck Surgery	96	102	343	108	107	107
	24	Neurosurgery	43	49	100	46	46	47
	25	Dental Surgery	2	2	0	2	2	2
	27	Ear, Nose & Throat	998	1,116	2,263	1,099	1,078	1,091
	28	Orthopaedics	3,804	4,553	7,856	4,326	4,475	4,641
	29	Ophthalmology	3,131	3,024	5,254	3,119	3,804	4,238
	30	Plastic & Reconstructive Surgery	2,122	3,077	5,318	2,709	2,816	2,944
	31	Urology	603	608	1,701	590	644	674
	32	Vascular Surgery	168	169	319	163	169	174
	33	Non Subspecialty Surgery	2,318	2,441	3,181	2,499	2,700	2,833
	34	Gynaecology	3,062	3,091	3,322	3,070	3,200	3,257
	35	Obstetrics	1,306	1,296	1,300	1,337	1,375	1,404
	39	Extensive Burns	57	61	65	62	66	69
	40	Tracheostomy	21	21	8	21	25	27
GRAND TOTAL			**31,035**	**33,982**	**49,951**	**33,962**	**37,343**	**39,761**
LESS PRIVATE					**13,509**			
TOTAL					**36,442**			

Table 2: Public Separations by region, Excludes medical separations

SEPARATIONS

Hospital Region	MSO	2014/15	2015/16	2016/17	2021/22	2025/26
GOLDFIELDS	Procedural	966	1,049	1,095	1,263	1,396
	Surgical	1,814	2,022	1,974	2,101	2,203
Total		**2,780**	**3,071**	**3,069**	**3,363**	**3,600**
GREAT SOUTHERN	Procedural	2,643	2,802	2,893	3,363	3,674
	Surgical	3,122	3,495	3,539	3,622	3,740
Total		**5,765**	**6,297**	**6,432**	**6,985**	**7,414**
KIMBERLEY	Procedural	892	963	992	1,147	1,260
	Surgical	2,134	2,504	2,433	2,545	2,648
Total		**3,026**	**3,467**	**3,426**	**3,692**	**3,908**
MID WEST	Procedural	1,133	1,238	1,282	1,459	1,597
	Surgical	2,556	2,587	2,565	2,862	3,048
Total		**3,689**	**3,825**	**3,847**	**4,321**	**4,645**
PILBARA	Procedural	670	740	776	881	966
	Surgical	1,784	2,048	1,985	2,068	2,141
Total		**2,454**	**2,788**	**2,761**	**2,950**	**3,107**
SOUTH WEST	Procedural	4,112	4,344	4,437	5,177	5,683
	Surgical	7,561	8,254	8,031	8,723	9,165
Total		**11,673**	**12,597**	**12,468**	**13,900**	**14,848**
WHEATBELT	Procedural	1,068	1,215	1,287	1,405	1,484
	Surgical	580	722	672	727	755
Total		**1,648**	**1,937**	**1,959**	**2,132**	**2,240**
GRAND TOTAL		**31,035**	**33,982**	**33,962**	**37,343**	**39,761**

5.2 WORKFORCE ANALYSIS

The analysis of the procedural workforce focused on GP procedural doctors separately from specialist proceduralists. The data on GP procedural doctors drew on the census data collected from country doctors by Rural Health West, which although it is a moment in time, it essentially mirrors the same data capture from 2007.

Rural Health West also collects the data from rural based specialists, however this is less complete and so the data-set was augmented by data provided by WACHS on the salaried specialists based in rural WA.

While reasonably complete, the combined data offers useful information on trends since 2007; these trends are a large part of the focus of this analysis.

Procedural GPs

The current procedural workforce comprises 190 procedural GPs (obstetrics, anaesthetics and surgery), including sixteen WAGPET registrars, in 2015. This compares to 192 procedural GPs, including four WAGPET registrars, in 2006. This means that the permanent rural GP Procedural workforce has reduced by about 14 doctors (7%) with overall numbers, including the trainees, having fallen by two doctors (1%).

When the significant procedural activity growth is taken into account, the workforce changes represent a sizeable reduction in this part of the rural procedural workforce. It is reasonable to conclude that while registrar numbers have increased substantially, this increase has only meant that the GP procedural workforce has remained relatively unchanged since 2006.

A closer examination of the data shows that the largest reduction in procedural GPs are in Obstetrics, with 36 fewer in 2015 than in 2006. However, this hasn't meant a direct loss of procedural doctors as many of the procedural GPs were multi skilled but chose to cease one of their skill sets.

In 2007 there were 60 procedural GPs who could do both anaesthetics and obstetrics. That number has now fallen to 21. This change is understandable given the burden of participating on two separate rosters when in the distant past it was possible to be on a single roster for both disciplines. The high indemnity cost involved in Obstetrics may also be a contributor.

Interestingly, since 2007, there has been substantial growth in the rural based procedural specialists, an increase of 17 procedural specialists (25%). The procedural specialists are in fact concentrated where the activity growth has occurred in the larger regional centres. Essentially, these resident specialists have made up for the relatively unchanged GP procedural numbers.

A further interesting feature of the rural procedural workforce is that they are far less reliant on overseas trained doctors who represent 34.7% of the procedural GPs compared to 55% of all GPs. Further, the main source of new arrivals into procedural practice are now from Perth and WAGPET trainees and no longer drawn from overseas recruitment, a major achievement since 2007.

Procedural Specialists

The workforce in 2006 was 79 procedural specialists, 43 of whom were based in Bunbury (54%). In contrast, in 2015 there were 96 procedural specialists an increase of 25% with 52 based in Bunbury (54%). Outside Bunbury the growth in resident specialists has included Obstetricians, Anaesthetists, General Surgeons, Orthopaedic Surgeons and in salaried FACEMs.

While not the focus of this study, it was also noted that the number of Paediatricians has significantly grown over the past ten years. The Kimberley alone has seen an increase from one to four Paediatricians. The growth in the resident procedural specialists has been concentrated in the larger regional centres; Bunbury continues to dominate with over 54% of all procedural specialists residing in the city.

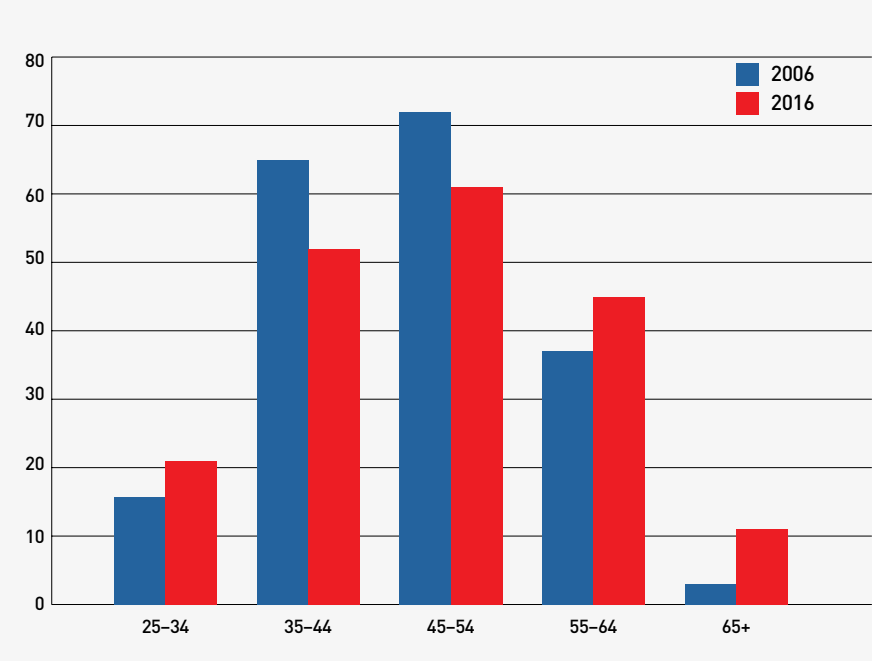
The main centres to have seen a significant growth includes:

- Bunbury, nine additional procedural specialists (from 43 to 52)
- Albany, seven additional procedural specialists (from 4 to 11)
- Geraldton, six additional procedural specialists (from 8 to 14)

5.3 WORKFORCE PROFILE

The data from 2006 was revised to 2016 and the key features of age range, skill sets and turnover rates were considered as follows.

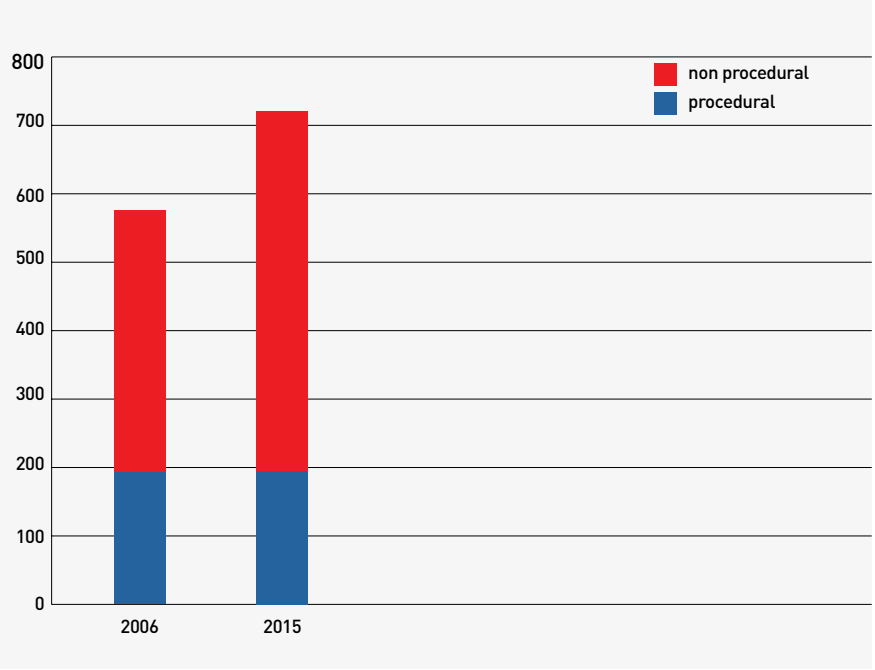
Age range of Proceduralist GP



As this age profile demonstrates there has been a significant shift in the age profile of Procedural GPs with those procedural GPs 55 years and over, increasing by 43% in ten years. The proportion of doctors in this age range now equates to almost 30% of procedural GPs up from 20% in 2006.

What this means is that the procedural GP workforce is not replacing itself quickly enough to arrest the inevitable ageing of the workforce. However, the profile is consistent with the ageing of the general population and also anecdotal advice from the trainers is that many of the candidates for procedural training are also relatively mature.

Proportion of GPs with procedural skills



While there has been a relatively large increase in the total number of GPs in country areas, some 27% or 156 doctors since 2007, there has not been a similar growth in procedural GPs.

There may be a number of reasons for this, including the introduction of the Southern Inland Health Initiative which has substantially increased the number of GPs in this geographic area and increased the retention rates across the Wheatbelt. The introduction of the Rural Clinical School, better employment terms and conditions and central recruitment have all contributed to better recruitment and retention of GPs.

The increase of specialist recruitment into the larger regional centres can be attributed to a similar mix of initiatives such as improved facilities, education and training infrastructure, exposure to rural practice through rotations and mentoring programs.

Table 3: Turnover Rates of whole GP Population per Region (Proceduralists + Non-Proceduralists)

		2015	2006
WHEATBELT	Number of permanent GPs, November 2014	64	
	Number of departures between November 2014 and November 2015	9	
	Turnover	**14.06%**	**19%**
GOLDFIELDS	Number of permanent GPs, November 2014	65	
	Number of departures between November 2014 and November 2015	5	21
	Turnover	**7.69%**	**21%**
SOUTH WEST (*INCLUDES PEEL)	Number of permanent GPs, November 2014	261	
	Number of departures between November 2014 and November 2015	16	
	Turnover	**6.13%**	**15%**
GREAT SOUTHERN	Number of permanent GPs, November 2014	78	
	Number of departures between November 2014 and November 2015	4	
	Turnover	**5.13%**	**12%**
KIMBERLEY	Number of permanent GPs, November 2014	75	
	Number of departures between November 2014 and November 2015	20	
	Turnover	**26.67%**	**37%**
MID WEST	Number of permanent GPs, November 2014	82	
	Number of departures between November 2014 and November 2015	18	
	Turnover	**21.95%**	**28%**
PILBARA	Number of permanent GPs, November 2014	56	
	Number of departures between November 2014 and November 2015	15	
	Turnover	**26.79%**	**28%**

6. IMPLEMENTATION OF RECOMMENDATIONS FROM THE 2007 REVIEW REPORT

There were ten recommendations made in the 2007 report and the majority of these have been implemented, with some variations and enhancements as follows:

RECOMMENDATION 1 – IMPLEMENTED

An agreed target of 10 procedural GP graduates per annum by 2008/2009 should be adopted in Western Australia to respond to the expected departures from the procedural workforce and reduce reliance on overseas recruitment. This action alone would reduce overseas recruitment to the procedural workforce by more than 50%.

The report executive summary added that *"projections indicate that six of these should be in Obstetrics (including two with advanced skills) and four in Anaesthetics." – page 3, Maintaining an Effective Procedural Workforce in Rural Western Australia (2007), Healthfix Consulting.*

This recommendation was fully implemented with the formation of six non-specialist obstetric training places at King Edward Memorial Hospital including rotations with Bunbury, Kalgoorlie and Albany. Four of these were basic Diploma of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (DRANZCOG) requiring six months training and two were advanced DRANZCOG requiring twelve months or longer.

The five anaesthetic posts were established at Joondalup, including rotations to Bunbury. These have traditionally involved two rural GPs interested in anaesthetics. The additional two posts were funded by WACHS in 2007.

The presence of these two initiatives have ensured a regular supply of well-trained GP Anaesthetists and Obstetricians as recommended and in alignment with the expected departures from these disciplines and to meet the projected activity. The reliance on overseas recruitment has also been reduced with overseas recruitment no longer the main source of new recruits.

RECOMMENDATION 2 – IMPLEMENTED

Rural procedural GPs who have ceased procedural work should be contacted to establish the actions needed to return them to the procedural workforce.

RECOMMENDATION 3 – IMPLEMENTED

Overseas Trained Doctors now resident in this state, and who possess procedural skills, should be assessed to determine their ability to undertake procedural practice.

These two recommendations were relatively quickly initiated by Rural Health West and WACHS in 2007 and 2008. This provided a clear understanding of what was needed to retain these doctors in procedural practice and ensure they were aware of the supports available to undertake training and upskilling.

RECOMMENDATION 4 – PARTIALLY IMPLEMENTED

Design of procedural education and training programs should follow the previously successful Rural Training Unit model, with the maximum possible time/placements spent in regional centres. This should focus on the special skills required to work in the country, including emergency medicine. Special attention should be given to family and spouse support for the duration of the training.

This recommendation was adopted and incorporated into wider measures within the rural practice pathway developed in WA. This pathway included both procedural and non-procedural GPs however, family and spouse support were not included in this approach.

RECOMMENDATION 5 – FULLY IMPLEMENTED

Supernumerary rural-based training should be undertaken on a three-tiered basis with:

- Tier A represented by Albany and Bunbury– locations where significant exposure to clinical activity is possible under supervision.
- Tier B represented by Kalgoorlie and Geraldton – locations where some infrastructure and training facilities are needed.
- Tier C represented by remote locations such as Karratha, Port Hedland, Broome, and in smaller regional centres at Narrogin and Northam, for rural rotations and placements to broaden training experiences.

The tiers should be the subject of further discussion and assessment amongst the Colleges to determine appropriate assessment criteria for the accreditation of these sites. Some placement within the major teaching hospitals may be necessary to achieve a volume of cases and procedures.

RECOMMENDATION 6 – FULLY IMPLEMENTED

Bunbury and Albany are both well-placed to accept supernumerary procedural training placements as part of the training program and should be given early priority as base training locations.

Within the limitations of accreditation the three-tier locations named in Recommendation 5 have received accreditation for procedural training. For example, Kalgoorlie, Albany, Bunbury and Geraldton are accredited for GP Obstetric DRANZCOG training and specialist by the College; Bunbury is also accredited for specialist Anaesthetic training.

In addition, many of the rural centres now accept interns and registrars as part of the broader training programs and more recently WACHS has been approved as a Teaching entity in its own right. This represents a major advance from the situation in 2007 and one which ensures that rural health services have the capacity to train the future workforce it requires rather than relying on metropolitan centres to train the workforce needed.

This transformation in medical education and training efforts have included King Edward Memorial Hospital and Joondalup Health Campus who have accepted a responsibility to educate and train for rural practice. At the same time, rural rotations and accreditation of placements in rural areas has cemented education and training as a key priority need in the future of rural health.

The education and training now includes the basic understanding of rural and regional health service models involving shared care arrangements. This approach is the most effective, sustainable, safe and cost effective approach for most centres outside Perth and Bunbury.

RECOMMENDATION 7 – FULLY IMPLEMENTED

Entry into rural procedural training programs needs to be made competitive and supported by training agencies and service providers alike. Marketing strategies are needed to repeat the attractiveness of the previous Rural Training Unit scheme.

While the previous Rural Training Unit scheme itself wasn't implemented, the key features are present in the discipline-based training and are extremely competitive, attracting high calibre candidates to the posts.

RECOMMENDATION 8 – FULLY IMPLEMENTED

Remuneration models, as described in the regional profiles, need to be examined to ensure adequate recompense and time for the teaching role to be undertaken and for trainees in the program to be funded as supernumeraries.

Remuneration for quality teaching and support for trainees undertaking country locations has been implemented and is working effectively.

RECOMMENDATION 9 – FULLY IMPLEMENTED

As the major beneficiary of procedural doctors, the WA Country Health Service should be approached to determine the extent of their financial support for the establishment of procedural training programs in Western Australia. Similarly matched support should be sought from the Department of Health and Ageing.

WACHS provided the financial support for the continuation of the Anaesthetic training places based at Joondalup and did so through a transfer of funds to the North Metropolitan Health Service for inclusion in the Joondalup service contract. WACHS also supports the Bunbury and Kalgoorlie training places in Obstetrics and Anaesthetics and also supports the mentoring program provided to Obstetric graduates through Rural Health West and King Edward Memorial Hospital.

The Commonwealth Department of Health and Ageing (now Australian Health Department) introduced funding programs for Specialist Training Posts and this represented a contribution towards the additional costs involved in these posts in rural and remote settings.

RECOMMENDATION 10 – PARTIALLY IMPLEMENTED

A rural specialist workforce body should be established to manage, support and act as a voice for rural procedural specialists. This group should:

10.1 Establish support mechanisms for procedural specialists including, but not restricted to, locum support, up-skilling and general back-up support.

10.2 Establish appropriate training programs to support the entry of generalist specialists, especially in General Surgery and General Medicine.

10.3 Assist and coordinate recruitment, particularly overseas recruitment.

10.4 Support the establishment of advanced training posts and teaching programs.

10.5 Immediately fill the existing specialist procedural workforce gap (12 FTE) as identified within the regional profiles.

10.6 Develop an action plan to achieve support for procedural specialists similar to that available to General Practitioners.

10.7 Investigate and advise on the inclusion of the visiting specialists role in training and mentoring under the existing Medical Specialist Outreach Program operated through Rural Health West.

While a specific rural specialist workforce body was not established, a number of the points under this recommendation were implemented by other bodies as follows:

10.1 The various Colleges were funded by the Commonwealth Department of Health and Ageing to provide support mechanisms to the rural based specialists. This was done on a discipline basis rather than across all

disciplines as envisaged by this recommendation. Nonetheless, action has been taken to provide a better level of support to rural resident specialists.

10.2 The Royal Australasian College of Physicians has increased its training places and included rotations into rural areas. This has been a welcome development as at the time of the initial report in 2007 there were virtually no general physicians in training. In respect to General Surgery, The Royal Australasian College of Surgeons has also increased its rural focus. However in WA, the State government funded four training places for General Surgeons and the College of Surgeons ran its selection process on a national basis. The end result was that four trainees from other States undertook their training in WA, but all of them returned to the east coast at the completion of their training. This was a disappointing result for WA.

10.3 The WACHS established a recruitment arm to specifically coordinate the activity of the various health regions in the recruitment of doctors and nurses from overseas. This included the establishment of an Office in central London to coordinate the recruitment effort for WA Health more broadly.

10.4 The various Colleges (with advocacy from rural stakeholders) accredited a number of regional training places, these were subsequently supported through the Commonwealth Health Departments Specialist Training Program and many continue to provide rotations.

10.5 All of the positions identified in the regional profiles in 2007 were filled and as described in the regional profiles the current workforce capability has been substantially improved.

10.6 Rural Health West extended its offerings to rural specialists where it was able. This included attendances at the regular rural health conferences hosted by Rural Health West. The additional funding support to the various Colleges also increased the general support available to the resident specialists, albeit on a discipline-by-discipline basis.

10.7 Training and mentoring was ultimately supported through a variety of programs including Models of Specialist Outreach Program (MSOAP) after advocacy by Rural Health West.

There was a remarkably strong and sustained response to the issues and recommendations raised in the 2007 review report *'Maintaining and Effective Procedural workforce in rural Western Australia'*. This has meant that Western Australia has been a little more insulated from the national decline in procedural GP workforce in particular.

This outcome is a credit to the various agencies involved in implementing and, more importantly, maintaining these initiatives. This is especially true of the Anaesthetic and Obstetric training programs focused on supporting non-specialist procedural training.

7. INVESTMENTS INTO PROCEDURAL EDUCATION AND TRAINING

7.1 OBSTETRIC TRAINING IN WESTERN AUSTRALIA

The Obstetric training effort has been largely led by Dr Anne Karczub, Director of Obstetrics at King Edward Memorial Hospital. Dr Karczub's dedication over the course of the past ten years has been remarkable and has transformed Obstetric training in WA, particularly with her determination to make sure that obstetric services into Western Australia were improved and in particular ensuring the parlous state of obstetrics in rural areas was addressed.

In WA a unique and highly successful mentoring program was also established by Dr Karczub and Dr Felicity Jefferies, formerly Rural Health West and WACHS. Both Dr Karczub and Dr Jefferies were concerned that the training programs would generate competent doctors that may lack confidence in starting practice in rural areas where there was little collegial support. This may mean that graduates from the Obstetric training programs would not be prepared to work in rural areas where they were needed most.

This mentoring program has involved clinicians across the State. For example Dr Ian Leggett, GP Obstetrician based in Albany routinely mentors the newly recruited GP Obstetricians. If they need advice even late at night he has been prepared to be available to help them discuss the case. He mentors up to five registrars who remained in Albany because they are supported. This level of dedication is symptomatic of the commitment shown by most rural proceduralists.

The mentoring program was designed and implemented and had an immediate and lasting effect to the extent that over 65% of graduates since 2007 from the non-specialist Obstetric training programs are now working in rural regions.

7.2 ANAESTHETIC TRAINING IN WESTERN AUSTRALIA

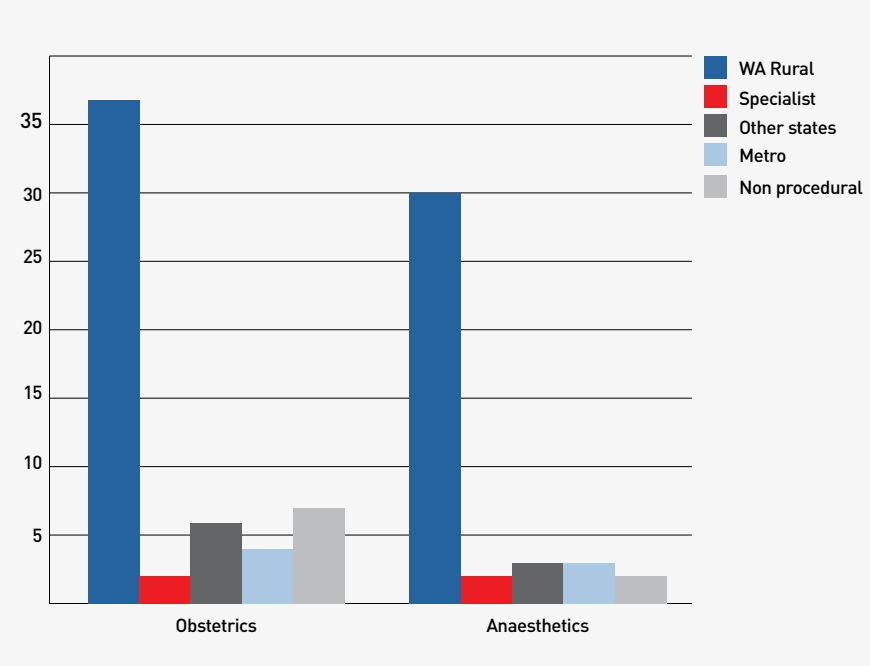
The Anaesthetic training program being offered through the Joondalup Health campus has regularly trained GP procedural doctors and included rotations into accredited places in Bunbury.

The performance of this program in preparing Anaesthetists and encouraging them to work in regional areas has been outstanding. An analysis of the current work location for graduates of the program between 2005 and 2014 shows that 30 of the graduates, or 75%, are currently practicing in rural WA. This is an extraordinary result and one that has ensured WA has been able to maintain an effective anaesthetic coverage. This has meant turnover in the anaesthetic workforce has been accommodated, additional activity addressed and there has been a reduced reliance on overseas recruitment to fill these workforce gaps.

To this end the Department of Health, WA, (Anaesthetic training program funder) and Ramsay Health Care are to be congratulated for the sustained effort to maintain these places. From time-to-time there has been pressure to reduce costs by dropping the places or convert them into specialist trainee posts; we are very fortunate that these pressures have been resisted.

Special acknowledgement is made of Dr Dianne Fakes, Dr Jon Mckeon (Dr Fakes' predecessor) and Dr Michael Veltman, the Director of Anaesthesia and Deputy Director of Medical Services at Joondalup Health Campus, for their commitment to the posts and to rural Anaesthetic training in Western Australia that has achieved such a significant result. Also special mention is made of Dr Colleen Bradford, WAGPET for her pursuit and successfully lobbying for an anaesthetics mentoring program.

Current place of practice for GP Obstetrician (56) and GP Anaesthetist (40) graduating over past ten years



The results from the sustained effort in educating and training GP proceduralists in WA are extraordinary with 66% of GP Obstetricians and 75% of GP Anaesthetists practicing in rural areas of WA. When those practicing in rural areas of other states are included this number rises to 76% of GP Obstetricians and 82% of GP Anaesthetists. Recently Queensland have been seeking to have their rural generalist pathway recognised and applied nationally. This is interesting given that of the 9 graduates now working in other states 6 were recruited by Queensland from the WA funded procedural program.

Furthermore, Queensland procedural GPs represent only 8.3% of the rural GP workforce in that State, while in Western Australia they represent 21.2% of the total rural GP workforce.

7.3 WA COUNTRY HEALTH SERVICE INVESTMENTS IN REGIONAL MEDICAL EDUCATION AND TRAINING

Since 2007 WACHS has sought to introduce a stronger level of support and investment into medical education and training in the knowledge that relying on education and training in metropolitan areas had not seen an increase in Australian graduates working in rural areas up to that time.

This effort involved introducing clinical governance and supports from Dr Di Mohen for Obstetrics and Dr Pat Coleman for Anaesthetics. Both of these practitioners worked tirelessly to introduce standard protocols and support for safe procedural practice across rural WA. More recently Dr Tom Bowles has been appointed to play a similar role in respect to surgical services.

The WACHS also introduced more supervision and pursued accreditation of a range of training places for specialist rotations, GP procedural placements and interns and junior doctors across rural WA. This saw a major increase in students and trainees gaining their qualifications through rural placements. This meant they were directly exposed to the rural working environment and the challenging and rewarding professional career available.

To establish an effective education and training system within WACHS they invested in a Post Graduate Medical Education Unit, funded two Director positions, medical education support officers and a network
of directors of clinical training across all regions and a medical simulation and coordination centre.

This effort alone has seen junior doctor numbers in rural communities increase fourfold.

This effort was consistent with the findings and recommendations included in the report on maintaining
an effective procedural workforce in rural WA in 2007.

7.4 RURAL HEALTH WEST AND WAGPET CONTRIBUTIONS

Both Rural Health West and WAGPET have offered support to the development of procedural workforce through a variety of measures. For example, both bodies are actively involved in ensuring WA has a well-trained and supported rural medical workforce including having both participated in the mentoring arrangements in place for both Obstetrics and Anaesthetics.

A key role has been the establishment of the rural generalist pathway in WA. This has focused attention on delivering the medical education and training capacity and infrastructure required to support more rural places for education and training at all levels. This has been integrated with the work of the Rural Clinical School in achieving exposure to rural practice for undergraduates in working together a fully integrated education and training pipeline with encouragement and support for those clinicians expressing an interest in rural practice.

Unlike Queensland where a separate rural generalist pathway has been developed with a focus on procedural doctors only, the WA approach has not delineated career or skill pathways and incorporates procedural training as one of a number of options clinicians might pursue.

It is recommended in this review that this group should take carriage for the implementation of agreed recommendations.

8. ISSUES RAISED DURING THE COURSE OF THE REVIEW

During the course of the review a number of issues were raised in respect to the future direction for rural procedural practice. These views were drawn from anecdotal evidence and need to be clarified and addressed.

- Several GP Proceduralists indicated their view that it is important for the future support and understanding of the shared care model that there be attention directed towards ensuring the inherent quality and safety of GPs working in a shared care model is more widely promoted and demonstrated.

The Australian College of Rural and Remote Medicine (ACRRM) view of quality and safety as it relates to the shared care model between GP proceduralists and specialists is that appropriately trained General Practitioners sharing care with specialists and with a clear scope of practice and effective credentialing processes, ensure that the work undertaken is conducted at a high level of quality and safety. GPs clearly refer more complex or high risk cases to specialists or other service centres for treatment and care.

- The message from a number of Practitioners and those thinking about the future attractiveness of rural procedural practice was that clear support for the shared care model by the WA Country Health Service (WACHS) would be helpful. This would dispel some of the myths and rumours about WACHS intentions to either move to a more specialist service model or move away from a partnership with private practitioners. As a basic premise, a description of the model from a WACHS perspective would also assist in creating a sense of certainty for those considering an investment in additional skills.

As part of this review, I discussed the commitment of WACHS towards the shared care model. Chief Executive Officer of WACHS, Mr Jeff Moffet, made clear he was fully supportive of and committed to shared care approaches across rural areas, with the understanding that some regional differences will be required. The reason for his support was very simply directed towards ensuring that rural communities could have safe, accessible services as close to where they live as possible. This can only be effectively delivered by a shared care approach.

In broad, it was felt that Bunbury would continue with a specialist service model, the larger regional centres would operate with resident specialists in-situ, but work closely with GP proceduralists as the backbone of the service; and there would be a third approach where specialist support is provided from offsite either through telehealth support or through visiting services. The visiting services would be less about direct service provision and more about clinical governance, protocols and procedures that would provide a safe framework for the proceduralists.

This approach sits within an overall WACHS clinical governance model where specific roles have been established to provide governance, oversight and third party review capacity in Anaesthetics (Dr Pat Coleman) and Obstetrics (Dr Di Mohen).

These approaches were also supported by the Regional Medical Directors during the course of discussions about the procedural workforce in each of the regions.

9. REGIONAL ANALYSIS

In addition to the hard data analysis of the existing workforce and the projection of future surgical and procedural activity, discussions were also held with those living and working in the regions. The purpose of these discussions was to validate the findings drawn from the hard data analysis and obtain any 'on the ground' intelligence relating to the procedural workforce. This was mainly obtained through discussion with the WACHS Regional Medical Directors and local practitioners.

There are some variations between the centrally reported data (as at November 2015) which is the basis for the trend analysis in this report with other reported data at the regional level mainly because it is based on a different timeframe or represents positions and includes locum staff etc.

In these discussions the purpose of the review report was clarified and the relevant findings outlined so there was context for the conversations. The main purpose though was to discuss the status of the procedural workforce, the service model being pursued and any issues and gaps that were evident on the ground.

These discussions were augmented by conversations with the WACHS Chief Executive Officer, Mr Jeff Moffet, WACHS Executive Director Medical Services, Dr Tony Robins and Drs Anne Karzcub and Dianne Fakes on issues associated with Obstetric and Anaesthetic training; and with Drs Pat Coleman and Di Mohen on clinical governance in these areas.

A chief question of all of these individuals, including all of the Regional Medical Directors, was to establish the service model they were pursuing and how they saw the state of rural procedural workforce and practice.

Interestingly, all the participants expressed the view that Procedural General Practitioners remained the backbone for procedural work in rural areas and that the shared care model was the preferred model incorporating specialist advice and assistance, preferably in person but at least as part of readily available advice.

There was a further view that the shared care model required more clarity for specialists and GPs alike. The approach also needed to be fundamentally imbedded in the education and training process. It seemed to have been well incorporated in the Obstetric training for specialists and non-specialists and incorporated into the subsequent mentoring programs.

While there was a view that a shared care approach was the preferred model, it was clear that different regions approached shared care slightly differently and some regions had matured it more readily than others.

The following descriptions of the workforce status focus on general issues that are unique to each region; however these are not an exhaustive assessment of the relevant region.

9.1 BUNBURY – GENERAL FEATURES

	2006	2015
Procedural GPs	58	50
Turnover all GPs	12%	6.13%
Turnover Procedural GPs	6%	4%

Bunbury is the largest regional centre in WA. Its procedural and surgical work follows service models and characteristics similar to large metropolitan hospitals. Given its nature and dominance in size, Bunbury tends to draw work to it.

Bunbury follows more of a specialist led-and-delivered service than any other region and has some 54% of all procedural specialists residing outside Perth. This specialist workforce has grown by nine additional procedural specialists, or 21%, over the past ten years. The area is attractive to live and offers excellent public and private facilities.

In 2007 it was noted that one of the key problems for Bunbury was in Obstetrics where there was an ageing workforce. The Obstetricians felt that having six specialist Obstetricians would be more comfortable and would allow some of the older clinicians some relief from extensive on-call and prolong their working life.

This seems to have occurred over the past ten years and Bunbury has been a major recipient of the additional training occurring at King Edward Memorial Hospital, establishing its own rotation for specialists and GP Obstetricians in training. This has also occurred in Anaesthetics.

As indicated in the 2007 review report, Bunbury is ideally placed to be the hub for rural procedural training not only specialists. While Bunbury itself has a sufficient volume of work to provide more specialised treatment and care, it can also play a more active role in supporting the development of services in the wider region.

The wider Bunbury region including Peel includes 261 GPs with 50 of those Procedural. This represents a reduction from 58 in 2007. Turnover amongst the GPs is running at 6.13%, while turnover for procedural GPs is 4%. In the past twelve months two procedural GPs have ceased practicing their procedural skills.

Turnover of both GPs and Procedural Doctors is one of the lowest in the State.

In summary, Bunbury and the wider South West are well served with procedural doctors, although the service could do more to train GP Proceduralists across the wider region.

The shortages and workforce gaps previously encountered have largely been resolved.

The projected surgical and procedural activity is unspectacular and appears manageable within the existing procedural growth rates. The new hospital at Busselton is expected to generate a gradual increase in procedural capability as the population growth accelerates through this corridor.

9.2 GREAT SOUTHERN – GENERAL FEATURES

	2006	2015
Procedural GPs	20	28
Turnover all GPs	12%	5.13%
Turnover Procedural GPs	6%	3.57%

The Great Southern and particularly Albany has undergone a transformation in terms of its health services and the workforce profile. The new Hospital opened in 2013 and is now retaining considerably more procedural work.

The previous medical model involved all private practitioners with highly skilled and experienced procedural GPs supporting the hospital's surgical and procedural work.

During 2010 and 2011 a decision was made to augment the GP coverage of the hospital's Emergency Department with salaried doctors. This followed a significant reduction in the availability of GPs from one particular surgery at that time and created problems in maintaining coverage and rosters.

At the same time a shared care approach to Obstetrics was introduced with recruitment of a specialist Obstetrician. Over the past ten years Albany has also recruited three salaried General Surgeons, an Obstetrician, an Orthopaedic surgeon and specialist Anaesthetists overseeing HDU with 13 GP Anaesthetists. Albany has completed recruitment of a second Obstetrician in the past three months.

These specialists are operating in a shared care model and the procedural GPs continue to provide the backbone of the procedural service. This has been a transformation that now serves Albany well. It shares the workload sensibly between specific discipline specialists with the community based GPs with additional procedural skills. There would appear to be good rapport and respect amongst the clinicians for their respective roles.

The Great Southern has 78 GPs with 28 Procedural. This represents an increase of eight Procedural GPs. Turnover rates are the lowest in WA and runs at between 4% and 5% per annum. The City has also seen an additional seven Procedural specialists over the ten year period

In summary, Albany and the wider Great Southern has seen a major transformation in the availability of procedural services despite not having a private hospital service.

The new Albany Hospital and the influx of specialists, both public and private, and the retention of a shared care model with General Practice has seen Albany step up its performance as a regional hospital and health hub for the Great Southern. Over the past ten years it has also participated in education and training of junior doctors and offered rotations for a number of specialties.

Activity levels for the Hospital have increased in line with the increased infrastructure and workforce. The future projected activity can be met with the existing growth trend in the current workforce.

In contrast with Albany, the Procedural Obstetric services in Katanning continue to be less than required. To offer a safe service it requires GP Obstetricians with Caesarian section skills and access to appropriate 24/7 Anaesthetic skills.

9.3 GOLDFIELDS – GENERAL FEATURES

	2006	2015
Total GPs		65
Procedural GPs	16	14
Turnover all GPs	21%	7.69%
Turnover Procedural GPs	6%	21.43%

The Goldfields has seen a mixed outcome with Kalgoorlie suffering severe losses in its Procedural workforce since 2007 while Esperance has seen sustained growth and the development of a very effective model in that town. The Goldfields has a total of 65 GPs with 14 of them procedural. This represents a reduction of three over 2007.

The procedural GP profile in 2007 highlighted the likely loss of this workforce as, at that time, 44% were over 50 years of age and 31% were over 55; a much older workforce than other regions.

The loss of these GPs at about the same time had a severe impact on procedural capacity in Kalgoorlie over this period and added enormous pressure to those remaining clinicians; this became a crisis for the City.

The City has since been rebuilding its regional resilience with efforts to promote GP involvement in the Kalgoorlie Hospital by the Regional Director and the Regional Medical Director. The objective is to ensure a fully shared care model with resident specialist support. Much has already been done to achieve this outcome.

In summary, The Goldfields has experienced a period of major transition and difficulty brought on by a loss of experienced GP Proceduralists over a short period.

Esperance has a very effective and highly skilled GP Procedural workforce; and with the redevelopment of the Esperance Hospital it is capable of providing an extended range of services safely and reliably.

9.4 MID WEST

	2006	2015
Total GPs		82
Procedural GPs	23	28
Turnover all GPs	27%	22%
Turnover Procedural GPs	17%	25%

The Mid West is well served at Geraldton with a public and a private hospital offering a wide range of procedural services. The hospitals work effectively together however Anaesthetic on-call continues to be provided from the regional hospital. Geraldton performs an effective role as the regional hub for procedural work with some work still being undertaken in Carnarvon.

The region has a total of 82 GPs with turnover in 2015 of 22%. This is relatively high for a region with a good range of services and attractive lifestyle.

In 2007 there were 23 procedural GPs; this has now increased to 28 in 2015. The number of procedural specialists has also grown from eight to 14 over the past ten years. Many of these specialists have been recruited into staff positions with the addition of registrars and RMOs in a very traditional specialist hospital model.

The Emergency Department is run with FACEMs and Senior Medical Officers.

The region and particularly Geraldton is providing significant training and rotations for junior doctors. The City is well placed with a good mix of procedural General Practice and the resident specialists to accommodate the steady procedural activity growth predicted for the Region.

An effective shared care model is in operation for Anaesthetics (supported by two staff Specialists) and Obstetrics with one salaried and one private specialist.

The Regional Medical Director, Dr Bill Beresford, advised that the service would be pursuing a Urologist, Vascular and an ENT

In summary, the region now has a significant procedural workforce with increased specialisation in most disciplines, many of which are now provided as traditional salaried service with associated registrars and junior doctors.

9.5 PILBARA – GENERAL FEATURES

	2006	2015
Total GPs		56
Procedural GPs	16	11
Turnover all GPs	23%	26%
Turnover Procedural GPs	22%	27%

In the review undertaken in 2007 the Pilbara was in a very parlous state with Obstetrics in Karratha at breaking point with no caesarian section capability. Given its remoteness this meant women were being flown to Perth in advance of their delivery at significant social and economic cost.

The Pilbara had very poor resident services and was reliant on locum doctors to provide the basic service.

The Pilbara now has three resident specialist Obstetricians, two in Port Hedland and one in Karratha. These operate in a fully functioning shared care model with five GP Obstetricians in Port Hedland and two in Karratha. The region is also well served with Anaesthetists with four in Port Hedland and two in Karratha. This is adequate for the level of procedural work in these centres.

The Emergency services are also under a shared care arrangement with 0.2 FTE

FACEM support to provide clinical governance, policy and general guidance. The emergency service is provided by SMOs.

The Regional Medical Director, Dr Phil Montgomery, advised that in the Pilbara they had recruited 29 Doctors (mainly replacing locum doctors) and now had achieved a stable workforce with GP Proceduralists at the backbone of the services rather than relying on locum services.

Dr Montgomery advised that in his view a shared care model was both the safest and most cost effective way of providing services in the Pilbara communities; and the level of activity meant that GP Proceduralists were best able to respond to the local health needs.

He also said that in his view, the standard of Australian trained procedural GPs was excellent and that their skills were ideally matched with the wide variety of conditions and health issues presenting to the services.

9.6 WHEATBELT – GENERAL FEATURES

	2006	2015
Procedural GPs	12	8
Turnover all GPs	18%	14%
Turnover Procedural GPs	17%	25%

The Wheatbelt region has a number of small hospitals with only Northam and Narrogin offering a range of procedural services. Northam has recently ceased providing an Obstetric service and will probably see more procedural work move to Midland.

Narrogin continues to provide Obstetric services, however this is also under pressure with fewer and older GPs offering the service.

In discussion with Dr Peter Maguire, Narrogin GP it is clear that Narrogin will be coming under additional pressure with the potential retirement of Dr Stephen Lei, General Surgeon. His departure will create a reduced surgical load for the hospital, this will in turn reduce the Anaesthetic workload and then clearly add pressure to the Anaesthetists to maintain lists and ultimately pressure the Anaesthetic cover for Obstetrics. This represents a slippery slope for the continued procedural service in Narrogin.

On this basis there needs to be strong leadership and support to either recruit a replacement resident surgeon or alternatively secure a reliable visiting service to maintain basic procedural services.

The wider Wheatbelt has 64 GPs with a turnover rate in 2015 of 14% and eight GPs have maintained their procedural skills.

9.7 KIMBERLEY – GENERAL FEATURES

	2006	2015
Total GPs		75
Procedural GPs	20	27
Turnover all GPs	40%	26.6%
Turnover Procedural GPs	36%	11.1%

There has been a significant increase in the number of procedural doctors based in the Kimberley over the past ten years. GP Proceduralists alone have increased from 20 in 2007 to 32 in 2015. The major increase can be largely attributed to the investment into the education and training infrastructure and the success of both WAGPET and the Rural Clinical School over this period.

These organisations together with the local efforts in the region have created an effective pipeline of well trained and committed procedural doctors. The increases have been shared across the Region with Broome increased by five, Kununurra increased by five and Derby up by three.

Broome also has a resident General Surgeon.

Observations by the Regional Medical Director Dr David Gaskell reinforce the extensive improvements to the Kimberley procedural workforce. He described the workforce as having a good age spectrum.

This means a good blend of skills in both clinical and management with younger graduates being given the opportunity to gain an early taste of remote practice and living.

In his view the region workforce was about right (in Derby and Kununnurra), however the region needs a further GP Anaesthetist and two specialist Obstetricians and Gynaecologists.

Dr Gaskell was a strong supporter of the access to regular clinical upskilling through King Edward Memorial Hospital as a major contributor to those practicing obstetrics, remaining in the region and ensuring no clinical skills are lost.

APPENDIX 1
RURAL PRACTICE PATHWAY

The Rural Practice Pathway (RPP) is a training pathway for doctors interested in rural medicine. It aims to offer as many opportunities as possible for medical students, interns, junior doctors and specialist (including GP) trainees to work in the country and train in their chosen areas of interest. The key and major achievements of the Rural Practice Pathway included:

- Increased rural based junior doctor training positions from 25 in 2008 to 86 in 2013. The Rural Practice Pathway consortium also succeeded in ensuring appropriate accommodation for students was available. This had previously been a barrier to students on rotation to the country.
- Facilitated the Specialist Training Program (run by the individual specialty colleges) where WACHS supported 21 accredited registrar training positions in O&G, Emergency Medicine, General Surgery, General Medicine, Ophthalmology, Anaesthetics and Psychiatry.
- Established a Post Graduate Medical Education Unit and medical educators across WACHS. This continues to support the regional medical education programs to the present day.
- Established the mentoring program in anaesthetics and obstetrics are funded by WACHS and administered by RHW, both of these are important components of the Rural Practice Pathway.

The Rural Practice Pathway is a uniquely Western Australian approach which seeks to bridge the gap between medical school and a vocational training program. At the time the pathway was formed many medical students had little appreciation for what careers were available in rural areas and there were few opportunities to experience rural practice. Virtually all Interns were trained in the metropolitan teaching hospitals and consequently were influenced to remain in Perth or in major hospital employment and were often lost to rural practice.

With Australian graduates remaining in metropolitan Perth after graduating, the rural practices were in crisis across the State and were left to rely almost exclusively on overseas recruitment during this period. Unlike the Queensland approach the rural practice pathway was not restricted to hospital doctors but rather supported doctors to consider working in public or private, specialist or general practice in rural areas.

Its key aims include:

- Promote rural practice with junior doctors making decisions about their future career following medical school including the Junior doctor expo where various careers and training programs are presented.
- Ensure that education and training programs run by Colleges included a rural option and orientation to the unique practice in these environments.
- Make it easy for students to navigate a complicated and disparate set of training requirements made by the various colleges
- Support doctors in rural practice via mentoring.

It is supported by a working party consisting of a collaborative of agencies. These include WA Country Health Service WACHS), WA General Practice Education and Training (WAGPET), Rural Health West (RHW), Rural Clinical School (RCS), Post-graduate Medical Council (PMC), and the Junior Doctors represented by the Doctors in Training and the Junior Medical Officers forum.

The RPP aims to support those interested in a rural career through its collaborative partners, starting with the Rural Clinical School and the Rural Medical Student Networks, and finishing with the various specialty colleges.

History

The Engaging Rural Doctors project in 2007 had highlighted how important the rural doctors felt it was to attract new local graduates to work in country WA. Queensland had just commenced a program called the Rural Generalist Pathway (RGP) and it was recommended that WA consider implementing such a pathway.

In 2007 a consortium of interested parties met and invited their Queensland counterparts to discuss the RGP. From this meeting it was agreed that as WA was a highly centralised state, with only one regional centre having a population greater than 50,000 it could not support the Queensland model.

The Queensland model is about hospital doctors employed by Queensland Health gaining procedural skills. Instead it was felt that the model appropriate for WA was one where doctors could work both in the rural communities in a private capacity as well hospitals, it was one where doctors were encouraged to gain the skills they needed.

A key part of the Rural Generalist Pathway was to ensure Junior Doctors could get advice from key and knowledgeable clinicians who could give them a clear picture about rural practice and what was needed to be appropriately skilled and competent to practice in rural areas.

Much of this advice was provided by dedicated rural clinicians such as Dr Sarah Moore (GP now with RCS), Dr Tom Bowles (WACHS general surgeon), Dr Ann Karczub (Obstetrician, KEMH), and Dr Dianne Fakes. Other clinicians have since engaged in these roles.

To assist in understanding the component parts of the medical education continuum the following describes the stages and their normal duration:

Stage of Training	Responsible Organisation	Funding	Time (year)
Medical Student	Universities	Federal	4–6
Interns	Primary Employing Hospital Service	State	1
Junior Doctors	Hospitals	State	1–4
GP Registrars	GP/Hospital	Federal /State	3–4
Registrar	Hospital	State	1 +