

## SHORT COMMUNICATION

# GP surgeons: what are they? An audit of GP surgeons in South Australia

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## ABSTRACT

**Introduction:** In many parts of Australia where there is no access to local specialist services, procedural services are provided by local GPs. Within the range of procedural skills offered, a small group of GPs is able to provide surgery. Unlike other procedural areas, there remains no defined training or assessment pathway for GP surgeons. Support from specialist colleagues is variable and continuing education arbitrary. The result is a somewhat ill-defined group that is poorly understood by credentialing bodies, government, medical defence organisations and training colleges. This study aims to describe the scope of practice, initial training and ongoing support and education for GP surgeons currently practising in South Australia.

**Methods:** Seventeen semistructured interviews were undertaken with self-identified GP surgeons (74% response rate). Areas explored included demographics, scope of practice, initial training and ongoing support and education. Content and thematic analysis was used to identify common responses and themes.

**Results:** The amount of initial training varied among participants, with a mean duration of training of 20 months. Initial assessment of competency for the majority of participants was assessment by a supervisor (10/17). The most common procedures undertaken were caesarean sections (94% of participants) and grafts and flaps (94%). The most common continuing professional development was clinical attachments (27%) and assisting visiting specialists or colleagues (17%).

**Conclusions:** This study demonstrates a wide variation in training, scope of practice and continuing education for GPs performing surgery, highlighting the effects of a self-regulated system. There is a trend towards an increased level of training; however, engagement in continuing education remains low. Further work is needed to define this group, to enable successful planning of future training and education to support this group in rural areas.

**Key words:** continuing education, GP surgeon, procedural general practice, rural practice, training.



## Introduction

In Australia, there is a relative shortage of medical services in rural areas, including specialist procedural services. Federal and state authorities have attempted to address this deficiency by funding specialist outreach through fly-in/fly-out services. However, these programs do not address emergency procedural services (eg caesarean section, appendectomy), which are often met by the resident GP<sup>1-3</sup>. Medical colleges have attempted to address the shortage by the introduction of rural training pathways, but these programs have not delivered an increase in rural specialists, or procedurally trained GPs.

Two important issues must be explored to plan for recruitment, training and support of rural GP surgeons: (1) the current scope of practice of GP surgeons, and (2) initial and ongoing training and support.

While GP surgeons only represent a small proportion of procedurally trained GPs (10–27%)<sup>4,5</sup>, their potential scope of practice is broad. While the scope of practice has not been defined in the literature, it is believed that the scope may be changing<sup>6</sup>. Also, with changing surgical techniques, particularly the development of laparoscopic procedures, opinion is divided regarding the range of procedures GPs should be performing, including controversy over the provision of elective procedures<sup>7</sup>. To date, there is no evidence to demonstrate the current scope of practice among GP surgeons in rural Australia.

Secondly, there is currently no clear pathway of training and support available for rural GP surgeons, and potential pathways are not informed by the needs of rural medicine. For example, potential training providers are unclear on what service provision is occurring<sup>6</sup>, and, therefore, what degree of training is required to fill positions left vacant by retiring GP surgeons.

To address these two important issues, this study aims to describe the scope of practice, initial training and ongoing support and education for GP surgeons currently practising in South Australia (SA).

## Methods

Participants were identified through the Rural Doctors Workforce Agency (RDWA) database. This database indexes all rural GPs in SA. Twenty-three self-described GP surgeons were identified. A GP surgeon was defined as one who undertakes non-obstetric procedures, and who *may* undertake gynaecological procedures. This group was contacted by email and invited to participate. Participants were excluded if they were not currently practising.

Seventeen eligible participants participated in a 15 minute semistructured telephone interview with the primary researcher (74% response rate). An interview guide was used to achieve consistency (Table 1). Questions focused on demographics, scope of practice, initial training and ongoing support and education. The interview discussion was documented by the primary researcher on the interview template.

All interviews were conducted between January and May 2011. Content and thematic analyses were used to identify common responses and themes.

### *Ethics approval*

Ethics approval was obtained through the University of Adelaide Human Research Ethics Committee (# H1312010).

## Results

Most participants were male (16/17) and aged from 40 to over 60 years. All participants had an Australian medical degree and the majority were located in regional or small rural centres (Table 2).



**Table 1: Interview guide summary**

| Focus                     | Description   |
|---------------------------|---|
| Demographics              | Questions regarding gender, age, details of practice location   |
| Scope of current practice | Prompted according to the following subspecialty areas: plastic surgery, endoscopic surgery, gynaecology, orthopaedic surgery, urology surgery, vascular surgery, general surgery |
| Initial training          | Questions regarding initial training, qualification gained, assessment method/s   |
| Ongoing support/training  | Questions regarding description of ongoing continuing education and/or training in procedural skills, ongoing mentoring or other support  |

**Table 2: Participant characteristics (n=17)**

| Characteristic              | Frequency (%) |
|-----------------------------|---------------|
| Sex                         |               |
| Male                        | 16 (94)       |
| Female                      | 1 (6)         |
| Age group                   |               |
| 40-49 years                 | 5 (29)        |
| 50-59 years                 | 9 (53)        |
| >60                         | 3 (18)        |
| Practice location (ASGC-RA) |               |
| RA2 – Inner regional        | 6 (35)        |
| RA3 – Outer regional        | 9 (53)        |
| RA4 – Remote                | 2 (12)        |
| Practice location (RRMA)    |               |
| RRMA 4                      | 3 (18)        |
| RRMA 5                      | 14 (82)       |

### *Scope of practice*

Figure 1 shows the most complicated procedure/s routinely performed by the participants across six identified subspecialty areas. Procedures are organised hierarchically within each subspecialty area according to their complexity (as assessed by the primary researcher, a practising rural GP surgeon). The modal response has been used as a baseline. The most common procedures reported were caesarean sections (94%), flaps and grafts/rotation and advancement flaps/halo graft/full thickness graft (94%), closed reduction (82%) and appendectomy (71%). None of the participants undertook flexible endoscopic procedures.

### *Initial training*

Overall, the mean duration of initial training to acquire surgical skills was 20 months (Table 3), with approximately 50% of training time spent on the acquisition of obstetric/gynaecological procedural skills. This was consistent across all age groups. The youngest participants' (40–49 years) mean training duration was 30 months, 50% higher than the participant group as a whole. There was a trend in this group for training to have occurred locally and to have been provided by a GP surgeon or through a registrar position.



|                      |   |  |  |   |   |  |
|----------------------|---|--|--|---|---|--|
| +++                  |   | Knee arthroscopy (1)<br>Open reduction ankle fractures (1)               |  |   |   |  |
| ++                   |   | Bunionectomy (1)<br>Tendon repair/extensor tendon repairs (2)            |  |   | Cholecystectomy (1)   |  |
| +                    | Ectopic (5)<br>Abdominal hysterectomy (2) | Ganglionectomy (2)<br>Tenotomy (1)<br>Keller's (1)<br>Trigger finger (2) | Scrotal surgery/cysts/hydrocele (6)<br>Torsion (1)<br>Cystoscopy (1) |   | Tonsillectomy (1)<br>Hernia repair – incision, inguinal (5)           | Dupuytren's contracture release (2)<br>Abdominoplasty (1)                  |
| Mode response        | Caesarean section (16)                    | Closed reduction (14)  | Vasectomy (11)   | Varicose vein stripping (4)                 | Appendicectomy (12)   | Flaps & grafts/Rotation & advancement/Halo graft/Full thickness graft (16) |
| -                    | Sterilisation (1)<br>Vaginal repair (1)   |  | Circumcision (1)   | Haemorrhoidectomy (1)<br>Stab avulsions (1) | Carpal tunnel release (10)<br>Umbilical hernia (1)<br>Abscess I+D (1) |  |
| <b>Subspeciality</b> | <b>Obstetrics &amp; gynaecology</b>       | <b>Orthopaedics</b>  | <b>Urology</b>   | <b>Vascular</b>                             | <b>General surgery</b>  | <b>Plastics</b>  |

**Figure 1: Scope and complexity of procedures undertaken by participants by subspecialties (numbers in brackets refer to the number of participants undertaking that procedure).**

Information about initial qualifications obtained and mode of assessment of initial competency is listed in Table 4. Self-assessment or no assessment was reported as the initial qualification for 18% of participants.

### *Ongoing support and education*

The participants reported a range of Continuing Medical Education (CME) activities for their ongoing skill development (Table 5). The most common activities were undertaking a clinical attachment (27%) and assisting a visiting specialist or colleague (17%). No ongoing education was undertaken by 18% of participants.

Participants identified mentors who they referred questions or complicated issues to, although the role of and frequency of contact with the mentors was varied. All participants developed their mentor relationship through personal contact. Most participants identified more than one mentor.

## Discussion

Results show that GP surgery covers a wide range of surgical subspecialties. This means that to adequately equip GP surgeons, there needs to be flexibility within initial and ongoing training to enable development of a surgical skill set that is relevant to the individual and community needs. The



mode responses (Fig1) provide a possible baseline skill set to structure initial training for GP surgeons. The most common surgical skill reported across participants was caesarean section (94%). Many participants indicated that their need to provide caesarean section in the local community was a major factor leading them to acquire and maintain surgical skills. Thus, in line with previous literature, caesarean section has become a cornerstone of GP surgery and needs to be a crucial component of initial and ongoing training<sup>2,6</sup>. Seventy-five percent of recent surgical trainees in SA did not undertake any obstetric training<sup>2</sup>. The separation of this procedure from the broader range of surgical skills greatly diminishes emergency procedure requirements, and the argument for other emergency service delivery, with flow-on effects for elective procedures. Input from workforce planning, credentialing and training organisations is required.

Results showed a broad variety in initial training and qualifications. Currently in Australia, there is no formal qualification for surgery other than Fellowship of Royal Australian College of Surgeons (FRACS). Unfortunately, to date, qualifications offered by the Royal Australian College of General Practitioners (RACGP) and the Australian College of Rural and Remote Medicine (ACRRM) are not recognised by RACS, nor by state credentialing agencies, so provide little or no benefit in granting surgical privileges in rural hospitals, this being largely determined by logbook evidence, and other surrogate measures of competency. The acceptance of these surrogates appears disturbing given the results presented in Table 4. This paper demonstrates that an accepted training pathway, which is flexible and tailored for this group, needs to be developed in collaboration with the relevant colleges and credentialing bodies.

Training among the youngest cohort of GP surgeons was primarily completed locally. Unfortunately, current opportunities to train locally are limited and access to overseas training posts is no longer possible (a training option undertaken by the older cohort). Currently in SA, there is only one position specifically available for GPs wishing to acquire surgical skills, but it is not a major trauma centre. It may be that fewer SA training positions are available in the

future and that existing positions may not meet the requirements of the two-year surgical curriculum negotiated by ACRRM and RACS. There needs to be an exploration of how to maximise opportunities for locally based training that can assist GP surgeons to maintain their local practice, and are responsive to regional needs.

Results show a variety of methods for ongoing support and education. Skill maintenance is an important component within medicine, with credentialing and registration bodies requiring minimum thresholds to maintain clinical privileges. However, for GP surgeons, there is no mandatory requirement for surgical skill maintenance by either RACGP or ACRRM. Unfortunately, nearly 25% of participants in the current study had not completed CME related to surgery since acquiring their initial skills and only a very small number participated in regular surgical CME. While the majority had one or more mentors, the expectations of the relationship were ad hoc. This finding aligns with a Queensland study supporting the need for ongoing support for proceduralist GPs, which found that over one-third of trainees who had undertaken advanced rural skills training, experienced poor or very poor support once they had left training<sup>8</sup>. Both a standard regulated requirement for CME for GP surgeons and a tailored program of support and education should be developed.

Although this study is the first to explore these issues in Australia, it is limited by a number of factors. It is a retrospective study and relies on self-report, particularly regarding training and assessment, which may have occurred many years ago. The primary researcher was the interviewer, and also a practising rural GP surgeon in SA, introducing a potential bias. The RDWA database only recognises those who have self-identified with a surgical interest, and potential participants may have been omitted (eg international medical graduates, where surgery may be a routine part of general practice in their country of origin). Being conducted in SA, this profile may not be similar to other states.



**Table 3: Location and type of initial surgery training by age group**

| Age group (years)                | Location of surgery training | Type of training                          |                            |                                      |
|----------------------------------|------------------------------|---|----------------------------|--------------------------------------|
|                                  |                              | Resident medical officer position (n (%)) | Registrar position (n (%)) | In community with GP surgeon (n (%)) |
| 40–49                            | Locally                      | 4 (50)                                    | 3 (43)                     | 2 (100)                              |
|                                  | Interstate                   | 1 (13)                                    | 2 (29)                     | 0 (0)                                |
|                                  | Overseas                     | 1 (13)                                    | 1 (14)                     | 0 (0)                                |
|                                  | Unknown                      | 2 (25)                                    | 0 (0)                      | 0 (0)                                |
|                                  | <b>Total</b>                 | <b>8 (100)</b>                            | <b>7 (100)</b>             | <b>2 (100)</b>                       |
| Mean length of training (months) |                              | 7 (range 3–12)                            | 12 (range 3–24)            | 9 (range 6–12)                       |
| 50–59                            | Locally                      | 2 (25)                                    | 0 (0)                      | 4 (80)                               |
|                                  | Interstate                   | 3 (38)                                    | 1 (17)                     | 0 (0)                                |
|                                  | Overseas                     | 0 (0)                                     | 3 (50)                     | 0 (0)                                |
|                                  | Unknown                      | 3 (38)                                    | 2 (33)                     | 1 (20)                               |
|                                  | <b>Total</b>                 | <b>8 (100)</b>                            | <b>6 (100)</b>             | <b>5 (83)</b>                        |
| Mean length of training (months) |                              | 9 (range 3–12)                            | 9 (range 3–12)             | -                                    |
| 60                               | Locally                      | 2 (33)                                    | 0 (0)                      | 0 (0)                                |
|                                  | Interstate                   | 0 (0)                                     | 0 (0)                      | 0 (0)                                |
|                                  | Overseas                     | 0 (0)                                     | 0 (0)                      | 0 (0)                                |
|                                  | Unknown                      | 4 (67)                                    | 0 (0)                      | 0 (0)                                |
|                                  | <b>Total</b>                 | <b>6 (100)</b>                            | <b>0 (0)</b>               | <b>0 (0)</b>                         |
| Mean length of training (months) |                              | 11 (range 3–24)                           | n/a                        | n/a                                  |

**Table 4: Initial assessment of competency/qualifications**

| Type of assessment <sup>†</sup>            | Frequency <sup>†</sup> | % of all assessments/qualifications (n=32) | % of participants (n=17) |
|--|------------------------|--|--------------------------|
| Supervisor assessment                      | 10                     | 31   | 59                       |
| Diploma Obstetrics & Gynaecology           | 6                      | 19   | 35                       |
| Advanced Diploma Obstetrics & Gynaecology  | 3                      | 9  | 18                       |
| Peer assessment                            | 3                      | 9  | 18                       |
| Graduate Diploma of Rural General Practice | 2                      | 6  | 12                       |
| Logbook                                    | 2                      | 6  | 12                       |
| Certificate Obstetrics & Gynaecology       | 1                      | 3  | 6                        |
| Diploma Skin Surgery                       | 1                      | 3  | 6                        |
| Self-assessed                              | 1                      | 3  | 6                        |
| See one, do one, teach one                 | 1                      | 3  | 6                        |
| No type of assessment                      | 2                      | 6  | 12                       |
| <b>Total</b>                               | <b>32 (100)</b>        | <b>100</b>                                 |                          |

<sup>†</sup>Multiple responses



**Table 5: Continuing education activities**

| Type of ongoing training                | Frequency <sup>†</sup> | % of all ongoing training (n=30) | % of participants (n=17) |
|---|------------------------|----------------------------------|--------------------------|
| Clinical attachment                     | 8                      | 27                               | 47                       |
| Assisting visiting specialist/colleague | 5                      | 17                               | 29                       |
| Early Management of Severe Trauma       | 4                      | 13                               | 24                       |
| Course                                  | 3                      | 10                               | 18                       |
| None                                    | 3                      | 10                               | 18                       |
| Workshop                                | 3                      | 10                               | 18                       |
| Postgraduate course                     | 2                      | 7                                | 12                       |
| Working with GP surgeons locally        | 1                      | 3                                | 6                        |
| Teaching obstetrics and surgical skills | 1                      | 3                                | 6                        |
| Total                                   | 30                     | 100                              |                          |

<sup>†</sup>Multiple responses

## Conclusions

With limited information regarding GP surgeons, this research begins to provide a description of the current scope of practice, initial training and ongoing support and education. To date, GP surgeons have largely been self-determined and there has been little done to establish standards within the group, and a reluctance to provide cross-referencing against specialist surgeon standards. This research demonstrates the effect of self-determinism. The results from this research should help to generate discussion regarding standards and curricula for initial and ongoing training for GP surgeons and inform policy to improve access and delivery of surgical services to rural Australians.

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