



What can Findings of the ReCEnT Project Contribute to Supervisors' Training of Their Registrars?

What is the Registrar Clinical Encounters in Training (ReCEnT) project?

The ReCEnT project has been running since 2009. This project incorporates educational and research elements, having been undertaken with the goal of documenting and analysing the nature of the clinical and educational content of GP registrar consultations.

Registrars participating in the project record details of 60 consecutive office-based consultations in each of GP terms 1, 2 and 3. This excludes nursing home and home visits, and specialist clinics such as flu or COVID immunisation clinics.

Despite being conceptualised as a research project, the more imminent educational outcomes – such as collated registrar data providing registrars with reflective feedback and informing RTO training programs – have ended up driving the project to a larger extent.

What are the ReCEnT research aspects and aims?

- To map the territory of registrar experience
 - To open the 'black box' of what registrars see
 - To establish associations of registrars' experiences
- To establish what registrars do
 - Including, do clinical behaviours align with evidence-based recommendations?
 - To establish associations of registrars' behaviours
- To establish if experience and behaviours change during training
 - Individual registrar experience and clinical behaviour
- To establish if experience and behaviours change over time
 - Aggregate registrar experience and clinical behaviour
- To explore how registrars learn within clinical consultations
- To establish if education provided by GP Synergy changes registrars' clinical behaviours

What are the ReCEnT data strengths and limitations?

- Strengths: A large number of variables
 - Collected for the purpose of ReCEnT
 - And internally linked to the problems the registrars are facing during their training
- Limitations: A 'snap shot' of a consultation without a great deal of context
 - Treatment regimens, past illnesses, etc
 - A longitudinal study of registrars, not 'patients'

What is the map of the territory of registrar experience: by condition exposure and registrar gender?

It is already known that trainee GPs see less chronic disease and more acute minor illness. The findings of the ReCEnT study add to this by revealing that, while trainees manage almost exactly the same number of problems per encounter as established GPs:

- Trainees see a different patient demographic and different clinical spectrum compared to established GPs
- Trainees see more new patients, more new problems and less chronic disease
- Trainees have a relative lack of opportunity for continuity of care with patients.

The conditions trainees as a whole are not found to be getting enough exposure to include:

- Cardiovascular disease
- Diabetes
- Musculoskeletal conditions
- Skin issues

In contrast, trainees seem to be getting more exposure to certain conditions than established GPs, most notably in the area of respiratory conditions.



When the registrar experience is broken into trainees' gender, further disparities become obvious in the study's findings:

- Female trainees had almost 6 times the exposure to problems relating to female genitals
- Female trainees had more than double the exposure to family planning and pregnancy
- Female trainees had negligible exposure to issues relating to male genitals
- Male trainees had marginally more exposure to musculoskeletal conditions
- Female trainees had marginally more exposure to psychological conditions
- Male trainees had marginally more exposure to respiratory issues.

What is the map of the territory of registrar experience: chronic disease, older patients, and continuity of care?

Chronic disease

Compared to established GP's, who recorded chronic disease consultations of 40.7% in male patients and 38.7% in female patients, the percentage for registrars of chronic disease consultations was 29.5%.

The most common chronic diseases encountered by trainees were:

- Uncomplicated hypertension (5.7% of all consultations)
- Depressive disorder (4.2%)
- Lipid disorder (2.5%)
- Asthma (2.2%)
- Oesophageal disease (1.7%)

Older patients

Where 32.5% of established GP consultations were with older patients, only 17.6% of registrar consultations involved patients aged 65 years old and over.

These consultations were more likely to include chronic disease and more complex problems. However, inconsultation information or advice was less likely to be sought and consultations were briefer for the trainees, leading to the conclusion that registrars have relatively limited exposure to older patients coupled with less complex consultations.

Continuity of care

There are concerns that changing general practice structures may be creating a relative deficit in experience of 'interpersonal' continuity of care (a personal relationship of doctor and patient) in GP vocational training. The ReCEnT study confirms that levels of continuity of care in Australian GP trainees' clinical experience are modest, where the nature of the continuity of care that they do experience with older chronic disease patients is not necessarily of high educational utility.

In the study, 43.1% of patients had been seen by the registrar prior to the index consultation (characterised as 'upstream' continuity).

This percentage is associated with:

- Smaller practice size, ie with less than six GP's
- The practice routinely bulk-billing patients
- The practice being located in a lower socio-economic status area
- The consultation involving a chronic disease
- 49.4% of the patients had follow-ups planned with the registrar (characterised as 'downstream' interpersonal continuity).

This finding is associated with:

- Being new to the practice, and new to the registrar
- The practice routinely bulk billing patients
- The consultation involving a chronic disease
- The registrar generating learning goals
- The consultation lasting longer

Of registrars' consultations, 89.9% of the patients for whom follow-up was arranged were to be followed up by the registrar rather than another GP in the practice, ie: interpersonal continuity rather than informational continuity.

Associations of interpersonal continuity rather than informational continuity were:

- The registrar working full time
- The registrar generating learning goals
- The consultation lasting longer and addressing more problems/ diagnoses
- Smaller practice size, ie: less than six GP's.



What do registrars do?

Antibiotic prescribing

The study has found that trainees prescribe antibiotics less than their established GP colleagues, but still well in excess of international evidence-based guidelines:

- 71.5% of sore throat diagnosis
- 21.6% of URTI
- 73.1% of acute bronchitis/bronchiolitis
- 78.8% of acute otitis media
- 71.2% for acute sinusitis
- Variables positively associated with prescribing included:
- higher socio-economic practice location
- seeking information from guidelines or a supervisor

Other prescribing

Registrars prescribe a lot of Benzodiazepine and opioids, more than best practice, but still less than established GPs.

Referrals, investigations, procedures etc

See research papers listed under Resources.

Does the registrar experience and behaviours change during training?

Antibiotic prescribing

Moving from an earlier to later term did not significantly influence registrars' antibiotic prescribing:

- for URTI [adjusted odds ratio [OR 0.95 (95% CI 0.87,1.04), P=0.27]
- for acute bronchitis / bronchiolitis [OR 1.01 (95% CI 0.91-1.14),P=0.86]

Benzodiazepine prescribing

There was no significant change in 'within-registrar' prescribing over the registrar term, BUT there was a marked decline (6% per year on average) of registrar prescribing of benzodiazepine generally across the timeframe 2010-2015. This suggests the training environment has changed in that period, emphasising the influence of the training practice on the training outcomes.

How do registrars learn within clinical consultations?

Information and assistance-seeking

Information was sought from the supervisor for 6.9% (95% CI 6.8-7.1) of all problems encountered (and in 9.2% of consultations):

- 11.7% for diagnosis
- 53.1% for management
- 35.2% for both diagnosis and management
- In-consultation information was sought for 15.4%

(95% CI15.3-15.6) of problems/diagnoses.

Sources were:

- GP in 6.9% of problems / diagnoses
- Other specialists 0.9%
- Other health professionals 0.6%
- Electronic sources 6.5%
- Hard-copy sources 1.5%

Human information-sources are preferentially sought for more complex problems, even by early-career GPs who have trained in the internet era.

Generation of learning goals

Generated for 16.6% of problems / diagnoses in 22.1% of consultations.

Associations of generating learning goals included:

- Earlier registration term
- Being overseas-trained
- Longer consultation duration
- Addressing a chronic disease problem/diagnosis
- Accessing in-consultation information
 - 19% of registrars felt in-consultation helpseeking decreases patient impressions of their competence
 - 57% perceived that patient impressions are unchanged
 - 25% perceived that in-consultation helpseeking increased patient impressions of their competence



Registrars who felt in-consultation help-seeking decreased patient impressions of their competence:

- were younger, mean age 31 vs 33 years
- have worked in their current training practice for less than six months full time equivalent, ie. 3.85 times as likely

55% of registrars were more comfortable presenting outside the patient's hearing:

- 40% reported no difference in comfort level
- 5% of respondents were less comfortable

Registrars who were more comfortable presenting outside the patient's hearing were more likely to be:

- female, 50% more likely
- younger, mean age 32 vs 33 years

Does GP Synergy education changes registrars' clinical behaviours?

Antibiotics: the ChAP study

A pragmatic non-randomised trial employing non-equivalent control group design

- the intervention included access to online modules (covering evidence for, and communication skills in, management of acute bronchitis, followed by a face-toface educational session)
- the intervention was delivered to registrars (and their supervisors)

There was no significant reduction in antibiotic prescribing for URTIs.

For bronchitis/bronchiolitis, there was a significant reduction in prescribing

• the adjusted absolute reduction in prescribing was 15.8% (95% CI: 4.2%-27.5%)

Opioid prescribing

A pragmatic non-randomised trial employing a non-equivalent control group design:

- there was no relationship between the training and prescribing after training
- interaction odds ratio: 0.74; 95% CI: 0.48-1.16; P value 0.19

A one-group pre-test / post-test design study, assessing:

- therapeutic intentions of tapering opioid maintenance for pain (in a paper-based clinical vignette)
- therapeutic intentions of tapering opioid maintenance for pain increased from 37 (80.4%) pre-intervention to 44 (95.7%) post-intervention (P=0.039)
- Anticipated initiation of any opioids for a chronic osteoarthritic knee pain clinical vignette
- Anticipated initiation of any opioids reduced from 37 (74.5%) to 24 (51.1%; P=0.012)
- Knowledge and attitude vs clinical practice
- The role of supervisors and of the practice

Overall impression

Education is necessary but not sufficient.

To change behaviours, education needs to be combined with other intervention functions, namely:

- Environmental restructuring
- Modelling
- Enablement
- Relevant training
- Coercion
- Incentivisation
- Persuasion
- Restrictions





Resources: research papers based on ReCEnT study data

Aghajafari F, Tapley A, Sylvester S, et al. (2017) **Procedural skills** of Australian general practice registrars: A cross-sectional analysis. June 2017. <u>https://www.racgp.org.au/download/</u> <u>Documents/AFP/2017/June/afp-2017-6-research-aghajafari.pdf</u>

Bentley M, Kerr R, Scott F, Hansen E, Magin P, Bonney A (2019) Exploring opportunities for general practice registrars to manage older patients with chronic disease: A qualitative study. DOI: 10.31128/AJGP-09-18-4694 <u>RACGP - Opportunities</u> for general practice registrars to manage older patients with chronic disease

Bonney A, Morgan S, Tapley A et al. (2017) **Older patients' consultations in an apprenticeship model-based general practice training program: A cross-sectional study.** Australian Journal on Ageing, March 2017. <u>https://www.zdrav.by/pdf/</u> <u>kp.pdf</u>

Catzikiris N, Tapley A, Morgan S, van Driel M, Spike N, Holliday EG, Ball J, Henderson K, McArthur L, Magin P. (2019) **Emergency department referral patterns of Australian general practitioner registrars: a cross-sectional analysis of prevalence, nature and associations.** Aust Health Rev. 2019 Feb;43(1):21-28. DOI: 10.1071/AH17005. PMID: 29117892. https://www.publish.csiro.au/ah/Fulltext/AH17005

Cherry MD, Tapley A, Quain D, Holliday EG, Ball J, Davey A, van Driel ML, Fielding A, Spike N, FitzGerald K, Magin P. (2021) **Antibiotic prescribing patterns of general practice registrars for infective conjunctivitis: a cross-sectional analysis.** J Prim Health Care. 2021 Mar;13(1):5-14. DOI: 10.1071/HC20040. PMID: 33785106.

Cooke G, Tapley A, Holliday E, Morgan S, Henderson K, Ball J, van Driel M, Spike N, Kerr R, Magin P. (2017) Responses to clinical uncertainty in Australian general practice trainees: a cross-sectional analysis. Med Educ. 2017 Dec;51(12):1277-1288. DOI: 10.1111/medu.13408. PMID: 29124801.

Dallas A, Magin P, Morgan S, Tapley A, Henderson K, Ball J, Scott J, Spike N, McArthur L, van Driel M. (2015) **Antibiotic prescribing for respiratory infections: a cross-sectional analysis of the ReCEnT study exploring the habits of earlycareer doctors in primary care.** Fam Pract. 2015 Feb;32(1):49-55. DOI: 10.1093/fampra/cmu069. Epub 2014 Oct 31. PMID: 25361635. https://research.gpsynergy.com.au/wp-content/ uploads/2017/12/A.Dallas-Antibiotic-Prescribing-for-RTIs.pdf Dallas A, van Driel M, Morgan S, Tapley A, Henderson K, Ball J, Oldmeadow C, Davey A, Mulquiney K, Davis J, Spike N, McArthur L, Magin P. (2016) Antibiotic prescribing for sore throat: a cross-sectional analysis of the ReCEnT study exploring the habits of early-career doctors in family practice. Fam Pract. 2016 Jun;33(3):302-8. doi: 10.1093/ fampra/cmw014. Epub 2016 Mar 18. PMID: 26993484. https:// research.gpsynergy.com.au/wp-content/uploads/2017/12/ AntibioticPrescribingSoreThroat_Dallas.pdf

Dallas A, van Driel M, Morgan S, Tapley A, Henderson K, Oldmeadow C, Ball J, Davey A, Mulquiney K, Davis J, Spike N, McArthur L, Stewart R, Magin P. (2017) **Antibiotic prescribing for acute otitis media and acute sinusitis: a cross-sectional analysis of the ReCEnT study exploring the habits of early career doctors in family practice.** Fam Pract. 2017 Apr 1;34(2):180-187. DOI: 10.1093/fampra/cmw144. PMID: 28158735.

Dallas A, van Driel M, van de Mortel T, Magin P. (2014) Antibiotic prescribing for the future: exploring the attitudes of trainees in general practice. Br J Gen Pract. 2014 Sep;64(626):e561-7. DOI: 10.3399/bjgp14X681373. PMID: 25179070; PMCID: PMC4141613.

Davey AR, Lasserson DS, Levi CR, Tapley A, Morgan S, Henderson K, Holliday EG, Ball J, van Driel ML, McArthur L, Spike NA, Magin PJ. (2017) **Management of transient ischemic attacks diagnosed by early-career general practitioners: A cross-sectional study.** Int J Stroke. 2018 Apr;13(3):313-320. doi: 10.1177/1747493017743053. Epub 2017 Nov 21. PMID: 29157195. https://www.publish.csiro.au/hc/Fulltext/hc17003

Davey A, Tapley A, Mulquiney KJ, van Driel M, Fielding A, Holliday E, Davis JS, Glasziou P, Dallas A, Ball J, Spike N, FitzGerald K & Magin P. (2021) **Immediate and delayed antibiotic prescribing strategies used by Australian earlycareer general practitioners.** British Journal of General Practice 4 June 2021; BJGP.2021.0026. DOI: <u>https://doi.</u> org/10.3399/BJGP.2021.0026

Davis JS, Tapley A, Morgan S, van Driel ML, Magin PJ. (2017) Clinical experience of patients with hepatitis C virus infection among Australian GP trainees. Med J Aust. 2017 Apr 17;206(7):308-309. DOI: 10.5694/mja16.01106. PMID: 28403764.

Deckx L, Anthierens S, Magin PJ, Morgan S, McArthur L, Yardley L, Dallas A, Little P, van Driel ML. (2018) Focus on early-career **GPs: qualitative evaluation of a multi-faceted educational intervention to improve antibiotic prescribing.** Fam Pract. 2018 Jan 16;35(1):99-104. DOI: 10.1093/fampra/cmx074. PMID: 28985300.



De Giovanni JM, Tapley A, Druce PL, Davey AR, van Driel ML, Henderson KM, Catzikiris NF, Mulquiney KJ, Morgan S, Spike NA, Kerr RH, Magin PJ. (2018) **GP registrar consultations addressing menopause-related symptoms: a cross-sectional analysis.** Menopause. 2018 May;25(5):563-570. doi: 10.1097/ GME.00000000001042. PMID: 29257032. <u>https://research.</u> gpsynergy.com.au/wp-content/uploads/2017/12/Menopauserelated-symptoms-2017.pdf

Freed GL, Morgan S, Tapley A, Spike N, Magin PJ. (2016) **Referral rates of general practice registrars for behavioural or mental health conditions in children.** Aust Fam Physician. 2016 Mar;45(3):139-42. PMID: 27052052. <u>https://www.racgp.org.</u> au/afp/2016/march/referral-rates-of-general-practice-registrars/

Heal C, Gorges H, van Driel ML, et al (2019) **Antibiotic** stewardship in skin infections: a cross-sectional analysis of early-career **GP**'s management of impetigo. BMJ Open 2019;9:e031527. DOI: 10.1136/bmjopen-2019-031527

Hill S, Tapley A, et al. (2019) Australian general practice registrars and their experience with postpartum consultations: A cross-sectional analysis of prevalence and associations. July 2019, Australian and New Zealand Journal of Obstetrics and Gynaecology 60(11) DOI:10.1111/ajo.13034 https://www.researchgate.net/publication/334293228 Australian general practice registrars and their experience with postpartum consultations A cross-sectional analysis of prevalence and associations

Hiscock H, Freed G, Morgan S, et al. (2016) **Clinical encounters** of Australian general practice registrars with paediatric patients. Nov 2016, Published online: 10 Jan 2017 DOI: <u>https://</u>doi.org/10.1080/14739879.2016.1266697

Holliday SM, Hayes C, Dunlop AJ, Morgan S, Tapley A, Henderson KM, van Driel ML, Holliday EG, Ball JI, Davey A, Spike NA, McArthur LA, Magin PJ. (2017) **Does brief chronic pain management education change opioid prescribing rates? A pragmatic trial in Australian early-career general practitioners**. Pain. 2017 Feb;158(2):278-288. DOI: 10.1097/j. pain.000000000000755. PMID: 28092648.

Holliday S, Hayes C, Dunlop A, Morgan S, Tapley A, Henderson K, Larance B, Magin P. (2017) **Protecting Pain Patients. The Evaluation of a Chronic Pain Educational Intervention.** Pain Med. 2017 Dec 1;18(12):2306-2315. DOI: 10.1093/pm/pnx018. PMID: 28340143.

Holliday S, Morgan S, Tapley A, Dunlop A, Henderson K, van Driel M, Spike N, McArthur L, Ball J, Oldmeadow C, Magin P. (2015) **The Pattern of Opioid Management by Australian General Practice Trainees.** Pain Med. 2015 Sep;16(9):1720-31. doi: 10.1111/pme.12820. Epub 2015 Jun 27. PMID: 26118466. Holliday SM, Morgan S, Tapley A, Henderson KM, Dunlop AJ, van Driel ML, Spike NA, McArthur LA, Ball J, Oldmeadow CJ, Magin PJ. (2017) The pattern of anxiolytic and hypnotic management by Australian general practice trainees. Drug Alcohol Rev. 2017 Mar;36(2):261-269. doi: 10.1111/dar.12404. Epub 2016 May 18. PMID: 27189268.

Magin, P., Morgan, S., Henderson, K. et al. (2014) **Family** medicine trainees' clinical experience of chronic disease during training: a cross-sectional analysis from the registrars' clinical encounters in training study. BMC Med Educ 14, 260 (2014). https://doi.org/10.1186/s12909-014-0260-7

Magin PJ, Morgan S, Tapley A, Henderson KM, Holliday EG, Ball J, Davis JS, Dallas A, Davey AR, Spike NA, McArthur L, Stewart R, Mulquiney KJ, van Driel ML. (2016) **Changes in early-career family physicians' antibiotic prescribing for upper respiratory tract infection and acute bronchitis: a multicentre longitudinal study.** Fam Pract. 2016 Aug;33(4):360-7. DOI: 10.1093/fampra/cmw025. Epub 2016 Apr 19. PMID: 27095798.

Magin PJ, Morgan S, Tapley A, McCowan C, Parkinson L, Henderson KM, Muth C, Hammer MS, Pond D, Mate KE, Spike NA, McArthur LA, van Driel ML. (2016) **Anticholinergic medicines in an older primary care population: a crosssectional analysis of medicines' levels of anticholinergic activity and clinical indications.** J Clin Pharm Ther. 2016 Oct;41(5):486-92. DOI: 10.1111/jcpt.12413. Epub 2016 Jun 27. Erratum in: J Clin Pharm Ther. 2016 Dec;41(6):741. PMID: 27349795.

Magin P, Quain D, Tapley A, van Driel M, Davey A, Holliday E, Ball J, Kaniah A, Turner R, Spike N, FitzGerald K, Hilmer S. (2021) **Deprescribing in older patients by early-career general practitioners: Prevalence and associations.** Int J Clin Pract. 2021 May 6:e14325. DOI: 10.1111/ijcp.14325. Epub ahead of print. PMID: 33960089.

Magin P, Tapley A, Davey A, Morgan S, Henderson K, Holliday E, Ball J, Catzikiris N, Mulquiney K, Spike N, Kerr R, van Driel M. (2017) **Prevalence and associations of general practitioners' ordering of "non-symptomatic" prostate-specific antigen tests: A cross-sectional analysis.** Int J Clin Pract. 2017 Oct;71(10). DOI: 10.1111/ijcp.12998. Epub 2017 Sep 4. PMID: 28869684.

Magin P, Tapley A, Davey A, Morgan S, Holliday E, Ball J, Wearne S, Henderson K, Catzikiris N, Mulquiney K, Spike N, Kerr R, van Driel M. (2017) **General practitioner trainees' in-consultation generation of clinical questions for later answering: prevalence and associations.** Fam Pract. 2017 Sep 1;34(5):599-605. DOI: 10.1093/fampra/cmx021. PMID: 28369454.



Magin P, Tapley A, Dunlop AJ, Davey A, van Driel M, Holliday E, Morgan S, Henderson K, Ball J, Catzikiris N, Mulquiney K, Spike N, Kerr R, Holliday S. (2018) Changes in Australian Early-Career General Practitioners' Benzodiazepine Prescribing: a Longitudinal Analysis. J Gen Intern Med. 2018 Oct;33(10):1676-1684. DOI: 10.1007/s11606-018-4577-5. Epub 2018 Jul 23. PMID: 30039495; PMCID: PMC6153232.

Magin P, Tapley A, Morgan S, Davis JS, McElduff P, Yardley L, Henderson K, Dallas A, McArthur L, Mulquiney K, Davey A, Little P, Spike N, van Driel ML. (2018) **Reducing early career general practitioners' antibiotic prescribing for respiratory tract infections: a pragmatic prospective non-randomised controlled trial.** Fam Pract. 2018 Jan 16;35(1):53-60. DOI: 10.1093/fampra/cmx070. PMID: 28985369.

Morgon S, Henderson K, Tapley A, Scott J, Thomson A, Spike N, McArthur L, van Driel M, Magin P. (2014) **Problems managed by Australian general practice trainees: results from the ReCENT (Registrar Clinical Encounters in Training) study.** https://pubmed.ncbi.nlm.nih.gov/25198470/

Morgan S, Henderson KM, Tapley A, Scott J, van Driel ML, Spike NA, McArthur LA, Davey AR, Catzikiris NF, Magin PJ. (2015) **Travel Medicine Encounters of Australian General Practice Trainees-A Cross-Sectional Study.** J Travel Med. 2015 Nov-Dec;22(6):375-82. DOI: 10.1111/jtm.12216. Epub 2015 Jun 2. PMID: 26031394.

Morgan S, Henderson KM, Tapley A, Scott J, Van Driel ML, Spike NA, Mcarthur LA, Davey AR, Oldmeadow C, Ball J, Magin PJ. (2015) **Pathology test-ordering behaviour of Australian general practice trainees: a cross-sectional analysis.** Int J Qual Health Care. 2015 Dec;27(6):528-35. doi: 10.1093/intqhc/ mzv086. Epub 2015 Oct 20. PMID: 26487508.

Morgan S, Morgan A, Kerr R, Tapley A, Magin P. (2016) **Test ordering by GP trainees: Effects of an educational intervention on attitudes and intended practice.** Can Fam Physician. 2016 Sep;62(9):733-41. PMID: 27629671; PMCID: PMC5023346. <u>https://www.cfp.ca/content/62/9/733</u>

Morgan S, Tapley A, Henderson KM, Spike NA, McArthur LA, Stewart R, Davey AR, Dunlop A, van Driel ML, Magin PJ. (2016) **Australian general practice trainees' exposure to ophthalmic problems and implications for training: a cross-sectional analysis.** J Prim Health Care. 2016 Dec;8(4):295-302. DOI: 10.1071/HC16024. PMID: 29530153.

Morgan S, Wearne S, Tapley A, Henderson K, Oldmeadow C, Ball J, van Driel M, Scott J, Spike N, McArthur L, Magin P. (2015) In-consultation information and advice-seeking by Australian GP trainees from GP trainers - a crosssectional analysis. Educ Prim Care. 2015 May;26(3):155-65. doi: 10.1080/14739879.2015.11494335. PMID: 26092144. Mulquiney KJ, Tapley A, van Driel M, et al. (2017) **Referrals** to dietitians/nutritionists: A cross-sectional analysis of Australian GP registrars' clinical practice. September 2017. DOI:https://doi.org/10.1111/1747-0080.12377

Nawaz S, Tapley A, Davey AR, van Driel ML, Fielding A, Holliday EG, Ball J, Patsan I, Berrigan A, Morgan S, Spike NA, FitzGerald K, Magin P. (2021) **Management of a chronic skin disease in primary care: an analysis of early-career general practitioners' consultations involving psoriasis Dermatol Pract Concept.** 2021;11(3):e2021055. DOI: <u>https://doi. org/10.5826/dpc.1103a55</u>

Pappalardo E, Magin P, Tapley A, et al. (2019) **General practice** registrars' experiences of antenatal care: A cross-sectional analysis. Aust N Z J Obstet Gynaecol 2019. DOI: 10.1111/ ajo.13042 <u>https://research.gpsynergy.com.au/wp-content/</u> uploads/2019/05/Antenatal-Care-Published-Paper.pdf

Pearlman J, Morgan S, van Driel M, Henderson K, Tapley A, McElduff P, Scott J, Spike N, Thomson A & Magin P (2016) **Continuity of care in general practice vocational training: prevalence, associations and implications for training, Education for Primary Care.**

DOI: 10.1080/14739879.2015.1101871 **Continuity of care in** general practice vocational training: prevalence, associations and implications for training (gpsynergy.com.au)

Rhee DW, Chun JW, Stern DT, Sartori DJ. (2021) **Experience** and Education in Residency Training: Capturing the Resident Experience by Mapping Clinical Data. Academic Medicine : Journal of the Association of American Medical Colleges. 2021 May. DOI: 10.1097/acm.000000000004162.

Stone L, Tapley A, Presser J, Holliday E, Ball J, Van Driel M, Davey A, Spike N, Fitzgerald K, Mulquiney K, Morgan S, Magin P. (2018) **Early career GPs, mental health training and clinical complexity: a cross-sectional analysis.** Educ Prim Care. 2019 Mar;30(2):62-69. doi: 10.1080/14739879.2018.1551070. Epub 2018 Dec 11. PMID: 30537904.

Sturman NJ, Tapley A, van Driel ML. et al. (2020) **Configurations for obtaining in-consultation assistance from supervisors in general practice training, and patient-related barriers to trainee help-seeking: a survey study.** BMC Med Educ 20, 369 (2020). DOI: <u>https://doi.org/10.1186/s12909-020-02291-2</u>

Tapley A, Davey AR, van Driel ML, Holliday EG, Morgan S, Mulquiney K, Turnock A, Spike NA, Magin PJ. (2020) **General practice training in regional and rural Australia: A crosssectional analysis of the Registrar Clinical Encounters in Training study.** Aust J Rural Health. 2020 Feb;28(1):32-41. DOI: 10.1111/ajr.12591. Epub 2020 Jan 17. PMID: 31950594.



Tapley A, Magin P, Morgan S, Henderson K, Scott J, Thomson A, Spike N, McArthur L, van Driel M, McElduff P, Bonevski B. (2015) Test ordering in an evidence free zone: Rates and associations of Australian general practice trainees' vitamin D test ordering. J Eval Clin Pract. 2015 Dec;21(6):1151-6. DOI: 10.1111/jep.12322. Epub 2015 May 25. PMID: 26011573.

Thomson A, Morgan S, O'Mara P, Tapley A, Henderson K, van Driel M, Oldmeadow C, Ball J, Scott J, Spike N, McArthur L, Magin P. (2015) **Clinical encounters of Australian general practice registrars with Aboriginal and Torres Strait Islander patients.** Aust N Z J Public Health. 2016 Apr;40 Suppl 1:S75-80. doi: 10.1111/1753-6405.12412. Epub 2015 Aug 10. PMID: 26260208.

Thomson A, Morgan S, Tapley A, van Driel M, et al (2015). **Prevalence and associations of gender concordance in general practice consultations: a cross-sectional analysis.** European Journal for Person Centered Healthcare 3 (4) 470-477. http://www.ejpch.org/ejpch/article/view/1016

Tng ETV, Tapley A, Davey A, De Zwaan S, Morgan S, van Driel M, Holliday E, Ball J, Catzikiris N, Henderson K, Mulquiney K, Spike N, Kerr R, Magin P. (2018) **General practice registrars' clinical exposure to dermatological procedures during general practice training: a crosssectional analysis.** Educ Prim Care. 2018 Nov;29(6):357-366. doi: 10.1080/14739879.2018.1520612. Epub 2018 Oct 12. PMID: 30311852.

Turner R, Tapley A, Sweeney S, Davey A, Holliday E, van Driel M, Henderson K, Ball J, Morgan S, Spike N, FitzGerald K, Magin P. (2020) **Prevalence and associations of prescribing of longacting reversible contraception by general practitioner registrars: a secondary analysis of ReCEnT data.** BMJ Sex Reprod Health. 2020 Jul;46(3):218-225. doi: 10.1136/ bmjsrh-2019-200309. Epub 2020 Jan 21. PMID: 31964777. Turnock A, Morgan S, Henderson K, Tapley A, van Driel M, Oldmeadow C, Ball J, Presser J, Davey A, Scott J, Magin P. (2016) **Prevalence and associations of general practice nurses' involvement in consultations of general practitioner registrars: a cross-sectional analysis.** Aust Health Rev. 2016 Feb;40(1):92-99. DOI: 10.1071/AH15010. PMID: 26117411. https://www.publish.csiro.au/ah/AH15010.

Wearne SM, Magin PJ & Spike NA. (2018) **Preparation for** general practice vocational training: time for a rethink Med J Aust 2018; 209 (2): DOI: 10.5694/mja17.00379 <u>https://research.</u> gpsynergy.com.au/wp-content/uploads/2018/04/Time-to-Rethink-Wearne.pdf

Whiting G, Magin P, Morgan S, Tapley A, Henderson K, Oldmeadow C, Ball J, van Driel M, Spike N, McArthur L, Scott J, Stocks N. (2016) **General practice trainees' clinical experience of dermatology indicates a need for improved education: A cross-sectional analysis from the Registrar Clinical Encounters in Training Study.** Australas J Dermatol. 2017 Nov;58(4):e199-e206. doi: 10.1111/ajd.12493. Epub 2016 Jun 15. PMID: 27301794.

Whiting G, Stocks N, Morgan S, Tapley A, Henderson K, Holliday E, Ball J, van Driel ML, Spike N, McArthur L, Davey AR, Magin P. (2019) **General practice registrars' use of dermoscopy: Prevalence, associations and influence on diagnosis and confidence.** Aust J Gen Pract. 2019 Aug;48(8):547-553. doi: 10.31128/AJGP-11-18-4773. PMID: 31370131. <u>https://www1.racgp.org.au/getattachment/c0f553fb-8c80-4ce8-a144-ab13fbd83a89/General-practice-registrars-useof-dermoscopy.aspx</u>

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