

Referral rates of general practice registrars for behavioural or mental health conditions in children

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Background

There is concern about whether general practice registrars gain sufficient exposure to, and confidence in caring for, many paediatric conditions during their apprenticeship training. General practice registrars' referral patterns for paediatric conditions overall or for specific conditions, including behavioural or mental health diagnoses, are unknown.

Objectives

The aim of this study was to assess the relative rates of referral by general practice registrars for children, compared with adults, specifically for those with behavioural or mental health diagnoses.

Method

A secondary analysis of 83,445 encounters from the Registrar Clinical Encounters in Training (ReCEnT) dataset was undertaken.

Results

More than half of children (52%) with a behavioural or mental health problem were referred to specialty care, compared with only 23% of adults. For all other conditions, only 9% of children received specialty referral, compared with 12% of adults.

Discussion

Although a certain proportion of behavioural or mental health issues in children may require either diagnostic assistance or aid in management, it is unclear whether more than half are unable to be cared for by a general practice registrar without referral.

General practitioners (GPs) are responsible for the primary care of Australians of all ages. As healthcare becomes more complex, and new discoveries and therapies continue to emerge, the knowledge required to provide competent care continues to increase. This not only places a burden on established GPs to remain up to date in the care of patients across the age spectrum, but also on general practice registrars and those responsible for their training. As the duration of registrar training has not increased, more information and potentially more educational experiences must be included in existing time constraints.

Some have hypothesised that the increased rate of referrals to specialist care from GPs is due to the difficulty in keeping up to date with the myriad conditions managed by GPs.¹ Others have hypothesised that the time required to manage complex chronic conditions may be a disincentive for GPs to provide such care.² There is also concern about whether registrars gain sufficient exposure to, and confidence in caring for, many paediatric conditions during their apprenticeship training.

Further complicating this issue is the changing demography of Australia. A greater proportion of the population now includes adults and seniors, resulting in a greater proportion of GP visits from those age groups.³ As there are no requirements for registrars to see a particular number or proportion of patients in specific age groups during their apprenticeship, the culture of 'what walks in the door is what is seen' plays a determining role in registrar exposures. This has resulted in some general practice registrars seeing a smaller number of children than may be necessary to achieve competence and confidence in their care.⁴ It is unknown whether this diminished exposure leads to increased referral rates for children with specific conditions.

Other research has found that high referral rates for children with behavioural or mental health complaints have resulted in a significant proportion of presentations that are behavioural in nature to general paediatricians.⁵ There has also been a significant increase in patients on waiting lists to see paediatric behavioural and mental health specialists due, at least in part, to an increased number of referrals.⁶

Anecdotal reports have suggested an increasing pattern of GPs referring such patients, even those with conditions believed to be appropriate for primary care management.

To assess the relative rates of referral by general practice registrars for children, compared with adults, specifically for those with behavioural or mental health diagnoses, we conducted an analysis of the Registrar Clinical Encounters in Training (ReCEnT) dataset. This dataset was developed by a regional training provider (RTP) in New South Wales – General Practice Training Valley to Coast – in collaboration with partner RTPs to better understand the experiences of registrars in community-based clinical placements.

Methods

This study used data from the ReCEnT study dataset. ReCEnT is an ongoing multisite cohort study of the within-consultation experiences of general practice registrars. Study participants in the current analysis were general practice registrars training within four RTPs across four Australian states.

The methodology has been described in detail elsewhere.⁷ Briefly, general practice registrars undertook data collection once every six-month training term (or every twelve-month term for part-time registrars) as part of their training program. This resulted in registrars collecting data on three or four occasions during their training. Informed consent was obtained for the registrars' de-identified data to be used for research purposes as part of the ReCEnT project.

Initial data collection for each registrar and training term involved questionnaire items that related to demographics, education and work experience.

Registrars then recorded the details of 60 consecutive clinical consultations per term on a paper-based encounter form. As data collection was designed to reflect a 'normal' week of general practice, consultations in a specialised clinic (eg vaccination clinic, Pap smear clinic) were excluded.

Only office-based consultations were recorded; registrars did not provide information on home or nursing home visits. The collected data encompassed four broad areas:

- patient demographics
 - diagnoses (or problems managed)
 - investigations or management (including referral and follow-up)
 - educational training aspects (whether the registrar sought in-consultation advice from their trainer, information from other sources or generated learning goals).
- Problems managed or diagnoses were coded according to the International Classification of Primary Care, second edition (ICPC-2 PLUS).

Outcomes assessed

The outcomes assessed in this study were:¹

- the proportion of consultations in which a behavioural or mental health condition for a child or adult was recorded as a diagnosis or problem by the registrar²
- whether referral to a specialist was made³
- the frequency of the specific diagnoses among the behavioural or mental health conditions, and their unique rates of referral.

Behavioural or mental health conditions were coded via a classification of behavioural or mental health problems on the basis of ICPC-2 PLUS codes. Children were defined as those aged younger than 19 years. Analyses were programmed using Stata 13.1 and SAS 9.4.

Ethics approval

The ReCEnT project has approval from the University of Newcastle's Human Research Ethics Committee (reference H-2009-0323).

Results

We analysed 83,445 patient encounters from eight rounds of ReCEnT data collection across four RTPs in 2010–13. Of these, 18,063 (21.6%) were with paediatric patients (95% confidence interval [CI]: 21.4–21.9). These encounters were the product of the experiences of 645 individual

registrars, some of whom completed more than one round of data collection, resulting in 1426 'registrar-rounds' of data.

A much smaller proportion of paediatric encounters (4.3%; $n = 781$; 95% CI: 4.2–4.6) were coded as having a behavioural or mental health problem, compared with adult encounters (8.1%; $n = 5310$; 95% CI, 7.9, 8.1; odds ratio [OR] 0.7; $P < 0.001$).

However, more than half of the children (52%; 95% CI: 48.3–55.4) with a behavioural or mental health problem were referred to specialist care, compared with only 23% (95% CI: 21.5–23.7; OR 3.7; $P < 0.001$) of adults with such problems. By contrast, for all other paediatric conditions, only 9% (95% CI: 8.6–9.3) of patients received a specialist referral, compared with 12% (95% CI: 11.6–12.0; OR 0.7; $P < 0.001$) of adults. Overall, behavioural or mental health problems made up 17% (95% CI: 15.5–18.5) of all paediatric referrals.

Nine conditions accounted for 85% of all paediatric behavioural or mental health problems seen by the registrars in the study population (Table 1). The most common condition was depression (32%), followed by anxiety (21%) and attention deficit hyperactivity disorder (ADHD; 9%).

Rates of referral for paediatric patients with behavioural or mental health problems varied by condition. Among the nine most common behavioural or mental health problems, the highest referral rates were seen for delayed development (86%), behaviour problems (74%), delayed speech (68%) and ADHD (67%). However, >40% of all presentations for depression and anxiety were also referred (Table 2). Referral rates were 100% of all presentations for some less commonly diagnosed conditions, including disturbed behaviour, oppositional defiant child, problem behaviour at school and oppositional defiant adolescent.

Most referrals for patients with paediatric behavioural or mental health problems were to psychologists (41%) or paediatricians (21%). Much smaller proportions were referred to speech pathologists (5%), psychiatrists (4%) or audiologists (4%). Other health professionals made up an even smaller share of referrals.

Discussion

Among our most significant findings is that general practice registrars refer more than half of all children seen with behavioural or mental health problems, a rate much greater than for either adults with behavioural or mental health problems, or children with other conditions. Although a certain proportion of behavioural issues may require either diagnostic assistance or aid in management, it is unclear whether more than half of all children seen in primary care for such issues are unable to be cared for by a GP without referral. Additional studies are needed to identify the specific factors that result in referrals by general practice registrars.

Referrals for children with behavioural or mental health problems already constitute the greatest proportion of diagnostic groupings of care provided by general paediatricians.⁵ Further, the waiting list for community or behavioural paediatric care is growing rapidly. This rate of referral is unsustainable in the current Australian healthcare system. If general practice registrars develop normative patterns of high referral rates for patients with such conditions, rather than develop experience and expertise in caring for them, it is likely that such patterns will continue after they complete their training.

There are several potential reasons why general practice registrars are referring at such a high rate. Registrars may not have the confidence to care for patients with such issues because of their inexperience with children's behavioural or mental health problems, because they may not believe they have the time to address such issues, or because they may experience pressure from the patient's parents to provide a referral. As well, registrars may adopt the practice patterns of their supervisors who may also be referring children with behavioural or mental health problems at a high rate due to their own discomfort, or a lack of time to address these issues within the course of a busy day at the clinic. However, although it is known that the number of referrals has increased, the specific rate of referral of behavioural or

mental health problems for children and adults by GPs in practice is not known. Future studies should assess this deficiency in the understanding of health service delivery pathways for behavioural or mental health problems. For some conditions, such as ADHD, children must be referred to specialist care in order to receive stimulant medication. However, this is only a small proportion of all such referrals and does not negate the overall trends we have observed or that deserve further attention.

Registrar confidence with child behavioural and mental health issues

Confidence in the care of a specific patient population or certain condition is often

linked to clinical experience. Recent studies have shown that general practice registrars see far fewer paediatric, relative to adult, patients.⁴ Further, they see an even smaller proportion of extended consultations for children, relative to adults, as do GPs in practice.⁸ As such, it is possible that these registrars do not see enough children with behavioural and mental health issues to gain experience and to develop confidence in their own abilities to provide care to those who are appropriate for primary care management. In the ReCEnT database, there were only 165 encounters with children having anxiety and only 22 with sleep disorders. Thus, most registrars never recorded contact with even one patient with these common paediatric conditions.

Table 1. Most common paediatric behavioural or mental health conditions seen by registrars

Condition	Number of cases seen	Proportion of all behavioural or mental health visits (%)
Depression	249	31.9
Anxiety	165	21.1
Attention deficit hyperactivity disorder	70	9.0
Behaviour problem	47	6.0
Delayed speech	37	4.7
Insomnia	29	3.1
Sleep problem	22	2.8
Developmental delay	21	2.7
Delayed milestones	21	2.7

Table 2. Proportion of common paediatric behavioural or mental health conditions referred to specialists by registrars

Condition	Number of cases referred	Proportion of all visits referred (%)
Depression	110	41.2
Anxiety	70	42.2
Attention deficit hyperactivity disorder	47	67.1
Behaviour problem	35	74.5
Delayed speech	25	67.6
Insomnia	5	17.2
Sleep problem	10	45.5
Developmental delay	18	85.7
Delayed milestones	11	52.4

Time to care for children with behavioural and mental health issues

Even simple paediatric behavioural and mental health problems often require spending a significant amount of time with the family. Conditions such as bedwetting, constipation or school phobia are usually within the realm of GP care. However, management of these conditions is likely to require at least one extended consultation, and perhaps more.

It is unclear why general practice registrars have so few extended consultations with children, especially those with behavioural or mental health disorders. It may be due to the practice culture or role-modelling of apprenticeship supervisors, or it may reflect the registrar's own beliefs regarding the value of their time expended in different activities. Regardless, registrars need to gain experience and be encouraged to provide the time required for behavioural counselling for primary care conditions.

Parental pressure to provide referrals

There are anecdotal reports of GPs experiencing pressure from parents to provide specialist referrals for children with conditions that a GP may appropriately manage.^{9,10} It is possible that registrars are more likely to experience parental requests for referral for children with behavioural or mental health issues due to parental anxiety and their degree of confidence in the registrar. Registrars may also not possess the self-efficacy required to reassure parents that they are able, with the assistance of their supervisor, to manage most non-complex behavioural issues. GP supervisors must be keenly attuned to this issue in order to provide the support that registrars need to work with parents to keep appropriate patients in their practices.

Supervisor referral of children with behavioural or mental health problems

Children with behavioural or mental health issues often require extended consultations. Previous research has shown that over the

past two decades, the absolute number of extended general practice consultations for children has fallen.⁸ Thus, it appears that GPs in general are devoting less time to the management of relatively complex issues in children, including behavioural or mental health issues. This may be due to prioritisation of time, financial issues surrounding the way children are billed within a practice, or reflect current Medicare reimbursement or patient care policies. Supervisors should ensure they model patient-care behaviours for registrars to demonstrate the management of non-complex behavioural issues and devote the required appointment time needed.

Limitations

Data in the ReCEnT database are provided by self-reports of registrars. Errors in recording the encounters or transcription in the database may occur. As the database comprises encounters with 645 registrars across four RTPs, results may not be generalisable to the experiences of all registrars. Additionally, referral patterns of GPs in practice may differ from those of registrars and should be the focus of future studies to determine whether patterns or trends may be occurring. Finally, determining why registrars are referring children at a much higher rate than adults is also warranted.

Conclusion

Children with behavioural or mental health conditions are referred by general practice registrars to specialist care at a rate much higher than for other problems and adults with similar diagnoses. These referrals are straining the healthcare delivery system for children in Australia. Reasons for this high rate of referral are not known with certainty. As general practice registrars now see few patients with these diagnoses during their clinical training placements, additional effort is needed to ensure they leave training with the experience and confidence they need to manage, or share in the management of, common paediatric behavioural or mental health issues.

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References

- Harris MF, Zwar NA. Care of patients with chronic disease: The challenge for general practice. *Med J Aust* 2007;187:104–07.
- Holden L, Williams ID, Patterson E, et al. Uptake of Medicare chronic disease management incentives – A study into service providers' perspectives. *Aust Fam Physician* 2012;41:973–77.
- Freed GL, Sewell J, Spike N, Brooks PJ. Changes in the demography of Australia and therefore general practice patient populations. *Aust Fam Physician* 2012;41:715–19.
- Freed GL, Magin P, Morgan S, Fitzgerald M, Brooks P. The paediatric clinical experiences of general practice registrars. *Aust Fam Physician* 2012;41:529–33.
- Hiscock H, Roberts G, Efron D, et al. Children attending paediatricians study: A national prospective audit of outpatient practice from the Australian paediatric research network. *Med J Aust* 2011;194:392–97.
- Department of Health. Strengthening the focus on the mental health needs of children, families and youth. Canberra: DoH, 2011. Available at www.health.gov.au/internet/publications/publishing.nsf/Content/nmhr11-12~nmhr11-12-priorities~children [Accessed 16 February 2015].
- Valley to Coast General Practice Training. The registrar clinical encounters in training (ReCEnT) project. Sydney: VCGPT, 2015. Available at www.gpvtc.com.au/site/index.cfm?display=397006 [Accessed 16 February 2015].
- Freed GL, Spike NA, Sewell JR, et al. Changes in longer consultations for children in general practice. *J Paed and Child Health* 2013;49:325–29.
- Fletcher HJ. Educational difficulties: GP referrals. Available at www.gp-training.net/protocol/paediatrics/educational_difficulties.htm [Accessed 16 February 2015].
- Dale N, Godsman J. Factors influencing general practitioner referrals to a tertiary paediatric neurodisability service. *Brit J of Gen Pract* 2000;50:131–32.

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