PREVALENCE AND ASSOCIATIONS OF REGISTRARS’ ANTIBIOTIC PRESCRIBING FOR URTIS AND ACUTE BONCHITIS

Dr Parker Magin 1, 2, Dr Simon Morgan 1, Ms Kim Henderson 1, Ms Amanda Tapley 1, Prof Mieke van Driel 3, 4

1 General Practice Training Valley to Coast, 2 University of Newcastle, 3 University of Queensland, 4 Ghent University

Background
Evidence-based guidelines strongly discourage antibiotic use in the great majority of cases of upper respiratory tract infections (URTIs), bronchitis and bronchiolitis.

Aims/objectives
To establish levels and associations of GP registrars’ antibiotic prescribing in upper respiratory tract infections, bronchitis and bronchiolitis using data from the Registrar Clinical Encounters in Training (ReCEnT) study.

Methods
In ReCEnT, registrars of three RTPs, once per term, record demographic, clinical and educational details of 60 consecutive consultations. Diagnoses at each consultation are coded with the International Classification of Primary Care-2 (ICPC-2).

This analysis includes data from four data collection rounds, 2010-2011. We calculated the percentage of consultations in which an URTI (ICPC-2 diagnosis R74) or bronchitis/bronchiolitis (ICPC-2, R78) was diagnosed. We also calculated the proportion of R74 and R78 diagnoses for which antibiotics were ordered.

Associations of antibiotic prescription for these diagnoses were tested with Chi-square and Mann-Whitney tests for categorical and continuous data, respectively.

Results
207 registrars participated (response rate 95%), providing data from 383 registrar-rounds (41%, 34%, 24% in Terms 1,2,3/4, respectively) and 22,844 consultations.

URTIs were diagnosed in 7.3% of consultations and bronchitis/bronchiolitis in 2.2%.

Antibiotics were prescribed in 26.0% (95% CIs 23.8-28.1) of URTIs and 77.5% (73.9-81.1) of bronchitis/bronchiolitis. Of patients prescribed antibiotics for bronchitis/bronchiolitis, 6.8% received two antibiotics.

Significant associations of an antibiotic being prescribed in URTIs were patient factors (older patients, English-speaking background, non-indigenous, privately billed), registrar factors (male registrars, earlier in training, overseas-trained), practice factors (private-billing) and consultation factors (longer consultations).

Significant associations of an antibiotic being prescribed in bronchitis/bronchiolitis were patient factors (older patients, being new to the registrar, privately billed) and practice factors (private-billing).

Discussion
While non-adherence to evidence-based guidelines may be warranted in individual clinical scenarios, this study suggests, overall, inappropriate antibiotic prescribing. Addressing this in registrar training will be informed by a more detailed analysis of associations and predictors of antibiotic prescribing.
CONTINUITY OF CARE IN GENERAL PRACTICE REGISTRAR TRAINING: RESULTS FROM THE RECENT STUDY

Mr James W Pearlman 1, 2, Dr Parker Magin 1, 2, Dr Cathy Regan 2, Dr Simon Morgan 2, Ms Kim Henderson 2, Ms Amanda Tapley 2

1 The University of Newcastle, 2 General Practice Training - Valley To Coast

Background
Continuity of care is accepted as an integral part of quality general practice. Continuity of care can be informational, longitudinal and interpersonal. Informational continuity refers to medical records; longitudinal, to the health care team; and interpersonal describes a personal continuity between doctor and patient. In general practice, interpersonal continuity of care is associated with greater patient satisfaction and trust. Evidence for continuity of care in GP registrar vocational training is lacking.

Objectives
To establish prevalence of interpersonal continuity of care in GP registrar consultations and to determine factors associated with this continuity of care. And to establish the relationship between continuity of care and levels of exposure to chronic disease.

Methodology
ReCEnT is an ongoing longitudinal cohort study of general practice registrars. Registrars record demographic, clinical and educational details of 60 consecutive consultations during each term of their training. Outcome factors in this analysis were percentage of patients that were new to the registrar, and rates of planned follow up appointments with the registrar. Independent variables were a number of registrar, practice, patient, and consultation factors recorded in ReCEnT. An additional independent variable, practice policy regarding patient hand-over from registrar-to-registrar at term end, will be assessed via a questionnaire survey of ReCEnT study practice managers. Initial univariate analysis employed chi-square and Mann-Whitney tests.

Results
Preliminary univariate analysis has shown that working in smaller practices is associated with a greater likelihood of registrars seeing regular patients. Full-time registrars were more likely to have planned follow-up consultations with the same patient compared to part-time registrars. Female registrars had an increased likelihood of seeing regular patients. Registrars who had worked at their practice previously were more likely to see regular patients compared with registrars at new practices. Further, and more detailed multivariate analysis will be presented.

Discussion:
This study’s investigation of interpersonal continuity of care will inform general practice vocational training strategies, as well as future reviews of general practice policy.
GAPS IN GP EDUCATION – DEMONSTRATING THAT BREASTFEEDING EDUCATION FOR GP REGISTRARS WORKS
Dr Ben Mitchell, Dr Wendy Brodribb
The University of Queensland

Background
Although managing breastfeeding problems is an important part of general practice, GP registrars receive limited education about breastfeeding, and have limited knowledge about managing breastfeeding problems.

Aims/objectives
To show that educating GP registrars about breastfeeding problems improved registrar knowledge, attitudes and practice behaviour scores whilst being achievable in the current training environment.

Methods
We used a cluster quasi-randomised controlled trial involving GP registrars in South East Queensland. Four Regional training provider nodes were recruited and allocated to intervention or control status giving similar numbers of metropolitan and regional registrars (approximately 30 in each arm). Participants were invited to attend the seminar as part of their normal training schedule and the control group acted as wait list controls. We used a validated 96 item questionnaire to measure knowledge, attitudes and practice behaviour immediately before, after and two months post-delivery of a three hour small group tutorial session.

Results
Preliminary results demonstrate i) GP registrars have areas of low scores in knowledge and attitudes and ii) this improves after an education session covering breastfeeding problems. Feedback from registrars is overwhelmingly positive, confirming its acceptability in the current training environment. Results will be discussed.

Discussion
GP registrars require specific training to manage breastfeeding problems effectively, and thus provide complete care to mothers and babies. Delivery of an educational package is effective and achievable in current General Practice training, and should be considered for inclusion in all GP training curricula.
Background
Chlamydia is an important clinical and public health issue in Australia and worldwide. The current Australian chlamydia screening guidelines recommend annual testing of all sexually active people aged 15-25 and those with a recent change in partner or reporting inconsistent condom use. Literature examining General Practice registrars’ testing for chlamydia is currently lacking.

Objectives
To determine the rate of screening (including opportunistic screening) for chlamydia by registrars and document factors associated with the ordering of these tests.

Methodology
Recent is an ongoing cohort study of general practice registrars and their clinical consultations. Registrars from around Australia record demographic, clinical and educational details of 60 consecutive consultations in each general practice term of their training. Outcome factors in this analysis were rates of ordering chlamydia tests and rates of opportunistic screening assessed by the question- ‘was the issue raised by you?’ In this study we also elicited registrars’ prior experience in sexual health as a factor associated with testing. We assessed associations of registrar and practice characteristics with chlamydia testing using Chi-square for categorical variables and t-tests for continuous variables.

Results
Preliminary analysis reveals that Chlamydia testing occurs in 1.48% of registrar consultations. Associations of testing will be presented.

Discussion
This study’s documentation of the frequency of chlamydia screening and predictors of testing, will inform sexual health education and training strategies for General Practice training organisations.
GENERAL PRACTICE REGISTRAR ORDERING OF VITAMIN D LEVELS: RESULTS FROM REGISTRARS CLINICAL ENCOUNTERS IN TRAINING (ReCeEnt) STUDY

Ms Amanda Tapley 1, Dr Parker Magin 1, 2, Dr Simon Morgan 1, Ms Kim Henderson 1
1 General Practice Training Valley to Coast, 2 Discipline of General Practice, University of Newcastle

Background
Increasing requests for vitamin D measurement have been labelled in a recent Lancet editorial as ‘costly, confusing, and without credibility’. Australian research has shown 25-hydroxyvitamin D testing to lack reliability and its validity has been challenged.

Aims/objectives
To establish levels and associations of GP registrars’ Vitamin D testing.

Methods
In ReCeEnt, registrars of three RTPs, once per term, record demographic, clinical and educational details of 60 consecutive consultations. This analysis includes data from four data collection rounds, 2010-2011. We calculated the percentage of consultations in which a vitamin D level was requested. We also calculated the proportion of Vitamin D tests co-ordered with a lipid profile as a (non-comprehensive) marker of non-targeted testing. We documented the diagnosis/problem (coded with the International Classification of Primary Care) for which the test was ordered.

Associations of test ordering, and of co-ordering of lipids, were tested with Chi-square and Mann-Whitney tests for categorical and continuous data, respectively.

Results
207 registrars participated (response rate 95%), providing data from 383 registrar-rounds (41%, 34%, 25% in Terms 1, 2, 3/4, respectively) and 22,844 consultations.

Vitamin D was ordered in 1.3% of consultations. In 39% of these it was co-ordered with lipids. 10.6% of tests were ordered for a problem/diagnosis of vitamin deficiency and 5.1% for osteoporosis. 23.4% (35.1% when co-ordered with lipids) were for a medical exam or check. Significant associations of greater Vitamin D-ordering were patient factors (female, older, non-English-speaking background, and being new to the practice or registrar), registrar factors (older, earlier in training, more sessions worked, Australian-trained) and consultation factors (longer consultations). Associations with co-ordering Vitamin D with lipids rather than Vitamin D alone included greater patient age and English-speaking background.

Discussion
Our findings suggest registrars to some degree target Vitamin D test-ordering to patients at higher risk of Vitamin D-deficiency, but also provide evidence of non-targeted, possibly indiscriminate, ordering.
DOES POST-GRADUATE PSYCHIATRY EXPERIENCE INFLUENCE GP REGISTRAR CONSULTATIONS?
Dr Moses Chan, Dr Therese Cox, Dr Helena Hooi, Dr Sarah McLain, Dr Parker Magin, Dr Simon Morgan, Kim Henderson, Amanda Tapley, Dr Cathy Regan
General Practice Training - Valley To Coast

Background
The burden of mental illness in general practice and the wider community is well documented. Clinical experience in a psychiatry rotation is not a core pre-requisite of GP training. There is currently no data describing the extent of past psychiatry experience of Australian GP registrars, and particularly how this experience influences consultations with patients with mental health problems.

Aims/objectives
We aim to compare the demographics, consultation and self-reported confidence in performing key tasks relating to mental health consultation of GP registrars who have had previous postgraduate psychiatry experience to those who have not.

Methods
We used data from the ReCEnT study and a self-reported survey rating their confidence in key tasks of the mental health consultation. We then divided registrars according to their post-graduate experience in psychiatry and compared the demographic, clinical and educational data, and their levels of confidence.

Results
267 discrete registrar rounds were collected from 171 registrars. Registrars with previous psychiatric experience, when compared to their peers without experience, were significantly older, more likely to have received their medical qualification overseas and took slightly longer per consultation over all problems. Registrars with psychiatric experience were significantly more confident than their peers at taking a psychiatric history, performing a mental state examination and initiating antipsychotic medication.

Discussion
These findings suggest (1) registrar practice is dictated by structural factors within the practice rather than their capacity to establish a personal practice profile, and (2) increased psychiatry experience during pre-vocational training is associated with increased confidence in a number of key tasks of the mental health consultation.