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Distinguished papers / Présentations de distinction

Documentation of chaperone use

What are family physicians doing and why?

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Abstract

Context In Alberta, recommendations set out by the provincial regulatory college state that when a chaperone is used, this should be documented in the patient's medical record. How family physicians are applying this guidance in their daily practice is unknown.

Objective To examine whether and how family physicians are documenting the use of chaperones, how aware family physicians are of provincial recommendations regarding chaperone use, and how provincial guidance influences family physicians' decisions about chaperone use.

Design Mixed methods design. Data on documentation practices and awareness of provincial recommendations were collected by cross-sectional survey, with analysis using SPSS statistical software. Data on influencing factors were collected through individual interviews that underwent thematic analysis by the constant comparison method.

Setting Calgary, Alta.

Participants Survey participants included 438 family physicians. Interview participants included 17 family physicians in 3 academic, community-based Calgary teaching clinics.

Results There were 353 surveys used for analysis (30% response rate), and 17 individual interviews were completed. Survey results showed that 67% of respondents never or rarely documented the offer of a chaperone and most physicians never or rarely documented whether a chaperone was used. Sex differences were noted, with male physicians being more likely to document chaperone use ($P < .001$). Interview findings suggested physician reasoning around documentation varied and included individual physician standard of practice, anticipation of concern, patient choice, and other patient factors. Survey results demonstrated that only 25% of respondents were aware of provincial recommendations. This was supported by interview findings, which also showed that, while many did not use the recommendations in determining chaperone use, others used them as a way to counsel patients that a chaperone was required.

Conclusion Documentation of chaperone use and application of provincial guidance are variable. Most physicians do not document chaperone use and physician sex might affect documentation practices.

Normative definition of comprehensive practice

Across 3 generations of alumni of 1 family practice program

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Abstract

Objective To determine the range of services and procedures offered by family physicians who define themselves as comprehensive practitioners and compare their responses across 3 generations of alumni of 1 family practice program.

Design Cross-sectional survey.

Setting One family medicine program in the province of Ontario.

Participants All graduates of the family medicine program between 1985 and 2012.

Main outcome measures Self-reported provision of care in office care, in-hospital care, intrapartum obstetrics, housecalls, palliative care, after hours care, nursing home care, minor surgery, emergency department care, sport medicine, and walk-in care. In addition, sex, training stream (urban or rural), size of the community of practice, practice model, and satisfaction with practice were considered.

Results Participants practised in 8 provinces across Canada, but principally in Ontario. A small number were located in the United States. There was a decline in the number of services across 3 generations of graduates, with newer graduates providing fewer services than the older graduates. Significant declines across the 3 groups were observed in the provision of housecalls, palliative care, and nursing home care. Non-significant changes were seen in the provision of intrapartum obstetrics across the 3 alumni groups, with an initial decline then an increase in reported activity. The average number of types of procedures offered declined from the oldest to the newest graduates. Most respondents were in a patient-enrolment practice model, and those in such models reported offering significantly more services than those in fee-for-service, family health group, or salary models.

Conclusion The normative definition of comprehensive care varies across 3 generations of graduates of this family medicine program, with newer physicians reporting fewer overall services and procedures than older graduates. A greater understanding of the forces that determine the meaning of comprehensive primary care is necessary if this foundational element of family medicine is to be preserved.

Adherence to Choosing Wisely recommendations within primary care

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Abstract

Objective To assess factors associated with adherence to 4 Choosing Wisely (CW) recommendations during patient encounters with primary care clinicians.

Design We conducted a retrospective review of electronic medical record data from the Manitoba Primary Care Research Network (MaPCReN).

Setting Data from 239 MaPCReN clinicians in 46 clinics representing 162 728 patients.

Participants All patients with at least 1 encounter (2014 to 2016) with a participating MaPCReN primary care clinician.

Main outcome measures Adherence to each of the 4 CW recommendations. Data relating to the following CW recommendations: prescription of antibiotics for viral infections; prescription of antipsychotics in patients with dementia; vitamin D-level testing; or prostate-specific antigen testing. Descriptive statistics and multivariable logic models with generalized estimating equations were used to assess adherence to the CW recommendations and associations with patient, provider, and practice characteristics. Odds ratios (ORs) and 95% CIs were reported.

Results There were 164 195 primary care encounters related to 1 of the 4 CW recommendations evaluated. Overall 15.6% (n = 25 629) of the encounters did not adhere to 1 of the investigated CW recommendations. The most common nonadherent CW encounter related to antibiotic prescription for viral infection (65.4%). The remainder related to prostate-specific antigen screening (28.7%), vitamin D tests (9%), and antipsychotic prescriptions for patients diagnosed with dementia (0.7%). Female patients had increased odds of an encounter with an antibiotic prescription for viral infections (OR = 1.18, 95% CI 1.1 to 1.3) or vitamin D testing (OR = 1.5, 95% CI 1.3 to 1.9). Salaried physicians, older patients, patients with more frequent office visits, and patients residing in rural areas had increased odds of nonadherence.

Conclusion There are patient-, provider-, and practice-related factors that affect adherence to CW recommendations. Understanding factors associated with adherence is essential to designing strategies to reduce unnecessary investigations and treatments.

Experiences with medical assistance in dying

Patient and loved ones' perspectives

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Abstract

Context Canada passed its medical assistance in dying (MAID) law on June 17, 2016.

Objective To explore the experiences and perspectives of Canadians who requested and were eligible for MAID, as well as the experiences of people supporting them.

Design This was a qualitative study using semistructured interviews and thematic analysis.

Setting A clinic in British Columbia.

Participants Patients who had a consultation about MAID and who were found to be eligible were recruited for the study. Semistructured interviews were conducted by 2 family practice residents with patients and the patients' support people to explore wishes, fears, beliefs, and experiences as they pursued, prepared for, and in some cases reflected on MAID. Basic demographic characteristics were recorded for context.

Findings Twenty-three patient experiences were explored in interviews with 11 patients and 18 support people. Most patients had a malignancy, neurological disorder, or organ failure. The major reason for requesting assisted death was a self-perceived unacceptable quality of life most, commonly due to the loss of autonomy, independence, physical function, and ability to communicate. Some patients expressed fear of future suffering and future disability. The support people included spouses, sons, daughters, and friends. All supported their loved one's decisions, although some were initially opposed and some found it very hard. All 11 support people who were interviewed after the MAID death said the death was peaceful. They valued that they could be present, prepared, and able to say some final words.

Discussion The reasons patients in our study requested assisted death were similar to the findings in other countries—namely loss of autonomy and the ability to do the things they enjoyed. Their loved ones supported their decisions and valued the chance to be prepared and present.

Free-standing oral presentations / Présentations libres (orales)

Effects of a criterion-based competency assessment tool on identification and management of residents in difficulty

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Abstract

Context The family medicine residency program at Laval University has developed and validated an innovative criterion-based competency assessment tool (CCAT) adapted to each rotation and training period. This computerized tool includes a decision support system suggesting educational diagnoses and prescriptions to support resident feedback and guide teachers in their judgment of competency achievement for each milestone.

Objective To determine the effects of a CCAT on the identification and management of residents in difficulty.

Setting Family medicine residency program at Laval University.

Participants Clinical teachers who had filled out at least 1 family medicine resident summative assessment in the previous 3 months participated in this study.

Main outcome measures Clinical teachers filled out a questionnaire before and after implementation of the CCAT to appraise Factors that Influence Reporting of Residents in Difficulty (Q-FIR-RID: 12 items, $\alpha = .81$) to assess 4 constructs on a 5-point Likert scale: documentation, knowledge of what to document, consequences for the evaluator, and remediation options. Anonymized data about remediation rotations were obtained from the program promotion committee.

Results A total of 254 clinical teachers completed the questionnaire. The Q-FIR-RID score increased after implementation of the CCAT (Δ change = 0.25). Three constructs improved after CCAT implementation: documentation ($P < .001$), knowledge of what to document ($P < .001$), and remediation options ($P < .01$). Residents in difficulty were identified earlier after implementation of the CCAT, and remediation rotations were offered earlier to residents (before, 85% of remediation rotations were offered during first-year residency and 15% were offered to second-year residents; after, 100% were offered during first-year residency).

Conclusion This project suggests a CCAT that includes a decision support system improves the identification and management of residents in difficulty.

What's in an ITER?

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Abstract

Context Since 2013 the University of Ottawa's family medicine (FM) in-training evaluation reports (ITERs) have used an "action-based" ITER evaluation scale with 4 parameters: "not observed/applicable" (0); "off trajectory for this benchmark (action required)" (1); "on trajectory for this benchmark (minimal/no action required)" (2); and "attained this benchmark (no action required)" (3). The 29 first-year residents' and 32 second-year residents' stems of core FM ITERs are communicated as benchmarks that state expectations to be attained at the completion of each training year.

Objective To explore how preceptors have completed ITERs since this rating system was implemented.

Design We retrospectively analyzed aggregated ITER data contained in our assessment system (one45 WebEval) from July 2013 to present.

Participants One hundred thirty-six preceptors completed 1351 ITERs (666 for first-year residents, 685 for second-year residents).

Intervention The ITER data in one45 were sorted by preceptor with sequenced FM rotations for 5 communication competencies.

Outcome measures Using descriptive statistics and frequencies and nonparametric tests, we analyzed preceptors' use of FM ITERs.

Results Mean (SD) scores for first-year residents' ITERs were 2.26 (0.51) and 2.65 (0.48). Preceptors completed between 1 and 20 first-year residents' ITERs and 1 and 24 second-year residents' ITERs over more than 3 years. There was a statistically significant difference between first-year residents' ITERs completed at sequential FM rotations as determined by 1-way ANOVA ($F_{4632} = 48.79, P < .001$) and for second-year residents' ITERs ($F_{4654} = 22.90, P < .001$). Post hoc tests revealed when the sequential changes in ITER scoring occurred.

Discussion Communication skills differ in first-year residents and second-year residents owing to higher expectations. Supervisors should flag concerns and discern progression so residents can attain competencies required for graduation. We confirm that these ITERs reflect the preceptors' assessment of gradual development along the competency journey.

Conclusion Residents in a department of FM acquire communication competencies progressively. Analysis of preceptor ITER ratings allows normative feedback to preceptors on their patterns of scoring residents.

Capturing resident progression toward competence using the Competency-Based Achievement System

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Abstract

Context Competency-based assessment in medical education incorporates multiple constructs including “assessment for learning” or coaching to promote guided self-assessment, and assessment of learning to determine resident progress toward competence. In both cases the provision of continuous formative feedback is paramount for improving both the validity of summative assessments and the quality of coaching that residents receive. In our family medicine residency program we use the Competency-Based Achievement System (CBAS) as our assessment framework. This study examined the effectiveness of CBAS in capturing evidence of resident progress from first-year residents to second-year residents.

Objective The objective of this study was to examine whether progress levels assigned by expert judges change to reflect the increased competence of residents from first-year residents to second-year residents; and if there were differences in progress level assignment between academic years, teaching sites, and mentor-learner relationship strength (advisors vs preceptors).

Design Secondary data analysis.

Participants FieldNotes (N = 6664) spanning 4 academic years (2012, 2013, 2014, and 2015). Data came from residents (n = 156), preceptors (n = 451), and academic advisors (n = 48) across 4 urban teaching sites.

Main outcome measures Between- and within-resident as well as between- and within-preceptor comparisons were made.

Results Overall there was a 14% increase in “Carry on, got it” from first-year residents to second-year residents, irrespective of whether comparing between different residents or different preceptors. One site maintained a high proportion of “Carry on, got it” between first-year residents and second-year residents, indicative of ongoing implementation and buy-in of the CBAS framework. No apparent differences in progress level assignment existed between preceptors and academic advisors when controlling for differences between residents.

Conclusion FieldNotes captured residents’ increase in competence over time. Similarities between advisor- and preceptor-made notes support triangulation in formative assessment. Observed teaching site differences suggest further research is needed to examine reasons behind site discrepancies.

Realist Canada-wide audit of Triple C implementation

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Abstract

Context The College of Family Physicians of Canada's Triple C (TC) initiative was one of the first national approaches to competency-based medical education. All family medicine residency programs at Canada's 17 medical schools have adopted TC and program evaluation is ongoing.

Objective To examine the different approaches to implementation of TC and its effects across Canadian family medicine residency programs.

Design A realist audit of the different approaches to the implementation of TC and its effects was conducted. Realist analysis of the results was used to identify the different contexts, mechanisms, and outcomes associated with implementing TC. Data were collected through individual interviews and focus groups that underwent thematic analysis using the constant comparison method.

Participants Participants included Program Directors, Department Chairs, Deans, administrators, preceptors, and residents at all 17 schools.

Main outcome measures Outcomes included the identification of narrative themes related to TC implementation and its effects.

Results Every family medicine residency program had implemented some part of TC in some way or form. Implementation was pragmatic, making use of opportunities where they arose. Some challenges in implementing TC were common to all schools; others were more localized. Triple C has been broadly successful, with earlier and more specific identification of struggling students being of particular value. Some programs struggled with renegotiating the role and presence of specialist physicians outside of family medicine in the training of family doctors. Implementing TC involved substantial administrative and resource costs. Schools that delayed the adoption of the TC curriculum learned from earlier adopters, and many partially attribute their success to concurrent and new assessment programs.

Conclusion Despite many challenges, TC has been a driver for much quality improvement in programs and it has catalyzed the Canadian family medicine community to be much more engaged in and attentive to educational matters.

R2C2 in residency

Facilitating feedback implementation

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Abstract

Objective To test an evidence-based model (R2C2) in residency education. The model focuses on building relationships; exploring reactions to the feedback; exploring understanding of feedback content; and coaching for performance change.

Methods This was an international study of 5 residency programs using case study methodology and realist evaluation. Dyads of residents and their supervisors were recruited. Supervisors were trained and then asked to use the R2C2 model in 2 feedback sessions, 3 to 6 months apart. Feedback sessions and subsequent debrief interviews were recorded and transcribed. Content and template analysis were used within and across cases. Synthesis consisted of case and comparative analysis to identify the usefulness of each component and suggest revisions required to strengthen the R2C2 model.

Results Forty resident-preceptor dyads were recruited. The R2C2 model was effective in engaging residents in a reflective feedback conversation, although variability was noted across sites. The process appeared to enhance resident engagement and reflection, guided self-assessment, and encouraged active collaboration in the development of goals and outcomes. The model appeared to be useful with both excelling and struggling residents. Coaching for change was the most useful feature of the model, with the learning change plan an integral component of the coaching discussion. Factors influencing the use of the R2C2 model included supervisor and resident factors, such as the resident-supervisor relationship, and programmatic assessment approaches and contextual factors.

Conclusion The model can be effective in engaging residents in reviewing their performance assessment data, in reflecting and identifying opportunities for improvement, and in working with their supervisors to plan and implement improvements.

Barriers to acquiring minor procedural skills in family medicine training at the University of Toronto in Ontario

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Abstract

Objective To evaluate current barriers to minor procedural skills training in postgraduate family medicine at the University of Toronto in Ontario.

Design This is a qualitative study that employed a grounded theory methodology. The data set is multisourced, including accreditation documents, one-on-one interviews, and surveys. Interviews were audiorecorded and transcribed verbatim. Documents, transcripts, and survey responses were coded and categorized for common themes.

Setting This study took place during postgraduate residency training within the Department of Family and Community Medicine (DFCM).

Participants The DFCM faculty physicians (11 from 10 sites), program directors (5), and first-year and second-year family medicine residents who volunteered to participate (9).

Main outcome measures The identification of barriers in teaching and acquiring minor procedural skills facilitates further inquiry to improve current standards of training in postgraduate family medicine.

Findings Family medicine sites employ a variety of approaches to deliver procedural skills training. Three were identified in family medicine: routine clinical practice; designated clinics; and academic workshops. Each has its own barriers. Despite various strategies employed by sites, nearly all residents surveyed feel their current curricula are insufficient to develop procedural competence and confidence. Important barriers identified include an insufficient volume of patients or case mix, infrequent procedural clinics spread among too many residents, and insufficient protected time to pursue complementary training. Residents have difficulty obtaining procedure-rich electives within family medicine, and experience tends to come disproportionately and inconsistently from external rotations. Teachers also identify underlying influences on training. In addition to an insufficient case mix, these include a perception of insufficient initiative among residents, an insufficient pool of experienced supervisors, and easy access to other specialists for procedural referrals in urban settings.

Conclusion Challenges to minor procedural training are multifaceted; strategies to address this must also be multifaceted. This study identifies minor procedural skills training needs within the DFCM at the University of Toronto, with a view to improvement.

Training doctors for rural generalist practice

Memorial University's pipelines to pathways approach

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Abstract

Objective The objective of Memorial University of Newfoundland's "pathways to rural practice" approach is to produce rural family physicians to meet the rural health care needs of Newfoundland and Labrador and Canada.

Design The pathways to rural practice approach has led to a program made of 4 components: a targeted preadmission process (Indigenous initiative, MedQuest geographic and minority selection); medical school clinical placements (rural experiences); vocational family medicine (FM) residency training (extended rural training experiences, deeper community integration); and postgraduate (PG) training (opportunities for professional and faculty development).

Setting This study considers data from Atlantic Canada and Memorial University's School of Medicine.

Participants This study included Memorial's medical school students and graduates from the classes of 2011 to 2019.

Intervention A survey and administrative data were used to collect student background data (address history, medical training and PG placements, and practice location data).

Main outcome measures To evaluate Memorial's medical school curriculum we considered the percentage of placement weeks spent in rural locations for clinical placements and FM residencies.

Results For the graduating classes of 2011 to 2019 (N = 617), 90% of year 1 community health placement weeks took place in rural locations. Of the 537 students (classes of 2011 to 2018) who completed year 3 FM placements, 97% of their placements were spent in a rural location (community or town). Of the students who graduated between 2011 and 2013 and went on to complete FM-PG training at Memorial (n = 49), 100% completed rural training in some capacity. The same graduates (2011 to 2013, n = 49) spent 52 weeks (55%) out of 95 weeks in rural areas while completing their FM training.

Conclusion The "pathways" approach has allowed Memorial to become one of the main producers of rural generalists for both Newfoundland and Labrador and Canada.

Lifelong learning in health professions

Meta-analysis along the education and career continuum

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Abstract

Context Lifelong learning is an important aspect of health professionals' maintenance of competence. Several studies have examined the orientation toward lifelong learning at various stages of the education and career continuum; however, none has looked at changes throughout training and practice.

Objective To determine whether there are differences in this orientation between groups defined by their places on the education and career continuum. Additionally, involvement in scholarly and research activities was considered for its influence on the orientation toward lifelong learning.

Design This was a group-level meta-analysis of studies that used the 14-item Jefferson Scale of Physician Lifelong Learning or its variants. In total, 11 studies conducted with postsecondary health professions students, residents, and practising professionals met the inclusion criteria.

Main outcome measures Means and standard deviations of the total scores on the Jefferson Scale, together with sample sizes, were extracted from each study and used in the analysis.

Results Results of the meta-analysis indicated that the orientation toward lifelong learning in the health professions tended to increase gradually further along the career continuum; however, substantial variability was observed within each group of studies, with students, residents, and practising professionals. Significant differences in group means were found between trainees (students and residents) and practising professionals. Involvement in scholarly and research activities appeared to be associated with a greater orientation toward lifelong learning along the career continuum.

Conclusion The findings offer insights into the long-term trend in the orientation toward lifelong learning in health professions. Although the links between lifelong learning and its behavioural manifestations in the health professions have been reported in the literature, much work in this area still needs to be done, including examination of the effects of lifelong learning on patient care.

Does a structured curriculum help residents diagnose and treat skin cancer?

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Abstract

Objective To determine whether a biweekly procedure clinic and structured procedural curriculum throughout family medicine (FM) residency prepares residents to identify and manage skin cancers better than routine opportunistic teaching of skin procedures does.

Design A survey and photo quiz before and after participating in the structured curriculum or opportunistic teaching.

Setting Family medicine training sites at the University of Ottawa in Ontario.

Participants All incoming FM residents starting residency (N = 60).

Main outcome measures All incoming FM residents were asked to fill out a survey and photo quiz at the beginning of their training to establish their level of experience with and knowledge of skin conditions. The photo quiz was validated by a dermatologist. The FM residents at one site received training in the procedure clinic every 2 weeks, along with a structured procedural curriculum focused on the diagnosis and management of skin cancer during 8 months of FM training throughout the 2 years of residency. The other sites had routine opportunistic teaching on the diagnosis and management of skin cancer. The procedure clinic is based on hands-on experience with direct supervision by the study authors. At the end of their first year and at the end of their training all FM residents were asked to fill out a survey and photo quiz to verify their knowledge.

Results Twenty-five residents participated in the initial survey and photo quiz. The study participants and nonparticipants obtained a score of 61% and 58%, respectively, at the beginning of residency and 76% and 57%, respectively, at the end of residency.

Conclusion Our results indicate that a longitudinal curriculum helps FM residents identify and treat skin cancers, whereas opportunistic teaching showed no objective benefit.

Integrating a medical assistance in dying curriculum in a family medicine residency training program

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Abstract

Objective To determine family medicine (FM) resident and faculty perceptions about medical assistance in dying (MAID) in terms of interest in and knowledge of MAID, experiences with MAID, willingness and readiness to learn or teach about MAID, anticipation of participating in MAID, and recommendations for curricular content for residents, faculty development, and continuing professional development.

Design An exploratory mixed-method design was used to help inform the development of an integrated MAID curriculum.

Setting A Canadian FM residency program that included 4 distributed sites: 1 academic FM site and 3 community-based FM sites.

Participants Using purposive sampling, anonymous online surveys were distributed to FM physician preceptors (n = 158) and first- and second-year FM residents (n = 193) associated with the FM program under study.

Results Survey response rates were 45% for faculty and 33% for residents. Faculty were significantly more confident, competent, and comfortable than residents were in explaining and discussing MAID with colleagues and patients ($P < .05$). Residents, however, were more willing to participate in administering MAID than faculty were ($P < .05$). Seventy-two percent of respondents believed it is important to integrate MAID into the core curriculum, with faculty who were non-conscientious objectors being more likely to believe it should be included in the curriculum ($P < .05$). The curricular elements deemed most important included advance care and end-of-life planning (76%), technical aspects (73%), and regulations and ethical issues (56%).

Conclusion Developing a MAID curriculum will bridge the competency gap self-identified by participants. Patients' access to compassionate end-of-life care can be improved through training that increases the comfort, confidence, and competence of both faculty and residents in the topic of MAID. Of importance is developing faculty development and continuing professional development sessions to educate and support both conscientious objectors and non-conscientious objectors, allowing all residents to learn about the care of patients requesting MAID.

From reactive to proactive

Disease prevention and health promotion in undergraduate medical education

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Abstract

Objective To evaluate the delivery of health promotion and disease prevention (HPDP) content in the curriculum at the University of Calgary medical school.

Design Mixed-methods study.

Setting Cumming School of Medicine in Calgary, Alta.

Participants Purposive sampling of 18 faculty from 7 specialties and 18 student volunteers.

Intervention Using the Clinical Prevention and Population Health Curriculum Framework, data extraction was piloted, refined, and used to document HPDP content in the published curriculum. Students extracted quantitative and qualitative data on teaching activities. Two focus groups were conducted with year 1 and 2 learners. Faculty participated in semistructured interviews.

Main outcome measures Quantitative data were analyzed using descriptive statistics to give the proportion of learning events with HPDP content and the proportion of content in each of the 4 key areas identified by the framework. Qualitative data were analyzed thematically using the aforementioned theoretical framework.

Findings Of the 935 learning events identified, 88.8% were available for analysis: 30.2% of the learning events contained disease prevention content while only 16.8% contained health promotion content. The most frequently identified subject was foundations of population health (75.6%) and the least frequently identified was health systems and health policy (9.45%). Students in focus groups called for more integration of HPDP into existing content and suggested HPDP be included in communications cases. Faculty emphasized a need to address HPDP proactively by focusing on disease before it manifests rather than concentrating on secondary and tertiary prevention.

Conclusion Health promotion and disease prevention content is well represented in the curriculum at the University of Calgary, but the experiences of students and faculty suggest the need for an HPDP approach that helps students better integrate and apply HPDP knowledge in clinical practice. This includes raising students' awareness of their own attitudes toward HPDP and providing opportunities for HPDP communication skills development in the undergraduate curriculum.

Understanding curricular messaging surrounding enhanced skills programs from the family medicine resident perspective

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Abstract

Objective To better understand the messages family medicine residents are receiving about enhanced skills fellowship programs throughout their training.

Design Phenomenologic approach using structured qualitative interviews.

Setting Postgraduate family medicine program in Ontario.

Participants Residents were recruited using both purposive and, subsequently, snowball sampling until data saturation was reached. Eleven family medicine residents (5 first-year residents and 6 second-year residents) were interviewed from 4 separate training sites.

Methods Interviews were audiorecorded and transcribed and codes were developed by the study investigators. Themes arose from the data via immersion and crystallization techniques.

Main findings Themes emerged in 3 categories: perception of purpose; sources of messaging; and formal and informal versus hidden curricular messages. Residents viewed fellowship programs in terms of their personal and professional benefits. Residents learned about fellowship programs through word of mouth and role modeling. The formal curriculum remained neutral about fellowship training. The hidden curriculum highlighted a number of messages: to maximize the chances of acceptance into some fellowship programs, one should focus most of their elective time in that clinical area; many fellowships graduate subspecialists to the exclusion of family medicine; a fellowship is required to practise in a large urban centre but not in rural communities; and graduates without fellowship training are less well regarded.

Conclusion Residents both hear and perceive mixed messages regarding fellowship training. This might be an isolated phenomenon at a larger urban centre in Ontario. Decision making at the individual level in terms of career path seems to be affected and this might have implications at the larger system level.

Implantation de l'accès adapté en unités de médecine de famille

Une recherche participative

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Résumé

Objectif Soutenir l'implantation de l'accès adapté (AA) dans les unités de médecine de famille (UMF) de l'Université de Sherbrooke (Québec) et identifier les défis et solutions à l'enseignement de l'AA aux résidents.

Méthodologie Une recherche participative a été menée de 2015 à 2017 avec la communauté de pratique des directeurs d'UMF en utilisant une méthode qualitative descriptive. Un comité Accessibilité a été formé pour accompagner le processus d'implantation de l'AA. Le comité réunissant la directrice de la recherche, une coordonnatrice, 2 directeurs d'UMF, un résident, une patiente partenaire, 3 expertes (changement organisationnel, amélioration de la qualité et AA) et 2 représentants du département. Les données ont été recueillies au moyen de 6 groupes de discussion traitant de différents aspects de l'implantation. Les résultats des analyses thématiques ont été validés avec la communauté de pratique.

Contexte Le projet a été réalisé dans 10 UMF de l'Université de Sherbrooke.

Participants La communauté de pratique des directeurs d'UMF (n = 18) représente les 110 superviseurs et 190 résidents des UMF.

Résultats Toutes les UMF ont adopté le modèle d'AA. La majorité (80 %) a implanté l'AA tant pour les superviseurs que pour les résidents. Quatre défis à l'enseignement de l'AA aux résidents ont émergé: définir la patientèle; assurer une continuité des soins; adopter une approche de collaboration interprofessionnelle; et formaliser l'enseignement de l'AA. La planification préalable de la patientèle, l'appariement des résidents, la clarification des rôles des professionnels et la formation initiale et continue de l'AA ont été identifiés comme des solutions pour faciliter l'enseignement de l'AA aux résidents.

Conclusion À la fin de cette présentation, le participant sera en mesure d'identifier des stratégies pour favoriser l'implantation et l'enseignement de l'AA en UMF et de mieux comprendre l'utilité de la recherche participative.

Les courbes cognitives pour différencier un déclin normal relié à l'âge du développement d'une démence

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Résumé

Objectif Concevoir des courbes cognitives d'usage facile pour appuyer les cliniciens dans le suivi de leurs patients en utilisant uniquement des résultats de mini-examen de l'état mental (*Mini-Mental State Examination* ou MMSE) combinés à l'âge et à la scolarité.

Type d'étude Modélisation mathématique rétrospective.

Contexte Le MMSE demeure l'outil cognitif le plus utilisé dans le monde. Les performances au MMSE sont principalement influencées par l'âge et par la scolarité. La tâche demeure difficile en première ligne de faire la différence entre un déclin cognitif normal et l'apparition des premiers signes d'un processus dégénératif.

Participants La base de données de l'Étude sur la santé et le vieillissement au Canada qui regroupe 7569 personnes âgées de 65 ans et plus ayant complété le MMSE au départ puis à 5 et à 10 ans.

Intervention La modélisation mathématique de la relation entre l'âge, la scolarité et le résultat du MMSE a permis de générer des courbes cognitives (CC) de percentiles selon la trajectoire normale attendue et basées sur les nouveaux concepts de quotient cognitif et d'âge standardisé. Une zone de seuil inférieur (*cutoff*) était intégrée. Les CC ont ensuite été validées à l'aide d'une base de données externe (National Alzheimer's Coordinating Center).

Paramètres à l'étude Les sensibilités, les spécificités, les valeur prédictives positives, les valeur prédictives négatives, des CC et la stabilité de ces mesures.

Résultats Le déclin d'un intervalle de percentile ou plus à partir de la mesure initiale suggère la présence d'une trajectoire cognitive anormale avec une sensibilité de 80 %, une spécificité de 89 % et une valeur prédictive négative de 99 %.

Conclusion À l'image des courbes de croissance pédiatriques nous proposons ici un modèle innovateur de courbes cognitives qui tient compte du MMSE, de l'âge et de la scolarité pour déterminer si des patients âgés ont un déclin cognitif normal ou non. Les CC rendent possible un suivi longitudinal tout en intégrant un seuil ponctuel qui permet d'orienter précocement vers des investigations plus poussées.

La télétraumatologie en milieux ruraux

Une revue de littérature—travail en cours

Marie-Hélène Lavallée-Bourget MSc Luc Lapointe MA Alexia Pichard-Jolicoeur Jade Labrie Richard Fleet MD PhD

Résumé

Contexte Les traumatismes sont une cause importante de morbidité et de mortalité dans les milieux ruraux. Ces milieux ont cependant moins facilement accès à des médecins spécialistes en traumatologie que les milieux urbains, ce qui entraîne des délais de prise en charge et nécessite parfois des transferts sur de longues distances vers les centres hospitaliers spécialisés. Avec l'avènement des technologies de l'information, la télémédecine semble offrir des avenues prometteuses pour pallier ce problème.

Objectif Déterminer l'impact de la télémédecine sur la prise en charge des patients victimes de traumatismes en milieux ruraux.

Design Une revue systématique rapide de la littérature scientifique a été effectuée à partir des concepts suivants: «traumatology» et «rural» et «telemedicine» ou «teletrauma». La stratégie de recherche a été lancée dans 13 bases de données bibliographiques. Cette recherche a permis d'identifier 157 documents. Le tri des articles a été effectué par 2 codeurs indépendants selon des critères d'inclusion prédéfinis. Uniquement les articles parus après 2010 ont été conservés pour l'analyse, réduisant le nombre d'articles à 19. Les bibliographies des documents retenus ont été ratissées à la recherche de nouveaux articles pertinents. La question de recherche étant de nature causale seules les études expérimentales, quasi expérimentales et de cohorte ont été conservées.

Résultats Jusqu'à maintenant 9 articles ont été sélectionnés pour extraction. Les résultats préliminaires suggèrent que l'utilisation de la télémédecine (téléphones intelligents, logiciels, réseaux privés virtuels, etc.) peut améliorer la prise en charge des patients.

Conclusion L'apport de la télémédecine semble donc avoir un impact positif sur la qualité des soins prodigués aux patients traumatisés en milieu rural. Les résultats préliminaires confirment l'intérêt de poursuivre la recherche de nouveaux articles notamment en élargissant la période temporelle et en effectuant des recherches dans la littérature grise.

Améliorer les soins des patients ayant des besoins complexes en première ligne

Catherine Hudon MD PhD CCMF Maud-Christine Chouinard PhD Marie-Dominique Beaulieu MD FCMF MSc
Paul Morin MSc PhD Danielle Bouliane MA Fatoumata Diadiou Mireille Lambert MA Véronique Sabourin

Résumé

Objectif Identifier les enjeux et des pistes de solution pour améliorer les soins et les services aux patients ayant des besoins de santé complexes en groupes de médecine de famille (GMF).

Devis et méthodes Approche de recherche participative dans le cadre d'un forum provincial utilisant des groupes de discussion mixtes d'acteurs-clés des milieux de la santé des services sociaux universitaires et communautaires ainsi que des patients partenaires pour identifier les enjeux; puis des groupes de discussion disciplinaires pour identifier des pistes de solution. Une analyse thématique des données a été réalisée.

Organisations Les participants provenaient de centres intégrés et de centres intégrés universitaires de santé et de services sociaux de GMF et d'organisations communautaires de 16 régions du Québec.

Participants En total, 160 personnes ont participé: gestionnaires (n=52), décideurs (n=15), chercheurs (n=23), pharmaciens (n=13), médecins (n=9), infirmiers et infirmières praticiens spécialisés (n=18), patients partenaires (n=11), travailleurs sociaux (n=10), représentants d'organismes communautaires (n=6), psychologues (n=2) et kinésithérapeute (n=1).

Résultats Les enjeux identifiés portaient sur: la conciliation des mandats des GMF axés sur une population de patients inscrits et des centres intégrés et de centres intégrés universitaires de santé et de services sociaux axés sur la population d'un territoire; la méconnaissance mutuelle du réseau des GMF et du réseau des organismes communautaire; une clientèle à risque hétérogène qui passe souvent sous le radar; et le défi de structurer l'action collective de plusieurs professionnels et partenaires. Les pistes de solution suggéraient: la conception de l'utilisateur en tant qu'expert de sa complexité; la conception des organismes communautaires comme partenaires de l'équipe GMF; la création de nouveaux modèles professionnels; la gestion du changement; la contribution de la recherche axée sur le patient; et un financement qui favorise le travail interprofessionnel.

Conclusion Cette présentation permettra aux participants d'envisager de nouvelles pistes de solution pour l'amélioration des soins et des services aux patients ayant des besoins de santé complexes en GMF et de comprendre les enjeux qui s'y rattachent.

Le Programme de sensibilisation à la santé cardiovasculaire pour les patients en liste d'attente pour obtenir un médecin de famille

Marie-Thérèse Lussier MD MSc Janusz Kaczorowski PhD Magali Girard PhD

Résumé

Contexte Le Québec affiche le pourcentage de patients orphelins le plus élevé au Canada. Par conséquent des listes d'attente centralisées ont été mises sur pied dans le but de contrer les difficultés à obtenir un médecin de famille. Au moment de s'inscrire les patients sont répartis selon des codes de priorité. En raison des délais d'attente et du caractère réduit des évaluations il peut arriver que les codes de priorité ne soient plus à jour ou qu'ils soient erronés. Le Programme de sensibilisation à la santé cardiovasculaire (PSSC) pourrait permettre à des patients sur la liste d'attente de se voir accorder une nouvelle priorité et obtenir plus rapidement l'accès à un médecin de famille. Le but de ce projet pilote est de déterminer dans quelle mesure il serait réalisable et acceptable de mettre en place un programme comme le PSSC pour les patients adultes en attente d'un médecin de famille.

Méthodes L'intervention était offerte à des patients adultes de 40 ans et plus inscrits sur la liste d'attente du guichet d'accès à un médecin de famille de Laval (Québec). Des séances PSSC ont été menées par des bénévoles formés sous la supervision d'une infirmière. Leur déroulement comprenait notamment la prise de la pression artérielle, la mesure du tour de taille et de l'indice de masse corporelle, l'évaluation du risque cardiométabolique, la distribution de documentation éducative et d'information sur les ressources communautaires liées aux saines habitudes de vie, et la recommandation à un médecin de famille local pour les patients chez qui un risque de santé a été décelé.

Résultats Le projet a permis d'identifier les patients qui nécessitaient de l'aide médicale immédiate. En effet, plus de 40 % des participants ont été orientés vers des programmes de promotion de la santé offerts par des autorités sanitaires locales. La plupart des participants étaient sédentaires, ne consommaient pas suffisamment de fruits et légumes, et souffraient d'embonpoint ou d'obésité.

Conclusion Les programmes communautaires de sensibilisation à la santé cardiométabolique tels que le PSSC peuvent présenter des avantages pour les évaluations des guichets d'accès: ils permettent d'identifier les participants qui nécessitent des soins immédiats et de leur attribuer un médecin, d'offrir de la documentation éducative sur les saines habitudes de vie, et d'orienter les participants vers des ressources communautaires locales gratuites ou à prix abordable qui souvent sont inconnues des participants ou généralement sous-utilisées.

Évaluation de l'état de préparation à la mise en place du Programme de sensibilisation à la santé cardiovasculaire dans les logements sociaux subventionnés du Québec

Janusz Kaczorowski PhD Marie-Thérèse Lussier MD MSc Gina Agarwal MD PhD Magali Girard PhD

Résumé

Contexte Les résidents des logements sociaux subventionnés constituent une tranche de la population vulnérable à faible revenu et reconnue comme étant en moins bonne santé que les locataires de logement privé ou les propriétaires. Le Programme de sensibilisation à la santé cardiovasculaire (PSSC) est un programme communautaire de prévention et de prise en charge des maladies chroniques. Son objectif consiste à réduire le fardeau associé aux maladies chroniques qui pèse sur le système de santé en s'attaquant aux facteurs de risques en aidant les patients à obtenir des soins primaires et en améliorant les liens avec les ressources communautaires. Présenté sous forme d'évaluation des besoins et de l'état de préparation, ce projet a pour but avant tout d'évaluer les attitudes des principaux intervenants (disposés au changement), les conditions (le contexte, la structure) et les ressources (humaines, matérielles et financières): en somme tout ce qui est nécessaire à l'intégration d'un programme comme le PSSC dans les logements sociaux du Québec.

Méthode Ce projet propose d'adapter le PSSC aux besoins locaux en appliquant une approche intégrée de transfert du savoir qui repose sur la consultation de cliniciens, de participants, de gestionnaires du système de santé, et d'édifice de logements sociaux et d'ambulanciers. L'intervention comprend une série de groupes de discussion avec les principaux intervenants et un sondage ciblant les résidents des logements sociaux.

Milieu et participants Ce projet sera réalisé dans des cliniques et des logements sociaux situés dans les réseaux de recherche fondée sur la pratique de l'Université McGill et de l'Université de Montréal (Québec).

Résultats Les paramètres à l'étude compteront notamment un profil de l'état de santé des locataires de logements sociaux ainsi qu'une analyse de leurs besoins en matière de soins de santé et de leur niveau de littératie en santé. Les groupes de discussion éclaireront les positions des intervenants et mettront en valeur les conditions et les ressources qui entrent en jeu dans la mise en œuvre de programmes comme le PSSC pour les résidents des logements sociaux.

Conclusion Les résultats du sondage et des groupes de discussion seront indispensables pour formuler des recommandations et pour rédiger un guide d'implantation. On s'attend à ce qu'une part importante des résidents n'aient pas d'interactions régulières avec des fournisseurs de soins primaires et probablement que peu d'entre eux aient un médecin de famille. Un protocole de suivi sera ajouté au guide d'implantation une fois que les facteurs de risques seront identifiés.

Addressing driving retirement with our clients

Scoping review

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Abstract

Objective To review the existing literature on interventions supporting clients in their transition to driving retirement.

Design A scoping review was completed in September 2016.

Method Articles were identified through PubMed, EMBASE, and the reference lists of relevant articles with key words that included *driving retirement intervention* and *driving cessation intervention*. The selected articles had to be published in English and provide specific directions to support the transition to driving retirement. Articles strictly focused on the assessment of driving capacities were excluded. A thematic analysis was conducted to synthesize findings.

Main findings Twenty articles were deemed relevant to informing professionals' interventions related to driving retirement. These articles fell into 4 themes: outcomes of driving retirement (n=5), perceived barriers to driving retirement (n=2), suggestions for driving retirement interventions (n=3), and description and evaluation of existing programs (n=10). Programs and interventions were often delivered in a group format by multidisciplinary teams, including occupational therapists, physicians, nurses, and peer leaders, and addressed both practical and emotional concerns associated with driving retirement.

Conclusion The findings of this review will enable family physicians to identify and explore with clients the practical and emotional concerns linked to driving retirement. Family physicians will also be able to provide concrete and evidence-based strategies to their clients who need to transition to driving retirement. Finally family physicians will be able to determine situations that would benefit from the input of an occupational therapist.

Overcoming language barriers through the training of health professional students as volunteer interpreters

Shiva Adel MD MSc Belle Song MD CCFP Eva Purkey MD CCFP FCFP MPH

Abstract

Context In recent years, Kingston, Ont, has seen an influx of new Canadians with limited English proficiency, most recently with the arrival of Syrian refugees. Currently there are limited resources for medical interpretation at the Queen's Family Health Team (QFHT). Patients with limited English proficiency have considerable health disparities, which can be improved through access to trained interpreters.

Objective To develop and evaluate a sustainable model to provide free interpreter services within primary care to patients with limited English proficiency at the QFHT.

Design Qualitative, descriptive study including surveys and program evaluation.

Setting Academic family health team in a medium-sized city.

Participants Forty-four student volunteers from health sciences backgrounds, more than 50 patients with limited English proficiency, and health care providers at the QFHT.

Intervention Student volunteers underwent a training session regarding medical interpretation, confidentiality, and cultural competency. They were paired with patients with low English proficiency and attended medical intake and follow-up appointments at the QFHT to provide interpretation between patients and health care practitioners throughout the year.

Main outcome measures Surveys were distributed to volunteer interpreters before the training session to assess interest, level of experience, and exposure to medical interpretation. A second survey was then administered several months later to collect feedback from volunteers, patients, and health care practitioners regarding the effectiveness of the program and potential improvements that could be implemented.

Results Volunteer interpreters attended 2 evenings of patient intake sessions and more than 40 follow-up appointments and urgent care visits. Preliminary feedback from volunteers and health care providers is positive and suggests that this provides a valuable service to underserved patients and health care providers at the QFHT.

Conclusion Our program provides access to free interpreter services at the QFHT through health sciences students who have received informal training in interpretation, cultural competency, and confidentiality.

Implementation of the OCFP poverty screening tool in primary care and pediatric settings

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Andrew D. Pinto MD CCFP FRCPC MSc Christina Klassen MD Shannon French MD Matti D. Allen PhD Ethan Toumishey MD

Abstract

Objective To evaluate the feasibility of universal screening for poverty in primary care and pediatric settings.

Design This study was an implementation evaluation of universal poverty screening, including a questionnaire to assess the acceptability of being screened and focus groups to explore barriers to and facilitators of implementation.

Setting This study took place in 6 family medicine practices (community health centres, family health teams, an academic family health team, and private practice) as well as in inpatient and outpatient pediatric settings in Kingston and Napanee in Ontario.

Participants A total of 22 health care providers (family doctors, nurse practitioners, pediatricians) and 148 patients completed the questionnaire about poverty screening.

Methods Health care providers were first trained using the Ontario College of Family Physicians' "Treating Poverty" workshop and related poverty tool. They were instructed to perform universal poverty screening on their patients using the question "Do you have difficulty making ends meet at the end of the month?" for the duration of the study (3 months). Health care providers tracked the numbers of patients screened. Surveys were distributed to patients to assess the acceptability of being screened for poverty in a health care setting. Following the study period health care providers were invited to focus groups to explore barriers to and facilitators of implementing universal screening with this tool.

Main findings Despite the substantial motivation of the providers, only approximately 10% of patients were screened during the study period. Most patients (72%) either agreed or strongly agreed that screening was important. Lack of time and simply forgetting were some of the barriers encountered. Despite these barriers, most health care providers strongly supported normalizing the discussion of a patient's financial situation.

Conclusion For health providers to identify and intervene in cases of poverty, barriers need to be addressed to ensure that screening is universal.

Health outcomes and FP patient volumes

Phase I results

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Abstract

Context Primary care physician remuneration policies in Alberta are currently under review; at the moment it is a predominantly fee-for-service (FFS) system. Using blended capitation and capping FFS billings per day are being considered. Both would discourage high-volume (> 50 patients per day) practice, but little is known about high-volume practice in Alberta and its effects on patient outcomes.

Objective To improve our understanding of current physician patient volumes and billing practices in relation to associated provider demographic characteristics.

Design Analysis of Alberta FP billing and demographic data.

Setting Alberta.

Participants All FFS FPs in the province (N = 3465).

Main outcome measures Characteristics of high-volume practice, including international medical graduate (IMG) status, geography, and billing patterns.

Results Approximately 30% of FPs currently working in Canada are IMGs. High-volume status was modeled on general practice billing data from 2011 to 2015, provider demographic characteristics, and geographic parameters in simple comparisons and in a logistic regression. Logistic regression analysis revealed that high-volume practitioners tended to avoid service codes representing time-intensive services, were typically older, were typically male, and tended to be located in the north of the province. Additionally, IMGs were substantially more likely to be high-volume practitioners. Rurality was not associated with high-volume practice independently of location in the north. A large number of FPs do work not full-time.

Conclusion The results of this study serve to fill an important knowledge gap about high-volume practitioners and facilitate the next step in exploring the interaction between service volume and health outcomes. These results are important for policy-makers when considering the design of a payment system to optimize patient outcomes.

Examining family medicine residents' self-reported perceptions of their specialty

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Abstract

Context Triple C is a competency-based medical education initiative that aims to ensure that graduates from any family medicine residency program in Canada are prepared to provide comprehensive care to patients across the lifespan and meet the needs of the community. The Family Medicine Longitudinal Survey (FMLS) which began in 2012 is intended to evaluate Triple C. In this study we used data from the FMLS to explore potential changes in perceptions about the discipline of family medicine before and after residency.

Objective To explore resident responses on the FMLS to understand how residents perceive their medical specialty; identify aspects of the discipline that might need improvement; and show evidence of changes in perceptions before and after residency.

Design Secondary data analysis using de-identified FMLS responses from 1 cohort at entrance (T1) and exit (T2) of residency.

Setting Canada.

Participants One cohort of family medicine residents (N = 424).

Main outcome measures Level of agreement with statements about family medicine as a discipline.

Results Most residents agreed with feeling proud to become a family physician; that patients recognize the value of the discipline; and that family physicians provide a valuable contribution that is different from other specialists and valuable beyond referrals. This high level of agreement was consistent at T1 and T2. Interestingly, a substantial proportion of T2 respondents believed the government does not perceive family medicine as essential to the health care system, a notable change from T1 responses. This finding was not found to be correlated with practice intentions.

Conclusion The FMLS has provided insight into resident perceptions of family medicine. While most perceptions about the discipline were positive at T1 and T2, more than 50% of respondents indicated that they perceived that the government does not value the discipline. Surveying residents about their perceptions about family medicine has provided valuable insights into areas needing further examination.

Personal health of family physicians

Barriers and gaps in care and solutions

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MBBS Christopher Simon PhD Iuliia Oleksand Povieriena MSc Bridget McDonald

Abstract

Objective To determine the barriers and systemic gaps physicians encounter when seeking help and suggest solutions to prevent physician burnout.

Design This qualitative study used grounded theory to uncover the recurrent themes identified in semistructured discussion groups.

Setting This study was conducted in the setting of a conference on physician wellness.

Participants Convenience sample of 57 participants (51% family physicians, 35 females, 22 males).

Methods Following the testimonials of local physicians on themes of physician wellness and resilience, the participants were divided into 10 focus groups for discussion. Based on the recordings and scribe notes of the discussions, a spreadsheet of identified themes was created. These themes were then grouped into categories such as barriers, gaps, and solutions. The frequency of each theme being mentioned was tabulated and the most common themes were identified.

Main findings Twenty-two themes related to barriers, 9 themes on gaps, and 24 related to solutions, were identified and their occurrence summarized. The most frequently mentioned barriers to seeking help were stigma, unsupportive work environment, and denial. The most commonly identified gap was lack of accessibility of existing services. This was especially true for family physicians in the community. The most frequently suggested solutions to barriers were creating a culture of support, providing continued mentorship, and improving awareness and accessibility of existing resources.

Conclusion The CanMEDS framework for the role of Professional stipulates that the provision of optimal patient care requires physicians to take responsibility for their own health and well-being, and that of their colleagues. The findings of this study indicate that for physicians to accomplish this, a culture of support, mentorship, and awareness must be created. Proposed solutions include improved communication and collaboration among colleagues to reduce stigma and remove the shame in seeking help.

What Is the link between eConsult and CPD programming?

Erin Keely MD Clare Liddy MD CCFP FCFP Douglas Green MD Julia Stratton MD Christine Prudhoe Douglas Archibald PhD

Abstract

Objective To assess whether local annual refresher session offerings for primary care providers match their needs by coding and comparing session syllabi to clinical questions collected electronically through the Champlain BASE (Building Access to Specialists through eConsultation) service.

Design Retrospective review of eConsult clinical questions and continuing professional development (CPD) course offerings.

Setting Eastern region of Ontario.

Participants Primary care providers posing clinical questions through eConsult from July 2011 to January 2015.

Main outcome measures Syllabi from 521 refresher CPD sessions offered to primary care providers in the eastern region of Ontario over a 3-year period (2012 to 2014). The CPD session descriptions were coded using hybrid taxonomies derived from the International Classification of Primary Care, second edition; *Journal of the American Medical Association* specialty classifications; and our eConsult specialty services experts. Of the 22 670 total CPD minutes, 12 215 corresponded to the content offered through 12 eConsult specialty services. Percentage differences between CPD content and clinical questions posed through eConsult were calculated.

Results Congruence and dissonance between CPD content and clinical questions posed through eConsult varied significantly across the 12 specialty services. Within each specialty some topics were well covered, while others were not. For example psychiatry content such as depressive mood disorders, neurodevelopmental disorders, and substance-related and addictive disorders showed percent differences ranging from 11.5% to 26.3%. Personality disorders, somatic system disorders, and trauma-related disorders showed strong congruence (1.5% to 2.4% difference).

Conclusion Differences between questions asked by primary care providers at the point of care through eConsults and the content of contemporaneous CPD refresher courses can be analyzed to identify gaps in offerings. This knowledge, if shared with CPD program offices and providers, could be used to develop CPD curricula and highlight areas of need for inclusion in primary care update activities.

Mental health effects of partnering Indigenous Elders within primary care teams

Mixed-methods prospective cohort study

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Colleen Varcoe RN PhD Jennifer Dehoney Annette Brown RN PhD

Abstract

Objective To determine the mental health and broader effects of patients connecting with Indigenous Elders as part of routine primary health care.

Design Mixed-methods prospective cohort study with quantitative measures at baseline and after 1, 3, and 6 months and an in-depth qualitative interview at more than 3 months after the intervention.

Setting A western Canadian, urban Indigenous primary care clinic.

Participants Participants had to be older than 18 years of age and self-identify as Indigenous, with no prior contact with an Elders program. Forty-two patients were enrolled—4 had incomplete follow-up and 1 died—allowing for complete quantitative data for 37 participants. Overall, 70% were female and the mean age was 51 years; 33% had attended residential school and 67% had experience in the foster care system.

Intervention Participants connected with an Indigenous Elder as part of one-on-one or group sessions, or both. Follow-up visits were left to the discretion of the participant and the Elder.

Main outcome measures Quantitative depressive symptoms (PHQ-9 [Patient Health Questionnaire]) and suicide risk (SBQ-R [Suicidal Behaviors Questionnaire, Revised]) and qualitative descriptions of health effects and harms.

Results Twenty-four participants at baseline had moderate to severe depression (PHQ-9 score >10); of these, there was a decrease in depressive symptoms (5 points) that was sustained over a 6-month period ($P=.002$). Ten participants had an above-average suicide risk at baseline (SBQ-R score >7); of these, there was a decrease in suicide risk (2 points) that was sustained over a 6-month period ($P=.008$). Twenty-nine participants completed qualitative interviews; 28 of 29 indicated a clear positive effect and 0 of 29 indicated harms. Common effects were improved emotional regulation, adaptive behavioural changes, increased social connection, improved housing status, improved employment status, and less use of mood-altering substances.

Conclusion Connection with Indigenous Elders as part of routine primary care had a significant positive effect on depressive symptoms and suicide risk; it was also associated with beneficial mood, behavioural, and social outcomes and was not associated with identifiable harms.

Barriers and facilitators in primary care follow-up upon hospital discharge

Patients' and caregivers' perspectives

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Abstract

Objective To explore patient and caregiver experiences with how easy or difficult it was for patients to follow up with their primary care providers upon discharge from hospital, as the transition period from an inpatient setting to an outpatient setting is a vulnerable time for patients.

Design Qualitative, descriptive research design using semistructured, individual interviews.

Setting The study took place at the Toronto Western Family Health Team in Ontario. Interviews were held on site or over the telephone.

Participants A total of 13 participants (11 patients and 2 caregivers)

Methods Interviews were carried out with 11 patients and 2 caregivers. The purposive sampling technique was used to select patient participants who were discharged home from the Family Inpatient Service unit of the Toronto Western Family Health Team in the past 30 days; had an identified primary care provider in Ontario at the time of discharge; had 1 or more of chronic obstructive pulmonary disease exacerbations, congestive heart failure, gastrointestinal disorders, pneumonia, or acute myocardial infarction; and were able to speak English, Portuguese, or Mandarin (interpretation was made available).

Main findings Thematic analysis identified a number of barriers to follow-up by patient participants including language barriers, lack of communication between the patient and their primary care provider or inpatient physician, and lack of communication between the primary care provider and inpatient physician. Among the main facilitators of follow-up identified were the availability and accessibility of a patient's primary care provider, a patient's proximity to the primary care provider, and accessible transportation to and from the primary care provider's office.

Conclusion Understanding patients' postdischarge experiences has the potential to aid in developing interventions to improve patient quality of life and care in the postdischarge transitional period. By including the experiences and perspectives of both the patient and their caregivers, our research team was able to gain broader critical insight into patients' postdischarge experiences and create recommendations on strategies to improve them.

Reluctance to discuss advance care planning with primary care providers despite prompting during emergency department visits

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Abstract

Context Advance care planning (ACP) is important for patient-preferred care goals. Owing to the complexity of ACP, discussions should occur with patients' primary care providers. However, ACP discussions often occur in the emergency department (ED) during acute clinical encounters; this is not a conducive setting for such discussions.

Objective To determine whether introducing the importance of ACP in the ED would promote discussions with primary care providers.

Design Distribution of a patient handout with follow-up telephone survey.

Setting Community hospital ED.

Participants Patients 75 years of age or older attending the community hospital ED for nonurgent medical conditions.

Intervention Patients who consented to participate were given a handout describing ACP and were encouraged to pursue discussions with their primary care providers upon ED discharge. A follow-up telephone survey ensued 4 to 6 weeks after ED discharge to assess whether patients had initiated ACP discussions with their primary care providers. We also sought information regarding barriers to ACP discussions with their primary care providers.

Results Fifty-four handouts were offered during the ED visits, of which 50 were accepted. However, only 26 (52%) patients agreed to participate in the postdischarge telephone survey. The postdischarge survey indicated that only 3 of the 26 patients, all female, had initiated ACP discussion with their primary care providers. Of those who did not initiate ACP discussions with their primary care providers (23 of 26), 36% stated it was not a priority, 27% stated their physician-patient relationship was not open to such conversations, and 36% felt it was a family matter not requiring discussions with the primary care provider.

Conclusion The intervention implemented in the ED to promote ACP discussion by patients with their primary care providers was not successful owing to patient-perceived barriers. Knowing these patient-perceived barriers would be important for primary care providers to initiate appropriate targeted strategies to encourage ACP discussions and to help alleviate the burden of such discussions in the ED during acute clinical encounters.

Palliative care quality standard

Guiding evidence-based, high-quality palliative care

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Abstract

Context The Ontario Palliative Care Network is creating a quality standard focused on palliative care for adults with progressive life-limiting illness. This quality standard is a go-to resource containing a set of evidence-based measurable statements outlining what high-quality palliative care should look like for patients caregivers and health care providers.

Objective To identify and prioritize palliative care topic areas and develop evidence-based quality statements.

Design A systematic search was conducted for palliative care clinical practice guidelines published between 2011 and 2016. The AGREE II instrument was used to appraise the methodologic quality of the guidelines. An open call was conducted to recruit experts for a working group using a skills matrix to ensure broad representation across health sectors and geographic regions. A modified Delphi process was used to prioritize topic areas for the standard. A quality statement was developed for each topic area based on guideline evidence and working group expertise.

Setting The standard considers palliative care services provided in Ontario, inclusive of all settings and geographic regions, including family medicine practices and primary health care.

Participants A 26-member working group of clinical experts and lived-experience advisers was recruited. The clinical experts included physicians, nurses, volunteers, spiritual care providers, allied health care providers, researchers, administrators, and other service providers. The lived experience advisers were caregivers to people with progressive life-limiting illnesses.

Results The working group prioritized topic areas, which include identification; advance care planning and goals of care; assessment of needs; person-centred care plans; management of pain and symptoms; psychosocial aspects of care; education for health care professionals and volunteers; education for patients, families, and caregivers; setting of care and place of death; models of care; and transitions in care. These topic areas were developed into quality statements.

Conclusion The developed quality statements describe what high-quality palliative care should look like in Ontario.

Medical assistance in dying

Concern and optimism from palliative care physicians

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Abstract

Objective To understand palliative care physicians' perceptions of the anticipated effects of the legalization of medical assistance in dying (MAID).

Design Qualitative descriptive study using in-depth interviews.

Setting Southern Ontario

Participants Forty-four physicians (42 family physicians) practising primarily palliative care.

Methods Interviews were conducted in the time period between the 2015 Supreme Court ruling that decriminalized MAID in Canada and the implementation of federal legislation to govern the practice.

Main findings Participants articulated a wide spectrum of ideas regarding the nature and degree of anticipated effects of the legalization of MAID. Participants anticipated effects in multiple overlapping spheres affecting their patients, themselves, and their colleagues. Responses demonstrated complex and evolving ways of thinking about MAID that expressed a mixture of concern and optimism.

Conclusion Participants described the anticipated effects of the legalization of MAID primarily in relational terms. The principles of relational ethics were not a sensitizing concept for this study, but they provide a helpful lens through which to understand participants' perspectives.

Implications of identifying older patients in primary health care at risk of dying

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Abstract

Objective To explore the acceptability and implications of using a primary health care (PHC)-based electronic medical record (EMR) algorithm to help providers identify patients in their practices at risk of declining health and death.

Design Qualitative descriptive study using focus-group methods (6 focus groups in total).

Setting Palliative care, PHC, and geriatric care in Nova Scotia and Ontario.

Participants Twenty-nine health care providers and policy makers in PHC, palliative care, and geriatrics.

Methods Participants were purposively sampled to gain maximum variation. Thematic analysis with a constant comparative approach was used to analyze data to determine whether EMR identification algorithms were acceptable to health care providers and policy makers and to identify informed views on the clinical policy and social implications of practice-level identification in PHC.

Main findings Overall, PHC-based identification was viewed as acceptable and aligned with the values, aims, and positioning of PHC. Participants were less concerned about the identification algorithm itself and more concerned about what to do after identification. Participants believed PHC providers required additional training and supports to undertake conversations around a patient's values, wishes, and goals for future health care (ie, advance care planning [ACP]). Participants emphasized that early identification and ACP conversations required an integrated team approach. They also noted early identification would not only trigger ACP discussions but also prompt patients to reflect on and undertake life planning. Participants highlighted the need for a public health approach to early identification and that ACP is needed to optimize early identification and its effects.

Conclusion The research team has developed a validated algorithm using PHC EMR data to identify persons at risk of dying within 12 months. Understanding the implications of practice-level identification is critical to implementing EMR algorithms in ways that facilitate sensitive and responsive identification and care planning.

Reasons for requesting medical assistance in dying

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Abstract

Context Canadians have had the right to medical assistance in dying (MAID) nationally since June 2016.

Objective The purpose of this study was to review the charts of people who requested MAID to examine the reasons for their requests.

Design Retrospective chart survey.

Setting British Columbia in 2016.

Participants Patients who requested an assisted death and were assessed by 1 of 6 physicians.

Main outcome measures Patients' diagnoses and reasons for requesting MAID.

Results We have data on 270 assessments for MAID, with 132 assisted deaths, 14 natural deaths, and 124 others. The patients who had assisted deaths ranged in age from 26 to 102 years, with a mean age of 74.2 years. The most common diagnoses were malignancies (61, 46.2%), end-organ failure (29, 22.0%), and neurological diseases (28, 21.2%). For people who had assisted deaths, the reasons they gave as being the most important for their choice were disease-related symptoms (57, 43.2%), loss of autonomy (32, 24.2%), loss of the ability to enjoy activities (32, 24.2%), and fear of future suffering (10, 7.6%). There were significant differences in reasons given by people with different diagnoses; 66.7% of patients with malignancies gave either disease-related symptoms or fear of future suffering as their most important reason, while 66.7% of people with neurological diseases gave either loss of autonomy or loss of the ability to do enjoyable or meaningful activities as their most important reason ($P < .001$).

Conclusion This study shows that the reasons patients in British Columbia give for requesting an assisted death are somewhat different from those in other jurisdictions. Only 53.4% of our patients listed loss of autonomy as the first or second most important reason for the request compared with 91.4% of patients in Oregon. Loss of ability to enjoy activities was given as a reason by 53.4% of our patients compared with 86.7% of the Oregon patients.

Engaging patients as observers in monitoring hand hygiene compliance in family practice

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Abstract

Objective To assess the feasibility of engaging patients as observers to investigate hand hygiene compliance rates in our family practice clinic at Sunnybrook Hospital in Toronto, Ont, and whether all 4 moments of hand hygiene were being met.

Design This quality improvement study was conducted from 2013 to 2016. Each cycle occurred for a 2.5-week period. A convenience sampling strategy was used to obtain representative data by engaging a sample of participants presenting for scheduled appointments.

Setting The Sunnybrook Academic Family Health Team (SAFHT), which provides primary care services to patients and families.

Participants Participants included patients presenting to the SAFHT clinic.

Intervention Patients presenting to the SAFHT clinic were asked if they would be willing to participate in observing and recording their health care providers' hand hygiene compliance. Patients agreeing to participate were given a 1-page survey audit tool with instructions on which to record their observations. The surveys were collected from a dropbox at the end of the observation period and responses were entered into a spreadsheet for analysis and reporting.

Main outcome measures Hand hygiene compliance rates.

Results This study demonstrated a hand hygiene compliance rate of 94% in 2016 to 97% in 2013, maintaining the target of 95% for the clinic and exceeding the overall hospital target of 87%.

Conclusion This study emphasized the importance of patient communication as a novel way to evaluate programs that have direct patient care implications. The success of this initiative has encouraged its expansion to other ambulatory areas of the hospital. The results must be considered in light of study limitations, such as reliance on volunteer resources and the Hawthorne effect.

False-positive newborn screening results for cystic fibrosis

Effects on health service use

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Abstract

Context Evidence is mixed regarding the effects of false-positive newborn screening results on health care use.

Objective To determine the association of false-positive newborn screening results with health care use in infants and their mothers in Ontario, using cystic fibrosis (CF) as an example.

Design Population-based cohort study.

Setting Ontario.

Participants All infants with false-positive CF results (n = 1564) and matched controls with negative screening results (n = 6256) born between April 1, 2008, and November 30, 2012, using linked health administrative data sets.

Main outcome measures Maternal and infant physician and emergency department visits and inpatient hospitalizations from the infant's 3rd to 15th month of age. Negative binomial regression tested associations between newborn screening status and outcomes, adjusting for infant (comorbidities, income quintile, rurality) and maternal (age, mental health history) characteristics.

Results A greater proportion of infants with false-positive results had more than 2 outpatient specialist visits (16.2% vs 13.2%) and more than 2 hospital admissions (1.5% vs 0.7%) compared with controls; emergency department visits were not significantly different. Differences persisted after adjustment, with higher rates of specialist visits (RR = 1.39, 95% CI 1.20 to 1.60) and hospital admissions (RR = 1.70, 95% CI 1.24 to 2.34) for infants with false-positive results. Stratified models indicated the effect of false-positive status was greater among those whose primary care provider was a pediatrician compared with those whose primary care provider was a family physician. No differences in health care use among mothers were detected.

Conclusion Higher use of outpatient specialist services among infants with false-positive results might relate to follow-up carrier testing or heightened perceptions of vulnerable infant health by parents or providers. However, increased rates of hospitalization might signal increased medicalization of these healthy infants. By understanding the downstream experience for patients and providers, newborn screening programs can better support them in navigating screening results. Specifically, counseling and education resources can be improved to ensure that parents and providers understand the benign nature of false-positive CF screening results.

Breastfeeding discontinuation in the Cypress Health Region and intrapartum factors

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Abstract

Context Previous research revealed that breastfeeding rates in the Cypress Health Region (CHR) in Saskatchewan dropped from 97% at discharge to 36.1% and 22.3% at 2 and 4 months postpartum, respectively. There is limited information on the relationship between intrapartum factors and breastfeeding discontinuation in the CHR.

Objective To determine the relationship between intrapartum factors and breastfeeding discontinuation in the CHR.

Design Cross-sectional retrospective chart audit.

Setting Cypress Regional Hospital.

Participants All women who delivered live infants at the Cypress Regional Hospital between January 1, 2014, and December 31, 2015.

Main outcome measures Intrapartum factors were included in the analysis, including duration of labour, route of delivery, skilled attendant at labour, group B streptococcus status, type of analgesia, presence of perineal tear, and presence of postpartum hemorrhage. Demographic factors were also considered, including maternal age, body mass index, and gestational age at delivery. Outcomes considered were breastfeeding status at discharge and at 2 and 4 months postpartum. Data were analyzed using descriptive statistics, *t* tests, χ^2 tests, and logistic regression.

Results A total of 762 charts met the inclusion criteria, representing normal vaginal deliveries (65.5%, 499 of 762), cesarean sections (27.0%, 206 of 762), and operative vaginal deliveries (7.5%, 57 of 762). Overall, 92.0% (701 of 762) of mothers were breastfeeding at discharge and were subsequently followed at 2 and 4 months postpartum. Of those breastfeeding women, the mean (SD) patient age was 28.3 (5) years and 40.3% were primiparous. A total of 72.7% (336 of 462) and 57.5% (267 of 464) of women who presented for follow up with public health at 2 and 4 months, respectively, were breastfeeding. There was no significant independent relationship between breastfeeding at 2 or 4 months and the presence of postpartum hemorrhage, group B streptococcus status, perineal laceration, or duration of labour. Women who had normal vaginal deliveries were more likely to be breastfeeding at discharge (OR = 3.03, 95% CI 1.76 to 5.21) compared with other delivery routes. Significant multivariate predictors of breastfeeding at 2 months were maternal age ($P < .002$), gestational age ($P < .034$), epidural analgesia ($P < .004$), and opioid analgesia ($P < .019$). Midwifery ($P < .014$) and specialist patients ($P < .0003$) were more likely to breastfeed at 4 months than those whose infants were delivered by a family physician.

Conclusion Breastfeeding discontinuation rates in the CHR at 2 and 4 months postpartum are noteworthy. Intrapartum factors that might predict breastfeeding discontinuation are the type of analgesia and the type of provider involved in the delivery. Significant demographic factors include both maternal and gestational age.

Age-related decline in social connections

Does it affect loneliness and depression in the elderly?

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Abstract

Objective To explore whether an age-related decline in social connections and capital exists and whether it has an effect on loneliness and depression in the elderly.

Design Survey using a written questionnaire inquiring about employment and social and family connections via personal contact, telephone, the Internet, or social media. The questionnaire also inquired about living arrangement, loneliness, and depression. In addition, patients filled out a 15-question Geriatric Depression Scale.

Setting Ten primary care practices.

Participants Patients aged 55 to 85 years.

Results A total of 101 survey questionnaires were completed. These were divided into 3 age groups (group 1 was patients aged 55 to 60 years [$n=32$]; group 2 was patients aged 61 to 70 years [$n=32$]; and group 3 was patients aged 71 to 85 years [$n=37$]) and analyzed using χ^2 and z statistics. There was a significant age-related decline in employment-related connections (66% vs 28% vs 16% for groups 1 to 3, respectively; $P<.005$). There was no difference for connections with friends (53% vs 66% vs 65%) or family (66% vs 66% vs 62% for groups 1 to 3, respectively). Only a small number were living alone (13% vs 25% vs 19% for groups 1 to 3, respectively; not significant). Depression was reported by 13%, 25%, and 16% of patients in groups 1 to 3, respectively (not significant). Mean (SD) Geriatric Depression Scale scores were similar in all 3 groups (8 [3] vs 7 [2] vs 7 [2] in groups 1 to 3, respectively). History of depression was lowest in group 3 (19% vs 41% for group 2 and 50% for group 1; $P<.02$). Loneliness was similar in all 3 groups (25%, 19%, and 22% for groups 1 to 3, respectively; not significant).

Conclusion Other than an expected employment-related decline in social connection, there was no age-related decline in social capital. The oldest cohort (group 3) did not show any greater loneliness and had a lower prevalence of depression than the other 2 cohorts did. We conclude that the loss of social connections is not a major determinant for loneliness or depression in the elderly, warranting greater attention to parameters such as economic status and service accessibility.

Competency of family physicians in adolescent medicine

Systematic literature review

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Abstract

Objective To synthesize knowledge on family physicians' preparedness in adolescent medicine.

Design A systematic literature review of works on this topic in which authors used either qualitative, quantitative, or mixed methods research approaches published in scholarly journals between 1996 and 2016. Analysis was based on narrative synthesis.

Data sources Ovid MEDLINE, PsycINFO, EMBASE, Web of Science, CINAHL, and ERIC were searched combining these main concepts: family physicians, competence, and adolescent.

Study selection Eligible papers had to be published in English, French, or Spanish; report results of empirical investigations; include medical care provided to 12- to 25-year-old individuals; examine family doctors' competences; and mention barriers to or facilitators of acquiring competency in adolescent medicine. Relevant studies were selected following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Upon de-duplication and application of a language filter, 1905 articles were identified. Screening of the titles and abstracts yielded 692 articles. Full-text reading resulted in 49 articles for analysis. A scoring system was used to assess the quality of studies. A narrative synthesis analytical approach was adopted, which included a thematic analysis and elaboration of a conceptual map with the main findings.

Synthesis Family doctors do not achieve the same level of competency in the areas of adolescent mental health, gynecology, and pharmacology as they do in adult medicine. Specifically, knowledge, communication, advocacy, and the application of guidelines are the main themes in need of improvement.

Conclusion Although the literature regarding objective measures of competency remains scarce, this study reveals that family doctors need to respond to several issues in adolescent medicine, specifically the areas where training is insufficient. Also it gives some recommendations on how to align competencies, population needs, and health care systems structure.

Are direct oral anticoagulants being prescribed appropriately in Canadian primary care practices?

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Abstract

Objective To evaluate the appropriateness of direct oral anticoagulant (DOAC) prescribing patterns in Canada among patients with atrial fibrillation being managed in the outpatient setting by primary care providers and explore the effects of patient and provider factors.

Design Retrospective review of electronic medical record data from the Canadian Primary Care Sentinel Surveillance Network repository.

Setting Canadian primary care outpatient setting.

Participants Data from 744 primary care clinicians in 137 clinics with 6854 patients prescribed a DOAC between 2010 and 2015 were used.

Main outcome measures Inappropriate DOAC prescribing, defined as underdosing, overdosing, or not indicated based on comorbidity or CHADS₂ (congestive heart failure, hypertension, age ≥ 75 , diabetes mellitus, and stroke or transient ischemic attack) score. We performed multivariate analysis using logistic regression, considering inappropriate DOAC use as the outcome and patient, provider, and practice as independent variables.

Results Of the 6854 patients prescribed DOACs (mean age 74.8 years, 55% male), 12.3% (n = 844) of patients had an inappropriate prescription. Of these 59.1% were prescribed too low a dose; 3.7% were prescribed a dose that was too high given their age, weight, and estimated glomerular filtration rate; and 42.5% had conditions for which DOACs are not indicated (ie, valvular atrial fibrillation, low CHADS₂ score). Nearly half of the patients prescribed DOACs were also prescribed antiplatelet agents or nonsteroidal anti-inflammatory drugs. Inappropriate prescribing of a DOAC was associated with polypharmacy (adjusted odds ratio [AOR] of 1.3, 95% CI 1.1 to 1.6), female patients (AOR = 1.3, 95% CI 1.1 to 1.6), and patients younger than 65 years of age (AOR = 1.6, 95% CI 1.3 to 2.2). Patients with comorbid heart failure or dementia were significantly more likely to be prescribed inappropriate DOAC doses. Regarding provider characteristics, inappropriate DOAC prescribing was more common among younger physicians (AOR = 1.3, 95% CI 1.1 to 1.5), rural physicians (AOR = 1.9, 95% CI 1.6 to 2.3), and medium-sized (600 to 1000 patients) compared with smaller (fewer than 600 patients) practices (AOR = 2.7, 95% CI 1.9 to 3.8).

Conclusion These findings are similar to rates of inappropriate DOAC prescribing found in other registries (eg, ORBIT-AF II) with predominantly cardiologist prescribers. Patient and provider factors should be considered when designing quality improvement efforts to improve care.

Who still uses manual blood pressure measurement in routine clinical practice?

Results from a national survey

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Abstract

Objective To explore whether FPs' sex, age, type of patient population served, and province of practice are associated with routine use of manual blood pressure (BP) measurement for screening, diagnosing, and managing hypertension.

Design Web-based cross-sectional survey distributed by e-mail, conducted in 2016.

Setting Stratified random sample of FPs in Canada.

Participants Members of the College of Family Physicians of Canada with valid e-mail addresses.

Main outcome measures The FPs' self-reported routine use of manual BP measurement (mercury or aneroid device) for recording BP in their practices to screen for, diagnose, and manage hypertension.

Results A total of 774 valid responses were received (response rate of 16.2%). Respondents were similar to nonrespondents except for underrepresentation of male physicians. Slightly more than half of Canadian FPs (54%) reported using manual BP as their routine measurement method for hypertension screening; 1 out of 5 (21%) did so for diagnosis; and 2 out of 3 (64%) reported using manual BP measurement for management, generally along with other measurement methods. Following multivariate logistic regression analyses, province of practice was the most statistically significant factor related to using manual BP for hypertension screening, diagnosis, and management (adjusted odds ratios in the range of 0.2 to 2.8). Family physicians primarily serving rural or isolated or remote patient populations were less likely (adjusted odds ratio of 0.6) than those serving urban or suburban populations to report using manual BP measurement for hypertension diagnosis, although ambulatory BP monitoring was reported to be significantly less available to them, as well as to FPs in British Columbia, the Atlantic provinces, and Northern Canada.

Conclusion A sizable proportion of Canadian FPs routinely use manual BP measurement, counter to current national guidelines. Efforts to encourage FPs to adopt evidence-based BP measurement practices should reflect the uneven distribution of manual BP users among provincial jurisdictions, independent of FPs' individual characteristics.

Describing the pause

Phenomenologic study of physical examination in family practice

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Abstract

Context Physical examination is a cornerstone of family practice and serves not only to diagnose but also to communicate reassurance and care. However, with a shift to evidence-based medicine in the past few decades, physicians might be moving away from traditional aspects of touch and the use of physical examination to communicate with and reassure patients.

Objective To understand family physicians' experiences of physical examination.

Design Qualitative phenomenologic study.

Setting Family practice.

Participants Sixteen family physicians recruited through purposive sampling to ensure participants included men and women, rural and urban family physicians, and individuals newer to practice and those more established in practice.

Methods In the tradition of phenomenology, a series of thick descriptions were sought through in-depth semistructured interviews. Interviews were analyzed through template analysis starting with literature-informed a priori codes.

Main findings Study participants described physical examination as core to their practice to diagnose, communicate, and validate patient and practitioner concerns. Participants described a pause—a slowing of time experienced while conducting physical examination during which they were conscious of their bodies and their relation to time and space. This pause is a time when physicians experience affective, intellectual, and physical phenomena and integrate information to inform their behaviour, diagnosis, and management of the patient. The role of physical examination is therefore not only to diagnosis in the context of the physician's role as an evidence-based medical expert, but also to act as a form of embodied nonverbal communication to express care.

Conclusion This study describes and interprets family physicians' experiences of physical examination and demonstrates physicians' beliefs and attitudes toward physical examination. This includes the tension between the roles of physical examination in diagnosis and nonverbal communication. This understanding might inform the role of physical examination in practice and teaching, as it reinforces the value of examination in patient-centred care.

Reducing clinically unnecessary free thyroid indices in a family health team

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Abstract

Objective To reduce clinically unnecessary ordering of free thyroid indices (fT3 and fT4) for patients at a family medicine teaching unit, because if there is low suspicion for pituitary disease, measurement of fT3 and fT4 is not required to investigate thyroid function or to monitor levothyroxine replacement when thyroid-stimulating hormone (TSH) levels are normal (0.5 to 5.0 mIU/L).

Design Quality improvement project.

Setting The Health for All (HFA) family health team in Markham, Ont. All fT3 and fT4 indices with their associated TSH values were collected during a 1-year period.

Participants Providers on the HFA family health team.

Intervention A poster was created to educate providers at HFA about when not to order fT3 and fT4 indices.

Main outcome measures Proportion of fT3 and fT4 indices associated with normal TSH levels and change in provider behaviour after the education intervention.

Results From November 23, 2015, to November 23, 2016, 894 fT3 or fT4 indices were ordered for adult patients (>18 years of age) at HFA. Of these, 646 (72.2%) were associated with normal TSH levels, representing 487 patients. Ninety-seven charts (19.9%) were randomly selected for review. From the chart review, the most common reasons for ordering fT3 and fT4 indices despite normal TSH levels were to monitor levothyroxine dose in patients with known primary hypothyroidism (34.6%), to investigate thyroid nodules (8.0%), and to screen for primary hypothyroidism (6.5%). A poster was created to educate providers at HFA not to order fT3 and fT4 indices for the reasons above. An accompanying survey quantified provider engagement. It was expected that the number of clinically unnecessary free thyroid indices ordered would decrease, as the poster raised awareness about the largest contributors to the problem. Eighteen out of 34 providers at HFA received the poster. Data analysis 1 month after distribution revealed a reduced proportion of fT3 and fT4 indices associated with normal TSH levels: 62.0% (31 out of 50) compared with 72.2% before the poster.

Conclusion By educating providers on the most common reasons for ordering clinically unnecessary free thyroid indices, we were able raise awareness and address the largest contributors to this problem. It is expected that continued data analyses will reflect a further reduction in the number of clinically unnecessary fT3 and fT4 indices ordered.

Home-based dialysis for patients with end-stage kidney disease

What does the evidence say?

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Abstract

Context Some patients with chronic kidney disease progress to having end-stage kidney disease (ESKD), also known as *kidney failure*. When kidney transplantation is not an option, most patients living with ESKD are treated with dialysis, which is often a lifelong treatment. Even though several options for having dialysis treatment at home (eg, home hemodialysis and peritoneal dialysis) are available to ESKD patients, traditional hemodialysis offered in a clinical setting remains the most frequently used approach in Canada.

Objective To provide an overview of the clinical effectiveness of home hemodialysis and peritoneal dialysis, as well as other considerations that might be important when planning for dialysis treatment.

Design A health technology assessment reviewed the evidence on clinical effectiveness, cost effectiveness, patient perspectives, ethical issues, and implementation considerations for home-based dialysis. The review assessed the evidence based on the published literature and surveys relevant to Canadian dialysis stakeholders. An expert panel, which included family physicians, made recommendations on the use of home-based dialysis based on the reviewed evidence.

Main findings Overall, compared with in-centre hemodialysis, home-based options appear to offer similar clinical benefits and are less costly for eligible patients.

Conclusion The findings of the evidence review can inform treatment decisions, particularly for patients living in areas with no easy access to treatment (eg, patients in rural or remote areas) and patients with unique health and cultural profiles (eg, Indigenous patients).

Predictors of nonadherence to colorectal cancer screening among immigrants in Ontario

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Abstract

Context Although colorectal cancer (CRC) screening rates have increased over time, immigrants continue to have lower rates of screening.

Objective To examine the association between characteristics related to immigration, sociodemographic factors, and health care use, and primary care physicians' nonadherence to CRC screening when caring for immigrants in Ontario.

Design Population-based, retrospective study with a cross-sectional design. This study used multiple health care administrative databases housed at the Institute for Clinical Evaluative Sciences and the Immigration, Refugees and Citizenship Canada database.

Setting Ontario.

Participants Our cohort comprised immigrants between the ages of 60 and 74 years who had been eligible for the Ontario Health Insurance Plan for at least 10 years and who lived in Ontario on March 31, 2015. Those who had a history of CRC, inflammatory bowel disease, or total colectomy were excluded. The final cohort contained 182 949 individuals.

Main outcome measures The outcome was defined as not being up-to-date with CRC screening on March 31, 2015, which included fecal occult blood testing in the previous 2 years, sigmoidoscopy in the previous 5 years, or colonoscopy in the previous 10 years.

Results Risk of nonadherence to CRC screening was higher among immigrants who were from low- or middle-income countries, refugees, unmarried, without postsecondary education, and non-English speaking and among those who had immigrated more recently and lived in only 1 world region before landing in Canada. Compared with those from the United States, Australia, and New Zealand, immigrants from most other world regions had higher risks of nonadherence. Significant associations were also found between screening nonadherence and several sociodemographic, health care use, and provider factors, especially resource use, rostering status, and neighbourhood income quintile.

Conclusion Many immigration and nonimmigration factors predicted the risk of nonadherence to CRC screening. These findings can be used in future efforts to improve the uptake of CRC screening among immigrants.

Effects of rapid antigen detection testing on antibiotic prescription for pharyngitis

Systematic review and meta-analysis

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Abstract

Objective To assess the effects of using a rapid antigen detection test (RADT) in patients presenting with acute group A streptococcus (GAS) pharyngitis on the antibiotic prescription rate and appropriateness of antibiotic management.

Design Systematic review and meta-analysis of prospective and retrospective cohort studies.

Setting Primary care clinics and emergency departments.

Participants Adult and pediatric populations presenting with acute pharyngitis, excluding those with comorbidities such as altered mental status and immunosuppression. Ten out of 4003 identified studies met the inclusion criteria (N=10 859 participants, median age 31 years, 56.7% female).

Intervention Studies were systematically sought using MEDLINE and EMBASE and selected according to a predefined PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol. Data were extracted by 2 reviewers using DistillerSR. Study quality was assessed using the Cochrane Risk of Bias Tool and the Newcastle-Ottawa Scale. Studies were combined if there was low clinical and statistical heterogeneity ($I^2 < 30\%$). The bivariate Mantel-Haenszel random effects model was used to perform meta-analyses using SPSS, version 22, and RevMan 5.

Main outcome measures Dichotomous measure of antibiotic prescription with or without RADT availability.

Results Mean (SD) antibiotic prescription rates in the RADT and control arms were 38.2% (15.6%) and 55.9% (16.3%), respectively. The use of RADT was associated with a lower antibiotic prescription rate in both adult (odds ratio [OR] of 0.60, 95% CI 0.45 to 0.80, $I^2=8\%$, $n=1407$) and pediatric (OR=0.49, 95% CI 0.44 to 0.55, $I^2=5\%$, $n=976$) populations. There was no overall difference ($P=.3$) in antibiotic prescription rate based on disease severity (Centor scores 1 to 4). The use of RADT did not significantly affect the appropriateness of antibiotic management (OR=1.15, 95% CI 0.94 to 1.5).

Conclusion The use of RADT is associated with reduced antibiotic prescription for patients with GAS pharyngitis without an increase in appropriate antibiotic use. Despite low prevalence of the disease, antibiotic prescription rates are still high. These findings suggest a great potential for antibiotic stewardship and reevaluation of current guidelines for managing GAS pharyngitis.

Follow-up of COPD patients at 14 or 30 days after discharge affects rebound to emergency department

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Abstract

Context Acute exacerbation of chronic obstructive pulmonary disease (COPD) is associated with more hospitalization compared with other chronic diseases, with an estimated health care cost of approximately \$1.5 billion annually. Timely follow-up in the community after discharge from the hospital or emergency department (ED) has been shown to reduce ED rebound. However, optimal timing for the follow-up or distinction between specialist versus primary care provider follow-up is not clear.

Objective To assess the effects of primary care provider follow-up of COPD patients after ED or hospital discharge on ED rebound.

Design Retroactive chart review.

Setting A community hospital ED.

Participants Patients with COPD presenting to the ED at a community hospital over a 3-year period (2013 to 2015).

Main outcome measures We gathered data for no primary care provider follow-up, follow-up within 14 days, and follow-up 30 days after discharge versus 90-day ED rebound. Data were analyzed using χ^2 analysis with Bonferroni corrections.

Results A total of 104 ED visits (73 patients) were assessed. Forty-three visits (41%) had no primary care provider follow-up within 30 days, 61 (59%) had primary care provider follow-up within 30 days, and 37 (36%) had primary care provider follow-up within 14 days of ED discharge. Ninety-day ED rebound was significantly lower for 30-day (20%) and 14-day (19%) post-ED discharge primary care provider follow-up versus no primary care provider follow-up (58%; $P < .001$).

Conclusion Follow-up of COPD patients by a primary care provider within 14 days or 30 days of ED discharge significantly reduced 90-day ED rebound compared with those who received no primary care provider follow-up. In the present study, 14-day primary care provider follow-up was not superior to 30-day primary care provider follow-up in reducing 90-day ED rebound. This study suggests there is ample time (at least up to 30 days) for postdischarge follow-up of COPD patients by primary care providers to optimize care and prevent hospital or ED rebound.

Simple clinical prognosis tool to predict mortality after a “first” hospitalization for COPD

Alain Vanasse MD PhD Josiane Courteau PhD Simon Couillard MD Marie-France Beauchesne PharmD Pierre Larivée MD

Abstract

Objective To provide family physicians with a simple score sheet to estimate a 1-year all-cause mortality risk for patients with chronic obstructive pulmonary disease (COPD) who are hospitalized for the “first” time.

Design Retrospective cohort study using linked administrative and clinical data.

Setting Regional hospital in Sherbrooke, Que.

Participants Patients with COPD between 40 and 84 years of age who were hospitalized in the regional hospital between April 2006 and March 2013 and discharged alive. Patients with a previous COPD hospitalization within 5 years were excluded to retain only “first” COPD hospitalizations.

Main outcome measures One-year all-cause mortality after discharge was assessed and analyzed using multiple logistic regression on a derivation sample (backward elimination with $P < .01$) and validated on a testing sample.

Results A total of 141 (12.5%) of the 1129 patients died within 1 year of discharge from their first hospitalization for COPD. Predictors of 1-year mortality were older age (odds ratio [OR] of 1.055, 95% CI 1.026 to 1.085), male sex (OR=1.474, 95% CI 0.921 to 2.358), having a severe COPD exacerbation during index hospitalization (OR=2.548, 95% CI 1.571 to 4.132), a longer index hospital length of stay (OR=1.024, 95% CI 0.996 to 1.053), a higher Charlson comorbidity index score (OR=1.262, 95% CI 1.099 to 1.449), a diagnosis of cancer (OR=2.928, 95% CI 1.456 to 5.885), the number of prior all-cause hospitalizations (OR=1.323, 95% CI 1.097 to 1.595), and COPD duration exceeding 3 years (OR 1.710, 95% CI 1.058 to 2.763). Using estimates of the logistic model for these 8 predictors, a simple clinical prognosis tool is proposed. The model shows good discrimination in both the derivation and validation cohorts (C-statistic exceeding 0.78).

Conclusion One out of 8 patients discharged alive from a first COPD hospitalization will die in the following year. It is thus important to identify high-risk patients to plan and manage appropriate treatments.

Breaking the cycle of survival drinking

Peer-run managed alcohol program

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Christy Sutherland MD CCFP Kate Vallance MA

Abstract

Context Managed alcohol programs (MAPs) have been implemented in Canada to assist individuals with severe alcohol use disorder and homelessness by providing regularly dispensed standard-size drinks to prevent alcohol withdrawal symptoms and minimize nonbeverage alcohol consumption.

Objective To describes the individual experience of the members of a nonresidential, peer-run MAP.

Design This project is part of a larger mixed-methods study of 5 Canadian MAPs. Fourteen qualitative semistructured interviews were conducted using a previously developed and ethically approved set of questions from the National Study of Managed Alcohol Programs in Canada.

Setting A nonresidential, peer-run MAP in a large urban setting run by a non-governmental organization.

Participants Members of the MAP were recruited by announcements at meetings, posters, and word of mouth. To be included, participants had to have a minimum of 30 days in the program and speak English. Fourteen participants were eligible and all were included. The mean age of participants was 42 (range 29 to 61) years and 2 were female. Eight participants identified as Indigenous or First Nations.

Findings This study describes the importance of community among individuals with chronic alcohol use disorder and homelessness. Before the program, participants described injuries related to drinking, frequent hospitalizations, and overdoses as a result of concurrent illicit alcohol and drug use. While in the program, participants noted decreased or discontinued illicit alcohol consumption and had fewer blackouts and withdrawal symptoms. Our findings suggest this nonresidential, peer-run MAP was fundamental in participants' transition from daily survival drinking to meaningful engagement in their community.

Conclusion This nonresidential, peer-run MAP played an integral role in the lives of its participants, improving health, substance use patterns, relationships, and community connections. These benefits are consistent with the current literature on residential Canadian MAPs.

Assessment of patient-physician communication in primary care practices

What is retained immediately after the clinical encounter?

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Abstract

Context Effective communication is central to fostering shared decision making and empowering patient participation in care plans. Numerous studies have identified gaps in patient-physician communication, but most are limited to single types of encounters or relate to specialty practices other than family medicine. Primary care physicians interact with patients for diverse conditions in a single day, hence assessing physician-patient communication for different types of clinical encounters is more relevant.

Objective To assess patient-physician communication in primary care practices for 3 different kinds of clinical encounters; to assess concordance versus discordance between physicians and patients for the information relayed and retained.

Design A cross-sectional survey of patient-physician communication for 3 types of clinical encounters: cholesterolemia, colon cancer screening, and smoking cessation.

Setting Eight primary care practices.

Main outcome measures Survey forms with 5 to 7 identical questions for patients and physicians but on separate sheets coded to allow comparisons were employed. Each sheet had a standard overall question: For the physician, "Did you feel your patient understood the information discussed today?" and for the patient, "Did you understand the information discussed today?"

Results Fifty-eight completed surveys were obtained: 24 for cholesterolemia, 20 for colon cancer screening, and 14 for smoking cessation. The overall question about whether the information discussed was understood had 81% concordance and 7% discordance; 12% were incomplete. Concordance for specific encounter-related answers was high (85% to 100%) except for the importance of medications for cholesterolemia (54% concordance) and referral for smoking cessation (66% concordance); $P < .05$ for both z statistics.

Conclusion This is a unique study assessing patient-physician communication in primary care settings for 3 distinct types of clinical encounters. The immediate postencounter recall of communication between physicians and patients showed high concordance for the overall information, but there were gaps for details such as discussion of management or therapeutic approaches.

Family physicians' awareness of Charles Bonnet syndrome

Canadian national survey

Tina Felfeli Keith D. Gordon MSc PhD

Abstract

Objective To assess Canadian FPs' awareness of Charles Bonnet syndrome (CBS).

Design National perception and practices survey.

Setting All provinces and territories across Canada.

Participants A total of 500 English- and French-speaking FPs across Canada were randomly selected.

Main outcome measures The level of awareness of CBS among FPs, the frequency of FPs' encounters with patients who have visual hallucinations, and management strategies and referral patterns for CBS patients presenting to FPs.

Results A total of 499 respondents answered at least 1 question on the survey. Approximately 54.7% of FPs indicated they were not at all aware, 19.7% were only slightly aware, and 25.6% were well aware of CBS. Among the respondents who were slightly or well aware of CBS, the most commonly reported sources of information included medical training (27.5%), colleagues (18.4%), conferences or continuing medical education (16%), and patients (14.3%). With respect to the frequency of patient encounters with visual hallucinations, 5.3% of physicians reported having encountered patients once a month, 18.9% every 6 months, 13.4% once a year, and 37% less than once a year, while 25.4% reported no encounters in their practice. The number of patients presenting to practice with visual hallucinations significantly predicted FPs' awareness about CBS ($\beta = 0.501$, $t_{371} = 5.59$, $P < .001$). Of FPs who had previously encountered patients with visual hallucinations, 21.3% reported having supported patients through pharmacologic interventions and 31.6% through nonpharmacologic interventions, while 29.3% of FPs completed both and 17.8% did neither. When speaking with patients who have visual hallucinations, 84.9% of FPs do not discuss the possibility of developing CBS, while 7.9% and 7.2% discuss it always or sometimes, respectively.

Conclusion There is a lack of knowledge about CBS among FPs. Increased awareness of CBS is critical for the appropriate diagnosis, assessment, and management of biological and psychosocial manifestations of this condition.

Access to primary care for persons recently released from prison

Audit study

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Stephen Hwang MD MPH Sharif Fahmy MBA Carlos Magnas Neves Jonathan Berkowitz PhD

Abstract

Objective To determine whether a history of recent imprisonment affects the response a person receives when seeking a primary care appointment.

Design We conducted a controlled audit study in which we made unannounced telephone calls to the offices of family physicians (N=339). Male and female researchers played the role of a patient seeking a physician and requested an initial appointment for primary care according to 1 of 4 patient scenarios that were sequentially assigned to each physician office: 1) a male recently released from prison; 2) a female recently released from prison; 3) a male not recently released from prison; and 4) a female not recently released from prison.

Setting British Columbia.

Participants Family physicians who were listed as accepting new patients on the College of Physicians and Surgeons of British Columbia website.

Main outcome measures Whether the caller was offered an initial appointment.

Results For physician offices that we contacted that were eligible for inclusion (n=250), the proportion of calls resulting in an appointment being offered was significantly lower when the callers said they had recently been released from prison compared with controls (46.2% of 122 vs 84.4% of 128, $P=.001$). The odds of being offered an appointment were 7.3 times higher (95% CI 4.0 to 13.2) for controls compared with those who reported a recent release from prison. There was no significant difference based on the sex of the caller, with 48.3% of 62 calls from a male and 37.1% of 60 calls from a female researcher ($P=.42$) resulting in an appointment.

Conclusion In a setting with a universal health insurance system, people who presented themselves as having recently been released from prison had poorer access to primary care. Efforts to improve access to primary care for this vulnerable population need to address barriers to care beyond health insurance.

Achieving health goals with formerly incarcerated men

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Blake Stitilis MPH Kate Roth MA John Oliffe PhD RN Jane Buxton MBBS MHSc FRCPC Nicole Myers PhD
Carl Leggo PhD Wayne Taylor Naomi Dove MD MPH FRCPC

Abstract

Objective To determine the immediate-, short-, and long-term health priorities of formerly incarcerated men leaving federal correctional facilities in the Lower Mainland of British Columbia.

Design A community-based participatory research approach using interpretive descriptive methods, survey data, and focus group data.

Setting Two John Howard Society of the Lower Mainland of British Columbia halfway houses.

Participants Eighteen formerly incarcerated men participated in 2 focus groups. The first focus group (n=10) included men released within 3 months from a federal correctional facility. The second focus group (n=8) included men released from a federal correctional facility more than 6 months before the focus group.

Methods Focus group interviews yielded qualitative data regarding the formerly incarcerated men's health priorities and the factors that supported or prevented their self-health. Interview transcripts were coded and thematically analyzed by co-authors, including formerly incarcerated project assistants. The findings were member checked with some focus group participants (n=6) to ensure validation of interpretation.

Main findings The immediate- and short-term health priorities of recently released men related to acquiring personal identification or a medical card, refilling prescriptions, obtaining their medical records from prison, finding a family physician, learning how to navigate the health care system, and addressing mental health and substance use issues. As the men integrated into the community, their long-term health priorities focused on healthy living, building long-term relationships, maintaining ongoing medical care, addressing hepatitis C, and connecting to culture, spirituality, and volunteering. The focus group findings were primarily used to inform the design of the main research study.

Conclusion Men encountered considerable individual and systemic barriers to achieving their health priorities as they transitioned from a federal correctional facility back into the community. All focus group participants reported post-release stressors as they adapted to community life.

I'm so glad you found me!

Caring for patients with multimorbidity who are vulnerable

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Luan Januzi MSc Moira Stewart PhD Martin Fortin MD CCFP FCFP MSc

Abstract

Context Patients with multimorbidity often require an interdisciplinary primary health care team approach. Within this population, a subset of patients might be more vulnerable and require a tailored approach to addressing their complex needs.

Objective To explore how a 1-hour consultation outside of usual care conducted by innovative interdisciplinary primary health care teams addresses the needs of vulnerable patients with multimorbidity.

Design Descriptive qualitative study.

Setting Ontario.

Participants Forty-eight interviews were conducted with 20 allied health care professionals (eg, nurses, social workers, pharmacists), 10 non-family-physician specialists (eg, psychiatrists, internal medicine specialists), 9 decision makers, and 9 family physicians who had made referrals to the primary health care consultation teams.

Methods A purposive sample was used to recruit participants for a 30- to 45-minute semistructured interview. An iterative and interpretative process was conducted with both individual and team analysis to identify overarching themes and subthemes.

Main findings The collaborative nature of the team supported the sharing of ideas about how to overcome some of the barriers patients experienced and facilitated the development of creative recommendations specifically designed to meet the needs of each patient. Participants paid specific attention to how and why certain patients with multimorbidity were vulnerable. Patients who were described as vulnerable were those who face considerable challenges in accessing and navigating the health care system and consequently “fall through the cracks.” Mental health issues were a main contributor to patients being vulnerable and were often linked to common social determinants of health (eg, poverty, homelessness, and social isolation). Cultural factors (eg, language, values, and beliefs) were also identified as potentially causing patients to be vulnerable.

Conclusion These unique 1-time consultations go beyond the assessment of a patient's multimorbidity by including a psychosocial contextual understanding of their vulnerability within the primary health care setting. Findings might have important clinical and policy implications for supporting the spread of this innovative approach.

Interdisciplinary approach to caring for patients with multimorbidity

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Martin Fortin MD CCFP FCFP MSc Moira Stewart PhD

Abstract

Context Primary health care providers describe patient-centredness in a variety of ways; they are often relevant to the one-on-one relationship but rarely within the context of interdisciplinary team care.

Objective To reveal how providers describe their patient-centredness during a 1-time telemedicine, interdisciplinary consultation for patients with multimorbidity.

Design Descriptive qualitative study.

Setting Ontario.

Participants Thirty-nine interviews were conducted with 20 allied health care professionals (eg, social workers, nurses, pharmacists), 10 physician specialists (eg, internal medicine specialists, psychiatrists), and 9 decision makers.

Methods A purposive sample was used to recruit participants for a 30- to 45-minute semistructured interview. An iterative and imperative process was conducted with both individual and team analysis to identify overarching themes and subthemes.

Main findings Participants described a strong commitment to providing patient-centred care starting at the outset of the consultation: “Make sure that it’s patient-centred from the very beginning.” They explored patients’ perceptions of “how they would like to improve their quality of life and health” as well as the daily “struggles” they encountered in managing their multimorbidity. Participants explained their interest in “looking at the patient as a whole,” hence going beyond the disease to understanding the person in context. Close attention was paid to identifying the patient’s goals throughout the consultation: “What are the patient’s goals?” As the team provided their concluding recommendations, they actively engaged the patient in the process: “Does this make sense to you? Would this be helpful?” Finally patient-centredness was described as “coming up with a care plan that the patient would be able and willing to implement.”

Conclusion These findings demonstrate how an interdisciplinary primary health care team consultation provides patient-centred care to a complex patient population with multimorbidity. This team approach to care is for a brief 1-time consultation, yet the findings reflect how patient-centred care is achievable in this unique context.

Identifying potentially inappropriate prescriptions in Ontario's older adult population

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 Steven Hawken PhD Ulrika Gillespie MSc PhD Douglas G. Manuel MD MSc FRCPC

Abstract

Objective To describe the prevalence of potentially inappropriate prescriptions (PIPs) in Ontario's older adult population by applying criteria used in clinical settings to population-level health data.

Design Population-based retrospective cohort study.

Setting Ontario health administrative data set.

Participants Patients 66 years of age or older who were issued at least 1 prescription between April 2003 and March 2014 (N = 2 477 403).

Intervention Subsets of the 2014 STOPP and START (Screening Tool of Older People's Prescriptions and Screening Tool to Alert to Right Treatment) criteria and of 2015 Beers criteria were selected as applicable to health administrative databases, codified using diagnostic and medication codes, and used to identify PIPs in the health administrative database among the patients selected.

Main outcome measures The incidence of a first PIP ever and the PIP prevalence for each criterion over the study period.

Results In this study, 95.5% (84 of 88) of Beers criteria, 64.2% (52 of 81) of STOPP criteria, and 26.5% (9 of 34) of START criteria were identified as applicable to the health administrative database. The Beers criteria identified 51.1% (1265 295 of 2 477 403) of patients as having a first PIP ever, while 26.8% of patients had more than 1 PIP and 2.6% of patients had more than 5 PIPs ever. The STOPP and START criteria identified 69.2% (1714 311 of 2 477 403) of patients as having at least 1 PIP over the course of the cohort membership, 30.8% of patients had more than 1 PIP, and 18.0% of patients had more than 5 PIPs ever. The most common PIP criteria were diseaseB4, drugG3, drug-drug6 for Beers criteria, and STOPP D12, STOPP D10, and STOPP D6 for STOPP and START criteria (excluding START 1—immunizations).

Conclusion Applying clinical criteria for identifying PIPs in Ontario's population aged 66 years and older found that as many as 1.7 million older Ontarians who were issued a prescription between April 2003 and March 2014 had at least 1 PIP and more than 1 in 4 had 2 or more. This likely underestimates the true prevalence of PIPs in this population given the number of patients excluded owing to limitations in the health administrative database.

Evaluating the consistency of medication warnings issued to Canadian, American, and British prescribers

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Donald Mattison MD Carlos Rojas-Fernandez PharmD Jeremy Grimshaw MD PhD Margaret Watson PhD MSc MRPharmS

Abstract

Objective To determine whether and to what extent there was consistency in the format, content, and timing of medication warnings issued by regulatory health authorities to prescribers in 3 similar jurisdictions.

Design Cross-sectional analysis.

Setting Online databases of health advisory letters (HALs) in Canada, the United States, and the United Kingdom.

Participants The HALs issued by Health Canada, the US Food and Drug Administration (FDA), and the United Kingdom's Medicines and Healthcare products Regulatory Agency (MHRA) between January 1, 2010, and December 31, 2014, inclusive.

Intervention An abstraction tool consisting of 21 clinically desirable HAL characteristics developed by consensus of the research team was created to facilitate identification and documentation of the presence or absence of these characteristics in each HAL selected.

Main outcome measures Jurisdictional overlap of the content, format, and timing of HALs from Health Canada, the FDA, and the MHRA.

Results A comparison of the HALs issued by Health Canada, the FDA, and the MHRA determined that of 245 unique letters issued between January 1, 2010, and December 31, 2014, inclusive, 227 (93%) pertained to medications available in all 3 jurisdictions. Of these 227 letters, only 21 (9%) were issued by all 3 jurisdictions; 40 (18%) were issued by 2; and 166 (73%) were issued by only 1. Only 13 of the letters published in all 3 jurisdictions were issued within 6 months of one another. While there was consistency in the basic format and content of the HALs across jurisdictions, there were differences in the way additional information was presented or emphasized.

Conclusion There is a lack of consistency in the format, content, and timing of medication warnings issued by authorities to prescribers in Canada, the United States, and the United Kingdom, raising important questions about how and when medication safety-related issues are identified and communicated to prescribers by the authorities in each jurisdiction.

Engaging family practice physicians in system change

Partnering with a health authority and communities

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Abstract

Context Northern Health (NH), a British Columbia health authority, is leading a process of whole-system change in partnership with physicians and communities.

Objective To examine engagement with family physicians and how they have become partners in creating and scaling up NH-wide integrated patient-centred primary health care.

Design Longitudinal multiple case study.

Setting The NH region and 7 communities within it.

Participants A total of 236 participants including 20 community physicians.

Methods A total of 250 semistructured interviews were undertaken within the communities over 3 years. Data were analyzed by thematic analysis.

Main findings Fundamental transformative change that addresses the needs of people in communities while meeting regional and provincial directions takes longer than anticipated, and physician engagement as true partners is critical to overall success. The Divisions of Family Practice in British Columbia have been instrumental in that engagement. In northern British Columbia this engagement has been facilitated by regular meetings between NH and 5 separate divisions, the development of shared strategic directions, and local flexibility in the development of the priorities of divisions. We also observed that, over time as personnel changed, there was a need to renegotiate the partnerships and orient new personnel on vision and priorities. Strong, flexible leadership from the divisions and NH was also important in building trust. Interim indicators of change are reflected in joint initiatives between the divisions and NH positive quality improvement measures and fewer unattached patients.

Conclusion An in-depth examination of processes of change illuminated the relationships challenges and approaches that are needed for services and structures to be reformed to serve the needs of patients and families better. This also demonstrated how the Divisions of Family Practice in British Columbia have facilitated physician engagement with NH. Partnerships allow for working through the inevitable tensions and barriers to fundamental far-reaching system change.

Recruitment and retention in rural practice in the context of generational change

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Abstract

Objective To examine the implications for rural practice of the changing aspirations of young practitioners.

Design Qualitative in-depth interviews and thematic interpretive analysis.

Setting Rural northwest Canada.

Participants A purposefully diverse sample of 46 practitioners, mostly family physicians, but including some other specialists and nurses. The sample included early-, mid-, and late-career physicians.

Methods A mixture of small group and one-on-one interviews was used. Data were analyzed thematically by both researchers independently and then a common coding framework and interpretation was developed. Initial findings were returned to participants for validation.

Main findings There were 3 main themes: scope of practice and generalism, the importance of connectivity and relationships, and sensitivity to generational change. These interact together to influence the ecosystem of practices and have important implications for the future recruitment and retention of young physicians in rural areas. Enablers are local mentorship and community support, supportive specialist networks, connectivity, flexibility of contract arrangements, the ability of communities to adapt to changing working preferences, team working, and collaboration.

Conclusion Those communities that adapt to the aspirations of the next generation of physicians, who work hard but differently, might find it easier to recruit and retain young physicians. There might be potential implications in terms of educating patients and communities for care by teams, and in terms of how our professional associations negotiate on behalf of physicians.

Physician awareness and action regarding postpartum depression in male partners

Sarah Sloan MD George Ko MD Ana Pesantez MD Richard Trawick MD Deirdre Ryan MD FRCPC

Abstract

Objective To evaluate the practices of physicians and residents pertaining to postpartum depression (PPD) in male partners.

Design Non-randomized cross-sectional survey.

Setting British Columbia.

Participants University of British Columbia (UBC) residents in family practice, pediatrics, and obstetrics and practising family physicians in British Columbia between 18 and 80 years of age who consented to participate. Excluded were physicians in other disciplines of medicine, allied health care professionals, those outside of British Columbia, those beyond the stated age range, or those who did not express, or who withdrew, consent to participate.

Intervention An online survey was developed by the authors and distributed by email lists. Data were analyzed using IBM SPSS Statistics for Windows, version 22.0.

Main outcome measures The presence or absence of screening for PPD in male partners among primary care providers in British Columbia and assessment of the screening practices and follow-up among those practitioners who perform screening.

Results There were 164 respondents; 130 identified with family medicine and 20 identified as staff physicians; mean age was 32.2 years, with 63.4% female and 36.6% male respondents. The data showed that 95.3% of respondents do not routinely screen for male-partner PPD, 70.2% do not screen for male-partner PPD in the presence of maternal PPD, and 17.1% offer no follow-up care if a male partner has positive screening results for PPD. Further, 97.7% of respondents do not offer a dedicated visit for male partners of pregnant women, and 59.1% never screen the male partner for general health conditions when offering perinatal care. Only 35.3% of participants reference the provincial screening guidelines for male-partner PPD.

Conclusion Primary care residents and physicians in British Columbia are unfamiliar with PPD in male partners. Consequently, this condition is likely underscreened, underdiagnosed, and undertreated, leading to negative effects on male partners, mothers, and children. Increased awareness, education, and resources to diagnose and support those affected by male PPD is required to improve these outcomes.

Educating primary care providers regarding cancer survivor issues

Workshop results

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Abstract

Objective To assess the educational benefit of a survivorship educational workshop (EW) targeting primary care providers.

Design A Mainpro+-accredited EW based on common survivorship issues was created and delivered to 167 primary care providers at 6 sites. Each EW was presented by the same physician and was approximately 50 minutes in duration. Brief matched pre-, post-, and 3-month-delayed surveys were designed (Likert-scale and short-answer questions) and were completed on a voluntary basis. Data were analyzed with parametric (paired *t* tests) and nonparametric (Wilcoxon signed rank tests) comparisons, as appropriate.

Setting Montreal, Que.

Participants Inclusion criteria consisted of family physicians in active practice, postgraduate residents in family medicine, and nurse practitioners. Sample size was set at 100.

Main outcome measures Outcome measures targeted the first 3 levels of Kirkpatrick's learning model for adults: satisfaction, knowledge, and behaviour.

Results The pre- and post-survey response rate was 65.3% and the 3-month-delayed survey response rate was 56.9%. Immediately following the EW, participants were significantly more likely to be able to list standards of survivorship care ($t_{108} = 10.50, P < .001$) and to name late effects of cancer treatment ($t_{108} = 5.52, P < .001$). High relevance of and satisfaction with the EW were reported (95%), and 99% expressed intent to incorporate survivorship information into practice. At 3 months after the intervention, confidence remained significantly higher than preintervention levels for both knowledge of late physical effects ($z = 6.08, P < .001, n = 60$) and adverse psychosocial outcomes of cancer and its treatments ($z = 4.26, P < .001, n = 62$).

Conclusion Numerous studies have focused on identifying primary care provider barriers to survivorship care delivery, including suboptimal topic proficiency, but further initiatives are needed to close that knowledge gap. This EW increased primary care provider survivorship knowledge as well as confidence levels regarding cancer survivor issues.

Directions to enable safety, health, and well-being for drivers with musculoskeletal conditions

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Abstract

Objective To present the results of the National Blueprint for Injury Prevention in Drivers with Arthritis, a strategic action plan addressing the multiple unmet needs of drivers with arthritis.

Design A scoping review was completed to garner the evidence and resources published in the past 25 years on the activity of driving a motor vehicle for people with musculoskeletal conditions or arthritis. A Delphi method was then used to collect the insights of a panel of 15 experts and stakeholders regarding the implications of this evidence, or lack thereof, in terms of knowledge, practice, professional training, and policies. Finally, the panelists met in-person to agree on guiding principles, priority goals, and directions for action.

Results A total of 111 publications focusing on drivers with musculoskeletal conditions or arthritis were identified. These publications addressed 4 areas: driving capacity and safety (n=45), musculoskeletal health issues of professional drivers (n=37), safe return to driving after a musculoskeletal surgery (n=21), and ergonomic evaluation of vehicle equipment and seating posture (n=8). The panelists proposed a national blueprint comprising 9 guiding principles, 6 priority goals, and 16 concrete directions for action, such as the need to equip professionals with evidence-based resources that can readily be provided to clients.

Conclusion The input of several professionals is instrumental in addressing the needs of this growing population of drivers. The National Blueprint for Injury Prevention in Drivers with Arthritis allowed the collection of valuable insights, which we hope will translate into collaborative actions to optimize the safety, health, and well-being of drivers with musculoskeletal conditions.

Barriers and facilitators encountered by family physicians prescribing opioids for chronic noncancer pain

Qualitative study

Joshua Goodwin Susan Kirkland PhD

Abstract

Objective To examine what family physicians in Nova Scotia believe are the barriers to and facilitators of practising effective and safe opioid prescribing for chronic noncancer pain (CNCNCP).

Design Qualitative study using semistructured interviews.

Setting Nova Scotia.

Participants Participants were recruited using a snowball sampling technique and were screened for practice experience prescribing opioids for CNCNCP in Nova Scotia. Seven participants were interviewed.

Methods We conducted semistructured interviews with family physicians in Nova Scotia to determine opioid prescribing patterns, what the participants believed were the core issues and challenges with respect to opioid prescribing for family physicians, and what kinds of supports would be helpful to them. The interviews were approximately 60 minutes in duration and were audiorecorded and transcribed. The transcripts were then analyzed using a grounded theory approach in ATLAS.ti software.

Main findings Family physicians identified a complex intersection of challenges in prescribing opioids for CNCNCP that stem from the complexity of chronic pain management; physician-patient relationships; concern for diversion of opioids; lack of training; and systemic issues, such as wait lists for other specialists and the cost of pain medications. Education in chronic pain management enabled effective CNCNCP treatment for some family physicians. The complexity of the provider-patient relationship in treating chronic pain was also a focus of interest. Several prescriber tools such as opioid treatment agreements and prescribing guidelines were noted as being helpful in establishing an effective prescribing relationship.

Conclusion This study described the obstacles faced by family physicians in Nova Scotia in treating CNCNCP and identified areas of focus for improving the safety and effectiveness of opioid prescribing in Nova Scotia.

Evaluation of validated clinical tools in pain assessment and screening for substance misuse

Liliana Romero MD Anne Marie Pinard MD FRCPC Richard Côté MD FRCPC

Abstract

Objective To examine the feasibility and acceptability of family physician supervisors of medical residents in Quebec using validated clinical tools that are recognized by experts in pain assessment or in drug dependence.

Design Two complementary quantitative and qualitative methods were needed to meet the objectives of this project. The quantitative component is a cross-sectional analytical study and the qualitative component is an exploratory study. The online survey included 29 questions and was carried out between February 16 and March 6, 2017.

Setting The study was carried out in the family medicine units of the 4 faculties of medicine in Quebec.

Participants A total of 840 family physicians with clinical practices and duties that included supervising family medicine residents were targeted.

Main outcome measures Family physicians' opinions on 6 clinical tools previously selected by the experts.

Results The participation rate was 15%. The proportion of insufficient knowledge among participants in relation to the clinical tools for pain impact assessment was between 28% and 88%, depending on the tool. For the tools related to screening for substance misuse, the proportions were 5% (CAGE-AID) and 66% (Opioid Risk Tool). The reported percentage of usefulness of a clinical tool by the physician supervisors followed the same trend as the percentage of their recommendations for medical residents to master these same tools (in descending order): 86.51% for CAGE-AID, 69.05% for the Opioid Risk Tool, 48.41% for the Beck Depression Inventory, 48.41% for Douleur Neuropathique 4, 42.86% for the Brief Pain Inventory, and 32.54% for the Pain Catastrophizing Scale (χ^2 test, $P < .0001$).

Conclusion Quebec family physician supervisors need to improve their knowledge of the validated tools that are recommended by the national guidelines. This result emphasizes the need for training of family physician supervisors in family medicine units to strengthen their capacity to manage chronic pain and the risk of opioid drug misuse.

Screening for nephropathy in type 2 diabetes

Does an abnormal urine albumin-creatinine ratio result mean the test needs to be repeated?

Divya Garg MD CCFP Christopher Naugler MD CCFP FCFP FRCPC Vishal Bhella MD CCFP

Abstract

Context Canadian Diabetes Association guidelines recommend screening patients with type 2 diabetes for chronic kidney disease with a urine albumin-creatinine ratio (ACR) test and then repeating the test twice over a 3-month period if there is an abnormal result. Two out of 3 positive results confirm microalbuminuria. Recent studies looking at first-void samples have suggested that multiple samples might not be necessary at the screening stage for diagnosing microalbuminuria.

Objective To determine the positive predictive value of a single, random, abnormal measure of urine ACR compared with repeat samples in a patient with type 2 diabetes to diagnose microalbuminuria.

Design Retrospective, longitudinal secondary data analysis using Calgary Laboratory Services data.

Participants Patients older than age 21 with a new diagnosis of diabetes in the study period from January 2008 to December 2015, and with a first abnormal urine ACR result followed by another measurement completed within 120 days were included in the study.

Main outcome measures The positive predictive value of an abnormal urine ACR result to diagnose microalbuminuria was calculated.

Results Of 1243 identified cases, results with macroalbuminuria (n=204) and with inadequate follow-up (n=444) were excluded. A total of 574 of the remaining 595 cases were true positives, resulting in a 96.5% positive predictive value of the first abnormal urine ACR result to diagnose microalbuminuria. The data were further assessed to exclude patients who were started on, or who had had a dose adjustment of, angiotensin-converting enzyme inhibitor or angiotensin II receptor blocker medication around the time of ACR measurement in order to focus results on screening and not on treatment response. After exclusions, 306 out of 318 cases were identified as true positives, resulting in a 96.2% positive predictive value.

Conclusion The first abnormal value of random urine ACR has good positive predictive value for the diagnosis of microalbuminuria in patients with type 2 diabetes. Further studies are required to evaluate the reproducibility of these results.

Screening for chronic kidney disease in primary care patients with type 2 diabetes

Longitudinal study

Divya Garg MD CCFP Amardeep Thind MD PhD Heather Maddocks PhD

Abstract

Context Canadian Diabetes Association (CDA) clinical practice guidelines recommend screening all patients with type 2 diabetes for diabetic nephropathy within the first year of diagnosis. Early detection and intervention can delay or prevent loss of renal function and progression to end-stage renal disease.

Objective To further knowledge about screening for chronic kidney disease in patients with type 2 diabetes in a subset of family medicine practices in southwestern Ontario.

Design Retrospective longitudinal data analysis of a pre-existing database of a number of primary care practices.

Setting Family medicine practices in southwestern Ontario.

Participants Patients with type 2 diabetes from 18 family medicine practices.

Main outcome measures To determine if there is CDA guideline-compliant screening for chronic kidney disease in patients with diabetes. We explore the relation to patient age, sex, hypertension, and urban versus rural practice.

Results Out of 2399 patients who met study criteria, 144 were screened for chronic kidney disease with both urine albumin-creatinine ratio (ACR) measurement and estimated glomerular filtration rate (eGFR) completed within the first year of diagnosis. Holding other variables constant, the likelihood of screening using both urine ACR and eGFR increased with patient age. An abnormal ACR or eGFR test result was 1.6 times more likely to be repeated in male patients and 1.4 times more likely to be repeated by urban physicians. Out of these 144 patients, only 69 had guideline-compliant care as defined by the CDA, including adequate repeat testing for abnormal results.

Conclusion Overall rates of following the screening pathway as per CDA recommendations were low. Also, our study noted decreased compliance as the number of steps for screening increased, including follow-up of abnormal results. Further studies are required to assess additional physician, patient, and system factors that affect guideline compliance and to improve the screening pathway for feasibility of screening.

Chronotype and chronic disease prevalence in a family practice in the greater Toronto area

Carolyn Arbanas MD MSc Dennis Wong MD MSc Muhammad Mizanur Rashid Shuvra MBBS MPH MSc(ECD)
 Arsalan Monavvari MD MHSc CCFP(PC) CHE Michael Cardinal-Aucoin PhD MSc

Abstract

Context The circadian system imposes temporal order in human behaviour and physiology. The deleterious consequences of circadian dysregulation are placing a burden on health care systems. Chronotype, usually represented as sleep timing preferences, reflects genetically-based individual variation in circadian biology. A handful of recent evidence suggests that differences in chronotype can influence one's risk of developing certain chronic diseases, including those most commonly treated by Canadian family physicians. There is a pressing need to consider human circadian biology in primary care practice.

Objective To evaluate the association between chronotype and prevalence of chronic disease morbidity within a representative sample population of family medicine patients.

Design Chronotype assessment and quantitative cross-sectional exploratory study.

Setting Family health team and family medicine teaching group.

Participants A total of 200 primary care patients from the suburban community of Markham, Ont, and surrounding area aged 18 to 65 years who had not worked shift work in the past 3 months and had never been diagnosed with a circadian sleep disorder.

Intervention Munich ChronoType Questionnaire.

Results Participants older than 30 years showed a significant difference in the incidence of the total number of chronic diseases between early and late chronotypes (<30 years, ANOVA [analysis of variance], $P=.12$; >30 years, ANOVA and Bonferroni correction, $P=.03$). Stepwise linear regression analysis produced a significant equation ($F_{2,131}=5.401$; $P=.0061$; adjusted $R^2=0.09$) to which total number of chronic diseases and metabolic conditions were significant contributors. Individuals with earlier chronotype had an increased proportion of metabolic conditions.

Conclusion Our results suggest that the risk of developing chronic diseases is influenced by chronotype and that the risk of developing certain types of chronic disease might differ by chronotype. Understanding the contribution of individual chronotype to risk and development of chronic disease will lead to the design and implementation of personalized preventive plans and optimal management protocols for use in primary care.

Human circadian biology and family medicine

Survey of physician awareness

Carolyn Arbanas MD MSc Michael Cardinal-Aucoin PhD MSc

Abstract

Context Proper functioning of the circadian system is essential to human health, and its disruption has been linked to a variety of chronic diseases. This is especially relevant in primary care, as chronic conditions account for more than half of family physician consultations. A literature analysis revealed that most papers on human circadian biology are published in specialized journals. A search of the 10 journals most read by Canadian family physicians found few articles about human circadian biology. This suggests a general lack of awareness and recognition of the effects of circadian biology on primary care.

Objective To assess current awareness by family physicians of the circadian system, its role in health and disease, and the potential incorporation of chronobiological concepts into primary care practices.

Design Survey (5-point Likert scale) of 96 family physicians in the greater Toronto area.

Setting Family health team and family medicine teaching unit.

Participants Family medicine residents and early career physicians (mean age of 33.6 years, range 26 to 43 years).

Results Most physicians surveyed were well informed about the effects of circadian rhythm disorders and acute disruption of the circadian system. Few respondents were aware of the association between long-term circadian misalignment and chronic illness. Most indicated they were uncertain of how to assess the circadian health of patients or how to incorporate chronobiological strategies into patient care, although all agreed it was important and were interested in learning more.

Conclusion These results illuminate the current understanding of family physicians regarding human circadian biology and its relevance to primary care. Our findings will be useful in the design of educational and training programs to help implement circadian approaches in family medicine. There is a pressing need to translate the specialized knowledge of human circadian biology into primary care practice, which can benefit from personalized, simple, safe, and noninvasive chronobiological interventions.

Patient's Choice Award

Scarred for life

Results from the Hidradenitis Suppurativa Patient Experience survey

Jennifer A. Pereira MSc PhD Susan Quach MSc Kathryn Andrews-Clay Maria Goguen Raed Alhusayen MBBS MSCE FRCPC

Abstract

Objective To comprehensively describe the health care experiences of patients with hidradenitis suppurativa (HS), a devastating skin disease affecting more than 1% of North Americans characterized by boils, lesional discharge, unpleasant odour, and pain.

Design In January 2017 we conducted an online survey of Canadians and Americans with HS.

Setting We engaged HS-related patient advocacy groups, physician groups, and social media groups to disseminate the survey.

Participants A total of 167 eligible respondents (living in Canada or the United States with a formal diagnosis or self-diagnosis of HS) completed the survey; 30% were Canadian, most (96%) of whom were female. Mean age was 36 years.

Main outcome measures Survey questions focused on the journey to diagnosis, health care encounters, costs of therapies to manage symptoms, and quality of life.

Results The average amount of time from symptoms to diagnosis was 9 years for Canadians, which included multiple health provider visits. During this period, 79% of patients made at least 4 visits to family physicians for HS symptoms and 53% visited 10 or more times. Additionally, 30% made more than 10 emergency room visits. Respondents had 3 misdiagnoses on average, the most common being skin infection, ingrown hair, and sexually transmitted infection. Most (69%) were dissatisfied or extremely dissatisfied with their health care experience en route to diagnosis, but this number decreased to 36% once HS was accurately diagnosed. Respondents turned to online support groups and websites (95%) rather than to physicians (35%) for information about HS. They struggle with many aspects of their disease, most commonly the lack of awareness among physicians and management of depression and anxiety.

Conclusion There is much room to improve the lives of those living with HS, including greater awareness of this condition among health care providers and support for the psychological effects of HS.

Palliative care for heart failure

Characterizing the end-of-life experience of community heart failure clinic patients

Gregory Handrigan MD PhD CCFP Jennifer Daly MD CCFP

Abstract

Context Heart failure is a common chronic illness characterized by considerable patient symptom burden and heavy health care use at the end of life. A palliative care approach might improve both of these outcomes; however, patients with end-stage heart failure generally have limited access to palliative care owing to an unpredictable disease trajectory and inadequate goals-of-care discussions.

Objective To characterize the end-of-life experience of heart failure patients who attended the Central Okanagan Heart Function Clinic (COHFC).

Design Retrospective chart review.

Setting The COHFC, a community-based heart function clinic in Kelowna, BC.

Participants Patients of the COHFC who died in 2015.

Main outcome measures The patient population was characterized in terms of comorbidities, symptom profile, acute care usage patterns (ie, emergency visits, admissions), use of opioids, documented discussions of goals of care, and involvement of palliative services.

Results Study patients had heavy symptom burden, with more than 90% of patients experiencing dyspnea and fatigue. The same percentage of subjects reported functional impairment, and more than 70% were designated as New York Heart Association class III to IV, experiencing symptoms with minimal activity or at rest. On average, patients visited the emergency room 4 times and were admitted to hospital for 22.5 days in their final year of life; 69% of hospital admissions were for heart failure sequelae. Two-thirds of patients ultimately died in hospital. Less than 40% of subjects were referred to palliative care, often only days before death, and only 23% used opioids for symptom control in their final year of life. This is despite 87% of patients having end-of-life discussions that typically addressed issues beyond code status.

Conclusion Patients of the COHFC had heavy symptom burden with associated functional impairment and frequent acute care usage in their final year of life. Early palliative service involvement should be considered to improve the end-of-life experience for patients and to mitigate health care costs.

Understanding challenges to the delivery of palliative care in rural settings

Sara McDonald

Abstract

Context Approximately 0.5% to 1% of the Canadian population dies per year, according to Statistics Canada. Although many deaths are considered unexpected, a large proportion of deaths can be predicted. There has been an increased focus in research on the delivery of palliative care within medical communities; however, little is understood about the unique needs of rural communities.

Objective To develop an understanding of how the delivery of palliative care in rural settings differs from that in larger urban centres, specifically considering challenges and barriers to providing care.

Design Literature review.

Setting Rural communities.

Methods A database search was initiated using PubMed, MEDLINE, and CINAHL. Key terms searched included *palliative care*, *end-of-life care*, *terminal care*, and *rural*. Articles found were screened for inclusion criteria. Work in developing countries was excluded. Only work completed in English was included. Articles must have included a discussion of challenges and barriers to palliative care delivery in rural settings. Fourteen articles met the inclusion criteria and were further reviewed, synthesized, and thematically analyzed.

Main findings Similar barriers to the delivery of palliative care in rural settings were noted across the literature. Themes that emerged from the literature included costs, access to services, education and training, communication, symptom management, facility size, and coordination of care. Challenges associated with symptom management, education and training, and communication were the most prominent themes present in most articles reviewed.

Conclusion Although there is a small body of literature discussing the challenges and barriers to the delivery of palliative care in rural settings, much of the literature shares similar results. This knowledge could influence future practice to attempt to provide better access to high-quality palliative care in rural settings. Further research on specific interventions to address these challenges would be beneficial.

Multidisciplinary instrument to optimize end-of-life care in nursing homes

DELPHI study

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Abstract

Objective To develop a multidisciplinary instrument for assessment, guiding treatment, and facilitating communication to help optimize end-of-life care in nursing homes.

Design Literature review to help develop a preliminary version of the instrument, followed by a validation phase using a 3-round, online modified DELPHI method.

Setting Province of Quebec.

Participants Seven nurses and 7 physicians working in the province of Quebec participated in the study. They were all experts in palliative care or geriatric long-term care and were chosen according to their backgrounds: 10 had academic backgrounds (were trainers or had publications in the field) and 4 had strong clinical backgrounds in long-term care settings (at least 5 years' experience).

Main outcome measures In each of the 3 DELPHI rounds, experts received a questionnaire in which they had to rate each item of the instrument to determine if the item should be included in the instrument and if the item was adequately presented. The answers were rated on a Likert scale of 1 to 9, where 9 was high approval. Experts were also encouraged to give general and specific comments about each of the items.

Results The preliminary version had 88 items. In the first round, 34 items did not reach consensus. In the second round, after modifications, 4 items did not reach consensus. One item did not reach consensus in the third round, but was then modified and accepted by the group. In total, 7 items were added, 12 removed, 23 modified, and 3 resubmitted without modifications, following the experts' ratings and comments. Expert retention rate was 79% overall, and response rates were 86%, 100%, and 92% for those participating in the first, second, and third rounds, respectively.

Conclusion Expert consensus was reached for all items in the final version of our multicomponent guide by the end of the third DELPHI round. We believe that this instrument will help improve end-of-life symptoms assessment, care, and communication in nursing homes.

Do injury rates on playgrounds outweigh the benefits of play?

Systematic rapid review

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Patrice Aubertin Brandy Tanenbaum Richard Fleet MD PhD CCMF(MU)

Abstract

Objective To collate statistics on injuries to assess whether the benefits of play on playgrounds outweigh the consequences of potential injury.

Design A literature review was conducted from June to July 2016. A search strategy was built around the question “Does playing in a playground represent an increased injury risk activity compared to other activities?” and revolved around the main concepts of *child*, *playground*, and *injury*. The search strategy was applied in 3 databases (PubMed, EMBASE, and Cochrane) and was limited to articles published in the past 5 years. Inclusion and exclusion criteria were systematically applied to the retrieved references.

Results Of the 167 unique articles found, 22 respected the criteria and were retained for data extraction and analysis. Most of the injuries that occur on playgrounds are minor. Injuries requiring first aid accounted for 75% of total playground injuries, and 90% of all children who actually consulted a medical professional for their injuries were released without further investigation. Fractures, brain injuries, and other traumatic injuries accounted for less than 20% of all playground injuries. Fractures occurring on playgrounds were generally less frequent than fractures caused by other sports and other types of falls. Playground falls rarely caused brain injury, accounting for 2% to 9% of all minor head injuries.

Conclusion Playgrounds do not seem to account for a significant proportion of injuries in children. Many sports, leisure activities, and even other types of falls cause more traumas than playground falls. By taking into account the psychological, social, physical, and intellectual benefits that this kind of risky play provides to children, potential risks of injury do not seem to be sufficient grounds for encouraging parents to keep their children away from playgrounds.

Les blessures dans les arts du cirque

Une revue de la littérature

Isabelle Lavallée-Bourget Luc Lapointe MA Patrice Aubertin Richard Fleet MD PhD CCMF(MU)

Résumé

Contexte Les médecins de famille sont souvent confrontés aux blessures issues d'activités sportives. Chaque sport engendre des risques de blessures particuliers et il convient d'offrir des soins adaptés en fonction de la discipline sportive pratiquée. Depuis les années 1980, le cirque québécois a connu un véritable essor. Plusieurs compagnies et écoles de cirque ont vu le jour. Il s'agit d'un milieu très effervescent et il devient donc de plus en plus pertinent pour les omnipraticiens de mieux comprendre les types de blessures fréquemment rencontrés dans cette discipline. Ainsi, nous avons conduit une revue systématique rapide de la littérature pour répondre à la question: «quelles sont les blessures musculo-squelettiques des artistes de cirque?»

Méthodes La stratégie de recherche de la revue de littérature, basée sur les concepts: «blessures musculo-squelettiques» et «cirque», a été lancée dans 17 bases de données bibliographiques incluant notamment SPORTDiscus et MEDLINE. La stratégie a identifié 36 articles, dont 16 répondaient aux critères d'inclusion et ont subi l'étape de l'extraction des données.

Résultats Les résultats suggèrent que deux tiers des blessures sont de nature traumatique et le tiers restant résulte généralement de surutilisation. Les entorses et les elongations musculaires sont les blessures les plus fréquentes, représentant près de 30 % de toutes les blessures. Les fractures et les luxations sont moins courantes (4 % et 2 % respectivement). Les chevilles sont le site le plus susceptible aux blessures aiguës, alors que les blessures à évolution graduelle touchent plus souvent les épaules. Certaines disciplines prédisposent à des problèmes spécifiques, tels que la fracture de stress de la fibula chez le trapéziste.

Conclusion En tenant compte des blessures fréquemment rencontrées chez les artistes de cirque, l'omnipraticien pourra offrir des soins médicaux adaptés en fonction des besoins particuliers de cette clientèle spécifique en croissance.

Chaperone use during intimate examinations

What we do and what we teach

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Abstract

Context Recommendations from the College of Physicians and Surgeons of Alberta state that physicians should use chaperones when conducting intimate examinations of patients. Despite this recommendation, there are no published data on the use of chaperones in Alberta, and there is an overall paucity of research in Canada and in family medicine.

Objective To identify family physicians' use of chaperones during adult intimate examinations and their teaching practices.

Design This project was a questionnaire-based study with data collected using the anonymous, online FluidSurveys platform; SPSS statistical software was used for statistical analysis.

Setting Department of Family Medicine in Calgary.

Participants The study population included 1154 practising family physicians in the Department of Family Medicine.

Main outcome measures Outcomes included the frequency of self-reported chaperone use by physicians with adult patients and their teaching practices.

Results The total number of responses used for analysis was 353 (30% response rate). Physicians do not routinely use chaperones when examining male patients, and there were no significant differences between male and female physicians across all examination types ($P = .073$ to $P = .636$). Male physicians use chaperones significantly more than female physicians do when examining female patients across all types of examinations ($P < .001$). Less than 10% of physicians teach male learners to use chaperones with male patients, with no difference noted by physician sex ($P = .177$ to $P = .873$). Ten percent of physicians teach female learners to use chaperones with female patients, with male physicians being more likely to teach chaperone use across all examination types ($P = .012$ to $P = .035$). In general, female learners are less likely to be taught to use chaperones and male physicians are more likely to teach chaperone use.

Conclusion Despite the College of Physicians and Surgeons of Alberta recommendations, not all physicians routinely use chaperones during intimate examinations. Both patient and physician sex influence chaperone use. These results confirm previous international and Canadian research findings. This is the first study to address teaching practices around chaperone use, and results demonstrate that the sex of the learner, patient, and physician influence teaching practices.

Does the use of dialectical behaviour therapy improve symptoms of anxiety and depression?

Nicole Bennett MN NP Jeff Korchoski MA

Abstract

Objective To examine the use of dialectical behaviour therapy (DBT) as an adjuvant in treating patients in the primary care setting with anxiety and depression to improve measurements on the PHQ-9 (Patient Health Questionnaire) and GAD-7 (Generalized Anxiety Disorder scale).

Design Patients completed a 4-week DBT group facilitated by a nurse practitioner and shared-care counselor focusing on core mindfulness skills, interpersonal effectiveness skills, emotional regulation skills, and distress tolerance skills. The GAD-7 and PHQ-9 were administered before and after.

Setting The DBT course was offered in the primary care clinic 2 hours a week for 4 weeks, and was offered monthly.

Participants Patients with a diagnosis of depression or anxiety or both were referred from primary care clinics within the community by their nurse practitioner, family physician, or shared-care counselor and voluntarily attended the 4-week program.

Intervention The DBT group was facilitated using a course adapted from the Fulton State Hospital (Missouri Department of Mental Health).

Main outcome measures A total of 31 people participated in the group with 12 successfully completing the PHQ-9 and GAD-7 measures both before and after. Data were compared before and after for both the PHQ-9 scores and the GAD-7 scores using a paired *t* test with confidence intervals set at 95%.

Results There is strong evidence ($t=3.24$, $P=.004$) that the addition of a 4-week DBT program significantly improves the PHQ-9 scores of participants. There is also strong evidence ($t=2.81$, $P=.008$) that the addition of a 4-week DBT program significantly improves GAD-7 scores in participants.

Conclusion Use of a DBT group can significantly improve anxiety and depression symptoms in primary care patients. In the past, DBT was commonly used for borderline personality disorder but it should also be considered in the treatment of anxiety and depression.

Best Research Poster Award

Mindfulness-based interventions in clinical samples of youth with internalizing disorders

Systematic review

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Abstract

Context Mindfulness-based interventions (MBIs) have emerged as a promising strategy for individuals with chronic health conditions, given their versatility in targeting both physical and mental health outcomes. However, research to date has focused on adult or community-based populations. Yet, a recent meta-analysis revealed that MBIs are 3 times more impactful for clinical versus nonclinical pediatric populations and are particularly helpful for internalizing symptoms (eg, depression, anxiety).

Objective To summarize and critically appraise the available literature on the feasibility and effectiveness of MBIs for clinical samples of youth diagnosed with internalizing disorders (eg, anxiety, depression, posttraumatic stress).

Design A systematic review of the literature with electronic searches conducted by a library information specialist familiar with the field using EMBASE, PsycINFO, MEDLINE, CINAHL, Web of Science, and EBM Reviews databases. Two reviewers independently selected articles for review and extracted data.

Results Of a total of 4710 articles, 5 articles met inclusion criteria. Study designs were primarily randomized controlled trials with 1 prospective pre-post intervention study. Sample sizes varied across studies from 24 to 102 participants. No studies included inpatient participants or participants with comorbid internalizing and physical disorders. The MBIs included in this review were primarily group-based and did not offer remote or online options. All MBIs were feasible, and studies consistently found that following MBI completion, youth reported considerable improvements in internalizing symptoms (eg, anxiety, depression, posttraumatic stress).

Conclusion Mindfulness-based interventions are a promising approach to coping with internalizing symptoms in youth. Clinical populations of youth are an essential sample to target for future work in mindfulness owing to the substantial impairment in quality of life and function related to living with mental illness. Future research with rigorous study design is warranted to determine definitive treatment effectiveness of MBIs for internalizing symptoms.

Continuity of care in postgraduate training

Context and mechanisms to enable learning

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Abstract

Context Continuity of care is integral to the practice of comprehensive family medicine. To date, research in the area of continuity of care in residency training programs has examined structural programmatic changes and the effects of such changes on residents' continuity of care experiences. The mechanisms and enablers that facilitate the learning of continuity of care have not been well established.

Objective To understand how residents experience their learning of continuity of care and the effectiveness of a complex educational intervention targeted at integrating continuity of care into residents' identities at multiple levels of the postgraduate curriculum.

Design Mixed-methods comparative study.

Participants The population for this study consists of 1 cohort of family medicine residents in the Department of Family and Community Medicine at the University of Toronto in Ontario, their clinical preceptors, and a control group at a comparable community-based teaching site in Toronto.

Intervention The System Resident Preceptor intervention has been delivered to 1 cohort of residents and preceptors, which includes structural initiatives to enhance learning of continuity of care (eg, remote electronic medical record access), an orientation workshop for trainees, and faculty development sessions. Additionally, this intervention has introduced 2 novel formative assessment tools.

Main findings Early findings over the 2-year intervention point to contextual issues at the level of the system (such as electronic medical record access), the resident (such as career trajectory), and the preceptor (such as role modeling). These themes identify the critical mechanisms in our context for integrating continuity of care into the emerging identity of physicians.

Conclusion While curriculum design and assessment standards are important components of providing a structured approach to teaching continuity of care in the postgraduate curriculum, other factors such as evolution of skill and experience over the course of training, system of practice, and preceptor influence are crucial mechanisms.

Role modeling of professionalism in family medicine residency

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John Maxted MD MBA CCFP FCFP Donatus Mutasingwa MD MPhil PhD CCFP Shiphra Ginsburg MD Med FRCPC

Abstract

Objective To explore how family medicine (FM) residents experience role modeling of professionalism by FM preceptors.

Design This study employed qualitative description with phenomenologic hues.

Setting Two teaching units at the University of Toronto in Ontario; 1 unit employed a block model of FM exposure while the other followed a horizontal model.

Participants Sixteen FM residents.

Methods We conducted one-on-one, semistructured interviews with FM residents. We used the CanMEDS–Family Medicine 2009 framework to help craft interview questions. Interviews were audiorecorded and transcribed verbatim. Transcripts were coded and themes were developed.

Main findings Most participants could identify experiences with role modeling of ethical practice; many examples were in the context of challenging patients. Some, but not all, residents could identify experiences with role modeling of profession-led regulation. Examples included seeing preceptors participating in regulatory bodies and other professional organizations. There were mixed responses with respect to role modeling a commitment to personal health. Some were able to identify multiple positive examples and even believed that their preceptors explicitly sought to model self-care. One participant in particular expressed concerns with negative role modeling of self-care. Residents identified multiple experiences with role modeling of reflective practice such as witnessing preceptors seek help from colleagues, reflective writing, attending morbidity and mortality rounds, and debriefing at the end of clinic. Some residents described insufficient role modeling in general; most of these comments came from residents in the horizontal model. Two themes emerged from analysis of these comments: the importance of a longitudinal relationship with a role model and the need for a close working relationship in a clinical setting.

Conclusion Reassuringly, FM residents described experiences with positive role modeling of professionalism. As faculty, we should seek to explicitly model a commitment to personal health so that our learners recognize its importance. Finally, with more FM resident programs transitioning from block to horizontal models, we need to ensure residents have adequate opportunity to develop close, longitudinal working relationships with faculty in order to optimize the effects of role modeling.

Canada student loan forgiveness as a financial incentivization policy

Interest in and matches to family medicine residency programs

Conrad Tsang MD MPH

Abstract

Objective To evaluate whether the 2012 implementation of the Canada Student Loan Forgiveness for Family Doctors program increased the interest in and matches to family medicine residency programs.

Design Quasi-experimental interrupted time series with weighted synthetic control methods to match for preintervention trends.

Setting National data from 2000 to 2016.

Participants All Canadian medical graduates participating in the Canadian Resident Matching Service first-iteration match.

Intervention Financial incentivization policy providing \$8000 in federal loan forgiveness for family medicine residents and physicians working 400 hours in underserved or remote communities per year. All residency programs with mandatory rural rotations meet requirements.

Main outcome measures Immediate change after policy implementation and longitudinal trend changes in the number of first-choice applicants to family medicine, with a priori stratification by sex, and match results.

Results A total of 339 applicants in 2010 ranked family medicine as their first-choice discipline, which increased to 1050 in 2016, similar to the control group with 373 in 2010 and 940 in 2016. Although there were no significant changes in the total number of first-choice applicants immediately or longitudinally when compared with the control group, in the year following policy implementation there was a statistically significant increase of 71 female first-choice applicants (95% CI 0.4 to 141.9; $P=.049$) and 74 female first-choice matches to family medicine (95% CI 5.6 to 141.5; $P=.035$), with unchanged trends. First-choice male applicants had a statistically significant longitudinal trend increase of 11 matches per year (95% CI 0.9 to 21.8; $P=.034$). Among all applicants, regardless of discipline ranking, there was a statistically significant increase of 112 matches to family medicine in the year following policy implementation (95% CI 18.5 to 204.9; $P=.021$) with a maintained modest trend increase.

Conclusion Significant benefits were already seen at 5 years after policy implementation for interest in and matches to family medicine. Financial incentivization programs should consider characteristics of income sensitivity between sexes.

Preceptors' assessment of a preclerkship longitudinal family medicine experience at McGill University

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Peter Nugus PhD Yvonne Steinert PhD Charo Rodriguez MD PhD

Abstract

Objective To examine preceptors' views on a longitudinal family medicine experience (LFME) course for first-year medical students following its first year of implementation.

Design This study is part of a larger project assessing students' and preceptors' views of LFME using surveys and focus groups. A 54-item survey using 7-point Likert scales was developed to assess preceptors' views on various aspects of the LFME (eg, course logistics, motivation for becoming a preceptor, mentoring role, etc). Fourteen items were identical to the students' survey (N = 120; published in 2016) and mean scores from these items were compared across the 2 groups.

Setting McGill University in Montreal, Que. Surveys were available online via FluidSurveys from June to August 2014.

Participants Ninety-nine LFME preceptors (57% participation rate; 54% female) completed the survey.

Results Preceptors had more positive ratings regarding their role and the benefits of the LFME course than students did. For example, preceptors were more likely to report that students were given sufficient opportunity to practise clinic skills, received sufficient feedback from preceptors, felt more prepared for clerkship, had a better understanding of the work performed by family physicians, and were more likely to pursue family medicine as a result of the LFME ($P < .01$). Younger preceptors were more likely to report they had a challenging time balancing LFME teaching with maintaining their practice, were motivated to join LFME for remuneration, felt challenged as a role model, and believed the LFME would encourage students to pursue family medicine ($P < .01$) compared with older preceptors. Female preceptors were more likely to report having a challenging time balancing LFME with their practice and were less likely to feel confident in their teaching ability ($P < .01$) compared with male preceptors.

Conclusion Both preceptors and students were very satisfied with the LFME course; however, preceptors had more positive reviews than students did.

Examining follow-up of residents in difficulty in a competency-based assessment framework

Natalia Binczyk Shelley Ross PhD Oksana Babenko PhD Shirley Schipper MD CCFP

Abstract

Context Residents in difficulty are expensive for residency training programs in both human capital and financial resources. Detection and support of residents in difficulty has been challenging. Our program implemented competency-based assessment in 2009. While we have heard anecdotally that there has been an improvement in the follow-up of residents who encounter difficulty, we wished to explore this question empirically.

Objective To determine the extent to which the Competency-Based Achievement System (CBAS) results in better follow-up of residents identified as encountering difficulty.

Design Secondary data analysis of archived resident files.

Setting University of Alberta family medicine residency program.

Participants Archived files for urban family medicine residents who commenced and completed residency training in 2006 to 2016 (N = 517).

Intervention Introduction of CBAS as the main assessment tool in the University of Alberta's family medicine residency training program.

Main outcome measures Resident files were analyzed for evidence of difficulty in the form of professionalism flags or performance flags. It was recorded whether the files contained documentation indicating that the flags were addressed by the residency training program.

Results After CBAS implementation there was a decrease in the proportion of flagged residents whose difficulties were not documented as recognized and addressed, with 48.0% of such residents before the CBAS (95% CI 39.0 to 57.5) and 16.9% of such residents after CBAS implementation (95% CI 8.5 to 25.3). Pre-CBAS residents were 2.0 times (95% CI 1.2 to 3.4) more likely to encounter difficulty, residents older than 30 years were 2.3 times (95% CI 1.2 to 4.1) more likely to encounter difficulty, and nontransfer residents were 9.0 times (95% CI 1.2 to 68.4) more likely to encounter difficulty than their respective counterparts were.

Conclusion The CBAS is effective in identifying residents in difficulty and ensuring that difficulties are addressed. Addressing difficulties appears to result in a decrease in the proportion of learners who continue to encounter difficulty during training. Some characteristics might increase the likelihood that a resident could encounter difficulty.

Exploring the relationship between competency-based assessment and applications to third-year residency enhanced skills programs

Natalia Binczyk Oksana Babenko PhD Shirley Schipper MD CCFP Shelley Ross PhD

Abstract

Context In Canada, many family medicine residency programs offer enhanced-skills (third-year residency) programs that allow family physicians to obtain extra training in areas such as care of the elderly and emergency medicine. There has been a steady increase in applications to these programs, which is becoming a controversial topic. There is some speculation that residency program graduates pursue third-year residency training because they do not yet feel ready for independent practice. In this study we explored the relationship between the implementation of a competency-based assessment framework and application to third-year residency programs.

Objective To explore to what extent there is a relationship between competency-based assessment and the proportion of graduates from the program who apply to third-year residency programs and to what extent there are trends in the characteristics of residents applying to third-year residency programs.

Design Secondary data analysis of archived resident files.

Setting University of Alberta family medicine residency program.

Participants Archived files for urban family medicine residents who commenced and completed residency training in 2006 to 2016 (N=517).

Intervention Introduction of the Competency-Based Achievement System (CBAS).

Main outcome measures Application to third-year residency programs.

Results Residents trained before CBAS implementation were 1.69 times (95% CI 1.01 to 2.82) more likely to apply to third-year residency programs than their post-CBAS counterparts were. Male residents were 2.21 times (95% CI 1.32 to 3.68) more likely to apply to third-year residency programs than female residents were. Residents older than 30 years of age were 2.13 times (95% CI 1.22 to 3.70) more likely to apply to third-year residency programs than younger residents were. Canadian medical graduates were 2.72 times (95% CI 1.35 to 4.47) more likely to apply to third-year residency programs than international medical graduates were.

Conclusion The implementation of the CBAS might have contributed to a decrease in the proportion of residents pursuing third-year residency training. Male, older, and Canadian medical graduate students might be facing unique circumstances contributing to an increased likelihood of applying to third-year residency programs.

Examining relationships between residents' interests and achievement on the family medicine in-training examination

Oksana Babenko PhD Shirley Schipper MD CCFP Shelley Ross PhD
Denise Campbell-Scherer MD PhD CCFP FCFP John Chmielec MD CCFP FCFP FAFAP

Abstract

Context Interest, as a form of motivation, has been shown to facilitate learning and stimulate effort and personal involvement; however, interest in a particular area or subject can also jeopardize individuals' achievement and learning in other areas and subjects.

Objective To examine associations between residents' interests in specific areas of family medicine and their performance on the in-training examination (ITE), a standardized measure of medical knowledge and clinical reasoning.

Design Cross-sectional study employing survey methodology and 2016 ITE data.

Setting In the fall, all residents (N = 151) in their first and second years took the ITE (computer-based, 240 multiple-choice questions).

Participants Immediately before the ITE, all residents were invited to indicate which area of family medicine they were especially interested in. The response rate was about 60% (n = 87).

Main outcome measures Residents' performance on each of the 8 areas on the ITE: adult medicine; care of surgical patients; care of the elderly; maternity care; care of female patients; care of children; emergent care; and mental health. Multivariate linear regressions with year of residency (first- or second- year residency) and interest in a specific area (yes or no) entered as predictors of residents' performance in each domain.

Results Fifty-four percent of responding residents were first-year residents; 58% were female residents. Residents had, on average, the highest scores on emergent care and the lowest scores on maternity care. Significant differences in performance were observed between first-year and second-year residents on adult medicine, care of the elderly, care of children, emergent care, and mental health. Interest was a significant predictor of residents' performance on maternity care and emergent care (for both, $\beta = 0.22$; $P < .05$) only.

Conclusion Given the broad spectrum of family practice, it is reassuring that residents' performance on specific areas was largely comparable and independent of residents' interests for most of the areas of care in family medicine.

Family medicine residents' perceptions and experiences in teaching

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Abstract

Context Teaching is one of the best ways to be engaged in lifelong professional development. Previous involvement and experience in teaching contribute to perceptions that individuals have about the importance and value of teaching with respect to professional development.

Objective To examine family medicine residents' perceptions of the importance and value of teaching, as well as their enjoyment and interest in teaching, in light of their previous teaching experience and training in teaching.

Design Survey study.

Participants Family medicine residents at a Canadian university at the midpoint of their training.

Main outcome measures Residents completed a questionnaire with measures of perceptions of the importance and value of teaching, enjoyment and interest in teaching, and previous teaching experience and training in teaching (scale 1 to 10). A descriptive data analysis was conducted.

Results In total, 52 (67%) residents completed the survey (53% were female, 65% were in the urban stream, and the mean [SD] age was 28.8 [3.2] years, range 24 to 38 years). A total of 92% of residents reported having taught medical students (77%), patients (72%), school students (53%), university students (34%), and other health care professionals (30%). Eighty-seven percent of residents taught one-on-one, 75% taught small groups, and 53% had classroom teaching experience. Only 36% of residents had any training in teaching. Overall, residents reported a high level of teaching enjoyment (mean [SD] of 8.7 [1.5]), considered teaching an important skill for physicians to have (mean [SD] of 9.4 [0.9]) and to develop (mean [SD] of 9.3 [0.9]), and viewed teaching as part of lifelong learning (mean [SD] 9.3 [1.0]). Residents felt a professional duty to teach (mean [SD] of 8.6 [1.4]), were interested in teaching medical students (mean [SD] 8.5 [1.7]) and residents (mean [SD] of 8.3 [1.6]), and would choose to include clinical teaching as part of their careers (mean [SD] of 8.8 [1.5]).

Conclusion Family medicine residents are highly interested in teaching. To encourage the development of future teachers, residency programs should consider early formal processes in training residents to foster teaching in clinical settings.

Family medicine residents' perceptions of well-being and preparedness for dealing with burnout

Resident-facilitated small group discussions (Resident Ice Cream Rounds)

Kelly Howse MD CCFP Nancy Dalgarno PhD Emily Johnston MSc

Abstract

Context There is a dearth of literature that guides effective curricular support for residents learning about burnout and wellness, and enacting the new knowledge and skills in practice.

Objective To evaluate an innovative, voluntary, resident-facilitated, discussion-based curricular learning initiative in one family medicine training program, called Resident Ice Cream Rounds (RICRs).

Design Mixed-method program evaluation.

Methods Data collection included participant exit surveys (n=132) following 11 RICRs, a final online survey that included the Maslach Burnout Inventory (response rate of 50%), and 3 interviews. Data were analyzed using descriptive and inferential statistics and thematic design.

Results Most residents believed their well-being was somewhat better (60%) or the same (40%) following the RICR. Of those who attended more than 1 session, the perceived effect the sessions had on their level of stress was significantly higher compared with the first session they attended ($P < .05$). Most would recommend the RICRs to others (92%). The most common adaptive strategy for dealing with stress was talking with peers (100%). The most maladaptive strategies included self-blame (65%), avoiding people (52%), and consuming alcohol (48%). Wellness as a department priority and dedicated scheduled time were strengths of the RICR. Challenges included a lack of time to attend and difficulties engaging the entire group.

Conclusion Despite the fact that most residents thought the RICR had little or no effect on their level of stress, this improved as they attended more sessions and almost all would recommend the sessions to their peers. The RICR is well positioned to provide an outlet for peer-support and discussions integrated into the curriculum.

Collège des médecins du Québec

Rôle et responsabilités de l'apprenant et du superviseur

Louise Samson MD FRCPC Yves Gervais MD Josée Dubois MD Ève-Reine Gagné MD Kenneth Doyle MD
Sylvie Bélanger MD François Caron MD Serge Keverian MD Julie Lalancette MD
Mario Deschênes MD Anne Marie MacLellan MD

Résumé

Introduction La formation médicale est de grande qualité au Québec et les nombreux référentiels qui encadrent cette formation y jouent un rôle fondamental. Toutefois, il persiste certaines ambiguïtés dans la perception des apprenants et des superviseurs quant à leur rôle et à leurs responsabilités respectifs. Ce guide vise une standardisation des messages quant au rôle et aux responsabilités de l'apprenant et du superviseur. La préoccupation centrale est d'assurer la sécurité des soins. L'objectif de cette affiche est d'amener le participant à se familiariser avec certains énoncés du guide et à envisager les manières dont il peut être utilisé au quotidien.

Méthodes Le guide est écrit en fonction de 5 principales interactions de l'apprenant ou du superviseur avec leur environnement soit le patient, les milieux de formation, les équipes soignantes, le Collège des médecins du Québec ainsi que la profession et la discipline, et enfin envers soi-même. Pour cette affiche, certains énoncés ont été sélectionnés parmi les cent énoncés du guide afin d'aider le participant à saisir la portée du guide et à voir comment transposer les différents messages dans la réalité de son milieu de formation.

Conclusion Ce guide se veut un document succinct et facile à consulter dans le but d'offrir des balises claires et concrètes qui définissent le rôle et les responsabilités de l'apprenant et de son superviseur. Les énoncés décrits dans ce guide reflètent la préoccupation centrale d'assurer le respect de la mission du Collège des médecins du Québec, qui vise pour l'essentiel la protection du public par une médecine de qualité.

Family medicine residents' appreciation of home care in a nonurban training setting

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François Aubry PhD Johanne Gauthier MD CCFP Serge Dumont MD CCFP

Abstract

Objective To describe family medicine residents' appreciation of home care in a nonurban training setting and identify factors influencing their opinion.

Design Qualitative study using individual, semistructured interviews with participating residents.

Setting The study was conducted between January 2015 and July 2016 at the Trois-Rivières Family Medicine Teaching Unit, a nonurban centre affiliated with the University of Montreal in Quebec.

Participants Among the 22 residents completing their residency at the Trois-Rivières Family Medicine Teaching Unit, 15 agreed to participate in the study. Ten were in their first year of residency and 5 were in their second year of residency. Participant age ranged from 24 to 38 years, with a female predominance (11 of 15). Most participants completed their undergraduate studies in a nonurban training setting.

Methods Interviews were recorded and transcribed integrally by a research professional. Following codification of the transcriptions, a transversal analysis was performed by study themes, enabling a descriptive analysis of interview content.

Main findings Residents' appreciation of home care was favourable for 3 residents, unfavourable for 3 residents, and nuanced for 9 others. Residents' opinions regarding home care are influenced by its bad press among residents and other factors perceived as either favourable (eg, supplementary information obtained during home visits, benefits for patients, distinct nature of patient-physician relationship) or unfavourable (eg, uncertainty regarding home care practice, patient population targeted by home care, travel). For most residents (9 of 15) there was no association between their appreciation of home care and their openness to delivering home care in their future practices. Almost half (7 of 15) expressed, with no hesitancy, their willingness to integrate home care in their future practices.

Conclusion Residents trained in a nonurban setting do not express a spontaneously unfavourable experience regarding home care. Their opinion is nuanced and is influenced by various aspects specific to this practice, which are perceived positively by residents, resulting in an important proportion of residents with an openness to home care in their future practices.

How family medicine residents learn

Understanding the role of cues in self-regulated learning

Jane Griffiths MD CCFP FCFP Han Han PhD Nancy Dalgarno MEd PhD OCT Jessica Rich MEd
Karen Schultz MD CCFP FCFP Geoffrey Hodgetts MD CCFP FCFP Elaine Van Melle PhD

Abstract

Objective To identify cues that drive family medicine residents' self-regulated learning and to determine the effectiveness of the cues.

Design A qualitative descriptive design was adopted.

Setting The study took place in one medium-size department of family medicine located in an urban postgraduate medical education institution in Canada.

Participants Using purposive sampling, we identified family medicine residents (6 first-year and 6 second-year residents) to participate in the study.

Methods Information was collected from family medicine residents' natural learning behaviour in their training program. Over a 1-month period, participants used their smartphones to audiorecord a series of 120 voice notes about their in-training experiences and learning processes. The recordings were transcribed verbatim and pseudonyms replaced all identifiable data. Data analysis employed a thematic design.

Main findings The residents reported main sources of uncertainty that drove learning: prescribing or explaining medications, diagnosing complicated presentations, ordering further clinical investigations, handling patients' nonclinical demands, and managing differing opinions. These uncertainties prompted searching for information during clinical encounters. External resources included websites, published guidelines, and consultation with preceptors, advisers, senior staff, or allied health professionals. Obstacles to learning were not enough time to learn during clinic, inability to find specific guidelines, and the perception that preceptors were unable to provide clear and sufficient information.

Conclusion Residents are prompted to learn from uncertainties arising in clinical work. They enact self-regulated learning through accessing both internal and external resources to alleviate their uncertainty, regardless of the challenges they face, to resolve the uncertainties. This study expands our understanding of the cues and processes that family medicine residents use to engage in self-regulated learning. Evidence of the range of cues prompting residents to feel uncertain will help us design innovations and supports to promote self-regulated learning purposefully in practice.

Program evaluation of a simulation-based obstetric skills workshop for family medicine residents

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Abstract

Objective To enhance family medicine residents' knowledge and skills in intrapartum care through participation in a simulation-based Obstetrics Skills Day workshop designed and implemented within a postgraduate program in family medicine.

Design Program evaluation.

Setting Western University in London, Ont.

Participants First-year family medicine residents in 2014, 2015, and 2016.

Intervention A hands-on, low- to medium-fidelity, simulation-based workshop was developed according to objectives identified by a family medicine faculty member who practised obstetrics. Objectives for the workshop included 9 low-risk obstetric activities: assessment of cervical dilation, assessment of vertex and breech presentation, artificial rupture of membranes, normal vaginal birth, shoulder dystocia, postpartum hemorrhage, scalp clip application, knot tying, and perineal repair. The workshop took place over the course of 3 hours, beginning with a 30-minute introduction including videos of normal vaginal birth and perineal repair. Following this the residents had 2 hours and 25 minutes to rotate through 4 quadrants (approximately 35 minutes each) with various simulations. The workshop concluded with a 10-minute wrap-up.

Main outcome measures Pretest evaluation questions focused on demographic questions, along with questions regarding experience and competence in the objectives of the workshop. Posttest evaluation questions focused on competence in the objectives after the session and workshop improvement questions.

Results In total, 185 residents completed evaluations before and after the workshop over the 3 years (response rate was 81.5%). Self-reported competence in all 9 objectives significantly increased after the session in all 3 years, according to a paired-samples *t* test with a *P* value of .05. The feedback received regarding the workshop was extremely positive.

Conclusion Obstetrics Skills Day appears to have improved self-reported competence in managing low-risk intrapartum experiences in family medicine. The program capitalizes on successes of the workshop and continual improvements are made each year.

Family medicine resident training in abdominal aortic aneurysm ultrasound screening

Pilot study

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Abstract

Objective To determine family medicine residents' uptake of, confidence in, knowledge of, and barriers to abdominal aortic aneurysm (AAA) ultrasound screening in an academic family health team following a structured AAA ultrasound screening teaching program.

Design Prospective observational study.

Setting Queen's University academic family health team.

Participants Fourteen first-year family medicine residents with no formal ultrasound training.

Intervention The structured AAA ultrasound screening teaching program included a 45-minute video followed by supervised ultrasound scans by ultrasound educators from the Queen's Department of Emergency Medicine. Family medicine residents completed questionnaires before and 6 months after the teaching intervention assessing for confidence using 5-point Likert items, and knowledge using multiple-choice questions. Barriers to AAA ultrasound screening in an academic family health team were assessed using 3-point Likert items.

Main outcome measures The primary outcomes of the study included family medicine residents' confidence, knowledge, and perceived barriers to AAA ultrasound scanning in an academic family health team, and the number of AAA ultrasound screening scans performed before and after the training session.

Results Fourteen family medicine residents performed a median of 11 supervised scans. After training, overall confidence in ruling out an AAA increased (mean difference of -3.8, $W=0$, $P \leq .05$) and proportion of correct knowledge responses increased from 58% to 91% (mean difference of -6.3, $z=-3.62$, $P < .05$). Major barriers identified by family medicine residents both before and after training were time limits in the clinic and lack of faculty supervision and commitment to AAA ultrasound screening. The number of AAA ultrasound screening scans performed by residents in the 6 months following the AAA teaching intervention increased from 0 to 81 scans ($t=2.94$, $P \leq .05$).

Conclusion Family medicine residents experienced increased knowledge and confidence following a structured AAA ultrasound screening teaching program. Its implementation in academic family health teams might be successful if accompanied by faculty development, awareness of time limitations, and patient education regarding its utility.

Quantitative evaluation of OttawaResiliency.org as a resource for improving resident wellness

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Abstract

Context Resiliency is the capacity of an individual to endure, overcome, and recover from hardship or challenges. In the past few years, family medicine residents at the University of Ottawa in Ontario have identified resiliency training as a gap in their program. The Family Medicine Resiliency Committee has undertaken several projects to address this issue. One project is a resiliency website (**OttawaResiliency.org**)—a tool designed by residents for residents to promote wellness by providing relevant and easily accessible information and resources for coping with the stresses of residency training.

Objective To obtain feedback from University of Ottawa family medicine residents about the content and utility of the resiliency website.

Setting University of Ottawa.

Participants All current family medicine residents.

Main outcome measures A short, 10-question, anonymous online survey was emailed to all current family medicine residents. Website traffic data were also analyzed using Google Analytics.

Results Since its creation in June 2016, the resiliency website had had 177 visitors, accounting for 709 page views. Of approximately 150 residents, 33 responded to the survey (22%). A total of 85% of respondents were interested in a website that provided resources for resident wellness and resiliency, 97% were aware of the Ottawa Resiliency website, and 79% had visited the website. On a 5-point rating scale, the website scored an average of 3.31 for usefulness, 3.32 for comprehensiveness, and 4.07 for ease of use. The webpages residents found most helpful were resources for living in Ottawa and wellness resources. Twenty-one residents provided specific suggestions for website improvements.

Conclusion The **OttawaResiliency.org** website was positively received by the family medicine resident community. The website was found to have a very user-friendly platform but has room to improve on the comprehensiveness of its content. The results of this study allow the Family Medicine Resiliency Committee to improve its resident wellness curriculum.

Caring for those in long-term care

Results from a training program for family medicine residents

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Abstract

Context Care of the elderly is a growing area of practice within primary care. Training for family medicine physicians needs to incorporate exposure to and skill development for practice with elderly patients and those living in long-term care (LTC) facilities. Training in LTC can provide an important opportunity for family medicine residents to engage in interprofessional practice with other LTC staff, families, and patients.

Objective To provide residents with exposure to and skill development for practice with elderly patients and those living in LTC.

Design Surveys before and after a 3-month LTC rotation.

Setting The Dalhousie Department of Family Medicine launched a 3-month LTC rotation as part of postgraduate training for Halifax site residents in 2010.

Participants First-year residents from the 2013 and 2014 academic years.

Results Results from prerotation and postrotation surveys completed by 26 residents show that 50% of residents had an increased interest in practising in LTC following the rotation. More than two-thirds of the residents indicated an increased comfort in managing safe prescribing, constipation, chronic pain, and wounds. More than three-quarters had increased comfort in conducting medication reviews and comprehensive geriatric assessments. Feedback from these residents shows that exposure to LTC practice as part of their postgraduate training can have a positive effect on their comfort in managing issues for this population.

Conclusion The exposure to interprofessional practice and working with families was valued by the residents.

Transition to residency

First-year family medicine resident perspective

Britta Camilla Claire Laslo MD CCFP Judith Belle Brown PhD Thomas Freeman MD MCISc CCFP FCFP

Abstract

Objective To explore the feelings and experiences of first-year family medicine residents regarding the transition to first-year family medicine residency.

Design Descriptive qualitative study consisting of 9 semistructured, in-depth interviews with family medicine residents.

Setting The Department of Family Medicine at Western University in London, Ont.

Participants Participants had to be enrolled in their first-year of family medicine residency training at Western University and had to have completed their undergraduate medical school training at a Canadian medical school. The final sample included 9 first-year family medicine residents.

Methods Data were independently transcribed and then reviewed by 3 investigators to identify emerging themes. The data analysis was both iterative and interpretative. Credibility of findings was enhanced through field notes, questioning of the data, and concurrent analysis of data with ongoing data collection, and by employing reflexivity.

Main findings Family medicine residents described this transition as complex as they experienced evolving, and often competing, positive and negative feelings during this transition. Family medicine residents articulated an important professional transition that occurs as a first-year resident, as well as personal, intrinsic attributes (ie, personality traits, attributes, or habits) and a multitude of extrinsic factors (eg, geographical moves, residency rotation schedule, prior experiences with transition) that affect this transition. Of importance, family medicine residents consistently noted a perceived lack of connection to their family medicine resident peers, their family medicine preceptors, and their family medicine postgraduate program, which often left them feeling disengaged.

Conclusion The findings increase our understanding of this complex transition in medical education. The findings support recommendations to improve the transition from final-year medical student to first-year family medicine resident through a training environment with increased connectivity to the department of family medicine, early family medicine rotations, and fewer transitions between services.

Memorial University's integrated pathways to rural family practice

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Abstract

Objective To assess the national and provincial effects of Memorial University of Newfoundland's pathways approach to producing rural family physicians.

Design Retrospective cohort study that used data from 3 sources, which included national, provincial, and university databases.

Setting This study uses georeferenced practice location and student background data from Newfoundland and Labrador and Canada.

Participants We considered graduates from Memorial's family medicine postgraduate program who graduated between 2004 and 2013 at the national level and Memorial MD graduates practising in Newfoundland and Labrador as of January 2015 at the provincial level.

Intervention We used data from 3 sources: the Canadian Post MD Education Registry (2004 to 2013); the College of Physicians and Surgeons of Newfoundland and Labrador database (as of January 2015); and the Learners and Locations database (2007 to 2015). We georeferenced the practice and background locations of Memorial graduates and classified locations based on a standard Canadian geographic definition.

Main outcome measures The proportion of graduates practising in a rural location in Canada and in Newfoundland and Labrador. National-level analysis compared Memorial postgraduates practising in rural Canada with graduates of all other Canadian medical schools. Descriptive and bivariate analyses were performed.

Results For Memorial family medicine graduates who were practising in Canada 2 years after completing their postgraduate training (2004 to 2013), 27% were practising in a rural location compared with the national average of 13%. We found 305 Memorial MD graduates were practising in Newfoundland and Labrador, of whom 36% were practising in a rural location. For Memorial family medicine postgraduates, 42% were practising in rural Canada and 73% were practising in Newfoundland and Labrador (50% of those practising in Newfoundland and Labrador were rural).

Conclusion The integrated pathways approach has allowed Memorial to meet its targets with regard to providing rural generalists for rural Newfoundland and Labrador and for Canada.

Best Education Poster Award

Developing, implementing, and evaluating a CPD intervention for MPN and MDS cancers

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Abstract

Context Chronic myeloproliferative neoplasms (MPN) and myelodysplastic syndromes (MDS) are unknown to many health care professionals.

Objective To develop and implement a theory-driven MPN and MDS continuing professional development (CPD) intervention; assess the feasibility of delivering this intervention to its target audience; and determine its effects on the outcomes of participation, satisfaction, knowledge, reported performance, and perceived patient health.

Design We conducted a longitudinal, exploratory case study in which we employed mixed methods to collect data on the delivery, quality, and effect of the CPD intervention. The design was informed by the Knowledge-to-Action Cycle, the Expanded Outcome-Based Evaluation Framework, and the CPD “push” model.

Setting Continuing professional development for Canadian health care practitioners.

Participants We used purposeful convenience sampling to select eligible Canadian health care practitioners. A total of 124 practitioners participated, among whom 60% were family physicians and 46% primarily served urban or suburban populations.

Intervention Recommendations on screening, diagnosis, treatment, and management of MPN and MDS, delivered both synchronously and asynchronously as part of a free, online, 3-module CPD course.

Main outcome measures Data were collected using a registration form (participation outcome), an evaluation form (satisfaction outcome), pretests and posttests (knowledge outcome), and the Information Assessment Method and My MPN/MDS Portfolio questionnaires (perceived effects on practice and patient outcomes).

Results Of 124 participants, 94% stated that the intervention met their expectations (satisfaction outcome). Significant differences between pretest and posttest results ($P < .001$) indicated that knowledge had been gained. In addition, participants reported positive effects of the course on their practice regarding knowledge acquisition (86%) and the application (81%) and confirmation (75%) of practice. In analyzing reported patient outcomes, Information Assessment Method results will be triangulated with those of the My MPN/MDS Portfolio.

Conclusion Preliminary results indicate that this multifaceted MPN-MDS CPD intervention is a feasible and effective knowledge translation strategy that addresses health care professionals’ perceived and unperceived needs.

Assessing communicator, collaborator, and professional skill level of faculty in northern Ontario

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Diana Urajnik PhD Clare Cook PhD Janice Willett MD FRCSC

Abstract

Objective To identify perceived and unperceived learning needs of northern Ontario health care providers in CanMEDS roles beyond medical expert, namely communicator, collaborator, and professional; and to elicit perceptions of, and attitudes toward, these needs and identify barriers to change.

Design We have used a mixed methods multilayered approach to obtain diverse information. An environmental scan of College of Physicians and Surgeons of Ontario, the Canadian Medical Protective Association, and other regulatory colleges' data identified deficiencies in skills that might result in formal complaints. Next to medical expert, the roles most commonly identified were communicator, professional, and collaborator. A validated electronic survey of health care providers provides information on self-assessed skill level using both statements and case studies. A validated telephone survey of patients gives the patients' assessment of the skill level of their health care professional.

Participants A total of 283 of 1179 (24.0%) physician faculty of the Northern Ontario School of Medicine, representative on key demographic characteristics, participated in the health care provider survey. Fifty-four percent of respondents were family physicians. A total of 341 patients across northern Ontario, crossing a range of demographic and geographic features, participated in the survey. Overall, 81.5% responded about a family physician; 80.6% responded about a visit to a clinic or office.

Main findings A significant number of physicians score below benchmarks for case scenarios (44% communicator, 8% collaborator, 10% professional); only 1% scored below the benchmarks for noncontextualized statements. In the patient survey, at least 10% of patients did not agree with statements about physician behaviour mapped by CanMEDS roles (14% communicator, 11% collaborator, 10% professional). Seventy-six percent of patients perceived they were not told about an error in their health care (communicator); an additional 5 of the 17 statements were also identified as critical.

Conclusion When physicians self-assess using case scenarios rather than noncontextualized statements, results indicate a higher need for continuing professional development. Both the health care provider and patient surveys converged with the Canadian Medical Protective Association and College of Physicians and Surgeons of Ontario data. The communicator role was identified as a particular risk area. Triangulating multiple sources of data reinforces the findings of each.

Best Education Poster Award

Factors influencing faculty engagement with Canadian medical schools

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Abstract

Objective To assess faculty engagement in Canadian medical schools and identify potential barriers to and facilitators of engagement.

Design Qualitative phenomenologic study using semistructured interviews to examine facilitators of and barriers to faculty engagement.

Setting Canadian medical schools.

Participants Twenty-two faculty and staff involved in distributed medical education within Canadian medical schools.

Methods Semistructured interviews were conducted. Audiorecorded interviews were transcribed verbatim and analyzed using an iterative and interpretive process.

Main findings The findings revealed engagement occurred within 3 areas: administration, teaching, and faculty development. Faculty identified relationships as being an important element of engagement. Relationships with their clinical team, students, administration, and community were all important factors of engagement; however, they also proved to be barriers in some ways. Lack of recognition from administration, as well as a feeling of a lack of personal skills and training for their roles as clinical teachers, contributed to a feeling of disengagement. Suggestions for improved learning activities included distributed medical education–focused faculty development, hands-on teaching sessions, and conferences being made available to address personal and professional barriers to engagement.

Conclusion Faculty engagement occurs across many levels. Improved communication between faculty, administration, and clinical teams would lead to increased levels of engagement. Recognition and feedback plays an integral role in the satisfaction of faculty with their roles as faculty within a distributed medical education system.

What's your IQ in QI?

Building a faculty development program in quality improvement

Ed Seale MD CCFP(EM) FCFP Elizabeth Muggah MD MPH Doug Archibald PhD

Abstract

Objective To determine the effectiveness of a quality improvement (QI) faculty development program for family medicine faculty at the University of Ottawa in Ontario.

Design Cohort study.

Setting Department of Family Medicine at the University of Ottawa.

Participants Family medicine faculty.

Intervention Faculty participated in an interactive, 1-day faculty development session. The session covered key concepts in QI including physician engagement, use of the electronic health record for QI, and measurement in QI.

Main outcome measures Participant knowledge of 11 QI domains was assessed using a survey with a 6-point Likert scale (no knowledge, awareness, skilled, deep knowledge, understanding, and wisdom). We dichotomized the scale at 3 to some skill (3 and below) and deep knowledge (4 and above). This survey is used by our department to assess resident knowledge acquisition in QI. We will assess behaviour change by tracking engagement in QI activities at 3- and 6-months after the session.

Results Fourteen of 21 (67% response rate) faculty completed the survey before the session. The post-session survey was completed immediately after the session by 16 participants (80% response rate). Gains in deep knowledge were seen in 10 of 11 QI domains. The biggest increases in deep knowledge were found with the following QI domains: identification of improvement projects (33% before the session vs 64% after the session), collaboration with interprofessional teams to achieve QI goals (25% vs 57%), and engagement of stakeholders (25% vs 57%). There was a decrease in deep knowledge in only 1 domain: the identification of the root cause of a gap in care (42% vs 29%).

Conclusion A 1-day faculty development session resulted in a measurable increase in participant knowledge across 10 of 11 QI domains. We will follow this cohort to determine whether gains are maintained and engagement in QI activities improves.

“We are the little person”

Qualitative study of refugee experiences with primary care

Elizabeth Munn Matthew To Mandi Irwin MD Emily Gard-Marshall MSc PhD

Abstract

Objective To characterize the experiences of refugees with primary care services and determine barriers to and facilitators of access.

Design Four focus groups were conducted following a semistructured interview guide. Groups were organized by sex and language. Interview data were coded independently by 2 research team members and analyzed using a thematic analysis approach.

Setting Halifax, NS.

Participants Government-assisted refugees living in the Halifax region were recruited through purposive sampling. Individuals were recruited from the Arabic- and Nepali-speaking communities, which represent the main language groups of refugees resettled to Nova Scotia. Participants accessed care at walk-in clinics, family practices, emergency departments, and a specialized refugee health clinic.

Main findings The individuals in this study described considerable challenges in accessing primary care, vision and dental care, and specialist services. Barriers were personal (eg, language, financial) and structural (eg, wait times, bureaucracy). Individuals expressed different concerns based on their location of primary care. Perspectives were influenced by premigration experiences. Facilitators included having an English speaker at home and support from the local resettlement agency.

Conclusion Refugees face personal and structural barriers to accessing primary care and other health services. Access to interpretation and consideration of income are examples of measures that could improve the quality and accessibility of primary care for this population. The findings have public health and service provision implications, particularly as refugees are increasingly integrated into the mainstream primary care system.

Patient's Choice Award

Research-based theatre as a method of enhancing patient-centred primary care for marginalized populations

Natalie Ramsay Michael Milo Mo Moore Rahat Hossain

Abstract

Objective To determine whether research-based theatre as knowledge translation can enhance physician advocacy and attitudes toward homeless, health care access, and quality.

Design Quasi-experimental, 2-armed, non-randomized trial.

Setting St Catharines, Ont.

Participants Eligibility criteria included that participants identify as health care providers who have had or who might have clinical encounters with homeless individuals. Study participants (N=21) included the following disciplines: nursing (n=2), medicine (n=12), social work or psychology (n=3), and other (n=4).

Intervention A 20-minute ethnodrama about barriers and facilitators to care encountered by homeless individuals in the region. This research-based theatre production was developed from a qualitative interview study with individuals who had health care interactions while homeless.

Main outcome measures The Health Professionals Attitudes Towards the Homeless Inventory, a 19-item Likert-scale instrument, and the Legislative Theatre Questionnaire, a 5-item Likert-scale instrument, were used to evaluate attitudes of personal advocacy, social advocacy, and cynicism toward the homeless and perceptions of research-based theatre as a tool for knowledge translation.

Results Paired *t* tests on Health Professionals Attitudes Towards the Homeless Inventory findings demonstrated significant ($P < .05$) before-and-after changes on the following items: greater agreement with "Homeless people are victims of circumstance," "Homelessness is a major problem in our society," "Health-care dollars should be directed toward serving the poor and homeless," and "I believe social justice is an important part of health care." Findings of the Legislative Theatre Questionnaire were analyzed descriptively. Participants reported increased insight about patients who struggle with housing, agreement regarding the positive effects of theatre on interactions with marginalized patients, and agreement regarding theatre's positive effects on learning.

Conclusion Research-based theatre might promote empathy for the social circumstances of homelessness and promote personal and social advocacy. Enhancing these attitudes in clinicians, including family physicians, can advance the cause of equity for marginalized patients seeking primary health care.

Evaluating a community paramedicine health promotion program in seniors in social housing buildings

Cluster randomized trial

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Brent McLeod MPH Francine Marzanek Jenna Parascandalo

Abstract

Context Community paramedicine is a new field in which paramedics provide health care services outside of the traditional model of emergency response. Community Paramedicine at Clinic (CP@clinic) is a community-based health promotion and disease prevention program intended to prevent diabetes, cardiovascular disease, and falls among seniors with low socioeconomic status living in subsidized housing.

Objective To assess the effects of CP@clinic.

Design This was an open-label, pragmatic cluster randomized controlled trial with parallel intervention and control groups in seniors' apartment buildings. Six buildings were randomly allocated as intervention (CP@clinic for 1 year) or control (usual care) via block randomization.

Setting Hamilton, Ont.

Participants Residents 55 years of age and older.

Main outcome measures The primary outcome was building-level ambulance call rate and secondary outcomes were individual-level changes in blood pressure, health-risk behaviour, diabetes risk, and health-related quality of life (HRQoL) measured via the EuroQol 5 Dimensions. Data were analyzed using *t* tests, χ^2 tests, and regression modeling (linear regression, hierarchical linear modeling).

Results The total resident population was 455 in the 3 intervention buildings and 637 in the 3 control buildings. The CP@clinic participation rate in intervention buildings was 35.6% ($n = 171$). The rate of ambulance calls in the intervention buildings (mean [SD] of 3.1 [1.6] per 100 units/month) was significantly lower than in control buildings (mean [SD] of 3.9 [1.7] per 100 units/month; $P = .02$) leading to a net capacity gain of \$115 843. Higher participation rates in CP@clinic were significantly predictive of a decrease in ambulance calls ($\beta = -2.482$, $P = .03$). Among seniors in buildings with the CP@clinic drop-in sessions, mean systolic and diastolic blood pressure decreased after the second visit (5 mm Hg and 3 mm Hg, respectively). Intervention participants demonstrated significant improvement compared with the control group in diabetes risk, HRQoL (self-care and usual activities), and quality-adjusted life-years.

Conclusion The CP@clinic intervention improved individual-level risk factors and HRQoL that led to building-level changes in ambulance call rates and resource gains.

Interventions to reduce social isolation among the elderly

Scoping literature review

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Abstract

Context Social inclusion of elderly individuals is essential for improving access to care and, ultimately, health outcomes in this rapidly growing segment of the population. The number of people worldwide aged 60 years and older is expected to rise from its current 740 million to 1 billion by the end of the decade. Estimates of social isolation within the elderly population range from 5% to 40%, depending on the country under investigation, making this an important emerging public health challenge.

Objective To identify effective interventions proposed in the scientific literature to reduce social exclusion and improve access to services and health outcomes of isolated elderly persons, and to explore how these approaches could apply to a lower-middle-income country context of Jamaica.

Design We conducted a scoping review of the scientific literature using the Ovid MEDLINE database with key word searches. Abstracts were scanned for relevance according to predefined inclusion and exclusion criteria, and the retrieved articles were analyzed using a preestablished template.

Results Several individual and group interventions have been developed to increase social inclusion among the elderly, ranging from reminiscence therapy to facilitating transportation. However, the few trials that have evaluated the effects of such interventions on improving social participation and loneliness among the elderly show inconsistent results. Interventions that promote active rather than passive interactions are more likely to have a positive meaningful effect on health and quality of life (eg, community-based music and art therapy programs).

Conclusion As this is still a novel area of inquiry, there is, as yet, very little literature on the issue of socially isolated elderly, especially in low-resource settings. More research is needed on the role of health workers in helping to better support patients and reduce exclusion and on the role of advocates for effective community-based interventions to promote inclusion.

The writing club

Interprofessional peer-support writing group in an academic family health team

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Janet Probst RN Sheila Dunn MD CCFP MSc Melissa Desouza MD CCFP MHSc MSc Helen Batty MD CCFP MEd FCFP

Abstract

Context Academic family physicians and other health professional educators receive promotions based on their research and scholarly productivity. However, they face many challenges in writing for publication. Barriers to successful writing and publishing can be overcome through peer support.

Objective To describe the processes, experiences, and evaluative outcomes of an ongoing, bimonthly, 90-minute, interprofessional peer-support writing group that was established in January 2012.

Design The peer-support writing group was evaluated using a mixed-methods approach: an anonymized online survey in 2013 and 2016 and a focus group discussion in June 2016 to corroborate the quantitative findings.

Setting An academic family health team in Toronto, Ont.

Participants Academic family physicians and their interprofessional colleagues.

Main outcome measures Effects on writing skills, confidence, and academic and scholarly work productivity.

Results From September 2012 to June 2016 the peer-support writing group met bimonthly, a total of 76 times. Meetings were 90 minutes long and were held at the beginning of the work day. Attendance ranged from 3 to 9 participants. Group members liked the “hands-on” working meeting format and the group review process. Most participants felt supported and understood by both the facilitator and their peers in sharing their drafts for feedback and discussion. The peer-support writing group enhanced participants’ writing confidence, skills, and productivity; stimulated rich discussions; and inspired creative thinking and new writing project ideas.

Conclusion Our peer-support writing group is unique because it is interprofessional and is grounded in family practice. It encourages and supports a variety of writing projects ranging from research to education scholarship to reflective practice. This peer-support writing group has been sustainable over many years owing to the supportive, nonjudgmental, and collegial environment of our working meetings. Future work will determine whether our group review process can be implemented in other academic family health teams using distance education models and facilitator-training workshops.

Capacity and practice features of downtown primary care clinics

Vancouver, BC, pilot study

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Abstract

Objective To assess various features of primary care in downtown Vancouver, BC, including capacity, availability, and accessibility, in order to guide development of new policies and primary care structures to meet the health care needs of the downtown Vancouver community.

Design Observational cross-sectional study that is a part of the Models and Access Atlas for Primary Care at Providence Health Care project. Survey tools are modeled after the pioneering study in Nova Scotia (MAAP-NS). Each clinic survey reported practice style, features, and capacity (response rate of 84%), and surveillance of after-hours voice messages provided details of after-hours care (response rate of 100%).

Setting The surveys were completed by telephone or fax from March to November 2016 in downtown Vancouver.

Participants An initial inventory of all clinics in the downtown area was created by searching 3 sources: The College of Physicians and Surgeons of British Columbia website, the Yellow Pages, and Google Maps. Based on the collected information, each clinic was classified as one of family practice, walk-in, family practice and walk-in, special, or excluded. Excluded clinics were either permanently closed or not providing primary care.

Results A total of 103 family physicians are working in 44.6 full-time (5 days/week) positions. An estimated 83 000 to 123 000 patients are attached to these clinics. Most clinics provide same-day appointments, but maternity care and after-hours care are limited. From a total of 70 locations identified, 32 were verified to be clinics where at least 1 family physician regularly saw patients. These included 14 family practice, 4 walk-in, 9 family practice and walk-in, and 5 special clinics. Thirty-eight clinics were excluded.

Conclusion Using the clinic, rather than a specific family doctor, as a unit of planning and measure for attachment might be more relevant to future primary care planning.

The 5 types of urban family doctors

Vancouver, BC, pilot study

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Abstract

Context There are approximately 1000 family doctors working in Vancouver, BC, according to the College of Physicians and Surgeons of British Columbia; however, few details are known about their practice styles.

Objective To describe the practice scopes and styles of a subgroup of family doctors in Vancouver.

Design The survey tools used in this study were modeled after a pioneering Models and Access Atlas for Primary Care study in Nova Scotia, but were adjusted to match the differences in local practice patterns. The survey explored features including personal and practice location characteristics, hospital and teaching work, payment, and appointment characteristics.

Setting Vancouver, BC. The study is a part of the Models and Access Atlas for Primary Care at Providence Health Care project.

Participants The survey was distributed to all members of the Providence Health Care Department of Family and Community Medicine in the spring of 2016.

Results/findings Response rate was 86% (254 of 295). Survey participants identified their practice style as one of “continuous community-based primary care” (75%), “hospital or facility-based care” (18%), or “locum only” (7%). We further divided the continuous community-based primary care category into 3 groups based on self-reported patient panel size: focused practice with fewer than 500 patients (37%), smaller practice with 500 to 1000 patients (21%), and classic GP with more than 1000 patients (41%). The medians of self-reported weekly work hours of all groups were similar regardless of practice style. We also found that newer family physicians (12 years or less away from medical school graduation) are more likely to work at multiple locations, including specialty clinics, and are likely to be engaged in clinical supervision and teaching.

Conclusion Urban family doctors have diverse scopes and styles of practice. Given this diversity and dynamism, our findings suggest that human resource planning for primary care policy and service delivery might need to evolve and respond to the variety of actual work patterns.

Effects of a patient rostering model on continuity of care and coordination of specialized care

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Abstract

Context Although patient rostering is widely considered to be a cornerstone of a high-performing primary care system and is believed to improve continuity and coordination of specialized care, few studies have examined these relationships.

Objective Examine the effects of a patient rostering enhanced fee-for-service (FFS) model on continuity of care and coordination of specialized care.

Design Population-based longitudinal study using health administrative data.

Setting Urban family practices in Ontario.

Participants Family physicians who transitioned from traditional FFS to enhanced FFS practice between 2004 and 2013 were followed over time. Physicians providing comprehensive primary care who had at least 4 years of pretransition and 2 years of posttransition data were eligible. Patients were attributed to study physicians on an annual basis by determining the provider who billed the largest dollar amount of primary care services over a 2-year period.

Main outcome measures Continuity (usual provider of care index [UPC]) and coordination of specialized care (referral index: percent of total primary care referrals for a physician's roster made by main provider). Mixed-effects segmented linear regression was used to examine changes in outcomes from before to after the transition while controlling for patient and provider contextual factors.

Results Before transition, the UPC was decreasing at a rate of 0.27% per year (95% CI -0.34 to -0.21, $P < .0001$). Following the transition, the UPC began decreasing by an additional 0.59% per year (95% CI -0.69 to -0.49, $P < .0001$) compared with the pretransition rate. Referral index decreased by an 0.34% per year (95% CI -0.43 to -0.24, $P < .0001$) relative to the pretransition period, during which it had been stable.

Conclusion Continuity and coordination of specialized care decreased upon transition from traditional FFS to enhanced FFS practice. This is possibly owing to the increase in after-hours care across practices adopting these new models, which gave patients more care options aside from their main provider.

Scaling up chronic disease management in Alberta

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Abstract

Context Effective chronic disease management (CDM) can achieve considerable clinical improvements quickly and across large populations. In Alberta, providing the right tools and supports for practices engaging in CDM requires more than replicating what works for leading teams; it requires understanding how different teams conceptualize CDM and perform day-to-day work.

Objective To understand how different physicians and team members (individually and collectively) manage their patients living with chronic diseases to develop strategies and supports scalable across Alberta.

Design We used cognitive task analysis (CTA), a family of qualitative methods, as CTA is effective in eliciting tacit knowledge. The information and processes (known as *macro cognition*) are so automatic that the methods and reasons behind them go unnoticed or are misperceived.

Setting Alberta.

Participants Purposive sampling was used to recruit participants representing teams successful with CDM and teams newly engaging in CDM. A total of 8 practice teams (a physician and key team member [eg, registered nurse, medical office assistant]) were interviewed from a variety of practices (eg, urban or rural, small or large).

Methods Analysis was iterative. Data were coded independently by at least 2 CTA-trained facilitators for macrocognitive processes and functions; this was followed by group analysis meetings to review coding and develop mental models of how teams approach CDM.

Main findings Effective teams delivering CDM distribute the macrocognition functions across all team members, are “flatter” versus hierarchical in organizational structure, engage deliberately in high-trust activities and meaningful use of their electronic medical record, and have a higher degree of connectivity (formal and informal interaction).

Conclusion We are sharing our findings with policy makers, leaders in medicine, and other stakeholders to develop evidence-informed approaches to scale up the implementation of team-based initiatives (new and existing) in our province.

My Health eSnapshot

Strategy for improving preconception health through innovation and technology

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Abstract

Objective To examine whether the use of My Health eSnapshot (MHeS) during primary care visits increased preconception health (PCH) knowledge and behaviour change among women of reproductive age.

Design Wellington-Dufferin-Guelph Public Health (WDGPH) in Ontario conducted a cohort study. A mixed-method approach was used to include both quantitative and qualitative data.

Setting The MHeS was studied in 2016 across 7 primary care sites within 4 family health teams in the Wellington-Dufferin-Guelph area.

Participants A total of 300 women of reproductive age (15 to 49 years) participated in the study.

Intervention In partnership with Boston University Medical Centre, WDGPH developed a patient-driven, electronic, evidence-based PCH risk assessment tool called MHeS. Participants completed MHeS during a visit with their family practitioner. Results were automatically integrated into participants' electronic medical record. Family practitioners discussed the results and provided a customized handout generated by MHeS. To evaluate the effects of MHeS, WDGPH collected data from participants (risk assessment and 2 online surveys) and primary care sites (key informant interviews).

Main outcome measures The most prevalent risk factors, improvements in knowledge, and changes in behaviour.

Results A total of 300 participants completed MHeS, 188 completed a survey at 1 week, and 144 completed a survey at 2 months. The number of PCH risks identified ranged from 4 to 24, with an average of 15 risks per participant. The most prevalent risk factors were Canada's Food Guide recommendations not being met, consumption of unsafe foods and caffeine, stress in the past year, alcohol use in the past year, and immunizations not being up-to-date. Most participants reported that completing MHeS during their family physician visit made it easier to have a conversation with their family doctor, and that they were motivated to make positive health changes.

Conclusion Research findings support MHeS for use during primary care visits. Future research will further examine its effect on knowledge and behaviour. Next steps include validating the RA tool, improving the delivery model, and leading further research.

Outcomes of using Internet-based consumer health information

In primary health care

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Abstract

Context The Internet is the most frequently accessed source of consumer health information.

Objective To identify the outcomes associated with Internet-based consumer health information (IBCHI) in primary health care.

Design A systematic mixed studies review, followed by a 2-stage interpretive qualitative study. A search strategy developed by 4 specialized librarians used 6 information sources and was followed by selection and critical appraisal by 2 independent reviewers.

Methods Deductive-inductive qualitative thematic analysis was followed by a disambiguation and harmonization of themes, and evidence was coded against an initial framework. We interviewed a purposeful sample of 19 IBCHI users and a convenient sample of 10 key informants: 3 family physicians, 2 nurses, 2 pharmacists, and 3 health librarians. Thematic analysis was performed by 3 qualitative researchers on text transcribed verbatim, assisted by specialized software. Outcomes associated with IBCHI from the perspective of consumers were identified. In the qualitative study we also identified strategies to prevent negative outcomes.

Main findings Out of 4322 unique records identified, 65 eligible studies were included in the analysis. Our initial framework was revised and types of patient outcomes and influencing factors were identified and described. In the qualitative study we found that negative outcomes might occur along 3 dimensions of IBCHI tensions: internal (anxiety), interpersonal (worsening of patient-physician relationship), and service-related (excessive emergency room visits). Three main preventive strategies are providing reliable IBCHI sources, teaching consumers how to evaluate IBCHI sources, and encouraging consumers to discuss the information.

Conclusion We propose a revised conceptual framework of the outcomes of the use of IBCHI in primary health care. Whereas there are ongoing initiatives to be included in the curriculum and continuing professional development of health professionals, further support should be provided to practitioners to help them discuss IBCHI presented by patients during a clinical visit.

“It’s the difference between life and death”

Professional medical interpreters and patient safety

Margaret Wu Shail Rawal MD MPH FRCPC

Abstract

Context Patients with limited English proficiency (LEP) experience poorer quality of care and more adverse events compared with their English-proficient counterparts. Consequently, there is interest in understanding the role of medical interpreters in efforts to improve patient safety.

Objective To explore the views of professional medical interpreters on their role in patient safety.

Design We conducted a qualitative analysis of in-depth interviews with professional medical interpreters.

Setting Toronto, Ont.

Participants Fifteen professional medical interpreters affiliated with the Healthcare Interpretation Network in Toronto were interviewed.

Methods Interviews were audiorecorded and transcribed verbatim. Participants’ views on their role in patient safety were analyzed and organized into themes.

Main findings Professional medical interpreters described being uniquely situated to identify and prevent adverse events involving patients with LEP by facilitating communication between patients and health care providers; enhancing patients’ comprehension; giving voice to the patient; and speaking up when they had safety concerns. Medical interpreters highlighted challenges in fulfilling these functions, including the hierarchical structure of health care teams, the ill-defined role of interpreters within such teams, and the ethical imperative for interpreters to remain impartial when facilitating communication between patients and health care providers.

Conclusion Our study found that professional medical interpreters view their work as integral to the delivery of safe and high-quality care to patients with LEP. Interpreters and health care providers require a mutual understanding of their roles to engage in patient safety efforts together effectively. Of importance, the benefits of partnering with interpreters can be realized only when health care providers consistently use their services. However, there remain tensions between an expanded role for interpreters that includes speaking up about patient safety concerns and the need for interpreters to remain impartial.

The “6W” model of care trajectories for patients with chronic ambulatory care sensitive conditions

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Abstract

Context Reducing hospital readmission rates for ambulatory care sensitive conditions (ACSCs) is essential, as these events are common and could potentially be avoided through effective processes of care. Thus, observational studies on care trajectories based on secondary analysis of existing data should provide valuable information on rehospitalization risk factors at the health care level. However, published studies assessing care trajectories as sets of predictive variables are very sparse, while other approaches related to the process of care are fragmented, often overlapping, and confusing. It is time to synthesize that research into a comprehensive scheme.

Objective To describe, analyze, and synthesize published concepts related to processes of care; and to integrate these concepts into a comprehensive model of care trajectories, enabling cohesive, replicable studies on rehospitalization for ACSCs and associated factors.

Design Conceptual modeling supported by a literature review.

Main findings The most relevant concepts and approaches for the assessment of predictive factors of readmissions related to the process of care use generic terms such as *continuity*, *pathway*, *episode*, and *trajectory*. However, those concepts, taken separately, will provide incomplete information. Using their common denominators, those concepts were integrated into the 6W multidimensional model of care trajectories, which is based on 6 dimensions. Considering the patients' attributes and illness course (“who” and “why”), the 6W model better reflects their journey through the health care system across care providers (“which”), care units (“where”), and treatments (“what”) for specific periods of time (“when”).

Conclusion This comprehensive model gathers most of the potential factors associated with rehospitalization for ACSCs and provides a logical framework for further research.

Characteristics associated with inner-city primary care continuity

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Abstract

Objective To determine the demographic, social, and substance use patterns associated with high versus low primary care continuity for an inner-city patient population.

Design Secondary analysis of baseline-linked quantitative data from an ongoing controlled patient outcomes evaluation of an acute care-embedded multidisciplinary team intervention. Data sources include researcher-administered quantitative surveys and administrative health, income support, and housing records. Bivariate analyses of relationships were conducted between survey variables of interest and the main continuity measure, using *t* tests for continuous variables and χ^2 tests for categorical variables.

Setting Inner-city Edmonton and Calgary in Alberta.

Participants Patients were recruited from 1 of 3 urban acute care facilities and endorsed active excessive alcohol or drug use, unstable income, or unstable housing.

Main outcome measures Usual provider continuity ratio (number of visits with the most frequent primary care provider divided by the number of visits with any primary care provider over the previous 6 months); high continuity is 0.8 or higher.

Results A total of 95% (*n* = 545) of enrolled participants consented to the retrieval of administrative health services data. Of those, 167 (31%) demonstrated high baseline continuity with their usual care provider, 277 demonstrated low continuity (51%), and 101 had no primary care visits (19%). Compared with patients with low continuity or no primary care visits, patients with high continuity were older (*P* = .002), reported longer duration of residence locally (*P* = .048), and were less likely to report transitory sleeping (*P* = .001), homelessness (*P* = .001), opioid use (*P* = .048), and stimulant use (*P* = .006). Sex, ethnicity, income, employment, valid identification documents, HIV or hepatitis C seropositivity, mental illness, medication need, heavy alcohol consumption, and injection drug use did not vary by level of continuity.

Conclusion Inner-city primary care continuity is associated with housing stability and abstinence from opioid and stimulant use.