HIGHLIGHTS

Is more better? Primary care physician supply and diabetes outcomes

A larger supply of primary care physicians is associated with lower mortality from heart disease, cancer and stroke, but whether this is true for diabetes is not clear. Using linked administrative data from naturally occurring multispecialty physician networks in Ontario from 2009 to 2011, this cross-sectional analysis included all residents over 40 years of age with a diagnosis of diabetes (n = 712 681), and tested the association between supply of primary care physicians and outcomes (hospital visits and optimal diabetes monitoring) in both urban and nonurban settings. Patients in physician networks with a high supply of primary care physicians were more likely to receive the optimal number of evidence-based tests for diabetes than those in networks with a low supply (adjusted urban relative risk [RR] 1.06, 95% confidence interval [CI] 1.04–1.07; nonurban RR 1.17, 95% CI 1.14–1.21). There were no differences in emergency department visits or hospital admissions for diabetes complications (Table 1). The authors conclude that more research is needed to understand this relation and how it varies by setting because of its important implications for resource planning. ***CMAJ Open* 2016;4:E80-7**

Table 1: Association between primary care physician supply and optimal monitoring* (n = 610 441) and hospital visits for diabetes complications† (n = 712 681), by urban and nonurban networks

	Urban	Nonurban
Outcome/model	RR (95% CI)	RR (95% CI)
Optimal monitoring*‡		
High	1.06 (1.04–1.07)	1.17 (1.14–1.21)
Low (reference)	1.00	1.00
≥ 1 emergency department visit‡		
High	1.05 (0.94–1.17)	0.96 (0.85–1.08)
Low (reference)	1.00	1.00
One or more hospital admissions‡		
High	1.01 (0.89–1.14)	0.91 (0.77–1.07)
Low (reference)	1.00	1.00

Note: CI = confidence Interval, RR = relative risk.
*Defined as 1 retinal eye exam, 1 cholesterol test and 4 glycated hemoglobin tests during the 2-year study period.
†Visits for hyperglycemia or hypoglycemia, skin or soft-tissue infection, or cardiovascular events.
‡Adjusted for patient characteristics: age, sex, income quintile, recent immigration, diabetes duration, mental health diagnosis, comorbidity and morbidity.

Digital images v. glass slides on certification examination in anatomical pathology

After years of traditional practice using glass slides, pathologists are moving into a new era of digital images and telepathology. Recently, there has been a gradual switch to use of digital images in medical education, but are pathology residents ready for a full digital certification examination? This mixed methods study compared, after randomization, the performance of 100 senior residents (postgraduate years 4 and 5) in 7 accredited anatomical pathology training programs across Canada on a pathology examination using either glass slides or digital whole-slide scanned images of the slides. The study also included a post-test survey and an online survey of pathology residents (n = 179) from all levels of training. There was no significant difference in examination results between the 2 groups of residents (Table 2); however, those who were in the digital image group expressed concerns about the examination, including slowly functioning software, blurring and poor detail of images. All the respondents of the general survey agreed that more training was needed if the examination were to become fully digital. The authors recommend that a gradual transition to a fully digital examination should be considered so that residents will become more comfortable with using the technology. ***CMAJ Open* 2016;4:E88-94**

Table 2: Performance of the senior residents in assessing glass slides and digital whole-slide scanned images of slides

Slides assessed	Estimated marginal mean (95% CI)	p value
Group A slides*	7.06/12 (6.49–7.63)	0.001
Group B slides*	9.08/12 (8.51–9.65)	
Glass slides	8.23/12 (7.72–8.87)	0.3
Digital slides	7.84/12 (7.28–8.41)	

Note: CI = confidence interval.
*Two different sets of examination slides (glass and digital).

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