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Commentaries on health services research

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The quest to improve rural healthcare

ABSTRACT

Healthcare delivery in rural America faces the challenges of workforce shortages, hospital closures, and new life expectancy data unfavorable to rural living. Outside of recent federal directives supporting a public health response to the opioid epidemic that disproportionately plagues rural areas, little government support is cited to alleviate rural healthcare concerns. Medicaid expansion has helped some states but those not tapping that Affordable Care Act option find limited government support for rural care. Yet, higher mortality in rural residents is found across the leading causes of death, accompanied by higher rates of cigarette smoking, hypertension, and obesity. The physician shortage is highlighted by a North Carolina study showing that of the state's 2010 medical school graduates, only 3% were in primary care in 2015. A call to "redefine the hospital" seeks new delivery options and effective responses to rural social challenges.[1]

Commentary by Michael J. Huckabee: This sobering editorial renews the focus on rural healthcare struggles but those who breathe the air of rural America may differ with this bleak portrayal. That the word *rural* in research is defined in different ways is acknowledged as a weakness to reliable outcomes. Relevant application of statistical findings is then difficult, dependent on a rural community's proximity of healthcare services, the indigenous health culture, and local socioeconomic factors. For example, Holdrege, Neb., population 5,555, has a thriving medical center with seven physicians, six PAs, and four advanced practice RNs; visiting specialty services each month; and regional hospital services within an hour's drive. New strategies to improve rural access and transform quality care delivery, with support by public and private foundations, are showing success.[2] Telemedicine connects rural clinicians with virtual, real-time specialty care, such as Avera eCare in South Dakota or Project ECHO in New Mexico. Team-based care is key to effective healthcare delivery in the rural United States, though the number of PAs choosing rural practice has been diminishing (12% in 2013, down from 17% in 2005).[3] PAs help solve rural healthcare challenges, requiring continued diligence in PA applicant recruitment, education focus, legislative and regulatory support, and reimbursement equity.

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Ultrasound-guided hip injections by PAs in orthopedics

ABSTRACT

This study sought to determine the accuracy of ultrasound-guided hip injections performed in the orthopedic clinic by orthopedic surgeons and PAs. Fifty ultrasound-guided hip injections were performed using a standard technique. Contrast was included, and an anteroposterior pelvis radiograph was obtained immediately following injection. Diagnosis, body mass index, procedure time, and pain intensity ratings using visual analog scale scores were recorded. A musculoskeletal radiologist and an orthopedic surgeon reviewed radiographs independently to determine intra-articular placement of the injection. Fifty hips were injected. Two patients had no identifiable contrast, leaving 48 hips for analysis. Of these, contrast was injected intra-articularly in 46 hips, for an accuracy of 96%. Average procedural time was 2.6 minutes, and the average pain intensity rating on the

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visual analog scale score was 1.9 during the procedure. Revenue value units ranged from 1.72 to 2.55 for ultrasound-guided hip injections. These findings indicate ultrasound-guided intra-articular hip injections performed in the orthopedic clinic by surgeons or PAs are accurate, efficient, and patient-friendly. Additionally, they preserve patient continuity and maintain productivity within the orthopedic clinic.[1]

Commentary by Vasco Deon Kidd: No consensus exists as to whether radiologic guidance is needed for intra-articular hip injections.[2] This intriguing article reports 96% accuracy in performing intra-articular hip injections using ultrasound guidance by orthopedic surgeons and PAs. Unfortunately, the study failed to differentiate the number of injections performed by the surgeon versus the PA. The study also does not mention whether participating clinicians had previous experience with hip joint injections. The study did not quantify the magnitude of intraobserver and interobserver reliability among those involved in interpreting the single postinjection radiograph. The study seems to suggest a good safety profile with a standard technique but did not mention whether the patients had any adverse reactions during or after the procedure. Based on these observations, drawing any meaningful conclusions from this study may be difficult.

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Comparable care for diabetes management

ABSTRACT

Increasing use of PAs and NPs is a possible solution to the shortage of primary care providers in the United States but the quality of care they provide is not well understood. Because the scope of practice of the three provider types is similar in the Veterans Health Administration (VHA), we determined whether patients managed by primary care NPs, PAs, or physicians had similar hemoglobin A1C levels at comparable times in the natural history of diabetes. Our retrospective cohort study examined veterans with newly diagnosed diabetes in 2008, continuous primary care from 2008 to 2012, and more than 75% of primary care visits with an NP, PA, or physician. Of the 19,238 patients, 95.3% were male, 77.7% were white, and their mean age was 68.5 years; 14.7% of patients were managed by NPs, 7.1% by PAs, and 78.2% by physicians. Median A1C was comparable at diagnosis (6.6%, 6.7%, 6.7%, $P > .05$) and after 4 years (all 6.5%, $P > .5$). A1C levels at initiation of the first (7.5%-7.6%) and second (8%-8.2%) oral medications for patients of NPs and PAs compared with those of physicians also were similar after adjusting for patient characteristics. NPs started insulin at a lower A1C (9.4%) than physicians (9.7%), which remained significant after adjustment. The VHA model may be broadly useful to help meet the demand for primary care providers in the United States.[1]

Commentary by Julia M. Akeroyd: Using a large national VHA dataset, the authors compared primary care diabetes management between NPs, PAs, and physicians in newly diagnosed patients.[1] Using well-validated algorithms for selection of patients with diabetes and assignment of provider type, the authors showed that patients managed by the three types of providers had comparable A1C levels at diagnosis, initiation of first and second oral medications, initiation of insulin, and after 4 years of follow-up. These results are consistent with the mounting literature demonstrating comparable chronic disease care delivery and healthcare resource use among the three types of providers (as well as between NPs and PAs) in primary and specialty care.[2-5] These data support the notion that a more integrated team-based approach to chronic disease care delivery and potentially further expansion of full practice authority could alleviate the burden of the growing physician shortage in the United States without compromising the quality of care.

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