Navigating the Paradox of Scarcity: The Case for Radiologist-Driven Care.

Daniel A Ortiz
Kevin M Cregan
Join Y Luh
Providence St. Joseph Health, Eureka, California
Taj M Kattapuram

Follow this and additional works at: https://digitalcommons.psjhealth.org/publications

Part of the Oncology Commons, and the Radiology Commons

Recommended Citation

This Article is brought to you for free and open access by Providence St. Joseph Health Digital Commons. It has been accepted for inclusion in Articles, Abstracts, and Reports by an authorized administrator of Providence St. Joseph Health Digital Commons. For more information, please contact digitalcommons@providence.org.
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Navigating the Paradox of Scarcity: The Case for Radiologist-Driven Care

Daniel A. Ortiz, MD, Kevin M. Cregan, MD, FACR, Join Y. Luh, MD, Taj M. Kattapuram, MD

As imaging utilization increases and reimbursement declines, radiologists must evaluate how to manage increasing volumes and remain an attractive specialty for future physicians. The use of physician extenders, also known as nonphysician practitioners (NPPs), in medicine has increased over time in a multitude of specialties, including radiology [1]. Although labor costs have been reduced and radiologists can focus more on complex imaging studies and interventional procedures, there are unintended consequences of NPPs in practice that could diminish physicians’ role as health care providers. Therefore, we encourage radiologists to consider an alternative to NPPs in radiology: the incorporation of rapidly evolving artificial intelligence (AI) algorithms into daily practice.

INDEPENDENT PRACTICE OF PHYSICIAN EXTENDERS

One of the most concerning sequelae of NPPs in medicine has been the legislative movement for independent practice, also known as full practice authority (FPA). According to the American Association of Nurse Practitioners, FPA allows NPP “to evaluate patients; diagnose, order and interpret diagnostic tests; and initiate and manage treatments.” For nurse practitioners in particular, FPA is managed under the exclusive authority of state nursing boards, which means that physicians have very little, if any, input into the education or practice of nurses. At the time of this publication, 25 states and territories have passed FPA legislation [2]. This type of legislative and regulatory push is especially visible in anesthesiology and emergency medicine.

Although physician assistants are regulated by state boards of medicine, and radiologist assistants are not yet recognized as payable providers, both groups have been presented with opportunities, like nurse practitioners, to pave the pathway toward practicing independent of physicians. In fact, in August 2020, Georgia passed legislation that allowed physician assistants to have parity with advanced practice registered nurses regarding laxed supervision requirements [3]. Also, for example, during the coronavirus disease 2019 pandemic, several states have been encouraged by the US Department of Health and Human Services to temporarily relax regulations on NPPs to allow increases in their scope of practice as well as support their independent practice [4]. Furthermore, federal legislation such as the Medicare Access to Radiology Care Act seeks to provide full Medicare payment for any service provided by a radiologist assistant.

Although regulatory relaxation is currently temporary, several organized NPP groups have started lobbying to make their independent practice permanent. Although radiology may not initially feel the effects of these movements, there is much to be learned from our colleagues in other specialties.

THE REPLACEMENT OF PHYSICIANS

Consider emergency medicine, in which steadily over the years, hospital systems and private industries running urgent care facilities are replacing physicians with NPPs. These physicians are often blind-sided by the decision, but it is not surprising. “Hospitals and clinics cannot be forced to employ physicians if state laws allow them to employ other professionals in place of physicians” [5].

Although radiologists are not yet being replaced, the legislative movements for FPA include language for diagnostic test interpretation. Radiologists who train NPPs to interpret imaging studies are arguably training their replacements.

Consider recent state legislation, AB 890, passed by the Assembly and Senate in California on August 31, 2020, and awaiting the governor’s signature at the time of writing. This bill had original language that included interpretation of diagnostic tests, including mammography. The California Radiological Society
worked hard, in conjunction with the ACR, to preserve imaging interpretation as solely the domain of radiologists. Although the final bill language is not ideal, it ultimately prevents NPPs from interpreting imaging. How much time it will take for other regulations to change to allow nonphysicians to interpret imaging is unknown. What is known is that the goal of NPPs is the replacement of radiologists by NPPs for their self-determined scope of practice. Therefore, radiologists might want to consider alternatives to NPPs.

THE “SIMPLICITY” OF RADIOLOGY’S LOW-COMPLEXITY TASKS

The proponents of physician extenders used simple tasks such as nasogastric tube placement as an example of low-complexity work that should be relinquished completely to NPPs. The fallacy of this logic is highlighted by the idea that radiologists are not only responsible for answering the question at hand but are responsible for the “whole image.” Although one could train an NPP to identify tips of lines, tubes, and otherwise, this does not rescind the liability for finding the unexpected. Do we trust physician extenders to notice the sarcoma eroding the sacrum on the image for nasogastric tube placement, or any other of the myriad potential findings? If not, and if radiologists remain responsible for reviewing the images and modifying the drafted report, the expected gains become diminished. Even worse, if radiologists become accustomed to NPPs handling the “simple” tasks, but are still responsible for finalizing their work, do we accept the risk of developing a culture of rubber stamping without review and the associated consequences?

WHO DETERMINES THE “SIMPLE” TASKS, AND WHAT HAPPENS WHEN THEY ALL HAVE BEEN RELEGATED?

During the 2020 annual meeting of the ACR, several resolutions before the Council pertaining to radiologist assistants and their scope of practice. Impassioned debate ensued as it became clear that there were significant disagreements as to the “tasks” that were appropriate for these NPPs to perform. Furthermore, it was unclear why the established mechanisms for reviewing the list of appropriate radiology assistant procedures by organizations broke down. If one year we agreed upon a catalog of procedures to be relegated, do we really believe the process will stop at those procedures deemed “simple” by radiologists? Radiology, particularly interventional radiology, already finds itself in ever growing struggles with other physicians for access to procedures, such as cardiac imaging and vascular interventions. Why would we manufacture another equal player in this quandary, a player who we have shown will inevitably seek independence?

COST SAVING OR REVENUE TRANSFER?

It seems someone is always trying to cut their costs at the expense of physicians, including radiologists. In our current fee-for-service environment, these low-level tasks still contribute to the overall revenue generated by a practice. Depend on the practice model, these cost savings have a variable impact on radiologists. For instance, in an independent private practice, hiring NPPs to perform time-consuming tasks that generate few relative value units could in fact yield improved earnings for radiologists in the practice through profit sharing. However, in the academic setting, hospital employment model, or corporate practice, the outcome of those cost savings is less clear.

Any net positive revenue in these practice settings is unlikely to trickle down to the individual radiologists. It is conceivable that these large entities will be incentivized to lobby alongside NPPs to maximize their scope of practice, thereby minimizing labor costs by way of laying off radiologists, as demonstrated by the California Hospital Association’s support for AB 890 [6]. Furthermore, regarding payers, pushing for tasks to be performed by NPPs will ultimately result in a negative impact on reimbursement through the Relative Value Scale Update Committee process and subsequent revaluations by private payers.

AI

To the surprise of the radiology community, CMS has granted its first approval of payment for AI software [7]. Many believe this payment approval is a catalyst that will empower the many AI vendors to continue the rapid expansion of AI use cases and clinical trials. Unlike humans with a narrow scope of practice, narrow AI algorithms can easily be integrated into existing workflow and amalgamated into a platform for use by radiologists. Many of the gains touted by proponents for the use of NPPs, such as efficiency, will likely be soon realized through AI to the effect of preserving the radiologist’s role, supplemented by AI. Currently, there is little push by any group to advocate for autonomous, unsupervised AI. Furthermore, the cost savings would be greater relative to the legion of narrowly trained NPPs who would be required to handle the tasks for which they would be trained.
Empowered by AI, radiologists can achieve their wish of being as ubiquitous as water and remain heralded as diamonds.

CONCLUSIONS
Like many decisions being made by today’s radiology community, short-term gains by expanding the use of NPPs will have unforeseen consequences for the future of the specialty, especially radiologists early in their careers and medical students considering the specialty. The ultimate goal for our community should not be relegating work to others but rather to work the complexities of developing a future in which we empower ourselves to remain at the helm of the imaging care to our patients’ benefit.

REFERENCES
6. California Hospital Association. @SoCalOpinion agrees: “#AB890 is a good measure—and it deserves the @CAgovernor’s signature.” Available at: https://twitter.com/CalHospitals/status/1304147638435098628. Accessed September 25, 2020.

Daniel A. Ortiz, MD, is from Summit Radiology Services, Cartersville, Georgia. Kevin M. Cregan, MD, FACR, is from Wayne Radiologists, Goldsboro, North Carolina. Join Y. Luh, MD, is from the Department of Radiation Oncology, Providence St. Joseph Health, Eureka, California. Taj M. Kattapuram, MD, is from RadKatt, Arvada, Colorado.

Dr Luh is a member and delegation chair in the California Medical Association, which opposes full practice authority for nurse practitioners, and has supported the California Medical Association’s stand against AB 890 in his social media posts. All other authors state that they have no conflict of interest related to the material discussed in this article. Dr Ortiz is a partnership-track employee. Drs Cregan and Lu are partners. Dr Kattapuram is an employee.

Daniel A. Ortiz, MD: Summit Radiology Services, PO Box 200996, Cartersville, GA 30120; e-mail: danortizmd@gmail.com or e-mail: @danortizmd @danortizmd