Amid doctor shortage, NPs and PAs seemed like a fix. Data’s in: Nope.

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Hattiesburg Clinic’s value-based care journey illustrates the power of data analysis—and the vital importance of physician-led team-based care.

An examination of cost data for the South Mississippi system’s accountable care organization (ACO) revealed that care provided by nonphysician providers working on their own patient panels was more expensive than care delivered by doctors.

This prompted Hattiesburg Clinic leaders to redesign the clinic’s care model and to publish their findings. Hattiesburg Clinic employed a total of 26 physician assistants (PAs) and nurse practitioners (NPs) in 2005 and today there are 118. Along with certified registered nurse anesthetists and optometrists, they are part of a team of 186 nonphysician providers at the clinic, also called advanced practice providers (APPs).

“Over the past 15 years, in the face of physician shortages, especially in primary care, Hattiesburg Clinic made decisions to expand our care teams with the use of advanced practice providers,” says a study entitled “Targeting Value-based Care with Physician-led Care Teams” that was published in the Journal of the Mississippi State Medical Association.

“Focusing specifically on primary care, because our shortage of physicians there was so dire—due to retirements, massive panel sizes and lack of medical students entering primary care residencies—we allowed APPs to function with separate primary care panels, side by side with their collaborating physicians,” the study adds.

In hindsight and “with a wealth of internal data,” which includes cost data on more than 33,000 patients enrolled in Medicare, “the results are consistent and clear: By allowing APPs to function with independent panels under physician supervision, we failed to meet our goals in the primary care setting of providing patients with an equivalent value-based experience.”
A private multispecialty clinic with more than 300 physicians, Hattiesburg Clinic is a member of the AMA Health System Program. Its ACO was ranked first in quality in its cohort in 2016 and 2017, amongst a total of 471 other participants, and has been recognized by the Centers for Medicare & Medicaid Services (CMS) for delivering high-quality care at a low cost.

The 2017–2019 CMS cost data on Medicare patients without end-stage renal disease and who were not in a nursing home showed that per-member, per-month spending was $43 higher for patients whose primary health professional was a nonphysician instead of a doctor. This could translate to $10.3 million more in spending annually if all patients were followed by APPs, says the analysis. When risk-adjusted for patient complexity, the difference was $119 per member, per month, or $28.5 million annually.

**Data analysis sparks system changes**

“We didn’t set out to do a scientific study per se. This was really an observational experience that used data to help us drive decision-making going forward,” said internist Bryan N. Batson, MD, a co-author of the study and CEO of Hattiesburg Clinic.

“This was us looking in the mirror to say: As we're becoming more advanced in value-based care, how do we do it better?” Dr. Batson added.

After receiving the first CMS reports on care costs, the original intent was to identify the highest-cost physicians and work with them to cut spending.

“When we got the claims data for the first time, one of the first things we did was to look at who our highest-cost providers were” Dr. Batson said. “We were a little bit surprised at how stark the differences were, at the most-costly end of the spectrum between physicians and advance practice providers.”

“We dug a little further and used risk-adjustment analyses. It appears that the additional costs had to do with a combination of several factors that included more ordering of tests, more referrals to specialists, and more emergency department utilization,” he added.

Nephrologist John M. Fitzpatrick, MD, president of Hattiesburg Clinic and another co-author of the study, said “four of the five top highest-cost providers were nurse practitioners.” That finding “prompted us to really analyze the whole population and, ultimately, led to the findings in the paper.”

In fact, patients who saw a nondoctor as their primary care provider (PCP) had higher rates of ED use than patients without a PCP.


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The data also showed that physicians performed better on nine of 10 quality measures, with double-digit differences in flu and pneumococcal vaccination rates.

“This was surprising, as these are typically considered ‘process’ measures that can be adequately handled by nonphysician staff,” the study says.

Physicians also had higher average patient-satisfaction scores across six domains measured by Press Ganey.

Drs. Batson and Fitzpatrick praised NPs and PAs as invaluable members of the Hattiesburg care team without whom thousands of patients would go without care.

“However, based on a wealth of information and experiences with them functioning in collaborative relationships with physicians, we believe very strongly that nurse practitioners and physician assistants should not function independently,” the study says.

Fueled by the data, leaders at Hattiesburg Clinic redesigned its care model so that a doctor is the PCP all patients see and that no one sees a nonphysician exclusively.

“We had a one-year transition period leading up to that, so that the nurse practitioners could tell their patients that beginning Jan. 1, 2021, you’re going to have alternating visits with me and my supervising physician, but your PCP will officially be the physician,” Dr. Batson said.

“I give great credit to the nurse practitioners and PAs who work in our organization—almost all of them were very much supportive of this change in the model and have adapted and helped educate the patients on why we were making these changes. They continue to be great team players, and we are very thankful to them,” he added.

More robust use of telemedicine has also helped with implementation of the new care-team model.

“It really changes the way that we're able to deliver health care in a rural setting—in a positive way—such that a clinic may be able to be staffed some days with an APP, some days with a physician, but in those days that the APP is the lead there, there's the availability of telemedicine to support more advanced health care delivery,” Dr. Batson said.

Patients deserve care led by physicians—the most highly educated, trained and skilled health care professionals. Through research, advocacy and education, the AMA vigorously defends the practice of medicine against scope-of-practice expansions that threaten patient safety.

Other ways data may have an impact
Dr. Fitzpatrick noted that legislation to let nonphysician providers practice independently gets introduced every year in Mississippi, and this year the bill didn’t make it out of committee.

“A lot of it had to do with having real data—home-based, Mississippi-based—that was credible and published,” he said. “Our legislators did a commendable job with analyzing the information available with a focus on putting patients first and at the same being mindful about strategies to reduce the total cost of health care.”

Both doctors expressed hope that their experience would spark other ACOs to do the same type of analysis. If the results are similar, this should help stimulate discussion with other organizations around the country or may even be of interest to CMS.

“We would encourage other organizations to look at their data—like we did—to help them refine their care teams in ways that can improve health care,” Dr. Batson said. “That’s what this was all about: trying to improve health care of our patients and for the system.”