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'Do No Harm Project' targets overtreatment

In Health Care, Less Can Be More

By Todd Neff

The enormous financial cost of unnecessary health care makes headlines. The enormous personal costs, less so.

A University of Colorado School of Medicine initiative focusing on those personal costs – generally paid in patients' emotional and physical pain – is bringing such stories to light. In the process, its creators hope, their Do No Harm Project will help a new generation of physicians avoid unnecessary harms of medical overuse.

Brandon Combs, MD, University Medicine at Lowry. Combs, a CU School of Medicine internist, and Tanner Caverly, MD, co-founded Do No Harm, which seeks to teach medical trainees how to recognize and avoid overtreatment.

Far from a dry statistical exercise, the project focuses on storytelling. Physician residents and medical students volunteer to write vignettes about cases in which unnecessary, though well-intentioned, care led to – or nearly led to – patient harm.

What started local has quickly gone national: *JAMA Internal Medicine* is now publishing select entries in a monthly "Teachable Moments" column, the first having appeared in late September; and the ABIM Foundation and Cost of Care gave the project an innovation award in their inaugural Teaching Value and Choosing Wisely Competition.

The Do No Harm Project was launched in 2012 by internist Brandon Combs, MD, of UCH's University Medicine at Lowry practice; and Tanner Caverly, MD, MPH, now a lecturer at the University of Michigan Medical School and a Veterans Administration research fellow.

"We observed, along with many others, that medical overuse is very common," Combs said. "Tanner and I wanted to address it in a meaningful way."

Diving in. Caverly, who was CU Internal Medicine's Primary Care Research Fellow when the project launched, said unnecessary treatment often stems from valid concerns from well-meaning people. But long shots at improving health can blind physicians and patients to the potential harms.

Caverly and Combs, being "evidence-based medicine geeks," as Caverly put it, delved into the data. They were surprised to find evidence of real harms associated with overtreatment that were not taught in medical training — and not part of the discussion with patients. They also discovered evidence for possible harm for many patients who undergo things like prostate cancer PSA testing. The same story seemed to repeat itself with other common screenings and treatments.

"The further you walk into the ocean, the deeper the water gets," Caverly said. "When you look at the evidence, a lot of the things we were taught in training and held dear were not built on rigorous evidence."

But where to start in changing the status quo? They were busy and had no budget. Other efforts were already afoot, including the ABIM Foundation's Choosing Wisely campaign and the American College of Physicians' High Value Care Initiative. Caverly and

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Combs decided to focus their inquiries on the ethical consequences of overuse as opposed to the financial and societal. They also decided to target trainees – medical residents in particular.

"Trainees are seeing patients in a formative phase, where they are developing practice patterns that may persist for a lifetime," Combs said.

Vignettes. They met with Larry Feinberg, MD, a senior Internal Medicine colleague involved in the High Value Care Initiative, who encouraged them. They then arranged for Internal Medicine residents to get a day free of clinical duties in exchange for a 600- to 800-word vignette describing an overtreatment experience and its impact. More than a simple anecdote, each would include research evidence to support the assertion that theirs was indeed an example of overtreatment.

Meredith Niess, MD, MPH, wrote a vignette about a 54-year-old patient who arrived with a painful umbilical hernia and ended up with a string of false positives stemming from a preoperative X-ray.

The X-ray showed a lung nodule – or seemed to, because the follow-up CT scan didn't spot it. But that scan did show a nodule on the patient's adrenal gland, which required additional CT scanning until it, too, turned out to be benign. Niess then explored a research history dating to 1979 that cast serious doubt on the need for preoperative X-rays for patients with predictable chronic conditions.

Her conclusion: the patent "had more than 100 times the radiation of a single CXR, anxiety due to multiple incidental findings, and one objective patient-oriented outcome – delay in the management of his painful hernia."

Jill Gersh, MD, MPH, wrote about a patient subjected to multiple avoidable tests stemming from an evaluation prior to cataract surgery – such tests being common practice despite the medical literature showing them to be unnecessary.

Avash Karla, MD, submitted a happier anecdote: he walked through the case of a patient who had recently moved to Denver and requested a battery of unneeded screenings, including electrocardiographs and a urinalysis.

"Unnecessary tests beget unnecessary follow-up tests – and, as a result, more time spent inside the walls of clinics and hospitals," he concluded. He ultimately dissuaded her.

On their minds. In all, about 20 vignettes came in the first year, with Combs and Caverly guiding the work. Niess, who is now doing the Primary Care Research fellowship Caverly recently finished, said her vignette provided an outlet for frustration that had built through perhaps 100 overtreatment cases she had encountered through medical school and her three years of residency.

Not long after Combs and Caverly pitched the idea to residents – they were starting an outpatient rotation at the VA Medical Center under the supervision of Thomas Meyer, MD – the patient with the pre-operative X-ray appeared.

"Why on Earth are we doing all these things to him?" Niess recalled thinking. "These overuse things are so common that if you're looking for them they won't take very long to find."

She has had more experience in this area than most young doctors. Her dad, also a physician, used to quip, "Don't just do something: sit there."

"As a doctor, you have this tendency to believe that more is better, and the culture that we're kind of medically raised in reinforces that," she said.

Going national. In the meantime, then Denver Health CEO Patricia Gabow, MD, got wind of the project and suggested Combs and Caverly contact the editor of *JAMA Internal Medicine*, who in turn was enthusiastic. The journal created a "Teachable Moments" series; Caverly and Combs are among its five editors. Niess's entry kicked off the series.

"This local initiative has attracted the interest of thought leaders around the country, and that's to Brandon's and Tanner's credit," Feinberg said.

He added that the focus on the human side of overtreatment is a good strategy.

"I think emphasizing the dollar cost of things has really not worked," Feinberg said.

There are some very small carrots for residents who participate. There is the day off, though Niess said her first draft took probably 20 hours to do. There's a quarterly competition in Internal Medicine, the winning entry receiving a $50 Amazon gift card (all entrants

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receive a copy of "Overdiagnosed: Making People Sick in the Pursuit of Health"). The 2013 budget: $350.

But Niess said the opportunity to speak out on the topic was a carrot in itself. The focus on residents demonstrated that the department sensed what was stressing them out, she said.

"I wouldn't understate the importance of Tanner's and Brandon's awareness that residents are looking for opportunities like this," she said.

Combs and Caverly are now expanding the program. Locally, Combs is working to have medical students submit vignettes, too. More broadly, they are hoping to bring nursing, physical therapy, even dental students, into the mix. They're also enlisting a research assistant to interview those who have participated so far. They want to see if writing case studies has heightened the young physician-authors' awareness of overtreatment and influenced their clinical approaches. Caverly hopes to introduce a similar program at the University of Michigan.

"Residents and younger trainees are more in tune with the whole concept of the cost of unnecessary care and the burdens that it's placing on the nation and health care costs," Caverly said. "They really want to add to that conversation, not just in terms of cost as in dollars wasted, but also with respect to the harms of unnecessary testing."