

The Opinion Pages

A Fix for Gender Bias in Health Care? Check

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When Dr. Elliott Haut and his team at Johns Hopkins Hospital in Baltimore designed their blood clot prevention protocol back in 2006, they didn't expect to discover systemic gender bias. But the data were clear and the implications were alarming: Women who were trauma patients at Johns Hopkins Hospital were in considerably greater danger of dying of preventable blood clots than men.

Why? Because doctors were less likely to provide them with the appropriate blood clot prevention treatment. At Hopkins, as at many hospitals, both men and women were receiving treatment at less than perfect rates, but while 31 percent of male trauma patients were failing to get proper clot prevention, for women, the rate was 45 percent. That means women were nearly 50 percent more likely to miss out on blood clot prevention.

Blood clots, gelatinous tangles that can travel through the body and block

blood flow, kill more people every year than breast cancer, AIDS and car crashes combined. But many of these clots can be avoided — if doctors prescribe the right preventive measures.

Haut is a trauma surgeon, not a bias expert, so gender disparities were the last thing on his mind when he and his team put together a computerized checklist that requires doctors to review blood clot prevention for every patient. “Our goal was not to improve care for men or women or whoever, it was to improve the care of everybody,” he said. But what they found was that after the introduction of the checklist, appropriate treatment for everyone spiked. And the gender disparity disappeared.

In trying to end preventable blood clots, the Hopkins team may have quietly stumbled upon a way to eliminate at least one form of gender bias.

Gender bias has received significant attention in recent years, and has been scrutinized as a factor in the dearth of female chief executives, the treatment of presidential candidates and the lower pay of Hollywood actresses.

In health care, gender disparities are especially pernicious. If you are a woman, studies have shown, you are not only less likely to receive blood clot prophylaxis, but you may also receive less intensive treatment for a heart attack. If you are a woman older than 50 who is critically ill, you are at particular risk of failing to receive lifesaving interventions. If you have knee pain, you are less likely to be referred for a knee replacement than a man, and if you have heart failure, it may take longer to get EKGs.

It’s not clear what causes these differences. While situational factors and variations among patients may explain some of them, broad gender differences in treatment protocols that play out across large numbers of patients suggest a systemic bias. What’s especially difficult in ending such discrimination is that providers may not even realize they’re behaving in biased ways.

Such implicit bias, as researchers now understand, happens when we unintentionally use stereotypes or associations to make judgments. “Perhaps we take women’s symptoms less seriously, or we interpret them as having an emotional cause as opposed to a physical cause,” said Dr. Christine Kolehmainen, the associate director for women’s health at the Middleton Memorial Veterans Hospital in Madison, Wis. Studies bear this out: in one study of patients with irritable bowel syndrome, doctors were more likely to suggest that male patients receive X-rays and more likely to offer female patients tranquilizers and lifestyle advice.

In the case of blood clot prevention, doctors’ assumptions about women’s risk factors could lead to disparities in treatment. “There might be stereotypes about women’s biology or environment or occupation that could all play into medical decision-making,” Kolehmainen said.

Whether unintentional, unconscious or simply based on erroneous assumptions, treatment differentials clearly exist. Interventions like the Hopkins checklist can help correct them.

The Hopkins checklist is considered a “decision support tool,” and it works like this: Whenever a provider is admitting a patient to the hospital, a computerized checklist pops up onscreen. It asks if the patient has specific risk factors for blood clots, or for bleeding from blood thinning medication. Then the system offers a recommended treatment.

Like any checklist, this one serves as a reminder of proper protocol. Championed most notably by Dr. Atul Gawande in “The Checklist Manifesto,” checklists have been used for decades to improve flight safety, and have in recent years been applied in a wide range of medical settings. In one trial, a checklist reminding health care workers to do things like wash their hands led to a 66 percent drop in infections within 18 months. Results from a study of surgery patients at eight hospitals showed that post-checklist, complications dropped by 35 percent, and death rates dropped by 47 percent. Checklists plug

memory holes and put a safety net under human errors. As Gawande wrote, they “remind us of the minimum necessary steps.”

But implicit gender bias isn't about forgetting, it's about making assumptions. And this is where the Hopkins checklist makes a difference. In spelling out the specific criteria for determining a treatment plan and then recommending one, the checklist interrupts bias in two important ways.

First, it disentangles the thinking that goes into a medical decision. Typically, clinicians aggregate relevant patient information and use their judgment to arrive at the best course of action. The Hopkins checklist disaggregates that decision into its constituent parts. In a sense, the Hopkins checklist puts the decision about blood clot prevention through a prism, separating out and clarifying the sub-decisions the way a prism separates white light into its rainbow colors. In illuminating each step, the checklist interrupts habitual biases, preventing them from corrupting the decision-making process.

Second, the checklist reduces reliance on human judgment. “The decision support tool makes it very cut and dry — the decision isn't, ‘Hey, what do you think you should do?’ The decision is — click, click, click, here's what the computer says to do,” Haut said.

There are, of course, limitations to the uses of checklists. One of the biggest is that doctors may resist using them because it can feel like they are being asked to defer to the wisdom of a machine instead of relying on their long training. Of course, checklists cannot replace doctors' judgment. But they can, in many situations, improve it.

It all hinges on how such checklists are put in place. While studies of the practice have pointed to remarkable outcomes, real-world results haven't always measured up. Why? In many cases, the checklists haven't been used as designed. In a review of 7,000 surgical procedures, researchers at Imperial College London found that while checklists were used 97 percent of the time,

they were completed only 62 percent of the time. (An incomplete checklist defeats the purpose.)

Interviews with more than 100 staff members at 10 British National Health Service hospitals revealed that some providers opt out because they're not convinced of the checklist's utility. Others feel they haven't been adequately consulted, and the checklist is just another irritating dictum from on high. Yet others felt the checklist wasn't correctly tailored for a specific scenario.

But, crucially, these checklists were all optional. The Hopkins checklist was mandatory. Clinicians can override its recommendation, but they can't opt out of participating. "These passive approaches don't seem to work," Haut said. "Handing out laminated cards, education, reminding people — it doesn't work as well."

If done correctly, however, the checklist approach could reduce biased treatment for myriad patient backgrounds and conditions. (Studies have shown that African-American and Hispanic patients also receive lower quality health care compared with white patients.)

The checklist principle could be used in other fields as well. Indeed, structuring decision-making in order to root out bias is already gaining traction in business — companies like Google and Slack have begun to use structured interviews to avoid discrimination in hiring. Instead of allowing interviews to be free-form, guided by the interviewer's own judgments, these companies use the same interview techniques and questions for each candidate. Just as every Hopkins patient is assessed for the same blood clot risk factors, every job candidate is assessed the same way. This ensures fairer interviews.

The Hopkins blood clot prevention checklist has been enormously successful — after the intervention, the incidents of potentially preventable blood clots in medical patients dropped to zero. The checklist is now the

standard of care throughout Johns Hopkins Hospital. Any patient who enters the hospital — for a birth, brain surgery, pneumonia, even psychiatric treatment — is assessed for blood clot prevention. That means 50,000 patients a year are receiving treatment that isn't biased by their gender (or race, or any other factor). Hundreds of thousands of patients have benefited since the checklist was put into place in 2008.

Given the chances of clot-related deaths, that's dozens more women's lives saved, and dozens of families who didn't lose a mother, sister, grandmother or daughter. And that's just one hospital. Rolled out across the country, this relatively straightforward intervention could save thousands of lives — of both women and men — each year.

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