

Effect of a Peer Comparison and Educational Intervention on Medical Testing Conversation Quality: A Matched-Pair Cluster Randomized Clinical Trial

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Background

- Medical test overuse and resulting care cascades represent a costly, intractable problem driven in part by clinician norms, patient misperceptions, and inadequate patient-clinician communication.
- One possible solution is priming primary care physicians (PCPs) and patients to have routine, high-quality conversations about medical tests.

Methods

- Intervention developed through user-centered design with patients and physicians.¹
- Matched-pair randomized 20 PCPs at 14 primary care practices in an academic medical center; for each PCP, enrolled ≥10 patients with scheduled visits.
- Intervention group PCPs received emails that compared their low-value testing rates with those of peers and included point-of-care-accessible guidance on medical testing; intervention group patients received pre-visit educational materials (*shown in part below*). Control group physicians and patients received visit preparation tips.
- Primary patient outcome: Shared Decision-Making Process Survey (SDMP_4) score. Secondary patient outcomes: medical testing knowledge, presence of testing conversation, conversation satisfaction, discussed next steps, explained well.
- Outcomes compared using linear regression adjusted for patient age, gender, race/ethnicity, education.

Medical Tests: *The Basics*

Your health care may include medical tests like blood tests and x-rays. When you talk with your doctor, it is helpful to know a few things about medical tests. To learn more, [watch the video below](#), keep reading, or [take a quiz](#) of your knowledge.

What you will learn:



Medical tests are one of several tools in a doctor's toolbox

To understand your medical needs, your doctor will consider information like your age, your symptoms, your medical history, and your physical exam. Often, this information is enough to know how to care for you and you may not need a medical test.



Medical tests have possible benefits and possible downsides

Medical tests can be helpful but they are not always accurate. And tests can sometimes lead to extra tests and treatments that may not help you. So keep an open mind when you talk with your doctor about medical tests.



You can talk with your doctor

Here are some question you may want to ask:

- How will this test change what we do next?
- What are the possible benefits and downsides from this test?
- What else can we do instead of this test?

See the full patient intervention website here:



¹Rudin RS, Thakore N, Mulligan KL, Ganguli I. Addressing the Drivers of Medical Test Overuse and Cascades: User-Centered Design to Improve Patient-Doctor Communication. *Jt Comm J Qual Patient Saf*. Published online 2022

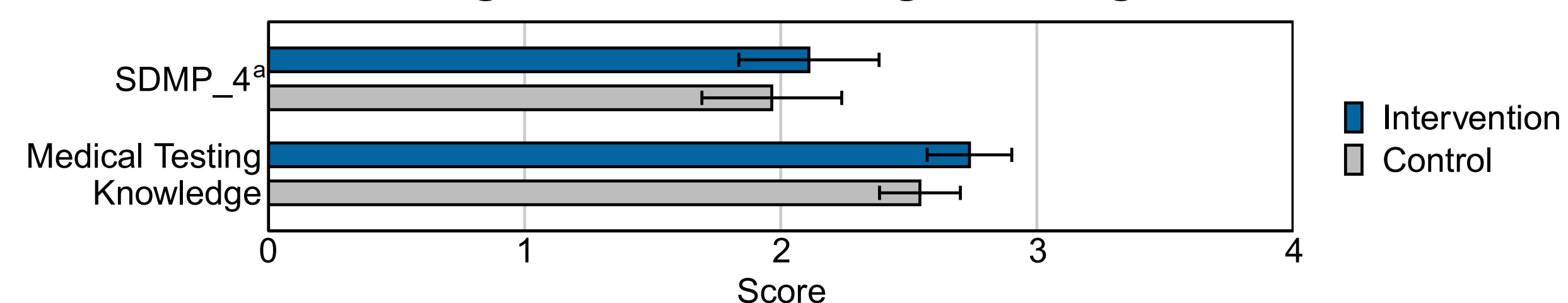
In this initial RCT, the intervention *did not* significantly improve shared decision-making conversations.

Physicians noted competing demands during visits; patients trusted their physicians' testing advice even when inconsistent with educational materials.

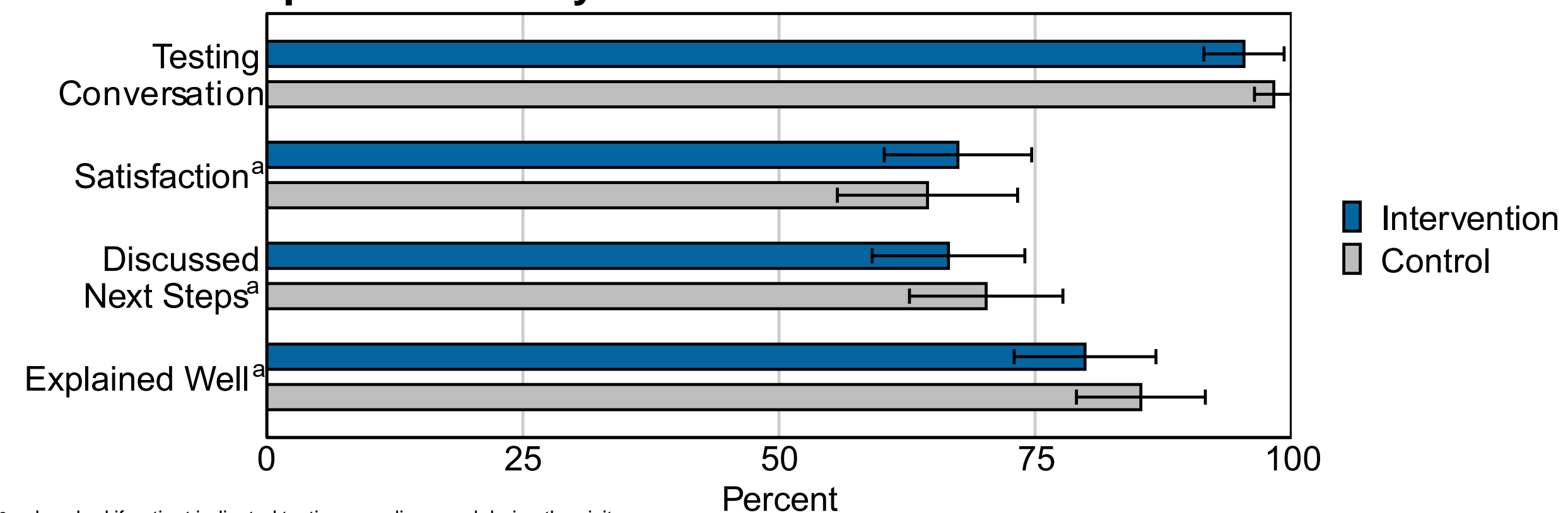
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Quantitative results

Shared decision making and medical testing knowledge



Patient descriptions of study visit



^a only asked if patient indicated testing was discussed during the visit

Qualitative Results

Physician interviews:

Physicians described how the materials affected their approach to testing discussions...

"I think that...[my approach has] definitely changed... you can recognize quickly who's willing to hear the information, and will have a shift in thinking, so it's worth having that conversation." (Physician #8)

They cited time pressure and patient preference as barriers to implementing change:

"You have maybe 20 minutes or 18 minutes left to do your physical. And they're like, oh, I brought my list with me... everything is so cramped." (8)
"I give in because I just don't have the time for [talking patients out of getting low-value tests], you know?" (4)

Patient interviews:

Many patients described the tests they received as routine and, therefore, not necessary to discuss:

"There was no need for elaborate conversations about tests which I routinely receive at any physical." (Patient #93)

Most patients trusted their PCPs, even when advice inconsistent with materials:

"I trust my doctor, if it's something that he maybe recommends it's something I should do." (158)

Conclusions and Implications

- In this initial trial, we found no significant improvement in shared decision-making conversations about medical testing during annual visits.
- Testing was extremely common during annuals, suggesting opportunities to improve conversations about potentially low-value tests.
- We found evidence of cycles of misunderstanding in which patients and physicians assumed the other party wanted testing, with patients at times underappreciating test downsides.
- To break these cycles, improve conversations around medical tests, and reduce overuse and downstream cascades, future interventions might focus on mitigating physician adoption barriers and further leveraging patient-clinician relationships.