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The Roles of Providers and Patients in the Overuse of Prostate-Specific Antigen Screening in the United States

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Background

Most guidelines recommend against using prostate-specific antigen (PSA) testing to screen a population for prostate cancer on the basis of findings from 2 large clinical trials—the U.S. PLCO (Prostate, Lung, Colorectal, and Ovarian) Cancer Screening Trial (1) and the ERSPC (European Randomized Study of Screening for Prostate Cancer) (2). However, this test is still widely used for screening in the United States, and understanding why this practice persists is important.

Objective

To measure the percentage of PSA tests in U.S. adult men that are done on a physician's recommendation versus a patient's request.

Methods and Findings

The National Health Interview Survey collects information through an annual survey of people in their homes, using a complex, stratified, multistage sample design to provide nationally representative data. The survey oversamples black, Hispanic, and Asian persons to increase the precision of the estimates for these populations. Each participant provides verbal consent for survey participation. We used data from the 2013 survey to measure the experiences of 7814 men (aged 40 to 70 years) without prostate cancer during the 12 months before the survey.

The Table shows our principal results. Thirty-five percent of men received a recommendation from their physicians, and approximately 22% of men had PSA screening. More than half of those who received a recommendation were actually screened, but only approximately 3% of cases were screened due to patient initiation. However, more than 90%

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of those who were screened received a recommendation from their physicians. Subgroup analysis showed similar results across groups defined by race/ethnicity, immigration status (born in the United States, residing in the United States for fewer than 10 years, and for 10 years or longer), region of residence (Northeast, Midwest, South, and West), marital status, education level, and the ratio of family income–poverty threshold. In contrast, among those who did not receive screening recommendations from their physicians, patient-initiated screening increased from 1.6% to 5.4% with increasing age (P value for trend <0.001).

Discussion

Our results suggest that PSA screening is widely overused among adult men in the United States and that this is due to physician recommendations rather than patient initiation. We are impressed with studies that suggest the power of discussions about the benefits and harms of screening between physicians and patients (3) and that the physician's approach to over- and underdiagnoses affects how those discussions unfold (4). We also recommend a highly specific computerized clinical decision-support tool that reminds physicians about current guidelines when they order PSA screening because it seems to reduce overuse in men older than 75 years (5).

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Table

Status of 7814 Men Aged 40–70 y Without Prostate Cancer Who Participated in the 2013 U.S. National Health Interview Survey

Experience During the Previous 12 mo	Percentage (95% CI) *
Received screening	22.1 (20.9–3.4)
Physician recommended screening	35.0 (33.6–36.4)
Screening occurred in physician-recommended cases	57.8 (55.4–60.3)
Patient-initiated screening †	2.9 (2.3–3.5)
When screening occurred, physicians had recommended it	91.5 (89.7–93.2)

* Adjusted to recognize sample weights.

† The percentage of patient-initiated screening among those who did not receive screening recommendations from their physicians in the previous 12 months.