**Shared Decision Making in PSA Testing: The effect of a mailed flyer prior to an annual exam**

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**Background**

PSA screening should be a shared decision. The PSA test has equivocal benefit in screening and significant potential harm.

- U.S. medical organizations currently recommend against routine PSA testing, instead calling for a shared discussion between patient and provider.

Shared decision making is not happening.

- Educational materials and decision aids to facilitate patient-centered decision making in PSA testing are often time and resource-intensive.
- Most have been studied in ideal research settings with voluntary participation.

**Methods**

- The flyer was developed by practitioners at the University of Colorado.
- 503 men seen in our GI practice aged 50-74 who were randomized into two groups:
  1. Mailed flyer with a personalized letter within 10 days of their visit
  2. Usual care (no intervention)

Charts were reviewed for three primary outcomes:

- Documentation of discussion in PSA testing
- Documentation of patient preference in PSA testing
- Whether a provider was involved

A follow-up telephone patient survey assessed:

- Patient perception of participation in PSA screening decision
- Patient knowledge of prostate cancer and PSA testing via 5 validated questions, e.g. "how is the PSA test conducted?"
- Acceptability of the flyer to the patient

**Analysis**

- Pearson’s chi-square to analyze intention-to-treat differences
- Hierarchical logistic regression (clustering within providers) was also used to explore the primary outcomes

**Results**

**Hypotheses:** The flyer (to the right) will be associated with 1) increased rates of discussions surrounding PSA testing 2) decreased rates of PSA testing 3) increased patient knowledge of the PSA test and 4) will be acceptable to patients

**Goal:** To test an intervention designed to facilitate shared decision making (SDM) in prostate cancer screening that is easy to implement, effective and acceptable to patients

**Table 1: Discussion Documentation and PSA testing rates**

<table>
<thead>
<tr>
<th></th>
<th>Flyer (n=136)</th>
<th>Control (n=147)</th>
<th>p-value</th>
<th>ICC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSA test ordered</td>
<td>24 (17.7%)</td>
<td>20 (13.6%)</td>
<td>0.41</td>
<td>0.34</td>
</tr>
<tr>
<td>Patient PSA testing preference (EHR documentation)</td>
<td>24 (17.7%)</td>
<td>20 (13.6%)</td>
<td>0.41</td>
<td>0.34</td>
</tr>
<tr>
<td>Patient-provider PSA discussion (EHR documentation)</td>
<td>86 (63.5%)</td>
<td>86 (63.5%)</td>
<td>0.48</td>
<td>0.17</td>
</tr>
</tbody>
</table>

**Table 2: Discussions reported by patients**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Flyer n=71</th>
<th>Usual Care n=77</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you discuss the PSA test with your healthcare provider at your recent visit?</td>
<td>Yes: 71.8%</td>
<td>No: 28.2%</td>
<td>0.02</td>
</tr>
<tr>
<td>Did you share your feelings about the PSA test with your healthcare provider?</td>
<td>Yes: 32.4%</td>
<td>No: 67.6%</td>
<td>0.04</td>
</tr>
</tbody>
</table>

**Acceptability of the Flyer**

- 10% thought there was too much information.
- 10% thought the flyer was “completely balanced” and 43% thought it was slanted towards not testing.
- 69% thought “everything was clear”
- 69% would recommend it to others

**Conclusions**

1. Our pragmatic study of a simple flyer had no effect on measures of shared decision making or PSA testing.
2. More pragmatic trials are needed to determine the real-world benefit of tools promoting SDM in PSA testing.
3. Given the clustering seen in our study, studying provider-level interventions could also be useful.

**Summary/Discussion**

**Implementation:**

- We enrolled 40% of all the men we screened
- Of the survey respondents who were mailed the flyer 62% reported receiving it

**PSA Discussions:**

- There were low rates of documentation of discussion and patient preference in PSA testing in both groups with no differences
- Patient report of discussions were higher, but again generally no differences between groups

**PSA Testing**

- Rates of PSA testing were high in all groups and similar to rates recently reported in larger studies

**Patient Knowledge**

- There were no significant differences in the survey responses

**Flyer acceptability**

- Patients found the flyer to be highly acceptable

**Provider Clustering**

- There was provider clustering in documentation of discussions and PSA testing rates
- 20 patients already had routine PSA ordered by their provider prior to the encounter
- Provider factors may be one explanation for the negative outcomes of the study

**Limitations**

1. Low documentation rates underpowered our primary outcomes
2. Were the discussions truly patient-centered?

**Figure 1: Enrollment**