Evidence-based Strategies to Enhance Cancer Control
Topics

- Evidence
- Why use evidence-based interventions (EBIs)?
- Community Guide – a good source of evidence
- Mammography example
- Texas examples
Topics

- How *Guide* and *P.L.A.N.E.T.* can help to identify/select proven interventions and research gaps
- How to use information about evidence
- Address questions/concerns
Evidence-Based Interventions

It’s about the evidence...
It’s easier on TV

CSI: HARD EVIDENCE
Evidence...
Classic evidence pyramid

- Systematic reviews
- Randomized control trials
- Cohort studies
- Case-control studies
- Case series, Case reports
- Editorials, Expert opinions
Community Preventive Services Task Force

Celebrating 15 Years of Scientific Excellence

October 3 - 4, 2011
Century Center 2500
Rooms 1200/1201
Atlanta, Georgia
Public health evidence

- More design options
- RCTs are not the only strategy.
- Still, rigor counts.
- Myth: *Guide* studies are done only in academic health centers.
- Myth: Results don’t apply to underserved groups.
Why Evidence-Based Interventions (EBIs)?

- Evidence-based expectations re impact
- Better decisions about practice
- More efficient; better resource allocation
- Clients deserve EBIs.
- Payers increasingly demand them.
- Trial and error includes trials AND errors.
Don’t you want evidence-based clinical interventions?

Why should public health interventions be different?
Don’t reinvent the wheel!
Guide Process

- Convene review team.
- Develop conceptual framework.
- Develop prioritized list of interventions.
- Develop and refine research questions.
- Search for evidence.
Guide Process

- Abstract and critically-evaluate available studies.
- Summarize evidence.
- Present to Task Force (TF) for discussion.
- Disseminate findings and TF recommendations.
Logic Models

- Graphically show relationships between independent variables and outcomes
- Show cascade of events demonstrated or hypothesized to affect immediate and longer-term outcomes
Increasing breast, cervical and colorectal cancer screening: provider reminder interventions
Searching the literature: the true story

- Identify 1000s of articles.
- Only a small number are eligible for inclusion.
Process

- Debate evidence.
- Summarize data qualitatively.
- Summarize statistically, e.g. median and inter-quartile interval.
- Create visual representations of data.
- Make recommendations about the strength of evidence.
- Identify threats to validity.
Suitability attributes

**Greatest** – Concurrent comparison groups and prospective measurement of exposure and outcome

**Moderate** – All retrospective designs or multiple pre or post measurements but no concurrent comparison group

**Least** – Single pre- and post-measurements & no concurrent comparison group or exposure, w/ outcome measured in a single group at the same point in time
Characterize body of evidence of effectiveness as **strong**, **sufficient**, or **insufficient** based on:

- Number of available studies and
- Strength of their reported effects.
Categories of Findings & Recommendations

**Recommended:** Strong or sufficient evidence that intervention is effective

**Recommended Against:** Strong or sufficient evidence that intervention is harmful or not effective

**Insufficient Evidence:** Studies don’t provide sufficient evidence to determine if intervention is/is not effective. More research is needed.
Insufficient evidence

- Insufficient doesn’t mean ineffective.

- Not enough studies
- Small number of studies; results inconsistent

Options:
- Conduct more research
- Wait for literature to ripen
Use What Works

Mammography Case Study: Increase sustained use
Percent of U. S. women age 40+ who had mammograms in previous 2 years, 2000-2008, by age
## Use What Works

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Client reminders

- Follow-up printed or telephone reminders
- Tailored or untailored
- Reasons for, benefits of, and ways to overcome barriers to screening
- Help scheduling

Strong evidence of effectiveness
Small media

- Letters, brochures and videos (examples)
- Inform and motivate
- Tailored or untailored

Strong evidence of effectiveness
One-on-One Education

- Information to individuals about reasons for, benefits of, and ways to overcome barriers to screening
- Inform, encourage, and motivate recommended screening
- Tailored or untailored

Strong evidence of effectiveness
Personally Relevant Information about Screening Mammography
# Top Past Barriers to Mammography

<table>
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<tr>
<th>障碍</th>
<th>百分比</th>
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<tbody>
<tr>
<td>难度预约（包括记忆）</td>
<td>21</td>
</tr>
<tr>
<td>拖延 / 推迟 / 没有安排</td>
<td>21</td>
</tr>
<tr>
<td>未能预约 / 忘记预约</td>
<td>21</td>
</tr>
<tr>
<td>成本 / 计划不支付 / 无健康保险</td>
<td>12</td>
</tr>
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</table>
## Top Future Barriers to Mammography

<table>
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<tr>
<th>Barrier</th>
<th>N</th>
<th>%</th>
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<tr>
<td>Family illness / Family emerg/death</td>
<td>865</td>
<td>(46)</td>
</tr>
<tr>
<td>Current illness / Other hlth problems more important</td>
<td>629</td>
<td>(33)</td>
</tr>
<tr>
<td>Difficulty making appt</td>
<td>344</td>
<td>(18)</td>
</tr>
<tr>
<td>Cost/Plan wouldn’t pay/ No health insurance</td>
<td>174</td>
<td>(9 )</td>
</tr>
<tr>
<td>Forget to make appt/keep appt</td>
<td>172</td>
<td>(9 )</td>
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Enhanced usual care reminders
Automated telephone reminders
Enhanced letter reminders

If no mammogram:
- Priming letters
- 3 different kinds of telephone counseling
- Framing of counseling messages: +, - or neutral
A Health Reminder
for Ms. Mary Doe

from the State Health Plan and PRISM
It’s Time to Schedule Your Next Mammogram!

Based on our records, you had your last mammogram March 2004 at State City Radiology - Blue Ridge (919-998-1437).

Please call today—or very soon—to make an appointment for your next mammogram at the clinic of your choice.

Breast cancer is a serious disease.
Each year, nearly 6,000 women in North Carolina will learn they have breast cancer, and about 1,100 North Carolina women will die from breast cancer. Regular mammograms could save the lives of 363 North Carolina women each year.

Age makes a difference!
As women get older, their chances of getting breast cancer increase.

Protect your health! Mammography is the key to finding breast cancers early.
This is when breast cancer can be treated more easily and cured. Since you are age 58, most doctors agree you should have a mammogram once a year. Mammograms are not perfect, but they are the best tool we have today.
Dear Mrs. Doe,

Thanks for agreeing to be part of PRISM (Personally Relevant Information about Screening Mammography). Our records show that your last mammogram was February 2004 at Rose Radiologists (129-229-2299). This means that you should have your next mammogram very soon to be on schedule. Women aged 40 and over should have mammograms every year.

If you had a recent mammogram, that’s great!

If you have not had a mammogram since the one our records show, please read on. The content was chosen based on what we heard you say when we talked in November. There’s also a Questions and Answers sheet for women who want more information. We hope you will think about mammograms in new ways. Please call today—or very soon—to make an appointment for your next mammogram at the clinic of your choice.

What Might Help You Get a Mammogram Soon?

Take a minute to think about what would help you get a mammogram soon. For some women, the first step is thinking about what’s getting in the way of their mammograms. We call these “barriers.” There’s a notes section on the back page if you want to make a list. Other women with whom we’ve talked have some great ideas for overcoming barriers. We’ve chosen these tips based on what we heard you say when we talked.

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<th>What Might Keep You from Getting a Mammogram?</th>
<th>What OTHER WOMEN Say Helped Them…</th>
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<td>You put it off.</td>
<td>“I tend to put things off. But I’m not going to put off a mammogram. If something’s going to happen, I want to find it early—when it can be treated easier and cured.” — Alice, High Point</td>
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<td>“I was so busy that I kept putting off a mammogram. One day, I realized that if I didn’t look after my health, who would? Later that day, I called and made an appointment.” — Tonya, Hendersonville</td>
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Think about it.
What can YOU do to make sure you get a mammogram soon?

A Message About Mammography
Created Especially for Mrs. Jeanette Doe

from the State Health Plan and PRISM
NEGATIVE CONSEQUENCES

Also I want to talk briefly about reasons for getting yearly mammograms. Do you remember Sandra's story from the booklet? It was on the inside of the booklet on the right hand side. (If woman doesn't remember story, relate synopsis below.)

Sandra's Story: Sandra thought about the benefits she could LOSE from not getting her next mammogram on time. That's what made her decide to call and make an appointment.

Most of us could list reasons why women shouldn't skip getting regular mammograms. But like Sandra, we don't stop and think what we, personally, could lose when we don't have mammograms.

Thinking about mammography, what are the benefits you might LOSE if you don't get a mammogram this year? Do not read options but use to record responses.

Continue probes until they reply, "no more benefits". Are there any other benefits you could lose? Are there any other benefits that you wouldn't want to lose?

Note to advisors: We want women to think through the benefits. We want her to elaborate about the benefit lost of having a mammogram soon. For example, she may say "early detection", but not know why that's important. By having her state why it's important, for her, we hope to have her think about these important reasons.

Note: If participant makes a statement that is factually incorrect, please correct and clarify for her. For example, if she says that mammograms prevent cancer, this is not the case. Mammograms detect cancers that are already there. They help to protect against dying from breast cancer.

If she says, "Mammograms prevent cancer": Actually, the purpose of mammograms is to find breast cancer early. They don't prevent breast cancer, or keep it from happening. Even though mammograms don't prevent breast cancer, research does show that mammograms reduce the number of deaths due to breast cancer. Are there other benefits that you might gain from getting a mammogram?

If she says "lose my life", respond with empathy. For example, "That's definitely a powerful reason." Follow conversation naturally if appropriate; finish this benefit with "Thank you for sharing that with me. It's a good reminder for me of why we're doing this study."
We learned

1. Reminders work.
2. Enhanced reminders and ATRs work even better.
3. Tailoring has benefits.

Absolute percent changes 12 mos post-intervention

- 14.2 Enhanced usual care reminder
- 18.4 Enhanced letter reminder
- 19.4 ATR

P<0.0001

Women randomized to additional interventions had significantly fewer days’ non-adherence compared to EUCR. 

P = .0003

We used Health Belief Model for Enhanced letter reminders:

- Susceptibility
- Benefits
- Serious
- Cue to action

1. Theory-built interventions are more effective (Legler et al., 2002).

2. Cost matters. ATR=$.35 vs. $1.34 for ELR vs. $.86 EUCR
We learned

1. Past behavior is best predictor of future behavior.

2. Give all women reminders @ step 1.

Start with minimal interventions for all age-eligible women.

Use more intensive interventions for those who do not respond.
We improved on prior EBIs.

Interventions may not be appropriate for women w/o insurance.

Not appropriate for women with no prior mammograms.

We learned

1. Caveats
2. Insured women
3. Only 11% Black
4. Only 16% <= high school ed
5. But...
6. Large sample size (3547)
7. RCT
We learned

1. Ask minimum intervention set needed.
2. Design studies to assess that.
3. If too expensive, then no dissemination
4. Design for dissemination.

- Design for dissemination
- Talk with potential adopters upfront.
- Ask the question: if this is successful, would you adopt?
We learned

- Reminders for all women
- Non-responders: Priming letters + telephone calls

Minimal intervention needed for adherence
Health provider interventions also are needed.

Women in 40s are still not clear on schedule.

We learned

In several studies, women in their 40s were less likely to get repeat mammograms on schedule.
Increasing Breast and Cervical Cancer Screening in Rural and Frontier Communities

- Friend to Friend
- Personal calls
- One-on-one educ.
- Access barriers

CPRIT-funded programs

Empower Her to Care
- Reminders
- Structural barriers
- Telephone calls
CPRIT-funded programs

ACCION: Against cervical cancer in our neighborhoods

- Community educ + outreach
- Reminders
- Structural barriers
Where do you start?
Adapt, adopt and study process and outcomes

- Best way to identify potential improvements
- Helps to understand why things did/didn’t turn out as expected

Knowing cost is important: value for health is compelling.

Collect cost data.
Stop: Search for evidence

www.thecommunityguide.org

- Cochrane reviews
- http://cancercontrolplanet.cancer.gov
- SAMSA evidence-based programs
How P.L.A.N.E.T. can help you

- Summary of recommendations in particular areas
- Research reviews of different interventions
- Find research-tested intervention programs and products in a variety of areas, including exercise, tobacco use, diet, cancer screening.
- Access an inventory of effective programs developed from research.
- Download most programs at no cost.
What’s a researcher to do?

- Learn from studies rated highly.
- See Guide recommendations for suggestions about research needs.
- Be part of evidence reviews.
- Consider replicating a proven intervention or extending to another population.
Focus innovations especially on areas where evidence is insufficient.
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What’s a practitioner to do?

- Don’t reinvent the wheel.
- Look for evidence and evidence reviews as well as evidence-based interventions. (P.L.A.N.E.T.)
- Adapt where needed and appropriate.
- If there are no proven interventions, consider whether there’s a related literature.
THANK YOU!