Practice Based Research in the Community Pharmacy

Stephanie A. Gernant, PharmD, MS, Assistant Professor, Department of Pharmacy Practice, University of Connecticut School of Pharmacy, 69 North Eagleville Road, Storrs, Connecticut 06269. P: 860-486-8887. E: stephanie.gernant@uconn.edu

Disclosure

• Dr. Gernant has no actual or potential conflict of interest associated with this presentation

Objectives

• Define Practice Based Research, and its distinction from drug trials
• Describe the history of Practice Based Research Networks
• Identify opportunities for and benefits of Practice Based Research in Community Pharmacies

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What do you think when you hear “research”? 

Converting Research to Care

On average, it takes 17 years to implement 14% of research findings into clinical care.
Benefits of Practice-Based Research

- Slow and insufficient use of research findings
- Study to Practice = Average 17 years
- Only ~14% of findings are implemented into practice
- Patients receive only 55% of recommended care
- Practice-Based Research address traditional research challenges
- Clinicians involved in research process and idea development = quick, useful findings

“Practice-Based Research”

- Laboratory research
- Clinical trials in academic settings
- Practice-based research
- Community-based research

1907, London:

"I fear the day may come when a heart specialist will no longer be a physician looking at the body as a whole, but one with more and more complicated instruments working in a narrow and restricted area of the body — I had not been long in the practice when I discovered how defective was my knowledge... I came to recognize that the kind of information I wanted did not exist."

Providers as Investigators: The Early Years

Fast Forward: Primary Care in the 1980's

The Arrival of Practice-Based Research Networks

- Collaboration between practitioners and researchers
- Examine
- Determine
- Increase

Figure 1. Example of an IHI data card for reporting care.
Clinicians in PBRNs are NOT passive data collectors.

Which is a benefit of PBRNs?
A. PBRNs slow down the translation of research findings into clinical practice to protect patients from unproven therapies
B. PBRN research is controlled by Universities, so the studies are grounded in theory
C. PBRN clinician members must participate in all research studies to increase generalizability
D. PBRN research is clinician-driven, to increase translatability into practice

What does PBRN Stand for?
A. Practice-Based Research Network
B. Physician-Based Rapid Notetaking
C. Patient-Built Referral Network
D. Pharmacist-Based Rapid Notetaking

Today: Agency for Healthcare Research and Quality

Types of Practice Based Research Networks
- Professional
- Regional
- Population
- Condition

Practice Based Research Networks in New England
CPRNs

- Community Pharmacy Based Research Networks (CPRNs) are a type of Practice Based Research Network (PBRN)
- CPRNs are not Service Networks; they are NOT GPO's:

<table>
<thead>
<tr>
<th>Service Networks</th>
<th>CPRNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Help pharmacists deliver care to patients through various resources like</td>
</tr>
<tr>
<td>Help pharmacists IDENTIFY AND RESEARCH ways to deliver care to patients</td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>Community Pharmacy Enhanced Services Network (CPESN)</td>
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</tbody>
</table>

What Institution Registers PBRNS?

A. Centers for Disease Control (CDC)
B. Agency for Healthcare Research and Quality (AHRQ)
C. Food and Drug Administration (FDA)
D. Connecticut Commission of Pharmacy

Why Research Community Pharmacies?

Now that I know what a PBRN is, what does this have to do with Community Pharmacy?

PBRNs in Pharmacy

Which of the following is True?

A. You have to have research experience to be part of a PBRN
B. You can't be a part of a PBRN unless you're a physician
C. Community Pharmacy PBRNs exist, and community pharmacists are a part of them
D. Community Pharmacy PBRNs only study insurance claims data
Examples of Community Pharmacy Research Network Studies

Previous Research In Community Pharmacy Networks

- **AACP MEDAP study:**

- **Evaluation of Care Coordination Through Community-Pharmacy Delivered Medication Therapy Management**
  - Intervention RPh’s found more drug therapy problems per patient than Usual Care RPh’s (14.8 vs 6.7 problems/patient p=0.01).
  - Intervention RPh’s gave more preventative recommendations per patient, than Usual Care RPh’s (3.4 vs 2.5 problems/patient p= 0.04).

State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Factors and Promote School Health (SHAPE): Pharmacy Initiative

- Comprehensive MTM services to 354 patients with hypertension and/or diabetes:
  - 39% improvement achieving BP goal;
  - 23% improvement achieving A1c goal;
  - Adherence improved 38% from initial to final MTM encounter

Why would we need a CPRN? How could this be good for our future?
How Can CPRNs Benefit Pharmacies?

- Research
  - For pharmacy faculty, university faculty, outside institutions
- Community involvement
  - Pharmacies, health departments, public health organizations, schools, private companies etc...
- Strengthen partnerships with state organizations
- Partner with in-state/out of state PBRNs
- Could lead to a new and sustained practices

How Could a CPRN Benefit Community Pharmacists?

- “The involvement of community pharmacy sites with PBRNs has the potential to be a driving force in practice innovation, improving patient care and professional satisfaction.”
- “Improving job satisfaction” ranked high on the list of reasons to become involved in the network...”
- “Pharmacists are easily accessible to the public and are very commonly the first line when patients are being managed with a chronic disease state. PBRNs in the community setting can help emphasize the importance of the community pharmacist and really show the impact being made by the staff at these locations.”

How can CPRNs Benefit Practice?

“All of our studies have patient-centered outcomes, such as pain and the alleviation of pain as well as quality of life.”

Barriers to Community Pharmacy PBRN Research

<table>
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<th>Barrier</th>
<th>Suggested Solution</th>
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<tr>
<td>1. Time Constraints</td>
<td>Participation in research that fits the practice</td>
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<tr>
<td>2. Financial Concerns</td>
<td>Compensation for time spent</td>
</tr>
<tr>
<td>3. Limited Research Background</td>
<td>Clinician’s focus is patient care, not research</td>
</tr>
<tr>
<td>4. Data Sharing</td>
<td>Some PBRNs share data, some do not</td>
</tr>
<tr>
<td>5. Recruitment</td>
<td>“One-pagers”</td>
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What are the purpose of PBRNs?

A. When clinicians are involved in research processes and idea development, original research can turn into useful findings quicker
B. When PBRN member clinicians serve as data collectors, rather than helping in idea generation, the studies are more rigorous
C. When health systems are members of PBRNs, they can receive more money from CMS
D. PBRNs serve to help health systems have better purchasing power and bill for services

Recap

1. Community Pharmacy research can benefit both patients and the profession
2. Traditional research is slow, and not always generalizable
3. Community Pharmacy Practice Based Research Networks promote quick implementation of relevant findings into practice