Welcome to PBRN Seminar
Week 3
To this point...

✓ What are PBRNs?
✓ What do PBRNs do?
✓ Why are PBRNs important?
✓ What are the key components of PBRNs?
✓ How do PBRNs function?
Tonight

• Dr. Ann Reichsman
  Director, Safety Net Providers Strategic Alliance PBRN (SNPSA)

  – What are the steps in developing a PBRN?

  – How do PBRNs maintain the interest and involvement of clinicians?

  – What is the value of PBRN research to clinician-members?
Also tonight…

• How generalizable are PBRN research findings to non-PBRN practices?
How Representative are PBRN Practices and Patients?

Jim Werner, PhD
CTSC PBRN Shared Resource
Case Department of Family Medicine
Why Practice-Based Research is Needed

How well does research generated in PBRN practices generalize to the larger population of ambulatory practices across the country?
Determine a baseline for ‘typical’ ambulatory health care in the U.S.

Determine a baseline for ‘typical’ health care delivered by PBRN practices in the U.S.

Compare patient populations and clinician practice patterns
National Center for Health Statistics

- Ambulatory Health Care Data (NAMCS/NHAMCS)
- National Health Interview Survey
- National Health Interview Survey on Disability
- National Health and Nutrition Examination Survey (NHANES)
- National Health Care Survey
- Hospital Discharge and Ambulatory Surgery Data
- National Home and Hospice Care Survey
- National Nursing Home Survey
- National Employer Health Insurance Survey
- National Vital Statistics System
- National Survey of Family Growth
- National Immunization Survey
- The Longitudinal Studies of Aging (LSOAs)

http://www.cdc.gov/nchs/
National Ambulatory Medical Care Survey (NAMCS)

• A national survey designed to meet the need for objective, reliable information about the provision and use of ambulatory medical care services in the United States.

• Findings are based on a sample of visits to non-federally employed office-based physicians who are primarily engaged in direct patient care.

• Physicians in the specialties of anesthesiology, pathology, and radiology are excluded from the survey (all others are included).
National Ambulatory Medical Care Survey (NAMCS)

• Each year, data is captured for 3,000 randomly selected ambulatory visits

• The survey has been conducted annually from 1973 to 1981, in 1985, and annually since 1989.

• Data are widely used by health care researchers, policy analysts, congressional staff, the news media, etc.
Methods for NAMCS

• Trainers visit the physicians prior to their participation in the survey to provide them with survey materials and instruct them on how to complete the forms.

• Each physician is randomly assigned to a 1-week reporting period. Data for a systematic random sample of visits are recorded by the physician or office staff on an encounter form.
Data Elements for NAMCS

- Patient information
- Injury/Poisoning/Adverse Effect
- Reason for visit
- Continuity of care
- Provider’s diagnosis for this visit
- Vital signs
- Diagnostic/screening services
- Health education
- Non-medication treatment
- Medications & immunizations
- Providers
- Disposition
- Time spent with provider
How Representative of Typical Practice are PBRN Patients?

• Methods
  – 83 physicians in 44 primary care PBRN practices were randomly assigned to 1 of 52 weeks for data collection (replicated NAMCS)
  – The PBRN sample was statistically compared with NAMCS sample that was collected at approximately the same time

Similarities

• Substantial similarities between the PBRN & NAMCS samples in...
  – Patient characteristics
  – Reasons for visits
  – Diagnoses
  – Diagnostic tests
  – Therapies prescribed
  – Time spent with patients
  – Patient disposition

Differences

• The PBRN reported the following minor differences vs. NAMCS…
  – More patients with HMO & private health insurance
  – More visits for preventive care
  – More diagnoses of depression & anxiety
  – Greater percentage of white patients
  – More PBRN practices were located in rural settings

Conclusions

• Findings suggest that patient visits to PBRN physicians were sufficiently representative of those made to primary care physicians nationally.

• Areas of difference point to potential biases that may impact the interpretation of findings.
How Accurately do PBRN Clinicians Represent Other Clinicians?

• Comparison between NAMCS and PBRN replication of NAMCS

• Examined the practice patterns of 129 primary care physicians (mostly Family docs) in 52 PBRN practices

• Compared 3192 PBRN visits with 3713 NAMCS visits

How Representative of Typical Practice are PBRN Clinicians?

• Primarily interested in how PBRN physicians might differ in screening, prescribing, diagnostic, and therapeutic services (20 clinical services)

• Used nested statistical models to account for multiple patient visits per physician

• Adjusted for patient age, sex, race, ethnicity, method of payment, physician age and sex, rural/non-rural, primary reason for visit, duration of visit, season of visit

Findings

- Of 20 clinical services, 4 predicted membership in the PBRN, 16 did not

- Screening and diagnostic:
  - PBRN docs 1.18x more likely to obtain blood pressure
  - PBRN docs 0.60x as likely to order a strep culture

- Counseling:
  - PBRN physicians 2.30x more likely to provide family planning counseling
  - PBRN docs 1.66x more likely to provide smoking cessation counseling after adjusting for smoking status

Conclusions

• There appear to be minimal differences in the practice patterns PBRN physicians vs. NAMCS probability sample

• Analysis limited to the service variables included in NAMCS

Interpretation

- Study 1: PBRN primary care patients are similar to patients nationally
- Study 2: PBRN primary care physicians have similar practice patterns to physicians nationally
- No study population is perfectly generalizable
- Clinicians should assess the relevance & transportability of findings of a particular PBRN study to their own settings

Stange KC. Practice-based research networks: Their current level of validity, generalizability, and potential for wider application. *Arch Fam Med* 1993 (2) 921-923.
In spite of all this...

It seems possible that PBRN physicians may practice differently than non-PBRN physicians.
Why might PBRN Physicians be Different?

• PBRN members may be more critical in their reading and analysis of evidence-based clinical guidelines

• The resulting differences in knowledge, attitudes, and beliefs can result in different practice patterns and services

• These physicians could attract patients who differ from the general population

What does this mean for PBRN Research?

• Studies of physician behavior may be affected

• Studies of patient characteristics seem less likely to be affected

Stange KC. Practice-based research networks: Their current level of validity, generalizability, and potential for wider application. Arch Fam Med 1993 (2) 921-923.
What does this mean for generalizability?

• No study population is perfectly generalizable

• It is important to assess the relevance & transportability of findings of a particular PBRN study to other settings

Stange KC. Practice-based research networks: Their current level of validity, generalizability, and potential for wider application. *Arch Fam Med* 1993 (2) 921-923.
Implications for PBRN Development

• Since PBRN-member clinicians may be ‘at risk’ for developing different practice patterns, offering various levels of network membership may be beneficial

• Continual expansion of PBRNs may protect against developing an insular group of practices who influence one another and who are changed by their interactions
Questions?
Next Week

• Data collection methods in PBRNs
  – Electronic data collection methods
    • Louise Acheson, MD, MS
  – The “Card Study” method
  – Frequently used data collection tools