

# **Measuring Comprehensiveness of Primary Care:**

Past, Present, and Future

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**Mathematica Policy Research**  
**Washington, DC**

**June 27, 2014**

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# Welcome

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**Moderator**

**Eugene Rich, M.D.**

**Mathematica Policy Research**

# About CHCE

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**The Center on Health Care Effectiveness (CHCE) conducts and disseminates research and policy analyses that support better decisions at the point of care. Our focus is on the delivery systems and policy environments that help clinicians and patients make more informed decisions, using information on outcomes and effectiveness.**

# Today's Speakers

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**Ann O'Malley**  
Mathematica



**Janice Genevro**  
AHRQ



**Eugene Rich**  
Mathematica



**Bob Phillips**  
ABFM



**Laura Sessums**  
CMMI

# Introduction to the AHRQ CDPP Project

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- **CDPP = Collecting data on physicians and their practices**
- **Develop an approach to conducting a regularly occurring survey of physicians and their practices**
  - **Provides sustained, timely, relevant, useful pictures of physicians, their practices, and the external context for their practices**
  - **Tracks, analyzes, and provides answers to how physician practices are responding to public and private policy initiatives and to organizational, demographic, and technological changes**
  - **Can be linked to AHRQ and other federal and private databases**
- **Field—and learn from—a prototype of such a survey**
- **Help AHRQ lay the groundwork for future, ongoing physician data collection**

# Addresses the Diversity of Physicians and Their Practices

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- Solo practice general surgeon
- Orthopedic surgeon in a group specializing in back problems
- Cardiologist in a multispecialty group
- Family physician employed at an urgent treatment center
- OB/GYN employed by a group or staff model HMO
- General internist employed by a hospital for inpatient care (“hospitalist”)

Who is providing primary care?

# Defining Primary Care (1)

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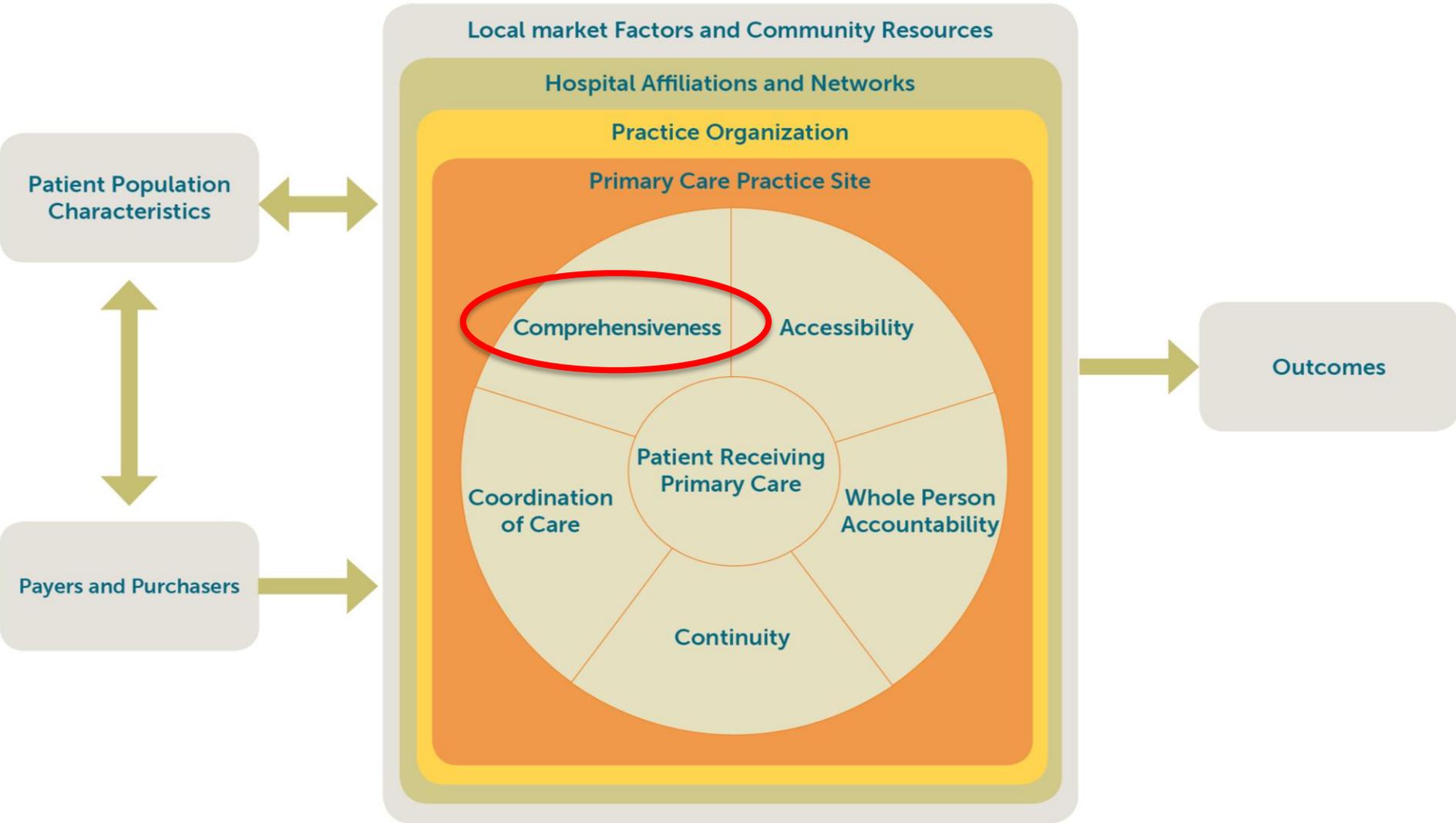
- Evolving definitions in U.S. since the 1960s
- Problems with defining primary care physician in U.S. by training tradition
  - IM, FM, Pediatrics physicians in non-primary care roles—hospitalist, ER, urgent care
  - Specialist role in primary care (e.g., ESRD)
  - Evidence of declining accessibility, comprehensiveness in generalist ambulatory care
- Reviewed IOM reports, WHO, work of Starfield, CIHI work, Chronic Care Model, COPC, PCMH

# Defining Primary Care (2)

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- **Key primary care features**
  - **First contact, accessible care**
  - **Continuous care**
  - **Coordinated care**
  - **Accountable/whole-person care**
  - **Comprehensive care**
- **Relevant but not unique to primary care**
  - **Patient-centered**
  - **Quality and safety-oriented**

# Primary Care Conceptual Framework



# Comprehensive Care

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- **“Primary care” was defined in response to the declining number of “general practice” physicians in the US.**
- **Comprehensiveness was one of the core features of primary care highlighted in early publications (e.g., 1966 Millis Commission report, 1978 IOM report)**
- **CDPP definition of comprehensiveness: primary care clinicians (as part of the primary care team) assess and treat the large majority of each patient’s physical and mental health care needs, including prevention and wellness, acute care, and chronic care**

**Adapted from AHRQ PCMH definition 2012**

# Challenges to Delivering Comprehensive Primary Care

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- **Current FFS physician payment**
  - “Hamster on a treadmill”
  - No compensation for extra time required for evaluating and managing patients with complex needs
  - No compensation for “curbside consultation” with specialists
  - “Document and refer” pays better
- **Difficult and time-consuming to maintain clinical competence in broad range of acute and chronic conditions**
  - Diagnosis, testing, treatment
  - Care management

# Why Measure Comprehensiveness?

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- **Comprehensiveness of primary care declining over time in U.S., but not necessarily in other countries**

(Rosenblatt 1995, Bazemore 2012, Van de Lisdonk 1996, Starfield 2008)

- **If we can't measure it, we can't track it, support it, or improve it**
- **Under-measured aspect of primary care in delivery system reforms (e.g., PCMH and ACO initiatives)**
- **Implications for workforce, training, maintenance of certification**

# More Comprehensive Primary Care Is Associated With

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- More equity and efficiency
- Improved interpersonal continuity of care
- Less need for coordination across multiple different providers (less care fragmentation, less service duplication)
- Lower hospitalization rates for ambulatory care sensitive conditions after controlling for prevalence of conditions & bed supply
- Better self-reported health outcomes
- Greater use of evidence-based preventive services

(White 1967; Starfield 1992, 1998, 2005; IOM 1996; Kringos 2010, 2012; Sox 1996, Sacket 1992; Sans Corrales 2006; Lee 2007; Wilhelmsson 2007)

# Terminology

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**“...assess and treat the large majority of each patient’s physical and common mental health care needs, including prevention and wellness, acute care, chronic and multi-morbid care.”**

- **Scope or range of services (e.g., procedures and sites of care)**
- **Conditions managed (depth and breadth)**
- **Unit of interest: primary care team**
  - **The small team of the clinician and other staff at the practice site**
  - **Work closely together to care for patients**

# How Has Comprehensiveness Been Measured?

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- **Surveys: mostly focus on services available on site**
  - Patients
  - Providers
  - Facilities
- **Claims and visit abstraction data: used to capture both sites of care and conditions treated during visits**
  - NAMCS visit data
  - Claims (e.g., Medicare fee-for-service)

# Advantages to Measuring Comprehensiveness with Surveys

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- **Patient surveys (PCAT, PCAS, ACES, etc.)**
  - Patients can best describe their own needs and experiences
- **Physician surveys (CDPP, MHIQ, PCAT provider survey)**
  - Physicians are best able to describe their own practice capabilities and expertise
  - Can also describe range of conditions they are comfortable caring for and managing
- **Facility surveys (PCAT facility survey, NSPO asks condition specific supports)**
  - Can get at practice supports & capabilities

# Measuring Scope of Services via Physician Survey (CDPP)

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From PCAT and MHIQ:

- How likely or unlikely is it that patients would be able to get the following services *on-site* at your practice location if they needed them?
  - Nutrition counseling
  - Immunizations
  - Family planning or birth control services
  - Counseling for behavior or mental health problem
  - Treating minor laceration
- Response options
  - Very unlikely, somewhat unlikely, somewhat likely, very likely

# **Measuring Depth and Breadth of Condition Management via Physician Survey (CDPP) (1)**

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**New measure:**

- **Among PCPs and specialists who said they provide primary care for at least 10 percent of their patients**
- **Asked about five common conditions which are within the management competencies of a PCP (though they don't capture even a fraction of primary care)**
  - **New onset low back pain**
  - **Sore throat**
  - **Amenorrhea**
  - **Depression symptoms**
  - **Diabetes symptoms**

# **Measuring Depth and Breadth of Condition Management via Physician Survey (CDPP) (2)**

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- Same questions asked for each of the five common conditions
- If a patient for whom you provide primary care presents with [symptom or condition], how likely is it that you would do each of the following
  - Conduct the needed history and physical exam for an initial assessment
  - Order and interpret the necessary diagnostic tests
  - Initiate treatment
  - Refer the patient to a different health professional
- Response options: very unlikely, somewhat unlikely, somewhat likely, very likely
- Note: measure has not yet been validated

# Limitations of Survey-Based Measures

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- **Patients**
  - Expectations around comprehensiveness vary (e.g., specialist for every body system regardless of level of severity or rarity of problem)
  - May not be aware of all services that practice is able to provide
- **Providers or practice**
  - Social desirability bias (could overstate comprehensiveness)
  - Not always aware of when patients are getting care from other providers, so clinician may think they are meeting all of their patients needs when that may not be the case
- **Thus, also useful to assess comprehensiveness via claims**

# Advantages of Measuring Comprehensiveness with Claims

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- Readily available
- Nationally representative (e.g., FFS Medicare)
- E&M (evaluation and management) services indicate physician visits and consultations
- Include International Classification of Diseases (ICD) codes and Current Procedural Terminology (CPT) codes
- Data on site of care (e.g., outpatient, ED, nursing home, house calls, hospital)

# Potential Claims Measures of Comprehensiveness

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- Range of conditions
- Involvement in patient conditions
- New problem management

# Rationale of “Range of Conditions” Approaches

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- Over a given time period, physicians will treat patients with a number of conditions identified by ICD-9 listed on E&M visits
- Clinicians providing more comprehensive care will treat a larger number of conditions

# Range of Conditions Example: Graham Center Measure

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- Looks at distribution of ICD-9 codes by physician for the year
- Rank conditions from most to least frequent and calculate cumulative frequencies
- Set the threshold of cumulative frequencies at 80 percent to remove infrequent codes, then count ICD-9 codes that account for the distribution below the threshold value
- Create a continuous score of the total # of separate ICD-9 (three digit) codes that account for 80 percent of ICD-9 diagnoses on claims submitted by the PCP
- Range: 1–211 (# of conditions treated by the physician)

(Pettersen et al., 2014)

# Involvement in Patient Conditions: Rationale

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- **Assess a clinician's involvement in care of patient's conditions (relative to other physicians caring for that patient)**
- **The assumption is that primary care clinicians are providing more comprehensive care when they document involvement in numerous conditions for which their patients were under treatment**
- **Measure under development at Mathematica**

# Involvement in Patient Conditions Measure (1)

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- Start with a given year of claims for national sample of beneficiaries
- For each patient, identify the range of conditions on their E&M claims in the year
- Calculate percentage of different conditions cared for by each doctor they saw

Dr. Smith billed for 50 percent of the patient's conditions in that year

Dr. Jones billed for 25 percent of the patient's conditions in that year

**WORK IN PROGRESS, NOT YET VALIDATED**

# Involvement in Patient Conditions Measure (2)

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- Rank clinicians based on who saw the most different conditions for each patient and designate that clinician as most comprehensive for that patient

$$\text{Score} = \frac{\text{\# of patients for whom doctor was designated "most comprehensive"}}{\text{Total \# patients for whom they provided E\&M visits}}$$

- If your score is 1, you are the most comprehensive physician for every patient seen (if 0, you are the most comprehensive for none of your patients)
- Range of scores on preliminary data for 28 primary care clinics in a large health system: 0.36–0.81

**WORK IN PROGRESS, NOT YET VALIDATED**

# New Problem Management: Rationale

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- **PCP or practice, if comprehensive, should be able to deal with majority of health problems except those too uncommon to maintain competence** (Starfield 2007)
- **Assess extent to which a physician manages vs. refers out patients with a new symptom/problem**
- **Limit analysis to those symptoms/problems common in PC**
- **Examples of top 20 symptoms/conditions from NAMCS**
  - Cough/symptoms of upper respiratory infections
  - Symptoms of hypertension
  - Symptoms of diabetes
  - Stomach pains
  - Knee/back symptoms

# New Problem Management Measure

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- Applicable to “generalist” physician outpatient practices
- Examine ICD-9 codes listed on E&M claims for given “index” period
- Assess claims for look-back period, e.g., three years, to ensure code for problem wasn’t present before (i.e., that it is new)
- Assess claims for same problem looking forward from the index claim to see who managed it (exclude problems assoc. with recent hosp.)

$$\text{Patient score} = \frac{\text{\# of E\&M visits for new problem with index physician}}{\text{\# of E\&M visits for new problem with all docs}}$$

Physician score = mean patient score for all patients with new problems seen in a year

- Higher score means more comprehensive management of new problem

**WORK IN PROGRESS, NOT YET VALIDATED**

# Disadvantages to Measuring Comprehensiveness with Claims

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- **Diagnosis (ICD) codes listed don't always reflect depth of care (document and refer)**
- **Thousands of diagnosis codes in claims (ICD-9 has 14,000 codes; ICD-10 has over 140,000 codes)**
- **Diagnostic coding practices may differ systematically between PCPs and specialists**
- **Claims lack info on non-reimbursed services (e.g., email, phone)**

# How Claims Measures Would Differ for Different Types of Clinicians & PC Teams

	Range of conditions measure	Involvement in patient conditions measure	New problem measure
Clinician doing comprehensive primary care for complex (geriatric) population	Would label clinician comprehensive	Would label clinician comprehensive	Might not detect overall comprehensiveness
Clinician in urgent care clinic	Could appear more comprehensive than actually is	Would correctly label clinician “not comprehensive”	Depends on problems seen, need for patient follow-up
Clinician who documents and refers	Would appear more comprehensive than actually is	Would appear more comprehensive than actually is	Could distinguish between more vs. less comprehensive

# **Future Research Needs on Comprehensiveness Measures Using Claims**

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- **What is the gold standard for comprehensive care?**
- **What are the relative qualities of different claims-based measures of comprehensiveness?**
- **Are combinations of different measures more useful than any individual measure?**
- **Examine associations between alternative comprehensiveness measures and patient outcomes (quality, costs)**
- **What features of practice are associated with more comprehensive care?**

# Discussant Reactions and Commentary

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**Bob Phillips**



**Janice Genevro**



**Laura Sessums**

# Audience Q&A

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Mathematica



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ABFM



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CMMI

# For More Information

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- **Ann S. O'Malley, M.D., M.P.H.**  
[aomalley@mathematica-mpr.com](mailto:aomalley@mathematica-mpr.com)
- **Eugene Rich, M.D.**  
[erich@mathematica-mpr.com](mailto:erich@mathematica-mpr.com)