How Do Family Medicine & Primary Care Influence Person & Population Health?

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Overview

- Motivation
- Paradox of primary care
- Possible mechanisms
  - What emerges from whole person focus
  - What emerges from relationship-centeredness
- Asking patients & primary care clinicians
  - 11 aspects they say matters
  - Simple rules

Motivation

- Misunderstanding of what is important leads to a fragmented, impersonal healthcare system
  - Stange KC. The problem of fragmentation and the need for integrative solutions. Ann. Fam. Med. 2009;7(3):100-103. www.annfammed.org/content/7/2/100
- Many efforts to improve primary care make it worse
  - Tarn DM, Wenger NS, Stange KC. Small solutions for primary care are part of a larger problem. Ann Intern Med. 2022. www.ncbi.nlm.nih.gov/pubmed/35759763
- We can't do it any more
  - Bujold E. When practice transformation impedes practice improvement. *Ann Fam Med*. May-Jun 2015;13(3):273-5. www.annfammed.org/content/13/3/273
  - Quick COVID-19 Survey: www.green-center.org/covid-survey
- It's time to stop enabling a dysfunctional system
  - Stange KC. Time for family medicine to stop enabling a dysfunctional health care system. Ann Fam Med. 2023;21(3):202-204. www.annfammed.org/content/21/3/202

Paradox of Primary Care

Primary care is associated with:

- Less evidence-based care for individual diseases,

But

- More evidence-based care at the population level
- Better population health
- Lower resource use and cost
- Less inequity in healthcare & health

Stange KC, Ferrer, RF. The paradox of primary care. *Ann. Fam. Med.* 2009;7(4):100-103.

Possible Mechanisms

Hypotheses

THE MILBANK QUARTERLY
A MULTIDISCIPLINARY JOURNAL OF POPULATION HEALTH AND HEALTH POLICY

Perspective

The Role of Primary Care in Improving Population Health

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Policy Points:

- Systems based on primary care have better population health, health equity, and health care quality, and lower health care expenditure.
- Primary care can be a boundary-spanning force to integrate and personalize the many factors from which population health emerges.
- Equitably advancing population health requires understanding and supporting the complexly interacting mechanisms by which primary care influences health, equity, and health costs.

Stange KC, Miller WL, Etz RS. The role of primary care in improving population health. Milbank Q. 2023;101(S1):795-840. https://onlinelibrary.wiley.com/doi/10.1111/1468-0009.12638

Principles of Primary Care – 4Cs

- 1st **Contact** accessibility
- **Comprehensiveness**
- **Coordination**
- **Continuity**

Starfield B. Primary Care. Balancing Health Needs, Services and Technology. New York: Oxford University Press, 1998.

Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the Patient-Centered Medical Home. *J Gen Intern Med.* 2010; 25(6): 601-612.

National Academies of Sciences, Engineering and Medicine. Implementing high-quality primary care: Rebuilding the foundation of health care. The National Academies Press; 2021.

Both

- Evidence-based care of single diseases
- Care for acute & chronic illness
- Individual
- Process
- Access
- Commodity
- Franchise
- Borrowed knowledge
- Scientific/systems ways of knowing
- Competing demands
- Generalist simple rules
- Discipline

And

- Attending to multiple problems & undifferentiated illness
- Prevention, mental health
- Family, Community, Population
- Outcome
- Continuity
- Relationship
- Different things in different contexts
- Generalist knowledge
- Personal ways of knowing
- Competing opportunities
- Specialist simple rules
- Social movement

What emerges from a whole person focus?

Visits to Family Physicians

- Variety of patients, problems and complexity
  - Top 25 diagnostic clusters account for <50% of visits
- 10-minute average duration
- Reason for visit
  - 58% acute illness
  - 24% chronic illness
  - 12% well care
- Average patient paid 4.3 visits in the past year

Stange KC, Zyzanski SJ, Flocke SA, et al. Illuminating the 'black box': A description of 4454 patient visits to 138 family physicians. *J Fam Pract*, 1998; 46:377-389.

Opportunistic Preventive Service Delivery

- 32% of outpatient visits for illness
  - Health habit advice (28%)
  - Immunization (5%)
  - Screening (4%)
- No difference in patient satisfaction
- Visits longer by 2.1 minutes

Stange KC, Flocke SA, Goodwin MA. Opportunistic preventive service delivery: Are time limitations and patient satisfaction barriers? *J Fam Pract*, 1998; 46:419-424.

Opportunistic Preventive Service Delivery

- **More common during visits by:**
  - Patients who smoke, drink or are overweight
  - Patients with high-risk diseases
  - New patients
  - Patients with fewer visits in the past year
  - Patients requesting preventive services
- **Less common during visits involving:**
  - Another family member
  - Acute illness
  - Prescription of a drug

Flocke SA, Goodwin MA, Stange KC. Predictors of opportunistic preventive service delivery *J Fam Pract*, 1998; 47:202-208.

Podl TR, Goodwin MA, Kikano GE, Stange KC. Direct observation of exercise counseling in community family practice. *Am J Prev Med.* 1999; 17:207-210.

Eaton CB, Goodwin MA, Stange KC. Direct observation of nutrition counseling in community family practice. *Am J Prev Med*, 2002; 23:174-179.

Jaén CR, Crabtree BF, Zyzanski SJ, Stange KC. Making time for tobacco counseling. *J Fam Pract*, 1998; 46:425-428.

Recent Emotional Distress

- Reported by 19% of patients seeing a family physician
- 18% of these were diagnosed with anxiety or depression
- Visit duration
  - 10 min - not distressed
  - 11.5 min - distressed, not diagnosed
  - 12.8 min - distressed and diagnosed
- Dramatic differences in time use

Callahan EJ, Jaén CR, Goodwin MA, Crabtree BF, Stange KC. The impact of recent emotional distress and diagnosis of depression or anxiety on the physician-patient encounter in family practice. *J Fam Pract*, 1998; 46:410-418.

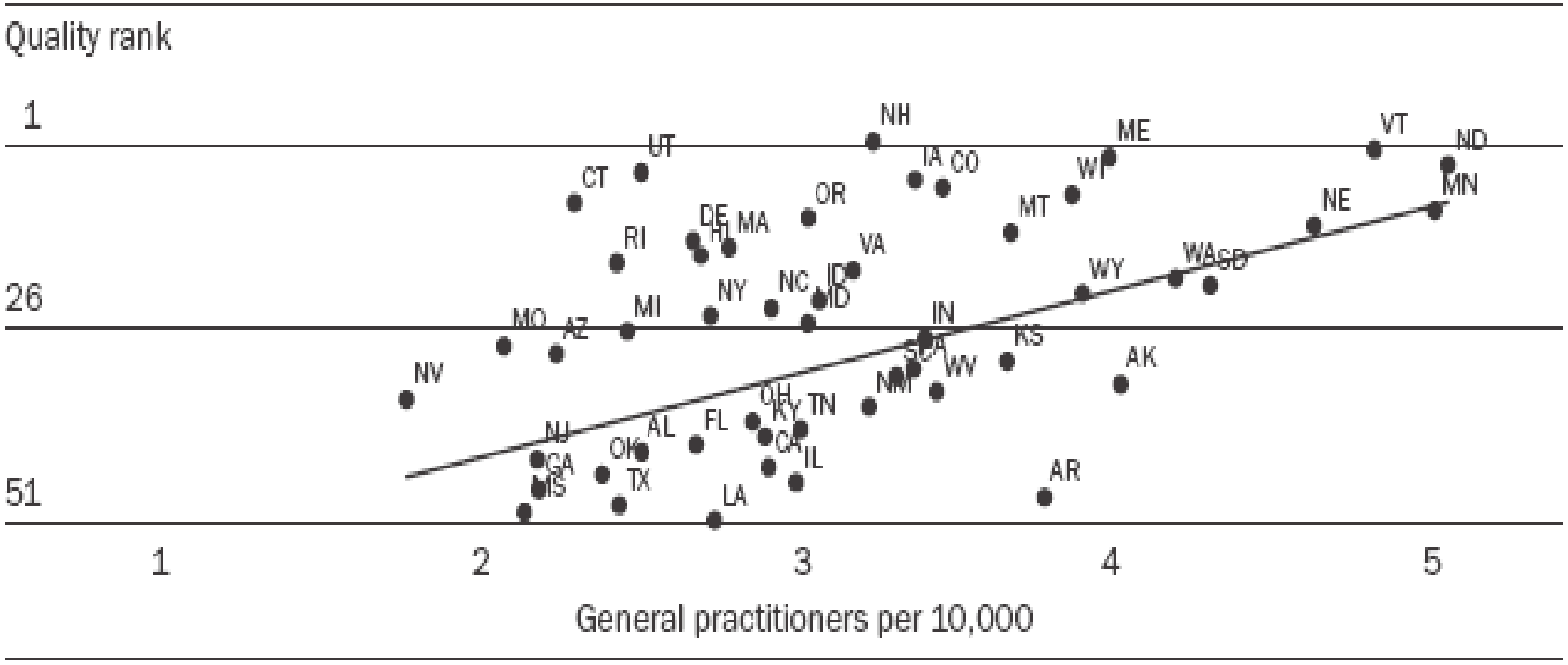
Recent Emotional Distress

- Lower rates of
  - Screening tests
- Less time spent on
  - Screening
  - Tobacco counseling

Callahan EJ, Jaén CR, Goodwin MA, Crabtree BF, Stange KC. The impact of recent emotional distress and diagnosis of depression or anxiety on the physician-patient encounter in family practice. *J Fam Pract*, 1998; 46:410-418.

EXHIBIT 8

Relationship Between Provider Workforce And Quality: General Practitioners Per 10,000 And Quality Rank In 2000



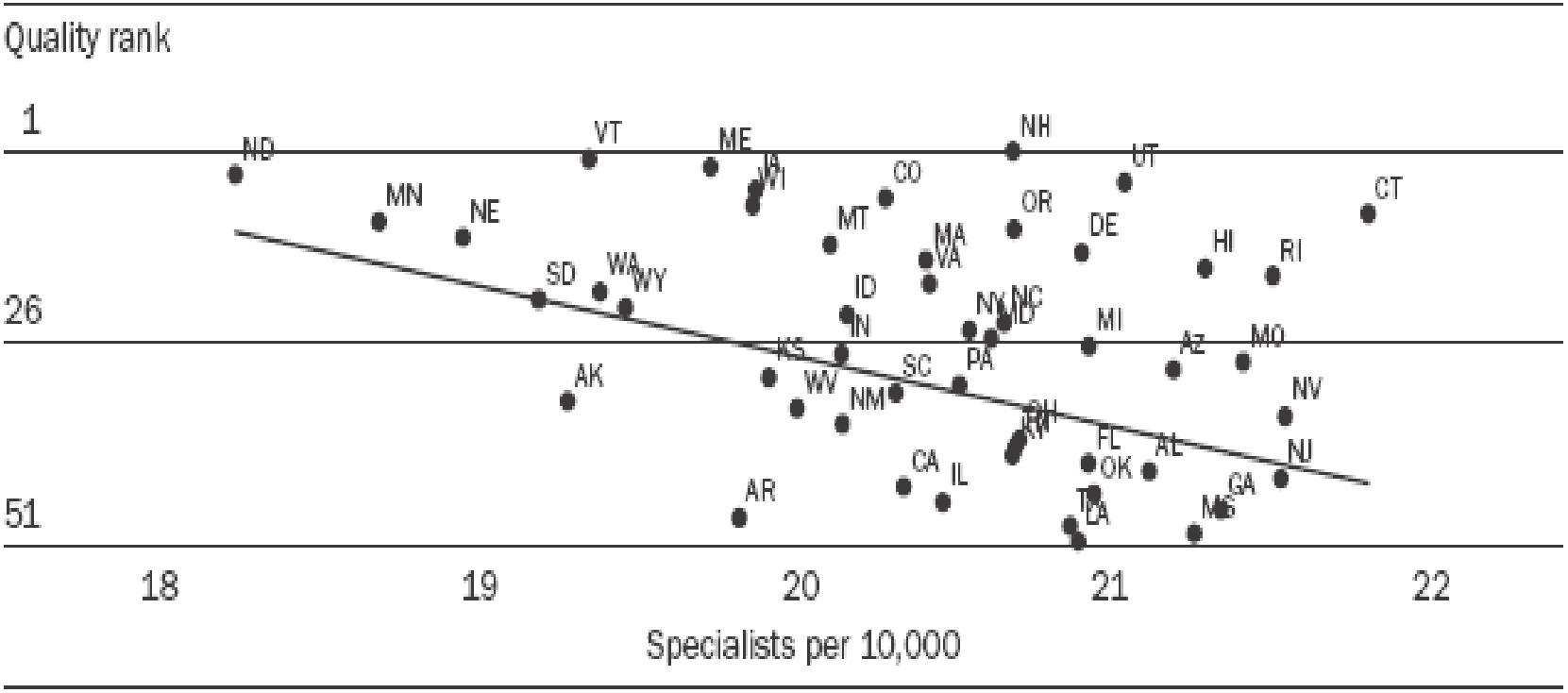
SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

EXHIBIT 6

Relationship Between Provider Workforce And Quality: Specialists Per 10,000 And Quality Rank In 2000



SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

Primary care is adaptable to the people providing and receiving it, and manifests differently in different socio-political environments. e.g.

- Extended general practice
- Managed care enterprise
- Reformed polyclinic
- District health system
- Community development agency
- Franchised outreach

Meads G (2006) *Primary Care in the Twenty-First Century: An international perspective.* Oxford: Radcliffe Publishing.

Multiple Problems Per Visit

- Average of 3 problems per visit
  - 37% >3 problems
  - 18% 4 problems
- Special groups
  - Patients >65 - 4 problems per visit
  - Diabetics - 5 problems per visit

Beasley JW, Hankey TH, Erickson R, Stange KC, Mundt M, Elliott M, Wiesen P, Bobula J. How many problems do family physicians manage at each encounter? *Ann Fam Med*, 2004; 2;405-410.

Flocke SA, Frank SH, Wenger DA. Addressing multiple problems in the family practice office visit. J Fam Pract. 2001; 50:211-216.

Visits by Diabetic Patients in a CHC

- Mean of 25 problems (range 13 to 32)
- Wide variety of issues
  - Biomedical – acute & multiple chronic illnesses
  - Behavioral
  - Social
  - System
  - Environmental health

Bolen SD, Sage P, Perzynski AT, Stange KC. No Moment Wasted: The Primary Care Visit for Adults with Diabetes. *Primary Healthcare Research & Development*. 2015; May 20:1-15.

Prioritizing

☒ BP
☒ Cholesterol
☒ Glycosylated Hgb

Screening for
- ☒ Tobacco
- ☒ Alcohol
- ☒ Other substances
- ☒ Depression/anxiety

Coaching about
- ☒ Physical activity
- ☒ Diet

Bolen SD, Sage P, Perzynski AT, Stange KC. No moment wasted: the primary-care visit for adults with diabetes and low socio-economic status. *Primary Health Care Research & Development.* 2016;17(1):18-32.

Donner-Banzhoff N. Solving the Diagnostic Challenge: A Patient-Centered Approach. *Ann Fam Med*. 2018 Jul;16(4):353-358.

Competing Demands Theory

- Many worthwhile services compete with each other for time on the agenda of primary care patient visits.
- When clinicians are not doing one thing under scrutiny, at times they are doing something more salient or important.

Jaén CR, Stange KC, Nutting PA. The competing demands of primary care: A model for the delivery of clinical preventive services. J Fam Pract. 1994; 38:166-171.

Competing Demands & Tobacco Counseling

- Hierarchy of taken & missed opportunities
  - Good (5As) counseling: 21%
  - **Competing demands: 24%**
  - Failure in a non-smoking related visit 27%
  - Failure in a smoking-related visit 25%
  - Failure in a health maintenance visit 2%
- Guidelines to counsel every visit unrealistic
- Systems & individual approaches are needed

Jaén CR, McIlvain H, Pol L, Phillips RL, Flocke SA, Crabtree BF. Tailoring tobacco counseling to the competing demands in the clinical encounter. *J Fam Pract*, 2001; 50:859-863.

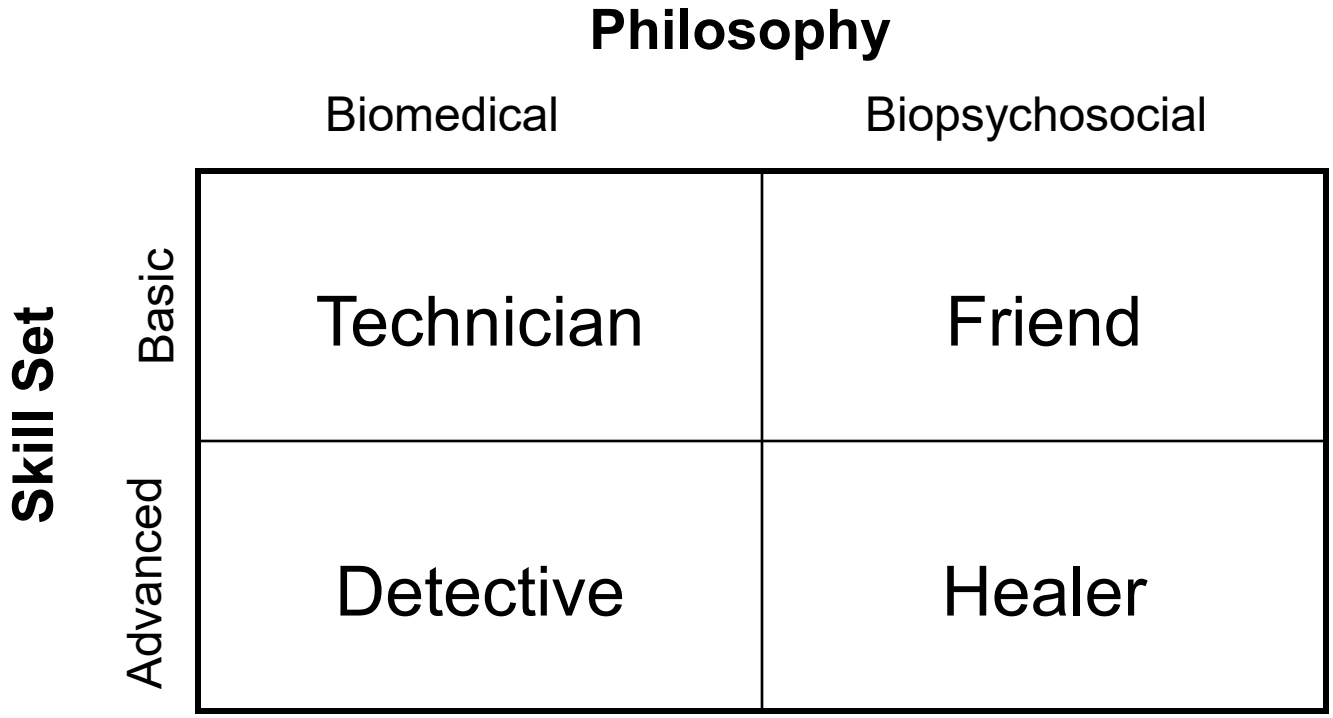
Theory of Competing Opportunities

- Integrated, prioritized care within an ongoing personal relationship
  - *Breadth* of care
  - *Depth* of knowledge of the patient, family and community over time
  - *Bridging* of the boundaries between health and illness
  - *Guiding* access to more narrowly focused care

Stange KC, Jaén CR, Flocke SA, Miller WL, Crabtree BF. The value of a family physician. *J Fam Pract*, 1998; 46:363-368.

What emerges from relationship?

Typology of Physicians based on Philosophy & Management Skills



Robinson WD, Priest LA, Susman JL, Rouse J, Crabtree BF. Technician, friend, detective, and healer: family physicians' responses to emotional distress. *J. Fam. Pract.* 2001;50(10):864-870.

Continuity of Care

- Lower total healthcare expenditures
- Lower rates of ED use & hospitalization
- Better 146 other outcomes

Gaglioti AH, Li C, Baltrus PT, et al. Interpersonal primary care continuity for chronic conditions is associated with fewer hospitalizations and emergency department visits among Medicaid enrollees. *J Am Board Fam Med*. 2023;36(2):303-312.

Bazemore A, Merenstein Z, Handler L, Saultz JW. The impact of interpersonal continuity of primary care on health care costs and use: A critical review. *Ann Fam Med*. 2023;21(3):274-279.

Bazemore A, Petterson S, Peterson LE, Bruno R, Chung Y, Phillips RL, Jr. Higher Primary Care Physician Continuity is Associated With Lower Costs and Hospitalizations. *Ann Fam Med*. Nov 2018;16(6):492-497.

The Family in Family Practice

- Is alive and well by multiple measures
  - 10% of time
  - Family members present during 34% of visits
  - Genograms in 11% of medical records
- Family history obtained in visits by:
  - 51% of new patients
  - 22% of established patients

Medalie JH, Zyzanski SJ, Langa DM, Stange KC. The family in family practice: Is it a reality? Results of a multi-faceted study. *J Fam Pract*, 1998; 46:390-396.

Family Focus - Two Styles

- Family history as context for care of individuals
  - Higher preventive service delivery rates
- Family as the unit of care
  - Greater knowledge of the patient and family

Medalie JH, Zyzanski SJ, Goodwin MA, Stange KC. Patient outcomes from two different styles of family focus. *J Fam Pract*, 2000; 46:209-215.

The "Secondary Patient"

- Family members other than the identified patient
- 18% of outpatient visits
- Care of secondary patient
  - Advice, information, explanation
  - Prescription
  - Follow-up of a previous episode of care
  - Visits longer by 1.3 minutes
- No difference in primary patient's
  - Preventive service delivery
  - Satisfaction
  - Billing

Flocke SA, Goodwin MA, Stange KC. The effect of a secondary patient on the family practice visit. *J Fam Pract*, 1998; 46:429-434.

Orzano AJ, Gregory PM, Nutting PA, Werner JJ Flocke SA, Stange KC. Care of the secondary patient in family practice: A report from the Ambulatory Sentinel Practice Network *J Fam Pract*, 2001; 50:113-116.

Relationship

Longitudinality

“This doctor and I have been through a lot together.”

Mainous AG, Goodwin MA, Stange KC. Patient-physician shared experiences and value patients place on continuity of care. *Annals of Family Medicine*. 2004;2(5):452-454.

Healing

- Cure when possible
- Transcendence of suffering

Egnew TR. The meaning of healing: transcending suffering. *Ann Fam Med*. 2005;3(3):255–262.

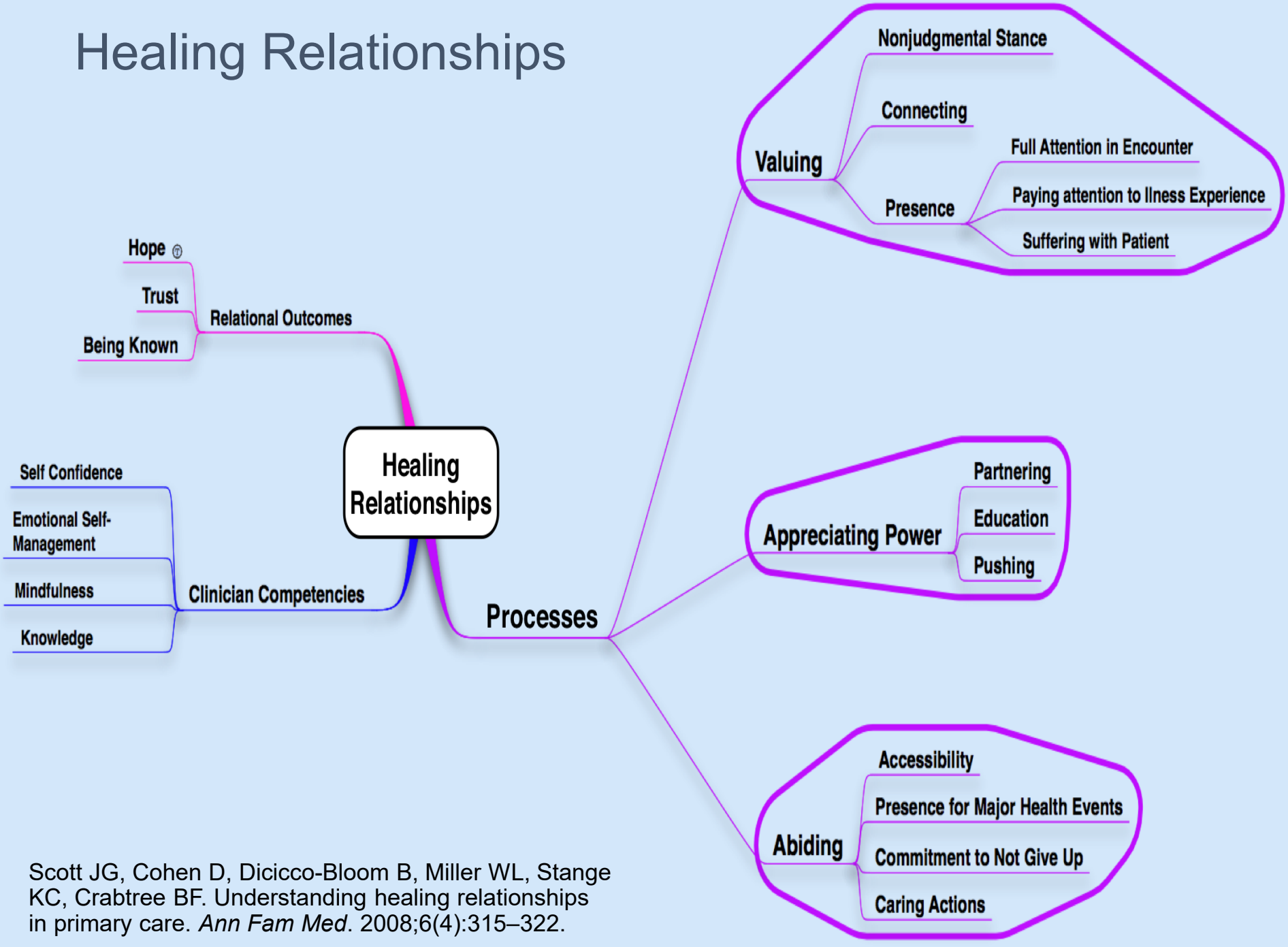
Egnew TR. Suffering, meaning, and healing: challenges of contemporary medicine. *Ann Fam Med*. 2009;7(2):170–175.

Scott JG, Cohen D, Dicicco-Bloom B, Miller WL, Stange KC, Crabtree BF. Understanding healing relationships in primary care. *Ann Fam Med*. 2008;6(4):315–322.

Scott JG, Scott RG, Miller WL, Stange KC, Crabtree BF. Healing relationships and the existential philosophy of Martin Buber. *Philos Ethics Humanit Med*. 2009;4:11.

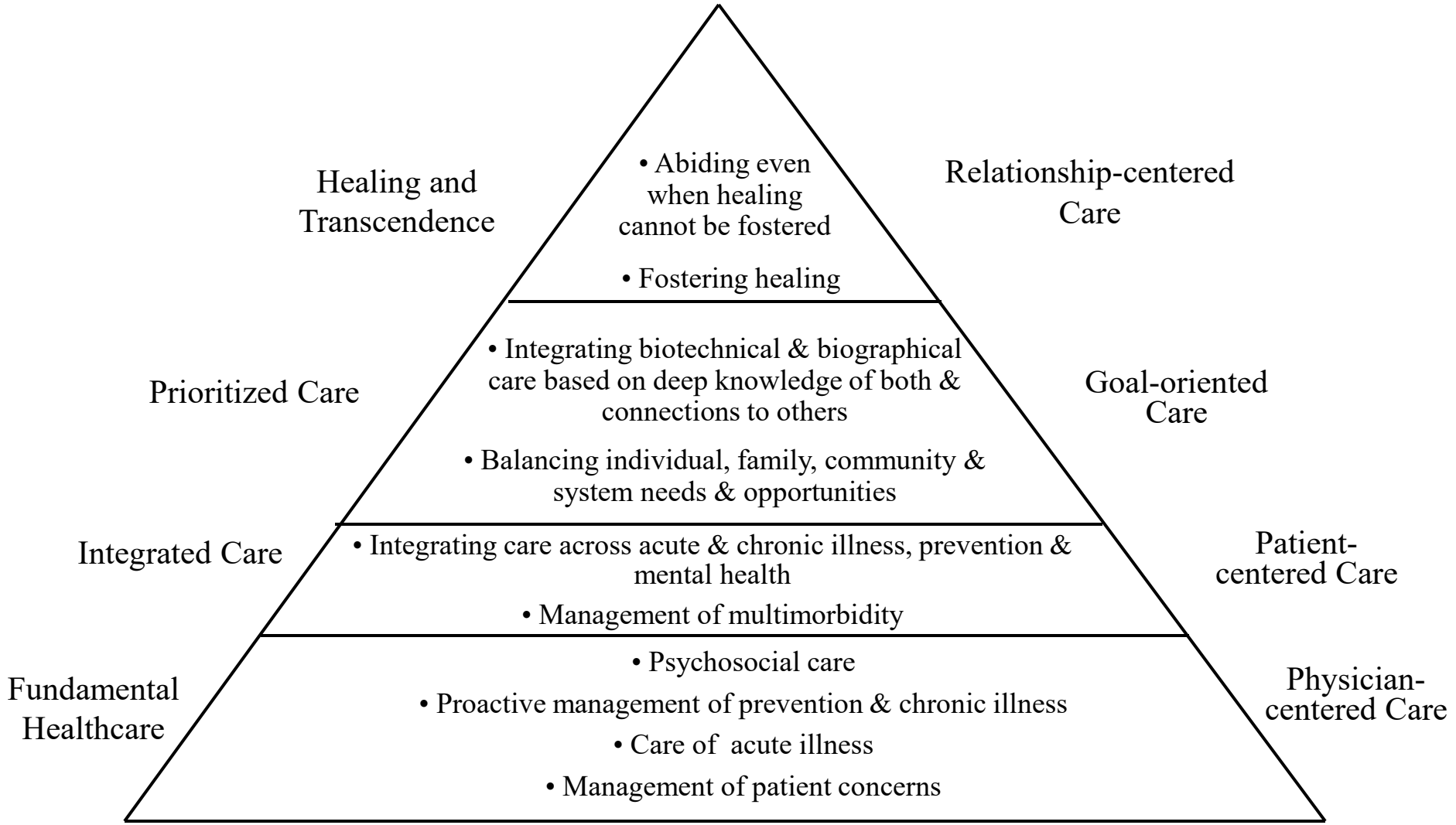
Scott JG, Warber SL, Dieppe P, Jones D, Stange KC. Healing journey: a qualitative analysis of the healing experiences of Americans suffering from trauma and illness. BMJ Open. 2017;0:e016771.

Healing Relationships



Scott JG, Cohen D, Dicicco-Bloom B, Miller WL, Stange KC, Crabtree BF. Understanding healing relationships in primary care. *Ann Fam Med*. 2008;6(4):315–322.

Holarchy of Health Care



Stange KC. A science of connectedness. *Ann Fam Med.* 2009;7(5):387-395.

Investing in relationship

- Many ways
- Many don’t require continuity
  - Quality of attention
  - Structure of the time during the visit
  - How care is organized

Bergman D, Bethell C, Gombojav N, Hassink S, Stange KC. Physical Distancing With Social Connectedness. *Ann Fam Med*. May 2020;18(3):272-277. www.ncbi.nlm.nih.gov/pubmed/32393566

Measuring what matters

Developing a New Primary Care Measure

- Begin by “crowd sourcing”
  - asking diverse stakeholders what is important to them about good quality care
- International multi-stakeholder conference
  - Starfield III
- Ethnographic analysis by a multidisciplinary team
- Two ways of measuring what provides value
  - Simple rules
  - A simple set of measures for patients to report

www.starfieldsummit.com/starfield3/ (Measures & report available under “Resources” tab.)

Person-Centered Primary Care Measure

- Primary Care Mechanisms Assessed by Patients -

- My practice makes it easy for me to get care.
- My practice is able to provide most of my care.
- In caring for me, my doctor considers all of the factors that affect my health.
- My practice coordinates the care I get from multiple places.
- My doctor or practice know me as a person.
- My doctor and I have been through a lot together
- My doctor or practice stand up for me.
- The care I get takes into account knowledge of my family.
- The care I get in this practice is informed by knowledge of my community.
- Over time, this practice helps me to meet my goals.
- Over time, my practice helps me stay healthy.

Etz RS, Zyzanski SJ, Gonzalez MM, Reves SR, O'Neal JP, Stange KC. A New Comprehensive Measure of High-Value Aspects of Primary Care. *The Annals of Family Medicine*. 2019;17(3):221-230. www.annfammed.org/content/17/3/221

https://www.green-center.org/pcpcm

Factor Analysis of Patient-Report Items

How Primary Care Works - Item	Factor Loading	Item-Total Correlation
My practice makes it easy for me to get care.	.70	.67
My practice is able to provide most of my care.	.70	.66
In caring for me, my doctor considers all of the factors that affect my health	.80	.76
My practice coordinates the care I get from multiple places.	.64	.62
My doctor or practice know me as a person.	83	.81
My doctor and I have been through a lot together	.66	.64
My doctor or practice stand up for me.	.85	.83
The care I get takes into account knowledge of my family.	.80	.78
The care I get in this practice is informed by knowledge of my community.	.71	.70
Over time, this practice helps me to meet my goals.	.85	.82
Over time, my practice helps me stay healthy.	.85	.81

Principal components factor analysis reveals a single factor
with an Eigen value of 6.85
accounting for 59% of the variance.
Alpha=.94.

Simple Rules – Birds Flocking

- **Alignment** – first, look to line up with those close by
- **Cohesion** – next, steer towards center mass of those around you
- **Separation** – finally, seek to be equi-distant from your neighbors so you don't collide

Simple Rules

Specialist Rules

- **Identify** & classify disease for management
- **Interpret** through specialized knowledge
- **Manage** a plan for disease care

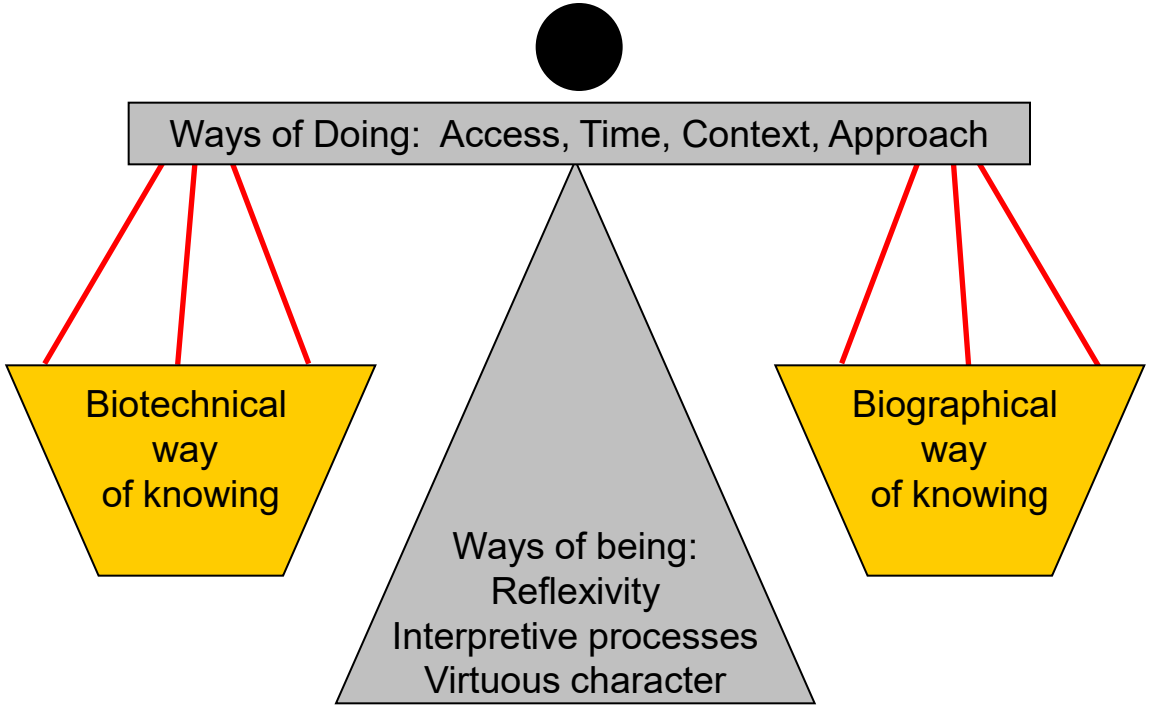
Generalist Rules

- **Recognize** & make sense of problems/opportunities
- **Prioritize** attention/action to promote:
  - Health
  - Healing
  - Connection
- **Personalize** care based on the particulars of the person in their family & community context

Etz R, Miller WL, Stange KC. Simple rules that guide generalist and specialist care. Fam Med. 2021;53(8):697-700. https://journals.stfm.org/familymedicine/2021/september/stange-2020-0588/

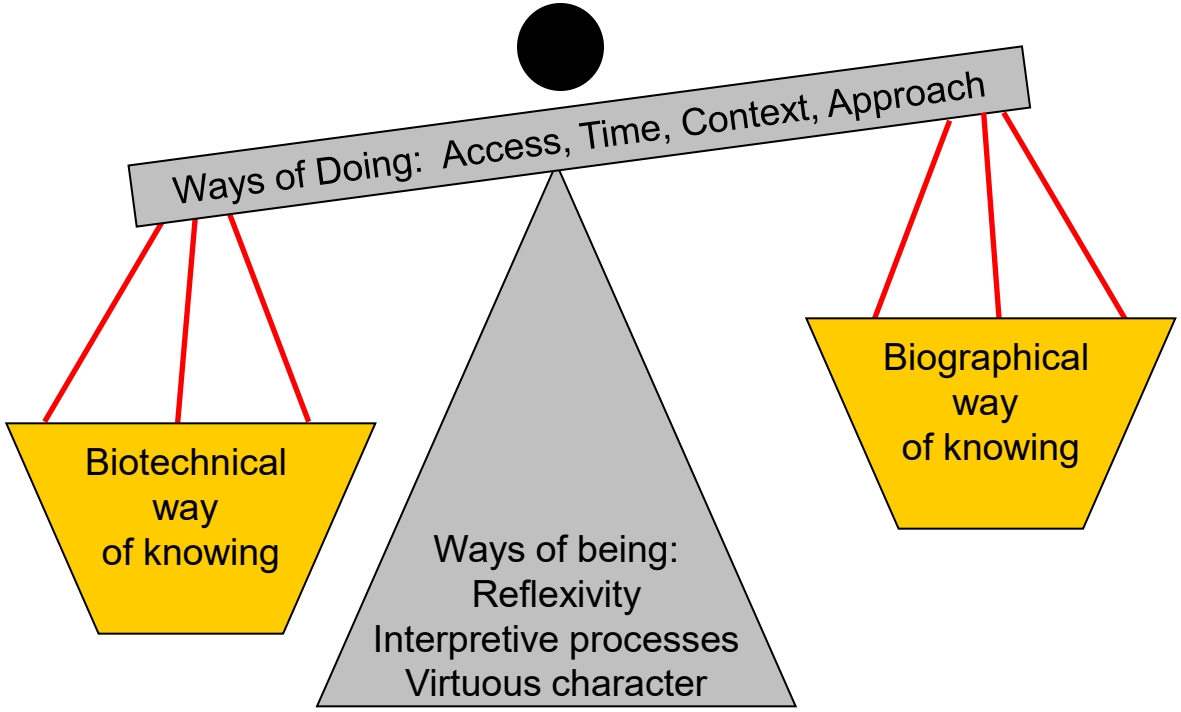
Extra Slides

Generalism Model of Health Care



Gunn JM, Palmer VJ, Naccarella L, et al. The promise and pitfalls of generalism in achieving the Alma-Ata vision of health for all. *Med J Aust.* 2008;189(2):110-112.

Generalism Model of Health Care



Gunn JM, Palmer VJ, Naccarella L, et al. The promise and pitfalls of generalism in achieving the Alma-Ata vision of health for all. *Med J Aust.* 2008;189(2):110-112.

Principles of Family Medicine

- Family physicians are committed to the person
  - rather than a particular body of knowledge, group of dis
- Family physicians seek to understand the context of the illness
- Family physicians see every contact with the patient as an opportunity for prevention or health education
- Family physicians view their practice as a population

Freeman T, McWhinney IR. *McWhinney's textbook of family medicine.* Fourth Ed. ed, 2016.

Principles of Family Medicine

- Family physicians see themselves as part of a community-wide network of supportive and health care agencies
- Ideally, family physicians share the same habitat as their patients
- Family physicians see patients in their homes
- Family physicians attach importance to the subjective aspects of medicine
- Family physicians act as a manager of resources

Freeman T, McWhinney IR. *McWhinney's textbook of family medicine.* Fourth Ed. ed, 2018.

The Generalist Way

- **Being**
  - Open, humble, connected
- **Knowing**
  - iterates between whole & particulars
- **Perceiving**
  - Scanning, prioritizing
  - Focusing on particulars while keeping the whole in view
- **Thinking & Doing**
  - Contextualizing, connecting, integrating

Stange KC. The Generalist Approach. *Ann Fam Med*. 2009;7(3):198-203.

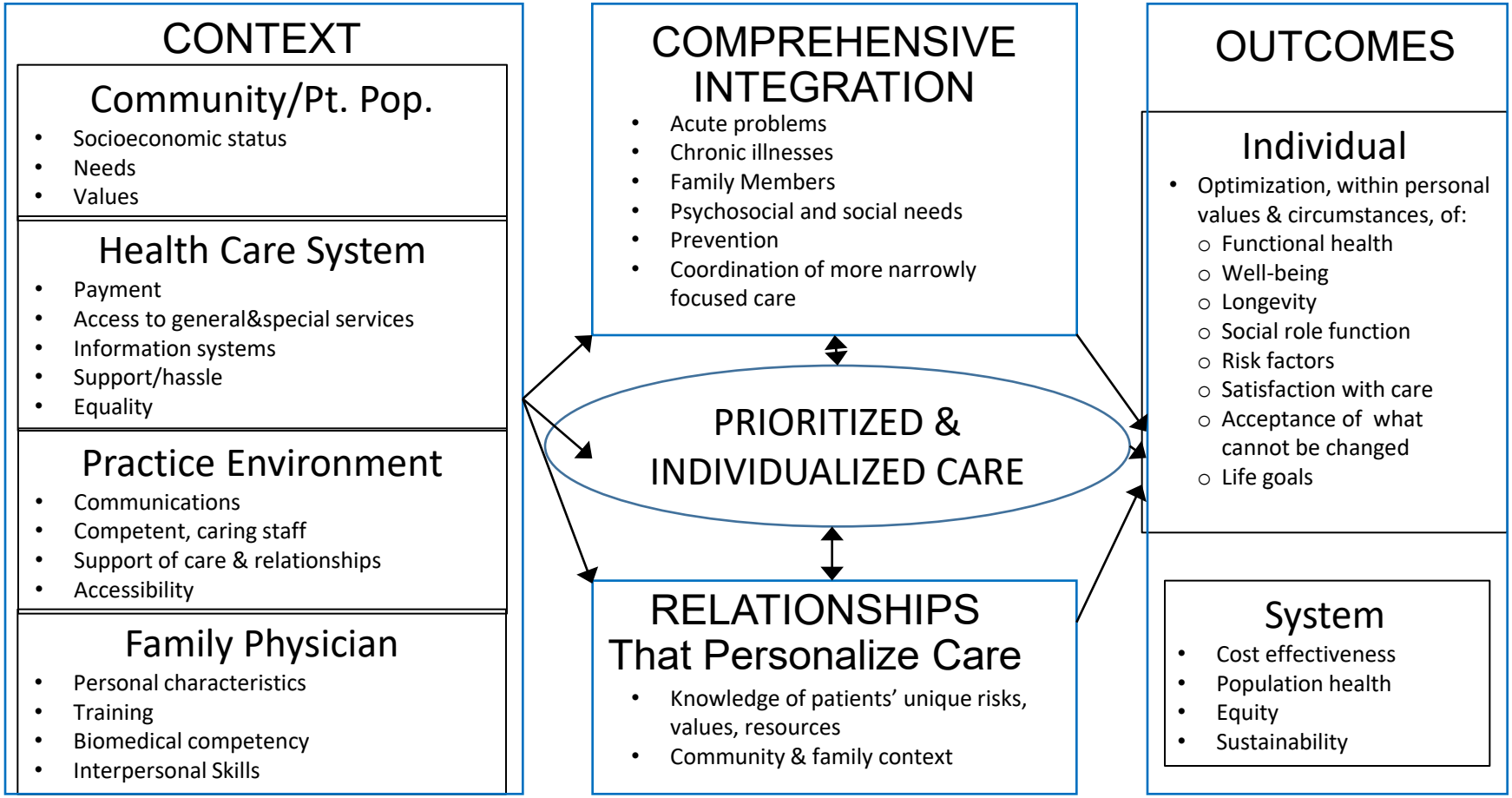
Gunn JM, Palmer VJ, Naccarella L, et al. The promise and pitfalls of generalism in achieving the Alma-Ata vision of health for all. *Med J Aust*. Jul 21 2008;189(2):110-2.

Types of Patient Encounters

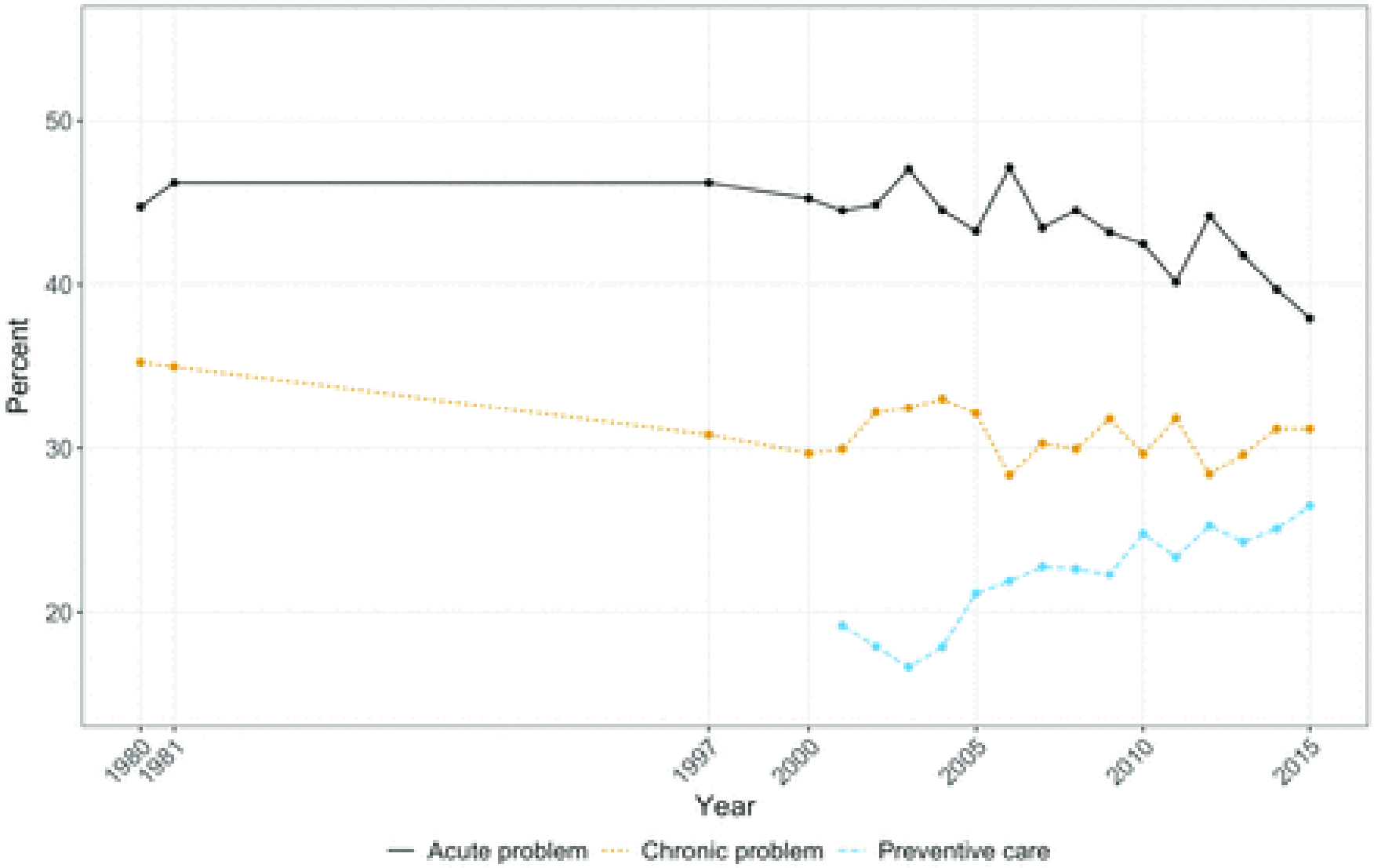
- Routines
  - Simple, brief, contractual, biomedical, “bread & butter”
- Ceremonies
  - Maintenance
    - Well care, prenatal care, chronic disease follow-up…
  - Transitional
    - “Schedule busters,” “Hidden time bombs,” “Oh, by the way,”
    - Surprise, new diagnosis of a chronic disease, revelation…
    - Often sets up a drama
- Dramas
  - Crisis, conflict, major life change happening/impending
  - Family often convened

Miller WL. Routine, ceremony, or drama: an exploratory field study of the primary care clinical encounter. *J Fam Pract.* 1992;34(3):289-296.

Primary Care: How It Works



Visit types over time



Bensken WP, Dong W, Gullett H, Etz RS, Stange KC. Changing Reasons for Visiting Primary Care Over a 35-Year Period. *J Am Board Fam Med*. Mar-Apr 2021;34(2):442-448. https://www.jabfm.org/node/12920.full

Current Efforts to Improve Quality of Care

- Disease management programs
- Disease-specific pay-for-performance
- Increase access to specialty care
- Carve outs

Brook RH, McGlynn EA, Cleary PD. Quality of health care: Part 2: Measuring quality of care. *N Engl J Med.* 1996;335:966-969.

Stange KC. The paradox of the parts and the whole in understanding and improving general practice. *Int J Qual Health Care*, 2002; 14(4):267-268.

Aron D, Pogach L. Specialists versus generalists in the era of pay for performance: "A plague o' both your houses!" Qual Saf Health Care. 2007;16:3-5.

Community-Oriented Primary Care

- Links primary care, epidemiology, public health
- Community for which practice assumes responsibility
- Four steps
  - Define & characterize the community
  - Describe community health problems
  - Modify health care to address high-priority needs
  - Monitoring effectiveness of program modifications
- Many successes
- No infrastructure for widespread implementation

Geiger HJ. Community-oriented primary care: a path to community development. Am J Pub Health. 2002;92(11):1713 - 1716.

Rhyne R, Bogue R, Kukulka G, Fulmer H, eds. Community-Oriented Primary Care: Health Care for the 21st Century. American Public Health Association; 1998.

Nutting PA. Community-oriented primary care: an integrated model for practice, research, and education. Am J Prev Med. 1986;2(3):140-7.

Longlett SK, Kruse JE, Wesley RM. Community-oriented primary care: historical perspective. J Am Board Fam Pract. Jan-Feb 2001;14(1):54-63.

Direct Primary Care

- Patients pay a monthly, quarterly, or annual fee that covers all or most primary care services
- Often combined with high deductable insurance
- Results
  - More time with patients
  - Low overhead; no insurance filing

Direct Primary Care Coalition. www.dpcare.org

Wu WN, Bliss G, Bliss EB, Green LA. Practice profile. A direct primary care medical home: the Qliance experience. Health Aff (Millwood). 2010 May;29(5):959-62. http://content.healthaffairs.org/content/29/5/959.full

Franchising Primary Care

- The Patient-Centered Medical Home
  - A political construct
- Future of Family Medicine Project
  - 'New Model' of care
- Venture Capital funded
  - ChenMD, CityBlock, Oak Street Health

Robert Graham Center. The PCMH: History, seven core features, evidence and transformational change. Washington, DC; 2007. www.graham-center.org/online/graham/home/publications/monographs-books/2007/rgcmo-medical-home.html

Stange KC, Miller WL, Nutting PA, Crabtree BF, Stewart EE, Jaén CR. Context for understanding the National Demonstration Project and the Patient-Centered Medical Home. Ann Fam Med. 2010;8(Suppl 1):S2-S8. www.annfammed.org/cgi/content/full/8/Suppl_1/S2

PCPCC. Shared Principles of Primary Care. https://www.pcpcc.org/about/shared-principles

PCPCC. Results & Evidence. https://www.pcpcc.org/results-evidence

Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the Patient-Centered Medical Home. *J Gen Intern Med.* 2010; 25(6): 601-612.

Martin JC, Avant RF, Bowman MA, et al. The Future of Family Medicine: a collaborative project of the family medicine community. Annals of Family Medicine. Mar-Apr 2004;2 Suppl 1:S3-32.

Borrowed AND Generalist Knowledge

- Borrowed knowledge
  - Primary care as a problem to be solved
  - 0.4% of NIH budget
- Generalist knowledge
  - Primary care as a force for integration
  - to be understood and supported

4 Ways of Knowing

	Inner Reality	Outer Reality
Individual	"I"	"It"
Collective	"We"	"Its"

Adapted from:

Wilber, K. *Sex, Ecology, Spirituality*. 1995/2000, Boston: Shambhala Publications, Inc.

Wilber, K. *A Brief History of Everything*. 1996, Boston: Shambhala Publications, Inc.

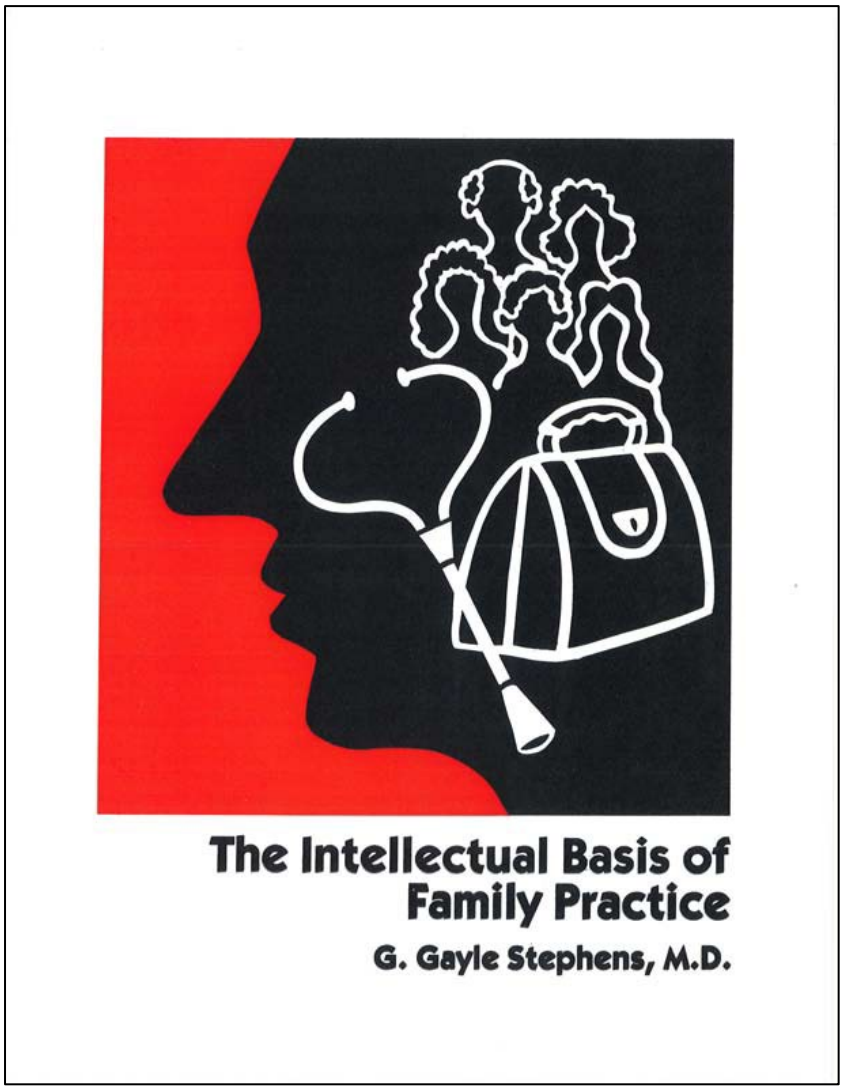
4 Ways of Knowing
About Health & Health Care

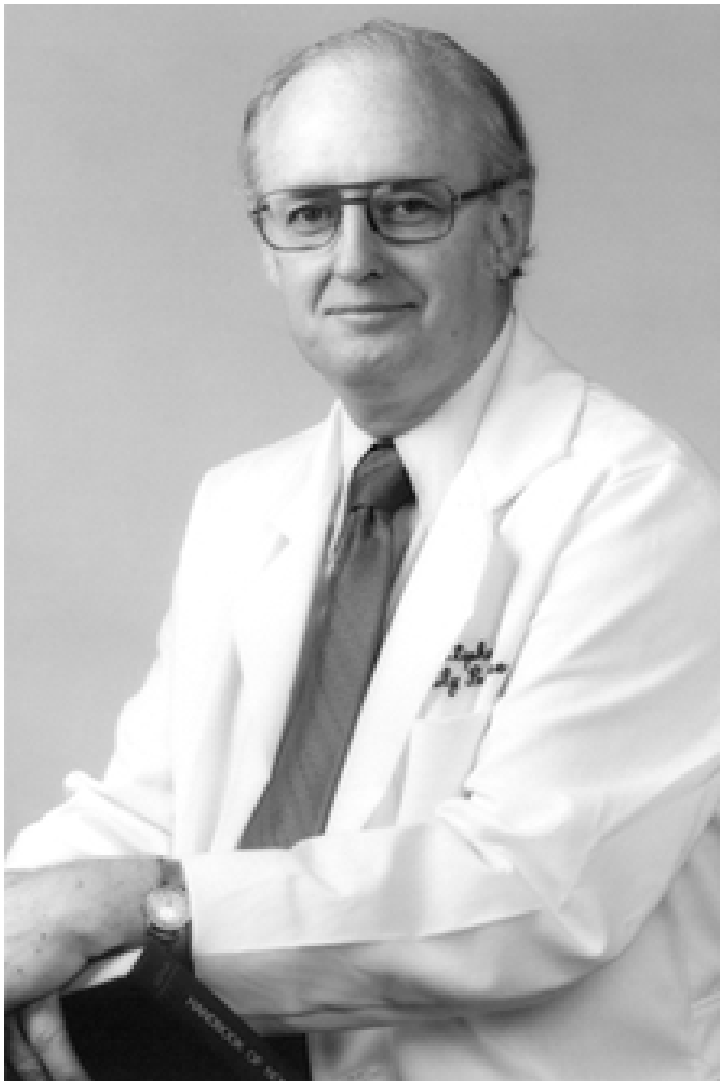
"I" Patient, Clinician, Worker, Policymaker	"It" Disease, Treatment
"We" Family, Practice, Team, Community	"Its" Systems, Organization

Adapted from:

Stange KC, Miller WL, McWhinney I. Developing the knowledge base of family practice. *Fam Med*. 2001; 33(4):286-297.

Stange KC. Ways of knowing, learning, and developing. Ann. Fam. Med. Jan-Feb 2010;8(1):4-10.


The Intellectual Basis of
Family Practice
G. Gayle Stephens, M.D.



"The family practice movement has succeeded in the decade just past because we were identified with reforms that are more pervasive and powerful than ourselves."

"I am convinced that the emergence of family practice was a response to ideas whose time had come and that our continued success is dependent on our ability to identify what they are, and to facilitate their expression, not to manage, control, or own them."

Stephens GG. Family medicine as counterculture. *Fam Med.* 1989;21(2):103-109.

Methods

- Working at the interface of QI & research
- Participatory approaches
- Measuring what matters
- Modeling complexity
- Numbers & narratives

Working at the interface of QI & research

- Difference between quality improvement & research
  - Local or transportable new knowledge?
  - IRB
- Develop clinical laboratories & learning communities

Mold JW, Peterson KA. Primary care practice-based research networks: working at the interface between research and quality improvement. Ann Fam Med. 2005;3 Suppl 1:S12-20.

Participatory approaches

- Practice-based research networks
- Community-based participatory research

Nutting PA, Green LA. Practice-based research networks: reuniting practice and research around the problems most of the people have most of the time. J Fam Pract. 1994;38(4):335-336.

Nutting PA, Beasley JW, Werner JJ. Practice-based research networks answer primary care questions. JAMA. 1999;281(8):686-688.

Green LA, White LL, Barry HC, Nease DE, Jr, Hudson BL. Infrastructure requirements for practice-based research networks. Ann Fam Med. 2005;3 Suppl 1:S5-11.

Agency for Healthcare Research and Quality. AHRQ Practice-Based Research Networks (PBRNs). AHRQ Publication No. 01-P020. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/cpi/initiatives/pbrn/index.html

Westfall JM, VanVorts RF, Main DS, Herbert C. Community-based participatory research in practice-based research networks. Ann Fam Med. 2006;4(1):8-14.

Israel BA, Eng E, Schulz AJ, Parker EA. Methods for Community-Based Participatory Research for Health. 2nd ed. Wiley; 2012.

Macaulay AC, Commanda LE, Freeman WL, et al. Participatory research maximises community and lay involvement. North American Primary Care Research Group. BMJ. 1999;319(7212):774-778

Modeling complexity

Complex Systems Modeling

- Simulation – hybrid computer models
  - Agent-based
  - System dynamics
  - Social network analysis
- Participatory group model building
- Test hypotheses about complexly-related primary care mechanisms & outcomes

Homa L, Rose J, Hovmand PS, et al. A participatory model of the paradox of primary care. *Ann Fam Med* 2015; 456-465.

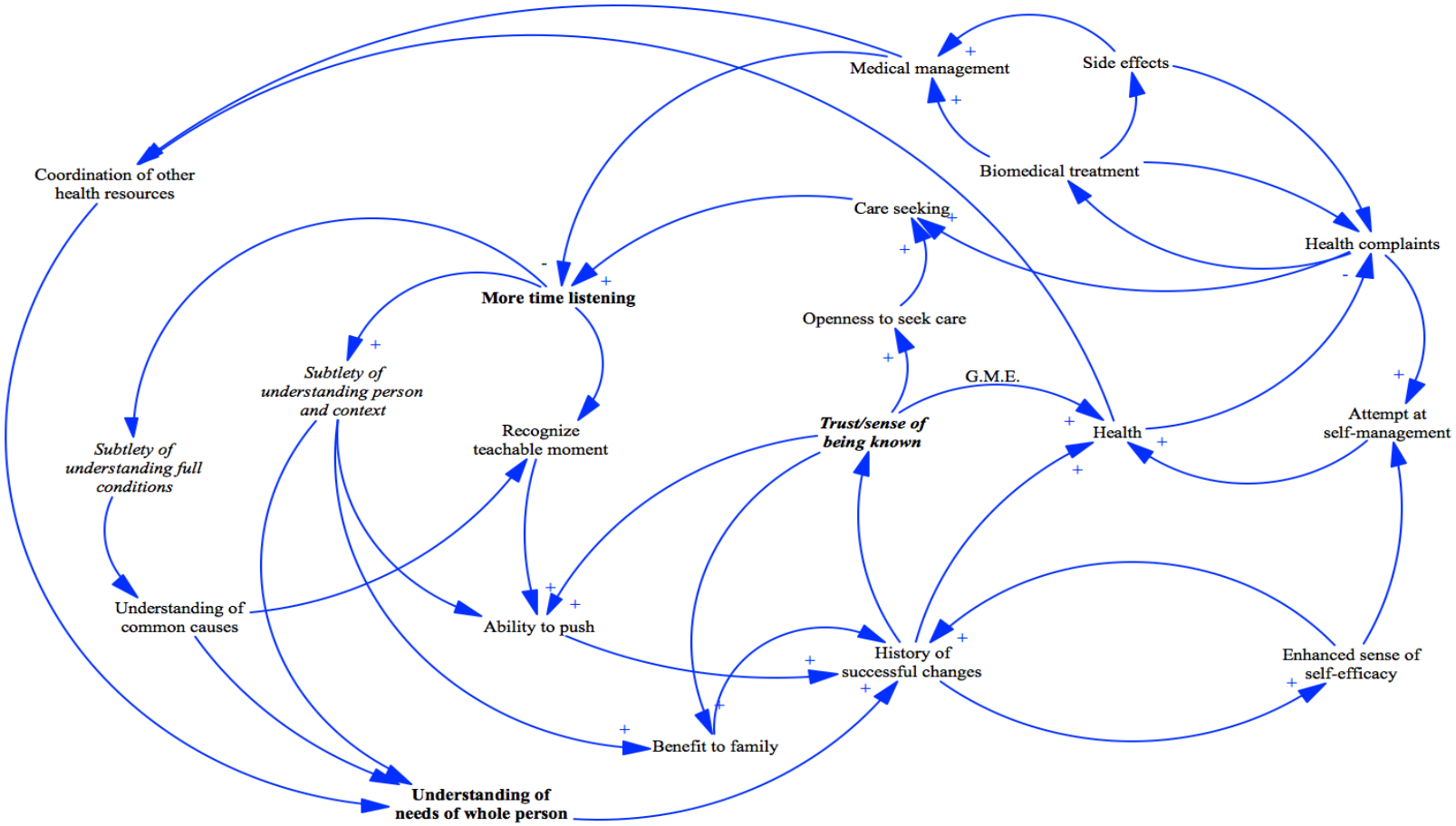
Stange KC, Cherng ST, Riolo RL, et al. No longer looking just under the lamp post: modeling the complexity of (primary) health care. In: Kaplan G, Diez-Roux A, Galeo S, Simon C, eds. *Growing Inequality: Bridging Complex Systems, Population Health, and Health Disparities*. Washington, D.C., Westphalia Press, 2017. pp 81-107.

An Agent-Based Model of Primary Care

- Group model building
  - Patients are at risk for acute illness, acute life-changing illness, chronic illness, and mental
  - Patients have changeable health behaviors and care-seeking tendencies that relate to their living in advantaged or disadvantaged neighborhoods.
  - There are 2 types of care available to patients: primary and specialty.
    - Primary care in the model is less effective than specialty care in treating single diseases, but it has the ability to treat multiple diseases at once.
    - Primary care also can provide disease prevention visits, help patients improve their health behaviors, refer to specialty care, and develop relationships with patients that cause them to lower their threshold for seeking care.
- Model runs
  - With primary care features turned off, primary care patients have poorer health.
  - With all primary care features turned on, their conjoint effect leads to better population health for patients who seek primary care,
    - The primary care effect being particularly pronounced for patients who are disadvantaged and patients with multiple chronic conditions.
    - Primary care leads to more total health care visits that are due to more disease prevention visits, but there are reduced illness visits among people in disadvantaged neighborhoods.

Homa L, Rose J, Hovmand PS, et al. A participatory model of the paradox of primary care. *Ann Fam Med* 2015; 456-465.

Community-Based System Dynamics



Hovmand PS. Community Based System Dynamics. Springer,; 2014

Stange KC, Cherng ST, Riolo RL, et al. No longer looking just under the lamp post: modeling the complexity of primary health care. In: Kaplan GA, Diez Roux AV, Simon CP, Galea S, eds. Growing Inequality: Bridging Complex Systems, Population Health, and Health Disparities. Washington, DC: Westphalia Press; 2017:81-107.

Numbers & narratives

Multimethod Research

- **Quantitative methods**
  - Counting descriptions
  - Testing *a priori* hypotheses
  - Seek to isolate phenomenon from context
- **Qualitative methods**
  - Rich descriptions
  - Discovery; testing evolving hypotheses
  - Seek to understand meaning and context
- **Integrated use**
  - Qualitative, then quantitative
  - Quantitative, then qualitative
  - Simultaneous

Stange KC, Zyzanski SJ. Integrating qualitative and quantitative research methods. *Fam Med*, 1989;21:448-451.

Stange KC, Miller WL, Crabtree BF, O'Connor PJ, Zyzanski SJ. Multimethod research: Approaches for integrating qualitative and quantitative methods. *J Gen Intern Med*. 1994; 9:278-282.

Crabtree BF, Miller WL, Stange KC. Understanding practice from the ground up. *J Fam Pract*, 2001;50:881-887.

Stange KC, Crabtree BF, Miller WL. Publishing multimethod research. *Ann Fam Med.* 2006;4(4):292-294.

A Few
Take-Away Points

Review

- Different views of population health
- Paradox of primary care
- Possible mechanisms
  - Breadth + drilling down
  - Prioritizing
  - Contextualizing
  - Systemic + personal connectedness
- Methods
  - Measuring what matters
  - Modeling complexity
  - Numbers & Narratives

Policy Points

- Systems based on primary care have
  - Better population health
  - Greater health equity
  - Better healthcare quality
  - Lower health care expenditure
- Primary care can be a boundary spanning force to integrate and personalize the many factors from which population health emerges.
- Equitably advancing population health requires understanding and supporting the complexly interacting mechanisms by which primary care influences health, equity, and health service costs.

Stange KC, Miller WL, Etz RS. The role of primary care in improving population health. Milbank Q. 2023;101(S1):795-840. https://onlinelibrary.wiley.com/doi/epdf/10.1111/1468-0009.12638

Implications

- To get the benefits of primary care for:
  - Population health
  - Equity
  - Quality
  - Sustainability
- *Support* frontlines primary care with:
  - Understanding of its complex role/functions
  - Relevant information
  - Time
  - Investment in relationship
  - Iteration between the parts and the whole

Family medicine is population health, one person at a time.

Larry Bauer, MSW

Results of a reanalysis of the monthly prevalence of illness in the community and the roles of various sources of health care. (Green LA et al., *N Engl J Med* 2001, 344:2021-2024)

Primary Care is [NASEM Definition]:

High quality primary care is the provision of **whole-person, integrated, accessible**, and **equitable** health care by interprofessional teams that are a**ccountable for addressing the majority of individual's health and wellness needs across settings** and through **sustained relationships with patients, families, and communities**.

National Academies of Sciences, Engineering and Medicine. Implementing high-quality primary care: Rebuilding the foundation of health care. Washington, DC: The National Academies Press; 2021.
https://www.nap.edu/catalog/25983/implementing-high-quality-primary-care-rebuilding-the-foundation-of-health

Emerging Models of Primary Care

- Many on-the-ground practice innovations
- Patient/person empowerment
- Technology-amplified
- Policy innovations that interact with primary care
- Foundation of an integrated health care system
- Community health centers
- Focused on special populations
- By groups, corporations
- Hot-spotting
- PCMH
- Direct primary care

Primary Health Care Activity Monitor for Europe

- Structure
  - Governance
  - Economic conditions
  - Workforce development
- Process
  - Access
  - Continuity
  - Coordination
  - Comprehensiveness

Kringos DS, Boerma WGW, Hutchinson A, Saltman RB, eds. *Building primary care in a changing Europe.* Copenhagen, Denmark: WHO; 2015.

Kringos D, Boerma W, Bourgueil Y, et al. The strength of primary care in Europe: an international comparative study. *Br J Gen Pract.* 2013;63(616):e742-750.

Primary Health Care Activity Monitor for Europe

- Outcomes
  - Better population health
  - Lower rates of unnecessary hospitalizations
  - Lower socioeconomic inequality
- Costs
  - Higher
  - Slower growth
- Subgroup benefit- people with multimorbidity

Kringos DS, Boerma WGW, Hutchinson A, Saltman RB, eds. *Building primary care in a changing Europe.* Copenhagen, Denmark: WHO; 2015.

Kringos DS, Boerma W, van der Zee J, Groenewegen P. Europe's strong primary care systems are linked to better population health but also to higher health spending. *Health Aff (Millwood).* 2013;32(4):686-694.

Hansen J, Groenewegen PP, Boerma WG, Kringos DS. Living In A Country With A Strong Primary Care System Is Beneficial To People With Chronic Conditions. *Health Aff (Millwood).* 2015;34(9):1531-1537.

Assessing Contextual factors

- Ask 2 questions:
  1. What contextual factors do we need to know to understand what happened here and why?
  2. What would someone else need to know to transport/re-invent what we learned here in a different time and place?
- Consider what is important across
  - multiple levels
  - times
  - perspectives

Stange KC, Glasgow RE. Considering and Reporting Important Contextual Factors in Research on the Patient-Centered Medical Home. Rockville, MD: Agency for Healthcare Research and Quality. May 2013. ARHQ Publication No. 13-0045-EF. http://pcmh.ahrq.gov/portal/server.pt/community/pcmh__home/1483/Contextual_Factors> .

Tomoaia-Cotisel A, Scammon DL, Waitzman NJ, et al. Context Matters: The Experience of 14 Research Teams in Systematically Reporting Contextual Factors Important for Practice Change. *Ann Fam Med.* 2013;11(Suppl 1):S115-S123.

Assess Context:
Across Multiple Levels

- Patient population and expectations
- Practice
- Networks of practices (ownership, affiliations)
- Local & regional health care systems
- Relationship of intervention or evaluation team with participants
- Communities
- Relevant geopolitical entities and policy context (State, regional, city)

Assess Context:
Across Multiple Time Points

- **Baseline** [historical]
  (roughly equivalent to recruitment phase)
- **Middle**
  (roughly equivalent to implementation phase)
- **End** [in retrospect]
  (sensemaking & sustainability phase)

Assess Context:
From Multiple Perspectives

that identify what contextual factors might matter for the question/purpose

- Perspective
  - Inside stakeholders (typically participants)
  - Outside observers (often researchers or high level informants)
- Consider
  - Motivational & instrumental factors
  - Exemplars of the norm or interesting outliers
  - Relevant theories

Assessing Contextual factors

Across Multiple Levels	**Across Multiple Time Points**					
↓	**Baseline** [historical] (recruitment phase)		**Middle** (implementation phase)		**End** [in retrospect] (sensemaking / sustainability phase)	
Perspective →	Inside stakeholders	Outside observers	Inside stakeholders	Outside observers	Inside stakeholders	Outside observers
Patient population & expectations						
Practice						
Networks of practices (ownership, affiliations)						
Health care systems						
Relationship among project & participants						
Communities						
Geopolitical & policy (state, regional, city)						

Stange KC, Glasgow RE. Considering and Reporting Important Contextual Factors in Research on the Patient-Centered Medical Home. Rockville, MD: Agency for Healthcare Research and Quality. May 2013. ARHQ Publication No. 13-0045-EF. http://pcmh.ahrq.gov/portal/server.pt/community/pcmh__home/1483/Contextual_Factors> .

Tomoaia-Cotisel A, Scammon DL, Waitzman NJ, et al. Context Matters: The Experience of 14 Research Teams in Systematically Reporting Contextual Factors Important for Practice Change. *Ann Fam Med.* 2013;11(Suppl 1):S115-S123.

Approaches used in 14 practice transformation projects

Important contextual factors sorted into 5 domains:

(1) practice setting

(2) larger organization

(3) external environment

(4) implementation pathway

(5) motivation for implementation

Tomoaia-Cotisel A, Scammon DL, Waitzman NJ, et al. Context Matters: The Experience of 14 Research Teams in Systematically Reporting Contextual Factors Important for Practice Change. *Ann Fam Med.* 2013;11(Suppl 1):S115-S123.

Metrics for Primary Health Care

- Metrics focus attention on what is important
- Balanced metrics of primary health care inform:
  - Purpose
  - Aspiration
  - Performance

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health.* 2014;35:423-442.

Purpose in Primary Health Care

- Is about improving the health of people and populations in their community contexts
- Informed by metrics that include the long-term
  - Meaning
  - Relationships

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health.* 2014;35:423-442.

Aspirational Uses of Metrics

- Inspire evolving insights & iterative improvement
- Use a collaborative, developmental perspective

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health.* 2014;35:423-442.

Performance Metrics

- Complex interactions among primary care tenets
  - First contact accessibility
  - A whole-person, comprehensive focus
  - Integration of care,
  - Coordination of care
  - Ongoing relationships with
    - individuals, families, and communities
- Focus on inclusion and equity
- Multilevel integration of health, collaborative policy dialogue, & stakeholder participation
- Basic and goal-directed health care
- Prioritization, development, multilevel health outcomes

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health.* 2014;35:423-442.

Measuring Primary Health Care

- Good measures focus attention on what is important
- Ideally, measures inform:
  - Understanding
  - Improvement
  - Support
  - (Not punishment)

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health.* 2014;35:423-442.

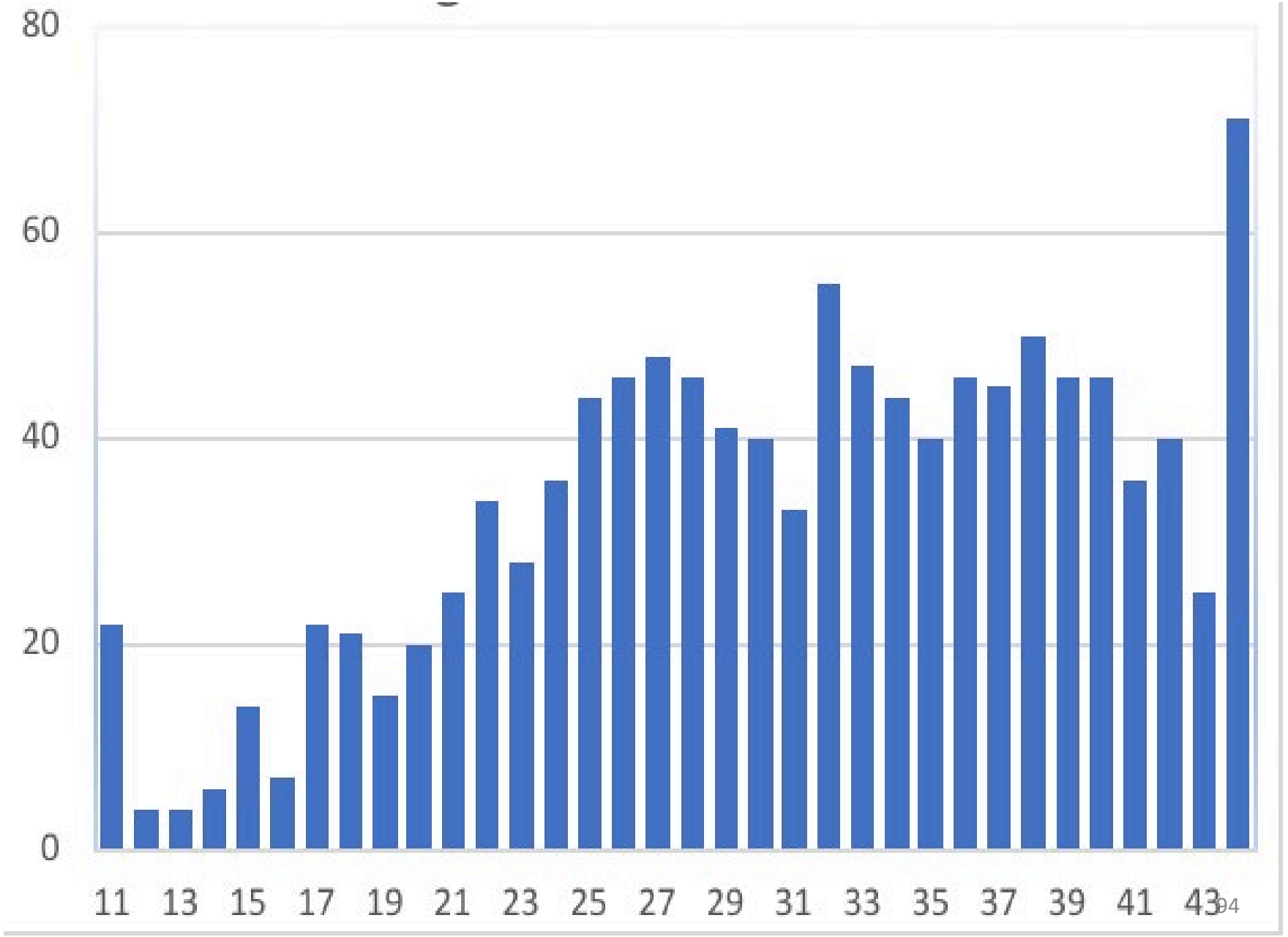
Items & Statistics

How Primary Care Works - Item	Mean	SD
My practice makes it easy for me to get care.	3.1	.85
My practice is able to provide most of my care.	3.1	.84
In caring for me, my doctor considers all of the factors that affect my health.	3.2	.85
My practice coordinates the care I get from multiple places.	2.8	1.0
My doctor or practice know me as a person.	2.9	1.1
My doctor and I have been through a lot together	2.3	1.2
My doctor or practice stand up for me.	2.7	1.0
The care I get takes into account knowledge of my family.	2.7	1.1
The care I get in this practice is informed by knowledge of my community.	2.3	1.1
Over time, this practice helps me to meet my goals.	3.0	.91
Over time, my practice helps me stay healthy.	2.8	.96

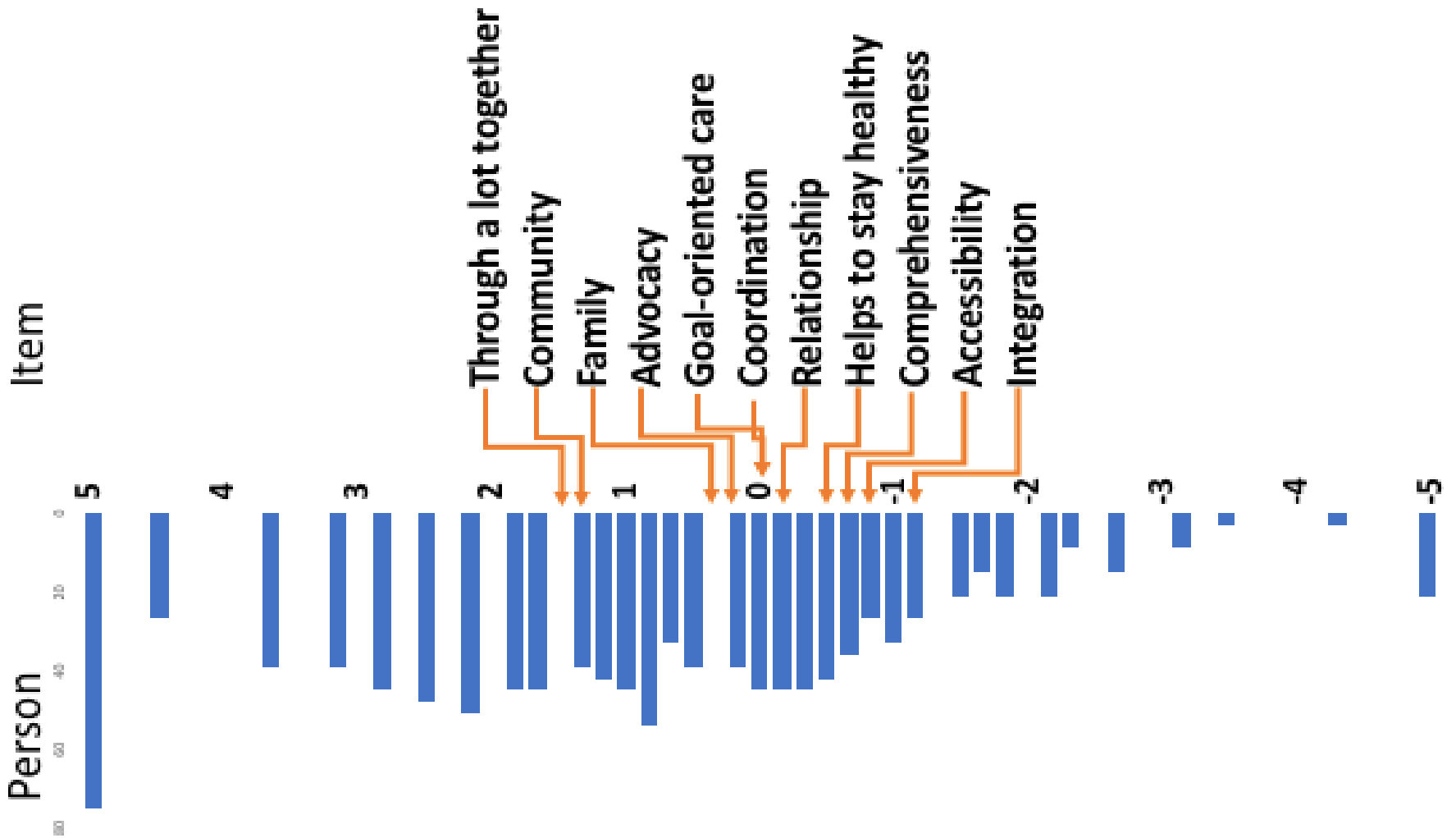
Likert Scale: 4=Definitely 3= Mostly 2=Somewhat 1=Not at all.

N= 1114 Alpha=.94

Distribution of the Total Score



Rasch Model


Item
Person
Through a lot together
Community
Family
Advocacy
Goal-oriented care
Coordination
Relationship
Helps to stay healthy
Comprehensiveness
Accessibility
Integration
5
4
3
2
1
0
-1
-2
-3
-4
-5

Higher Score if Patients Agreed with these 2 questions

- Do you have a single doctor or practice that you would say handles most of your care?

	N	Mean	SD	(p<.001)
• Yes	907	32.3	7.9	
• No	191	25.9	9.2	

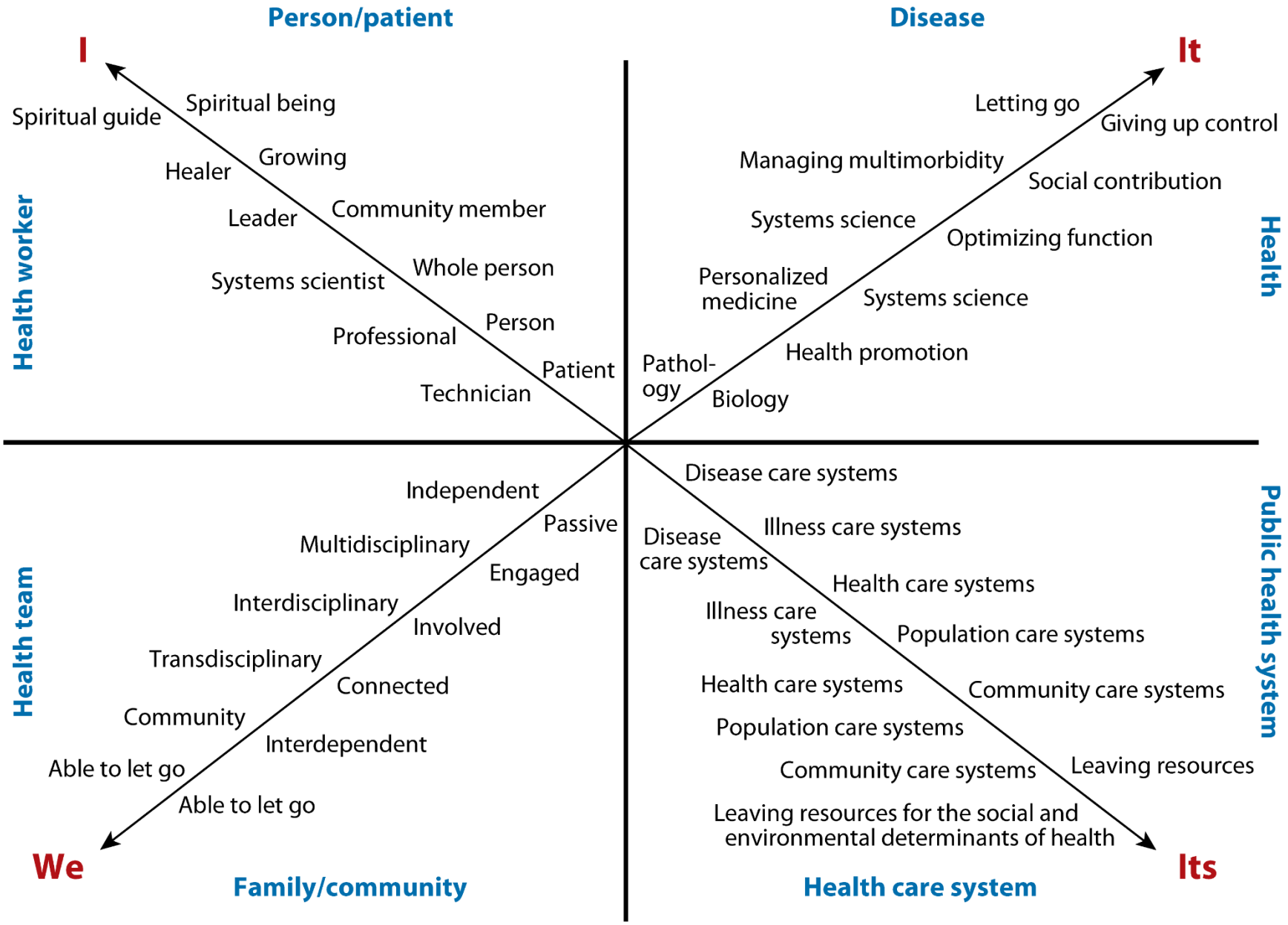
- If your doctor or practice received the answers to these questions, would it help them to understand how you feel about your care?

	N	Mean	SD	(p<.001)
• Yes	670	33.0	7.9	
• No	428	28.3	8.5	

Association with Total Score

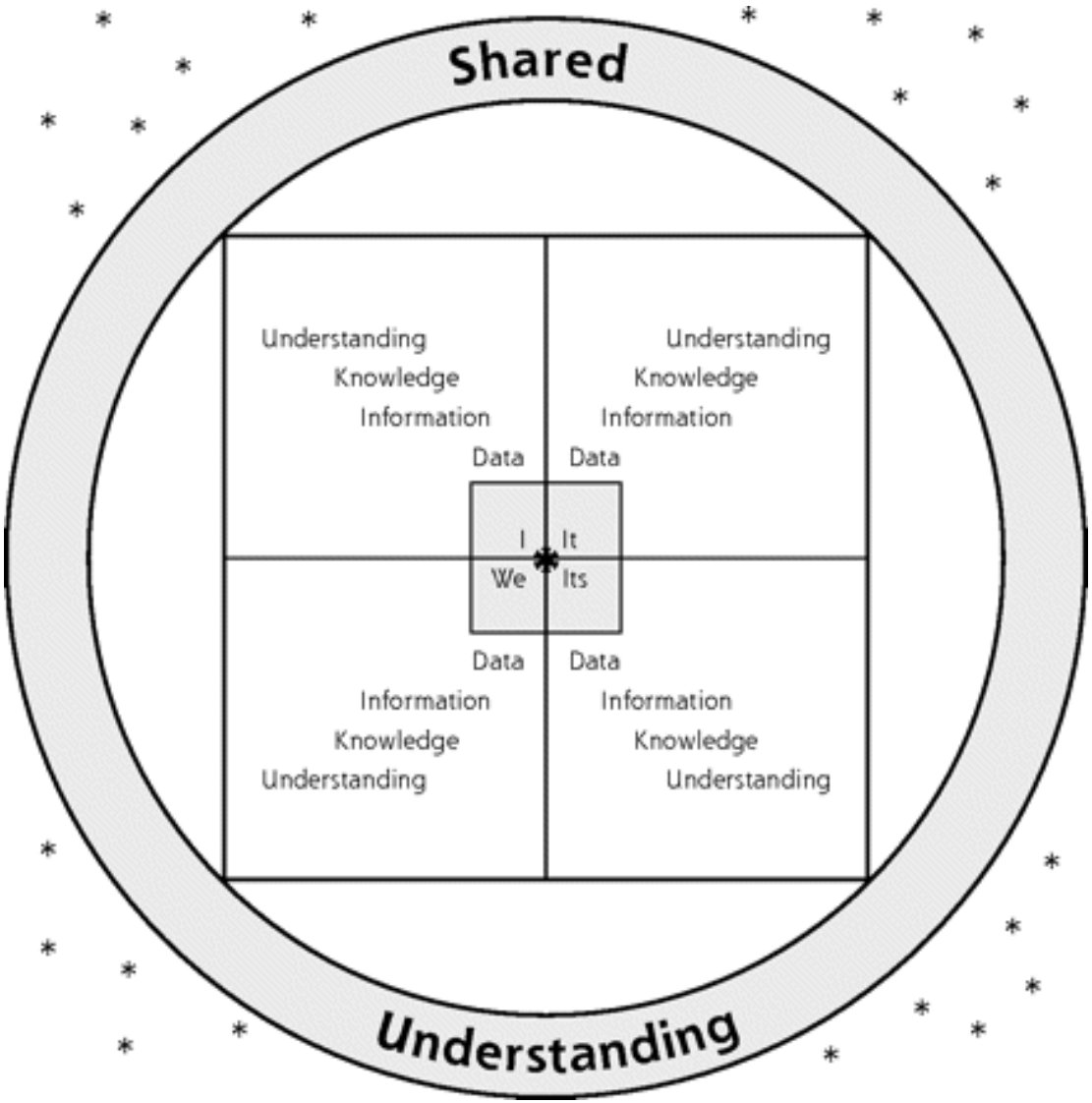
- Was the survey hard to complete?

	N	Mean	SD	(p<.02)
• Yes	41	28.1	9.5	
• No	1057	31.3	8.4	



Stange KC, et al. 2014.
Annu. Rev. Public Health. 35:423–42

Ways of Knowing, Learning & Developing



Stange KC. Ways of knowing, learning, and developing. Ann. Fam. Med. Jan-Feb 2010;8(1):4-10

Health Care Systems Focused on Primary Care

- Better population health
- Lower cost
- Less inequality
- Better health care quality

Donaldson MS, Yordy KD, Lohr KN, Vanselow NA, eds. Primary Care: America's Health in a New Era. Washington D.C.: National Academy Press; 1996.

Starfield B, Shi LY, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457-502.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

Stange KC, Ferrer RL. The paradox of primary care. *Ann Fam Med*. 2009;7:293-299.

International Comparisons

- Primary care orientation
  - Health care system characteristics
  - Practice characteristics
- Health status and cost
  - Rank on a composite of 14 health indicators
  - Rank on per capita health care spending

Starfield B. Primary Care. Balancing Health Needs, Services and Technology. New York: Oxford University Press, 1998.

Primary Care and Health Outcomes

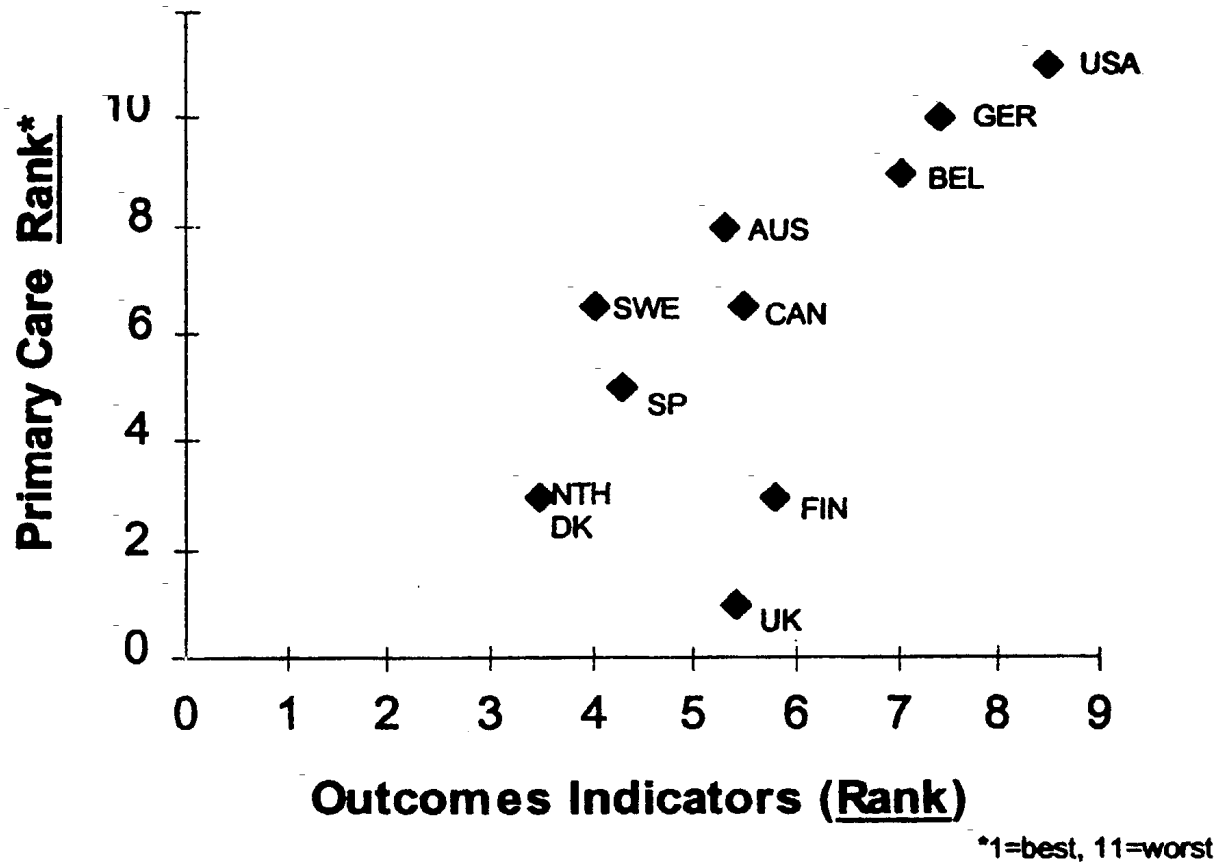


Figure 1.3. Relationship between strength of primary care and combined outcomes.

Source: Starfield B. Primary Care. Balancing health needs, services, and technology. New York: Oxford University Press, 1998.

Primary Care and Health Care Expenditures

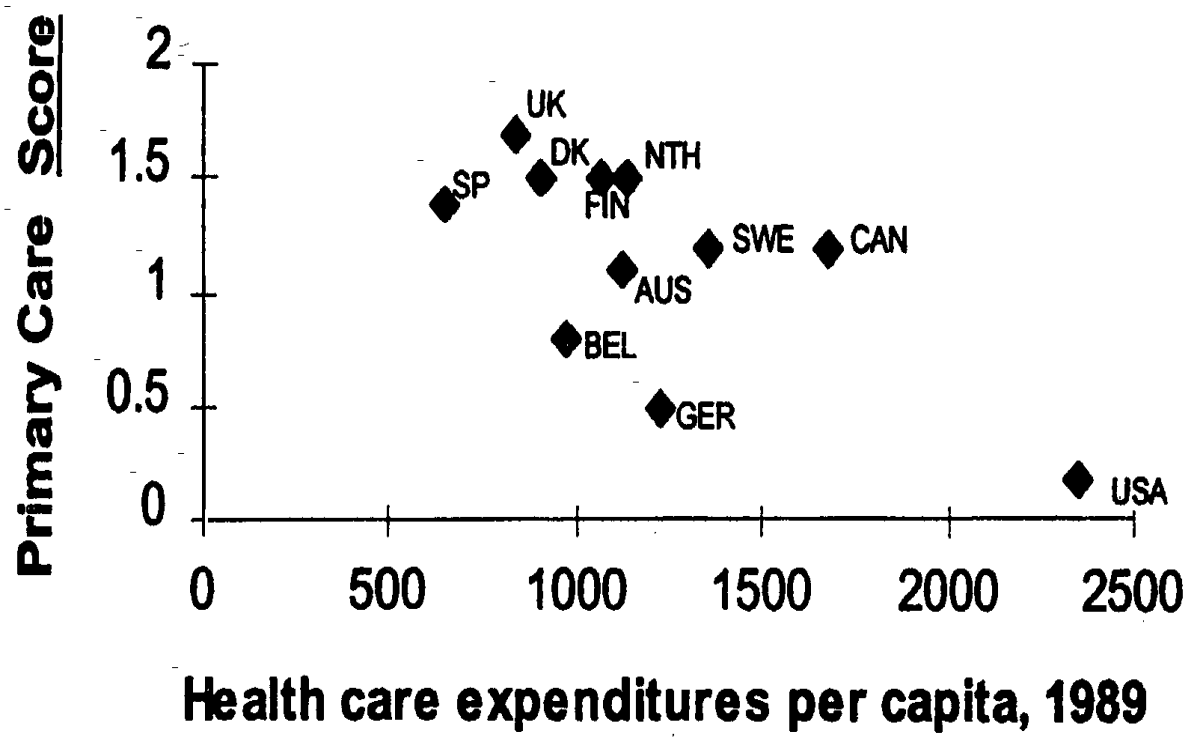


Figure 1.4. Relationship between strength of primary care and total health care expenditures.

Source: Starfield B. Primary Care. Balancing health needs, services, and technology. Oxford, New York, 1998.

US Primary Care Physician Supply

- Review of 10 studies of primary care & health
- Improved all-cause, cancer, heart disease, stroke & infant mortality; low birth weight; life expectancy; and self-rated health
- All-cause mortality
  - ↑ of 1 primary care physician /10,000 population
  - → 5.3% or 49 per 100,000 / yr ↓ mortality

Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. Int J Health Serv. 2007;37:111-26.

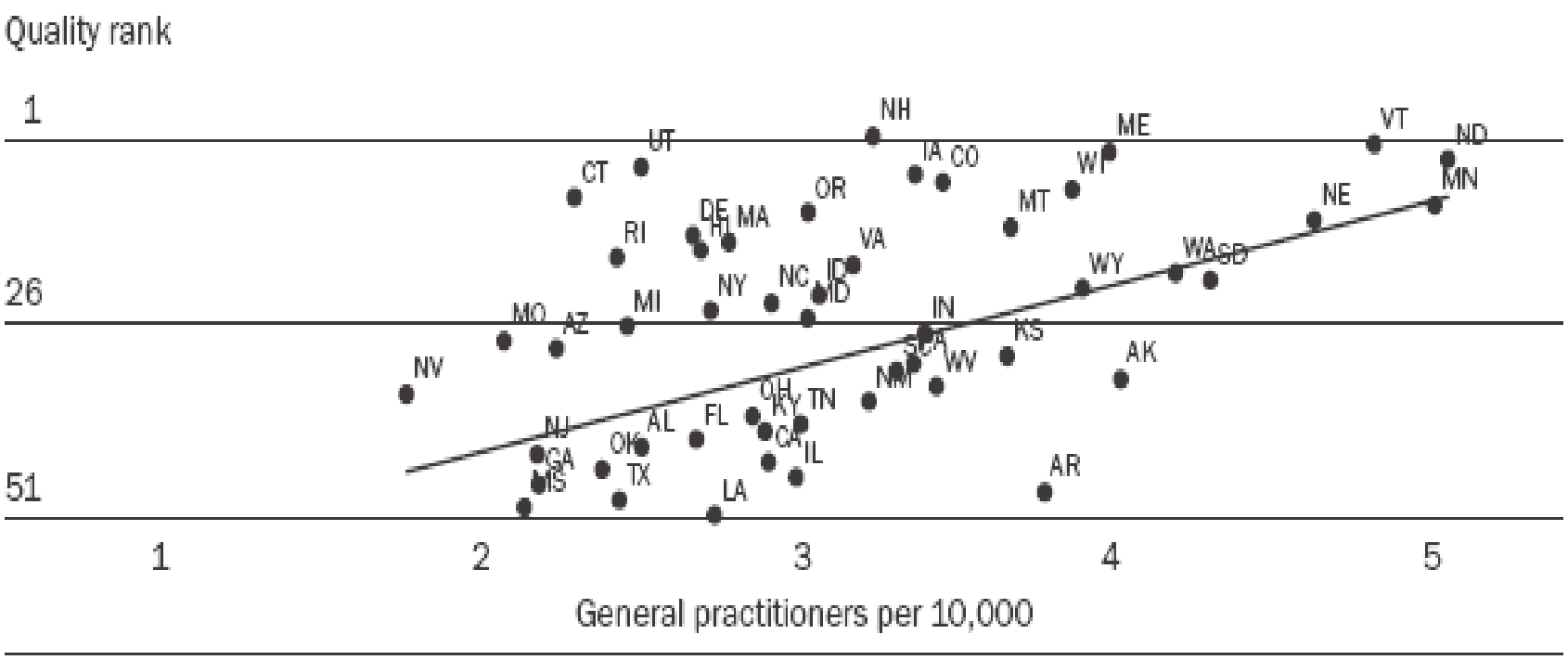
Inter-State Comparisons

- Adjusted Medicare spending
  - State-specific cost of living adjustment
  - Age, sex, race of Medicare population
- Quality measures
  - 24 Medicare Quality Improvement Organization measures
  - 6 common medical conditions
    - MI
    - Breast Cancer
    - Diabetes
    - Heart Failure
    - Pneumonia
    - Stroke

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

EXHIBIT 8

Relationship Between Provider Workforce And Quality: General Practitioners Per 10,000 And Quality Rank In 2000



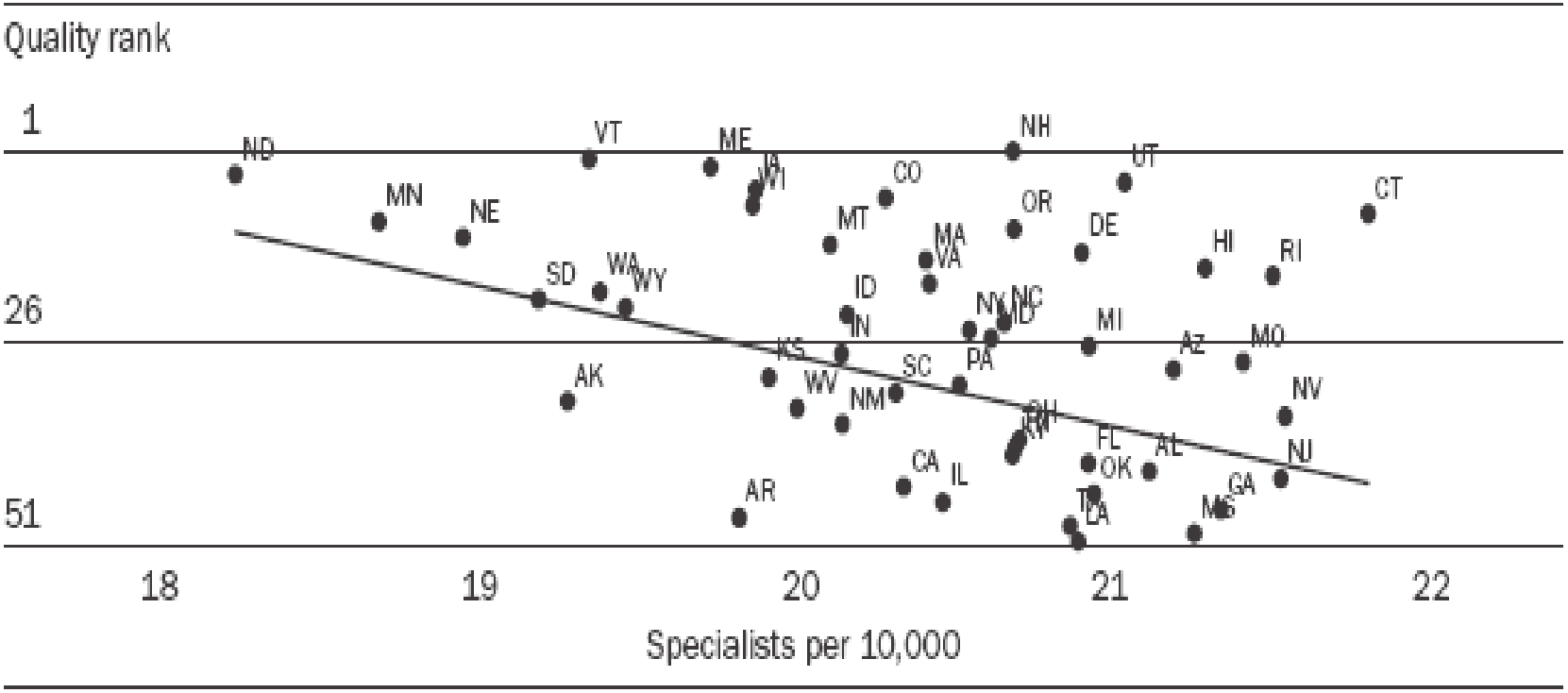
SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

EXHIBIT 6

Relationship Between Provider Workforce And Quality: Specialists Per 10,000 And Quality Rank In 2000



SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

Starfield's Summary

- Countries with strong primary care
  - Have lower overall costs
  - Generally have healthier populations
- Within countries
  - Areas with higher primary care physician availability (but not specialist availability) have healthier populations
  - Greater primary care physician availability reduces the adverse effects of social inequality

Starfield B. New paradigms for quality in primary care. Br J Gen Pract 51:303-309, 2001.

Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. Int J Health Serv. 2007;37:111-26.

Starfield B, Shi LY, Macinko J. Contribution of primary care to health systems and health. *Milbank Q.* 2005;83(3):457-502

Emerging Models of Primary Care

- Many on-the-ground practice innovations
- Patient/person empowerment
- Technology-amplified
- Policy innovations that interact with primary care
- Foundation of a integrated health care system
- Community health centers
- Focused on special populations
- By groups, corporations e.g. Amazon, Berkshire Hathaway, JPMorgan Venture
- PCMH
- Hot-spotting
- Direct primary care

McPhee J. *Heirs of General Practice.* New York, NY: Collins Publishers; 1986.

Stephens GG. Family medicine as counterculture. *Fam Med.* 1989;21(2):103-109.

DeVoe JE, et al. The Personal Doctoring Manifesto: A Perspective from the Keystone IV Conference. *JABFM.* 2016;29:(Supplement 1):S64-S68.

PCMH Evaluations

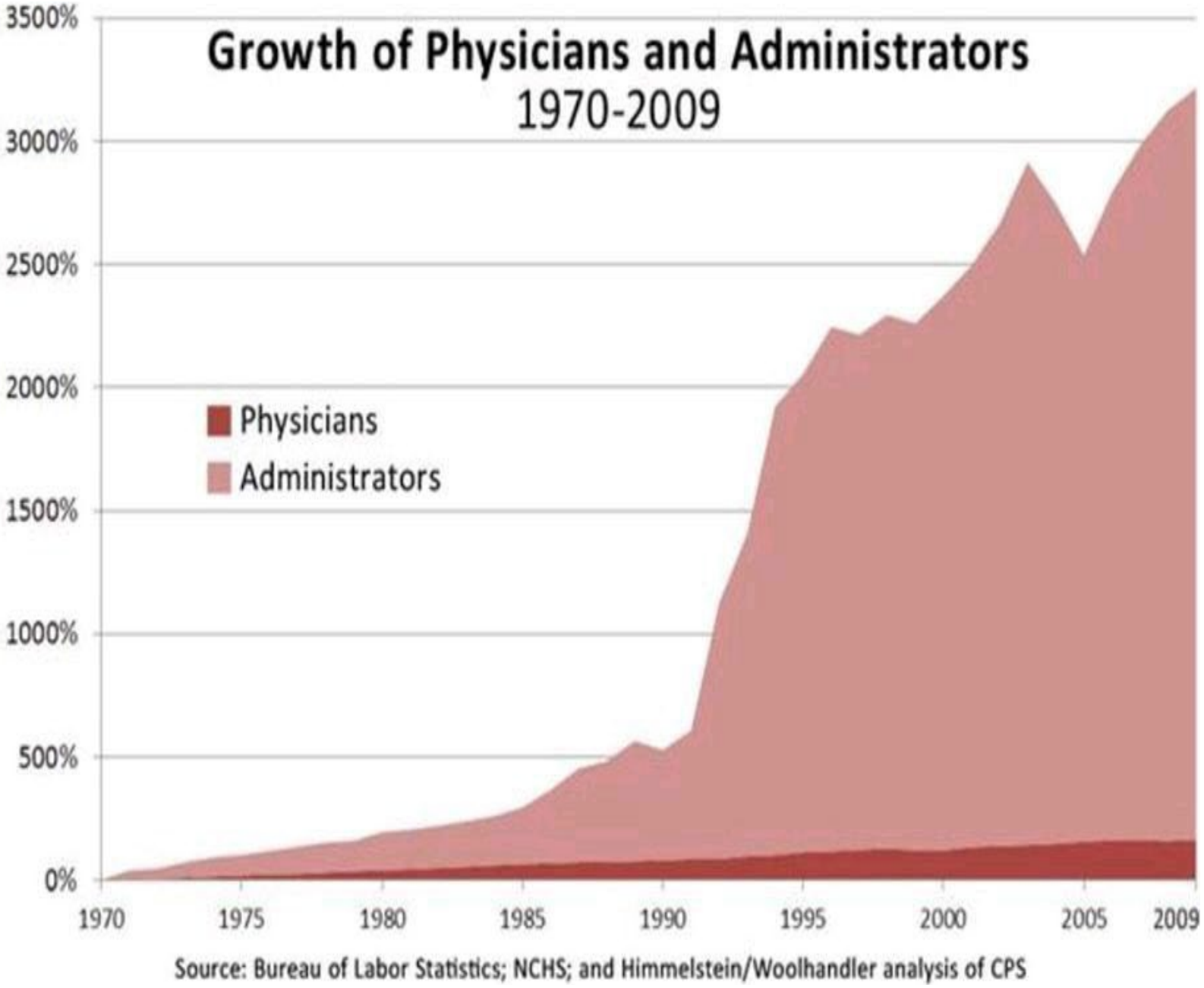
- Increased quality
- Decreased ED visits & hospitalizations for ambulatory-sensitive conditions
- Cost reduction
- Variable effects in different contexts

PCPCC. Results and Evidence: Research that demonstrates the medical home's cost and quality impact https://www.pcpcc.org/results-evidence .

Shi L, Lee DC, Chung M, Liang H, Lock D, Sripipatana A. Patient-Centered Medical Home Recognition and Clinical Performance in U.S. Community Health Centers. Health Serv Res. 2016 Jun 20. doi: 10.1111/1475-6773.12523. [Epub ahead of print]

Rhodes KV, Basseyn S, Gallop R, Noll E, Rothbard A, Crits-Christoph P. Pennsylvania's Medical Home Initiative: Reductions in Healthcare Utilization and Cost Among Medicaid Patients with Medical and Psychiatric Comorbidities. J Gen Intern Med. 2017 Jun 25. [Epub ahead of print] PubMed PMID: 27353455.

Cuellar A, Helmchen LA, Gimm G, Want J, Burla S, Kells BJ, Kicinger I, Nichols LM. The CareFirst Patient-Centered Medical Home Program: Cost and Utilization Effects in Its First Three Years. J Gen Intern Med. 2016 Jul 29. [Epub ahead of print] PubMed PMID: 27473005.



http://www.nejm.org/doi/pdf/10.1056/NEJM199105023241805
Presented by Julie Gunther at the 2016 DPC Summit.

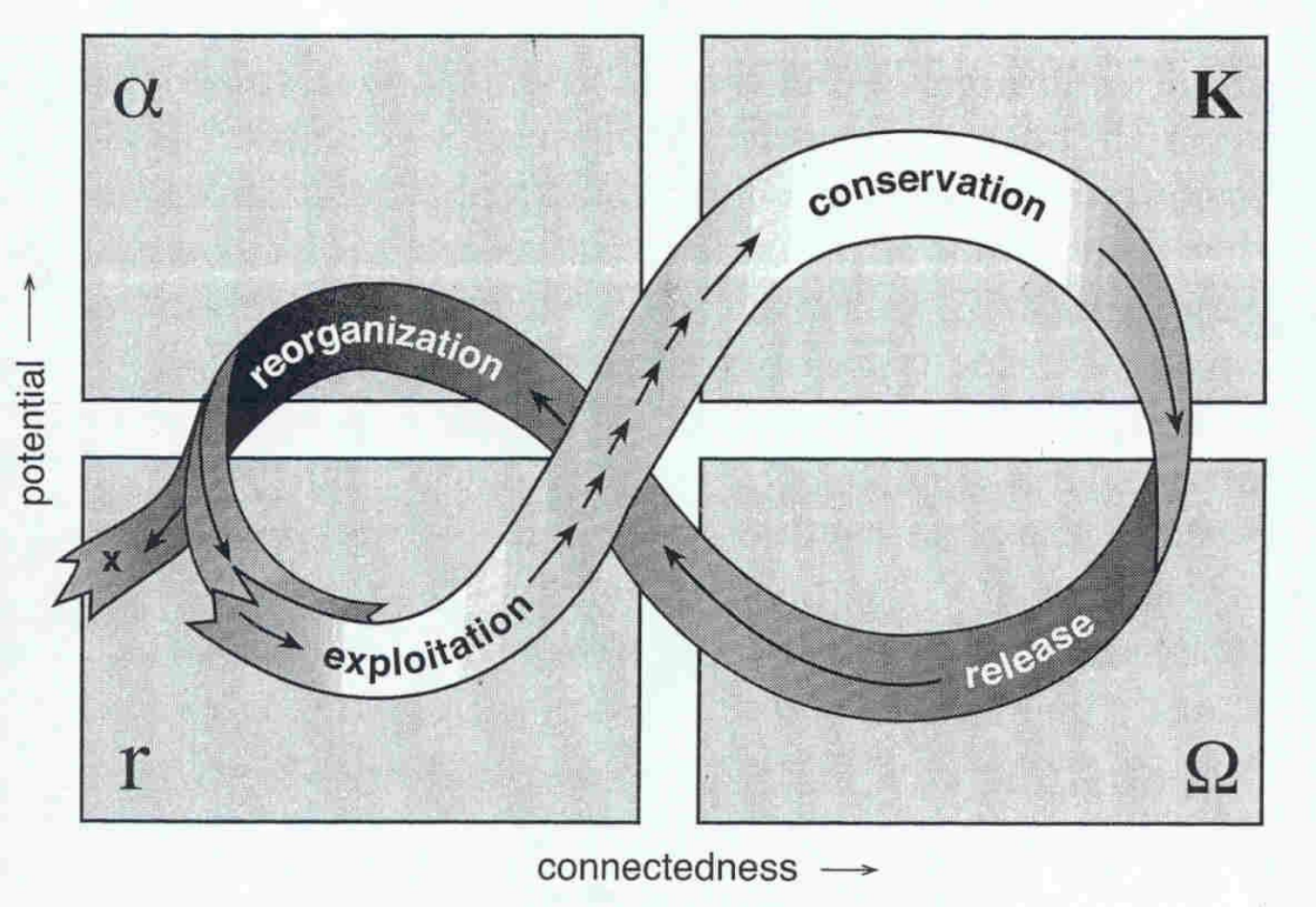
Direct Primary Care

- Patients pay a monthly, quarterly, or annual fee that covers all or most primary care services
- Often combined with high deductable insurance
- Results
  - More time with patients
  - Low overhead; no insurance filing

Direct Primary Care Coalition. www.dpcare.org

Wu WN, Bliss G, Bliss EB, Green LA. Practice profile. A direct primary care medical home: the Qliance experience. Health Aff (Millwood). 2010 May;29(5):959-62. http://content.healthaffairs.org/content/29/5/959.full

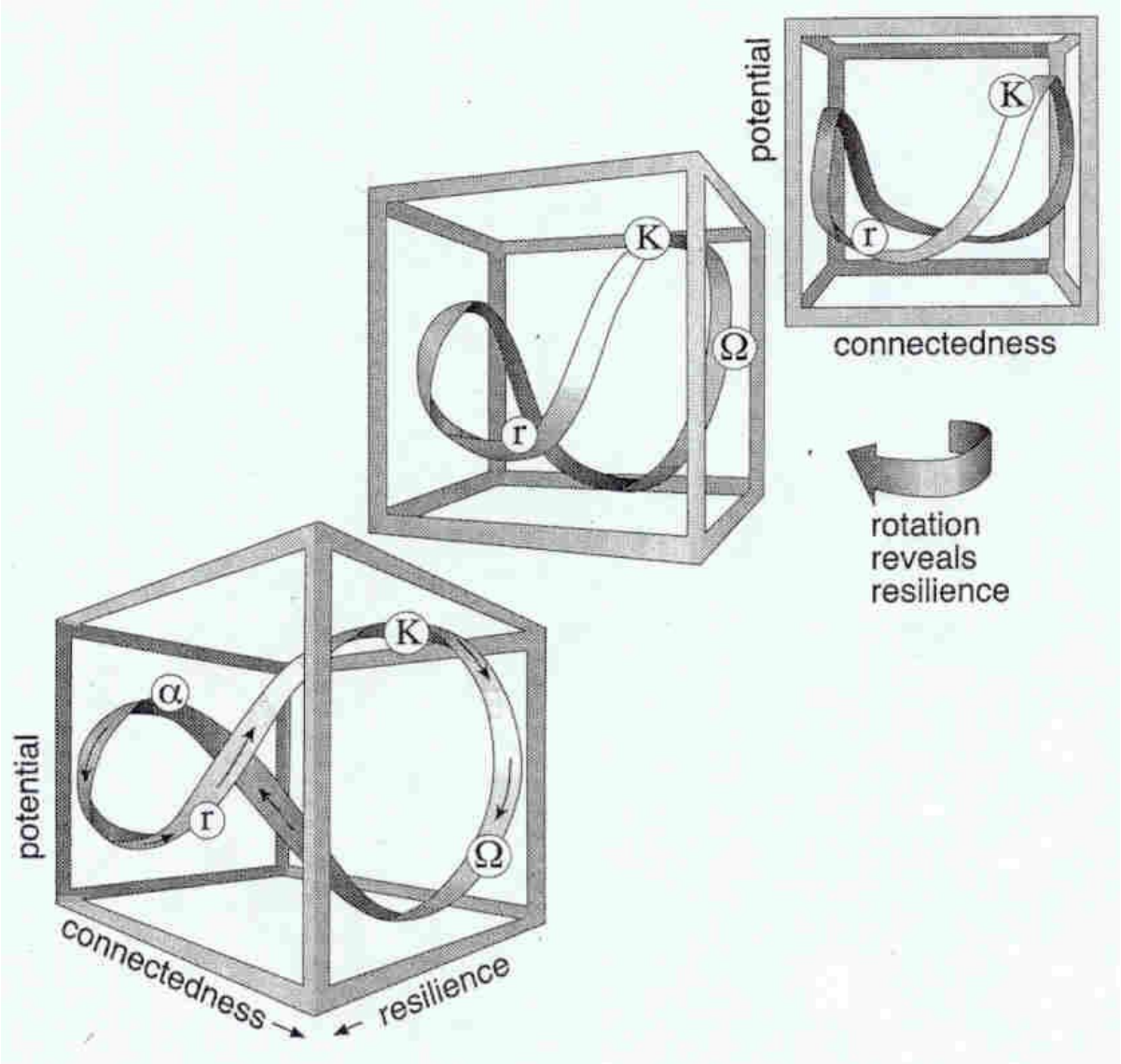
How Change Happens in Systems



Gunderson LH, Holling CS, eds. *Panarchy: understanding transformations in human and natural systems*. Washington, DC: Island Press; 2002.

Stange KC. Making sense of health care transformation as adaptive-renewal cycles. *Ann Fam Med*, 2009; 7: 484-487.

Resilience


potential
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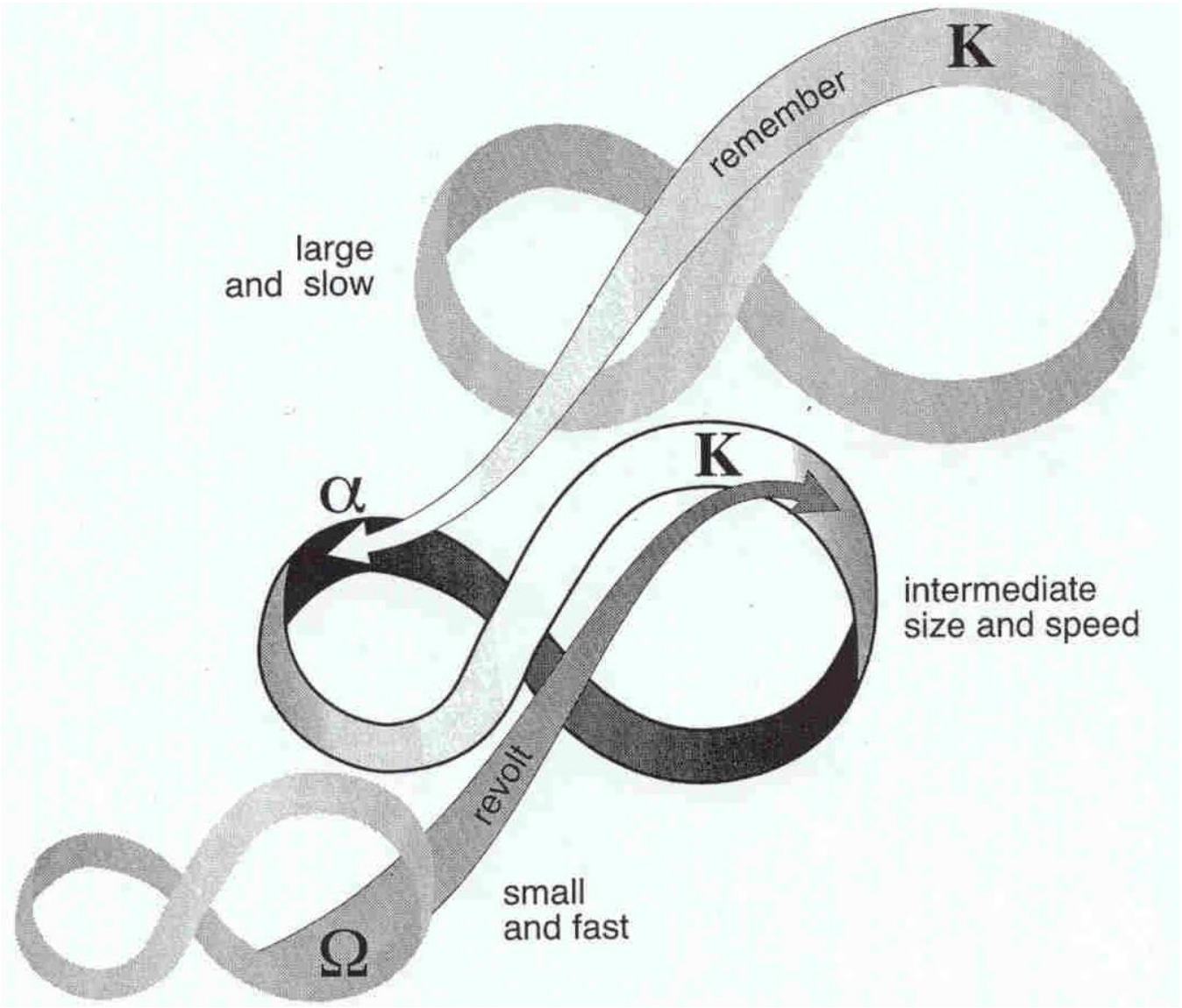
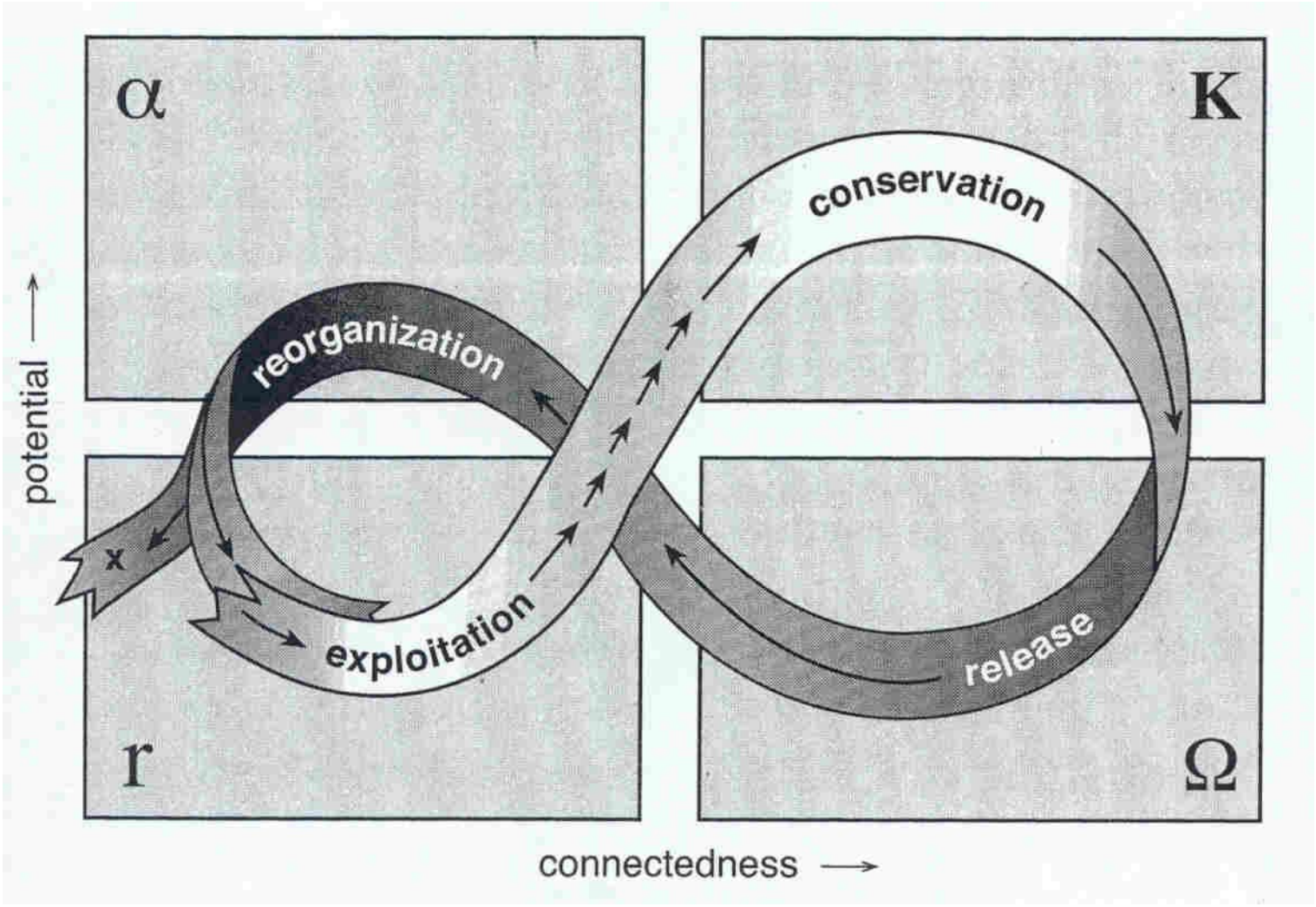
potential
connectedness
resilience

Connections between system levels



Adaptive Cycles



Implied Strategies

- Consider where we are in our cycle
- Remember and build on our roots as healers
  - In a rapidly changing environment, a generalist approach is adaptive
  - Relationships AND (information) technology
- Work to survive in the last stage of the conservation phase while planting seeds for the release/reorganization phase (Set up success in the exploitation phase)
- Consider multiple fast & slow cycles
  - System change
  - Practice transformation
  - Information age
  - Demographic and political shifts
  - Economies: local, country, world

Problem of Fragmentation

US Health Care

- "Fundamentally flawed" *
- Most expensive in the world**
- 37th in the health of our people**
- More integrated systems provide greater value***

* Institute of Medicine. *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press; 2001.

** WHO. Press Release WHO/44: World Health Organization assesses the world's health systems. *World Health Organization, Geneva Switzerland*. http://www.who.int/inf-pr-2000/en/pr2000-44.html.

*** Starfield B, Shi LY, Macinko J. Contribution of primary care to health systems and health. Milbank Quarterly. 2005;83(3):457-502.

Fragmentation

- Focusing on the parts without appreciating their relation to the whole
- Limited understanding of how the components of health and disease processes and health care work together
- Leads to
  - Uncontextualized investigation
  - Fragmentation of care
  - Devaluing of health care's higher order functions and possibilities.

Engel, GL. The need for a new medical model. *Science* 1977;196:129–136.

Stange KC. The paradox of the parts and the whole in understanding and improving general practice. *Int J Qual Health Care*, 2002; 14(4):267-268.

Stange KC. The problem of fragmentation and the need for integrative solutions. *Ann. Fam. Med.* 2009;7(3):100-103.

Consequences of Fragmented Approach to Healthcare

- Inefficiency & ineffectiveness
- Inequality
- Commoditization
- Commercialization
- Deprofessionalization
- Depersonalization
- Despair & discord

Stange KC. The problem of fragmentation and the need for integrative solutions. *Ann. Fam. Med.* 2009;7(3):100-103.

Misunderstanding what is important about (primary) health care

- How it is misunderstood
  - Simple
  - Commodity
  - If we get the parts right (care of individual diseases), the whole (person) will be better
- Consequences
  - Fragmentation
  - Depersonalization
  - Ineffectiveness, inefficiency

Engel, GL. The need for a new medical model. *Science* 1977;196:129–136.

Stange KC. The paradox of the parts and the whole in understanding and improving general practice. *Int J Qual Health Care*, 2002; 14(4):267-268.

Stange KC. The problem of fragmentation and the need for integrative solutions. *Ann. Fam. Med.* 2009;7(3):100-103.

Stange KC, Etz RS, Gullett H, et al. Metrics for assessing improvements in primary health care. *Annu Rev Public Health*. 2014;35:423-442.

Robert May, President of the Royal Society

"Application of the physical and biological sciences has made today arguably the best of times… But the unintended consequences of these well-intentioned actions…could well make tomorrow the worst of times.

The significant breakthrough we really need is better understanding of human institutions, particularly of the impediments to collective, cooperative activity in which all individuals pay small costs to reap large group benefits. Darwin recognised the evolution of cooperative behaviour as one of the most important unsolved problems of his day. We have made relatively little progress since then. Perhaps the social scientists of 2056 will have succeeded in combining the rigour of the "hard" (that is, easy) sciences with the thoughtful introspection of the humanities to solve this problem. I certainly hope so."

18 November 2006, NewScientist.com news service.

Principles of Primary Care

- **Accesibility** as 1st contact with health care
- **Accountability** for large majority of healthcare needs (comprehensiveness)
- **Coordination** & **integration** of care across settings, acute & chronic illnesses, mental health & prevention
- **Sustained partnership** – relationships over time in a family & community context

Starfield B. Primary Care. Balancing Health Needs, Services and Technology. New York: Oxford University Press, 1998.

Donaldson MS, Yordy KD, Lohr KN, Vanselow NA, eds. Primary Care: America's Health in a New Era. Washington D.C.: National Academy Press; 1996.

Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the Patient-Centered Medical Home. *J Gen Intern Med.* 2010; 25(6): 601-612.

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ANNALS OF FAMILY MEDICINE

A Science of Connectedness

www.AnnFamMed.org

• The problem of fragmentation	Mar 2009, v7i2
• A generalist approach	May 2009, v7i3
• The paradox of primary care	Jul 2009, v7i4
• A science of connectedness	Sept 2009, v7i5
• Cycles of renewal & adaption	Nov 2009, v7i6
• Ways of knowing and inquiry	Jan 2010, v8i1
• Regaining our moral authority	Mar 2010, v8i2

www.annfammed.org/cgi/collection/editorial_series

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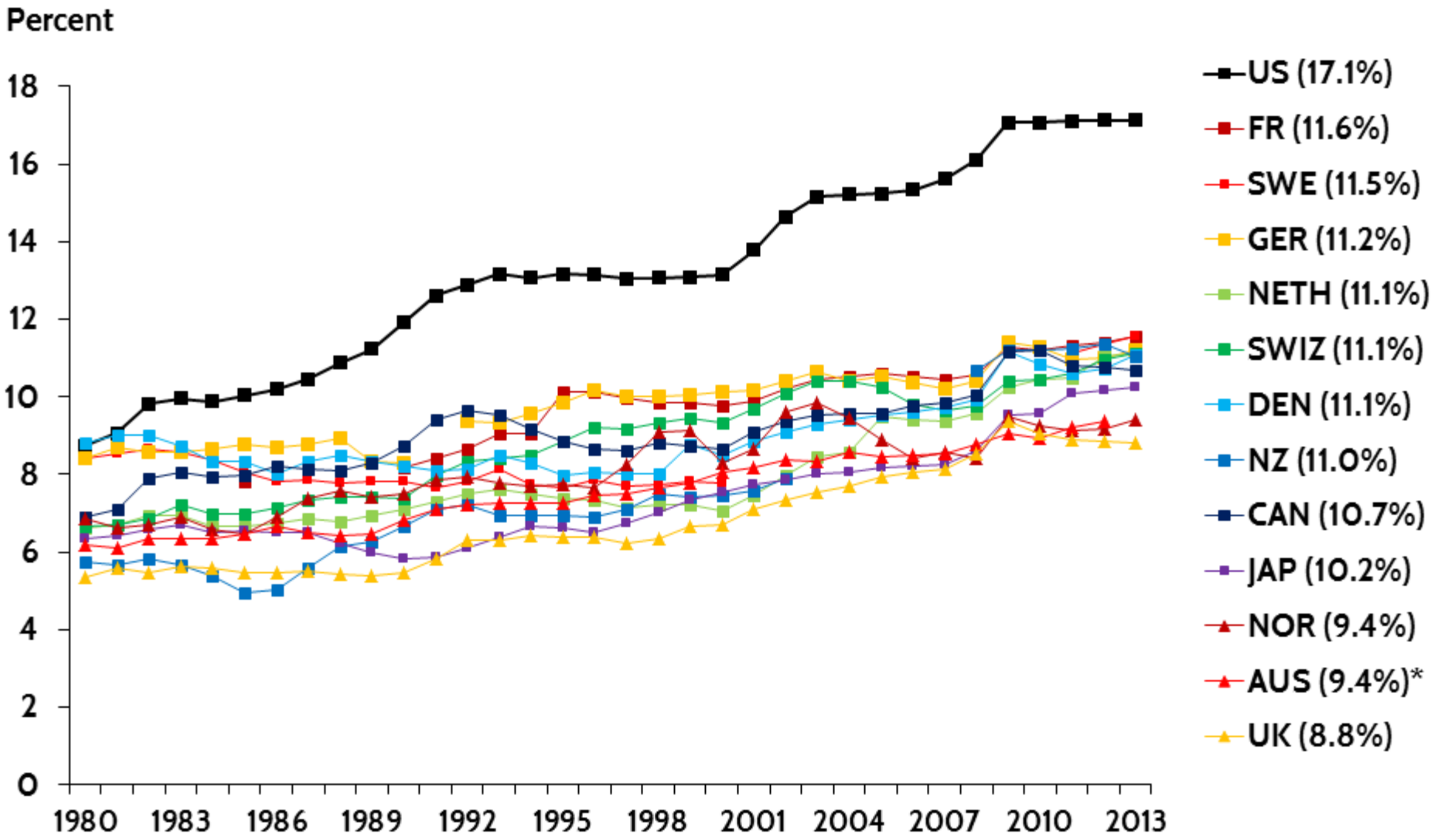
- www.AnnFamMed.org
  - Article Collections (from options on the right)
  - Under: **Core values of primary care:**
  - Science of connectedness / practice of generalism (7 Articles)
- Or: www.annfammed.org/cgi/collection/editorial_series

Exhibit 1. Health Care Spending as a Percentage of GDP, 1980–2013



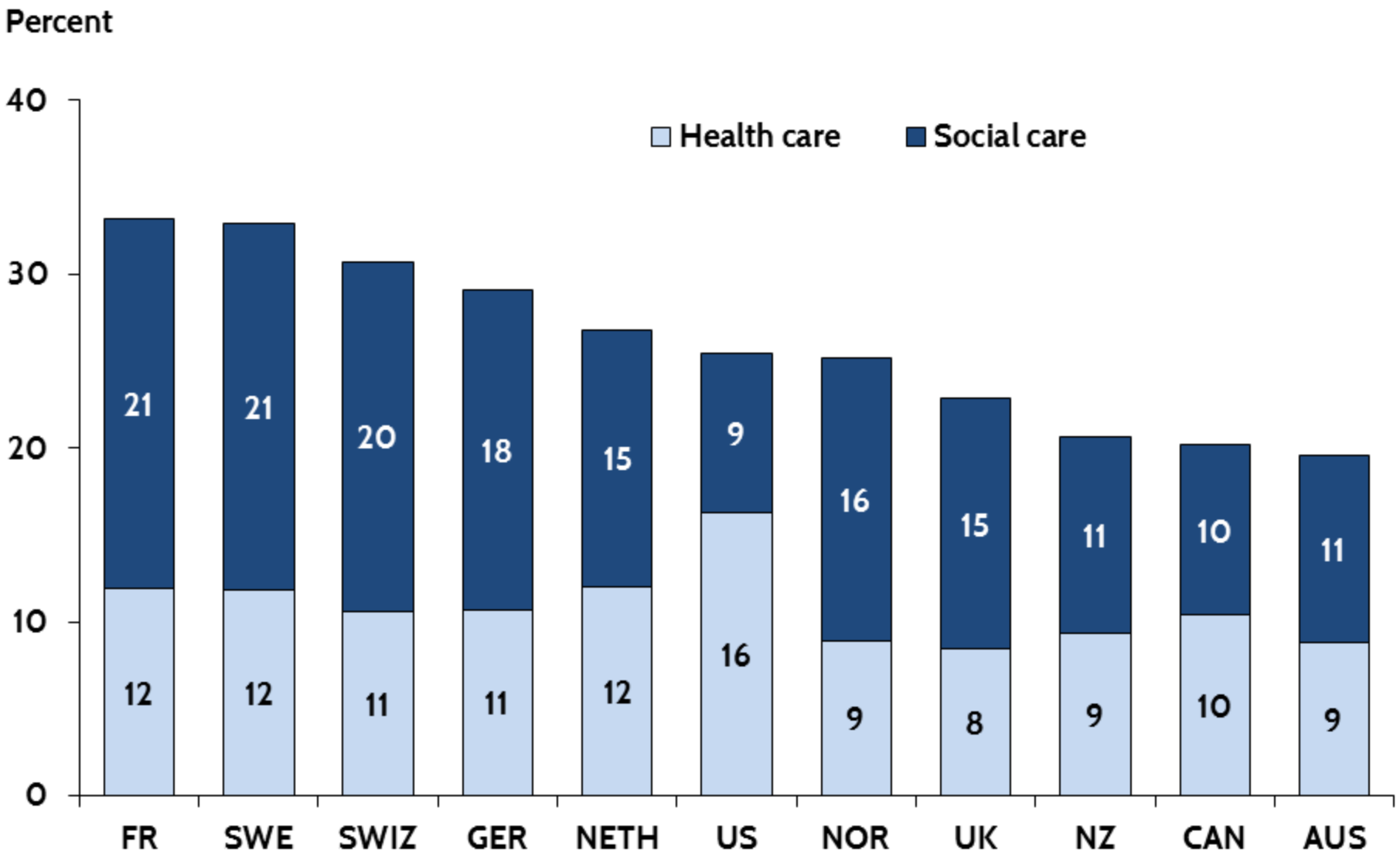
* 2012.

Notes: GDP refers to gross domestic product. Dutch and Swiss data are for current spending only, and exclude spending on capital formation of health care providers.

Source: OECD Health Data 2015.

www.commonwealthfund.org/publications/issue-briefs/2015/oct/us-health-care-from-a-global-perspective

Exhibit 8. Health and Social Care Spending as a Percentage of GDP



Notes: GDP refers to gross domestic product.
Source: E. H. Bradley and L. A. Taylor, *The American Health Care Paradox: Why Spending More Is Getting Us Less*, Public Affairs, 2013. www.commonwealthfund.org/publications/issue-briefs/2015/oct/us-health-care-from-a-global-perspective

Exhibit 9. Select Population Health Outcomes and Risk Factors

	Life exp. at birth, 2013[a]	Infant mortality, per 1,000 live births, 2013[a]	Percent of pop. age 65+ with two or more chronic conditions, 2014[b]	Obesity rate (BMI>30), 2013[a,c]	Percent of pop. (age 15+) who are daily smokers, 2013[a]	Percent of pop. age 65+
Australia	82.2	3.6	54	28.3[e]	12.8	14.4
Canada	81.5[e]	4.8[e]	56	25.8	14.9	15.2
Denmark	80.4	3.5	–	14.2	17.0	17.8
France	82.3	3.6	43	14.5[d]	24.1[d]	17.7
Germany	80.9	3.3	49	23.6	20.9	21.1
Japan	83.4	2.1	–	3.7	19.3	25.1
Netherlands	81.4	3.8	46	11.8	18.5	16.8
New Zealand	81.4	5.2[e]	37	30.6	15.5	14.2
Norway	81.8	2.4	43	10.0[d]	15.0	15.6
Sweden	82.0	2.7	42	11.7	10.7	19.0
Switzerland	82.9	3.9	44	10.3[d]	20.4[d]	17.3
United Kingdom	81.1	3.8	33	24.9	20.0[d]	17.1
United States	78.8	6.1[e]	68	35.3[d]	13.7	14.1
OECD median	81.2	3.5	–	28.3	18.9	17.0

[a] Source: OECD Health Data 2015.
[b] Includes: hypertension or high blood pressure, heart disease, diabetes, lung problems, mental health problems, cancer, and joint pain/arthritis. Source: Commonwealth Fund International Health Policy Survey of Older Adults, 2014.
[c] DEN, FR, NETH, NOR, SWE, and SWIZ based on self-reported data; all other countries based on measured data.
[d] 2012. [e] 2011. www.commonwealthfund.org/publications/issue-briefs/2015/oct/us-health-care-from-a-global-perspective

Mirror, Mirror on the Wall, 2014 Update: How the U.S. Health Care System Compares Internationally

COUNTRY RANKINGS

- Top 2*
- Middle
- Bottom 2*

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/Capita, 2011**	$3,800	$4,522	$4,118	$4,495	$5,099	$3,182	$5,669	$3,925	$5,643	$3,405	$8,508

Notes: * Includes ties. ** Expenditures shown in $US PPP (purchasing power parity); Australian $ data are from 2010.

Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund *National Scorecard 2011;* World Health Organization; and Organization for Economic Cooperation and Development, *OECD Health Data, 2013* (Paris: OECD, Nov. 2013).

www.commonwealthfund.org/publications/fund-reports/2014/jun/mirror-mirror

Key Provisions of the Affordable Care Act

- Individual mandate
- Employer mandate
- Pre-existing condition protection
- Essential health benefits
- Qualified health plans / coverage tiers
- Medicaid expansion
- Premium tax credits
- Cost-sharing subsidies
- Prevention and wellness programs
- Fees and taxes
- Grandfathered plans
- CMS Innovation Center

Accountable Care Organizations

- An ACO is a network of doctors and hospitals that shares responsibility for providing care to patients.
- ACOs agree to manage all of the health care needs of a minimum of 5,000 Medicare or Medicaid beneficiaries for at least three years.

Fisher, E.S., et al., Fostering accountable health care: moving forward in Medicare. Health Aff (Millwood), 2009. 28(2): p. w219-31.

McClellan, M., et al., A national strategy to put accountable care into practice. Health Affairs, 2010. 29(5): p. 982-90.

Rittenhouse, D.R., S.M. Shortell, and E.S. Fisher, Primary care and accountable care -- two essential elements of delivery-system reform. N Engl J Med, 2009.

The Patient-Centered Medical Home

- A political construct
- Hundreds of demonstrations around the country
- Movement toward changing
  - Health care organization
  - Reimbursement
- Growing evidence of effectiveness

The Patient-Centered Primary Care Collaborative. www.pcpcc.net/index.php.

Patient Centered Primary Care Collaborative. A Miracle of Modern Medicine. 2009. www.pcpcc.net/content/primary-care-miracle-modern-medicine.

Patient Centered Primary Care Collaborative. 2009 PCPP Pilot Guide: Proof in Practice. A Compilation of Patient Centered Medical Home Pilot and Demonstration Projects. 2009:90. www.pcpcc.net/pilot-guide.

Robert Graham Center. The PCMH: History, seven core features, evidence and transformational change. Washington, DC; 2007. www.graham-center.org/online/graham/home/publications/monographs-books/2007/rgcmo-medical-home.html

Stange KC, Miller WL, Nutting PA, Crabtree BF, Stewart EE, Jaén CR. Context for understanding the National Demonstration Project and the Patient-Centered Medical Home. Ann Fam Med. 2010;8(Suppl 1):S2-S8. www.annfammed.org/cgi/content/full/8/Suppl_1/S2

Joint Principles of the PCMH

- **Personal physician**
- **Physician-directed medical practice**
- **Whole person orientation**
- **Care is coordinated and integrated**
- **Quality & safety**
- **Enhanced access**
- **Payment recognizes added value**

AAFP, AAP, ACP, AOA. Joint principles of the patient-centered medical home. 2007; www.medicalhomeinfo.org/Joint%20Statement.pdf.

The PCMH is

1) The fundamental tenets of primary care:
   - First contact access
   - A comprehensive, whole person approach
   - Integration & coordination of care
   - Relationships involving sustained partnership
2) New ways of organizing practice
3) Development of practices' internal capabilities
4) Health care system & reimbursement changes.

Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the patient-centered medical home. *J. Gen. Intern. Med.* 2010;25(6):601-612.

What's happening between the lines

- Lurching movement toward value-based payment (paying for value vs. volume)
- Consolidation
- Commodification
- Demographic & behavioral imperatives
- Venture capital
- Vilification of the commons / collective

The Paradox of Primary Care

Stange KC. The paradox of primary care. *Ann. Fam. Med.* 2009;7(4):100-103.

Primary Care

Problem?

Solution?

Primary care is a problem

- Disease-by-disease
- Poor quality of care

Specialty vs Primary Care

- Specialists more knowledgeable about conditions in their specialty.
- Specialists more likely to use medications associated with improved survival and to comply with screening guidelines.
- Specialists use more tests, procedures and hospital time.

Harrold LR, Field TS, Gurwitz JH. Knowledge, patterns of care, and outcomes of care for generalists and specialists. J Gen Intern Med. 1999; 14:499-511.

Measures of process of care tend to favor specialists for:

- Myocardial infarction
- Other cardiovascular diseases
- Acute non-hemorrhagic stroke
- Asthma
- Arthritis
- Psychiatric diseases
- Skin diseases
- Preventive care

Harrold LR, Field TS, Gurwitz JH. Knowledge, patterns of care, and outcomes of care for generalists and specialists. J Gen Intern Med. 1999; 14:499-511.

‘Expert Generalists’ vs. Specialists

- Similar proportion of HIV+ patient on HAART
- Non-expert generalists
  - Low volume of HIV+ patients
  - Much less likely to use recommended HIV Rx

Landon BE, Wilson IB, Cohn SE et al. Physician specialization and antiretroviral therapy for HIV. J Gen Intern Med. 2003; 18:233-241.

Shared Care

In observational studies, more guideline-concordant care if shared between:

- Primary care physician AND endocrinologist (diabetes and general preventive care)
- Primary care physician an AND cardiologist (acute M.I.; CHF [also lower 30-day readmission])

Lafata JE, Martin S, Morlock R, Divine G, Xi H. Provider type and the receipt of general and diabetes-related preventive health services among patients with diabetes. Med Care. 2001; 39:491-499.

Willison DJ, Soumerai SB, McLaughlin TJ, et al. Consultation between cardiologists and generalists in the management of acute myocardioal infarction: implications for quality of care. Arch Intern Med. 1998; 158:1778-1783.

Ahmed A, Allman RM, Kiefe CI, et al. Association of consultation between generalists and cardiologists with quality and outcomes of heart failure care. Am Heart J. 2003; 145:1086-1093.

Shared Care

In RCT of depressed patients:

- Primary care physician AND psychiatrist
- Greater adherence, recovery, satisfaction

Katon W, VonKorff M, Lin E, et al. Stepped collaborative care for primary care patients with persistent symptoms of depression: a randomized trial. Arch Gen Psychiatry. 1999; 56:1109-1115.

Current Efforts to Improve Quality of Care

- Increase access to specialty care
- Carve outs
- Disease management programs
- Disease-specific pay-for-performance

Brook RH, McGlynn EA, Cleary PD. Quality of health care: Part 2: Measuring quality of care. *N Engl J Med.* 1996;335:966-969.

Stange KC. The paradox of the parts and the whole in understanding and improving general practice. *Int J Qual Health Care*, 2002; 14(4):267-268.

Aron D, Pogach L. Specialists versus generalists in the era of pay for performance: "A plague o' both your houses!" Qual Saf Health Care. 2007;16:3-5.

Primary care is a solution

- Whole-person functional health
- Cost
- Population health

Medical Outcomes Study

- Patients with hypertension and diabetes
- 3 follow-up points over 7 years
- Compared primary vs. specialty care
- Outcomes (controlling for patient mix)
  - Physical & emotional (functional) health
  - Mortality
  - Disease-specific physiologic markers

Greenfield S, Nelson EC, Zubkoff M, et al. Variations in resource utilization among medical specialties and systems of care: results from the Medical Outcomes Study. JAMA. 1992; 267:1624-1630.

Greenfield S, Rogers W, Mangotich M, Carney MF, Tarlov AR. Outcomes of patients with hypertension and non-insulin-dependent diabetes mellitus treated by different systems and specialties. Results from the Medical Outcomes Study. JAMA. 1995; 274:1436-1444.

Medical Outcomes Study

- Similar outcomes for primary & specialty care
  - Physical & emotional (functional) health
  - Mortality
  - Disease-specific physiologic markers
- Lower resource use & cost for primary care
  - Tests, procedures
  - Drugs
  - Office visits, hospitalizations

Greenfield S, Nelson EC, Zubkoff M, et al. Variations in resource utilization among medical specialties and systems of care: results from the Medical Outcomes Study. JAMA. 1992; 267:1624-1630.

Greenfield S, Rogers W, Mangotich M, Carney MF, Tarlov AR. Outcomes of patients with hypertension and non-insulin-dependent diabetes mellitus treated by different systems and specialties. Results from the Medical Outcomes Study. JAMA. 1995; 274:1436-1444.

International Comparisons

- Primary care orientation
  - Health care system characteristics
  - Practice characteristics
- Health status and cost
  - Rank on a composite of 14 health indicators
  - Rank on per capita health care spending

Starfield B. Primary Care. Balancing Health Needs, Services and Technology. New York: Oxford University Press, 1998.

Primary Care and Health Outcomes

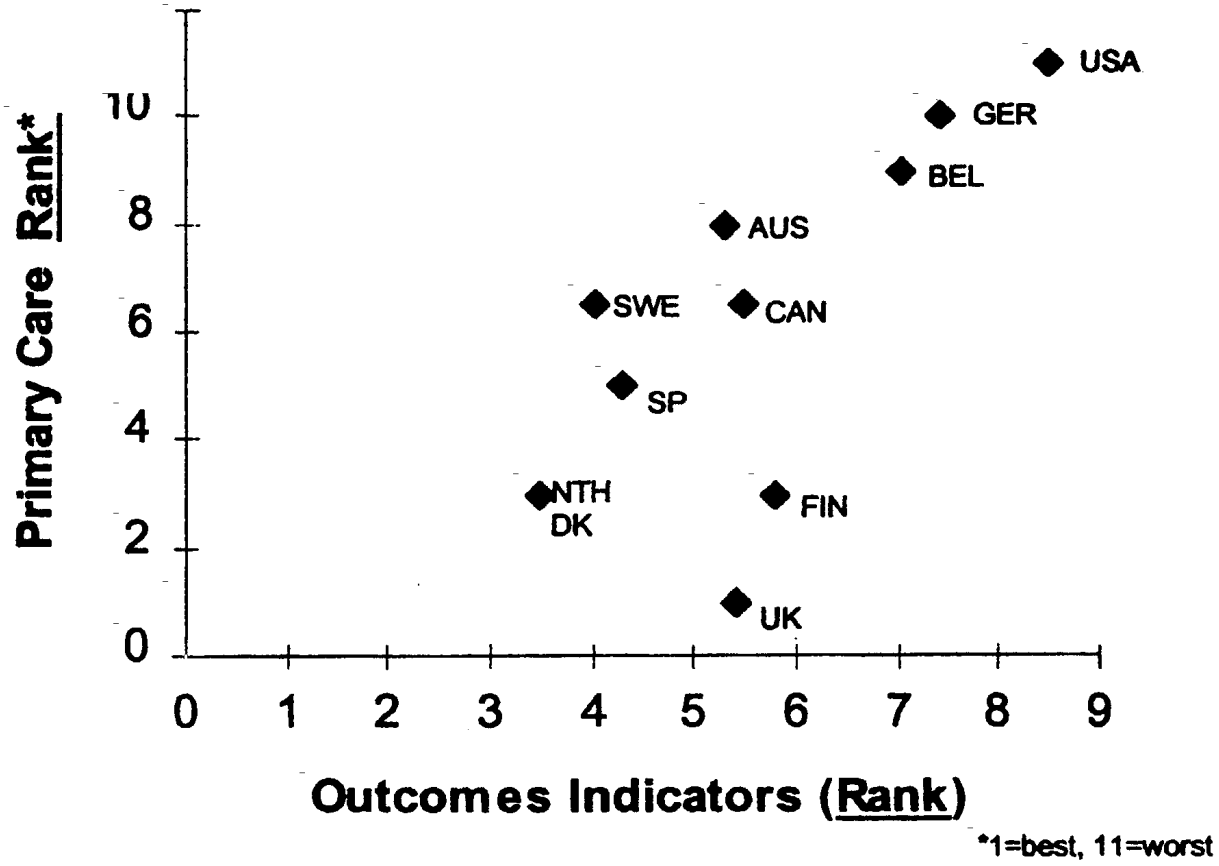


Figure 1.3. Relationship between strength of primary care and combined outcomes.

Source: Starfield B. Primary Care. Balancing health needs, services, and technology. New York: Oxford University Press, 1998.

Primary Care and Health Care Expenditures

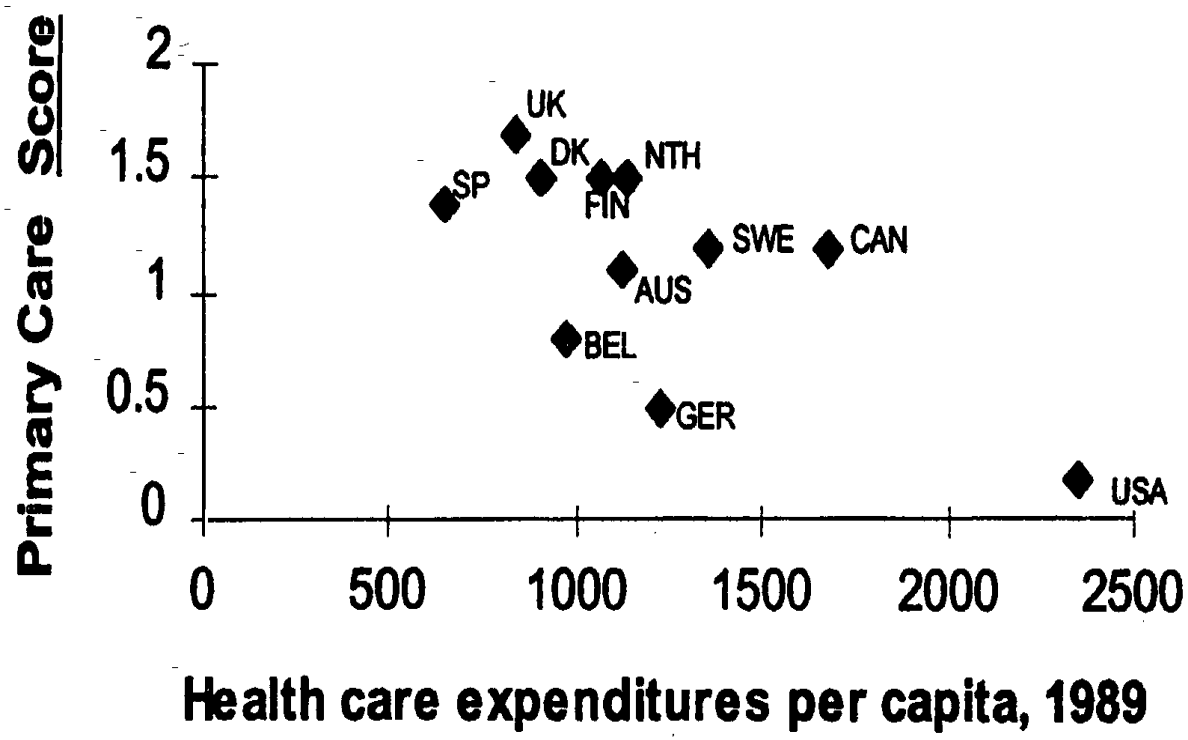


Figure 1.4. Relationship between strength of primary care and total health care expenditures.

Source: Starfield B. Primary Care. Balancing health needs, services, and technology. Oxford, New York, 1998.

US Primary Care Physician Supply

- Review of 10 studies of primary care & health
- Improved all-cause, cancer, heart disease, stroke & infant mortality; low birth weight; life expectancy; and self-rated health
- All-cause mortality
  - ↑ of 1 primary care physician /10,000 population
  - → 5.3% or 49 per 100,000 / yr ↓ mortality

Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. Int J Health Serv. 2007;37:111-26.

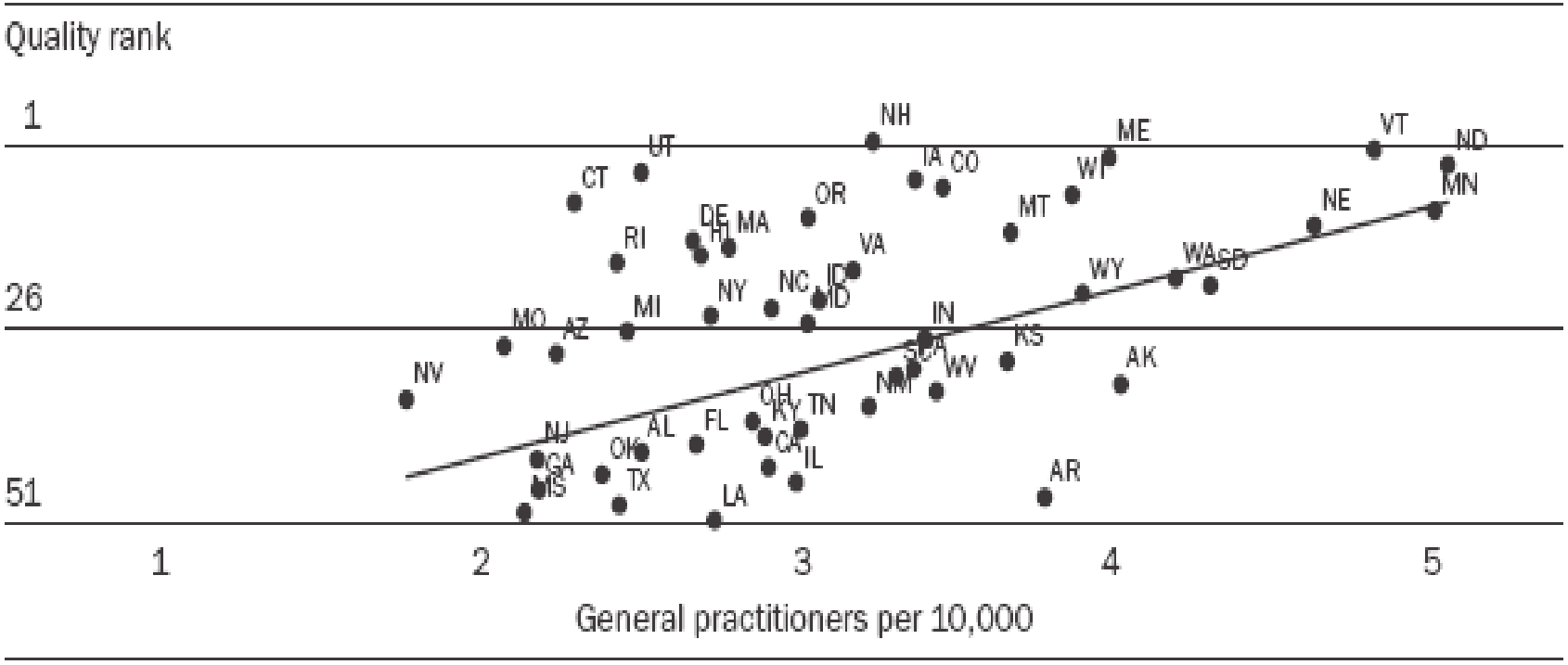
Inter-State Comparisons

- Adjusted Medicare spending
  - State-specific cost of living adjustment
  - Age, sex, race of Medicare population
- Quality measures
  - 24 Medicare Quality Improvement Organization measures
  - 6 common medical conditions
    - MI
    - Breast Cancer
    - Diabetes
    - Heart Failure
    - Pneumonia
    - Stroke

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

EXHIBIT 8

Relationship Between Provider Workforce And Quality: General Practitioners Per 10,000 And Quality Rank In 2000



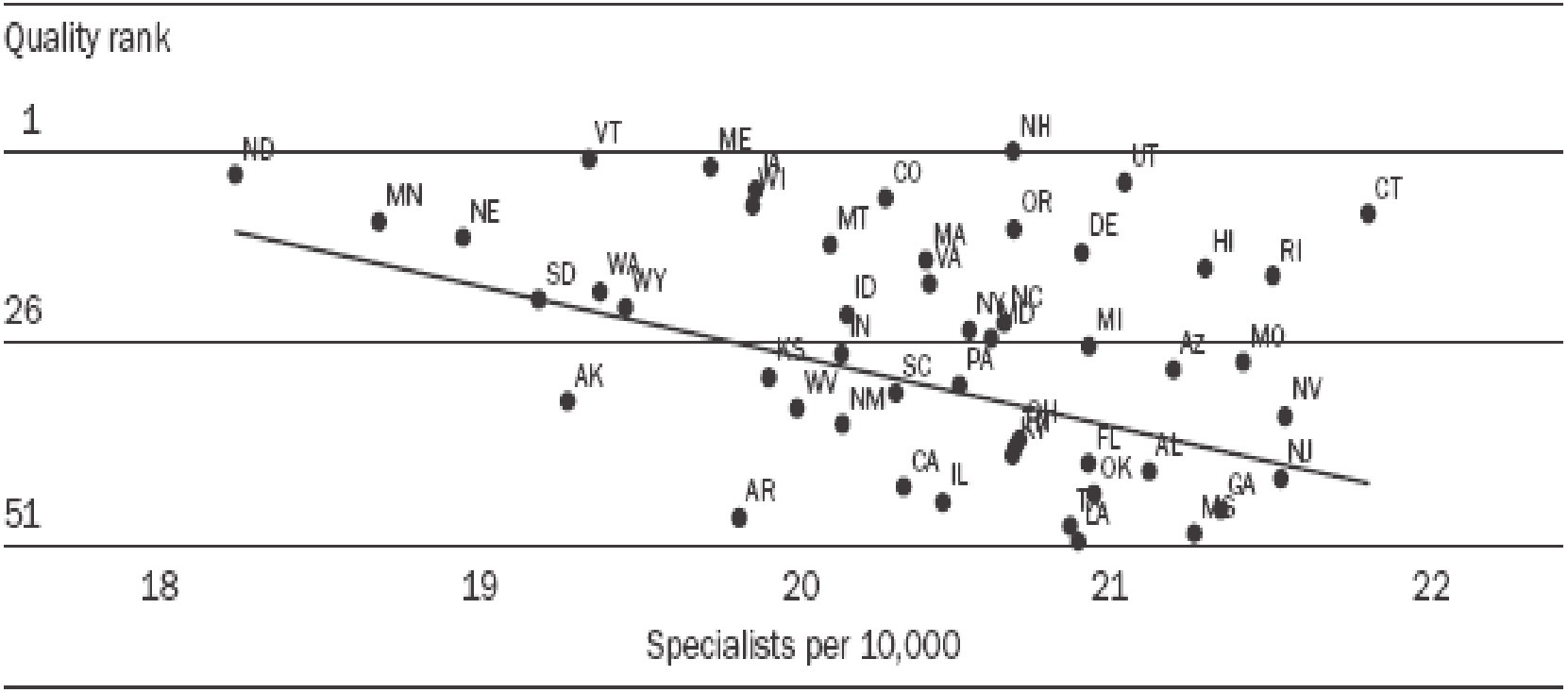
SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

EXHIBIT 6

Relationship Between Provider Workforce And Quality: Specialists Per 10,000 And Quality Rank In 2000



SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. Health Affairs W4-185 - W4-197, 2004.

Starfield's Summary

- Countries with strong primary care
  - Have lower overall costs
  - Generally have healthier populations
- Within countries
  - Areas with higher primary care physician availability (but not specialist availability) have healthier populations
  - Greater primary care physician availability reduces the adverse effects of social inequality

Starfield B. New paradigms for quality in primary care. Br J Gen Pract 51:303-309, 2001.

Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. Int J Health Serv. 2007;37:111-26.

Starfield B, Shi LY, Macinko J. Contribution of primary care to health systems and health. *Milbank Q.* 2005;83(3):457-502

Paradox of Primary Care

Primary care is associated with:

- Poor quality of care for individual diseases, but
- Better quality at population level
- Similar whole-person functional health
- Better population health
- Lower resource use and cost
- Less inequality in healthcare & health

Stange KC. The paradox of primary care. *Ann. Fam. Med.* 2009;7(4):100-103.

The Problem with Not Understanding what is Important about Primary Care

- How it is misunderstood
  - Simple
  - Commodity
  - If we get the parts right (care of individual diseases), the whole (person) will be better
- Consequences
  - Fragmentation
  - Depersonalization
  - Ineffectiveness, inefficiency

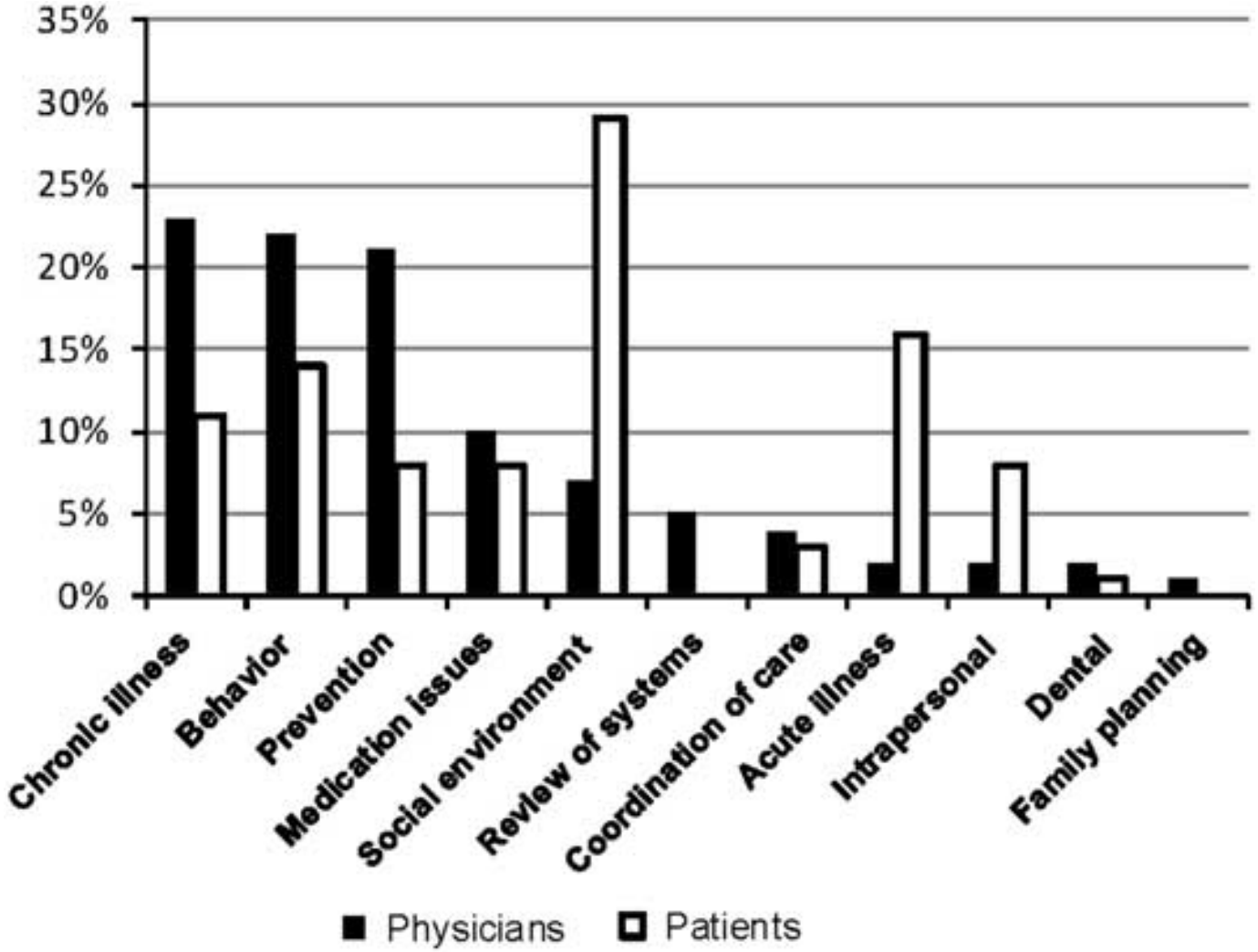
Engel, GL. The need for a new medical model. *Science* 1977;196:129–136.

Stange KC. The paradox of the parts and the whole in understanding and improving general practice. *Int J Qual Health Care*, 2002; 14(4):267-268.

Stange KC. The problem of fragmentation and the need for integrative solutions. *Ann. Fam. Med.* 2009;7(3):100-103.

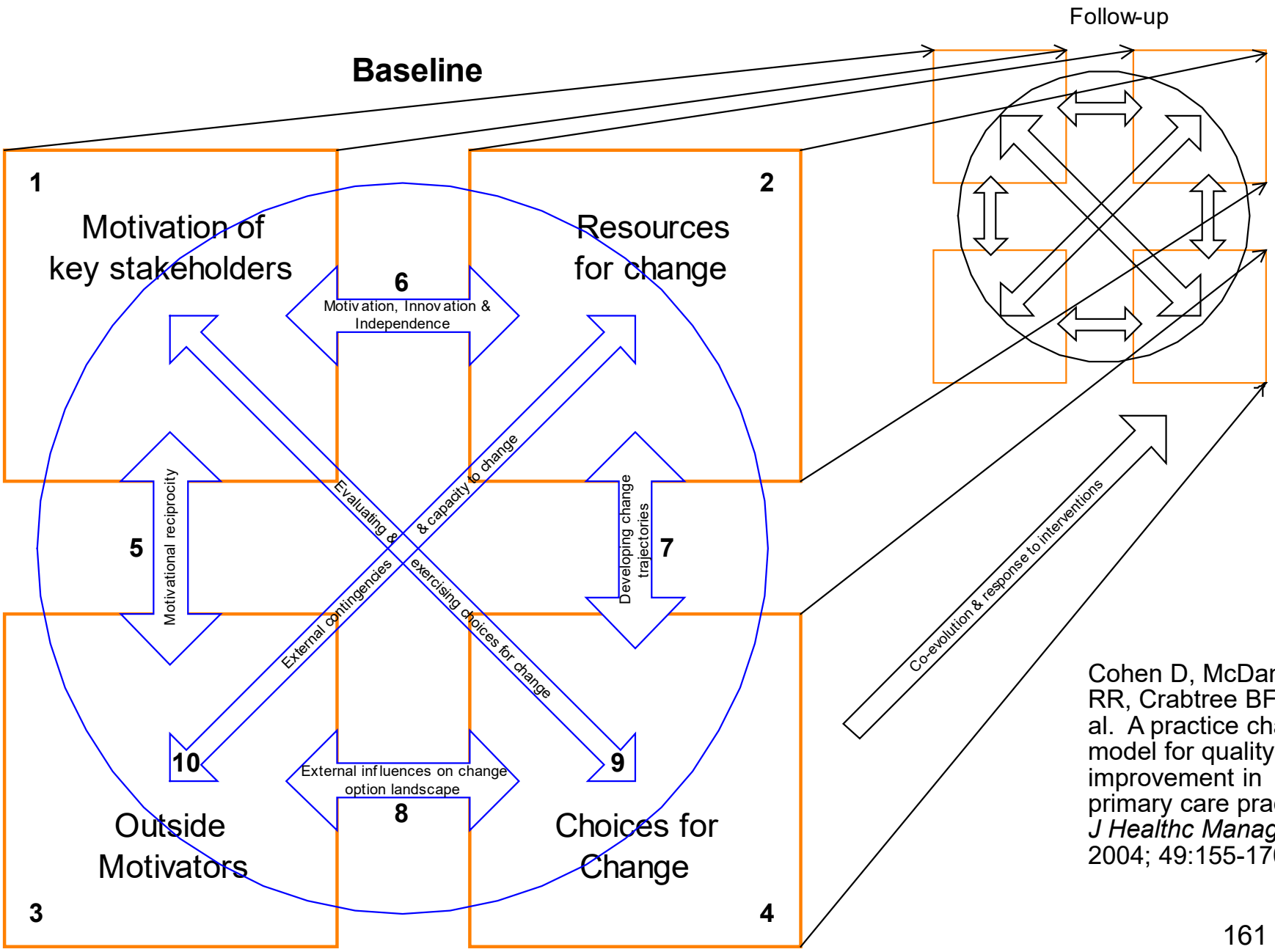
Domains of health issues initiated by clinician or patient

(*n*=365 total health issues at 15 encounters)



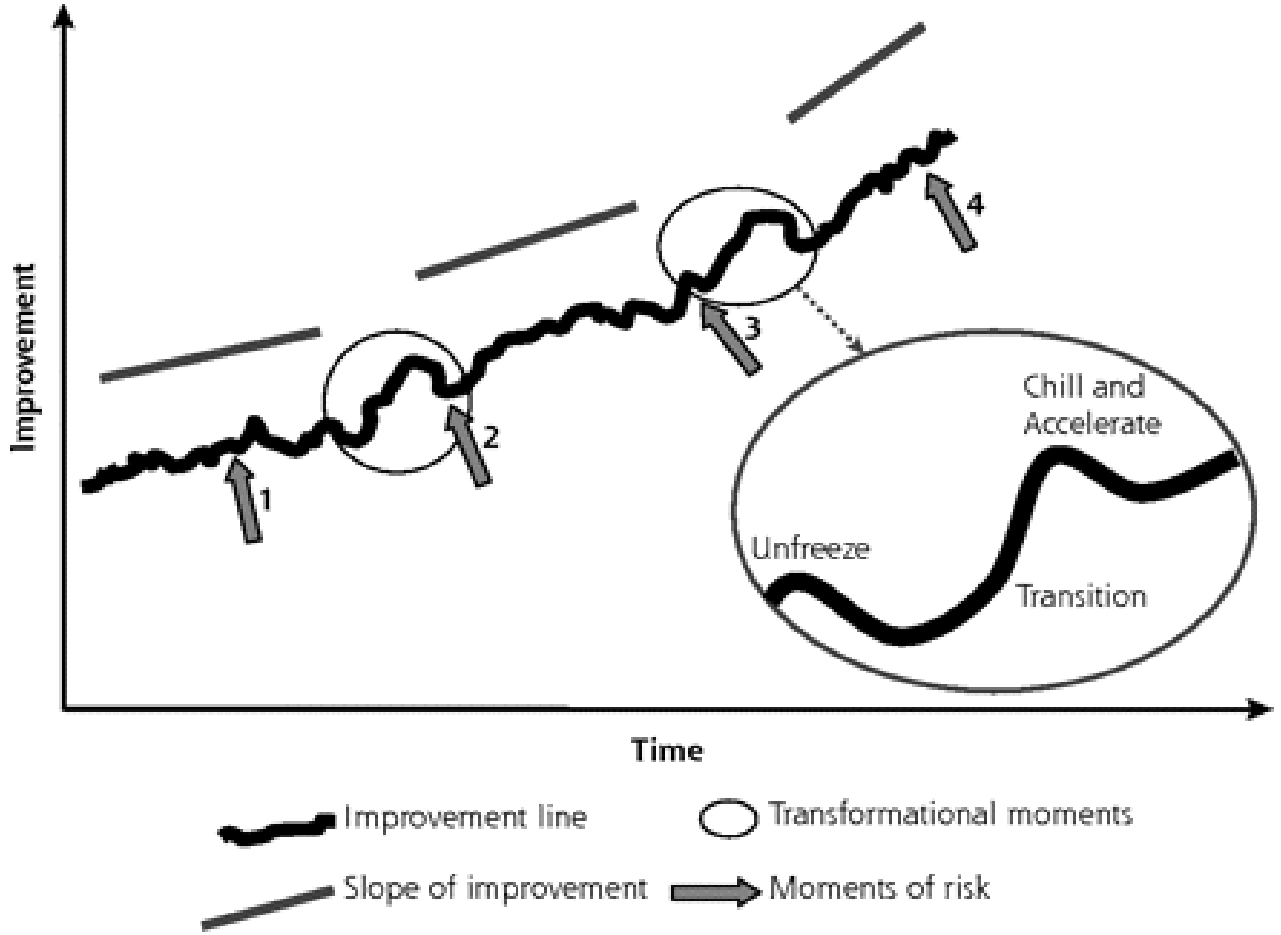
Bolen SD, Sage P, Perzynski AT, Stange KC. No Moment Wasted: The Primary Care Visit for Adults with Diabetes. *Primary Healthcare Research & Development*. 2015; May 20:1-15.

Practice Change Models



Cohen D, McDaniel RR, Crabtree BF, et al. A practice change model for quality improvement in primary care practice. *J Healthc Manag,* 2004; 49:155-170.

Developmental pathway of change and transformation



Miller WL, Crabtree BF, Nutting PA, Stange KC, Jaén CR. Primary care practice development: A relationship-centered approach. *Ann Fam Med.* 2010; 8 (Suppl 1): S68-S79.

Integrating Behavioral & Primary Care

- Purpose of study
  - Describe how different clinicians integrate care
  - Identify important contextual factors
- Methods
  - Comparative case study by multidisciplinary team
  - Observation, interviews, practice staff diaries
  - Data from two studies
    - Advancing Care Together – a demonstration project of 11 practices located in Colorado
    - Integration Workforce Study - 8 practices across the US

Cohen DJ, Davis M, Balasubramanian BA, et al. Integrating Behavioral Health and Primary Care: Consulting, Coordinating and Collaborating Among Professionals. *J Am Board Fam Med.* 2015;28 Suppl 1:S21-31.

Cohen DJ, Balasubramanian BA, Davis M, et al. Understanding Care Integration from the Ground Up: Five Organizing Constructs that Shape Integrated Practices. *J Am Board Fam Med.* 2015;28 Suppl 1:S7-S20.

Integrating Behavioral & Primary Care

- 3 strategies for working together
  - Consulting
  - Coordinating
  - Collaborating
- Key contextual factors
  - time to plan patient care
  - Staffing
  - employing brief therapeutic approaches
  - proximity of clinical team members
  - electronic health record documenting behavior

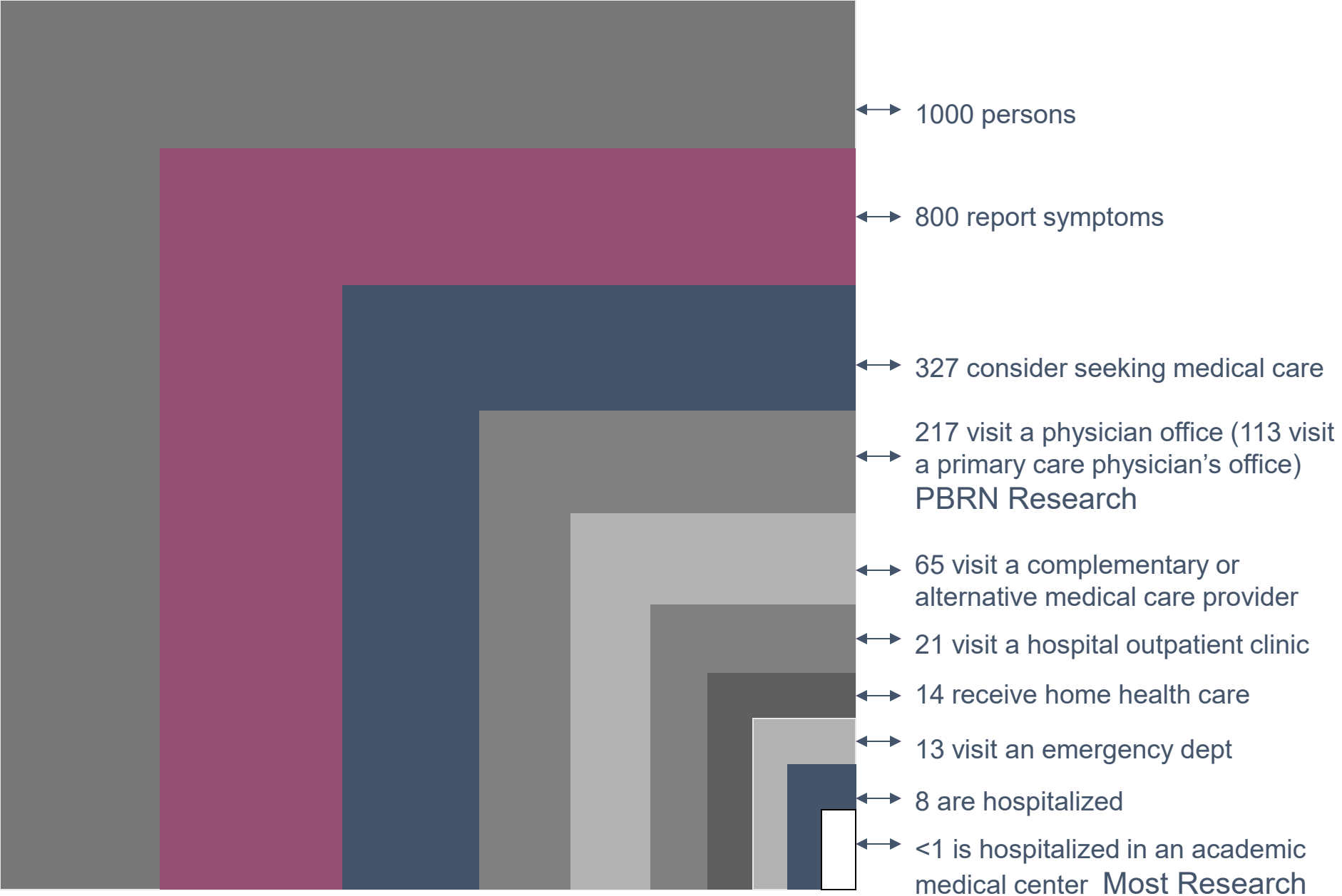
Cohen DJ, Davis M, Balasubramanian BA, et al. Integrating Behavioral Health and Primary Care: Consulting, Coordinating and Collaborating Among Professionals. *J Am Board Fam Med.* 2015;28 Suppl 1:S21-31.

"Never ever, think outside the box.

C’mon, c’mon. It’s either one or the other.

"Paper or plastic?"


I'm having such a good time, I feel like we're in a pharmaceutical ad.
10-14-10
BIZARROCOMIC.BLOGSPOT.COM
BIZARRO.COM



Results of a reanalysis of the monthly prevalence of illness in the community and the roles of various sources of health care. (Green LA et al., *N Engl J Med* 2001, 344:2021-2024)

Re-emerging Political Space for Linking Person and Community Through Primary Health Care

4 themes from national policy key informants:

- Affirmation of primary care as the foundation of a more effective healthcare system
- Patient-centered medical home is a *transitional step* to foster practice innovation & payment reform
- Urgent need for an increased focus on community and population health in primary care
- Ongoing need for advocacy and research efforts to keep primary care on & policy agendas.

Sweeney SA, Bazemore A, Phillips Jr. RL, Etz RS, Stange KC. A re-emerging political space for linking person and community through primary health care. *Am J Prev Med*, 2012; 42(6S2): S184-S190.

What is Health?

- A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (World Health Organization, 1947)
- A resource for every day life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities. (Ottawa Charter for Health Promotion, 1986)
- Conditions that enable a person to work to achieve his or her biological and chosen potential. (Seedhouse 2001)
- Membership in a community. (Berry, 2002)
- The biological, social, and psychological ability that affords an equal opportunity for each individual to function in the relationships appropriate to his or her cultural context at any point in the life cycle. (Fine & Peters, 2007)
- The ability to develop meaningful relationships and pursue a transcendent purpose in a finite life. (Stange, 2010)

Global Typology of Primary Care Organisational Developments

Organisational Type	Structure and Process	Value Base	Service Focus	Location (examples)	Endpoint
Extended general practice	Simple partnership	Normative	Registered patient list	Health centre	Patient
Managed care enterprise	Complex, stakeholder	Calculative	Target groups	Physicians group	User
Reformed polyclinic	Coalition, divisional	Commercial	Medical conditions	Multi-specialist clinic	Client
District health system	Hierarchic, administrative	Executive	Public health improvement	General hospital	Populations
Community development agency	Association, network	Affiliative	Local populations	Health stations	Citizen
Franchised outreach	Quasi-institutional, virtual	Remunerative	Payers	Private, hospital premises	Customer

Meads G (2006) *Primary Care in the Twenty-First Century: An international perspective. Oxford: Radcliffe Publishing.*

What do we mean by population health?

- *Goals*
  - *Health* as well-being for persons
  - *Population health* as that goal expressed in measurable terms for groups
  - *Community health* as population health for particular communities of interest, geography, or other defining characteristic-groups with shared identity and particular systemic influences on health
- *Realities*
  - Social determinants as influences
  - Health disparities as effects
  - Health equity as both a goal and a design principle
- *Ways to get the job done*
  - *Health care delivery systems* for enrollees
  - *Public health* in population-based civic activities-with a *broad zone of collaboration* where streams of effort converge in partnership with served communities

Peek CJ, Westfall JM, Stange KC, et al. Shared language for shared work in population health. Ann Fam Med. 2021;19(5):450-457. www.ncbi.nlm.nih.gov/pubmed/34546952 .