Patient Centered Care for People with Multimorbidity

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“Treating an Illness Is One Thing. What About a Patient With Many?”

New York Times, March 31, 2009

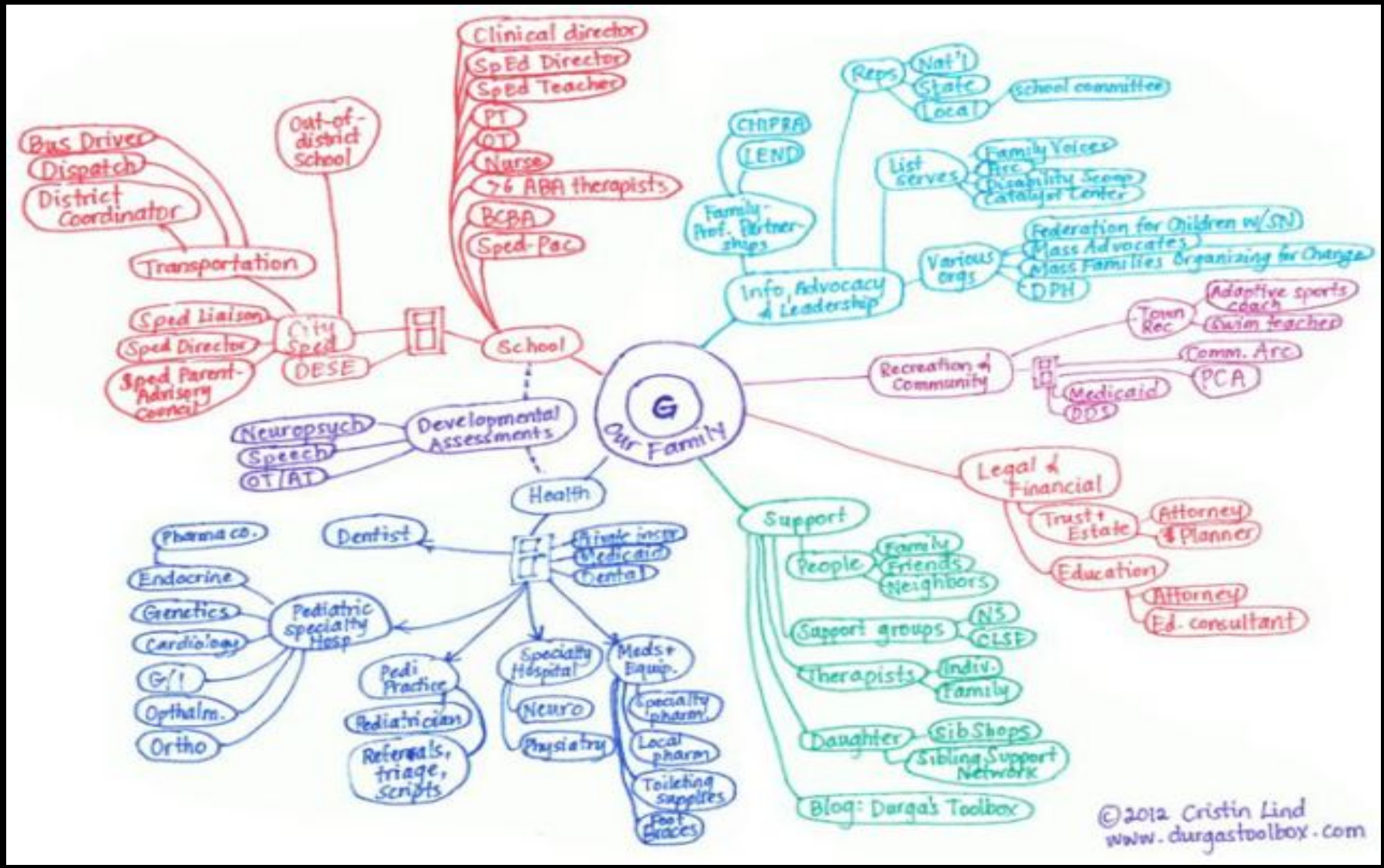
Image: Brendan Smialowski for the New York Times

It's Not Easy Living with Multimorbidity

Time	Medications	Non-pharmacologic Therapy	All Day	Periodic
7 AM	Ipratropium MDI Alendronate 70mg weekly	Check feet Sit upright 30 min. Check blood sugar	Joint protection Energy conservation Exercise (non-weight bearing if severe foot disease, weight bearing for osteoporosis) Muscle strengthening exercises, Aerobic Exercise ROM exercises Avoid environmental exposures that might exacerbate COPD Wear appropriate footwear Albuterol MDI prn Limit Alcohol Maintain normal body weight	Pneumonia vaccine, Yearly influenza vaccine All provider visits:Evaluate Self-monitoring blood glucose, foot exam and BP Quarterly HbA1c, biannual LFTs Yearly creatinine, electrolytes, microalbuminuria, cholesterol Referrals: Pulmonary rehabilitation Physical Therapy DEXA scan every 2 years Yearly eye exam Medical nutrition therapy Patient Education: High-risk foot conditions, foot care, foot wear Osteoarthritis COPD medication and delivery system training Diabetes Mellitus
8 AM	Eat Breakfast HCTZ 12.5 mg Lisinopril 40mg Glyburide 10 mg ECASA 81 mg Metformin 850mg Naproxen 250mg Omeprazole 20mg Calcium + Vit D 500mg	2.4gm Na, 90mm K, Adequate Mg, ↓ cholesterol & saturated fat, medical nutrition therapy for diabetes, DASH		
12 PM	Eat Lunch Ipratropium MDI Calcium+ Vit D 500 mg	Diet as above		
5 PM	Eat Dinner	Diet as above		
7 PM	Ipratropium MDI Metformin 850mg Naproxen 250mg Calcium 500mg Lovastatin 40mg			
11 PM	Ipratropium MDI			

Boyd et al. JAMA 2005;294:716-724

Care Maps



http://durgastoolbox.com/2012/09/19/durga-tool-9-my-care-map-or-the-picture-that-tells-a-thousand-words/

BMJ Aug 2009 May C et al.

How Applicable are Clinical Practice Guidelines (CPGs) for People with Multimorbidity?

- Reviewed 9 CPGs for chronic conditions
- Most single disease CPGs fail to give adequate guidance for older patients with multimorbidity

Issue	Is Criteria Addressed?
Attention	Limited
Quality of Evidence	Limited
Specific recommendations	Most address treatment of index disease in presence of single other conditions
Time needed to treat	Limited
Quality of life	Limited
Trade-offs in goals of therapy	Not at all
Patient preferences	Limited
Burden	Limited

Boyd et al. JAMA 2005;294:716-724

Canadian Guidelines

- 16 guidelines assessed
- 56.2% of guidelines addressed treatment for patients with multiple chronic conditions
- 18.8% addressed the issue for older patients.
- 93.8% included specific recommendations for patients with one concurrent condition
- only three guidelines (18.8%) addressed specific recommendations for patients with two comorbid conditions, only one for more than two concurrent comorbid conditions.

Fortin et al. BMC Family Practice 2011

Canadian Guidelines

10 CPGs reviewed

- 8 mentioned people with comorbidities
- 4 indicated the time needed to treat to benefit in the context of life expectancy
- 5 discussed barriers to implementation
- 7 discussed the quality of evidence.

Mutaswinga et al. Canadian Family Physician
July 2011 vol. 57 no. 7 e253-e262

Is this only relevant for the older population?

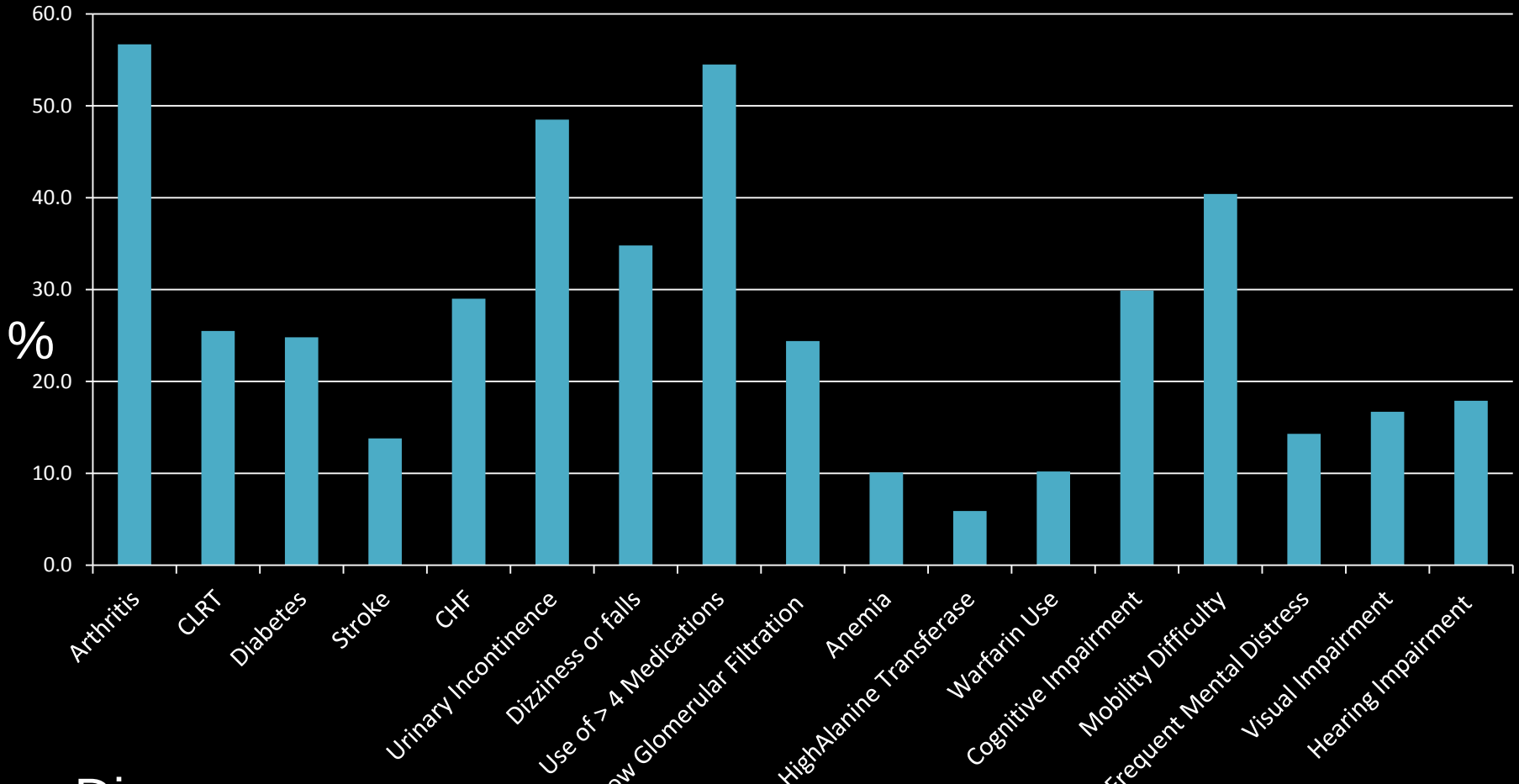
Multimorbidity is Common

Percentage of Major Chronic Disease in Isolation Among Women Aged 65 or Older: NHANES, 1999-2004

	Arthritis	Coronary Heart Disease	Chronic Lower Respiratory Tract Disease	Diabetes	Stroke
% with only 1 disease of 5 possible diseases	47%	17%	19%	17%	15%

Weiss CO et al. JAMA 2007;298:1160-1162

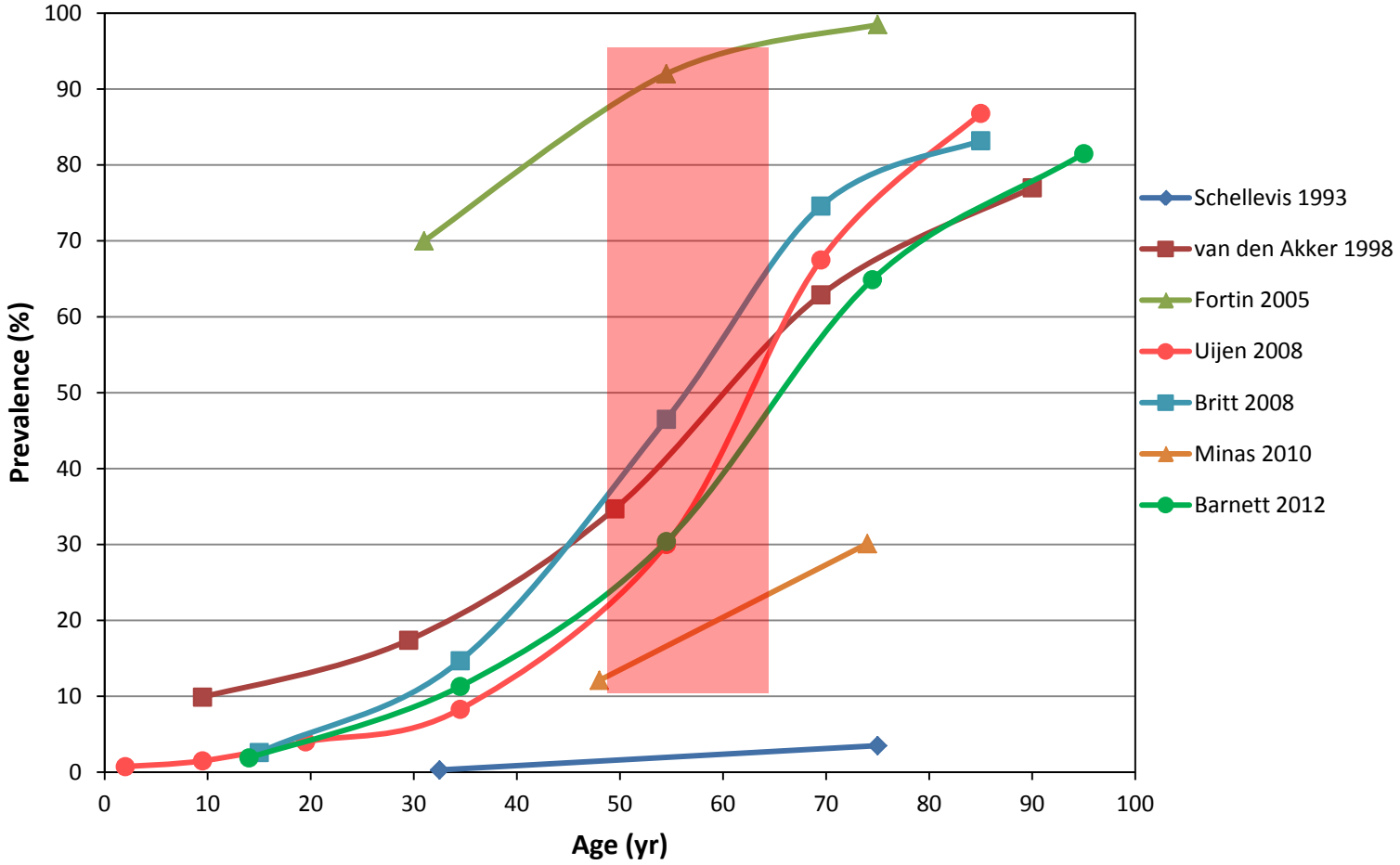
Prevalence of Comorbidities in Adults with Coronary Heart Disease Aged ≥ 45 in NHANES, 1999-2004



Boyd et al JAGS 2011 May;59(5):797-805

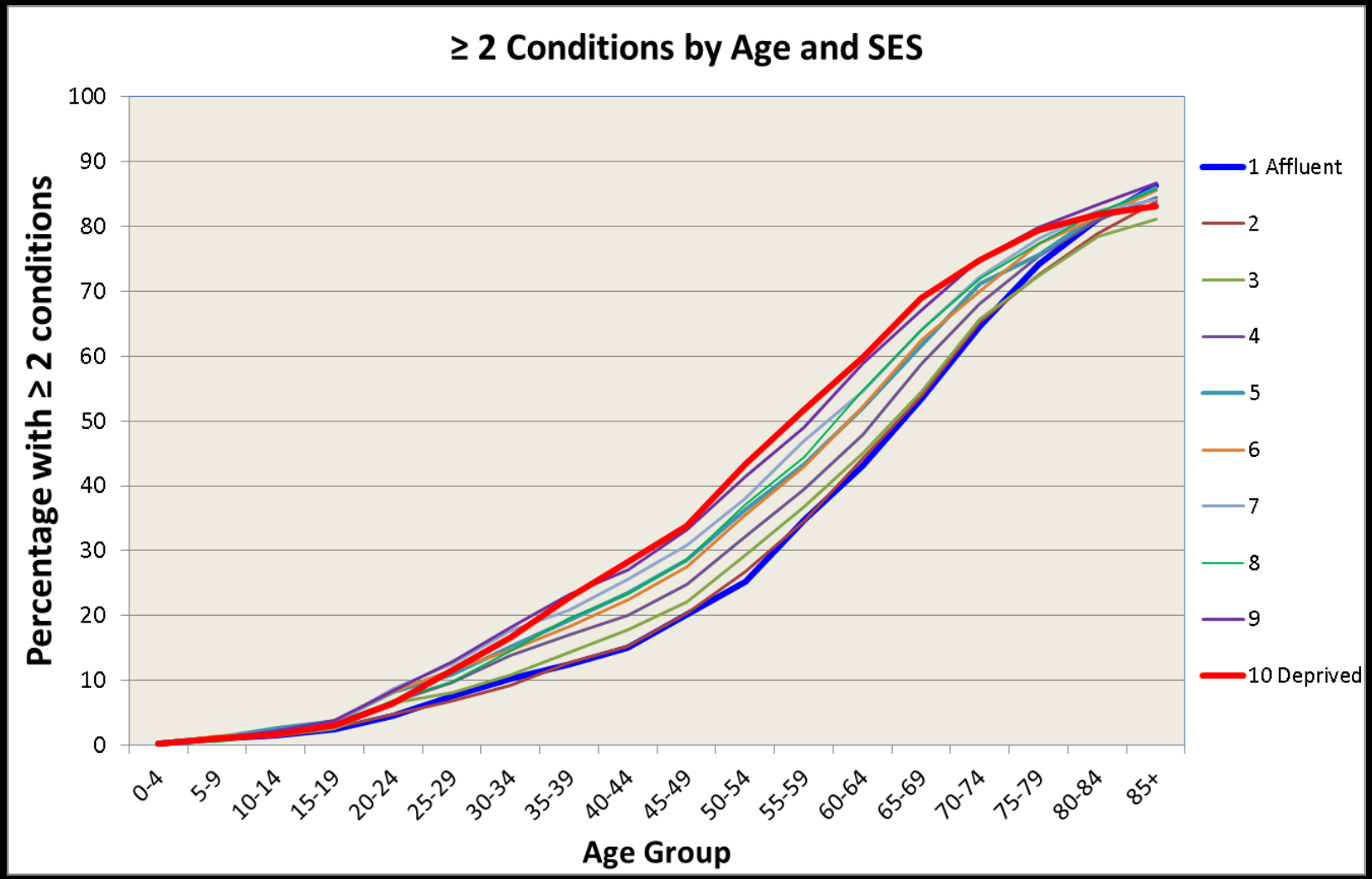
Multimorbidity in primary care and general practice

Multimorbidity and age



Adapted: Fortin, Stewart et al; *Ann Fam Med* 2012 Mar;10(2):142-51.

In Scotland, people living in more deprived areas develop multimorbidity 10 years before those living in affluent areas



Barnett et al. Lancet. 2012 Jul 7;380(9836):37-43

Living with MCCs

- Affects quality of life, functional status, ability to get a job and work, and life expectancy
- Receive care that often is fragmented, incomplete, inefficient, and ineffective
- Have higher healthcare costs and utilization rates

(Chronic Conditions among Medicare Beneficiaries, CMS Chartbook 2012)

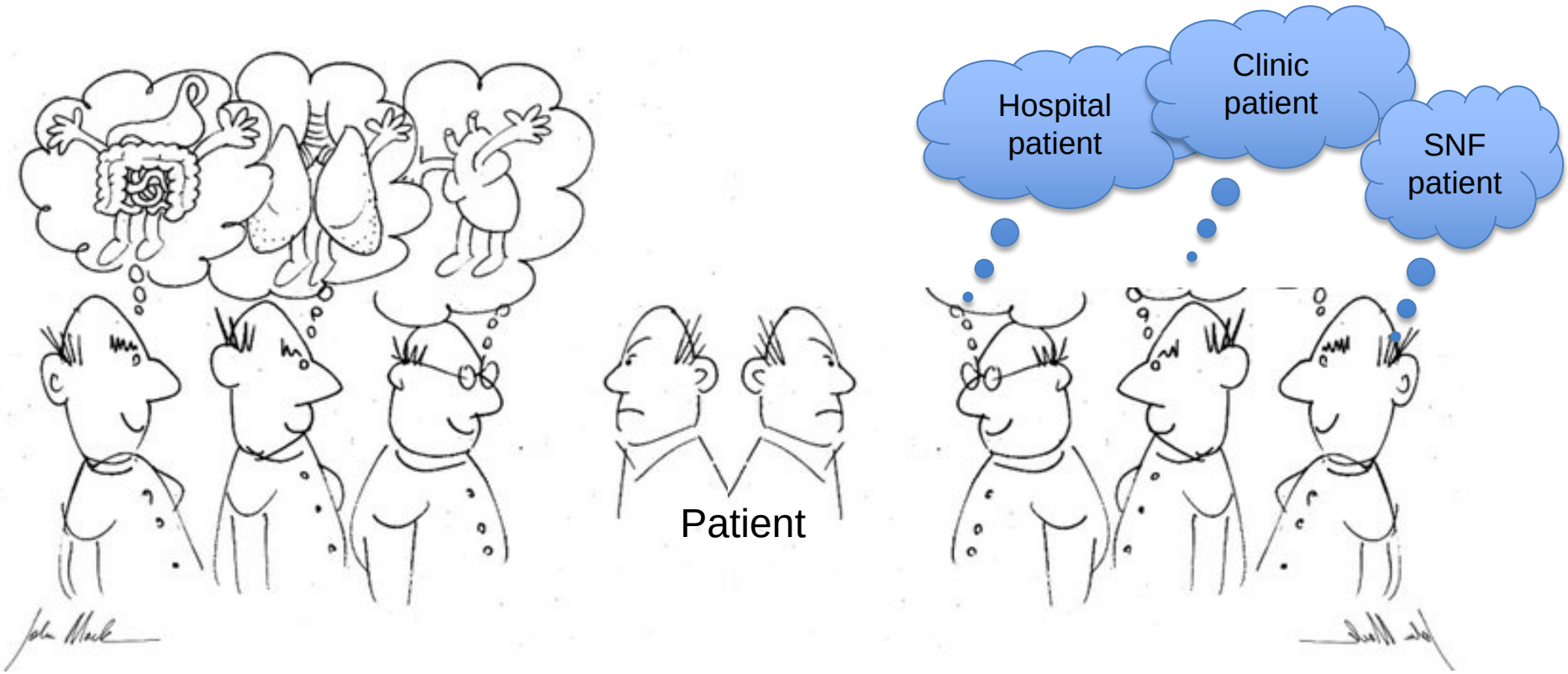
So what is patient-centered care for people with multimorbidity?

Patient-Centered Care

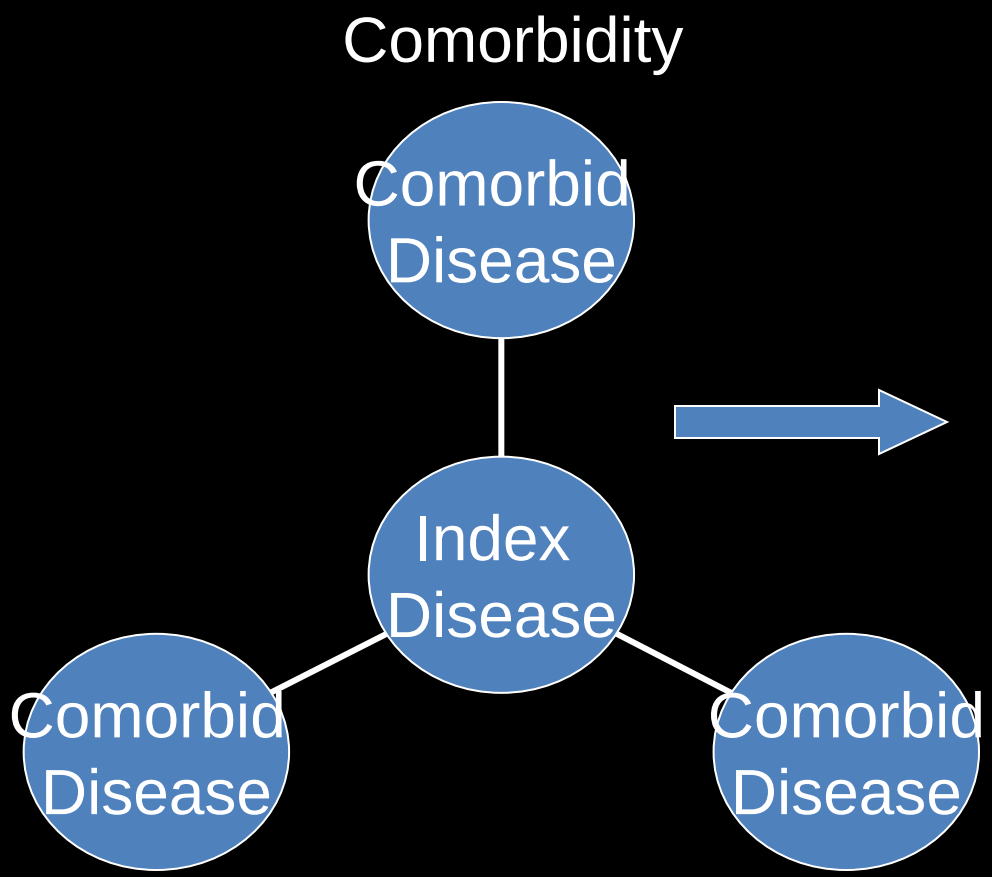
- “It may be most commonly understood for what it is not—technology centred, doctor centred, hospital centred, disease centred.”
  - Stewart M *BMJ 2001;322:444*

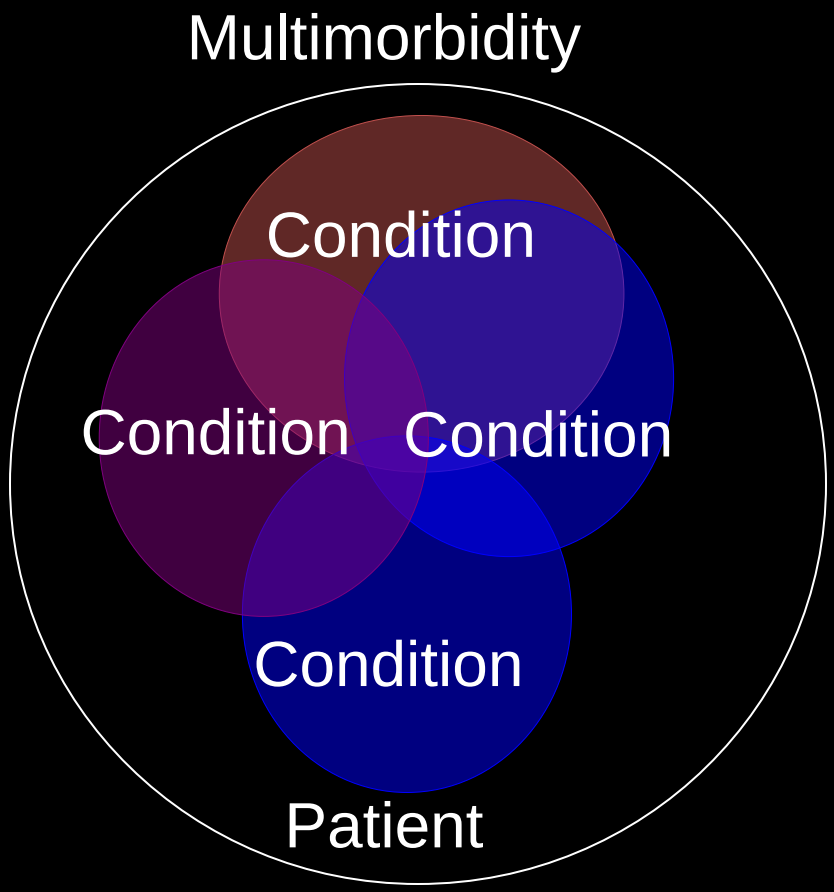
Key Elements:

- patients' concerns and need for information;
- integrated understanding of the patients' world
- common ground on issue and management
- prevention and health promotion;
- continuing relationship


Hospital patient
Clinic patient
SNF patient
Patient

Conceptual Framework





Boyd, CM, Fortin M. Public Health Reviews, 2011.

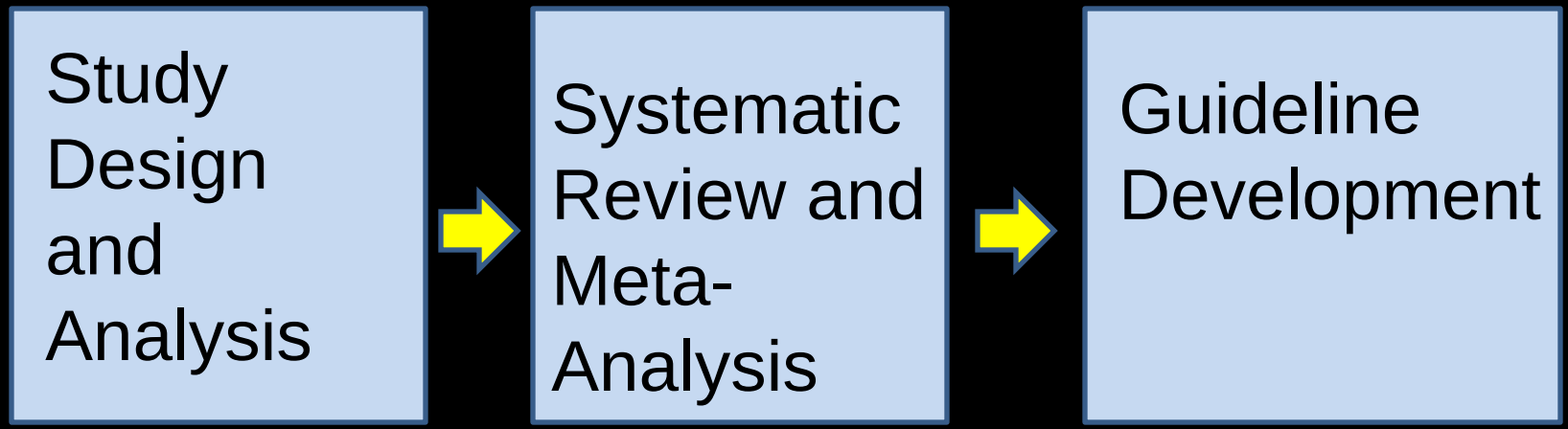
What Do Clinicians Need to Best Care for the People with Multimorbidity?

- Maximize use of therapies likely to benefit patients with multimorbidity
- Minimize use of therapies unlikely to benefit or likely to harm patients with multimorbidity
- Incorporate patient preferences and values regarding burdens, risks, and benefits

How do we get the evidence base we need to support patient-centered care?

Development of a Preliminary Framework for Guidelines That Are More Applicable to People with Multiple Chronic Conditions

Three Domains:



- Stakeholders: e.g. guideline developers, methodologists, clinicians, multimorbidity, government
- **Ultimate Goal**: Prioritization within, and across, diseases for what is most likely to benefit an individual patient

Uhlig et al., Trikalinos et al, Weiss et al, Boyd and Kent JGIM In Press 2013

The Evidence Base

- Are participants representative of the actual population (often multimorbid)
- the number of trials with explicit age exclusions ↓

  While trial enrollment of older patients ↑,

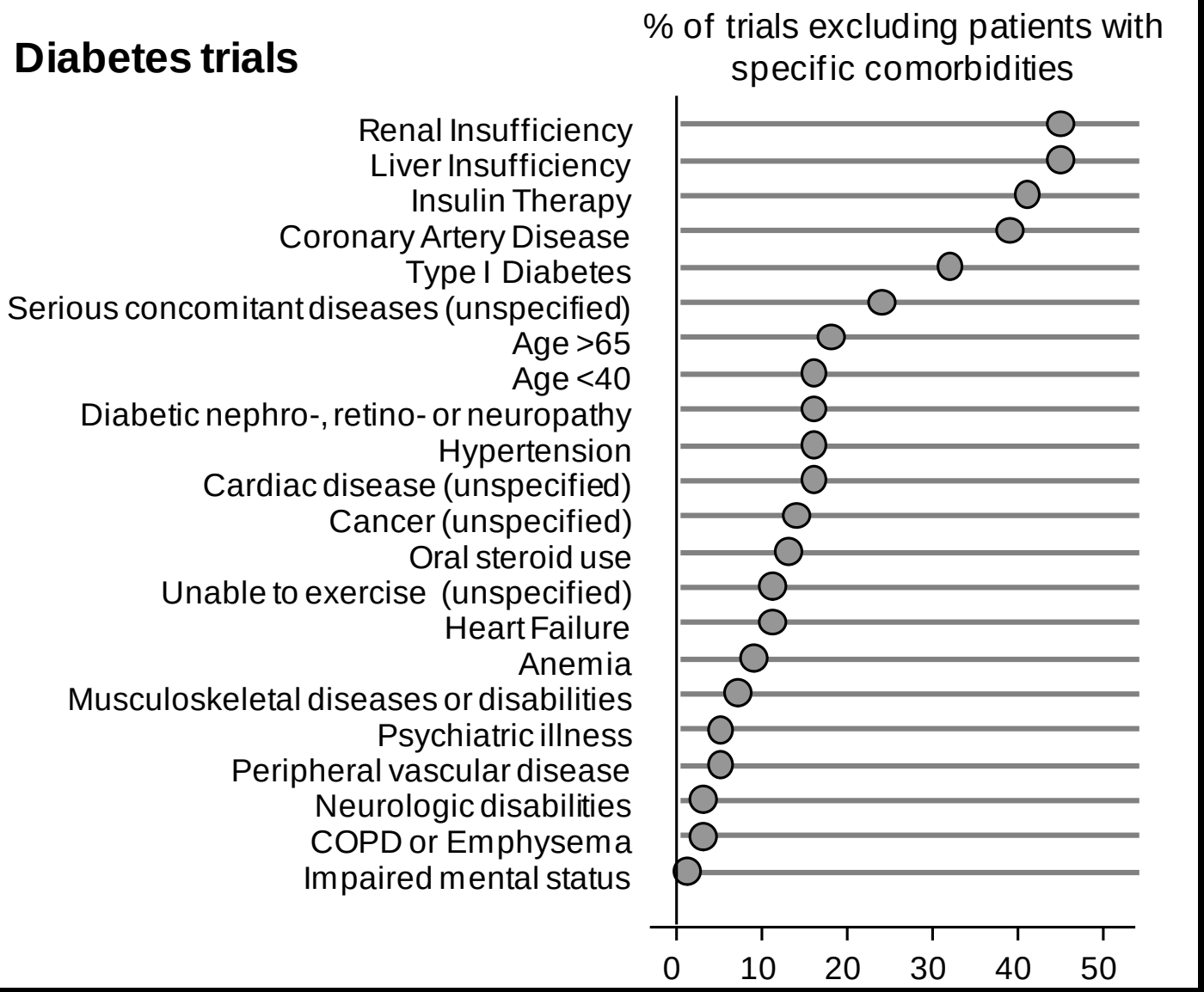
  - still well below levels that older patients are affected

  Lee PY et al. *JAMA*. 2001;286:708-713, Van Spall et al JAMA 2006
- number of heart failure trials excluding participants with specific comorbidities ↑ from 1985 to 1999

  Heiat A, et al *Arch Intern Med*. 2002;162:1682-1688.
- exclusion/inclusion criteria less important than who is the "average" patient in a trial
- Kravitz R et al. *Milbank Quarterly* 82: Dec 2004

  Kent and Kitsios, Trials 2009

Diabetes trials



Boyd, Vollenweider, Puhan
PLOS One 2012

Steps of Guideline Development

1 and 2: Choosing Topics

3: Commissioning Work Group and Process

4 and 5: Refining Questions, Choosing and Ranking Important Outcomes

6: Systematic Reviews

7 and 8: Grading quality of evidence and applicability

9. Summarizing benefits and harms

10. Formulating recommendations and Grading Strength

11. Implementation/evaluation

(GRADE, NICE, USPSTF, IOM)

Choosing Topics

- Prevalence
- Important interactions
  - –condition-condition
  - –condition-treatment
  - –treatment-treatment
- ? evidence

Framework for Considering Comorbid Conditions

Concordant conditions:

- same overall pathophysiologic risk profile
- shared disease management plan

Discordant conditions:

- not directly related in either their pathogenesis or management

(Piette JD and Kerr EA Diabetes Care 29:725-731, 2006)

Choosing Topics: Focus

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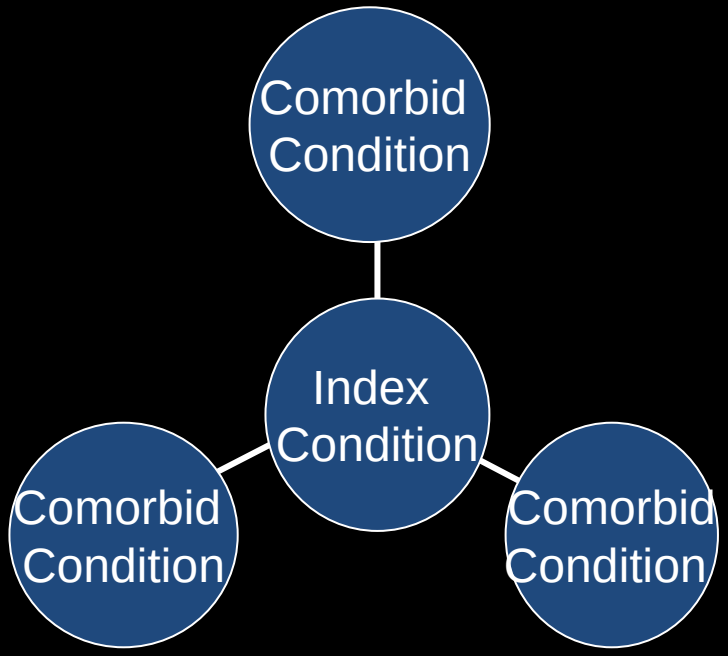

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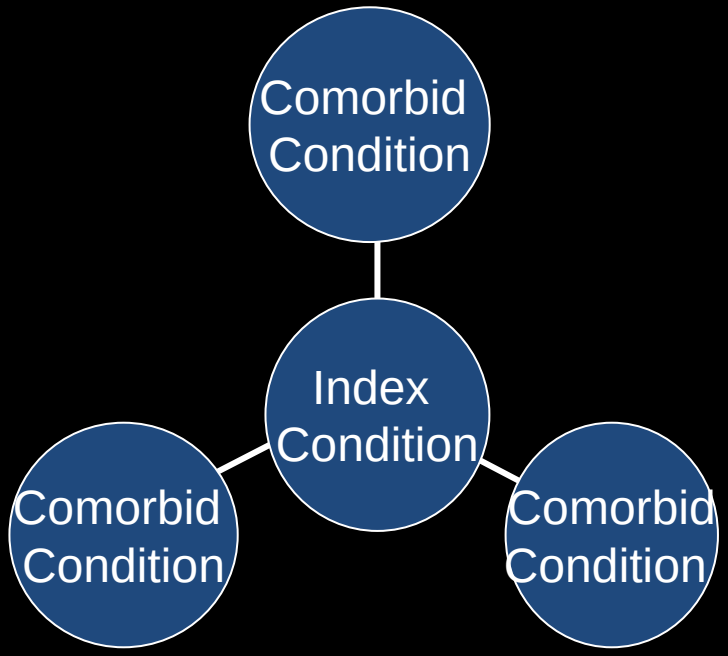

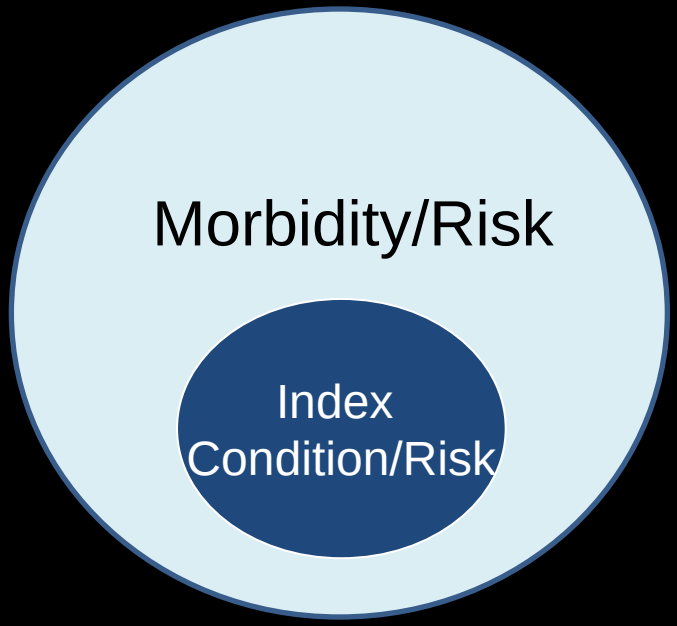

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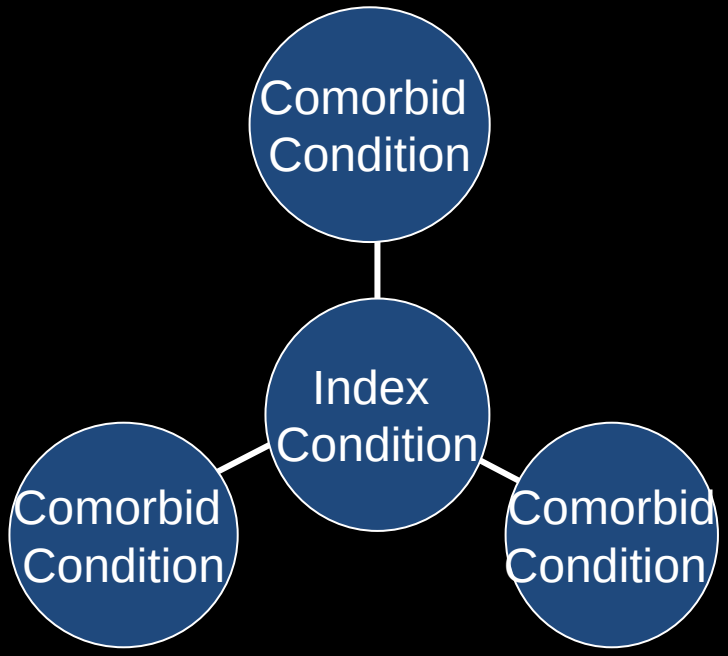

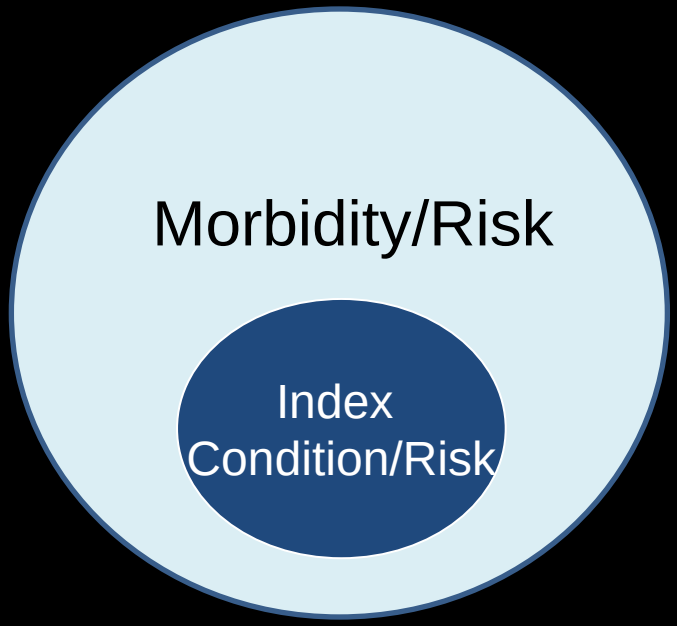

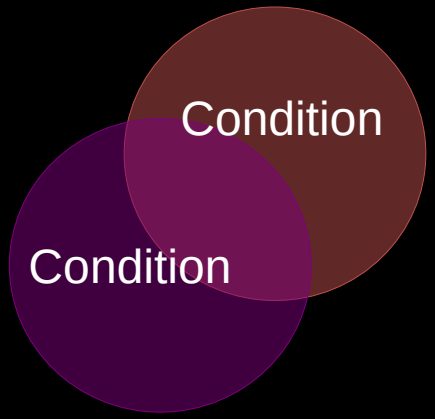

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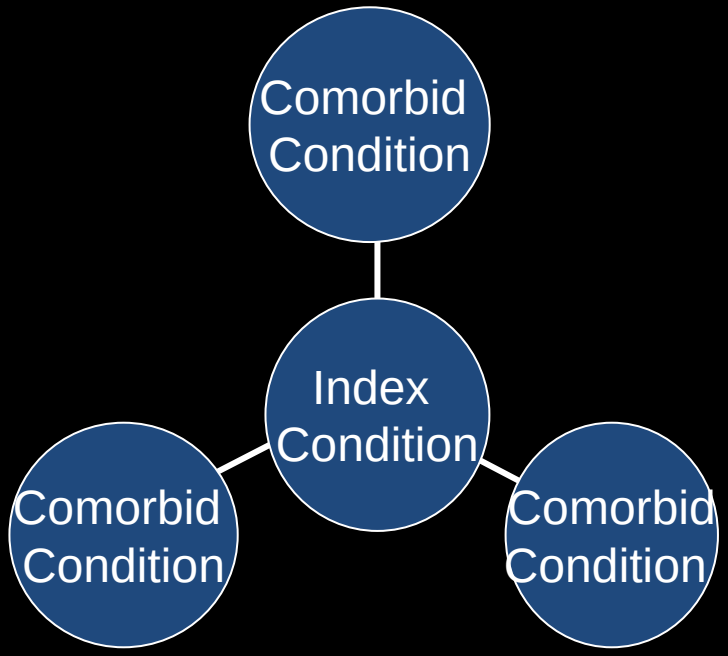

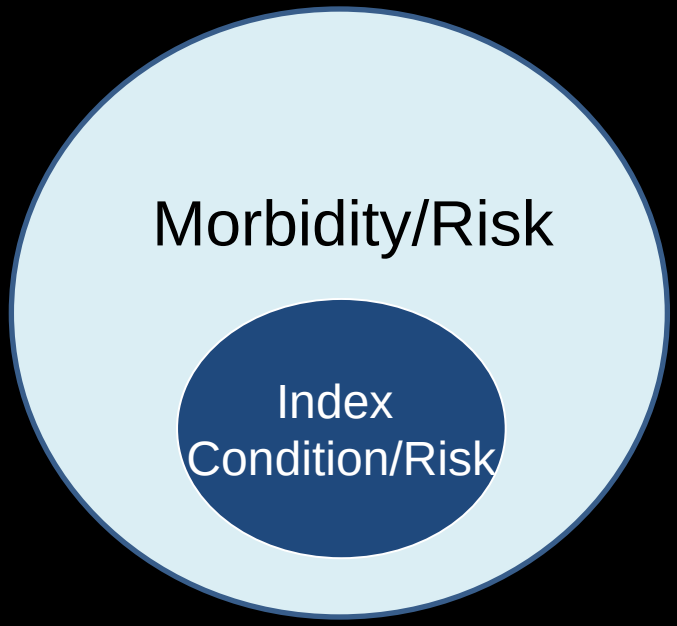

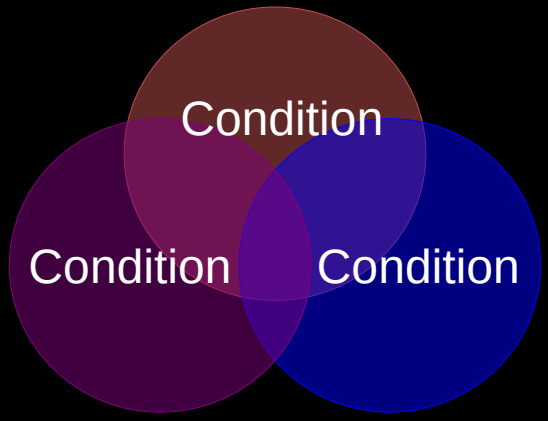

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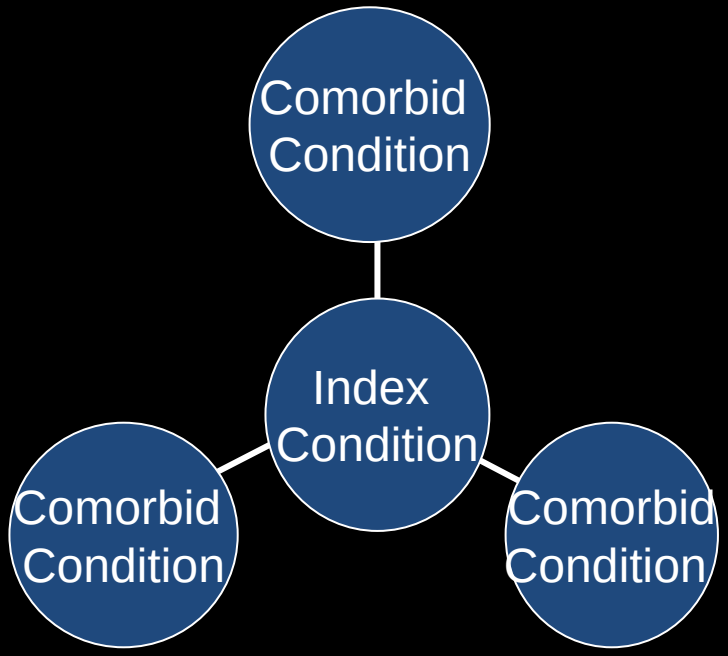

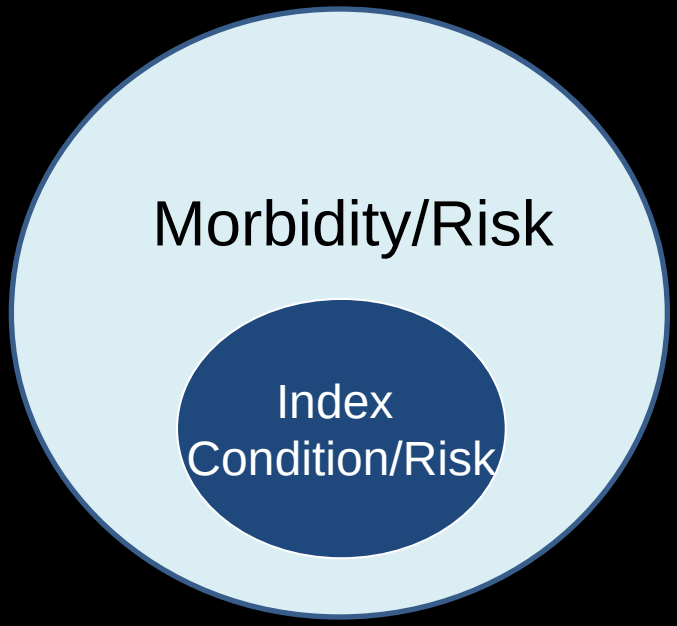

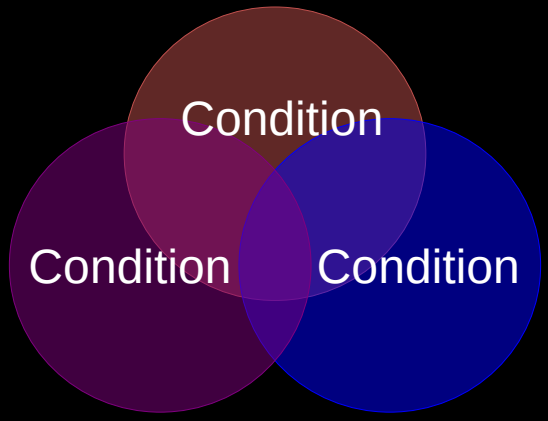

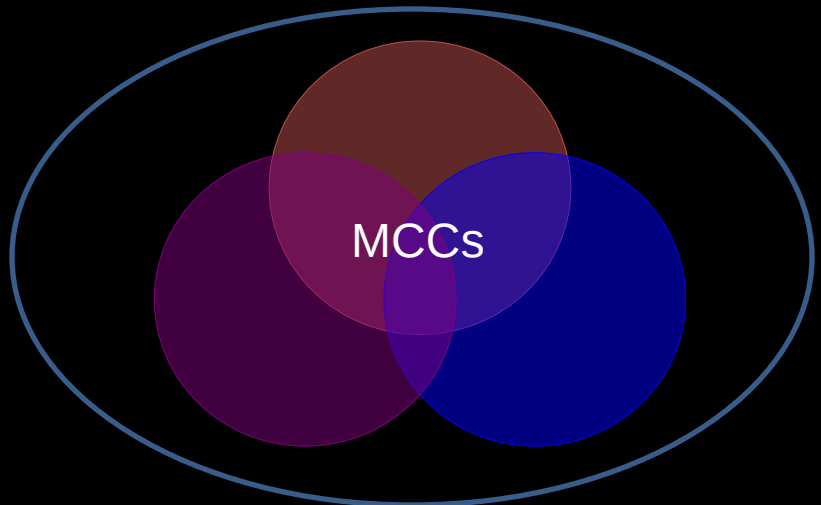

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(GRADE, NICE, USPSTF, IOM)

Addressing Comorbidities in Guideline Questions

Population: Define conditions of interest

Intervention and Comparators: effect modification

Outcomes: choice & ranking of relevant outcomes

- harms, burdens, benefits
- non-disease specific and disease specific
- linkage between surrogate and clinical outcomes

"*Effect of treatment on the final outcome may be small even if there are strong associations between treatment and the surrogate and between the surrogate and the patient-important outcome*"
Walter SD et al 2012 Sep;65(9):940-5

Timeframe for considering outcomes:

- risk prediction
- tradeoffs

Personalized Decisions

Do Screen

Likelihood of Benefit

Don't Screen

Likelihood of Harm

Patient Preferences (moveable fulcrum)

Slide Courtesy of Louise Walter, UCSF

How to Integrate Multiple Comorbidities in Guideline Development

Fabbri LM, Boyd C, Boschetto P, Rabe KF, Buist AS, Yawn B,
Leff B, Kent DM, and Schunemann HJ on behalf of the ATS/ERS Ad Hoc Committee
on Integrating and Coordinating Efforts in COPD Guideline Development

PATS 2012

- Net benefit of multiple interventions under consideration can be compared
- Ultimately can allow for prioritization with an individual patient

Approach to the Evaluation and Management of Older Adults with Multimorbidity: Guiding Principles

- Patient Preferences
- Interpreting the Evidence
- Prognosis
- Treatment Complexity and Feasibility
- Optimizing Therapies and Care Plans

http://www.americangeriatrics.org/health_care_professionals/clinical_practice/multimorbidity

Patient-Centered Care

- “It may be most commonly understood for what it is not—technology centred, doctor centred, hospital centred, disease centred.”
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Key Elements:

- patients' concerns and need for information;
- integrated understanding of the patients' world
- common ground on issue and management
- prevention and health promotion;
- continuing relationship

Multiple Chronic Conditions in Context

Moving from “What is the matter?” to

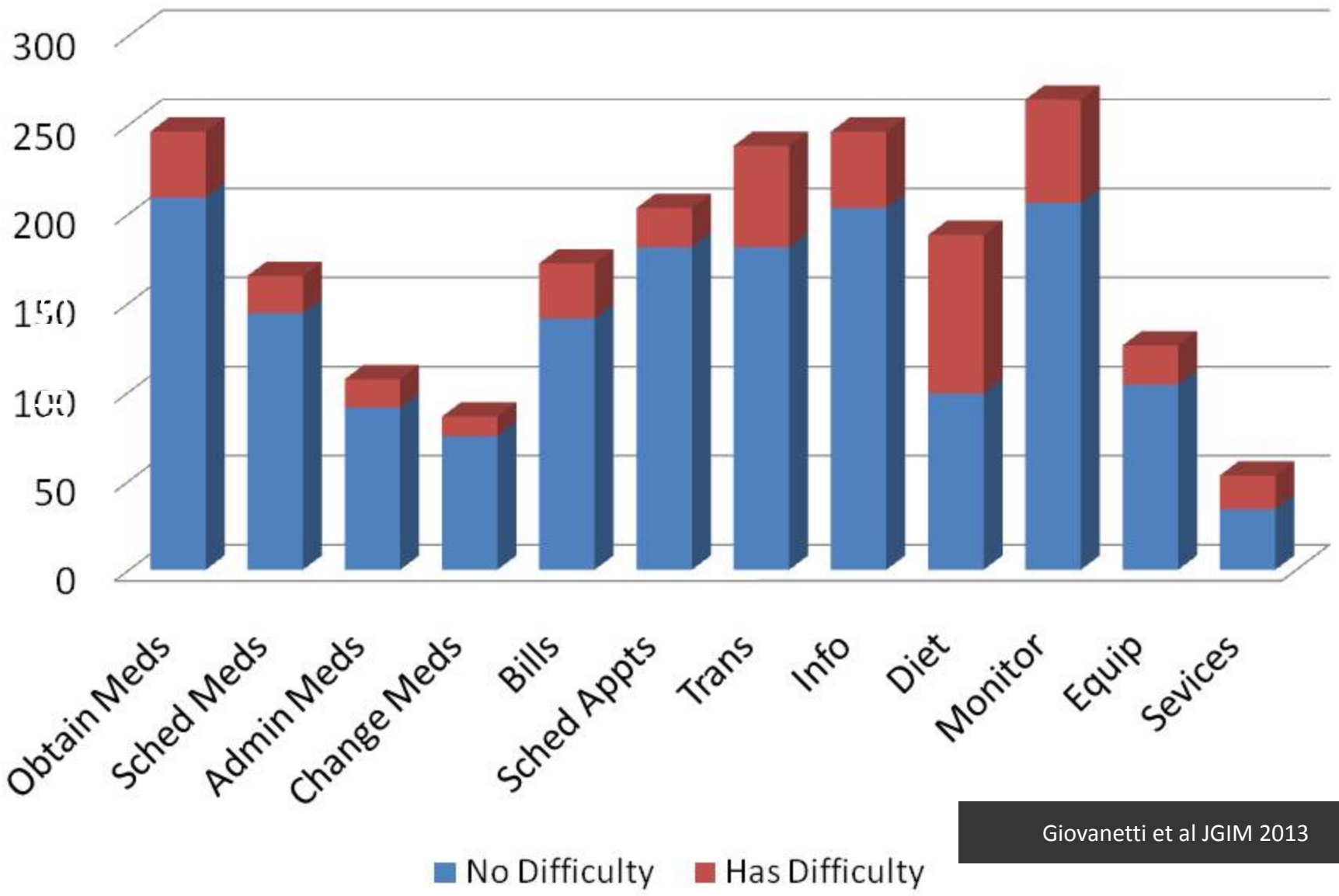
“What Matters to You?”

NIH/PCORI Meeting on Multiple Chronic Conditions in Context, Feb. 2013

Self-Management

- One quarter of high risk older adults with multiple chronic conditions who were invited to participate in Chronic Disease Self-Management attended 5 sessions

Dattalo M et al Medical Care 2012



Giovanetti et al JGIM 2013

Role of Family/Friends: *Hidden in Plain Sight*

- 40% of older adults are routinely accompanied to medical visits
- Accompanied older adults are older, sicker, less educated, use more health services
- Visit companion: same person over time

Wolff JL and Roter DL. Social Science and Medicine, 72(6) 823-31. 2011.
Wolff JL, Boyd CM, et al. J Am Geriatr Soc, 2012, 60(1):106-12.

Opportunities

- Companions assume varied behaviors that can help or hinder communication
- Most physicians struggle to adequately build a productive patient-family-provider partnership
  - Barriers include training, time and reimbursement, concerns about patient privacy
- Best methods to incorporate family in health care for chronic conditions ?

Scholle SP. AHRQ, 2010.
Wolff JL and Roter DL. Social Science and Medicine, 72(6) 823-31. 2011.

Interventions for improving outcomes in patients with multimorbidity in primary care and community settings: Systematic review

Susan M Smith[1], Hassan Soubhi[2], Martin Fortin[2], Catherine Hudon[2], Tom O'Dowd[3]

[1]HRB Centre for Primary Care Research, RCSI Medical School, Dublin

[2]Department of Family Medicine, University of Sherbrooke, Quebec

[3]Department of Public Health and Primary Care, Trinity College Dublin

Included studies

- Ten studies; all RCTs
  - 3407 patients
  - 8 in USA and 2 in UK
  - Majority 6-12 months
  - 8 included patients with broad range of conditions though elderly
  - 2 focused on co-morbidities

- Overall minimal risk of bias though consideration of contamination of control patients was generally inadequate

Results: Interventions

Interventions:

- 6 organisational
- 4 patient oriented

Multifaceted including:

- Case management
- Enhanced skill mix in teams
- Structured care provision
- Patient focused approaches such as self-care and self-management

Results: overview

- Variation in participants and interventions
- Co-morbidity vs multimorbidity
  - Problems with definitions and overlap with frailty
  - May need different interventions for different groups
- Timescale
  - Improvements in medication related measures
- Targeting risk factors or specific functional difficulties may be more effective

Summary

- Optimal decision-making and care for people with multimorbidity
  - Thinking beyond individual diseases
  - Incorporating the view and context of the patient (and family)
  - Considering Evidence
  - Facilitating patient-centered care within health care delivery

Boyd CM, October 2013

New York Times, March 31, 2009

Image: Brendan Smialowski for the New York Times

Thank you

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- Robert Wood Johnson Physician Faculty Scholars
- AHRQ R21 “Improving Clinical Practice Guidelines for Complex Patients” HS018597-01

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