POPULATION HEALTH AND THE REHABILITATION DISCIPLINES

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BACKGROUND AND PURPOSE

- Population health becoming an increasingly important part of the health care delivery system of the United States

- The US health care system is "as messy, disjunctive, and complex as its sprawling public-private health care industry." (Stevens, *Social History of Medicine*, 2008)

- Institute for Healthcare Improvement: Triple Aim
  - Improving the patient experience of care
  - Improving the health of populations
  - Reducing the per capita cost of care

- Population health component of the Triple Aim not well understood within rehabilitation disciplines

- Purpose: Present two models that can be useful to rehabilitation practitioners and faculty members interested in expanding roles within population health

POPULATION HEALTH DEFINITION

- "Multiple determinants of health including medical care, genetics, behaviors, social factors, environmental factors, and public health." (IOM, 2013)

- "Health outcomes of a group of individual including the distribution of outcomes within the group. . . which includes health outcomes, patterns of health determinants, and policies and interventions that link these two." (Kindig and Stoddard, *Am J Public Health*, 2003)

- "Conceptual framework for thinking about why some populations are healthier than others as well as the policy development, research agenda and resource allocation that flow from this framework." (Young, *Population Health: Concepts and Methods*, 1998)

- Broad, extends beyond individual treatment paradigm
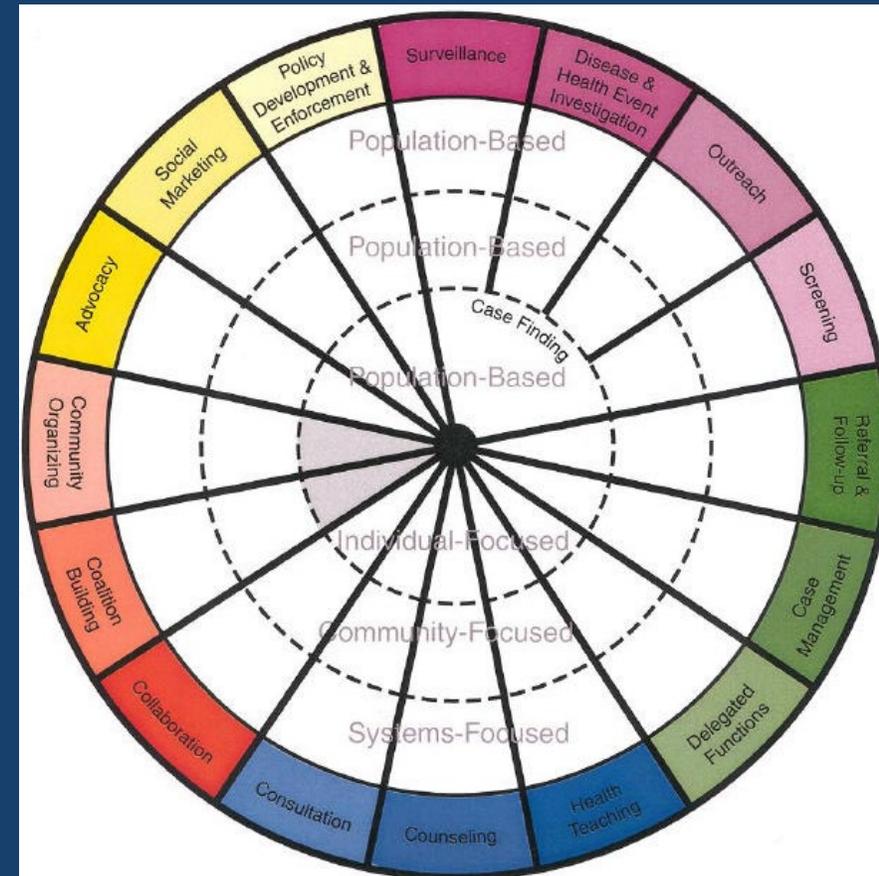
MODELS

- PRACTICE MODELS

- Public Health Nursing Intervention Wheel (Keller et al, *Pub Health Nursing*, 2004)

- Population-Based Practice Wheel (our modification of Keller et al)

- EDUCATIONAL MODEL

- Clinical Prevention and Population Health Curriculum Framework (CPPH) (Healthy People Curriculum Task Force of the Association for Prevention Teaching and Research, US DHHS Office of Disease Prevention and Health Promotion, 2015)
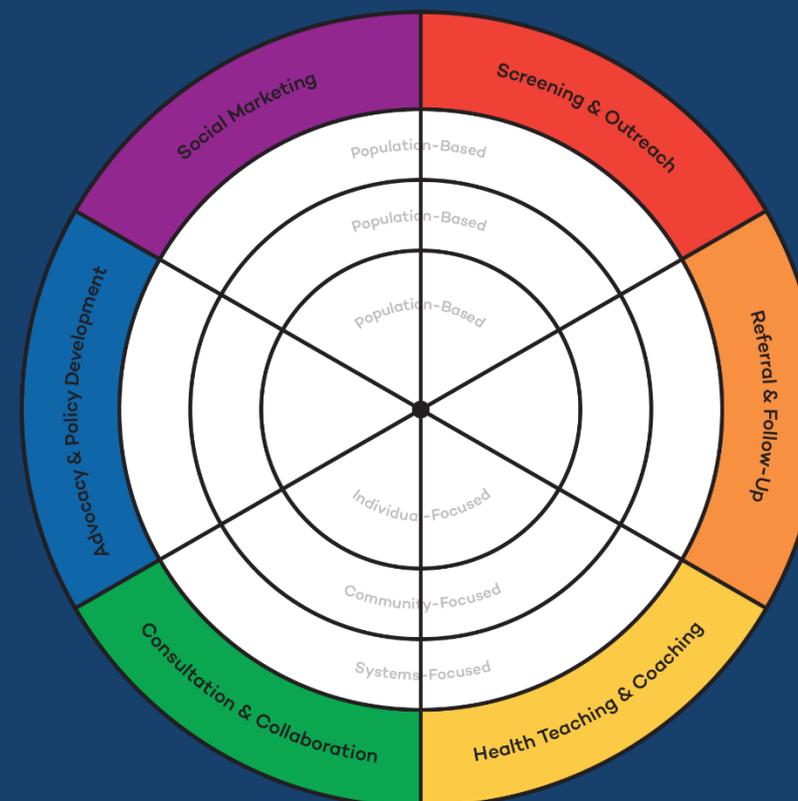
INTERVENTION WHEEL

- Keller et al (*Pub Health Nursing,* 2004)

- Developed through grounded theory process and validated through literature synthesis

- Three levels of population-based practice
  - Systems-focused
  - Community-focused
  - Individual-focused

- 17 population-based interventions, grouped into 5 wedges of similar or overlapping interventions

POPULATION-BASED PRACTICE WHEEL

- Simplification of Keller et al

- Giuffre S, Domholdt E, Keehan J. Beyond the Individual: Population Health and Physical Therapy. *Physiotherapy Theory and Practice.* Published online, 7/18/18. DOI: 10.1080/09593985.2018.1490364

- Retains three level of population-based practices

- Collapses 17 interventions into six activity wedges applicable to a broader set of disciplines

- Preliminary, not tested or validated

LEVELS OF PRACTICE

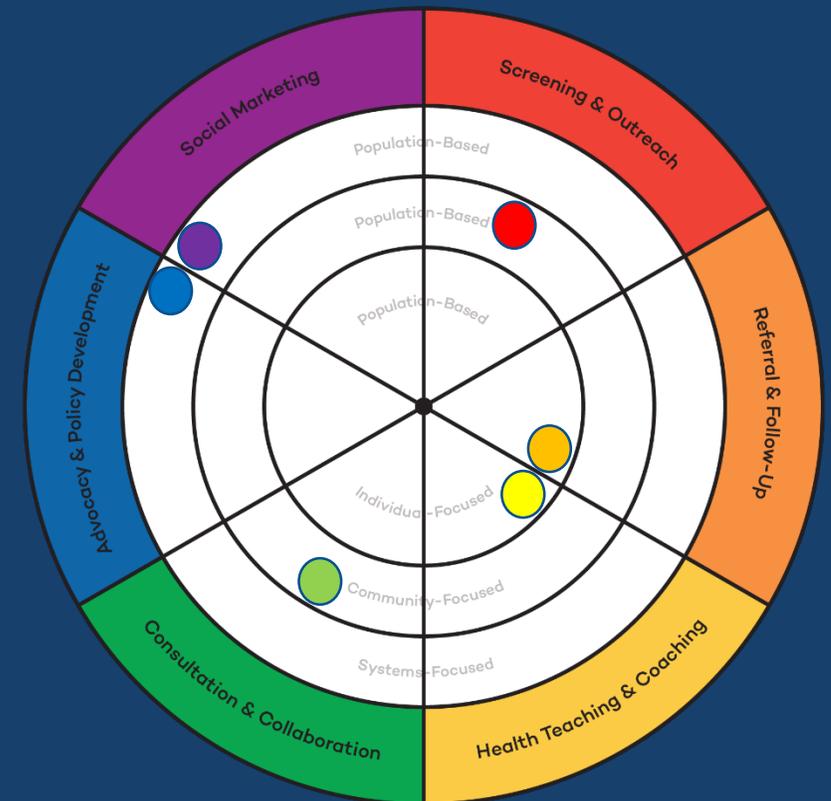| Level	Brief Definition (Keller et al)
System-focused practice	Population-based system-focused practice changes organizations, policies, laws, and power structures. The focus is on the systems that impact health, not directly on individuals and communities.
Community-focused practice	Population-based community-focused practice changes community norms, community attitudes, community awareness, community practices, and community behaviors. It is directed toward entire populations within the community or occasionally toward target groups within those populations.
Individual-focused practice	Population-based individual-focused practice changes knowledge, attitudes, beliefs, practices, and behaviors of individuals. This practice level is directed at individuals, alone or as part of a family, class, or group. Services to individuals and families are population-based only if they meet these two specific criteria: individuals receive services because they are members of an identified population and those services clearly contribute to improving the overall health status of that population.

PRACTICE WEDGES

Wedge	Brief Definition (Keller et al)
Screening & Outreach	Identifies and reaches out to individuals with unrecognized health risk factors or disease conditions
Referral & Follow-Up	Assists individuals, families, communities to identify and access resources to prevent or resolve concerns
Health Teaching & Counseling	Communicates to change knowledge and behaviors; establishes relationships to enhance capacity for self-care
Consultation & Collaboration	Generates potential solutions to problems through interactive work with communities, systems, families, individuals
Advocacy & Policy Development	Places health issues on decision-maker agendas, develops capacity of others to act on their own behalf
Social Marketing	Uses marketing technologies for programs to influence knowledge, attitudes, behaviors

LEVEL & WEDGE EXAMPLES

Wedge	Example	
Screening & Outreach	SLP hearing screening for clients with aphasia (Silkes and Winterstein, 2017)	🔴
Referral & Follow-Up	Family violence referral by PTs (Dalton, 2005)	🟠
Health Teaching & Counseling	Early literacy and SLPs (Tambyraja, 2014)	🟡
Consultation & Collaboration	OT and mental health needs of children and youth (Bazyk et al, 2015)	🟢
Advocacy & Policy Develop	Occupational identity. . .influence on return to work in HIV/AIDS (Braveman et al, 2006)	🔵
Social Marketing	PT for pain management (APTA)	🟣

CPPH EDUCATIONAL MODEL

- Clinical Prevention and Population Health Curriculum Framework (CPPH)

- Healthy People Curriculum Task Force of the Association for Prevention Teaching and Research, US DHHS Office of Disease Prevention and Health Promotion, 2015

- Broad brush curriculum that can be adapted and integrated into educations programs for a variety of health professionals

- Four major components
  - Foundations of population health
  - Clinical preventive services and health promotion
  - Clinical practice and population health
  - Health systems and health policy

- Subcategories, topic areas, illustrative examples

CPPH SUBCATEGORIES

Population Health	Prevention & Promotion	Clinical Practice & PH	Health Systems & Policy
Epidemiology	Screening	Integrating PH in Practice	Organization of Systems
Etiology, Benefits, Harms	Behav Change Counseling	Partnering with the Public	Health Services Financing
Evidence-Based Practice	Immunization	Environmental Health	Workforce
Prevent/Promote Interv	Preventive Medication	Occupational Health	Health Policy Process
Determinants of Health	Other Preventive Interv	Global Health Issues	
PH Informatics		Cultural Dimensions	
Evaluation		Emergency Preparedness	

EXAMPLES MAPPED TO CPPH FRAMEWORK

Population Health	Prevention & Promotion	Clinical Practice & PH	Health Systems & Policy
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COMPONENT 1: FOUNDATIONS OF PH

Implementation of Promotion/Prevention Sub-Component	Illustrative Examples
Types of prevention	Primary, secondary, teriary
Target audience for direct interventions	Individuals, high risk groups, populations
Social determinants of health re: prevention	Income, education, access to transportation, culture
Role of clinician and team	Education, incentives for behavioral change
Practice-based systems to aid in provision of preventive services	Reminders to clinicians and patients, outreach using technology
Impact of pop health focus on communities and individuals	Community-based approaches to facilitate healthy behaviors

Building capacity of OTs to address mental health needs of children and youth (Bazyk et al, 2015)

COMPONENT 2: PREVENTION AND PROMOTION

Screening Sub-Component	Illustrative Examples
Analysis of screening tests	Range of normal, sensitivity, specificity
Assessment of health risks	Psychosocial, environ, genetic factors
Criteria for successful screening	Effectiveness, benefits and harms, barriers
Clinician-patient communication	Patient participation in decision-making, risk communication
Evidence-based recommendations	Use of evidence-based recommendations
Government requirements	Newborn screening

Speech-language pathologists' use of hearing screening for clients with aphasia (Silkes and Winterstein, 2017)

COMPONENT 3:
CLINICAL PRACTICE AND PH

Partnering with the Public Sub-Component	Illustrative Examples
Community health assessments	Assess community needs/strengths
Options for interventions	Apply principles of community engagement
Conducting community-engaged research	Apply principles of community-based participatory research
Media communications	Strategies for using mass and social media
Literacy level and cultural appropriateness	Culturally and Linguistically Appropriate Services Standards
Evidence-based recommendation for community prevention services	Community Preventive Services Task Force recommendations

MoveForwardPT.com (APTA)

COMPONENT 4: HEALTH SYSTEMS AND POLICY

Health Policy Process Sub-Component	Illustrative Examples
Process of health policy making at local, state, and federal levels	Public hearings and comment periods, authorizations vs. appropriations
Participation in the policy process	Advisory roles, policy analysis and advocacy
Role and impact of policies on health and health care	Impact on the general population, on vulnerable populations, and on health disparities
Ethical frameworks for public health decision-making	Weighing individual and community needs, respect for diverse values and beliefs

Occupational identity. . . influence on return to work in men with HIV/AIDS (Braveman et al, 2006)

CURRICULAR QUESTIONS RAISED BY CPPH FRAMEWORK

- What elements of CPPH framework fit a particular professional program?

- What is entry-level practice and what is advanced practice?

- Separate course or threaded throughout the curriculum?

- Addition to curriculum or replacement for something else?

- Are faculty prepared to teach this content?

- Didactic, laboratory, service learning, clinical?

- Is this kind of practice modeled within our professional communities?

- How do we reach practicing clinicians?

SUMMARY

- Population health is increasingly important within the US health system

- Rehabilitation (and other) professions have a role to play in PH

- Population-Based Practice Wheel can help conceptualize levels and types of population-based practice

- Clinical Prevention and Population Health Curriculum Framework can help educators think about how to approach this emerging practice area

- Many questions remain about how PH will be realized by the various professions and how it should be incorporated into entry-level curriculums and into the professional development of practicing clinicians