Overview:

- What is a public health perspective?
- Why is arthritis a public health problem?
- What does public health have to offer?
What the heck is a “public health perspective”?

(or …things I never learned in occupational therapy or psychology school…)

Core Public Health Values

- Utilize and expand the science base
- Reduce health disparities
- Work through partnerships
- Emphasize prevention
  - Primary
  - Secondary
  - Tertiary
The Public Health Approach

- Promotes activities to both **measure** and **respond to** health problems or risk factors in **population groups**
- Fosters **system changes** to influence health of populations
- It is **not** the treatment of the individual person

Public Health’s Challenge

To identify and help implement strategies for improving the health of an entire population
Public Health Works at Multiple Levels of Influence

Social-ecological model was modified from: McLeroy et al., 1988, Health Educ Q; Sallis et al., 1998, Am J Prev M

Public Health Impact Pyramid

AJPH (2010) 100: 590-595
What makes arthritis a public health problem?

(or ... why does public health even care about arthritis?...)

1999 Public health takes action...

... to decrease impact of arthritis

National Arthritis Action Plan

• 1\textsuperscript{st} ever Congressional appropriation for arthritis

• 1\textsuperscript{st} ever arthritis objectives in Healthy People 2010
Why is PH interested in Arthritis? (circa 1999)

Arthritis:
- A large and growing problem
- Seriously impacts peoples’ lives
- Costly to people, families and society
- We can do something about it
Arthritis and other rheumatic conditions

- “Arthritis” encompasses more than 100 diseases and conditions affecting joints, the surrounding tissues and other connective tissues
- Characterized by pain, aching, stiffness, and/or swelling in and around a joint

Prevalence of Select Types of Arthritis

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA</td>
<td>27 M</td>
</tr>
<tr>
<td>Fibro</td>
<td>5 M</td>
</tr>
<tr>
<td>Gout</td>
<td>3 M</td>
</tr>
<tr>
<td>RA</td>
<td>1.5 M</td>
</tr>
<tr>
<td>JA</td>
<td>.3 M</td>
</tr>
<tr>
<td>SLE</td>
<td>.16 M</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/arthritis/data_statistics/arthritis_related_stats.htm
### Snapshot: Arthritis in the United States

- **52.5 million** Self-reported, Doctor-diagnosed
- **78 million** Ambulatory Care Visits (5% of all amb. Visits)
- **22.7 million** Limited in activities (9.8%)
- **750,000** Hospitalizations
- **9,500** Deaths


### Public Health “Definition” of Arthritis

Doctor-diagnosed arthritis:

“yes” to the question:

“Have you EVER been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?”
Who has arthritis?

- 52.5 million U.S. adults have arthritis
  - >1 in every 5 adults ≥18 years old
- Approximately 50% of adults over 65
- More than 2/3 of adults with arthritis are younger than age 65
- More women than men (24% vs 18%)
- More
  - White (23%) and Black (22%) than Hispanic (15%) or Asian (12%)

MMWR (2013) 62: 869-873

A Growing Problem: Projected Prevalence Increases

Arthritis & Rheumatism 2006;54:226-9
Why is PH interested in Arthritis? (circa 1999)

**Arthritis:**
- A large and growing problem
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---

**Most Common Causes of Disability**
**U.S. Adults, 2005**

- Arthritis or rheumatism
- Back or spine problems
- Heart trouble
- Mental or emotional problem
- Lung or respiratory problem
- Diabetes
- Deafness or hearing problem
- Stiffness or deformity of limbs/extremities
- Blindness or vision problems
- Stroke

Number in millions (of 47.5 million reporting a disability)
Projected Increases in Prevalence and Activity Limitations

Arthritis & Rheumatism 2006;54:226-9

Arthritis-Attributable Limitations

Among:
- Activity Limitations 43% 10%
- Work Limitations 31% 5%
- Social Participation 11%
- Volunteerism 41% (Among those who volunteer)

http://www.cdc.gov/arthritis/data_statistics/arthritis_related_stats.htm
Other Select Arthritis Impacts

- Severe Pain 26%
  (in the last week)
- Anxiety 31%
- Depression 18%

- 2-4 times as many “unhealthy days” as those without arthritis

http://www.cdc.gov/arthritis/data_statistics/arthritis_related_stats.htm

Why is PH interested in Arthritis? (circa 1999)

Arthritis:

- A large and growing problem
- Seriously impacts peoples’ lives
- **Costly to people, families and society**
- We can do something about it
Arthritis is Expensive

US Costs (2003 Estimate)
- Direct $81 B
- Indirect $47 B
- Total $128 B
(1.2% of GNP)

SOURCE: MMWR 2007 56:4-7

Why is PH interested in Arthritis? (circa 1999)

Arthritis:
- A large and growing problem
- Seriously impacts peoples’ lives
- Costly to people, families and society
- We can do something about it
Current Opportunities

- Primary: Preventing disease onset
  - Obesity, injury prevention
- Secondary: Screening and early detection
  - Early recognition and treatment of inflammatory arthritis
- Tertiary: Preventing disability or disease complications
  - Strategies with strongest science base
  - Size of target audience: 52.5 million

Arthritis-related Public Health Strategies

What makes a difference?

- Appropriate self management behaviors
  - Physical activity
  - Maintaining healthy weight
- Self management education programs
- Early diagnosis— inflammatory arthritis
Why is PH interested in Arthritis? (circa 1999)

Arthritis:
- A large and growing problem
- Seriously impacts peoples' lives
- Costly to people, families and society
- We can do something about it

Why is PH interested in Arthritis? (circa 2014)

- Large and growing problem
- Seriously impacts lives
- Rate of activity limitation progressing faster than projected
- Associated with obesity epidemic and physical inactivity
- Co-occurs with, and complicates management of, other chronic conditions
- Costly to people, families, society
- We can do something about it
Why is PH interested in Arthritis? (circa 2014)

- Large and growing problem
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Projected Increases in Prevalence and Activity Limitations

Arthritis & Rheumatism 2006;54:226-9
Activity Limitations Increasing Faster than Projected

Why is PH interested in Arthritis? (circa 2014)

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More Adults with Arthritis are Obese

More Adults with Arthritis are Inactive


Arthritis Shackles Obesity & Inactivity Efforts

People with arthritis are:
- more often obese
- more often inactive

People who are obese:
- more often have arthritis

People who are physically inactive:
- more often have arthritis

A bit of chicken and egg…
Arthritis + Obesity = Inactivity

And this is a problem because...

Arthritis creates unique barriers to physical activity

Physical Inactivity

Percent (%) inactive

<table>
<thead>
<tr>
<th></th>
<th>Neither</th>
<th>Arthritis Only</th>
<th>Obesity Only</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.4</td>
<td>16.1</td>
<td>13.5</td>
<td>22.7</td>
</tr>
</tbody>
</table>
Audience Research: Barriers to Exercise among People with Arthritis

Common Barriers
- Fatigue
- Lack time
- No exercise buddy
- “I should, but I don’t”
- “It’s not a priority”
- “I have other priorities”
- “Just don’t enjoy exercise”

http://www.cdc.gov/pcd/issues/2006/jul/05_0220.htm

Audience Research: Barriers to Exercise among People with Arthritis

Arthritis-specific Barriers
- Pain (before, during, after exercise)
- Perceived neg. outcomes
- No arthritis specific program
- No specific info (type, amount)
- Dr. did not mention
- Weather
Why is PH interested in Arthritis? (circa 2014)

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Common Co-morbidities

Prevalence of Arthritis among People with Diabetes

47%

Prevalence of Arthritis among People with Heart Disease

49%

MMWR (2013) 62: 869-873
Greater Arthritis-Attributable Activity Limitations with Co-morbidities

Arthritis + Diabetes = Inactivity

Percent (%) inactive

Neither | Arthritis only | Diabetes only | Both
---|---|---|---
10.9 | 17.3 | 21.0 | 29.8

Physical Inactivity

MMWR (2013) 62: 869-873
The silver lining...

- People are managing multiple chronic conditions (and may be more concerned about another condition)
- Arthritis-specific barriers present a barrier to management of other chronic conditions
- Many self management behaviors (physical activity, self management education) beneficial to arthritis and co-morbidity
What does public health have to offer the arthritis field?

(or ... who cares if arthritis is recognized as a public health problem?...)

Why does Arthritis need PH?

- Most “health care” takes place outside of the health care delivery system
  - Assuming a person has a 30 minute visit 3 times a year...

  ...less than 0.02% of time spent with a health care provider.
Public Health Contributions

- Conduct surveillance and prevention research
- Place arthritis on the national health agenda
- Address arthritis through multiple levels and with multiple partners
- Focus on research translation

National Health Agenda

Healthy People 2020 Objectives

Decrease
- Level of joint pain
- Activity/personal care limitations
- Work limitations
- Racial disparities in TKR

Increase
- Arthritis education
- Provider counseling
  - Weight control
  - Physical activity
- Seeing HCP for Dx
- PA and Obesity (other chapters)
Addressing Arthritis through Multiple Levels

- Changing the Context:
  - Environmental
  - Policy

Collective Action

Public Health Agenda for OA

OA Action Alliance
- Coalition of stakeholders
- Mission: work collectively to advance recommendations in the OA Agenda
- “Action Teams”
  - Physical Activity
  - Weight management
  - Self management education
  - Injury prevention

oaaction.org
Public Health’s Challenge
To identify and help implement strategies for improving the health of an entire population

Translating research into public health action

Expanding Self-Management Intervention Availability

State Arthritis Programs
- California
- Kansas
- Kentucky
- Michigan
- Missouri
- Montana
- New York
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- Utah

National Delivery Systems
- Y-USA
- National Association of County and City Health Officials
- National Recreation and Parks Association

Strategic Approach:
Embedding interventions into existing delivery systems
Planning for Translation

- Where could target audience easily get this intervention?
- Who is well positioned to provide intervention?
- What organizations could adopt intervention?
  - Incorporate into routine work
  - Routine financing available

Arthritis - A Public Health Perspective

- Arthritis
  - is a large and growing problem
  - is costly in economic and QOL terms
  - shackles efforts to address obesity and physical inactivity
  - sabotages diabetes and heart disease control efforts
- Need to work through multiple venues and levels of influence
- Need to address the challenges of translating research into action
Questions

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