Promoting Population Health: One Health Plan’s Perspective

Thomas Kottke, MD MSPH
Medical Director for Population Health
HealthPartners
Who is Tom Kottke? Really.

- Cardiologist with 30 years of experience
- Prevention oriented physician
- Medical Director for Population Health
- My well-being action plan
  - Always eat breakfast
  - Bike to work
  - Eat two vegetarian meals a day
  - No tobacco; no tobacco smoke
  - Careful about alcohol
  - Express appreciation/help others
  - Advanced care plan
  - Organ donor
The Triple Aim drives our strategy

Simultaneously improve

My focus today

Population Health

Experience of Care

Per Capita Cost
Targeting High-Utilizing Populations

20% of people generate 80% of costs

Claims Cost Distribution

This is the task of care management and case management
But high cost claimants churn

50% to 60% of the high cost claimant group is replaced, annually

Source: HealthPartners Health Behavior Group analysis, 2006
Only prevention can squeeze this pipeline

So we need to define “good health” and ask “What are the root determinants of good health?”
University of Wisconsin Population Health Institute County Health Rankings Model

Health Factors

- Clinical care (20%)
- Social & economic factors (40%)
- Physical environment (10%)

Health Outcomes

- Mortality (length of life): 50%
- Morbidity (quality of life): 50%

Programs and Policies

- Access to care
- Quality of care
- Education
- Employment
- Income
- Family & social support
- Community safety
- Environmental quality
- Built environment

Health Behaviors

- Unsafe sex
- Alcohol use
- Diet & exercise
- Tobacco use

Social & economic factors

- Income
- Employment
- Education
- Family & social support
- Community safety

Clinical care

- Access to care
- Quality of care

Physical environment

- Environmental quality
- Built environment

County Health Rankings model © 2010 UWPPI
Morbidity = Subjective life experience + chronic disease burden + acute disease episodes
We focus on *well-being* rather than QOL

QOL (quality of life) is rather “down in the mouth” as a measure
“Well-being” is positive

**CAREER**
How you occupy your time or simply liking what you do every day

**PHYSICAL & MENTAL**
Having good health and enough energy to get things done on a daily basis

**FINANCIAL**
Effectively planning and managing your personal finances

**COMMUNITY**
The sense of engagement you have with the area where you live and work

**SOCIAL & INTERPERSONAL**
Having strong relationships and love in your life

**EMOTIONAL**
Being resilient and able to handle daily stresses
Our assessment of well-being - I

• In general, how satisfied are you with your life?
• In general, how happy are you?
• In general, how happy are your close friends and relatives?
• When you need advice or support, is there someone you can turn to?
• How well are you able to manage your finances so that you feel in control of your financial situation?
Our assessment of well-being – II

• Do you participate in a financial savings plan that automatically puts money from your paycheck into a savings account (for example, an automated payroll deduction for a retirement fund)?

• How often do you donate money to a good cause?

• In general, how enjoyable and fulfilling is your main job or daily work?

• How safe do you feel in your neighborhood?

• How many hours each year do you volunteer for activities in your community?
Not everyone loves these questions

Ming, everyone says our website is ugly.

Really? Every person on Earth said that?

Even Tibetan monks?

Maybe it was just one person.

And you confused him with the entire planet?
What predicts well-being?
Health Outcomes
- Mortality (length of life): 50%
- Morbidity (quality of life): 50%

Health Factors
- Health behaviors (30%)
  - Tobacco use
  - Diet & exercise
  - Alcohol use
  - Unsafe sex
- Clinical care (20%)
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- Social & economic factors (40%)
  - Education
  - Employment
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  - Family & social support
  - Community safety
- Physical environment (10%)
  - Environmental quality
  - Built environment

Programs and Policies

County Health Rankings model © 2010 UWPHI
A few health behaviors (lifestyles) are critical:

- Adequate physical activity
- Not using tobacco
- Healthy dietary pattern
- Alcohol only in moderation
- Healthy sleep
- Healthy thinking

**Good things happened to me today**
Lifestyle predicts physical well-being

Difference (%) in 2-year incidence of new disease between people who adhere to 0 or 1 lifestyles and 3 or 4 lifestyles

High Blood Pressure: -15
Cholesterol: -17
Cancer: -24
Back Pain: -43
Heart Disease: -45
Diabetes: -66

HealthPartners data

Lifestyle predicts emotional well-being

_Difference in emotional health concerns among employees who adhere to 0 lifestyles and those who adhere to 4 lifestyles (%)_

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Stress Concerns</th>
<th>Emotional Health Concerns</th>
<th>Poor or Fair General Health Status</th>
<th>High Risk for Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference (%)</td>
<td>-47</td>
<td>-74</td>
<td>-81</td>
<td>-82</td>
<td>-93</td>
</tr>
</tbody>
</table>

Lifestyle predicts health care costs

- **Difference** in annual health care costs between the two risk profiles = 49%
  - “Low-Risk” profile
    - BMI of 25 kg/m²
    - Never-smoker
    - Physically active
  - “High-Risk” profile
    - BMI of 27.5 kg/m²
    - Current smoker
    - No physical activity

Source: HealthPartners Research Foundation Study. *JAMA* 1999;282(23):2235-2239
Lifestyle predicts productivity

Impact on excess health-related productivity loss

- Absenteeism
- Presenteeism

Based on 33,956 employees
(Sample company, assuming $50,000 average salary, expressed as per person per year productivity loss in 2009 dollars)

Source: HealthPartners Health Assessment database, 2009
Lifestyle predicts well-being
People can change their lifestyles

**Risk Factor**

- Tobacco use
- Physical Activity (% meeting Guidelines)
- Fruits and Vegetables
- Alcohol use

**3-Year Change**

- Tobacco use: 37%
- Physical Activity (% meeting Guidelines): 58%
- Fruits and Vegetables: 89%
- Alcohol use: No change (99% all years)

- Average composite score from 19.1% (2004) to 27.5% (2007): 44%

**Overall program ROI during same time period (2.5 years)**

- Demonstrated ROI of 3:1

Source: This HealthPartners case study has been published in: ACSM’s Worksite Health Handbook, 2nd Edition, 2009
HealthPartners’ socioeconomic initiatives

- Education
  - Early Childhood Development
    - Nutritious Food/Drink
    - Physical Activity
    - Dental Health
  - Adult/Family Literacy
    - Health Literacy
    - English Proficiency
- Employment
  - Worker Availability/Readiness
  - Trained Workforce
    - Cultural Competence
  - Employer/Employee Awareness
    - Improved Work-Health Linkage
- Income
  - Financial Management
    - Housing
  - Affordability
    - Utilities
- Community Safety
  - Reduced Violence
    - Parenting Skills
  - Family Stability
    - Aging Population Services and Caregiver Support
  - Mental Health
    - Anti-Stigma Efforts for Mental Health and Chemical Dependency
- Family/Social Support
  - Cultural Understanding
  - Community Engagement
  - Provider Outreach to Community

Related HealthPartners Initiatives
- “YumPower” campaign/healthy eating
- “St. Paul Promise Neighborhood "Cradle to Graduation" initiative
- Health Literacy community workshops
  - Project Read
- “Let’s Talk About Race” partnership with YWCA
  - “EBAN” equitable care improvement teams
  - “Culture Roots” communications
- Regions Hospital Financial Counseling program
  - Financial Fitness Program
- Habitat for Humanity Partnership
  - Healthy Homes
- Wilder Foundation partnership for adult day care health services
- National Alliance for Mental Illness (NAMI) partnership
  to reduce stigma in community
  - Mental Health Drug Assistance Program
- “EBAN” equitable care experience with co-advisors integration in care teams
HealthPartners’ socioeconomic initiatives

- Socioeconomic programs
  - Education
  - Employment
  - Income
  - Community Safety
  - Family/Social Support
Socioeconomic initiatives:

Education

- Early Childhood Development
  - Nutritious Food/Drink
  - Physical Activity
  - Dental Health
  - Health Literacy
  - English Proficiency

- Adult/Family Literacy

  • “YumPower” campaign/healthy eating
  • St. Paul Promise Neighborhood “Cradle to Graduation” initiative

  • Health Literacy community workshops
  • Project Read
HealthPartners yumPower

• HealthPartners yumPower is all about finding tasty, good-for-you foods that power your body and help you live the best life possible.

• yumPower tools:
  – yumPower.com
  – yumPower text messages
  – yumPower app
  – yumPower School Challenge
yumPower environmental well-being

- Environmental worksite well-being – vending, cafeteria, catering, beverages
  - Vending food guidelines
  - Vending plan-o-grams
  - Environmental worksite food employer wellness assessment
  - Coordination with Harvard School of Public Health work (Nico Pronk)
  - Example policies: cafeteria, vending, catering, employee food and beverage

- Vending pilot at 5 locations was expanded to most HP entities in 2012

- Pharmacy food and other HP location pilots – started June 2012
yumPower mobile apps– iPhone and m.yumpower.com

- App – recognition by Gizmodo.com and Star Tribune
- 5,000+ downloads
HealthPartners yumPower School Challenge
Teachers rave about the yumPower School Challenge

• “We’re really excited to see that our Superintendent as well as Senator Mary Jo McGuire attended the assembly today. The kids seemed to respond well and were excited to see new guests at their school. Thanks!” – Kelly Kantack, RN at Bruce Vento Elementary in St. Paul.

• “I do believe that tracking has been good for our younger students especially. I am seeing many more fruits and veggies on trays as kids get their breakfast and lunch trays AND less is being dumped at the end of the meal time. I think it became a pattern for the kids and I am hoping very much that it continues to be the pattern.” – Vickie Spindler, Principal of Franklin Elementary in Anoka.
Socioeconomic initiatives - II

- Trained Workforce
  - Worker Availability/Readiness
  - Cultural Competence
  - Improved Work-Health Linkage
  - Financial Management

- Employment
- Employer/Employee Awareness

- "Let's Talk About Race" partnership with YWCA
- "EBAN" equitable care improvement teams
- "Culture Roots" communications

- Regions Hospital Financial Counseling program
- Financial Fitness Program

HealthPartners®
What is the EBAN Experience™?

- learn
- collaborate
- improve
What Makes it Unique?

- Quality Improvement Teams
- Community Engagement
- Experiential Education

Reduce Health Disparities
Solicits Help from the Community

Improve the Health of your Community

Be a Community Advisor
Examples of EBAN projects

• Increase pediatric immunization rates
• Improve diabetes health outcomes through education
• Increase colorectal cancer screening rates
• Decrease readmission rates
• Improve pain medication delivery time in the ER
• Increase colorectal cancer screening rates
• Increase breast cancer screening rates
• Increase rates of advance directives
• Increase fluoride varnish and sealant rates
Colorectal screening improvement

Patient % met for Colorectal Screening

Brooklyn Center (color)
HealthPartners (color)
Brooklyn Center (White)
HealthPartners (White)
Socioeconomic initiatives - III

Income

Affordability

- Housing
  - Habitat for Humanity Partnership
  - Healthy Homes

- Utilities
Smoke-Free Multi-Housing: For Health and Social Justice

Smoke-Free Multi-Housing: Healthier Buildings, Happier Tenants, A Smart Investment.
Habitat for Humanity builds
Socioeconomic initiatives - IV

Community Safety

Reduced Violence
Socioeconomic initiatives - V

Family/ Social Support
  - Family Stability
    - Parenting Skills
    - Aging Population Services and Caregiver Support
    - Anti-Stigma Efforts for Mental Health and Chemical Dependency
  - Mental Health
    - Community Engagement
    - Provider Outreach to Community
  - Cultural Understanding
    - • Wilder Foundation partnership for adult day care health services
    - • National Alliance for Mental Illness (NAMI) partnership to reduce stigma in community
    - • Mental Health Drug Assistance Program
    - • “EBAN” equitable care experience with community advisors integration in care teams
NAMI educational campaign

Experiencing a mental health crisis is difficult for all people involved. Here are some simple ideas to help you support and understand someone experiencing a mental illness.

- Give hope — try not to give advice
- Remind them mental illnesses can be treated and people can get better
- Express sympathy and concern, offer your support
- Assure them that they are not alone
- Tell the person you are sorry they are in such pain
- Share only hopeful stories
- Understand that someone can’t just “pull themselves out of it”
- Recognize the person is not their illness; they have dreams, strengths and gifts to share with others
Join the fun at the NAMI Walk
Points to remember

• **1 in 4**: the number of people affected by a mental illness during their lifetime

• **Age 14**: the age that over half of all adults with a serious mental illness begin having symptoms

• **10 years**: because of stigma, this is the average time it takes for someone with a mental illness to seek treatment

• **Hope & healing are possible**: Abraham Lincoln, Isaac Newton, Ernest Hemingway, Kurt Cobain, Janet Jackson, Catherine Zeta-Jones, Mike Wallace and many others have proved this & enriched our lives – this is why we walk!
Destigmatizing mental illness
Can this short-circuit the extensive medical evaluation before diagnosis of a psych disorder?

- Patient comes to primary MD with atypical chest pain [abd pain, back pain, headache, you pick]
- ECG is not quite normal – sends pt. to cardiologist
- Stress test, Echo, nuc test, MRI are not quite normal – decides to do angiogram
- Angiogram not quite normal – decides to stent
- Patient comes back to primary MD 3 months later with same pain and big bill
- Pain is correctly diagnosed as a panic attack
How do we know that we are having an impact?
Environment supports health

Public policy, workplace and school policy, coalition building, built environment, infrastructure, norms, access, availability for all SES

Catalyst/Relationships/Transformation Zone

Engagement

Joining a shared effort to achieve common goals with:
partnerships, participation, outreach, events, promotion, relationships

Transformation Zone

Programs

Structured initiatives to change behavior such as:
classes, training, curricula,
tool kits

Clinical Interventions

1:1 or group interventions to address identified risk.
### Childhood Obesity Initiative Framework: Goals and Measures

#### Goals

- **The community environment supports and integrates healthy food, beverage, and physical activity options.**
- **The community joins the effort to establish better food, beverage, and activity choices.**
- **The target audience improves food, beverage, and physical activity behaviors. Infant feeding practices improve.**
- **Improved health outcomes for youth. Increased resources for provider referrals.**

#### Measures

- **Access to safe physical activity spaces.**
- **Availability of fruits and vegetables (e.g. salad sales).**
- **Policy change or implementation (schools, hospital, government).**
- **Strength of relationships and partnerships with community.**
- **Participation/response rates.**
- **Brand/initiative awareness.**
- **Web/social media traffic.**
- **Outreach results.**
- **Shared values.**
- **Intake of fruits/veg.**
- **Food inventory, lunchrooms.**
- **Level of physical activity.**
- **Amt sedentary/screen time.**
- **Rate of breastfeeding.**
- **Improved youth fitness.**
- **Improved BMI.**
- **Referral rate**
- **Improved youth fitness.**
- **Improved BMI.**
- **Improved health status.**

#### Environment

*Healthy choices are the easy/default choice through:* Public policy, workplace and school policy, coalition building, built environment, infrastructure, norms, access/availability for all SES

#### Engagement

*Joining a shared effort to achieve common goals with:* partnerships, participation, outreach, events, promotion,

#### Programs

*Structured initiatives to change behavior such as:* classes, training, curricula, challenges, tool kits

#### Clinical Interventions

1:1 or group interventions to address identified risk.
HealthPartners Health Driver Diagram

Key Outcome

Health Determinant

Primary Drivers

Alignment with Mission, Capabilities, and Degree of Control

• Central to Mission
• Many Capabilities
• High Control

• Central to Mission
• Shared Capabilities
• Shared Control

• Aligned with Mission
• Limited Capabilities
• Limited Control

Improved Health (As Measured by a Summary Measure of Health)

Health Care (20%)

Health Behaviors (30%)

Socio-economic Factors (40%)

Environmental Factors (10%)

Preventive Services
Acute Care
Chronic Disease
End of Life
Cross Cutting Issues

Tobacco Non-use
Activity
Diet/Nutrition
Alcohol Use

Community Identified Drivers (Advocacy and Participation)

Community Identified Drivers (Advocacy and Participation)

Modified from Isham G and Zimmerman D, HealthPartners Board of Directors Retreat, October 2010
Do epidemiologic rules of evidence apply?

Bradford Hill’s rules of epidemiologic evidence

- Strength
- Consistency
- Specificity
- Temporality
- Biological gradient

- Plausibility
- Coherence
- Experiment
- Analogy

Why do I have population health passion?

Blame it on the Finns

Bicycling past “The 3 Bears” in Lahti, Finland
In the 1960s, Finland had the highest heart disease death rates in the world. This was due to a common-source epidemic . . .

. . . So they organized a population-based approach to disease control.
Mortality Changes in North Karelian (Finland) Men Ages 35-64 years: 1970-1995

http://www.ktl.fi/etoe/cindi/northkarelia.html
Increasing Life Expectancy: Finland

Personal communication: Pekka Puska. 2008.11.04
Life expectancy correlates positively with healthy life expectancy

26 European Union countries
Thanks!

So be well, take care of yourself, your family, and your community. Enjoy life!

Mont Ventoux with Reege, 2012

HealthPartners®
Descending from La Berarde in the High Alps, France