INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

BOARD ON POPULATION HEALTH AND PUBLIC HEALTH PRACTICE

Roundtable on Population Health Improvement

Workshop: Business Engagement in Population Health Improvement

July 30, 2014

AGENDA

Location: New York Academy of Medicine, Room 20, New York, NY

WORKSHOP OBJECTIVES:

(1) Discuss why engaging in population health improvement is good for business.
(2) Explore how business can be effective key leaders in improving the health of communities.
(3) Discuss ways in which business can engage in population health improvement.

8:30 am	**Welcome, introductions, and context** *George Isham, senior advisor, HealthPartners, senior fellow, HealthPartners Institute for Education and Research; co-chair, Roundtable on Population Health Improvement*
8:40 am	**Welcome to the New York Academy of Medicine** *Jo Ivey Boufford, president, New York Academy of Medicine*
8:50 am	**Keynote presentation** *Dan Buettner, founder, Blue Zones*
9:20 am	**Discussion**
9:45 am	**Panel I: The Case for Engagement in Population Health Improvement** This panel will provide a broad view of reasons and approaches for business involvement in population health improvement. Reasons may include alignment with core company values, broader company priorities such as safety, human capital, corporate reputation, sustainability, corporate social responsibility, and return on investment. Approaches may include philanthropy, leadership influence, board roles, and advocacy. *Moderator: Andrew Webber, chief executive officer, Maine Health Management Coalition; member, Roundtable on Population Health Improvement; member, workshop planning committee* *Michael O' Donnell, director, Health Management Research Center, University of Michigan* *Catherine Baase, chief health officer, Dow Chemical Company; member Roundtable on Population*

	Health Improvement; member, workshop planning committee *Nicolaas Pronk, vice president and chief science officer, HealthPartners*
10:20 am	**Discussion**
10:45 am	**Break**
11:00 am	**Panel II: What Business Actions Make an Impact on Population Health?** This panel will focus on community health improvement projects that may not have improving health as the main goal but which do impact social and other determinants that affect population health improvement. Panelists will be asked to describe both the corporate priority which drove the action/aim of the program (e.g., early childhood education, building green space, improving transportation) and, briefly, the strategy they used (e.g., philanthropy, multi-stakeholder activity). *Moderator: Catherine Baase, chief health officer, Dow Chemical Company; member Roundtable on Population Health Improvement; member, workshop planning committee* *Gary Rost, executive director, Savannah Business Group* *Grace Suh, manager, Education, Corporate Citizenship & Corporate Affairs, IBM Corporation* *Alisa May, executive director, Priority Spokane*
11:35	**Discussion**
12:15 pm	**Lunch**
1:15 pm	**Panel III: Community/Population Health as an Intentional Business Strategy** This panel will focus on business strategies, actions, and impact that were intentionally designed to improve population health. *Moderator: James Knickman, president and chief executive officer, New York State Health Foundation; member, Roundtable on Population Health Improvement; member, workshop planning committee* *Fikry Isaac, vice president, global health services, Johnson & Johnson* *Charles Yarborough, director of medical strategies, Lockheed Martin*
1:50 pm	**Discussion**
2:30 pm	**Panel IV: How Can Business Engage** This panel will focus on frameworks or mechanisms that work well to stimulate and support business engagement in population health improvement. *Moderator: Alex Chan, fellow, Clinton Foundation* *George Isham, senior advisor, HealthPartners; senior fellow, HealthPartners Institute for*

	Education and Research; co-chair, Roundtable on Population Health Improvement; member, workshop planning committee *Neil Goldfarb, Greater Philadelphia Business Coalition on Health* *John Whittington, Institute for Healthcare Improvement*
3:15 pm	**Break**
3:30 pm	**Discussion of Previous Panel**
4:00 pm	**Reactions on the Day** *Moderator: David Kindig, professor emeritus of population health sciences, emeritus vice chancellor for health sciences, University of Wisconsin-Madison, School of Medicine and Public Health; co-chair, IOM Roundtable on Population Health Improvement*
4:45 pm	**Open Discussion**
5:15 pm	**Adjourn**

For more information about the roundtable, visit www.iom.edu/pophealthrt or email pophealthrt@nas.edu.

Phase II: Developing the Business Case – World Café Results

Role of Corporate America in Community Health and Wellness

About this Report

This report is the result of a one-day meeting of over 50 thought leaders representing Corporate America, Federal Government, Foundations, and Non-profit Organizations who all have a stake in the health of the nation. The meeting was sponsored by the Robert Wood Johnson Foundation. The convener of this project was the Health Enhancement Research Organization (HERO), a national leader in employee health management, research, education, policy, strategy, leadership and infrastructure (www.the-hero.org). Denise E. Stevens, Ph.D. of MATRIX Public Health Solutions, Inc. (www.matrixphs.com), an independent consultancy, summarized the results of this meeting and turned it into this report.

Special thanks are extended to the organizing committee:

- Catherine Baase, M.D., Global Director, Health Services, The Dow Chemical Company
- Nico Pronk, Ph.D., Vice President & Chief Science Officer, HealthPartners
- Jerry Noyce, President & CEO, HERO

The views presented in this report do not reflect any specific individual or industry position, nor are they representative of the views of the Robert Wood Johnson Foundation. It has been prepared to generate discussion and inform future work.

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INTRODUCTION

Overview and Purpose

This report presents the results of Phase II, which is part of a series of work that enhances our current knowledge regarding the role of Corporate America in community health and wellness. Phase I, commissioned by the Institute of Medicine, IOM, Population Health Improvement Roundtable, began with an Environmental Scan[1] that captured the types of activities that corporations are engaged in around the country that impact community health and wellness. It also began to capture some of the rationale for their involvement. The scan highlighted relevant literature and case examples and began the process of building a logical framework for further reflection and analysis. Phase II has engaged a diverse group of thought leaders in a facilitated discussion on key questions of interest using a World Café format (explained below). Phase III will triangulate data and knowledge obtained from Phases I and II and a report will be prepared suitable for publication in a peer reviewed journal. In addition, a web-based platform will be developed that will serve as a resource useful to employers interested in community engagement and collaboration. Further, a proactive dissemination agenda will be pursued to share the business case and methods for effective engagement of businesses in community health.

The results of the Environmental Scan revealed that many businesses are already engaged in programs/initiatives that address community health and wellness. The literature review and key informant interviews were able to uncover a number of key levers and drivers that are important to making the business case for engaging in community health efforts. Commonly stated reasons identified in the scan included: a) enhanced reputation in the community as good corporate citizens; b) cost savings that would increase over time; c) job satisfaction; d) healthier, happier and more productive employees; and e) healthy vibrant communities that draw new talent and retain current staff.

The purpose of Phase II is to extend these findings by convening business executives and organizational thought leaders to address the business case for healthy workplaces, healthy communities. The use of the World Café Forum allows for the collective intelligence and wisdom of multiple stakeholders to address challenging real world problems in a collaborative learning environment.

[1] Role of Corporate America in Community Health and Wellness, Institute of Medicine, Roundtable on Population Health Improvement.
http://www.iom.edu/~/media/Files/Activity%20Files/PublicHealth/PopulationHealthImprovementRT/Background-Papers/PopHealthEnvScan.pdf

Participants

More than 50 executives and thought leaders from a variety of sectors and industries (refer to Appendix A) representing a broad spectrum of organizations/entities participated in the one-day, invitation only session. The participants represented national business organizations (e.g., US Chamber of Commerce), non-health businesses (e.g., large and small business), health sector businesses (e.g., health systems, health plans and wellness service providers), federal organizations (e.g., Federal Reserve Banks, Centers for Disease Control), non-governmental organizations (e.g., American Heart Association, Canyon Ranch Institute, Institute of Medicine), hospitals, universities, and foundations (e.g., Clinton, Robert Wood Johnson). Figure 1 illustrates the breakdown.

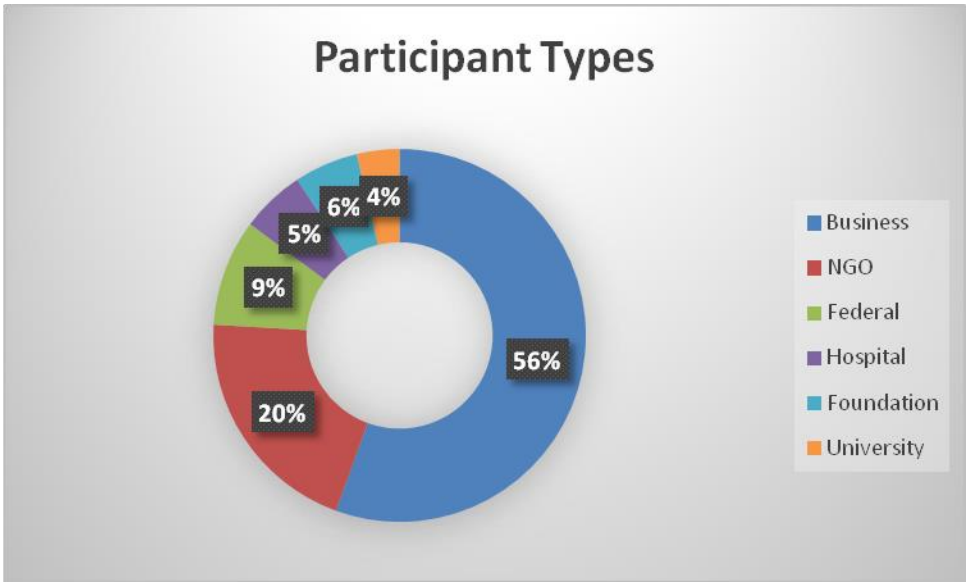


Figure 1

Setting the Stage

In preparation for the World Café, a panel of experts began the meeting by providing a critical perspective and framework for the day. The panelists included:

1. Catherine Baase, M.D., Global Director of Health Services for The Dow Chemical Company
2. Nico Pronk, Ph.D., Vice President for Health Management and Chief Science Officer for HealthPartners, Inc.
3. Michael O'Donnell, Director of the Health Management Research Center in the School of Kinesiology, University of Michigan

4. Tony Buettner, Vice President of Product and Business Development at Blue Zones, LLC
5. Elizabeth Sobel-Blum, Senior Community Development Advisor, Federal Reserve Bank of Dallas
6. Scott Peterson, Executive Vice President and Chief Human Resources Officer, Schwann Food Company

Key messages from the panel presentations setting the stage for the World Café sessions included:

- Importance of focusing on 'health creates wealth – wealth creates health – it is bidirectional'. (Nico Pronk)
- An exemplar (highlighted in Phase I) is Blue Zones which is currently in 20 communities. Blue Zones has demonstrated that health care costs can be lowered by 40% through programs that address the built environment and policy, creating lasting sustainable change – so it is possible for businesses to have an impact. (Tony Buettner)
- Our federal spending on health care is so high that 'I don't think our nation will exist as a nation if this problem continues. If the USA falls – so will the world'. 'Our nation's debt as a percentage of GDP will be over 200% (refer to Figure 2) in the next few decades. If however, we take the best of workplace wellness programs to the community we may have an impact. A way of funding this would be to allocate approximately $200 per covered life per year.' (Michael O'Donnell)

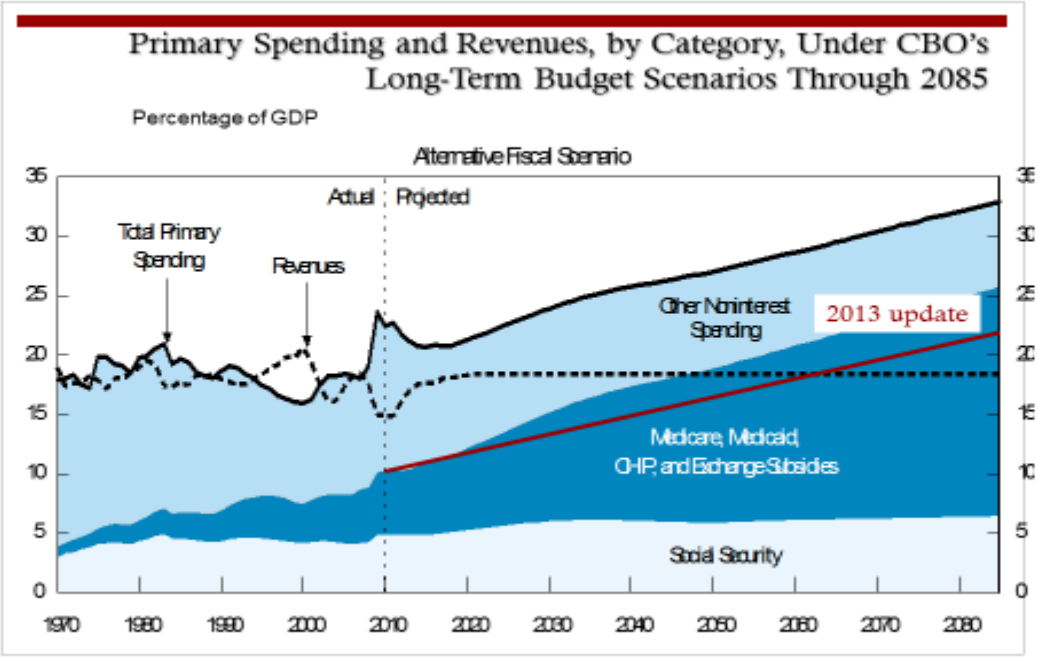


Figure 2

- ‘Health of our country affects our economy and the health of our economy impacts our nation.’ There is a need to support public policies, support high quality cradle to career programs, and get involved in collaborations (‘financial acumen, public policy acumen’). (Elizabeth Sobel-Blum)
- Businesses want to attract families, and ‘employees are citizens of communities where we as a business are part of the community ecosystem’. (Scott Peterson)
- Our current situation is destructive to businesses. ‘Non-communicable diseases are strongly connected to other global risks – fiscal crises, underinvestment in infrastructure, food, water, and energy security……’. ‘Moreover, by not investing in communities, we are creating ‘social structure erosion’ by less funding going into education, infrastructure, and societal priorities.’ (Cathy Baase)(Figure 3).

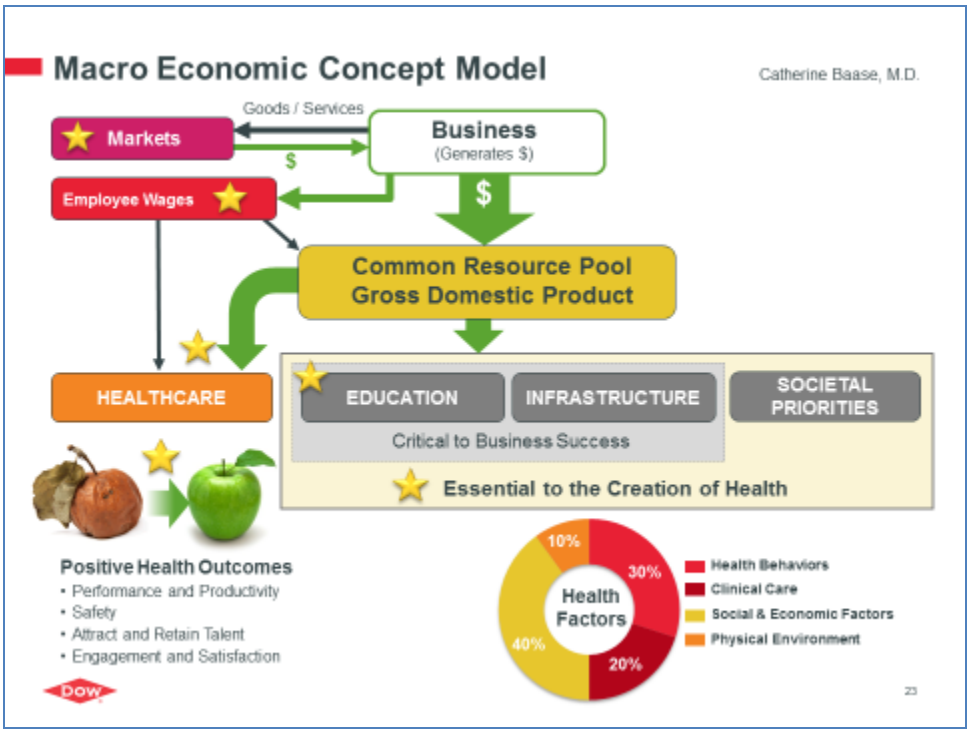


Figure 3

WORLD CAFE METHOD

The World Café process is a simple method for bringing people together to focus on answering key questions. It is founded on the assumption that people have the will and capacity to work together. The process uses connected conversations to share knowledge, ignite innovation, and tap into the intelligence of the group. The key elements of the process include:

- Small groups around tables
- Informal conversations focused on key questions
- Sharing ideas and knowledge as participants move among small groups
- Opportunities to record ideas in words and images
- Weaving of emerging themes and insights
- Awareness of the social nature of learning
- Noticing that individual conversations are part of and contribute to a larger web through which collective intelligence can become aware of itself

Critical Question #1: What are the strongest elements of a business case that will generate higher levels of employer leadership in improving community health?

Critical Question #2: What are the most important barriers and limitations that will keep employers from playing their critical role in improving community health?

Each of the roundtables included an assigned leader tasked with soliciting input from participants and summarizing responses to the questions. Participants went through three rotations of roundtables and during the last rotation were asked to narrow the responses to five key findings which were then shared with the larger group in a discussion session.

In the results section, in addition to providing specific examples of some of the responses to the key questions, and in order to provide some rigor to the data collected, a qualitative software program Dedoose was used to summarize the findings. Appendix B includes detailed summaries of responses from each of the roundtables as well as several interesting illustrations created by participants.

WORLD CAFE RESULTS

Question 1: Strongest Elements of a Business Case

As presented in Figure 4, seven thematic areas were identified that represent the elements of a business case to engage employer leadership in addressing community health and wellness.

The most frequently reported elements included the need to address return on investment (ROI) and measurement and metrics. These were followed by shared values, vision and definitions as well as strong leadership/buy-in.

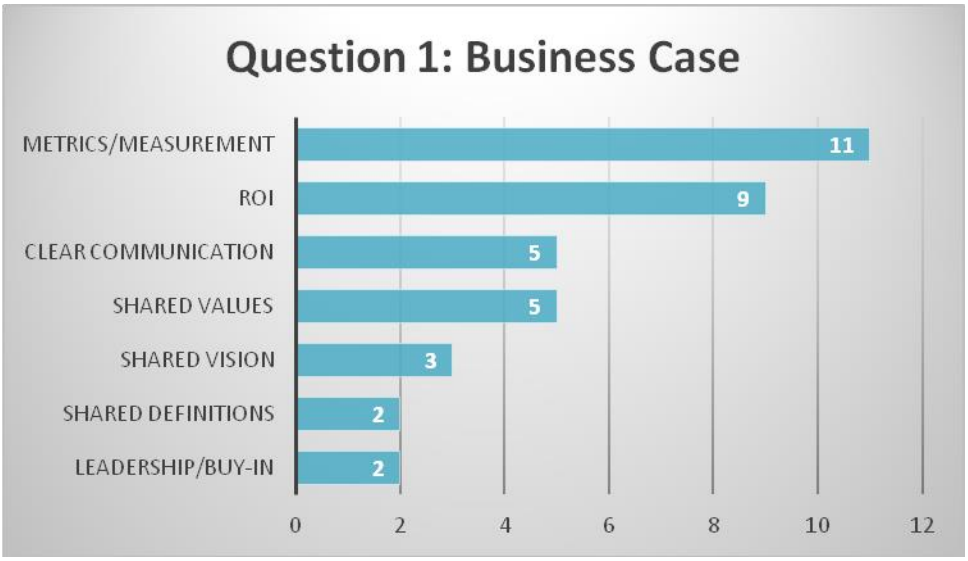


Figure 4

Examples of responses provided by participants under each of these include:

1. Metrics/Measurement
   A. There is a need for common definitions and a set of metrics for the measurement of health relevant for both businesses and the community. Specific to businesses:
      - Metrics that matter need to be developed – for example, define key health metrics that are 'standard' for all companies (Health Index) that could be reported alongside key business metrics (e.g., profit, revenue)
      - A dashboard for C-Suite that shows health of employees and health of communities where they have a footprint would be useful.
      - Health should be as important a metric as other aspects of social responsibility.
   B. The business case would be strengthened by creating and disseminating an inventory of best practices (e.g., a story of what works). This would involve analyzing data from all existing initiatives that demonstrate value/return.

2. Return on Investment
   A. When presenting the business case, it is important to speak the language of profit and through the lens of the CFO.
      - "Well Organizations" control costs, increase productivity, attract talent and limit turnover.

- It is not just about medical costs but also about absenteeism, presenteeism and disability.
- How does 'charitable' become an investment – short term vs. long term ROI?
- Profits remain central in the argument (no margin, no mission, no $, no competition).
- Social responsibility is an investment.
- There is strength in numbers and a diminishing ROI with internal health investments only.

B. Investing in the community can lead to greater profits
   - An investment in community (e.g., education system) dramatically impacts sustainability of business (e.g., talent pool, retention).
   - Community is critical to profit/survival (refer to BMI bathtub story where internal interventions have limited impact therefore the need to address community health challenges).
   - If focus on employee human capital only (e.g., employee productivity, workers comp and safety), you miss 2/3 costs related to spouses and dependents, so there is a need to invest in the community where families live.
   - Health of the community is linked to company sustainability financially, socially, culturally.
   - Partnering with the community can create supply/demand – business opportunities through collaboration (e.g., increasing purchasing power).

3. Clear Communication
   A. When articulating the business case the messaging needs to be clear and focused.
      - There should be simple, clear and consistent communications and messaging tailored to different audiences – the stories of the benefits of involvement in community health and wellness should be impactful and will be important moving forward.

   B. There is a need to consider the differences between businesses.
      - There is a need for different value propositions for different sized businesses -- may need to pool resources with other businesses.
      - There is a need for different 'stories' for different types of businesses (including ROI) – 'no one size fits all'.
      - Not all businesses are in the same stage of readiness.

   C. Messages created need to take into consideration the interplay between health, safety and economics.

- There is a need to understand the interdependence between the social and economic determinants of health and the systemic impact of poor health on sustainability of business (e.g., the economics of health).
- There is a need to build upon what we know of successes in the area of safety to ensure health is seen in a similar way (e.g., financial security, health security).

4. Shared Values
    - It is important to understand shared risk and shared values between business, communities and stakeholders (e.g., pooled resources, shared benefits, shared expenses).
    - Recognition is important, to be seen as the "employer of choice, community of choice".
    - Shareholders (who represent the 'community') can play a role promoting investments in health and 'green' living; young adults are more likely to be attracted to business that is socially conscious.

5. Shared Vision
    - Employers and communities need to focus on sustainability with the integration of a culture of health internally and externally.
    - There should be a common/collective investment and benefit (the workforce comes from the community).
    - Business is part of the community and the community is part of the business. Employers impact only 1/3 of family members currently and must partner with the community to address the other 2/3 in order to improve health outcomes that will impact their business.

6. Shared Definitions
    - There is a need to define: a) health beyond medical care; b) what we mean by 'leader'; and c) what we expect the 'influence model' is for businesses in their community.

7. Leadership/Buy-In
    - There is a need for visionary leadership that communicates to peers the value of community both short-term and long-term and understands the 'big picture' and economic realities.

Question 2: Important Barriers and Limitations

There were a number of potential barriers and limitations noted by the participants. These are summarized in Figure 5. The most commonly reported barriers included lack of understanding, the lack of a strategy/playbook, overall complexity of the problem, issues of trust, lack of a common language, ROI and lack of metrics. Interestingly, many of these parallel what was identified under Question 1.

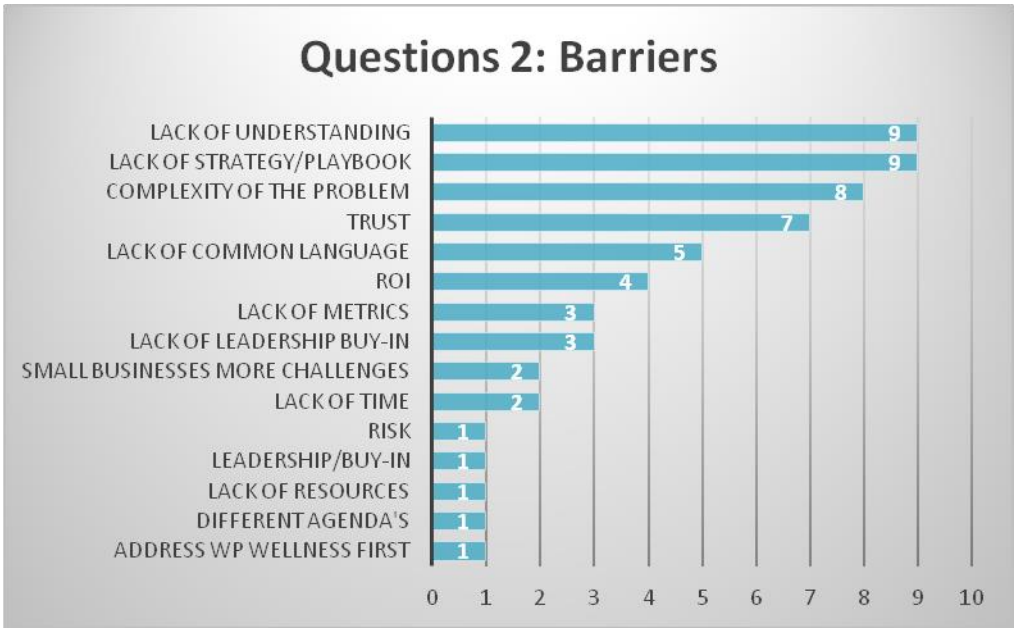


Figure 5

1. Lack of Understanding
    - Of why it's important to care about health outside of business' four walls
    - Of what 'health' is
    - Of diverse agendas and their potential misalignment
    - Of ideology
    - Of who is responsible
    - Of the benefit – as it is high risk 'toe in the water'
    - Of the problem(s), roles(s), the fix and the ask

2. Lack of Strategy/Playbook

- Lack of framework or models
- Lack of a playbook to tell what to do, how to do it and why
- Lack of a common language/definitions
- Where to start -- 'overwhelming' – no way forward
- Need for a roadmap and infrastructure (e.g., community involvement for dummies)
- Need for a 'sales pitch' to get the attention of companies not investing in their own employees let alone the broader community
- Lack of a clear system for healthcare or community health – lots of noise and we need to avoid reinventing the wheel

3. Complexity of the Problem
    - Vision is so large it needs to be 'doable and chewable'
    - The need to 'walk before you run' – build internal worksite capacity first and then look externally to the community
    - The problem is enormous and needs to be simplified so it is easily understood
    - Complexity of the collaboration needed to solve the issues and create solutions (e.g., broad stakeholders around the table, coordinating towards one end point, maintaining own priorities)
    - If we built it will they come – when presented with the healthy choice vs. unhealthy choice, many still choose the unhealthy choice
    - Scope and complexity are so big making it impossible to fix; it may take a long time with fear and a high risk of failure

4. Trust
    - Companies are not willing to take the risk of being a first-mover
    - Lack of a trusted convener and infrastructure
    - Although coalitions have been formed – people just don't know each other and don't know who to trust
    - Need to recognize that trust is linked to competition

5. Lack of a Common Language

6. Lack of Resources, Time, Leadership
    - Small businesses don't have the time and other resources for healthy communities programing
    - Lack of sense of urgency

- Large upfront expenditure of resources, money, and time with payoff lagging years

7. Other Important Points Raised
    - Need policies and regulations that incentivize
    - Philosophy among leadership
    - Lack of common metrics

SUMMARY

The Environmental Scan conducted during Phase I of this work presented a preliminary framework for the business case for why employers should engage in community health and wellness. Many themes presented in the Environmental Scan were reinforced and extended through the collective insight and wisdom shared by this diverse group of thought leaders representing the nation's leaders in health and workplace health and wellness. Through this World Café exercise additional critical elements have been distilled for building the business case. The dialogue centered around addressing the strongest elements of a business case that will generate higher levels of employer leadership in improving community health and identifying the most important barriers and limitations that they are likely to face.

The most commonly articulated elements when woven together around Question 1 included the need for a clearly articulated common language including a playbook/strategy that speaks to the level of the CFO, and that addresses profit, ROI, includes metrics and presents a compelling story. These are essentially factors that are important to internal communication including shareholder buy-in. Externally however, business leaders need to know how to communicate effectively with and engage community stakeholders in a way in which there is an understanding and appreciation of shared vision and shared values.

The results of Question 2 focus on the barriers and limitations that would need to be addressed in order to effectively make the business case or implement a plan of community involvement. The barriers and limitations noted by participants link back to many of the elements identified in Question 1. In order for businesses to develop their case and act on it, they need to address the need for a common language and metrics, develop trust with the community, understand divergent agendas, acknowledge the complexity of the problem and develop strategies to make it manageable by creating a roadmap.

Following the debriefing of the World Café results, the open discussion session led to several additional points of information that feed directly back to the results as well as provide some key take home messages. These include:

1. This is the beginning of something really big that warrants national effort and for which HERO is fulfilling a key leadership role.
2. There is a need to value collaboration – and recognize employers investing in their communities (e.g., consider developing a national award program and/or link to existing awards such as RWJ's Culture of Health Prize).

3. There are others tackling the 'metrics' issue (e.g., Gallup-Healthways Well-Being Index, National Quality Forum) that we should be paying attention to, rather than reinventing the wheel.
4. Holding meetings like this with multi-stakeholder involvement (e.g., business with foundations, government, NGOs) is the beginning of building 'trust'.
5. Health care costs are taking enormous amounts of funding that should be building our nation's infrastructure (e.g., schools) in order for us to remain competitive globally.
6. Economic and community development organizations' departments within communities or government are a natural resource to tap into, including Federal Reserve Banks that support this and health.
7. Today's meeting has only been about the 'why' – we need to tackle the 'how' and the 'what'.
8. There is the need to understand that 'health' is not the only concern – businesses are also investing in 'green' and 'climate change' among other movements. There may be links in each of these areas.

NEXT STEPS

The meeting ended with a series of next steps including:

- Participants will receive a report from this meeting and accompanying slides.
- A short survey will be sent soliciting feedback on next steps.
- Phase III is about dissemination and support for the effort so Ambassadors and Collaborating Partners will be identified to help get the information out.
- The Environmental Scan is a living document; additional case studies/stories can be added.
- A website will be developed that will include the Environmental Scan, repository of case studies, etc.

APPENDICES

A. Participants
B. World Café Results
C. Panel Presentations

A. Participants

Ron	Loeppke	MD, MPH, FACOEM, FACPM	President	American College of Occupational and Environmental Medicine (ACOEM)
Mark	Schoeberl	MPA	Executive Vice President, Advocacy & Health Quality	American Heart Association
Larry	Lee	MD, FACP	Vice President, Executive Medical Director for Provider Relations & Quality	Blue Cross and Blue Shield of Minnesota
Tony	Buettner		Senior Vice President of Business & Product Development	Blue Zones
Gwen	Martin		Managing Director, VP Corporate Development & Education	Blue Zones
Jennifer	Cabe	MA	Executive Director & Board Member	Canyon Ranch Institute
Rebecca	Payne	MPH	Senior Advisor for Business Engagement & Coordination	Centers for Disease Control and Prevention (CDC)
Regina	Chandler		Administrator, Wellness Institute	Cleveland Clinic
Alex	Chan		Clinton Foundation Fellow	Clinton Foundation
Dee	Edington	PhD	Founder & Chairman	Edington Associates, LLC
Elizabeth	Sobel-Blum	MBA, MA	Senior Community Development Advisor	Federal Reserve Bank of Dallas
Ela	Rausch	MPP	Project Manager, Community Development	Federal Reserve Bank of Minneapolis
Jim	Harter	PhD	Chief Scientist of Workplace Management and Well-Being	Gallup
Julia	Halberg	MD, MS, MPH	VP Global Health, Chief Medical Officer	General Mills
Mary	Brainerd	MBA	President & Chief Executive Officer	HealthPartners
Nicolas	Pronk	PhD, FACSM, FAWHP	Vice President & Chief Science Officer	HealthPartners
Patricia	Dennis		Senior Vice President, Health and Care Engagement	HealthPartners
Abigail	Katz	PhD	Senior Data Analyst	HealthPartners

Vicki	Shepard		Senior Vice President, Strategy & Government Relations	Healthways
Janet	Calhoun		Senior Vice President, Strategy & Innovation	Healthways
Jerry	Noyce		President & CEO	HERO
Pat	Rohner		Director of Operations & Marketing	HERO
Marlene	Abels		Coordinator, Member Services	HERO
Karen	Moseley		Coordinator, Research & Committees	HERO
Barb	Tabor		Communications Coordinator	HERO
Monique	Nadeau	MPA	Co-Founder & Board Member	Hope Street Group
Lyla	Hernandez	MPH	Senior Program Officer	Institute of Medicine
Jennifer	Bruno	BS	General Manager, Employer Franchise, Wellness & Prevention, Inc.	Johnson & Johnson
Elisa	Mendel		Vice President, Healthworks and Product Innovation	Kaiser Permanente
Holt	Vaughan	MBA	Senior Director, myHealthCheck	Life Time Fitness
Andrew	Webber		CEO	Maine Health Management Coalition
Denise	Stevens	PhD	President	MATRIX Public Health Solutions, Inc.
Jim	Yolch		Administrator, Healthy Living Program, Office of Wellness, Office of Population Health Management	Mayo Clinic
Jennifer	Flynn	MS	Health Management Strategy Consultant	Mayo Clinic
Karen	Adams	PhD, MT	Vice President, National Priorities	National Quality Forum (NQF)
John	Waters	MBA	Director, Population Health Consulting	Optum
Fred	Goldstein		Executive Director (Interim)	Population Health Alliance
Meg	Molloy	DrPH, MPH, RD	President & CEO	Prevention Partners

Steve	Flagg		Founder & President	Quality Bike Products (QBP)
Marjorie	Paloma	MPH	Team Director & Senior Program Officer	Robert Wood Johnson Foundation
Matt	Trujillo	PhD	Research Associate	Robert Wood Johnson Foundation
Bonnie	Sakallaris	PhD, RN	Vice President, Optimal Healing Environments	Samueli Institute
Scott	Peterson	MA	Executive Vice President & Chief Human Resources Officer	Schwan Food Company
Erin	Seaverson	MPH	Director, Research	StayWell
Joshua	Riff	MD	Director of Health and Wellbeing, Medical Director	Target Corporation
Tom	Mason		President	The Alliance for a Healthier Minnesota
Catherine	Baase	MD, FAAFP, FACOEM	Global Director of Health Services	The Dow Chemical Company
Brent	Pawlecki	MD	Chief Health Officer	The Goodyear Tire & Rubber Company
Steve	Romberg		President & COO (Retired)	The HAVI Group
Derek	Yach	MBChB, MPH, DSc	Executive Director	The Vitality Institute
David	Lagerstrom		President & CEO	TURCK Inc.
Randel	Johnson	JD, LL.M.	Senior Vice President, Labor, Immigration, & Employee Benefits	U.S. Chamber of Commerce
Michael	O'Donnell	PhD, MBA, MPH	Director of the Health Management Research Center in the School of Kinesiology	University of Michigan
David	Kindig	MD, PhD	Professor Emeritus	University of Wisconsin-Madison, School of Medicine
Nick	Baird	MD	Chief Executive Officer	US Healthiest
Peter	Wald	MD, MPH	VP, Enterprise Medical Director	USAA
Amy	Pearson	BSN, MPH, COHN-S	Administrator, Corporate Health Services	Vidant Health

Dalana	Brand	MBA	Senior Director, Global Benefits	Whirlpool Corporation
Bob	Thomas		Chief Experience Officer	YMCA of the Greater Twin Cities

B. World Café Results

Question #1: Build the business case-top 5 elements

Table 1: (Elizabeth Sobel-Blum)

1. ROI and Return on Value
    a. This is not just about medical costs but about absenteeism, presenteeism & disability
2. Common, shared definition & measurement of HEALTH
    a. Need dashboard for CEOs (C suite) that show health of employees and health of communities where they have a footprint
    b. Drain issue (Cathy Baase's slide)-increasing medical costs decreases expenditures in education and other components of community infrastructure
3. "Shared Risk"- provide diverse companies examples of what works
4. Collaborate –across companies because draw from same labor pool
5. Visionary Leadership

Table 2: (Nick Baird)

1. Metrics that matter
2. Shared values= Shared results (community plus stakeholders)
3. Clarity on CSR as an investment
4. Visionary leaders that communicate to peers (value of community) long term vs. short term
5. Pivot from ROI to Value
6. Different value propositions for different size businesses
7. Value of recognition

Table 3: (Alex Chan)

1. Measurement
2. Common/collective investment & benefit
3. Financial ROI
4. Simple/clear/consistent communications & messaging
5. Sustainability: integration of a culture of health (internally & externally)

Table 4: (Patricia Dennis)

1. Multiple business cases
    a. What's the story –ROI for different types of business
2. Leadership buy in
3. Diminishing ROI for internal investments only (strength in #'s)
4. Interdependence: Relationship between social & economic determinants of health
5. Change the definition of health beyond medical care

Table 5: (Jennifer Flynn)

1. Data to define key health metrics that are "standard" for all companies to roll up to a "health index" that could be reported alongside key business metrics like profit, revenue, etc.
    a. Metrics should include company specific & community specific elements
2. Quantitative data from all existing initiatives that demonstrates value/return for prioritizing health of community
    a. Disseminate a story that includes best practices, show that it works. Leaders want proof it will work
3. Investment in community (education system) dramatically impacts sustainability of business (talent pool, retention, etc.)
4. Safety/health/security connection-learn from our successes in the area of safety and ensure health is seen in a similar way (financial security, health security)
5. Economics of health are important to communicate –business leaders need to see the systemic impact of poor health to our sustainability as business and a nation

Table 6: (Abigail Katz)

1. Outside community becomes part of your organization
2. Use #s people believe
3. Employer impacts only 1/3 of family (employee only)
    a. Must partner to address the other 2/3
4. Talent-"Well organizations"
    a. Limit turnover
    b. Attract talent
5. "Classic" wellness argument
    a. Control costs
    b. Increase productivity

Table 7: (Tom Mason)

1. Measurement (ROI by company and community)
2. The value of sharing success narrative
3. Recruiting & retention
4. Productivity through "caring management"
5. Public/private cooperation

Table 8: (Meg Molloy)

1. Measurement of health things that matter
    a. Link to business measures (profitability)
2. Broaden dashboard from organizational to shared community measures
    a. Measures that matter to different groups (Michigan has this-used cost of health care as ultimate measure)

3. Standardize those measures/clear methods
4. Need peer reviewed literature on data that show linkages between progression of an issue (i.e. BMI in community; compare to organization's BMI, linked to turnover, health cost
5. Differentiate measures & tailor messages for different audiences (stories are door openers-data on relevant issues) and show publicly

Table 9: (Monique Nadeau)

1. Bottom line profits, medical costs, turnover
2. Human capital: productivity, workers comp, safety
    a. But employee directed programs will only get you so far
    b. 2/3 of costs are related to spouses and dependents
    c. Little documented success thru employer programs
    d. Thus…critical to meet families where they are-in the community
    e. Likely to be more effective & holistic
3. Other considerations/themes
    a. Connecting dots with employer programs
    b. Wellness can spread
    c. Goal to become employer/community of choice

Table 10: (Bonnie Sakallaris)

1. Impactful stories
2. Community is critical to profit/survival
3. Internal interventions have limited impact- must customize to supply BMI bathtub story

Table 11: (Erin Seaverson)

1. Make health as important a metric as other aspects of social responsibility
2. Health of community-company sustainability (financial, cultural, social, etc.)
3. Profit story-financials speak the language of CFOs
4. Supply/demand-create business opportunity thru collaboration (increase purchasing power, etc.)
5. Develop & focus on the metrics that matter (to a given audience)
    a. Employer success stories

Question #2: Barriers & limitations to success

Table 1: (Sobel-Blum)

1. Companies are unwilling to take the risk of being a first-mover
2. Small businesses don't have enough time & other resources for healthy communities programming
3. Lack of sense of urgency
4. Lack of understanding of why it's important to care about health outside of their 4 walls
5. Lack of a playbook to tell them what to do, how to do it a& why

Table 2: (Baird)

1. Time & money
2. No common language
3. Misalignment of agendas
4. Ideology
5. Don't believe the data
6. Trust
7. Where to start-"overwhelming"-no way forward

Table 3 (Chan)

1. Lack of understanding of what "health" is/lack of common vernacular
2. Skepticism/trust
3. Size of business and /or community
4. Lack of common trusted convener/infrastructure
5. "walk before you run": build internal worksite capacity first, then look externally to the community

Table 4 (Dennis)

1. Competing ROIs
2. Infrastructure/roadmap
    a. Community involvement for dummies
3. Buy-in from industry & leadership
4. Employers stepping out of the role of healthcare & moving to targeted impacts on wellness
5. Regulations

Table 5 (Flynn)

1. Complexity of understanding the problem; and the enormity of the problem (need to simplify it so it is easily understood)

2. Complexity of the collaboration that is needed to solve the issues/create the solution-broad folks around the table, coordinating towards one end point, maintaining their own priorities-very challenging
3. "Sales pitch"/story doesn't exist-need to get the attention of the companies who are not even investing in their own employees let alone the community members. Need the store
    a. There is a lack of a common language we are speaking
4. Short term ROI if investing in individuals who don't even work for me? Is there any?
5. Consumer choice- individuals, when presented with the healthy choice vs unhealthy choice, many still choose unhealthy choice. We can provide as much as we want, but still need individuals to choose health

Table 6: (Katz)

1. Short term concerns
2. Philosophy among leadership
3. Lack of understanding re: whit takes, who is responsible to participate
4. Lack of common definitions
5. Lack of infrastructure for a learning organization (self-correcting, adjusting, based on research/information

Table 7: (Mason)

1. Lack of trust relationships, common language
2. Road map needed- simple can't boil the ocean
3. Culture of health "Christmas tree"
4. High risk-unclear benefit –"toe in the water"
5. Lack of common metrics –build evidence

Table 8: (Molloy)

1. Uncertainty of – the problem(s), the role(s), the fix, the ask
2. Absence of a trusted convener –especially business leader involved
3. Scope & complexity are so big-impossible to fix, takes a long time, high risk of failure, fear
4. Lack of a clear system for healthcare or community health –so lots of noise, reinventing the wheel
5. Lack of a shared language

Table 9: (Nadeau)

1. Lack of leadership
2. Lack of- urgency, follow thru, common language
3. Disconnect between payment & benefit-free rider?
4. Vision so large – needs to be doable & chewable

Table 10: (Sakallaris)

1. Lack of clear models/framework/role definition
2. Lack of common language
3. Trust-competition, government-local alignment
4. Need policy /regulation that incentivizes
5. Large upfront expenditure of resources $, time- payoff lags years-short term profit motive

C. Panel Presentations

Opening Panel

- **Nico Pronk**, PhD, Vice President & Chief Science Officer, HealthPartners
- **Michael O'Donnell**, PhD, MBA, MPH, Director of the Health Management Research Center in the School of Kinesiology, University of Michigan
- **Tony Buettner**, Senior Vice President of Business & Product Development, Blue Zones

Opening Panel

- **Elizabeth Sobel-Blum**, MBA, MA, Senior Community Development Advisor, Federal Reserve Bank of Dallas
- **Scott Peterson**, MA, Executive Vice President & Chief Human Resources Officer, Schwan Food Company
- **Cathy Baase**, MD, Global Director of Health Services, The Dow Chemical Company

Improving HEALTH Through Employer Leadership

HERO

Panelists

Nico Pronk, PhD
Vice President & Chief Science Officer
HealthPartners

Improving HEALTH Through Employer Leadership

HERO

HealthPartners

Nico Pronk, Ph.D.
VP and Chief Science Officer
HealthPartners

Perspectives on the importance of employer-community connections for health drawn from Annual Reports to Congress of the **Community Preventive Services Task Force**

The Task Force is an independent, non-Federal, uncompensated panel of health experts appointed by the Director of CDC. It critically examines available research and conducts systematic reviews and economic analyses in order to generate recommendations on what works to:

- Protect and improve people's health
- Reduce future demand for health care
- Increase productivity and competitiveness of the US workforce

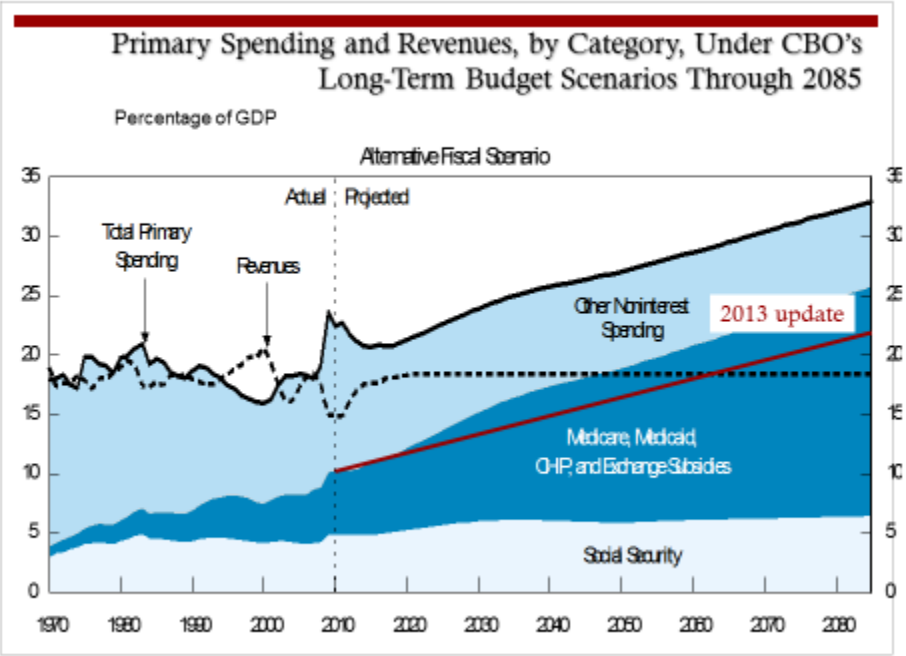
- **Reduce healthcare spending**
  - Lower need and demand for health care
- **Reduce illness burden**
  - Fewer cases, better management, better function
- **Reduce the likelihood of becoming ill**
  - Prevention of disease diagnoses
- **Make healthy choices easy choices**
  - Environmental and policy changes
- **Maintain or improve economic vitality**
  - Healthy communities complement vibrant business and industry
- **Reduce waste**
  - Less productivity loss due to prevention
- **Increase healthy longevity**
  - Today's youth may live shorter and less healthy lives than their parents
- **Enhance national security**
  - Obesity as the leading reason for failure to recruit into the military
- **Prepare the future workforce**
  - A healthy workforce through education, environments skill building, resources

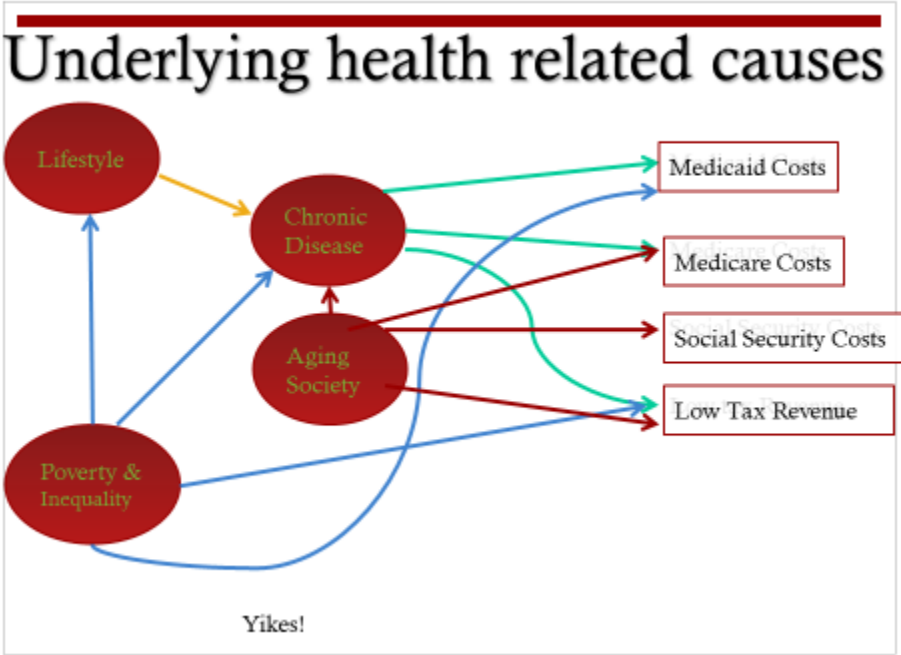
Panelists

Michael O'Donnell, PhD, MBA, MPH
Director, Health Management Research Center
University of Michigan

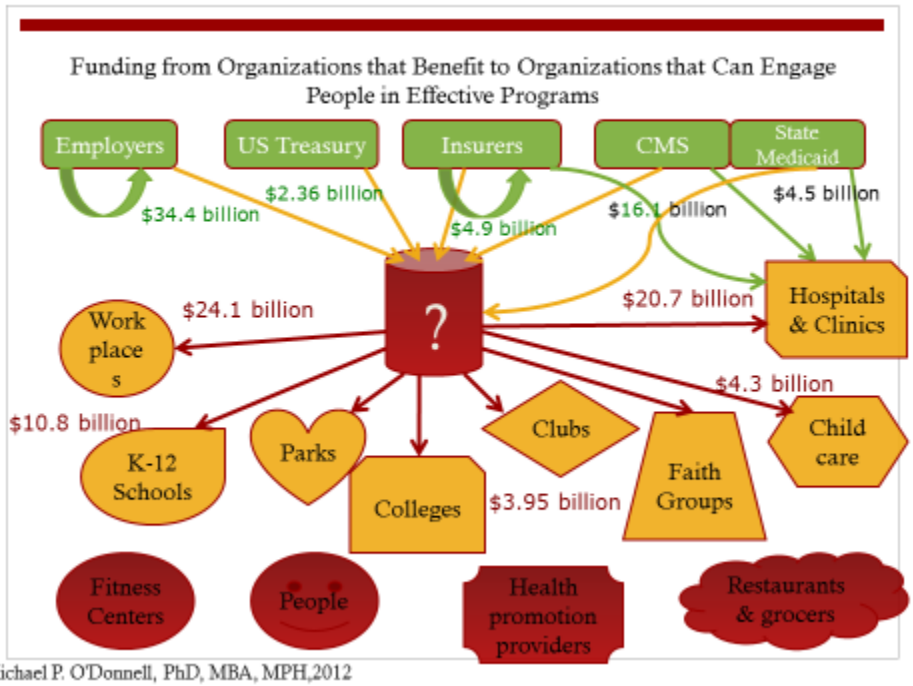
Improving HEALTH Through Employer Leadership

HERO





Michael P. O'Donnell, PhD, MBA, MPH,2012



Panelists

Tony Buettner
Senior Vice President of Business & Product Development
Blue Zones

Panelists

Elizabeth Sobel-Blum, MBA, MA
Senior Community Development Advisor
Federal Reserve Bank of Dallas

Improving HEALTH Through Employer Leadership

HERO

"There is a symbiotic relationship between the health and resilience of a country's economy, and the health and resilience of a country's people…"

Richard W. Fisher
President and CEO,
Federal Reserve Bank of Dallas

FEDERAL RESERVE BANK OF DALLAS

Healthy Communities

Components integral to healthy, vibrant, resilient communities:

- ✓ Access to Healthy Food
- ✓ Access to Medical Care
- ✓ Aesthetics: Landscaping, Art, Culture
- ✓ Air, Soil and Water Quality
- ✓ Building Financial Capacity
- ✓ Built Environment
- ✓ Early Childhood Development
- ✓ Education
- ✓ Employment
- ✓ Entrepreneurship
- ✓ Personal/Public Safety
- ✓ Physical Activity
- ✓ Public Transportation
- ✓ Senior Needs: Accommodation, Care, Services
- ✓ Social Networks/Social Environment
- ✓ Social Services

FEDERAL RESERVE BANK OF DALLAS

Panelists

Scott Peterson, MA
Executive Vice President & Chief Human Resources Officer
Schwan Food Company

Improving HEALTH Through Employer Leadership

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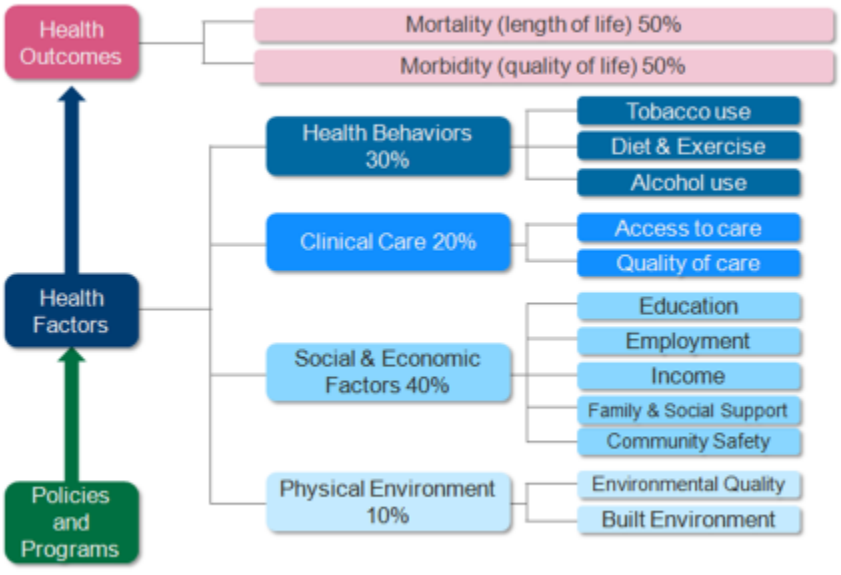
Marshall, MN:
Current Community Partnership Overview

Main Street in downtown Marshall, MN

What are the key factors driving Health Outcomes?



Panelists

Cathy Baase, MD
Global Director of Health Services
The Dow Chemical Company

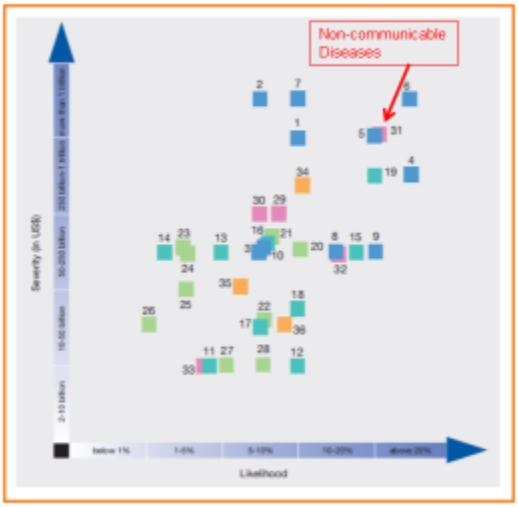
World Economic Forum

Catherine Baase, M.D.

Global Risks Landscape 2010: Likelihood with Severity by Economic Loss

Non-communicable diseases are strongly connected to other global risks: fiscal crises; underinvestment in infrastructure; food, water and energy security.

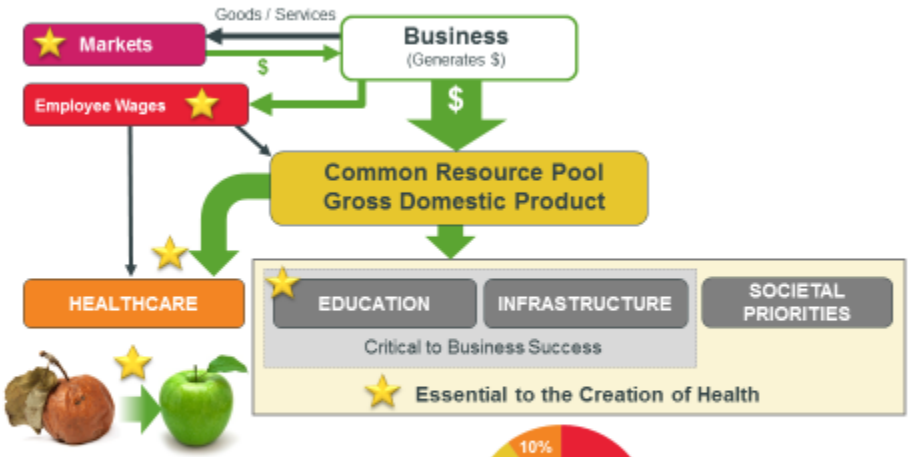
The mobilization of social forces and people outside of health systems is critical as it is clear that chronic diseases are affecting social and economic capital globally.



Source: *World Economic Forum 2010*

Macro Economic Concept Model

Catherine Baase, M.D.



Positive Health Outcomes

- Performance and Productivity
- Safety
- Attract and Retain Talent
- Engagement and Satisfaction

22

Discussion Paper

The Business Role in Improving Health: Beyond Social Responsibility

David A. Kindig, George J. Isham, and Kirstin Q. Siemering*

August 8, 2013

**Participants in the activities of the IOM Roundtable on Population Health Improvement*

The views expressed in this discussion paper are those of the authors and not necessarily of the authors' organizations or of the Institute of Medicine. The paper is intended to help inform and stimulate discussion. It has not been subjected to the review procedures of the Institute of Medicine and is not a report of the Institute of Medicine or of the National Research Council.

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The Business Role in Improving Health: Beyond Social Responsibility

David Kindig, M.D., Ph.D., Professor Emeritus, University of Wisconsin; George Isham, M.D., M.S., Senior Advisor, HealthPartners; and Kirstin Q. Siemering, Dr.Ph., R.D., Population Health Institute, University of Wisconsin[1]

INTRODUCTION

Although there is growing understanding that fundamental population health improvement will require multisectoral partnerships (Posner, 2010), the specific role of employers in such partnerships has been less well explored. While corporate social responsibility plays an important motivational role, more traction will be possible if improving health can be linked to corporate bottom-line performance. This paper explores why business should engage in improving population health.

THEMES

Corporate Business Goals and Community Health

Improving the health of the community where a company is located can contribute to achieving corporate business goals. The involvement of business with health care and public health is often focused on reducing health care costs and improving employee productivity (Baicker et al, 2010). As important as these are, we believe that current understanding of the many factors that contribute to better health provide a rationale for an even wider role for businesses in making surrounding communities healthier. This role can be rooted in core business objectives far beyond corporate social responsibility. According to Andrew Webber, President and CEO of the National Business Coalition on Health, "Business leaders must understand that an employer can do everything right to influence the health and productivity of its workforce at the worksite, but if that same workforce lives in unhealthy communities, employer investments can be seriously compromised" (Webber and Mercure, 2010).

Determinants of Population Health

Improving population health requires much more than high-quality, affordable health care. Health outcomes in the United States lag behind those in most developed countries by a wide margin, despite the fact that the United States spends substantially more on health care than its peers (IOM and NRC, 2013). Within the United States, we continue to experience substantial disparities by race, income, and geography, and, as shown in a recent report, there has been absolute worsening in mortality rates in many U.S. counties over the last decade (Kindig and Cheng, 2013).

[1] Participants in the activities of the IOM Roundtable on Population Health Improvement.

As important as health care quality and access is, the last several decades have shown that health outcomes are the product of many factors beyond health care. The widely used *County Health Rankings*[2] weight the multiple factors as 20 percent for health care, 30 percent for health behaviors, 40 percent for social factors like education and income, and 10 percent for the physical environment (see Figure 1).

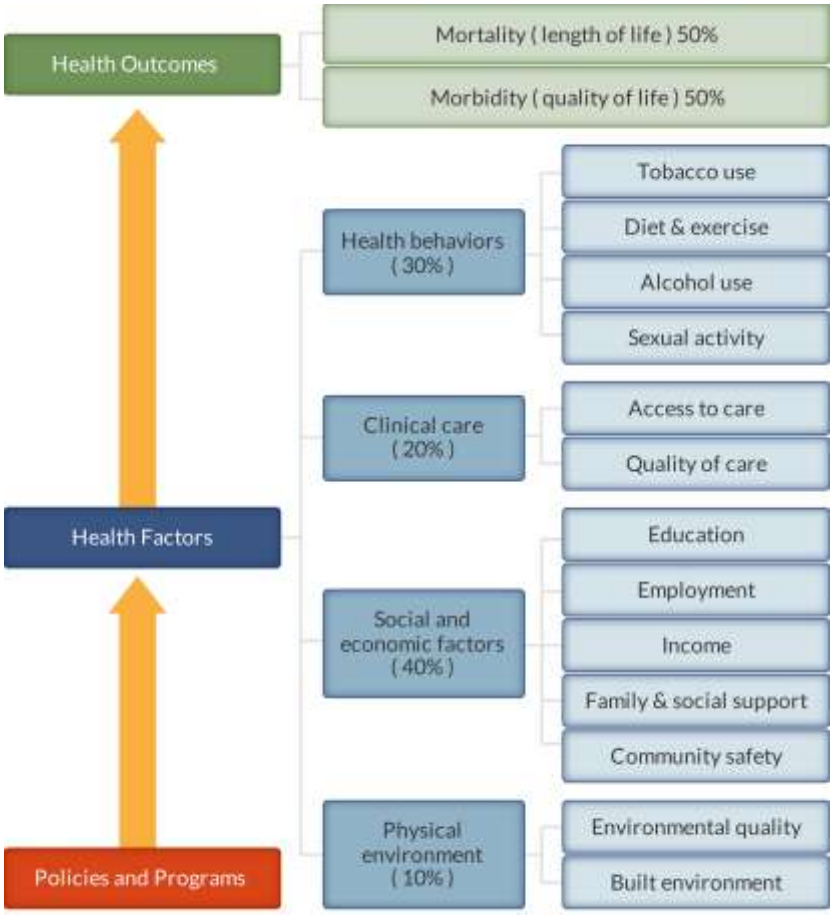

FIGURE 1 *County Health Rankings* model.
SOURCE: *County Health Rankings*, 2012.

The Critical Role of Business

We believe that the business sector plays a critical role in many determinants of health. While the health care system has primary responsibility for health care quality and access and, to some extent, for health behaviors, it has more limited roles in the social and physical environments. The business sector usually strives to maximize the value of

[2] *County Health Rankings* is a collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin.

health care dollars invested in the workforce because lower costs or better outcomes generally translate to a healthier and more productive workforce and a more successful enterprise. Business can also influence health care through purchasing requirements. Such requirements can specify the health care product they are purchasing and mandate that health care providers must practice evidence-based medicine. The focus is primarily on controlling the cost of services provided to employees and their dependents while ensuring an acceptable level of quality. Some larger employers also directly provide employee health services. Health care benefit design impacts both health care costs and employee recruitment and retention.

The business case for focusing on health behaviors has been to foster employee wellness, which is seen as improving productivity in the short run and reducing health care costs in the long run. With respect to social and economic factors, the strongest business contribution may be in employment itself, both in the employment-to-population ratio and the contribution to individual and family income. There is also growing realization by employers that K-12 and early childhood education programs in their communities contribute to business profitability in the short and long runs. In terms of the physical environment, some industries have substantial responsibility in areas of air and water quality and in community land use planning. There also has been a growing interest in the environmental factors that contribute to obesity in communities, for example, lack of opportunities for physical activity or for purchasing healthy food.

Impact of Community Health on Business Objectives

Improving the health of communities and individuals is important to core business objectives. While corporate social responsibility must be valued and encouraged, we believe the role of business in communities' health improvement efforts will be limited in impact and sustainability if not tied to bottom-line performance.

Better community health can contribute to the bottom line in many ways beyond reducing health care costs. Cathy Baase, Dow Chemical's Global Director of Health Services, has identified the following benefits of business involvement: attracting and retaining talent, employee engagement, human performance, personal safety, manufacturing and service reliability, sustainability, and brand reputation.

Also important is the link between employee well-being and profitability. One large retailer regularly assesses employee well-being and compares these data with sales and profitability figures.

The business community understands the health care and education connection. The poor health of our children will lead to rising health care costs, which will then exhaust the resources for education. One approach to long-term investments in youth development is through mentoring relationships. For example, one company recruits youth (from as early as the first grade) who might otherwise end up on the street or in jail to participate in supportive relationships and then guarantees jobs as long as the students earn good grades. The business case for investing in education in the community is that the company needs employees.

Social responsibility commitments of businesses can often lead to enhanced company reputation and customer loyalty. When a business reflects customers' values (such

as making a strong financial commitment to education), people feel good when they walk in, and it improves the brand.

Business Roles in Health Improvement Vary

Large employers with stable, older workforces may see greater bottom-line return than employers with younger, high-turnover workforces. Smaller employers will be limited in what they can do alone but could operate through employer coalitions or Chambers of Commerce.

Multisectoral Partnerships

No single sector is solely responsible for health improvement. Businesses can lead or play strong supporting roles in community multisectoral partnerships. It follows from a multideterminant understanding of health that no *one* organization or sector is totally responsible for improving health outcomes. For the business sector, the relationship of core corporate objectives to each of the determinant areas is different than for the health care sector, since businesses have less control over what is necessary to improve health. Real and meaningful improvement will require active participation and resources from multiple sectors of society, including health care, public health, schools, businesses, foundations, and government at all levels.

We believe that meaningful improvement requires collective action by sectors not used to working together. Many sectors do not understand how activities in their sector are important to and impact the overall goal of improving health. In some communities, because of their prestige, political clout, and financial resources, businesses can be the superintegrator (Kindig, 2010) across the stakeholders. Businesses must partner with others to achieve health improvement in communities and thereby reap the advantages for their workforces and overall well-being of business activity. Michael Porter observed that the "solution lies in the principle of shared value, which involves creating economic value in a way that *also* creates value for society by addressing its needs and challenges. Businesses must reconnect company success with social progress" (Porter and Kramer, 2011).

STEPS TO ACTION

What steps need to be taken to assist businesses to take a more active role in community health improvement? How do we get to that future from where we are today? What are the gaps and the barriers? We have identified seven activities that could advance understanding and action in this area.

1. **Set galvanizing goal targets.** Most business leaders understand the concept of impact metrics and know how they can drive strategic investments.
2. **Extend a meaningful invitation from those currently engaged in improving population health to business regarding their views, needs, and involvement.** There is no shared understanding of who "owns" the health improvement space in communities. In some sense, the community health improvement "sandbox" still

seems largely controlled by health care and public health, with business sector participation limited due to fear of meddling, revenue loss, or disruption of an ecosystem configured to maximize success for a designated few.

3. **Engage in education efforts for CEOs and others in the C-Suite.** One useful tool might be a population health primer from a business perspective or an action kit for business involvement. Such efforts would need to be built in to existing channels of information for businesses, such as a Conference Board or Business Roundtable. To be successful, business-sector engagement must address issues beyond health care costs.
4. **Sponsor convenings with broader community partners.** It is important to engage community partners but were much less certain about how to do so is not certain. One One approach might be to create a chartered value exchange to foster multi-stakeholder dialogue and convenw around health for employers, health providers, public health organizations, and consumers.
5. **Develop and widely share case studies of businesses that are already making progress in community health improvement activity.**
6. **Promote "Triple Aim" collaboration with business.** The Triple Aim is a policy framework developed by the Institute for Healthcare Improvement. It advocates the simultaneous improvement of patient experiences of care (including quality and satisfaction), reduction in per capita health care costs, and improvement of population health. Although most Triple Aim sites define their populations by the service areas of health care delivery systems, several initiatives have adopted a regional approach and are defining their populations geographically (Kindig and Whittington, 2011). Business-sector partners could benefit greatly from recognizing the value of Triple Aim goals and engaging in collaborative efforts to achieve them.
7. **Identify permanent revenue streams for carrying out these activities.** In addition to corporate contributions, businesses can partner with others in obtaining foundation or government grants for activities. In addition, many experts argue that as much as 25 percent of current health care spending is ineffective, improving neither outcomes nor quality. Capturing these dollars for reinvestment in more effective programs and policies within and outside of health care will not be easy, but nevertheless should be a high priority for both public- and private-sector leaders. Consideration should be given to setting aside a community share from savings anticipated under the implementation of accountable care organizations, which are designed to provide higher-quality care in a more efficient manner (Magnan et al., 2012). Also, as uncompensated care burdens are reduced under health reform, community benefit resources required by the Internal Revenue Service for nonprofit tax-exempt status could be redirected from charity care into broader health-promoting investments (Bakken and Kindig, 2012). This is a considerable sum; as of 2002, the most recent year examined, the national value of this tax exemption was $12.2 billion (U.S. Congressional Budget Office, 2012).

CONCLUSION

The authors believe that there is a solid argument to be made for a much stronger role for businesses in population health improvement. Such improvement can enhance corporate core objectives beyond those of social responsibility. It is hoped that the ideas presented here will contribute to a more robust discussion of this potential and lead to action at all levels, from individual communities to the nation as a whole.

ACKNOWLEDGMENT

The ideas for this paper emerged from discussion at a meeting that was supported by a MATCH grant from the Robert Wood Johnson Foundation (RWJF) to the University of Wisconsin Population Health Institute (UWPHI). The meeting was held January 9-10, 2012, at Health Partners in Bloomington, Minnesota, and was attended by Catherine Baase from Dow Chemical, Larry Becker from Xerox, Bridget Catlin from UWPHI, Abbey Cofsky from RWJF, George Isham from Health Partners, David Kindig from UWPHI, Joshua Riff from Target Corporation, Kirstin Siemering from UWPHI, and Andrew Webber from the National Business Coalitions for Health.

Suggested citation: Kindig, D., G. Isham, and K. Q. Siemering. 2013. *The business role in improving health: Beyond social responsibility*. Discussion Paper, Institute of Medicine, Washington, DC. http://iom.edu/Global/Perspectives/2013/TheBusinessRole.

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From Worker Health to Citizen Health

Moving Upstream

Martin-Jose Sepulveda, MD

New rapid growth economies, urbanization, health systems crises, and "big data" are causing fundamental changes in social structures and systems, including health. These forces for change have significant consequences for occupational and environmental medicine and will challenge the specialty to think beyond workers and workplaces as the principal locus of innovation for health and performance. These trends are placing great emphasis on upstream strategies for addressing the complex systems dynamics of the social determinants of health. The need to engage systems in communities for healthier workforces is a shift in orientation from worker and workplace centric to citizen and community centric. This change for occupational and environmental medicine requires extending systems approaches in the workplace to communities that are systems of systems and that require different skills, data, tools, and partnerships.

Occupational and environmental medicine is based on a population health and environmental paradigm of using data for understanding patterns and distributions and for predicting exposures, risks, and outcomes. During the last century, major changes in materials (eg, chemicals, radiation), people (eg, demographics, skills), processes (eg, assembly line, automation), laws (eg, child labor, work hours, safety), and science and technologies (eg, electrification, transportation, communications, and computing) altered the nature of work on multiple occasions.[1,2] These transformations expanded the opportunity for occupational and environmental medicine to perform new services with added value to workers and employers beyond providing acute medical care for workplace injuries and diseases (Fig. 1). New services included improved approaches to prevention of occupational morbidity and mortality such as training, exposure monitoring and control, risk assessment, screening, wellness and behavioral health interventions, disability management, and rigorous health and safety management systems. More recently, longitudinal data collection on occupational and environmental exposures, economic and population health data, and analytics are identifying new opportunities to support prevention, environmentally sustainable operations, and returns on investments in health and safety.[3]

The purpose of this commentary is to explore a subset of major disruptive forces for change and discuss how these may influence the practice of occupational and environmental medicine and perhaps shift its focus from worker and workplace to citizen and community. The forces for societal change discussed are the rapid economic development in emerging economies, health care delivery system transformations, noncommunicable diseases, and massive data generation (big data) along with advances in information and communication technologies (Fig. 1). These forces will likely cause the next shift in occupational and environmental medicine's opportunity for value creation, here defined as healthier environments, better health, higher productivity, and competitive labor costs. Although the physician is the prime focus of the commentary, other health and safety professionals will be affected in a similar fashion.

From the Health Systems and Policy Research—Watson Laboratory, IBM Corporation, Southbury, Conn.
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Other sources of support: None.
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DISRUPTIVE FORCES

Disruptive forces are affecting society and health through complex interactions and are challenging health systems and health care professionals at an unprecedented scale and speed.

Rapid Growth Economies

One such force is global economic development. Rapid economic growth has shifted from high-income countries such as the United States and Germany to middle-income countries such as China, India, and South Africa.[4,5] This has caused major changes in the market focus for global and domestic corporations including the sizes and locations of their operations in these middle-income countries. Rapid-growth middle-income countries present complicated admixtures of low-income country (eg, Chad, Cambodia, and Bangladesh) and high-income country health and environmental and safety challenges. For example, middle-income countries share many of the following health problems with low-income countries: poor access to basic medical care and essential drugs, effective communicable disease control, adequacy of essential public health services related to water, hygiene, sanitation, maternal and child health, unsafe sex, and indoor smoke from solid fuels. Problems of high-income countries are now also beginning to appear in middle-income countries. These often include violence, tobacco, alcohol and substance abuse, behavioral health, noncommunicable diseases, and environmental contamination from toxic discharges. A decade ago, occupational and environmental professionals in a limited number of industries such as textile, energy, and petrochemicals were challenged by occupational and public health threats in low- and middle-income countries. Today these are priorities for occupational and environmental medicine professionals in all major industries ranging from agriculture and construction to information technology and telecommunications because all are present in middle-income country markets.

Urbanization

Changes in the distribution of the world's population between rural and urban are also causing major disruptions in society and in health, creating additional opportunities for value from occupational and environmental medicine services. Urbanization is reshaping societies worldwide. Today more than half the world's population lives in cities, and each week approximately 1.5 million more people are added to the urban population.[6] It is projected that between 2011 and 2050, the global urban population will grow from 52% to 67% of the world's population. This massive urban growth will be driven primarily from increases in less-developed regions (from 47% to 64%) than from increases in the developed world (78% to 86%).[7] Urbanization is advantageous for economic development by increasing paid labor opportunities and by concentrating people for more

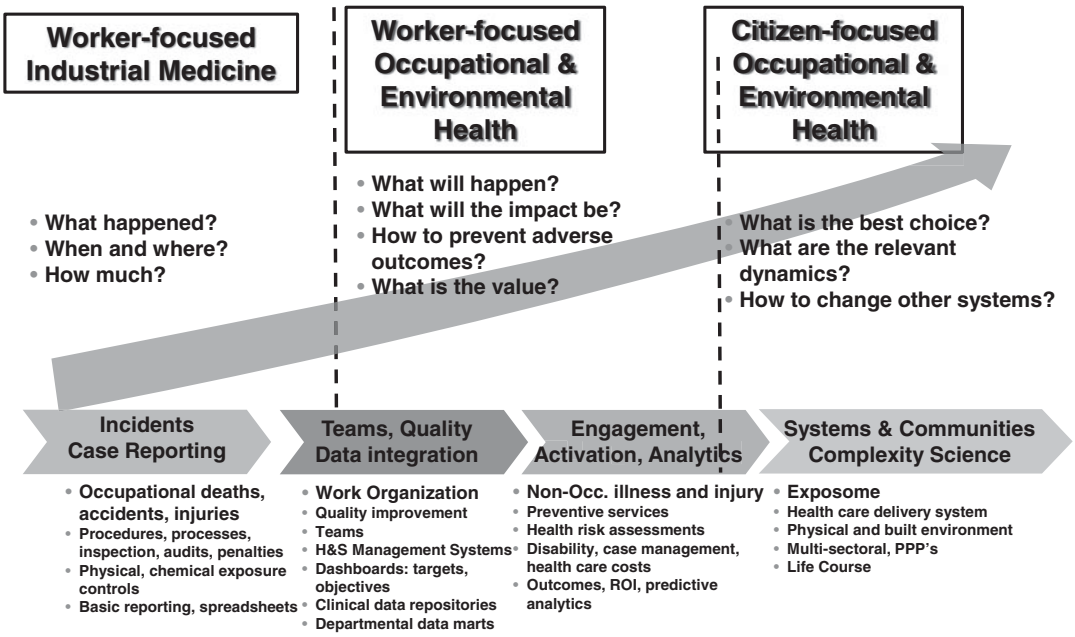

FIGURE 1. From worker to citizen health.

efficient services delivery such as education, health care, and transportation. Often, however, poor urban planning, limited resources, corruption, and other factors create urban conditions for slums, air pollution and excessive noise, poor built environments (eg, walkability), low nutritional value food sources, violence and crime, drug trafficking, and sexual exploitation and disease transmission.[8] These urbanization hazards can impede economic development in cities and produce major adverse impacts on the health, productivity, and costs of employed populations. Examples of such impacts include absenteeism, presenteeism, reduced flexibility due to transport or public safety, density-related communicable disease transmission, or rates of high-cost chronic conditions such as human immunodeficiency virus, hypertension, diabetes, and depression.

Noncommunicable Diseases

Noncommunicable diseases are adversely impacting economies, governments, and the private sector. These conditions are challenging existing systems and structures for health care delivery, wellness, and care management as well as economic development.[9] Noncommunicable diseases accounted for 63% of global mortality in 2008, affecting 36 million individuals, of which 25% or 9 million were in the working ages less than 60 years.[10] Noncommunicable diseases cause 86% of healthy years of life lost in high-income countries, 65% in middle-income countries, and 35% in low-income countries due to its impact on premature death and disability (DALY—disability-adjusted life years).[11] Although DALY from noncommunicable diseases will grow only 2.3% in high-income countries between 2008 and 2030, it will increase during this period by 17% in middle-income countries and 49% in low-income countries.[11]

The cost of noncommunicable diseases is staggering. In the United States, noncommunicable diseases account for more than three quarters of all national health expenditures, which are expected to increase from 17.8% of gross domestic product (USD$2.76 trillion) in 2013 to 19.6% of gross domestic product (USD$4.53 trillion) by 2021.[12] Annual executive survey data in the private sector reveal that half of executive leaders perceive noncommunicable diseases as a direct threat to their bottom line in the next 5 years and a bigger business threat than communicable diseases including human immunodeficiency virus/acquired immunodeficiency syndrome, tuberculosis, and malaria.[8]

Noncommunicable diseases are known to be related to addressable risk factors including tobacco use, physical inactivity, low nutritional diets, obesity, excess alcohol consumption, and exposure to environmental pollution. Many of these risk factors and others have been shown in two landmark occupational and environmental medicine studies to account for 22% to 25% of total health care expenditures in the companies studied.[13,14] Currently, occupational and environmental medicine workforce strategies to mitigate these noncommunicable diseases risks are employee-focused programs and services. Although this approach can be cost beneficial when high-quality wellness and health promotion interventions are delivered, the long-term maintenance of healthy behavior, improved health status, and cost control are unknown with this approach alone.[15] The challenge of durable risk modification is related to the determinants of risk for noncommunicable diseases, which are outcomes of complex interactions involving people in socioenvironmental systems of which the workplace is only one subsystem. Education, food sources, housing, the built environment, social networks and families, the media, and other subsystems interact continuously to influence healthy or unhealthy behaviors. Noncommunicable diseases challenge occupational and environmental medicine to redesign strategies for prevention and care management around communities to help impact the root determinants of risk.

Health Care Delivery System Transformation

Health care delivery system crises of cost, access, equity, and quality are causing significant changes in the organization, technology, financing, and delivery of care. This transformation will affect occupational and environmental medicine strategies for healthy workforces as well as occupational and environmental medicine skills and job functions. In the United States, changes to the organization of health services are well under way to shift from episodic fragmented medical care to comprehensive and coordinated care with outcomes-based payment. "Medical homes" for primary care and "accountable care organizations" are two examples of

current initiatives to accomplish this shift. In primary care "medical homes," physician-led teams are organized to provide enhanced access, comprehensiveness, coordination, and person-centered care.[16] Accountable care organizations are organizations of integrated health care providers (including primary care, specialist, and facilities) that receive specified payments with performance objectives and assume all health care and financial responsibilities for their patient populations.[17] These concepts of a single accountable locus for comprehensive care suggest that occupational health, wellness, fitness for duty, and work accommodation services will need to coordinate with or be integrated into these models. This change may be accelerated by the pursuit of employers for greater cost-efficiency by having one provider for all health-related services. Occupational and environmental physicians will be challenged by the need to engage these new models of care in productive ways, including supporting these new systems of care with an appropriate level of occupational and environmental health competency.[18]

Middle- and low-income countries are also undergoing health systems transformations to improve health equity, cost-efficiency, and service delivery. Primary care is a key delivery system priority in these countries and is increasingly being viewed as the means for providing basic occupational health services, which are generally unavailable to large proportions of working populations.[19] Training for community health workers, medical technicians, nurses, and general practitioners is a major challenge for occupational and environmental medicine in these countries. New models of service delivery that extend the reach of available resources and creative uses of mobile and other low-cost technologies for health are required to address these occupational and environmental medicine needs.

Retail and On-Site Clinics

Retail and on-site medical clinics are proliferating in the United States and are additional sources of care delivery system changes that will impact occupational and environmental medicine service models. Retail clinics located in pharmacies, large grocery stores, and other retailers grew from approximately 250 in 2006 to more than 1400 in 2013 and are projected to grow to 4000 by 2015.[20] These clinics began as sources of simple, protocol-driven nonurgent care such as vaccinations and upper respiratory tract infections but are expanding to include wellness, care management, and an array of primary care and other medical services for employers such as fitness for duty and periodic examinations. This trend is being fueled by employer needs to control health care costs and improve worker productivity.[21]

There are few comprehensive data on the number of on-site clinics, but one survey of 72 companies by World At Work reported that 25% of respondents representing more than a dozen industries had on-site clinics.[22] In a separate larger survey of on-site clinics, 66% offered occupational health services, 56% performed ergonomic assessments, and 55% performed US Occupational Safety and Health Administration required testing.[21] Occupational and environmental medicine services are only partially integrated into on-site clinics today but the potential exists for this to accelerate. Most on-site clinics are third party vendor arrangements that offer flexibility to employers for scaling up or down without incurring costs of adding or reducing employees. These outsourced clinics have the potential for integration of routine health, safety, and environmental services, which are often outsourced to environmental or site services companies.

Big Data

Scale of Data Generation

The quantity, variety, and speed of data generation today are unprecedented and growing at exponential rates. This is often referred to as "big data" because these exceed the capacity of existing information management systems to handle them. In 2010, it was estimated that the daily rate of global data generation was approximately 2.5 exabytes (2.5^{18} bytes) of information and growing at 40% or more per year. For purposes of comparison, one exabyte is more than four thousand times the information stored in the Library of Congress.[23] These data changes have been fueled by the pervasive instrumentation and interconnection of our world resulting from the enormous growth of networked sensors (fixed, mobile, and aerial), mobile devices and unstructured data from text, social media, images, video, voice, and multimedia. For example, in 2011, the United Nations reported that there were 86 mobile cellular phone subscriptions per 100 global inhabitants, 15.7 per 100 inhabitants with active cellular broadband subscriptions, and 34 per 100 households with home Internet access.[24] More than 30 million networked sensor nodes are now present in the transportation, automotive, industrial, utilities, and retail sectors and are increasing at a rate of more than 30% a year.[23] Today, Twitter generates more than 7 terabytes of data per day and FaceBook more than 10 terabytes per day.[25]

Value From Big Data

The generation of massive quantities of diverse forms of data, together with new technologies to aggregate, integrate, and analyze these data, is transforming every sector of society and will transform public health and occupational and environmental medicine. Value domains being exploited in industries include improving operational efficiency such as with radio frequency identification tracking of product movement for automated supply chain management. Other major areas for data and analytics that enabled value creation include labor productivity, effectiveness of product and service marketing and delivery, and accelerating discovery and innovation. The rapid ingestion, transformation, and integration of multisource data are coupled to advanced analytics to pursue improved quality and reliability, lower unit cost, accelerate research and development, transform processes, and create new business models. Use cases (practical applications of big data use to achieve specific user prioritized goals) are abundant in many industries such as (1) real-time fraud detection in the banking and insurance industries using pattern recognition, (2) modeling and simulation for risk management in enterprise functions from supply chain to facilities management optimization, and (3) real-time product performance monitoring for quality improvement using embedded sensor, geospatial, video, and other data.

Health Data

The health care delivery system and public health, including occupational and environmental medicine, are repositories of large quantities of heterogeneous data. For example, data in medical images, pathology specimens, surgical videos, telemetry, text in records, and social and Web-based exchanges are high-density data sources in health care delivery. In public health, large volumes of data are captured from vital statistics, surveys, biometric screening, biological, toxicological, and environmental testing, inspections, and numerous programs. In occupational and environmental medicine, similar types of data are collected or used as well as fixed and mobile sensor data from equipment, effluents, accidents, medical monitoring, and industrial hygiene and safety surveillance. Data challenges for occupational and environmental medicine related to the aggregation and analysis of integrated sets of occupational, medical, and environmental data will be overcome as these technologies become available and affordable for practitioners and researchers.

The Opportunity

Big data in health care and public health are capable of being accessed with new communication and information technologies

that are better able to collect, curate, analyze, and share them. This provides a transformative opportunity for generating information and creating knowledge with increased speed, collaboration, and personalization. In public health, for example, surveillance intelligence, which is essential for prevention, protection, and assessment of health, could be vastly improved in currency (eg, real time), quality, and speed of dissemination by rapid coupling of existing public health and medical data to (1) geospatial sensor data from mobile and aerial devices, (2) observation, intent, and sentiment data from social networking, and (3) Internet traffic patterns. The value of such real-time insights from the aggregation of these varied and high frequency data flows has been demonstrated. For example, very strong correlations have been found between content-usage patterns with Twitter tweets and Google searches for infectious disease outbreaks and responses to natural disasters.[26] Open data initiatives such as those by state and federal are another good example. These freely accessible data repositories facilitate gathering and integrating multisectoral data from communities and are extremely valuable for population health and environmental assessments or research, particularly with regard to social determinants of health and environmental exposures.

In the health care delivery system, multisource data are increasingly being used for outcomes improvement. Approaches to therapeutics and care management are being redefined by combining large clinical data repositories with administrative data sets and sensor data to personalize care plans. New insights are being generated from these data using advanced quantitative methods such as patient similarity analytics that identifies cohorts of similar individuals based on large numbers of clinical and nonclinical feature vectors or indicators.[27] For example, Optum Health (a United Health Care business) and the Mayo Clinic formed Optum Labs in 2013. This new collaborative enterprise provides infrastructure and tools for the health care industry, academic institutions, and other organizations to aggregate information for large-scale analytics to improve patient care, cost, and quality.[28]

Some Dependencies

Realizing the full potential of big data in health has many dependencies such as data skills requirements. For occupational and environmental medicine as for other disciplines, the need to develop professionals who understand data and have moderately advanced analytical skills will become acute. These skills are required for using such data for program design and evaluation, impact assessments, and new models for services delivery, operational efficiency, and research. There exist additional challenges to achieving broad-based value from big data. Some examples include greater standardization of protocols for the transmission and sharing of data with different formats, compliance with existing and evolving privacy and security requirements, and the development of sustainable business models that fund freely accessible big data infrastructure.

FROM WORKER HEALTH TO CITIZEN HEALTH

Moving Upstream

This commentary has explored a subset of major forces that are causing fundamental transformations in many societal sectors. The demographic shift to urban centers, the burden of noncommunicable diseases, challenges in rapid economic growth countries, changes in health care delivery systems, and the rapid pace of data generation and use were selected because their effect on occupational and environmental medicine is likely to be significant and sustained. All are contributing to changes in the health status and productive capacity of people before they enter the workforce and as workers. All are also challenging the ability of worker-focused interventions to further advance prevention at all levels. Advancing the health of workers will increasingly involve moving upstream of the workplace to involve multiple community sectors that, together with the workplace, nurture human resilience and vitality and contain the "real" causes of death and disability.[29]

How to Move Upstream

Moving upstream requires extending the systems approach that has been applied successfully inside the workplace to the broader ecosystem in which workers live and interact. Participation and leadership are needed in the development of strategies and interventions directed at shared pathways that impact social, environmental, and physical conditions in communities. New analytic methods and use of new forms and varieties of data will be essential to identify with greater confidence and precision where the best opportunities exist for intervention and what the next best choice for action is at given points in time.

We need to create the same strong and effective partnerships with multisectoral leaders and communities that we have for safety and health at work with management, government, workers, unions, and suppliers. Forging and sustaining these complicated partnerships, however, will be significantly more challenging. Unlike partnerships created in the pursuit of healthy workplaces and safe products, community public–private partnerships involve relatively autonomous parties, the need for compromise in strategies and tactics, demanding leadership and governance requirements, and challenging liability, funding, and other requirements. But these challenges can be overcome when motivated by shared significant hardship and when objectives are aligned, communication and accountability are clear, and collaborative ways of working are established.[30] Effective community public–private partnerships have addressed various community-wide needs ranging from infrastructure development to natural disasters, terrorism preparedness, infectious disease pandemics, and deaths from motor vehicle accidents.[31,32]

Employers have been deeply engaged historically in community improvement and crisis preparedness and are now increasingly becoming active participants in community health and environmental improvement partnerships. An early example is the Mid-America Coalition on Health Care in the Kansas City/Missouri area.[33] It began as an employer coalition focused on health care costs and outcomes of employees and their families and has since expanded to include diverse health stakeholders and broader initiatives in depression, cardiovascular disease, nutrition, fitness, and tobacco. Other partnerships have pursued a range of community health priorities ranging from water fluoridation and oral health to obesity, walkable communities, schools, chronic diseases, and access to primary care and medical homes.[34]

Community Partnerships

The role of social determinants in the health of populations including workers has been recognized for many years in the public health community,[29,35] but sustained and effective multisectoral partnerships for addressing these have been limited. Nevertheless, the threat to national economies and economic development from health care cost, equity, and access issues has garnered the attention of government and private sector leaders in an unprecedented fashion.[36] Government and private sector leaders now recognize that noncommunicable diseases, including cardiovascular, respiratory, cancer, diabetes, and injuries, are driving health care cost increases and disease burdens, are rooted in interactions among multiple sectors, and require community-based approaches for mitigating these impacts. Examples of such initiatives include the Million Hearts campaign sponsored by the US Department of Health and Human Services, the City of Philadelphia's campaign to reduce smoking and childhood obesity, and the Ripple Foundation's new ReThink Health initiative.

The Million Hearts Campaign involves extensive public–private partnerships to improve health care delivery system performance related to improved aspirin use, blood pressure control, cholesterol disorders control, and smoking reduction

("ABCS").[37] The campaign targets health care providers and outpatient health care facilities and uses reporting, measurements, and communication to promote engagement and change. Health insurers, pharmacy chains, and health care delivery systems are prominent employer partners in the campaign.

The "Get Healthy Philly" initiative of the City of Philadelphia is a multisectoral initiative designed to reduce smoking, increase physical activity, improve nutritious food consumption, and reduce rates of childhood obesity. Extensive collaboration is occurring in this initiative between diverse community sectors including the business community, city government agencies, community groups, health care payers and providers, the school system, and the media. Targets for improving the healthiness of the community in support of easy, healthy behaviors include changes to the physical environment (walkability, bike ability, parks, and recreation), school nutrition, retail food outlet stocks of fruits and vegetables, restaurant industry and food preparation, and tobacco control policies.[38]

The Ripple Foundation's mission is to bring innovation and systems thinking to major challenges in health and its main initiative is ReThink Health.[39] ReThink Health supports multisectoral collaboration strengthening leadership and the use of evidence-based approaches to stewardship of community resources along with training and tools for using systems science and taking action. In 2011, it began the Healthy Columbia, South Carolina campaign in zip code 29203 to improve access to primary care, reduce emergency department visits, and improve the health of the population. This region is characterized by high rates of uninsurance, hypertension, overweight, and diabetes and high rates of emergency department visits. The initiative has recruited strong participation and leadership from health care providers, private sector insurers and employers, the City of Columbia, South Carolina, the South Carolina Health Department and Environmental Control, and faith-based and other community organizations. Early priorities have included successfully recruiting and training leaders, engaging community members and initiating work to develop community-based wellness activities, health literacy interventions, and planning for improving access to primary care.

Citizen Health: A New Paradigm

The view of worker health as an outcome of more than the workplace has roots in our specialty of occupational and environmental medicine as alluded to by Jean Spencer Felton, MD, one of the most revered occupational medicine teachers and historians, when he wrote more than 50 years ago: "No patient-employee, when seen in the industrial dispensary or in the office of the consulting surgeon, can be viewed as the possessor of a single clinical entity unrelated to the life events which he experiences every day, day after day, in a continuum."[40] Social, environmental, and physical interactions outside the work environment are key to the initial development of healthy behaviors and to long-term health behavior change.[29] This suggests a need for a new paradigm for advancing the health of working people from workplace and worker-focused to community- and citizen-focused (Fig. 1). Citizen-centered health is a concept that has been used to frame the approach to healthy behavior that is dependent on changes to social and environmental enablers and inhibitors to " . . . bring about a way of life—at home, work, and school—that makes it easier for members of a community to adopt and maintain healthful practices."[41]

Workers as citizens challenge occupational and environmental professionals to extend further the boundaries and partnerships for better health of working populations by engaging communities. Achieving better health for greater productivity and lower health-related cost is dependent on the creation of healthier community environments and not just excellence in workplace health, wellness, and safety programs.

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SPECIAL TOPIC

Improving Population Health: The Business Community Imperative

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PEER REVIEWED

Abstract

Information on the economic effect of poor population health is needed to engage the business community in population health improvement. In a competitive global market, the United States has high health care costs and poor outcomes (measured by such factors as healthy and productive lives) compared with other countries. US business needs to understand population health and not focus just on the health of employees at the worksite. We describe a long-term approach to population health, including incentives, and identify what is needed to engage business leadership in population health improvement.

The Competitive Challenge

> Today, we are spending over $2 trillion a year on health care — almost 50% more per person than the next most costly nation. And yet, as I think many of you are aware, for all of this spending, more of our citizens are uninsured, the quality of our care is often lower, and we aren't any healthier. In fact, citizens in some countries that spend substantially less than we do are actually living longer than we do.
>
> President Barack Obama, Speech to the American Medical Association, June 15, 2009

The US business community competes in a dynamic global economy. The United States has historically achieved success in the global marketplace by excelling at traditional measures of business performance: innovation, technology application, production engineering, capital deployment, marketing, sales, distribution, and customer service. Increasingly, however, 2 related factors put the US business community at a competitive disadvantage: disease burden such as obesity (1) and increases in costs such as health insurance premiums for employers (2).

Business leaders not yet schooled in all the determinants of health (3) and a US health care system biased toward the treatment of illness often say, "With the growing and added investments I am making in health care for my workers and their dependents, surely my company is producing a healthier and more productive workforce." Sadly, this is not the case. As President Obama stated, the United States spends twice as much per citizen on health care as any other country on earth yet ranks in the lowest tier of advanced countries in health outcomes. In other words, the United States produces more health care for less health (4).

A Commonwealth Fund study illustrates more precisely the competitive disadvantage the United States is facing (5). The study demonstrates that the United States, in comparison with other industrialized countries, ranks lowest in metrics of health care that include quality, access, efficiency, and equity indicators; lowest in metrics of long, healthy, and productive lives; and highest in per capita costs. Other data from the *Dartmouth Atlas* (6) show not only wide variation in health care services but that populations in regions with higher spending levels and more physician visits and hospitalizations do not experience better outcomes or quality of care. Seen through this lens, how well the US business community responds to the related challenges of improving

health and transforming health care becomes a key driver of market success and of America's future competitiveness and economic security.

This commentary focuses on the role of employers in improving population health. Four issues are addressed: 1) population health from the perspective of employers, 2) incentives for employers to improve population health, 3) opportunities for employers to improve population health, and 4) employers as change agents for improving population health.

Population Health From the Perspective of Employers

Currently used constructs and measures of population health illustrate the multidimensional nature of the determinants of population health outcomes. Many of the determinants of health (7,8) are affected, both positively and negatively, by employers, who contribute substantially to population health by generating industrial production, creating jobs and family income, setting employment policies, and influencing health behaviors through worksite cultures, safety practices, and purchasing health care.

Despite their broad influence on population health outcomes, employers' views of population health are narrowly framed by their self-interests. Simply stated, the population that employers care about is their human capital — active employees — followed by employee dependents, and, for the few remaining employers providing generous benefits, their retirees.

Not as central to employers' definition and understanding of population health is community health or the health of the population where employees and their dependents reside. However, business leaders have incentives and compelling reasons to commit to building cultures of health in the worksite and the community. Employers that wish to maximize their influence on human capital as a competitive asset must develop strategies for workforce and community health.

Incentives for Employers to Improve Population Health

Incentives and rewards are the lifeblood of competitive industries and central to the thinking and culture of business leaders. Moral responsibility and doing the right thing are not dominant factors in corporate decision making. Investment decisions are made by building a business case that an investment today will lead to an economic benefit and a competitive edge tomorrow. The challenge is to broaden the scope of self-interest in building the business case.

Sophisticated employers understand the link between maintenance of workforce health, enhanced productivity, and corporate performance. Building a worksite culture of health with executive leadership, making a sustained commitment to developing human capital, and investing in a spectrum of evidence-based worksite health and health care management programs can increase productivity, reduce employer direct (eg, medical claims) and indirect (eg, absenteeism) costs, and improve bottom-line performance (9). A growing number of business leaders now believe that, in a global economy, workforce health is an important competitive asset that affects employer operating costs and shareholder earnings. For leaders in the nonprofit sector, improving workforce health and productivity is a key driver in advancing any organization's mission.

Incentives to invest in community health are less direct and salient to business leaders than incentives to invest in workforce health. Nevertheless, a compelling business case can and should be made for business leaders to look beyond the worksite to the communities where their organizations do business and their employees reside. Business leaders must understand that an employer can do everything right to influence the health and productivity of its workforce at the worksite, but if that same workforce lives in unhealthy communities, employer investments can be seriously compromised.

Influences on community health and, by extension, workforce health and productivity, include unsafe communities; the presence of a cheap and convenient but a nutritionally unsound food supply; the absence of health education in school curricula and adequate physical education programs; land use and neighborhood design that discourage physical activity and create dependency on car transportation; a health care system with a weak prevention and primary care infrastructure that is oriented toward treatment of acute illness; and poor air and water quality.

Using this broader perspective, the business community's view of population health can radically shift, and strong incentives emerge for employers to invest in com-

munity health intervention strategies. What also emerges is an understanding that individual employers do not have the needed leverage on their own to influence community health and health care. Instead, employers must work together collectively and with other community stakeholders on population health strategies that can make a difference. Such an understanding has led during the past several decades to the establishment of business and health coalitions dedicated to improving health and transforming health care, community by community.

The incentives and the business case for employers investing in building healthy communities include the following:

- Improve the health status, and therefore the productivity, of an employer's current and future workforce.
- Control direct (health care) and indirect (absenteeism, disability, presenteeism) costs to the employer.
- Create both the image and the reality of a healthy community that may help recruitment and retention of workforce talent in tight labor markets.
- Increase the buying power and consumption level for business products, in particular nonmedical goods and services, by improving the health and wealth of a community.
- Strengthen an employer's brand and recognition in the community.
- Generate, for individual business leaders, positive feelings of civic pride and responsibility and of being a constructive member of the community.
- Channel corporate philanthropy in a direction that will improve community relations, goodwill, or branding with the potential for a positive return for the business enterprise itself.
- Help create public and private partnerships and a multistakeholder community leadership team that can become the foundation for collaboration, cooperation, and community-based problem solving for many other issues affecting the business community, such as economic development and education.

Box. National Business Coalition on Health, Sample of Member Coalitions With Initiatives to Improve Community Population Health

Coalition	Coalition-Led Initiative for Community Population Health
Buyers Health Care Action Group Minneapolis, Minnesota www.bhcag.com	Collaborative initiative with public and private employers to measure and improve health with Healthiest Twin Cities including diagnosis and treatment for chronic conditions and healthier lifestyles
Employers Health Coalition Arkansas Fort Smith, Arkansas www.ehcark.org	Cooperative effort with public health for fluoridation of water to promote oral health
Heartland Healthcare Coalition Morton, Illinois www.hhco.org	Community public campaign to address inappropriate use of antibiotics with employer action component and outreach to primary care physicians
Louisiana Business Group on Health Baton Rouge, Louisiana www.lbgh.org	Medical home initiative including Medicare and Medicaid to address integrated health care with patient engagement and prevention with emphasis on primary care
Memphis Business Group on Health Memphis, Tennessee www.memphisbusinessgroup.org	Founding member of Healthy Memphis Common Table, which includes consumers, providers, government, and other stakeholders, to address treatment and prevention of obesity and other chronic conditions for a healthier community
Mid-America Coalition on Health Care Kansas City, Missouri www.machc.org	Three-part program to address depression with public education, practitioner engagement for diagnosis and treatment, and worksite initiatives; now leading a Healthier Heartland initiative with multiple stakeholders
Savannah Business Group on Health Savannah, Georgia www.savannahbusinessgroup.com	Leader in an initiative with city and other stakeholders targeting nutrition, exercise, and obesity with a special focus on schools

Opportunities for Employers to Improve Population Health

Whereas current employer efforts focus on building worksite health promotion initiatives, community-based health improvement strategies are emerging that enjoy the active participation from and leadership of the business community. Many of these initiatives have emerged from employer-based health coalitions that surfaced during the past 3 decades principally to address rising health care costs through *value-based purchasing* (10). Coalitions have learned that community-based organizations collectively representing employers (and their aggregate purchasing power) can provide more leverage on the local

health care delivery system than any single company. Now coalitions are applying that same philosophy to influence strategies for broader community health improvement.

Distinct opportunity areas for improving community health quickly surface when employer-led coalitions and members of the National Business Coalition on Health (NBCH) work in partnership with public health officials and other community stakeholders (Box). Many of these partnerships focus on the more clinical aspects of health (eg, cardiovascular health, diabetes, asthma, and depression) but are quickly moving to a more upstream approach focused on primary prevention and better support for healthy lifestyles.

A cross-cutting example is from the Florida Health Care Coalition (FHCC) (11). FHCC, a member of NBCH, partnered with the American Lung Association of Central Florida to bring to the local schools Open Airways for Schools, a school-based asthma risk assessment and health education program for children with asthma in grades 3 through 5 (ages 8-11). FHCC worked with 2 school district members to secure funding for Open Airways instructors to visit the schools and provide asthma education for school officials as well as children. This type of population outreach to dependents of employees — and the broader school community — benefits employers by reducing children's emergency department visits and the associated work time lost by parents. Business-led health coalitions demonstrate creativity and distinctive approaches to improving the health of the population.

Employers as Change Agents for Improving Population Health

Examples of population health improvement — from workforce to community health improvement — demonstrate that models exist. But what is needed to expand this work, particularly at the community level, and with employers in a leading role? We recommend four distinct needs: 1) evidence-based interventions, 2) performance incentives, 3) metrics, and 4) business leadership.

Evidence-based interventions

As business leaders know, success often depends on a good business plan and disciplined execution. As employers become more convinced that they should invest in improving workforce and community health, they will then want to identify the evidence-based intervention strategies that work. Building the evidence base and the lessons learned from a long history of population health strategies and organizing such information so it is easily accessible to community leaders is a priority (12,13).

Performance incentives

In workforce health improvement initiatives, employers are aggressively implementing incentives to motivate and help move employees and their dependents toward better health. Provider pay-for-performance strategies have become a central and universally recognized element of health care reform legislation and corresponding value-based purchasing initiatives in the private sector. Performance incentives are needed as a catalyst and motivator for community health improvement. With rare exceptions, not enough attention has been paid to strategies and mechanisms that could reward population health improvement (7). Innovative performance incentives should be rapidly explored and tested. Approaches might include making performance-based payments to integrated *accountable care organizations* that can manage population risk or tying the allocation of federal and state public health dollars to communities improving population health status.

Metrics

Meaningful metrics are an essential ingredient of employer engagement in population health. The field of worksite health has increasingly generated a set of metrics that tie improved workforce health status and reduced illness burden to quantifiable business performance. Similar metrics for community health indicators relevant to business are more elusive.

Typical population health measures relate to length of life, self-reported health status, access to care, disease prevalence, individual health behaviors, socioeconomic factors, and the physical environment. Are these considered meaningful metrics to a business leader? And what is the benefit to business of an improved population health score? Any metric embraced by the employer community needs to speak the language of business. In particular, understanding the revenue benefits of a healthier community is essential, whether the effect comes from reductions in direct health expenditures, improvements in workforce productivity, or customer buying behaviors.

Leadership

Business leaders go to work each day with this question in mind: "How can I make my company's products and services more competitive in a global economy?" Business leaders do not often think about their company's role as a primary contributor and change agent for improving health and health care. Yet, as key stakeholders with a substantial influence on health and health care, they must — or risk continuation of the status quo. Deteriorating workforce and community health and an expensive and broken health care system affect the bottom line and warrant the immediate attention of business leaders (13). The business community, in its role as employer, health care purchaser, and respected community leader, is in a unique and powerful position to be a change agent. Who else has both the motivation and status in the community to play this key leadership role?

Conclusion

Poor health and rising health care costs in America are problems in search of employer leadership and solutions. Although many businesses still treat health as an operating cost to be managed, an increasing number of employers — large and small — have begun investing in human capital and building cultures of health at the worksite. There has been less employer attention, leadership, and investment in improving the health of communities and understanding the influence and impact of population health status on business performance. Nevertheless, the work of business and health coalitions indicates that strategies for community health improvement are building momentum and that employers play a lead role. These efforts would be buttressed by more inspired leadership from individual corporate leaders, a stronger evidence base for community health intervention strategies, the establishment of performance incentives for population health, and metrics that speak the language of business.

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