


Keynote Speaker

Creating a Healthier World by Addressing Social Determinants of Health

Claire Pomeroy, MD, MBA, President, Albert and Mary Lasker Foundation, is president of the Albert and Mary Lasker Foundation. She serves as chief executive officer of the Foundation and is responsible for advancing the Foundation's mission to "improve health by accelerating support for medical research through recognition of research excellence, public education and advocacy." An expert in infectious diseases, Dr. Pomeroy is a long-time advocate for patients, especially those with HIV/AIDS, and public health. She passionately supports ongoing investment in the full range of research. She has a special interest in health care policy, with a focus on the importance of the social determinants of health. She has published more than 100 articles and book chapters and edited three books. Dr. Pomeroy serves on the Board of Trustees for the Morehouse School of Medicine and the Board of Directors for the Sierra Health Foundation; the Foundation for Biomedical Research; iBiology, Inc.; and New York Academy of Medicine. She is also a member of the Board of Directors for Expanesthetics, Inc. and for Becton Dickinson & Company. Dr. Pomeroy was inducted into the National Academy of Medicine in 2011. She is currently professor emerita at UC Davis. Dr. Pomeroy was chief of infectious diseases and associate dean for research and informatics at the University of Kentucky. She joined UC Davis in 2003 as executive associate dean and in 2005 was appointed vice chancellor and dean of the School of Medicine. She became president of the Lasker Foundation in June 2013.



Creating A Healthier World By Addressing Social Determinants of Health

The University of Texas Health Science Center at San Antonio
School of Nursing
3rd Annual Cultural Inclusion Institute
April 21-22, 2016

Claire Pomeroy, MD, MBA
President
Albert and Mary Lasker Foundation


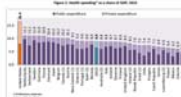
1

Cost, Outcomes Demand Change

▪ **High cost**

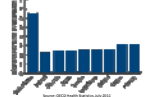
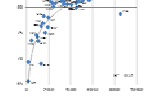
- Highest per capita spending (2x other OECD countries)
- 17% of GDP and increasing

US spends two-and-a-half times the OECD average

▪ **Poor outcomes**

- Infant mortality (31st/34 OECD)
- Life expectancy: 40th (UN)
Men - 39th (WHO)
Women - 36th (WHO)

ALBERT AND MARY LASKER FOUNDATION

2

Access Challenges Demand Change

- ACA → 18 million previously uninsured people now have coverage
- **BUT** 30 million people in US still uninsured; 31 million more are underinsured
- **BUT** Disparities persist (% uninsured – white: 9.7%; AA: 13.5%; Hispanic: 25%)
- **BUT** out-of-pocket expenses have increased significantly; high deductible plans more common – JAMA, March 3, 2016
- **BUT** only 65% of adults under 65 have accessible primary care provider; only 50% receive recommended screening, preventive care
 - Example: flu vaccine: insured (44%) vs. uninsured (14%)

Percent who say they or another family member living in their household have done each of the following in the past 12 months because of the cost:

Relied on home remedies or over-the-counter drugs instead of going to see a doctor	34%
Skipped dental care or checkups	35%
Put off or postponed getting health care you needed	29%
Skipped a recommended medical test or treatment	25%
Not filled a prescription for a medicine	24%
Cut pills in half or skipped doses of medicine	16%
Had problems getting mental health care	8%
Yes to any of the above	65%

ALBERT AND MARY LASKER FOUNDATION

3

Unconscionable Disparities Demand Change

- Race, ethnicity

African Americans die on average 4 years younger than whites:

Figure 1. Infant mortality rates, by race and Hispanic origin of mother, United States, 2007

Figure 2. Life expectancy, by race and sex, United States, 1980-2010

White men with >16 years of education vs. black men with <12 years of education:

14 Year Difference

Percent reporting poor/fair health

Source: Health Disparities Chart Book on Quality of Health and Ethnic Status in the U.S., August 2011

ALBERT AND MARY LASKER FOUNDATION

“Of all the forms of inequality, injustice in health care is the most shocking and inhumane.”

ALBERT AND MARY LASKER FOUNDATION

Addressing These Problems

- Requires solutions at the “interstices of social, political, cultural, and economic domains”
- Role must shift from “acting alone to engaging as a coordinator and motivator” of partners across sectors (government, academia, industry, not-for-profit)
- “Health improvement now requires participation in politics and social structures” - JAMA 315: 655, 2016

Box 1. Aspirations for Public Health

1. Take a leadership role in confronting and influencing the social, political, and economic factors that determine population health to sustainably protect the health of the public against old and new threats.
2. Take a leadership role in reducing inequities by working to narrow health gaps across groups in ways that promote social justice and human rights.

Box 2. Public Health Strategies for the 21st Century

1. Relentlessly prioritize actions to do what matters most to the health of populations.
2. Engage the mechanisms that explain how core foundational structures produce population health.
3. Move from government-dominated public health to multisectoral public health.
4. Formally adopt the Universal Declaration of Human Rights as the Code of Public Health Ethics.

WHAT DETERMINES HEALTH? (ADAPTED FROM WOODRUFF ET AL., 2007)

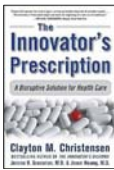
JAMA 7:315, 2016

ENVIRONMENT 20% HEALTH CARE 20% SOCIAL, ENVIRONMENTAL, ECONOMIC, POLITICAL 60%

ALBERT AND MARY LASKER FOUNDATION

Redesigning the U.S. Health-care System

- “Sick care” → “well care”
- Reactive → proactive
 - Disease-based → prevention-based
 - Acute intervention-, crisis-based → primary care-based
 - Hospital-, provider-based → population-based
 - Fragmented care → coordinated care across lifespan
- Medical model → more inclusive social determinants model





The Innovator's Prescription
A Radical Solution to Health Care
Clayton M. Christensen

“Perfecting health care is a half answer if the living conditions that cause disease prevail.”
- Steven Woolf, Virginia Commonwealth University

ALBERT AND MARY LASKER FOUNDATION 7

Social Determinants of Health: Healthy People 2020


- Healthy People 2020 highlights addressing social determinants
- One of the decades 4 overarching goals:
“Create social and physical environments that promote good health for all.”

ALBERT AND MARY LASKER FOUNDATION 8

Address Social Determinants of Health

- Socioeconomic status
- Education
- Occupation, job security
- Housing, transportation, food access
- Neighborhood safety, violence prevention
- Social status (marginalization)
- Social and environmental stressors



Source: Schroeder, SA, N Engl J Med 2017; 377:1222-8

“Social factors, including education, racial segregation, social supports, and poverty account for 1/3 of total US deaths annually.”
Kaiser Family Foundation, Nov. 4, 2015

ALBERT AND MARY LASKER FOUNDATION 9

Perceived Social Role/Support as a Driver of Health

Impact of Sense of Job Control on Coronary Heart Disease Risk

Job Control Level	Relative Risk (approx.)
High job control	0.5
Intermediate job control	1.5
Low job control	2.5

<http://www.pnas.org/content/early/2015/10/29/1518391132>

Middle-aged, white Americans dying younger, while rest of the world living longer – “Despair deaths”

ALBERT AND MARY LASKER FOUNDATION

Incarceration as a Driver of Health

- Incarceration is itself a social determinant of health; other social determinants impact risk of incarceration (selling marijuana in a college dorm less likely to result in jail sentence than selling in a low income neighborhood)
- U.S Rate – 492/100,000 persons – 2.2 million in jail
- U.S Rate – Black Men – 3074/100,000 persons – 1/3 will go to jail some time in their life
- “A good job after release may be the best preventative medicine we can offer” Annals Int Med 161:522 and 524, 2014

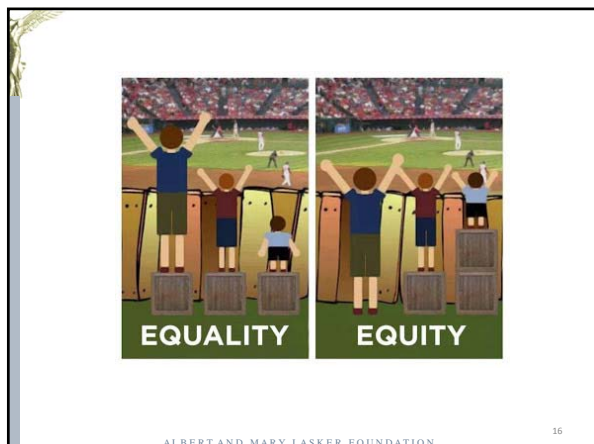
ALBERT AND MARY LASKER FOUNDATION

The Social Determinants Ten Tips for Better Health

- Don't be poor. If you can, stop. If you can't, try not to be poor for long.
- Don't have poor parents.
- Own a car.
- Don't work in a stressful, low-paid manual job.
- Don't live in damp, low-quality housing.
- Be able to afford to go on a vacation and sunbathe.
- Practice not losing your job and don't become unemployed.
- Make sure you have access to benefits, particularly if you are unemployed, retired, or sick or disabled.
- Don't live next to a busy major road or near a polluting factory.
- Learn how to fill in the complex housing benefit/shelter application forms before you become homeless and destitute.

Source: Centre for Social Justice. Social Determinants Across the Lifespan. <http://www.socialjustice.org/subsites/conference/resources.htm>, accessed October 2006.

ALBERT AND MARY LASKER FOUNDATION



ALBERT AND MARY LASKER FOUNDATION

16

Spending on Social Determinants Makes Financial Sense (Housing)

- **Special Homeless Initiative** (Adults in Boston with serious medical illness): 93% reduction in hospital costs → \$18m in annual health care savings (102 vs. 7 hospital days/client)
 - Levine et al, 2007
- **Housing First Model:** Net savings of \$9-30k/person/year
 - JAMA 301: 1349, 2009
 - MA Housing & Shelter Alliance, 2009
- **10th Decile Project:** For every \$1 spent, led to \$2 savings in first year and \$6 savings thereafter
 - Burns et al, 2013

Category	Patients discharged to a medical respite program	Patients discharged to usual care
Hospital days	3.4	8.1
ED visits	1.4	2.2
Outpatient clinic visits	0.7	6.7

Source: Bushanon, D., Dublin, S., Sai, T., & Garcia, P. (2004). The effects of respite care for homeless patients: A cohort study. *American Journal of Public Health*, 94(7), 1278-1281.

ALBERT AND MARY LASKER FOUNDATION

17

Spending on Social Determinants Makes Societal Sense (Nutrition)


- 23.5 million Americans live in a food desert
- Community grocery stores can revitalize a neighborhood and improve health
- Food insecurity has been linked to obesity, diabetes in adults; and poor glucose control in adult diabetics
 - J Gen Intern Med 22: 1018, 2007
- Every \$25 increase in home-delivered meals per older adult → 1% decline in nursing home admits
 - Health Aff (Millwood) 32:1796, 2013

ALBERT AND MARY LASKER FOUNDATION

18

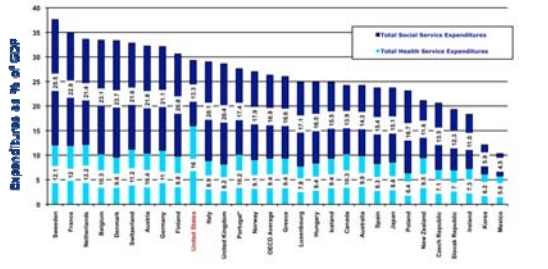
Spending on Social Determinants Makes Financial Sense (Built Environment)

- Neighborhood “cohesion” (neighbor relations) → Reduced risk of stroke mortality in community - Clark 2011
- Perception of having “green spaces” → Lower risk of obesity - Sullivan 2014
- Newly greened urban lots (vs. vacant lots) → Reduced heart disease rates - Am J Public Health 105: 909, 2015



ALBERT AND MARY LASKER FOUNDATION 19

Spending on Social Determinants Makes Financial Sense




Source: OECD Health Data 2009 (Accessed June 2009); OECD Social Expenditure Dataset (Accessed Dec. 2009); Health and Social Service Spending: Associations with Health Outcomes Article by Elizabeth Bradley, Ph.D., Benjamin Elkins, MPH, Brian Elbel, Ph.D.

ALBERT AND MARY LASKER FOUNDATION 20

Identifying High Pay-off Interventions: Impact of ACE


- Adverse childhood events increase disease risk
 - ↑ in unhealthy behaviors
 - Impact on brain development
 - Alteration in physiologic regulation
- Adverse Childhood Experiences Study
 - Child abuse/neglect → ↑ risk (graded response) of adult stroke (2.4x), CV disease (2.2x), obesity (1.4 - 1.6x) - Molec Psych 19: 544, 2014
 - Am J Prev Med 14: 245, 1998
- Several studies show childhood poverty, maternal stress during pregnancy, inadequate in-utero nutrition → Poorer adult health - Am J Psych 172: 108, 2015



ALBERT AND MARY LASKER FOUNDATION 21

Identifying High Pay-off Interventions: Start with Kids


- Early childhood interventions can improve adult health
- Carolina Abecedarian Project
 - Disadvantaged children randomized to intervention
 - play stimulation + free meals (age 0-5)
 - ↓ cardiovascular disease risk as adults (age 30)
 - Systolic BP: 143 (control) vs. 126 (treated)
 - Metabolic syndrome: 25% (control) vs. 0 (treated)
 - Cost of phase 1 intervention (\$67,000 in 2002 dollars)
 - Fetal Science 343: 1478, 2014
- Family-oriented psychosocial intervention for rural, low SES AA children age 11 years (7 weeks)
 - 8 years later: Lower levels of six inflammatory markers



ALBERT AND MARY LASKER FOUNDATION

Biological Explanations

- Physiologic stress responses associated with:
 - Historical trauma
 - Adverse childhood experiences
- Both animal and human studies: Fetal exposure to maternal stress → Later stress responses (even across subsequent generations)
- ? – Altered development of neural circuits controlling neuroendocrine response
- ? – Changes in inflammation – cytokines, stress hormones
- ? – Epigenetic modifications of DNA
("Experiences confer a signature on genome")
- Concept of "allostatic load" – accumulation of physiologic and psychologic stress on ability to maintain homeostasis




ALBERT AND MARY LASKER FOUNDATION

Identifying High Pay-off Interventions: Implications

- Importance of in-utero and childhood:
 - access to nutrition
 - poverty reduction
 - stress amelioration
 - family relationships
 - safe neighborhoods
- Economic impact of early life interventions – Excellent ROI
 - But "spread across different parts" of government budgets

"People must make good choices, but they must have good choices to make."



ALBERT AND MARY LASKER FOUNDATION

“Although health policy makers have traditionally considered nonmedical influences on health to be the domain of other state agencies and non-profit actors, a reconsideration of how the social determinants of health can be addressed within the current healthy policy landscape is underway.”

- Briefing for BCBS of MA Foundation, June 2015

Addressing Social Determinants of Health: Intersectoral Collaboration





New Approach - Health in All Policies

- Collaborative approach incorporating health considerations into decision-making across all sectors and policy areas
- RWJ – “Health in All Policies, at its core, is an approach to addressing the social determinants of health that are the key drivers of health outcomes and health inequities.”
- Inter-sectoral cooperation will require:
 - Policy changes
 - Common agenda across service providers
 - Linked data and information-sharing systems
 - Aligned budgets
 - Linked evaluation metrics

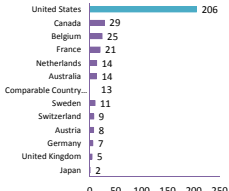
ALBERT AND MARY LASKER FOUNDATION 28

Health in All Policies

- Example – Agricultural subsidies:
High-fructose juices linked to obesity
“One government office subsidizes corn, while across the hall, another funds an anti-obesity campaign”
Versus
- Example – Tax breaks for grocery stores that locate in inner city neighborhoods
- Challenging given that health impacted by controversial social issues

The U.S. has the highest rate of years of life lost to disability and premature death due to firearm assaults

Age-standardized Disability adjusted life years (DALY) rate per 100,000 population, 2012




Country	DALY Rate per 100,000 population
United States	206
Canada	29
Belgium	25
France	21
Netherlands	14
Australia	14
Comparable Country...	13
Sweden	11
Switzerland	9
Austria	8
Germany	7
United Kingdom	5
Japan	2

Source: Kaiser Family Foundation analysis of data from the University of Washington Institute for Health Metrics and Evaluation. Available at: <http://www.healthmetricsandevaluation.org/diseases-and-injuries/2012/11/29/2012-daly-rates-comparison> (Accessed on November 23, 2015).

ALBERT AND MARY LASKER FOUNDATION 29

Tools to Address Social Determinants of Health: Asset-Based Community Development


- Capacity inventory
- Define problems that matter to community
- Determine how to work together to implement solutions



ALBERT AND MARY LASKER FOUNDATION 30

Tools to Address Social Determinants of Health: The Key Role of Information

- April 2014 IOM Report – Collect data on social determinants in the EMR
- “Frequent-Flyers”
 - MGH: 15% ↓ in hospitalizations/ED visits
- Geocoding / “Hot spotting”
 - Define “high risk” zip codes, neighborhoods
- Social media
 - Identification of issues; empowered patients; community problem-solving



ALBERT AND MARY LASKER FOUNDATION 31

Tools to Address Social Determinants of Health

Blue Ridge

- 2010 Report identified strategies to leverage role of academic health centers to address social determinants of health
- New curricula, research, faculty development



AAHC

- Board commitment to importance of social determinants
- Toolkit to guide approach available on AAHC website



Robert Wood Johnson

- County by county health statistics
- Multiple resources, including “how to communicate”

ALBERT AND MARY LASKER FOUNDATION 32

Incentivizing Providers to Address Social Determinants

- ACA requires non-profit hospitals to perform community needs assessment and develop plans to address needs
- CDC: Community Health Improvement Navigator
 - Database of multisector, evidence-based interventions
- CMS’ State Innovation Models Initiative – innovative models to address population health
 - June 2015 – CMS released guidelines re: Medicaid support of housing
- CMS launching Accountable Health Communities Model
 - 5 yr. pilot: will social assistance improve health and reduce costs?
 - \$157 million to a max. of 44 “bridge organizations”
 - Will address housing, food access, transportation, etc.
- Discussions of adjusting payments for social determinants

ALBERT AND MARY LASKER FOUNDATION 33

**Addressing Social Determinants of Health:
The Central Role of Advocacy**

“At a moment of prominence for social policy ...
Sweeping decisions are being made that will
affect living conditions, and resulting health
outcomes, for many years. This is the wrong time
for the health professions to keep their distance
from these issues.”

-Woolf S., JAMA 301:1166, 2009

ALBERT AND MARY LASKER FOUNDATION

34

**Seven Steps to Addressing Social
Determinants of Health**

- Create a new vision/ strategies to improve health
- Empower multidisciplinary teams, multi-sector solutions
- Educate health professionals with skills for new paradigm
- Provide information resources needed to support “social determinants” approach
- Invest in research on determinants of health
- Advocate for policies that address social determinants
- Raise our voices to drive change

“The arc of the moral universe is long, but it bends toward justice.”
– Martin Luther King Jr.

ALBERT AND MARY LASKER FOUNDATION

35
