What Does It Take to Be Good Stewards of the Systems That Shape Our Lives Together?

An Insider’s View from CDC and ReThink Health

System Dynamics Conference
Chicago, July 24, 2023

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“Public health is probably the most successful system of science and technology combined, as well as social policy, that has ever been devised…It is, I think, a paradigmatic model for how you do concerned, humane, directed science.”

-- Richard Rhodes
Pulitzer Prize Author, *The Making of the Atomic Bomb*

How is it *directed*?

What are the dynamic and democratic dimensions of this work?


Worldwide Life Expectancy, 1770-2021

“Public health achievements of the 20th century dwarf those accumulated in the previous 19.”

-- Jeffrey Koplan
CDC Director

https://ourworldindata.org/life-expectancy
US Life Expectancy, 1880-2021

Era 1
Public Health

Era 2
Biomedical Healthcare

Source: UN WPP (2022); Zijdeman et al. (2015); Riley (2005)
Note: Shown is the 'period life expectancy'. This is the average number of years a newborn would live if age-specific mortality rates in the current year were to stay the same throughout its life.

https://ourworldindata.org/life-expectancy

Life Expectancy at Birth, 1950-2021

15 countries have had higher life expectancy than the US for 50 years

Notes: Comparable countries include: Australia, Austria, Belgium, Canada (except for 2021), France, Germany, Japan, the Netherlands, Sweden, Switzerland, and the U.K. See Methods section of "How does U.S. life expectancy compare to other countries?"

Source: KFF analysis of CDC, OECD, Japanese Ministry of Health, Labour, and Welfare, Australian Bureau of Statistics, and UK Office for Health Improvement and Disparities data

https://www.healthsystemtracker.org/chart-collection/u-s-life-expectancy-compare-countries/#Life%20expectancy%20at%20birth%20in%20years%201980-2021
Life Expectancy and Healthcare Spending Per Capita, 1980-2021

Notes: Comparable countries include: Australia, Austria, Belgium, Canada (except for life expectancy average in 2021), France, Germany, Japan, the Netherlands, Sweden, Switzerland, and the U.K. See Methods section of "How does U.S. life expectancy compare to other countries?"

Source: KFF analysis of CDC, OECD, Japanese Ministry of Health, Labour, and Welfare, Australian Bureau of Statistics, and UK Office for Health Improvement and Disparities data

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We know that future cannot be achieved with narrow projects or technical fixes. It requires us to **think and act differently**.
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Our well-being relies on a system that is not built for everyone to thrive. But it can be transformed if enough of us—individuals and organizations in every sector—see ourselves and each other as interdependent stewards in a movement for well-being, equity, and racial justice.
As Systems Collapse, People Rise

This single dynamic explains how people with a just cause can transform failing systems for the better

—Thriving Together Springboard, quoting Otto Sharmer
Our Quest to Thrive Together

Life Evaluations of U.S. Adults

% Thriving

June 2021
Americans' Life Ratings
Reach Record High

June 2022
In U.S., Life Ratings
Drop to 13-Month Low

What will it take to reach even greater heights of well-being, equity, and resilience?

2040

Great Recession

COVID-19

SOURCE: Gallup
Building an Integrated High School Curriculum Focused on the Biology and History of Smallpox

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This year’s program also includes a special tribute to Dana Meadows, who passed away since our last conference in Bergen, Norway.
1990
2001
2011
2023

SCORSES OF SD PROJECTS

~50 SD projects
• Small maps + $$$$ industrial-strength models
• Aspiration + data + engagement
• User interfaces, interactive experiences, storytelling
• Training, facilitation, educational universities
• Publications, documentation, validation
• Evaluation (and awards)

SUITE OF SD MAPS & MODELS
Solid SD builds on and goes beyond…

- Surveillance
- Epidemiology
- Demography
- Ethnography
- Economics
- Evaluation
- Policy design
- Communications
CDC Projects Focused on System Science (circa 2009)

- **Infection dynamics**
  Smallpox, anthrax, HIV, STD, TB, polio, SARS, influenza, malaria, etc.

- **Chronic diseases and risks**
  Diabetes, obesity, hypertension, heart disease, stroke, tobacco, diet, physical activity, stress, alcohol, oral health, sleep, preventive care, etc.

- **Mental health**
  Continuum of positive well-being to mental disorders over the life-course

- **Environmental health**
  Air, water, soil, heat, radiation, climate change, etc.

- **Preparedness**
  Biological, radiological, chemical, environmental, etc.

- **Violence and injury**
  Child maltreatment, sexual assault, trauma care, etc.

- **Reproductive health**
  Maternal, fetal, and infant health

- **Urban health**
  Immigration, ethnic diversity, poverty, housing, employment, education, land use, and health

- **Grantmaking strategy**
  Timing and sequence of outside assistance to local leaders

- **Upstream-Downstream effort**
  Balancing disease treatment with prevention/protection

- **Health system performance**
  Relationships among access, cost, quality, equity, and health
Examples of CDC’s SD Tools

HEALTHBOUND POLICY SIMULATION MODEL AND GAME

“We are redefining CDC as the nation’s health-protection agency.”

-- Julie Gerberding, CDC Director


https://drupal.academyhealth.org/blog/2012-07/noteworthy-public-health-systems-research-illuminates-prospects-rethinking-local
Examples of CDC’s SD Tools

PREVENTION IMPACTS SIMULATION MODEL (PRISM)


https://www.cdc.gov/pcd/issues/2021/20_0225.htm

Who Are Stewards?
https://rippel.org/shared-stewardship/

Amplifying Stewardship

Pulse Check on Shared Stewardship: https://rippel.org/pulsecheck/

Thriving Together Through Shared Stewardship:
http://tiny.cc/SharedStewardshipVideo

STEWARDS

Stewards are people and organizations who work with others to create conditions that everyone needs to thrive together, beginning with those who are struggling and suffering. Everyone can be a steward.
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2021 Pulse Check on Shared Stewardship for Thriving Together Across America

Seven Signs of Stewardship on the Rise

Multisector

Faith and Social Justice

Housing

Food

Environment

Public Health

Businesses

Hospitals
Vital Conditions for Health and Well-Being

Thriving Natural World

Basic Needs for Health & Safety

Humane Housing

Meaningful Work & Wealth

Lifelong Learning

Reliable Transportation

Belonging & Civic Muscle

Belonging & Civic Muscle is at the center because it is both a vital condition and a practical capacity that is necessary for equitable success in every other kind of work.

http://Thriving.US; https://rippel.org/vital-conditions-for-health-and-well-being; a growing cadre of organizations now explicitly focus on establishing the vital conditions.
Pairing Coordinated Federal & Non-Government Actions

Non-Government Organizations
*Thriving Together Springboard*

Federal Plan
*52 agencies*

Informs federal programs, policies, and resources that give communities flexibility to tailor solutions to local needs

All people and places thriving together—no exceptions

Thriving.US

State and Local Action

Health.gov
“Never before have so many federal agencies and legions of leaders across America been able to organize around the same set of vital conditions in a common quest to thrive together.”

Next Gen Tools for Shared Stewardship
Thriving Together Model (Interactive Theater and Multisolving Investment Analysis)

First dynamic model to track population-level changes in well-being separately by race/ethnicity


ReThink Health. Thriving Together Theater: https://rippel.org/thriving-together-theater/
A Legacy Moment

ReThink Health’s Thriving Together Model
Illustrative ELTRR Scenario

US LIFE EXPECTANCY BY RACE/ETHNICITY

84 years: Japan, Switz, Spain, Italy

Hispanic

White

Black

Forthcoming...
Legacies for Living Together

We inherit vital conditions from our predecessors—their legacies are the starting points for our lives.

We also possess enormous capacities to transform current and future conditions, for better or for worse.

What legacies would make us “good ancestors” for generations to come?

Wayfinding
Ancient Practice of Goal-Directed Movement

Stewards of the Native Hawaiian renaissance changed the course of their collective destiny
“Our well-being and survival depend on social navigation – our ability to direct the course of change toward a negotiated set of valued conditions.”

Can you see a future? Do you believe you can navigate there?

-- Nainoa Thompson
Master Navigator
Polynesian Voyaging Society