The Use of Design in Communicating Scientific Findings

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Agenda

• Center on Society and Health overview
• Communications approach
• Using LE data
  – TCE LE Outliers
  – CA Healthy Places Index
  – Metropolitan Washington Healthy Communities Index
The VCU Center on Society and Health is an academic research center working to connect the dots between social factors and health.

www.societyhealth.vcu.edu
Connecting the Dots
“Connecting the Dots” Model

Research

Policy Outreach

Collaboration

Strategic Communication

Stakeholder Engagement
Health Expenditures and Life Expectancy, 2010

Place Matters

• A series of locally tailored Community Health Equity reports (CHERs) to assess population health inequities and related social and economic conditions for the following eight communities:
  – Alameda County (Oakland), CA; Baltimore, MD; Bernalillo County (Albuquerque), NM; Boston, MA; Cook County (Chicago), IL; New Orleans, LA; San Joaquin Valley, CA; and South Delta, MS.

• The reports examined how health is influenced by demographic, social, and economic conditions of importance to each community.

• [https://societyhealth.vcu.edu/work/the-projects/place-matters.html](https://societyhealth.vcu.edu/work/the-projects/place-matters.html)
Our Communications Approach

Sarah Blackburn, MS

Center on Society and Health
Traditional dissemination activities for academia

- Publication in scientific journals
- Presentations/posters at academic conferences
- Some possible media coverage
Making an Impact

• For science to be applicable, it needs to be in a format and venue that is accessible and understandable to a general audience

• At its best, sound science is coupled with:
  – community engagement
  – policy outreach
  – strategic communications
Information Overload!

https://jasoncasteel.deviantart.com/art/Information-Overload-170314438
Cutting Through Clutter

• What this means for getting your message through
  – Stories need to be told at a glance
  – Messages need to speak directly to the reader
  – Visuals need to stand out and be easy to understand
RICHMOND, VIRGINIA

Short Distances to Large Gaps in Health

Follow the discussion
#CloseHealthGaps

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PHILADELPHIA, PENNSYLVANIA

Short Distances to Large Gaps in Health

Follow the discussion
#CloseHealthGaps

Life expectancy at birth (years)
Shorter  Longer

1 mile

VIRGINIA COMMONWEALTH UNIVERSITY
1 Highway, 5 Counties, 7 Years of Life

Life expectancy at birth (years)
- Shorter
- Longer

10 miles

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Gaps in Health Across Neighborhoods Stem from Multiple Factors

Babies born just a few miles apart can face vastly different chances of living a long and healthy life. This isn’t a problem unique to big cities, small towns or rural areas—in fact, it’s a pattern across America as a result of the varying conditions in our neighborhoods:

- **Education and income** are directly linked to health: Communities with weak tax bases cannot support high-quality schools and jobs are often scare in neighborhoods with struggling economies.
- **Unsafe or unhealthy housing** exposes residents to allergens and other hazards like overcrowding.
- **Stores and restaurants selling unhealthy food** may outnumber markets with fresh produce or restaurants with nutritious food.
- **Opportunities for residents to exercise, walk, or cycle** may be limited and some neighborhoods are unsafe for children to play outside.
- **Proximity to highways, factories, or other sources of toxic agents** expose residents to pollutants.
- **Access to primary care doctors and good hospitals** may be limited.
- **Unreliable or expensive public transit** can isolate residents from good jobs, health and child care, and social services.
- **Residential segregation and features that isolate communities** (e.g., highways) can limit social cohesion, stifle economic growth, and perpetuate cycles of poverty.

To build a Culture of Health—where every person, no matter who they are or where they live, has the opportunity to be as healthy as they can be—we must improve people’s opportunities to be healthy in the places where they live, learn, work and play.
Cutting Through Clutter

While both of these maps depict large variations in life expectancy (LE) across short distances...

... the second map allows readers to easily orient themselves, recognize neighborhoods and landmarks familiar to them, and clearly see the large LE gaps.
Key Design Elements

• Simplified map elements (only selected geographic borders, waterways, and highways)
• Recognizable identification tools (highway markers, drop-pins, legend elements, landmark icons)
• Select labeling of well-known neighborhoods and landmarks
• Large numbers and color gradient to draw attention to trend & differences
• Inclusion of brief explainer (headline) and engagement tool (hashtag)
Challenges

• Deciding which neighborhoods, landmarks, etc to include or exclude
• Striking a balance between including an adequate amount of information and keeping the map uncluttered
• Restricting the size of the mapped area
• Encouraging engagement, but keeping within the constraints of design standards
• Accommodating multiple sets of brand standards
Getting the Message Across

• While good design is important to encourage uptake of information, products very rarely get in front of the right people without deliberate effort.

• Outreach involves more than drafting a press release at the end of a study. Planning throughout the project and tailoring efforts to meet goals and reach target audiences is key.
Communication Process

 Strategic planning (goals, audiences) → Arguments, messages, talking points, format, venue → Audience feedback

 Scientific evidence & data
Communication Process

- Strategic planning (goals, audiences)
- Arguments, messages, talking points, format, venue
- Audience feedback
- Scientific evidence & data
The Role of News Media

• Oftentimes, the media plays the role of the intermediary between you and the audiences you’re interested in reaching

• Findings and products considered “newsworthy” or “media friendly” will garner the most attention
  – Timeliness
  – Proximity
  – Significance/scale
  – Conflict/controversy
  – Relevance
  – Human interest
'Harsh reality' in Richmond: Drugs easily accessible, but fresh fruits are not.

Chimere Miles, with her son, Jibril McClendon.
GILPIN COURT VS. ETHIOPIA

Likening Richmond’s poorest neighborhoods to developing countries may not be as off-base as you’d think, at least when it comes to life expectancy. Virginia Commonwealth University researchers released data this spring showing the disparities in life expectancies among the city’s neighborhoods. By cross-referencing the researchers’ findings with World Health Organization data, it’s possible to compare the city to countries around the world. Life span in some neighborhoods may be lower than you think. —Mark Robinson

*Global life expectancy data per the World Health Organization’s life expectancy at birth index.

Source: Richmond Magazine, June 2015
The Local Angle

• Arguably, action is taken more easily at the local level
• With this project in particular, part of the heft of the visual is seeing such large differences across such small distances
• In order to maximize local relevance, we:
  – Involved local stakeholders
  – Created locality-specific media packages
  – Connected with other local initiatives
Short Distances to Large Gaps in Health

KENTUCKY

Follow the discussion
#CloseHealthGaps

15 miles

Life expectancy at birth (years)

Shorter

Longer
Life Expectancy at Birth by County, KY, 2002-11

Sources: Mortality data (2002-11) from CDC Wonder; decennial Census data from American Fact Finder
Beyond mapping: other uses of Life expectancy data

Center on Society and Health

Virginia Commonwealth University
The California Endowment Poverty Study

**Quantitative**

- Model life expectancy on poverty
- Obtain “outliers”: Census tracts (CTs) with high life expectancy given high poverty rates
- Identify correlates of unexpectedly high life expectancy

**Qualitative**

- Identify CTs having high life expectancy given poor social determinants profile
- Conduct key informant interviews with community stakeholders
- Identify qualitative, potentially policy-actionable assets from interviews
Summary of TCE Outlier Study Qualitative Findings

• Common themes emerged in both phases:
  – Availability of healthy food
  – Green spaces
  – Infrastructure for biking/walking/exercise

• Opportunities for employment

• Other themes
  – Education
  – Primary care
  – Civic engagement and social cohesion
  – Resources to support senior living and health
CA Healthy Places Index

http://map.healthyplacesindex.org/

http://healthyplacesindex.org/policy-actions/
Criteria for Selection of Indicators

- Statewide data publicly available at the census tract
- Actionable
- Informed by literature
- Predictive/statistical properties
- Continuity with earlier versions of HPI
- Compatibility with State health department projects
## Final Domains and Indicators

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<th>Social</th>
<th>Education</th>
<th>Transportation</th>
<th>Neighborhood</th>
<th>Housing</th>
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* Sourced from California Department of Public Health Climate Change and Health Vulnerability Indicators for California
Metropolitan Washington Council of Governments Healthy Community Index

- Life expectancy
  - 3-4 yr olds not enrolled in preschool
  - Bachelor's degree or higher
  - Some college or higher
  - High school diploma or higher
  - Below 100% of poverty level
  - Below 200% of poverty level
  - On public assistance
  - Median household income
  - Severe housing cost burdened*
  - Without health insurance
  - With private health insurance only
  - Low food access
  - Commute by public transportation
  - Single parent households
  - Hispanic population
  - Non-Hispanic black population
  - Diversity*
  - Racial segregation*

![Map with data]

https://novahealthfdn.org/interactive-map-opportunity/

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Don’t let 

PERFECT 

be the enemy of 

GOOD
Discussion
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