ALL IN DATA FOR COMMUNITY HEALTH
• Community Health Peer Learning Program
• Data Across Sectors for Health

Approaches to Collecting and Using Social Determinants of Health (SDOH) Data

June 23, 2016
12 - 1 pm EST

Presenters

Peter Eckart, AM
Co-Director, Data Across Sectors for Health (DASH)

Alison Rein, MS
Director, Community Health Peer Learning (CHP) Program, AcademyHealth

Andrew Hamilton, RN, BSN, MS
Chief Informatics Officer and Deputy Director, Alliance of Chicago Community Health Services

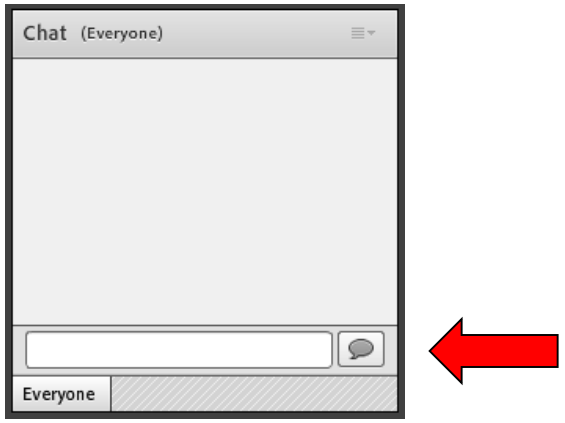
Michelle Lyn, MBA, MHA
Associate Director, Duke Center for Community and Population Health

Meeting Information

- Meeting Link: http://academyhealth.adobeconnect.com/sdoh/
- Conference Line: 1-866-546-3377
- Access Code: 6478553818
- Reminders:
  - Please **hard-mute your computer speakers** and the **speakers in the web conference**
  - Please **mute your phone line** when you are not speaking to minimize background noise
- Technical difficulties? Email us at chpinfo@academyhealth.org

Chat Feature

- To share your comments using the chat feature:
  - Click in the chat box on the left side of your screen
  - Type into the dialog box and click the send button
- To signal to presenters you have a question / comment:
  - Click on the drop down menu near the person icon and choose *raise your hand*



Agenda

- Introduction and Recap of CHP Learning Panel on SDOH data and standards (8 minutes)
  - Peter Eckart, DASH NPO and Alison Rein, CHP NPO
- Case Study 1: Collecting and integrating SDOH data in the EHR for action (12 minutes)
  - Andrew Hamilton, Alliance of Chicago
- Case Study 2: Aggregating SDOH data at the community level to address upstream factors (12 minutes)
  - Michelle Lyn, Duke University
- Discussion (25 minutes)
- Wrap-Up (3 minutes)

DASH and CHP are All In!

Community Health Peer Learning Program

- NPO: AcademyHealth, Washington D.C.
- Funded by the federal ONC
- 15 participant and subject matter expertise communities

Data Across Sectors for Health (DASH)

- NPO: Illinois Public Health Institute in partnership with the Michigan Public Health Institute
- Funded by the RWJF
- 10 grantee communities

All In: Data for Community Health

1. Support a movement acknowledging the social determinants of health

2. Build an evidence base for the field of multi-sector data integration to improve health

3. **Utilize the power of peer learning and collaboration**

Recap: Emerging Standards and Opportunities for Aligning Social Determinant Data Sharing Efforts

- Moderator:
  - **Kellan Baker**, Center for American Progress
- Panelists:
  - **Steve Posnack**, Office of the National Coordinator for Health IT
  - **Michelle Proser**, National Association of Community Health Centers
  - **Jeff Caballero**, Association of Asian Pacific Community Health Organizations

Recap cntd.

- Panel covered a range of issues, but primarily offered an introduction to social determinant data capture and possible applications
- Tremendous appetite for learning more, and hearing from those who have implemented "on the ground"
- Two different broad thematic needs emerged, both of which we hope to **begin** discussing today

PRARARE

Protocol to
Respond to and
Assess
Patient
Assets,
Risks, and
Experiences

Social Determinants of Health

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Community Health Services, L3C

PRAPARE

*Why do CHCs need to **document** and address SDH?*

Research has shown that SDH:

- *Contribute to poorer health outcomes*
- *Lead to health disparities*

Impact on health centers and population served:

- *Increasingly difficult to improve health outcomes for complex patients*

Possible negative impacts:

- *Value-based pay, such as incentive payments, shared shavings, and pay for performance*

Goals related to collecting SDH:

- *Can utilize the data to advocate for funding to address SDH*
- *HRSA's goal is to utilize EMRs to screen for and address SDH*

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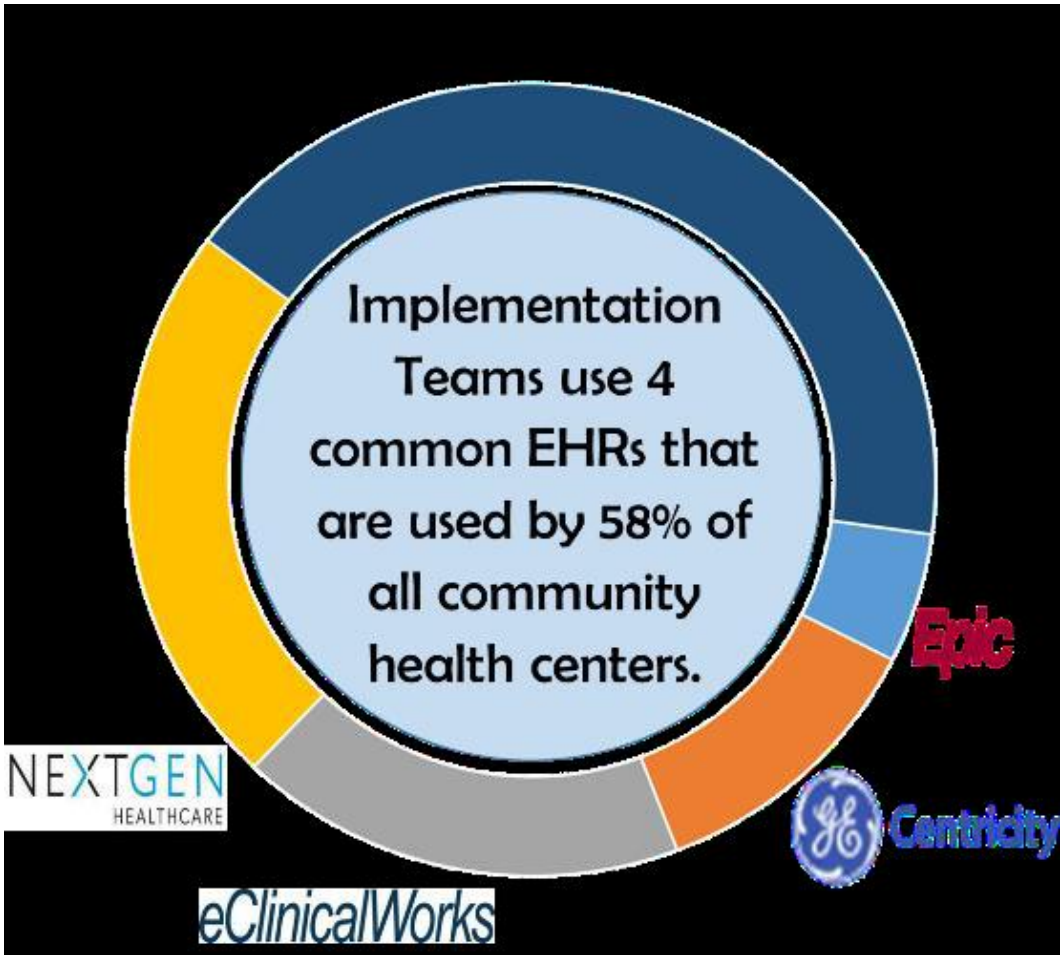
PRAPARE

Social Determinants of Health

PRAPARE

Social Determinants of Health



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PRAPARE

Overall Project Goals

- *To create, implement/test, and promote a national standardized patient risk assessment protocol to assess and address patients' social determinants of health (SDH).*
- *Document the extent to which each patient and total patient populations are complex.*
- *Use that data to:*
  - *improve patient health,*
  - *affect change at the community/population level*
  - *sustain resources and create community partnerships necessary to improve health.*

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Summary: Social Determinants...

+ Order + Medication + Problem

Interactions:

Forms | Text

Forms — Add...

- PRAPARE
- Patient Stress Questionnaire
- Care Management Plan
- HITS
- Enabling Services

Attachments — Add...

Favorites — Add

- Blank image
- Send SCHC Orders to Lab

Sociodemographic/Socioeconomic | Money and Resources | Psychosocial Assets

PRAPARE **DOB:** 04/19/1958 **Patient Age:** 57 Years Old

Add PRAPARE to Note

Sociodemographic Characteristics *Add to Note*

Ethnicity: Not Hispanic or Latino

Race: Black or African American, White

At any point in the last 2 years, has seasonal or migrant work been your or your family's main source of income? No

Veteran Status: No

Preferred Language: Spanish

Family and Home *Add to Note*

# of Family Members You Live With: 1

Monthly Family Income: 500.00

What is your housing situation today? I do not have housing

Add Homelessness (Z59.0) to Prob List

Patient's Address: 1234 Highway 75
Sioux City, IA 51104

Orders | Care Management Plan | Care Coordination Summary | Enabling Services

v1.02 version date 08/10/2015

Alliance of Chicago Community Health Services, L3

Summary: Social Determinants... «

+ Order + Medication + Problem

Interactions:

Forms | Text

Forms Add...

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- Care Management Plan
- HITS
- Enabling Services

Attachments Add...

Favorites Add

- Blank image
- Send SCHC Orders to Lab

Sociodemographic/Socioeconomic | **Money and Resources** | Psychosocial Assets

PRAPARE DOB: 04/19/1958 Patient Age: 57 Years Old

Money and Resources

Yes (12/11/2013)

PT (12/11/2013)

Add to Note ☑

Previous

What is the highest level of school that you have finished? high school graduate

Employed? ◉ Yes ○ No Your current work situation? ◉ FT ○ PT

Insurance: Sliding Fee Scale

In the past year, have you or any family members you live with been unable to get any of the following when it was really needed?

○ I choose not to answer

Detailed Insecurities:

Food:	○ Yes	◉ No	Clothing	○ Yes	◉ No
Utilities:	○ Yes	◉ No	Rent/Mortgage payment	○ Yes	◉ No
Transportation:	○ Yes	◉ No	Child care:	○ Yes	◉ No
Medicine or medical care:	◉ Yes	○ No	Phone:	○ Yes	◉ No
Health insurance:	○ Yes	◉ No	Other:	○ Yes	◉ No

Orders | **Care Management Plan** | **Care Coordination Summary** | **Enabling Services**

Prev Form (Ctrl+PgUp) **Next Form (Ctrl+PgDn)**

Summary: Social Determinants... «

+ Order + Medication + Problem

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Attachments — Add...

Favorites — Add

- Blank image
- Send SCHC Orders to Lab

Sociodemographic/Socioeconomic | Money and Resources | **Psychosocial Assets**

PRAPARE DOB: 04/19/1958 Patient Age: 57 Years Old

Social and Emotional Health

Add to Note ☑

Previous

How often do you see or talk to people that you care about and feel close to? Less than once a week

For example: talking to friends on the phone, visiting friends or family, attending church or meetings

Add Problem related to primary support group, unspec. (Z63.9) to Prob List

How Stressed Are You? A little bit

Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind ... trouble

Additional Optional Domains

Add to Note ☑

Previous

In the past 3 months, have you spent more than 2 nights in a row in a jail, prison, detention center or juvenile correctional facility? Yes

Release Date:

Has lack of transportation kept you from medical appointments or from getting your medications? Yes

Are you a refugee? No

Country of origin:

Do you feel physically and emotionally safe where you currently live? Yes

In the past year, have you been afraid of a partner, ex-partner? Yes

Orders | **Care Management Plan** | **Care Coordination Summary** | **Enabling Services**

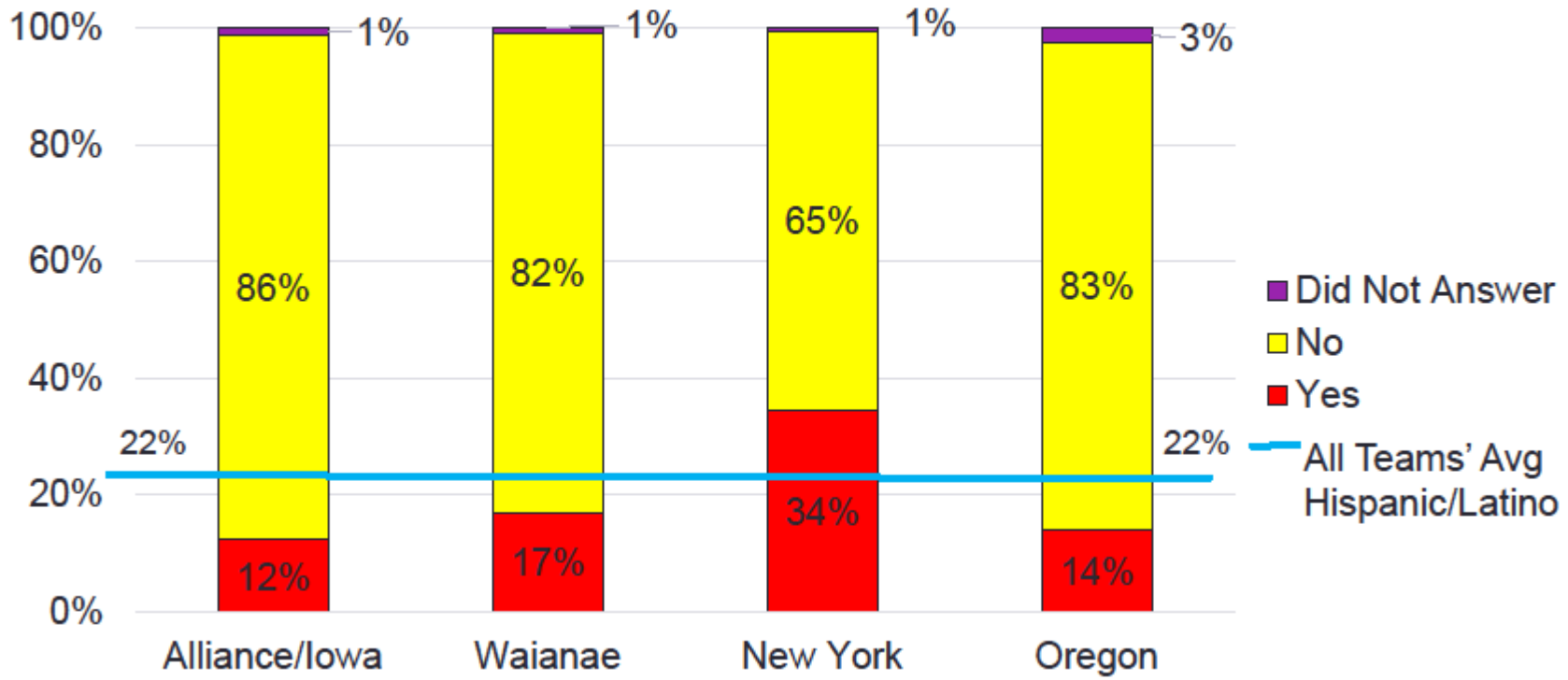
Pt Stress Questionnaire | **HITS**

Preface and Sample Sizes

- PRELIMINARY DATA

Learning Community Team	Population of Focus Sample Size
Alliance/Iowa	777
Waianae	501
New York	1,150
Oregon	438
All Teams	2,980

Hispanic/Latino



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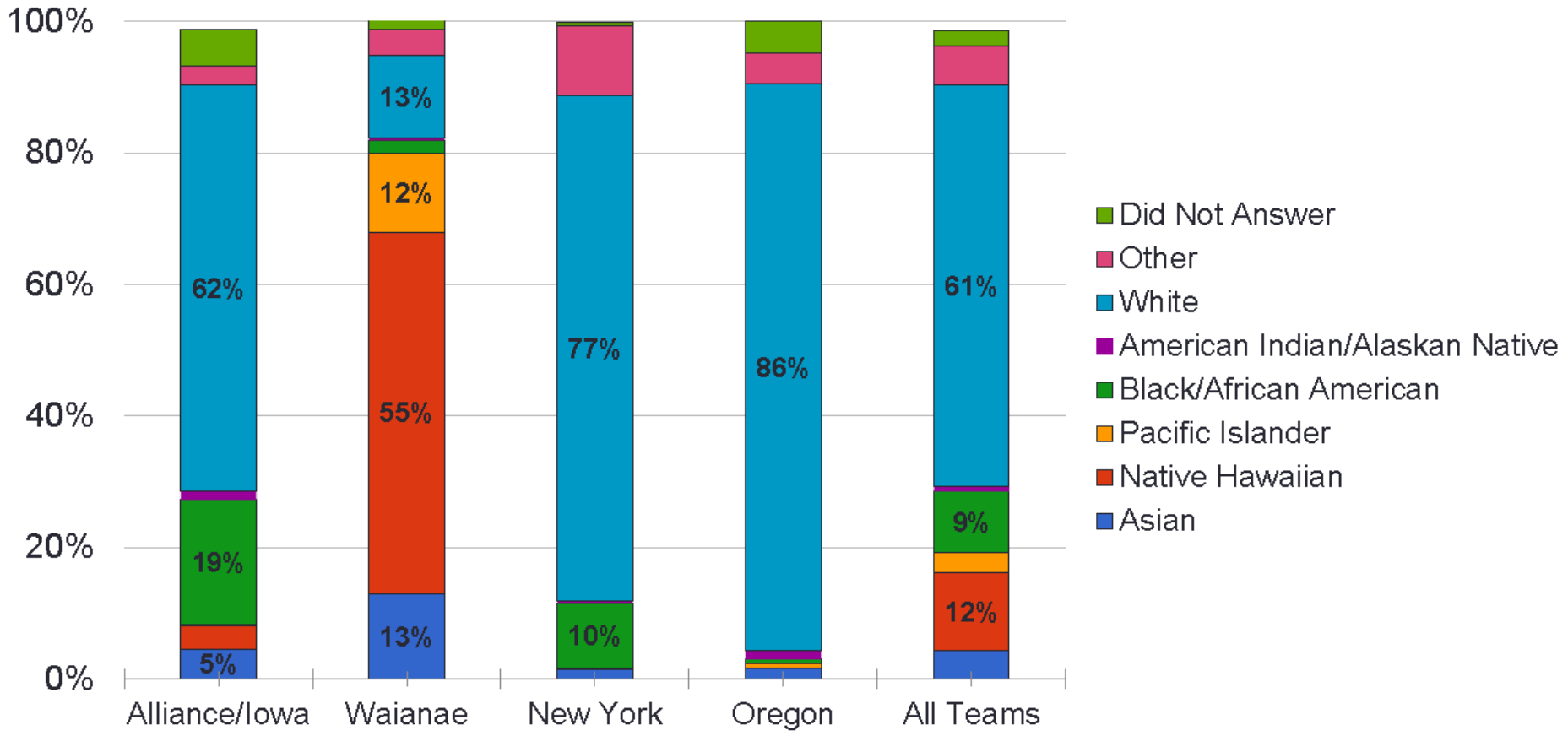
Race



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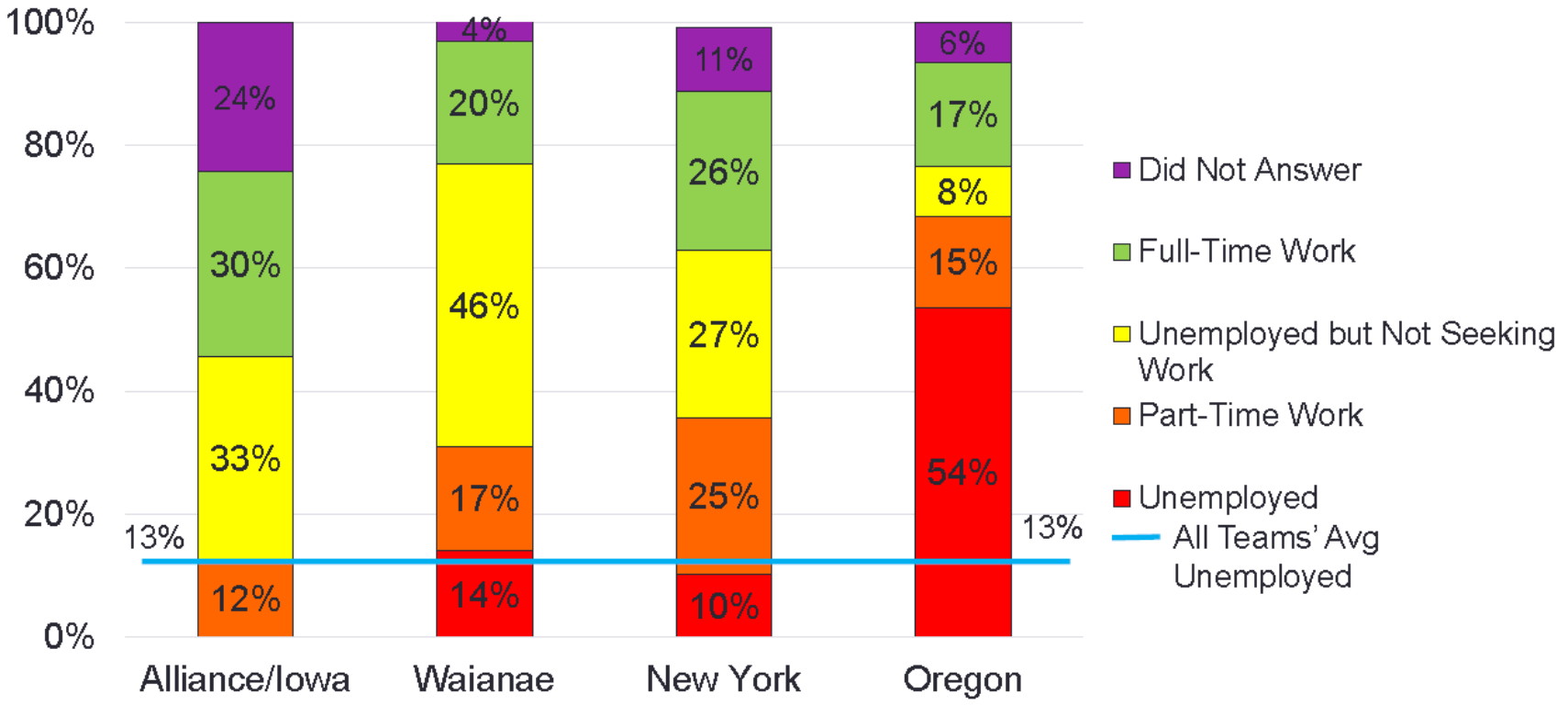
Employment Status



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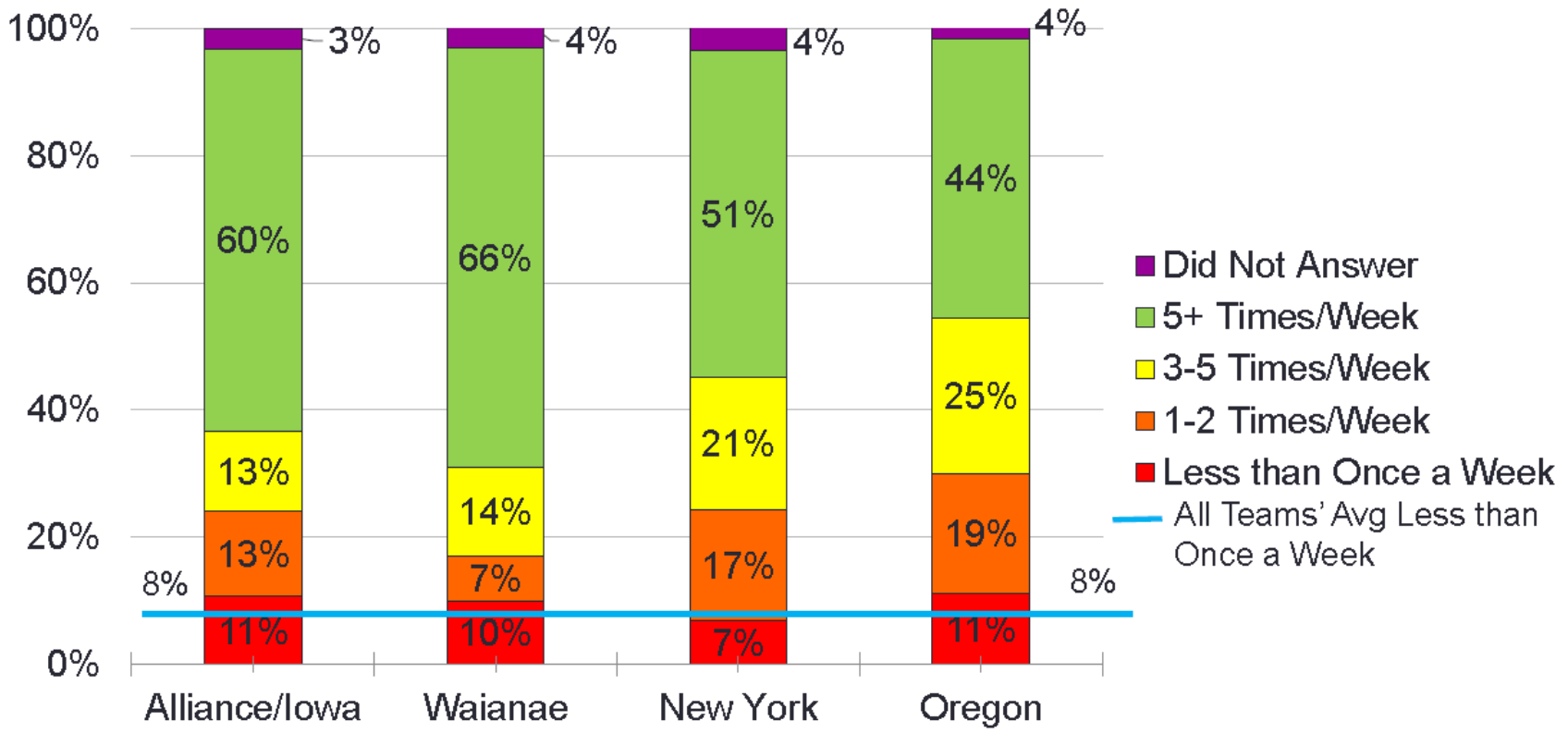
Social Integration



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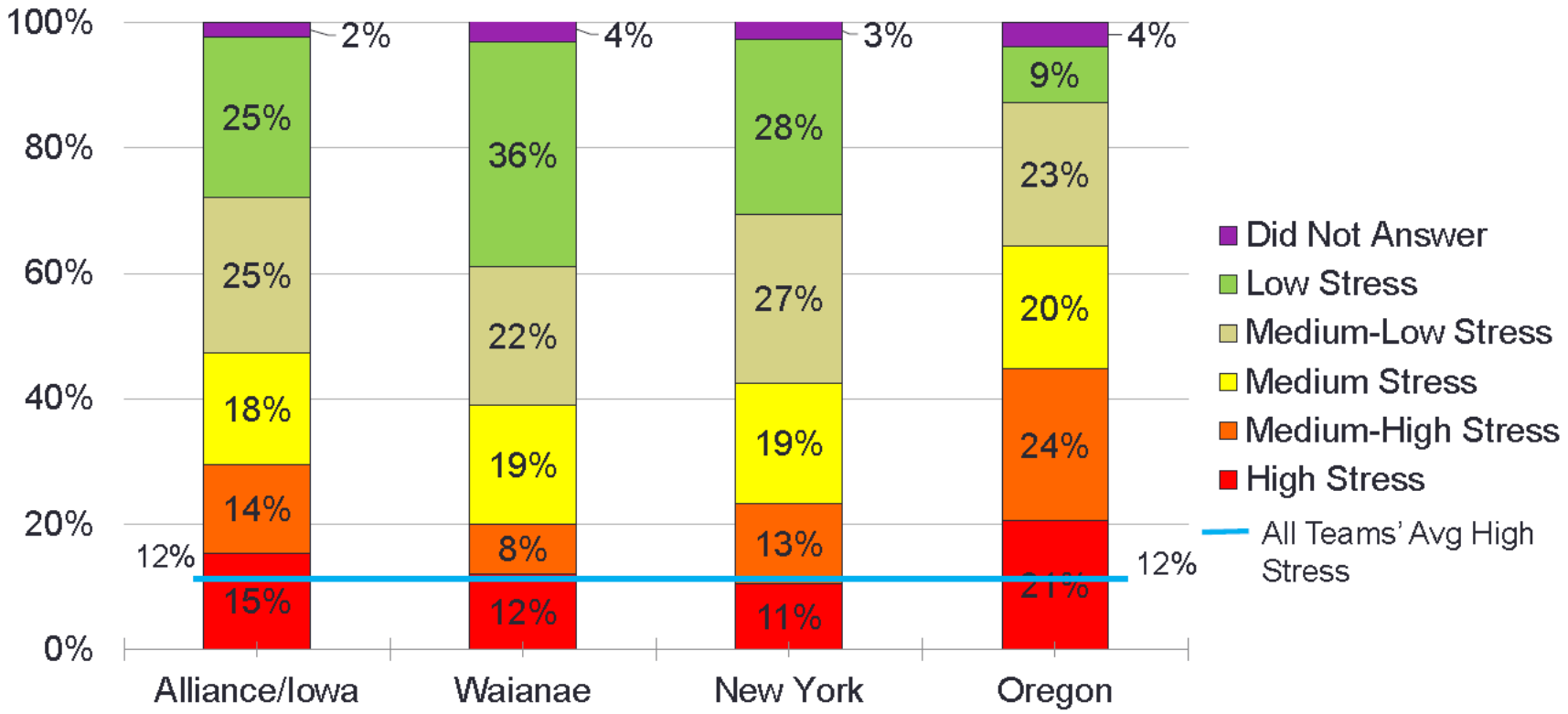
Stress



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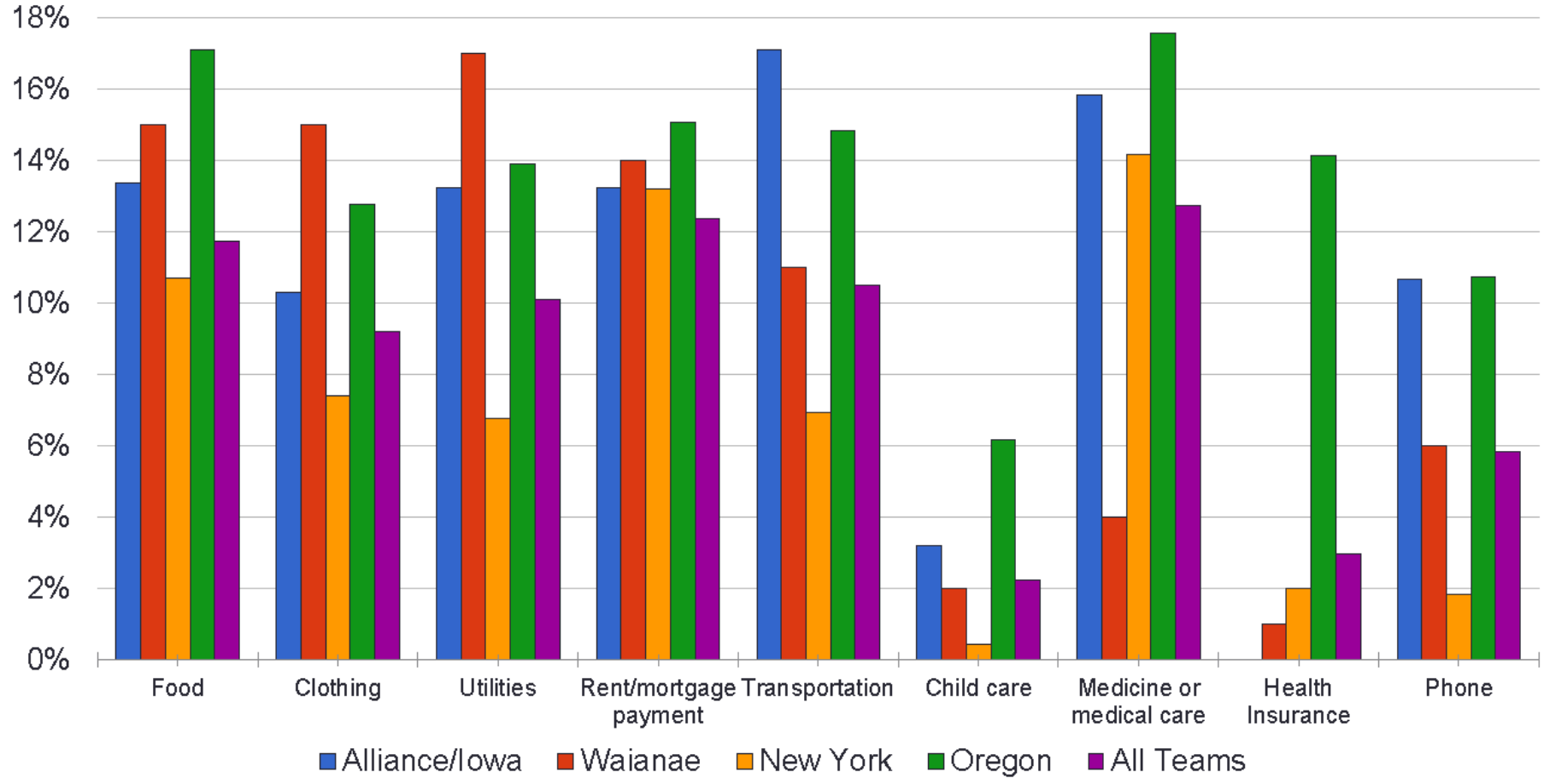
Material Security



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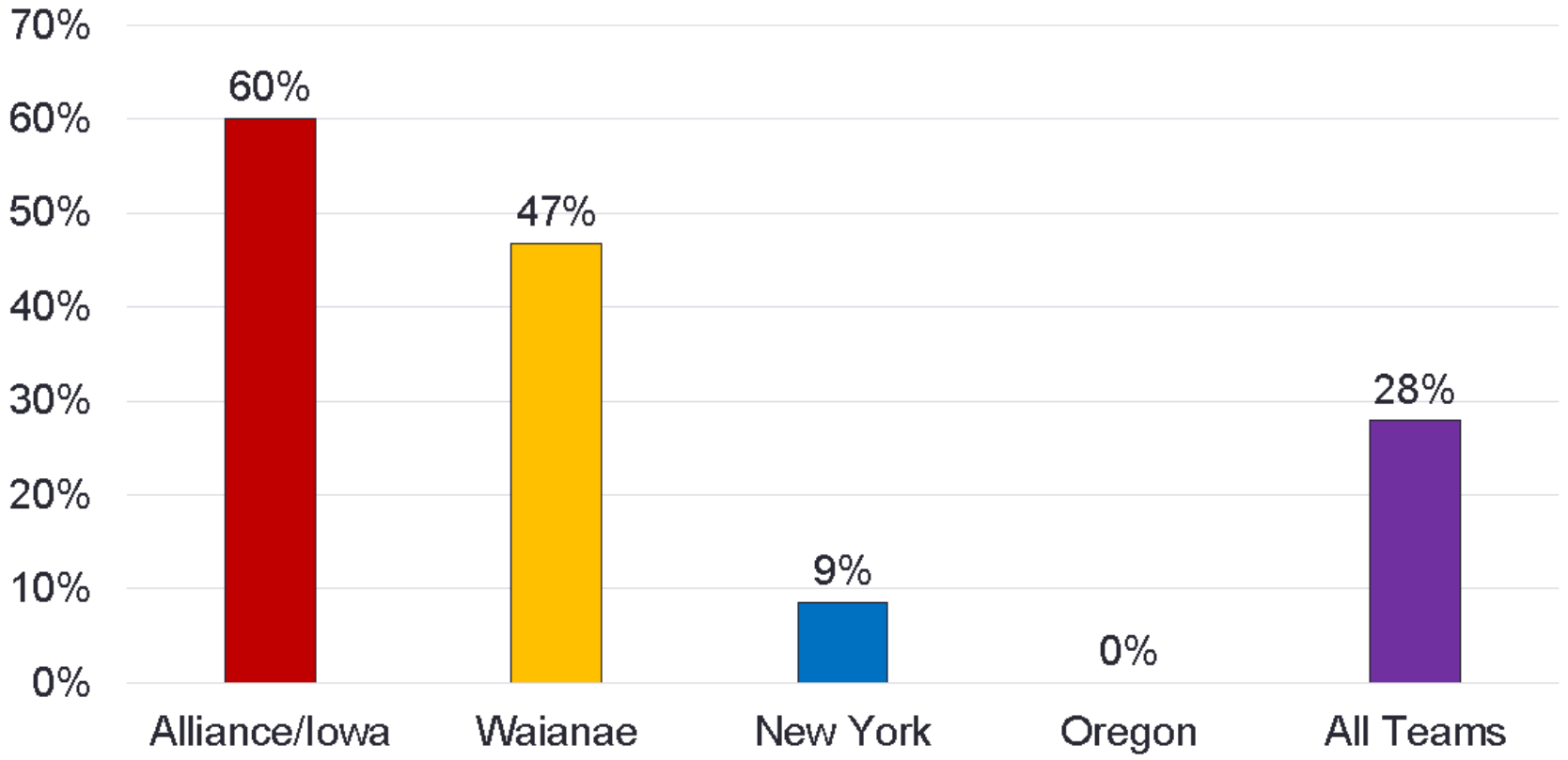
Percent of Patient Who Did Not Have ANY Material Security Needs



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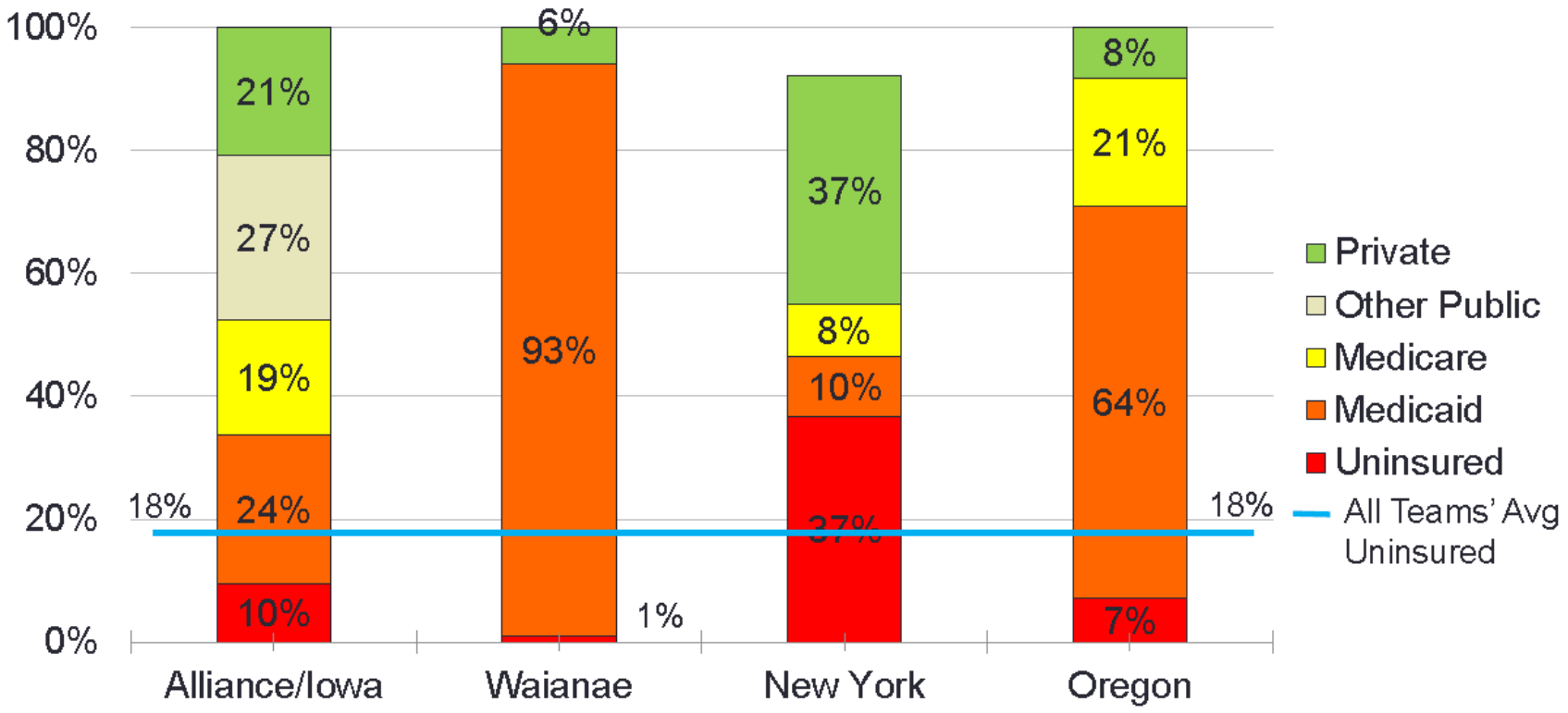
Insurance Status



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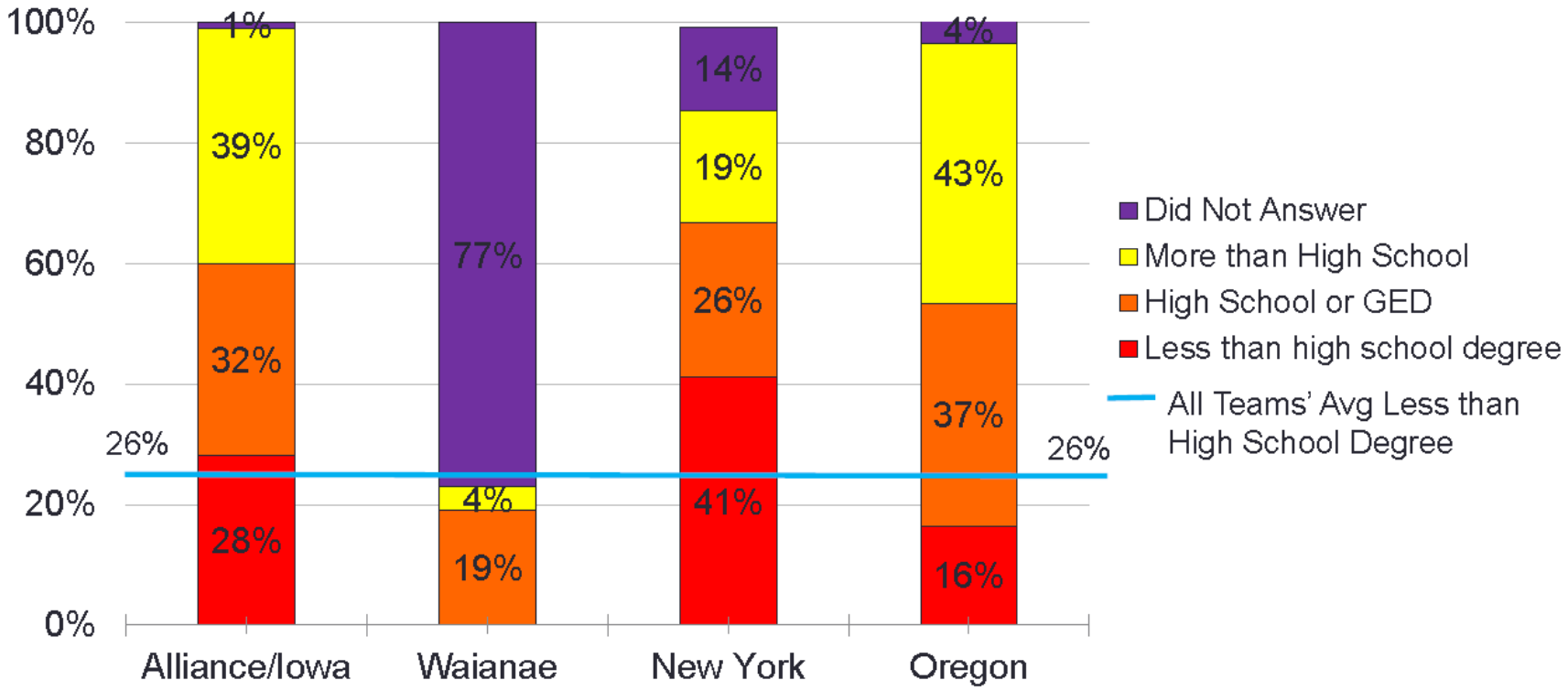
Education Status



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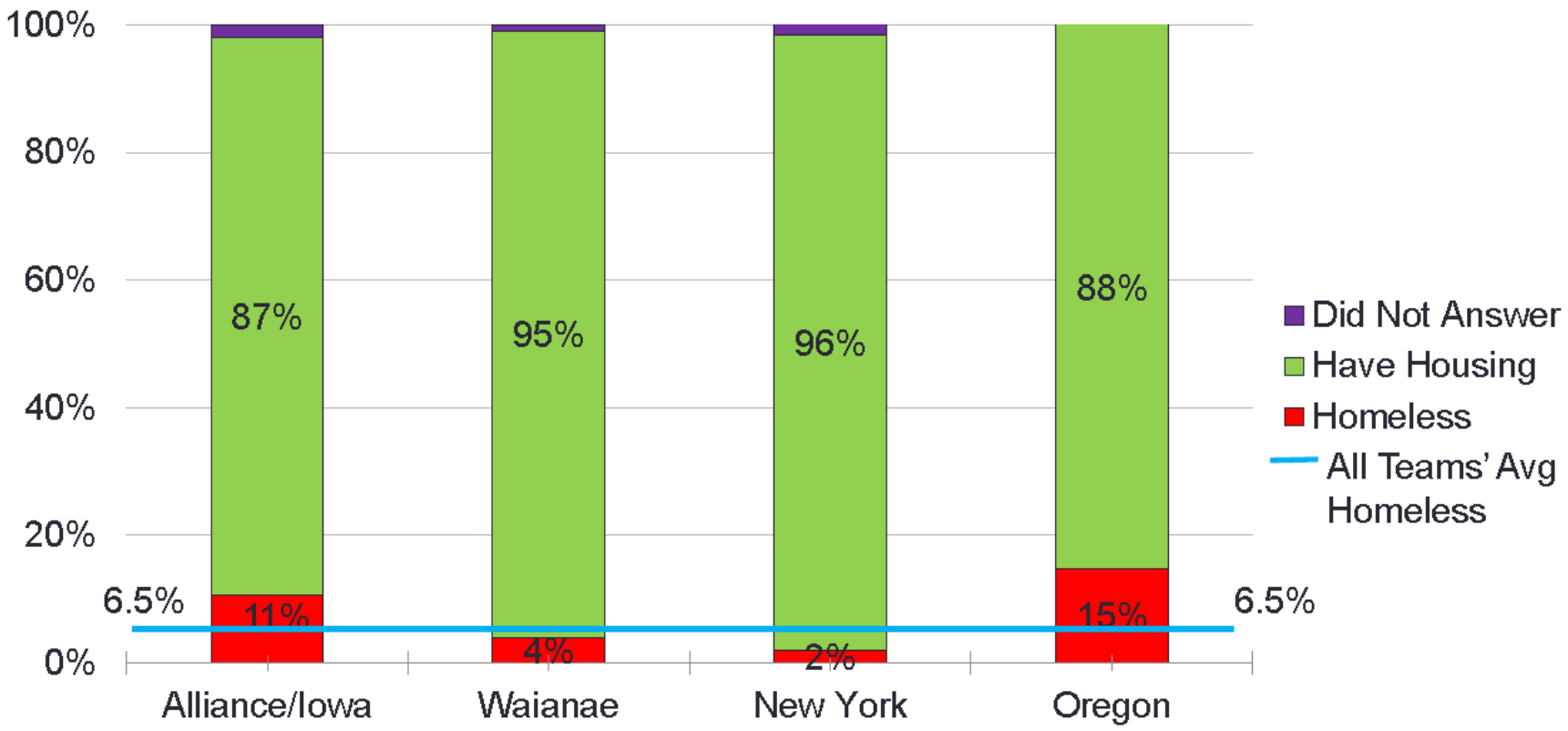
Housing Status



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Most Common Social Determinant ASSETS

Alliance/Iowa	Waianae	New York	Oregon	All Teams
Language: English speaking (90%)	Language: English Speaking (96%)	Housing: Have Housing (96%)	Language: English Speaking (95%)	Housing: Have Housing (92%)
Housing: Have Housing (87%)	Housing: Have Housing (95%)	Social Integration: Meet 5+ times/week (51%)	Housing: Have Housing (84%)	Language: English Speaking (72%)
Social Integration: Meet with ones care about 5+ times/week (60%)	Social Integration: Meet with ones care about 5+ times/week (66%)	Language: English Speaking (40%)	Social Integration: Meet 5+ times/week (44%)	Social Integration: Meet 5+ times/week (55%)
Education: More than high school degree (39%)	Stress: Not very Stressed (36%)	Stress: Not Very Stressed (28%)	Education: More than high school degree (43%)	Stress: Not Very Stressed (26%)
Employment: Full-time employed (30%)	Employment: Full-time employed (20%)	Employment: Full-time employed (26%)	Employment: Full-time employed (17%)	Education: More than high school degree (25%)

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Most Common Social Determinant Actionable RISKS

Alliance/Iowa	Waianae	New York	Oregon	Aggregated POF
Stress: High to Medium High Stress (29%)	Material Security: Utilities (17%)	Language: Non-English Speaking (60%)	Employment: Unemployed (54%)	Stress: High to Medium High Stress (28%)
Education: Less than high school (28%)	Material Security: Clothing (15%)	Education: Less than high school (41%)	Stress: High to Medium High Stress (45%)	Language: Non-English Speaking (28%)
Material Security: Transportation (17%)	Material Security: Food (15%)	Insurance: Uninsured (37%)	Material Security: Medicine/Medical care (18%)	Education: Less than high school (27%)
Material Security: Medicine/Medical care (16%)	Material Security: Rent/Mortgage (14%)	Material Security: Medicine/Medical care (14%)	Material Security: Food (17%)	Insurance: Uninsured (19%)
Material Security: Food (13%)	Employment: Unemployed (14%)	Material Security: Rent/Mortgage (13%)	Education: Less than high school (16%)	Employment: Unemployed (15%)

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PRAPARE

Social Determinants of Health

Steps needed to develop readiness:

1. Educate staff and leadership of the value of PRAPARE
2. Be prepared to address concerns and questions from staff and administration
3. Be prepared to address questions and concerns of patients
4. Catalog current countermeasure/resources available, both in-house and in the community, for each social determinants of health surveyed on the tool
5. Use “5 Rights” and PDSA cycle to develop workflow for administering and responding to PRAPARE tool.

PRAPARE

Social Determinants of Health

Additional Discussion Items:

- Adding ICD10 to problem list and associating problem with level of care
- Translating survey into other languages
- Documenting enabling services and interventions- EMR content revision
- Workflow- best way to administer survey, protocol, who to address issues indentified- Problems identified.
- NACHC toolkit- should be available late Summer 2016
- Data Analytics- how do we use data to accomplish all the goals of PRAPARE

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PRAPARE

Summary

- We need to create systems and workflows in which community health center workers have the ability and confidence to inquire about and address the social determinants of health in our patient's lives.
- Implementing PRAPARE is a first step in accomplishing this.
- PRAPARE is just one small, but important step, to address for SDH.

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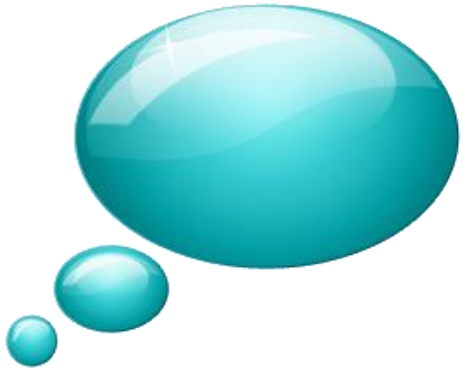
Questions & Thoughts



Andrew Hamilton
CIO, Alliance of Chicago
ahamilton@alliancechiago.org

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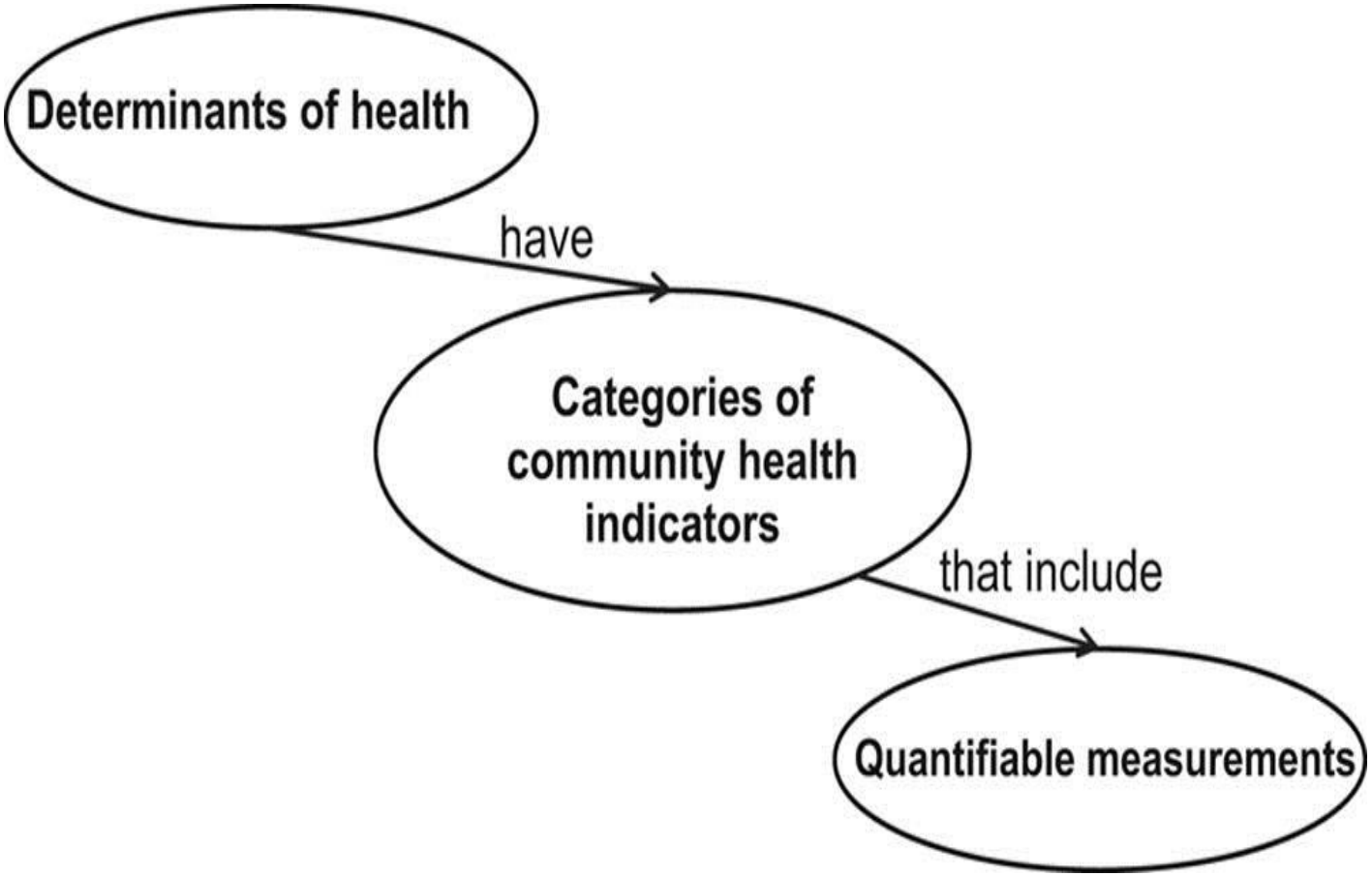
Case Study 2: Aggregating SDOH Data at the Community Level to Address Upstream Factors

Durham-Duke Collaborative Community Health Indicators Project

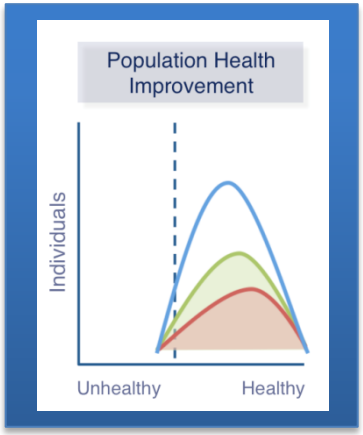
Michelle J. Lyn, MBA,MHA
Assistant Professor and Chief, Division of Community Health
Co-Director, Duke Center for Community and Population Health Improvement
Duke Health

Data Across Sectors to Improve Health
Webinar: June 23, 2016

Academic Health Systems and Communities Can Use Skills to Track Outcomes that People Care About



Towards a Unified Taxonomy of Health Indicators: Academic Health Centers and Communities Working Together to Improve Population Health
Sergio Aguilar-Gaxiola, MD ,PhD et al. Academic Medicine, Vol. 89, No. 4 / April 2014



Examples

- **Detect and treat chronic disease using big data:** Southeastern Diabetes Initiative (SEDI)
- **Collaborative data sharing efforts:** Durham Community Health Indicators

Parcel Geocoding

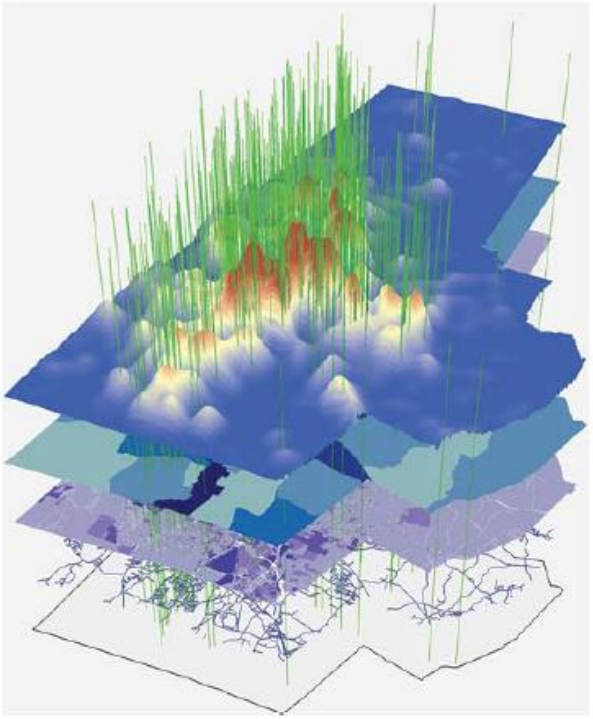
- Match all residential addresses with
- US Census Data
- Birth and Death Records
- County Tax Assessors' Data*
- GHIS data Mapped to 95% of Durham County residents

*Examples: age of housing, zoning codes, land use codes, date remodeled (if any), building class or type, owner (versus renter) occupancy, heating/cooling system, and assessed, tax value; and public transportation routes.

MAPPING HEALTH

EXHIBIT 1

Example Of Geographic Health Information Systems (GHIS) For Mapping The Terrain Of Diabetes In Durham County, North Carolina



SOURCE Duke Health Technology Solutions Decision Support Repository (DSR), using information on boundaries and streets layers from the US Census Bureau Geography Division, census 2010; and tax-parcel data from the Durham County Tax Assessor. NOTE The elements of this GHIS map are ex-

Miranda ML, Ferranti J, Strauss B, Neelon B, Califf RM. Geographic health information systems: a platform to support the 'triple aim'. Health Aff (Millwood). 2013 Sep;32(9):1608-15. doi: 10.1377/hlthaff.2012.1199. PubMed PMID: 24019366.

Durham Diabetes Coalition

A1c Monitoring

Year	Durham	NC
2012*	84%	89%
2013	86%	88%
2014	87%	88%
2015	90%	89%
2016**	91%	89%

*Diabetes prevalence 9%
**Diabetes prevalence 10%

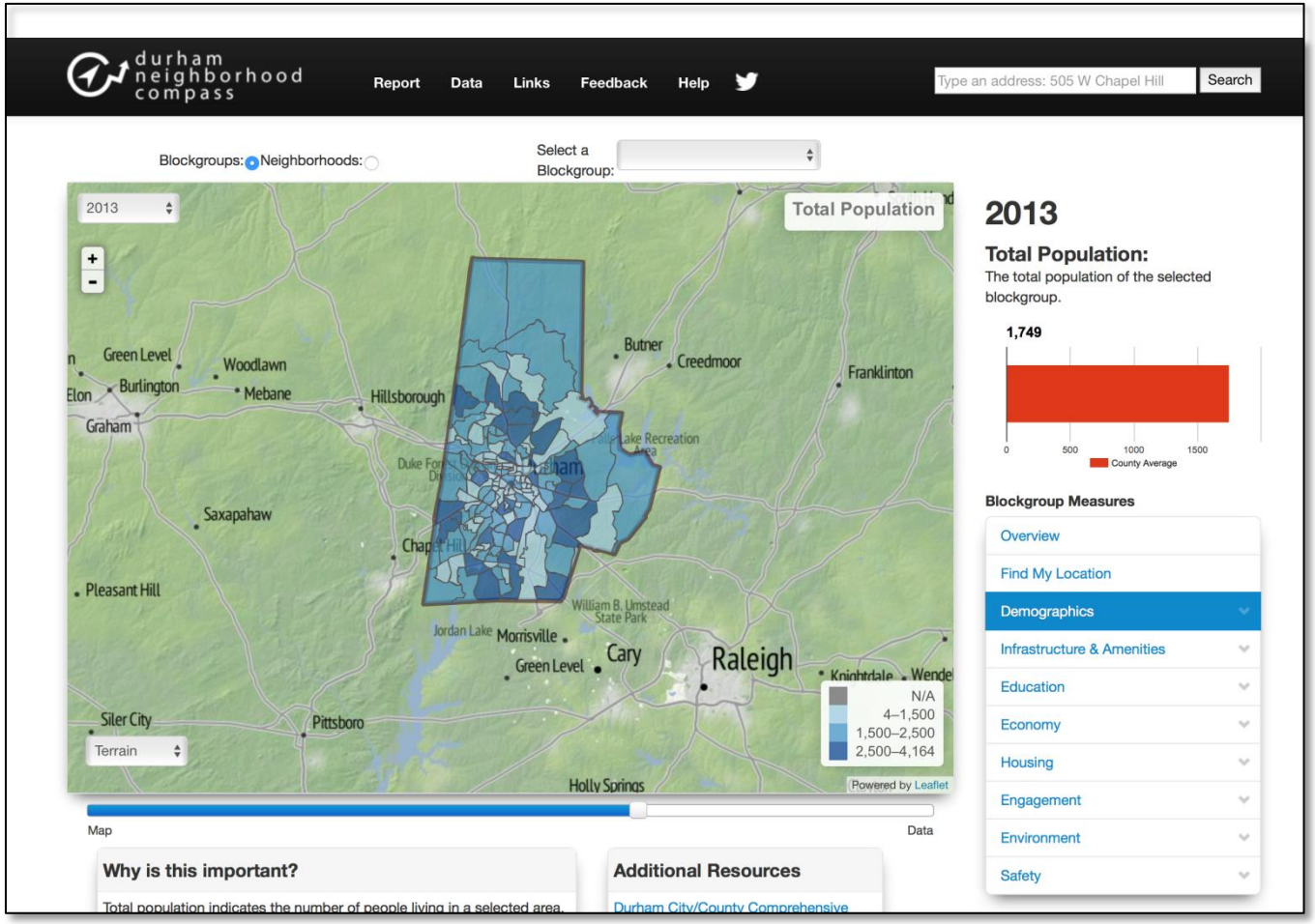
A Community Resource

From the **National Neighborhood Indicators Partnership**

"Perhaps more important is the way they have used their data. NNIP partners operate very differently from traditional planners and researchers. Their theme is ***democratizing information***. They concentrate on facilitating the direct practical use of data by city and community leaders, rather than preparing independent research reports on their own. And all have adopted as a primary purpose using information to build the capabilities of institutions and residents in distressed urban neighborhoods."

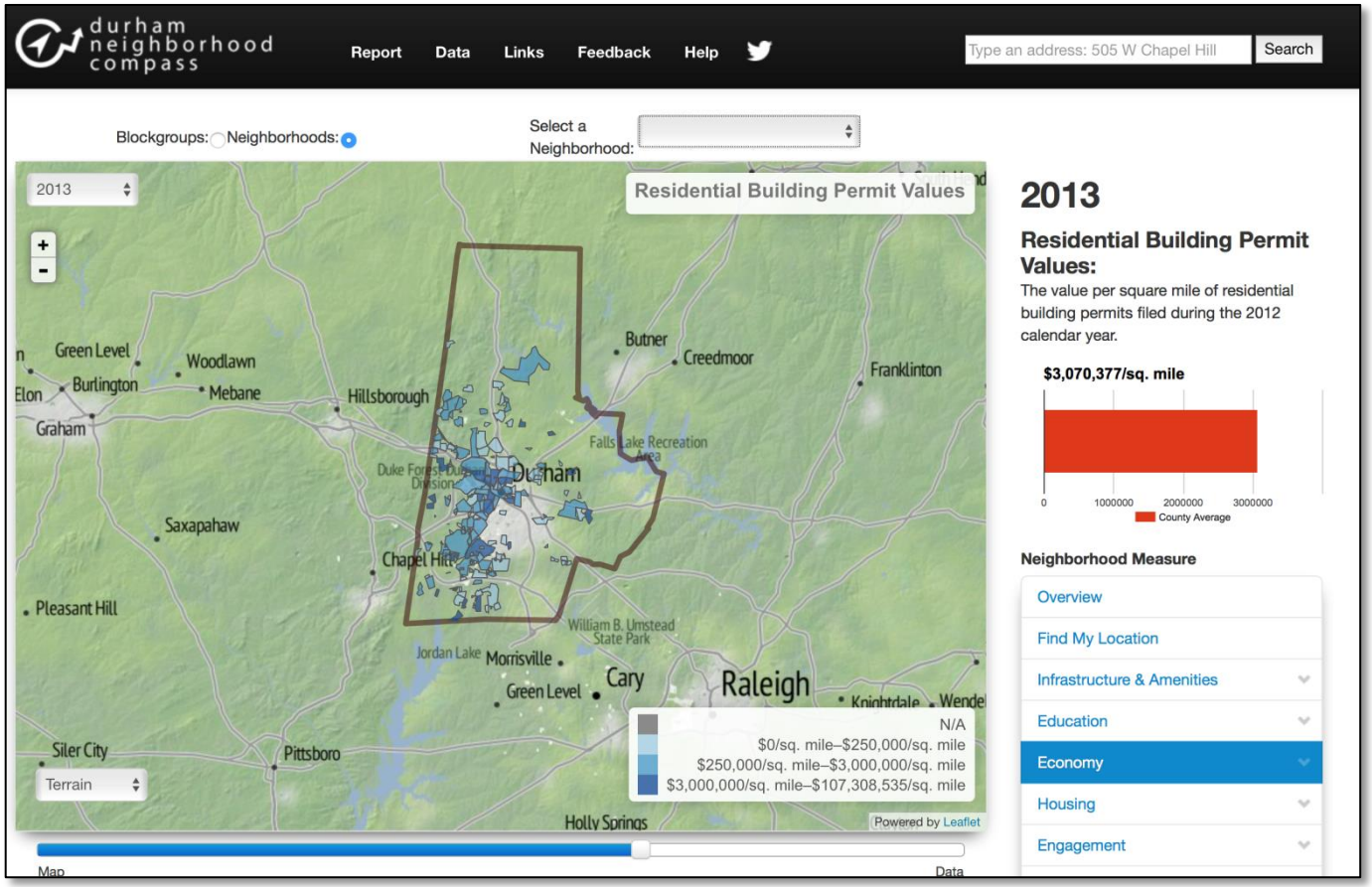
http://neighborhoodindicators.org/about-nnip/nnip-concept

Durham Neighborhood Compass Data by Block Groups



http://compass.durhamnc.gov/index.html

Durham Neighborhood Compass Data by Neighborhood



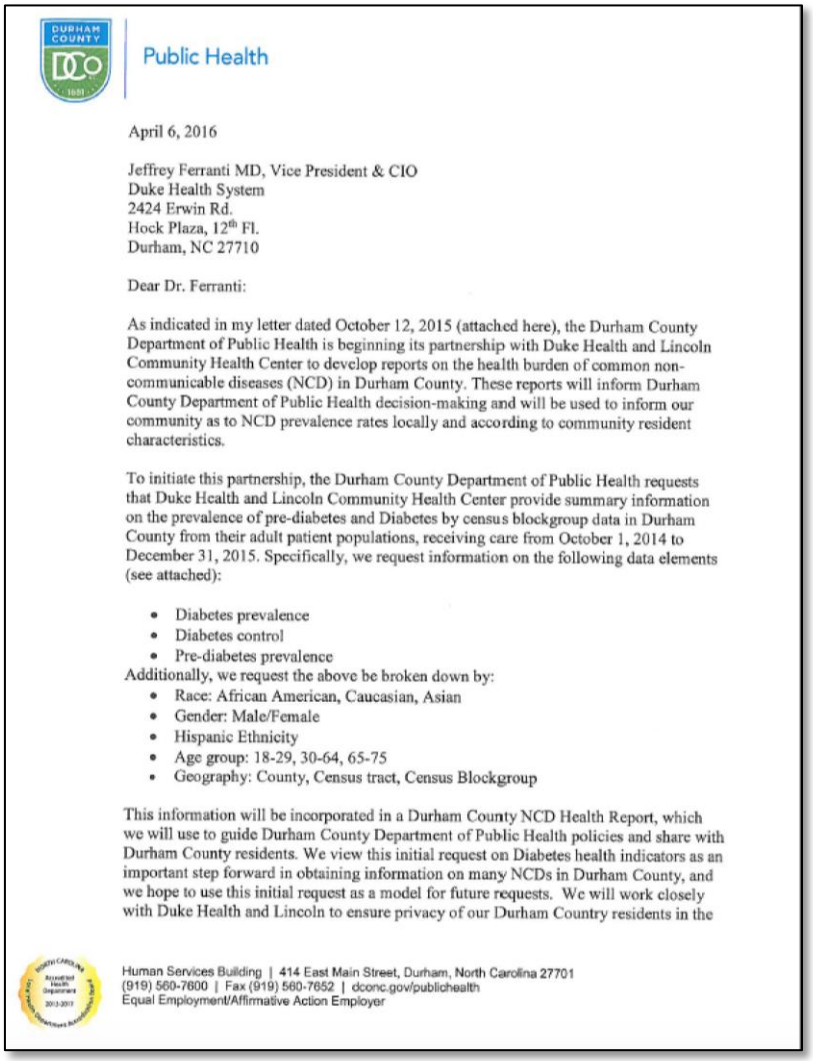
http://compass.durhamnc.gov/index.html

Community Involvement

- Regular trainings for public users
- Neighborhood-focused meetings upon request (e.g. for neighborhood associations)
- On-call information and support
- “Open analysis”
- Community-involved indicator development

Durham Neighborhood Compass Expand to Health Data

- Formal request from Durham County Public Health
- Diabetes prevalence
- Diabetes control
- Pre-diabetes prevalence
- Breakdown by:
  - Race/ethnicity
  - Age
  - Gender
  - Geography



Public Health

April 6, 2016

Jeffrey Ferranti MD, Vice President & CIO
Duke Health System
2424 Erwin Rd.
Hock Plaza, 12th Fl.
Durham, NC 27710

Dear Dr. Ferranti:

As indicated in my letter dated October 12, 2015 (attached here), the Durham County Department of Public Health is beginning its partnership with Duke Health and Lincoln Community Health Center to develop reports on the health burden of common non-communicable diseases (NCD) in Durham County. These reports will inform Durham County Department of Public Health decision-making and will be used to inform our community as to NCD prevalence rates locally and according to community resident characteristics.

To initiate this partnership, the Durham County Department of Public Health requests that Duke Health and Lincoln Community Health Center provide summary information on the prevalence of pre-diabetes and Diabetes by census blockgroup data in Durham County from their adult patient populations, receiving care from October 1, 2014 to December 31, 2015. Specifically, we request information on the following data elements (see attached):

- Diabetes prevalence
- Diabetes control
- Pre-diabetes prevalence

Additionally, we request the above be broken down by:

- Race: African American, Caucasian, Asian
- Gender: Male/Female
- Hispanic Ethnicity
- Age group: 18-29, 30-64, 65-75
- Geography: County, Census tract, Census Blockgroup

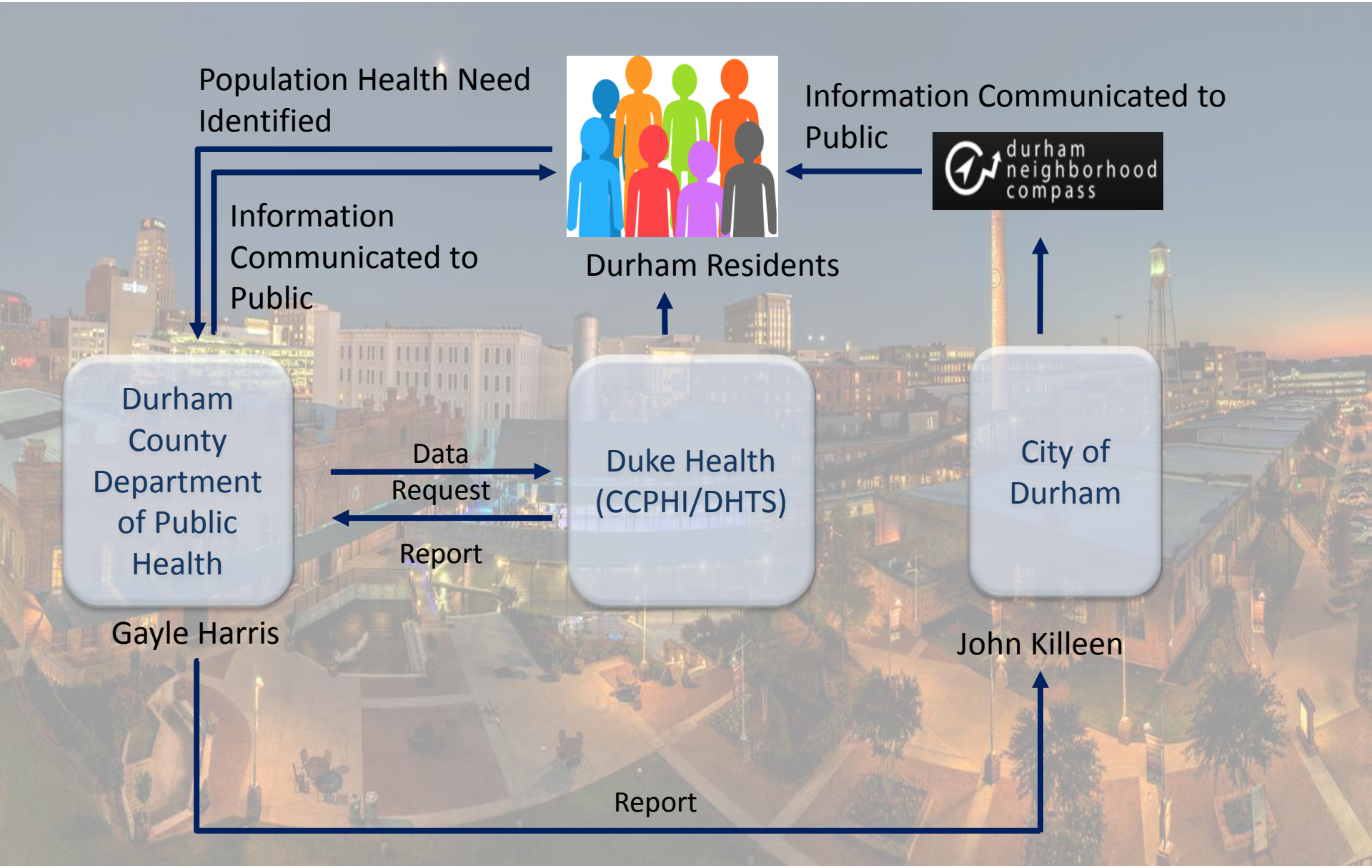
This information will be incorporated in a Durham County NCD Health Report, which we will use to guide Durham County Department of Public Health policies and share with Durham County residents. We view this initial request on Diabetes health indicators as an important step forward in obtaining information on many NCDs in Durham County, and we hope to use this initial request as a model for future requests. We will work closely with Duke Health and Lincoln to ensure privacy of our Durham Country residents in the

Human Services Building | 414 East Main Street, Durham, North Carolina 27701
(919) 560-7600 | Fax (919) 560-7652 | dconc.gov/publichealth
Equal Employment/Affirmative Action Employer

Current Draft of Next Steps…(as we now understand them to be)

- Convene attorneys and privacy officers.
- Pursue Expert Determination for compliant de-identification of PHI, as permitted by the privacy rule.
- Secure the services of statistical analysis disclosure expert to review process of pulling and aggregating data.
- Run test data pull and compile aggregated report for review to ensure compliance with privacy rule before being published.
- Publication of aggregated static report on the Neighborhood Compass will provide visual display of common disease prevalence at the neighborhood/census block level where allowable under the privacy rule.

Process Diagram of Data Flow between Durham County Stakeholders



Durham Community Health Indicators

- Diabetes test model
- Expand to other chronic conditions (hypertension, obesity)
- Reports on all health conditions identified as high priority in our community health needs assessments

Academic Health Systems and Their Communities Poised to Make Major Contributions to Health

- **Use data to develop and drive effective health interventions**
  - In house
  - In the community (locally, regionally, nationally)
- **Use data to provide information**
  - Inform decision making, resource allocation
  - Enhance transparency
- **Engage as major stakeholder partners in multi-sector health improvement action**

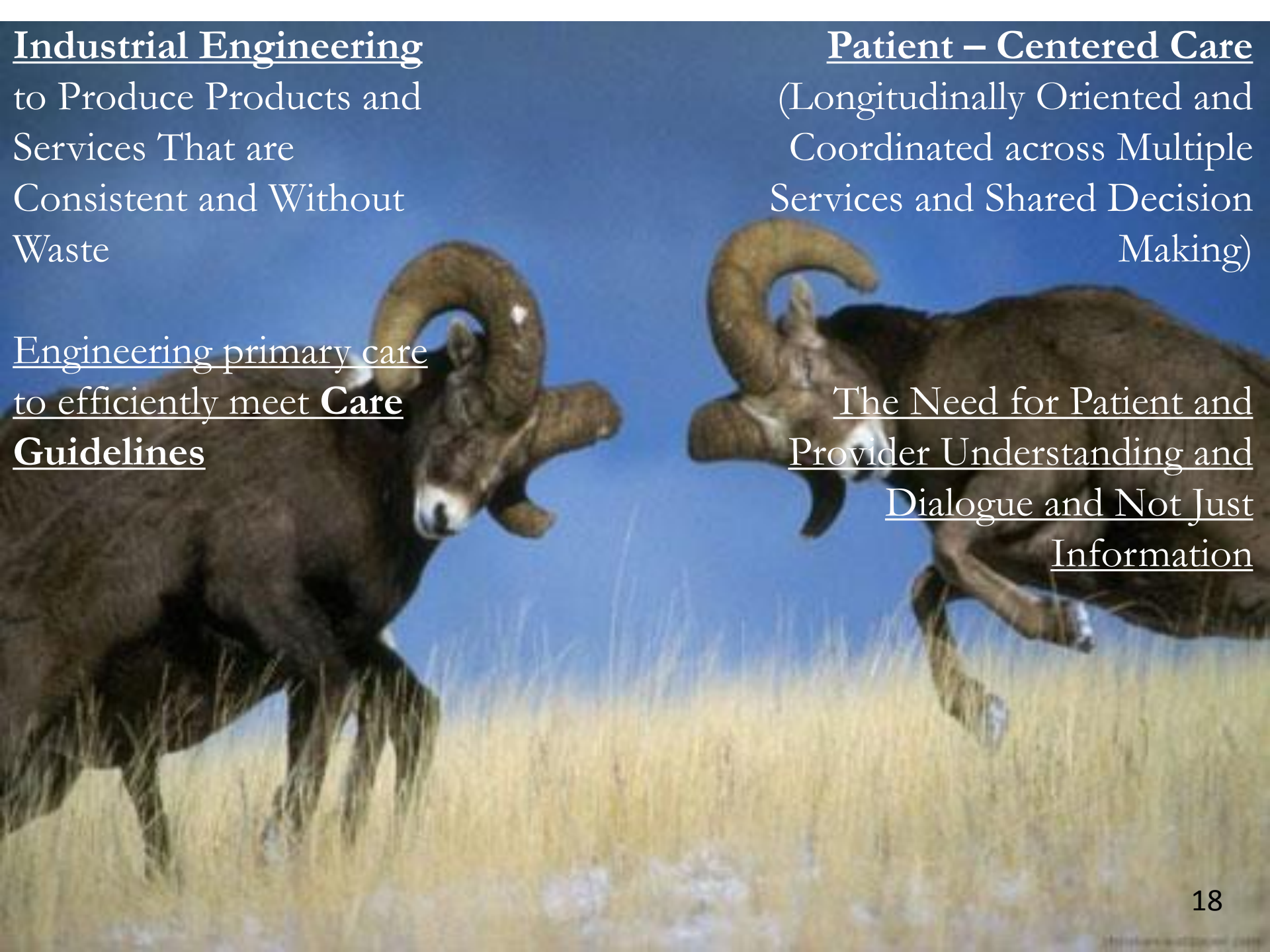
Goal: Change Practice and Influence Policy

- **Practice**
  - Pragmatic health delivery interventions that may 'reach into' communities (e.g., community health worker home visits, outreach education)
- **Policies**
  - Taxes (e.g., sugar sweetened beverages)
  - Environment (e.g., smoke free environments, playgrounds)

Why Should This Work Matter to Providers?

Because of the Future Demands on Providers by Patients and Payers:

- **Transparency of quality and cost**
- **24/7 access to information and support**
- **Capitated contract seeking total reduction in per capita cost**
- **Place Matters - obesity, social isolation, lack of physical activity, increase in personal violence, chronic stress, depression and allergies (Millennial Morbidities)**



Industrial Engineering
to Produce Products and Services That are Consistent and Without Waste

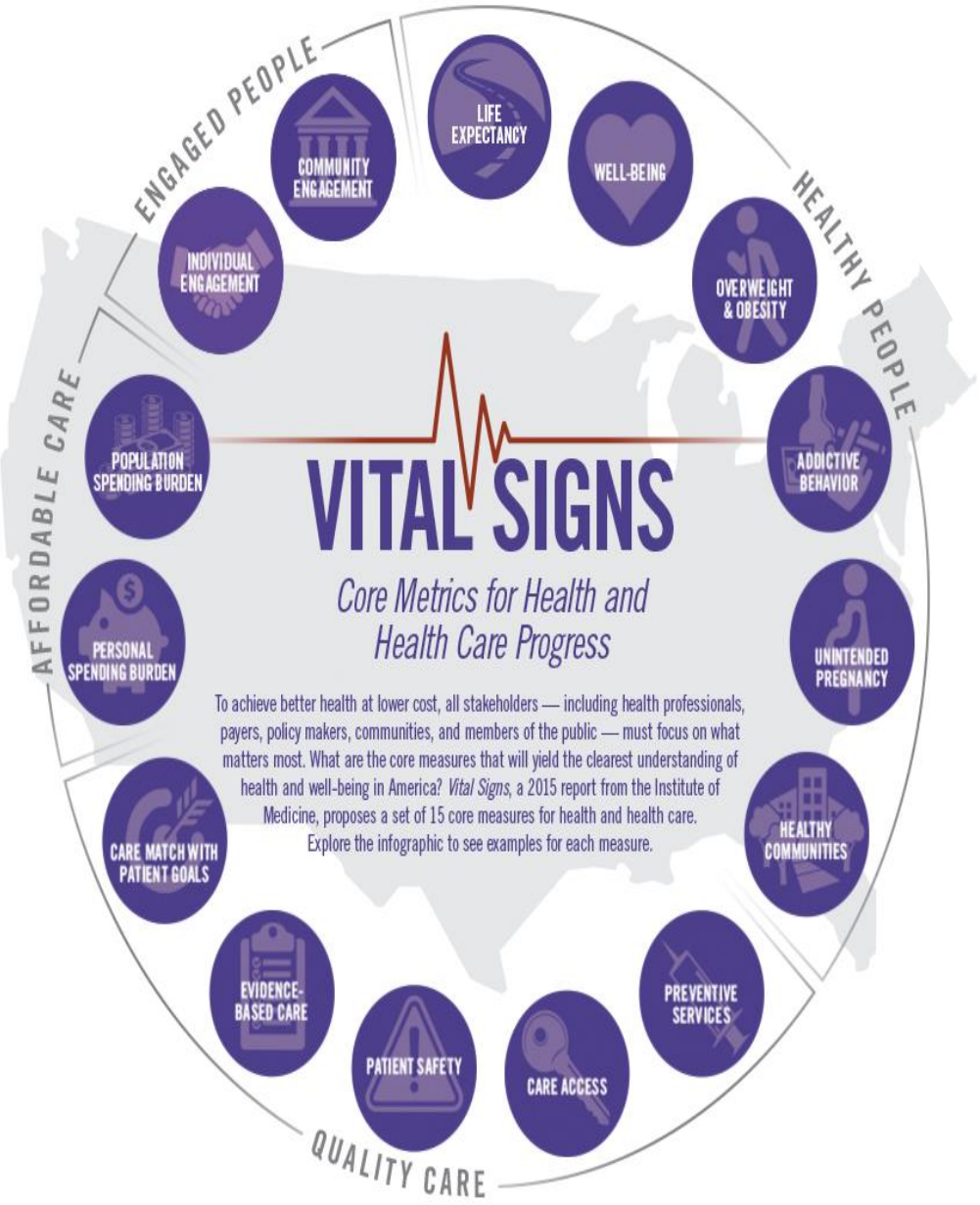
Engineering primary care to efficiently meet **Care Guidelines**

Patient – Centered Care
(Longitudinally Oriented and Coordinated across Multiple Services and Shared Decision Making)

The Need for Patient and Provider Understanding and Dialogue and Not Just Information

Current Cost of Quality

Recent Health Affairs – reports that the annual cost to meet Quality metrics through Primary care and 3 specialty providers equates to a $15 Billion dollar annual cost.


ENGAGED PEOPLE
HEALTHY PEOPLE
AFFORDABLE CARE
QUALITY CARE
COMMUNITY ENGAGEMENT
INDIVIDUAL ENGAGEMENT
LIFE EXPECTANCY
WELL-BEING
OVERWEIGHT & OBESITY
ADDICTIVE BEHAVIOR
UNINTENDED PREGNANCY
HEALTHY COMMUNITIES
PREVENTIVE SERVICES
CARE ACCESS
PATIENT SAFETY
EVIDENCE-BASED CARE
CARE MATCH WITH PATIENT GOALS
PERSONAL SPENDING BURDEN
POPULATION SPENDING BURDEN
VITAL SIGNS
Core Metrics for Health and Health Care Progress
To achieve better health at lower cost, all stakeholders — including health professionals, payers, policy makers, communities, and members of the public — must focus on what matters most. What are the core measures that will yield the clearest understanding of health and well-being in America? Vital Signs, a 2015 report from the Institute of Medicine, proposes a set of 15 core measures for health and health care. Explore the infographic to see examples for each measure.

It’s not an Either Or

Better methods in engaging the patient requires better methods in engaging the entire community.

Community Connected Health

Just for Us

DUH

Transportation

Care Management

Alliance Behavioral Health

Affordable Housing

DRH

HCFH Clinic

Acupuncture

Physical Therapy

Durham Diabetes Coalition

Medical Respite

22

Neighborhood base Community Health Worker

Community Housing Specialists

LATCH

Crisis Intervention Teams

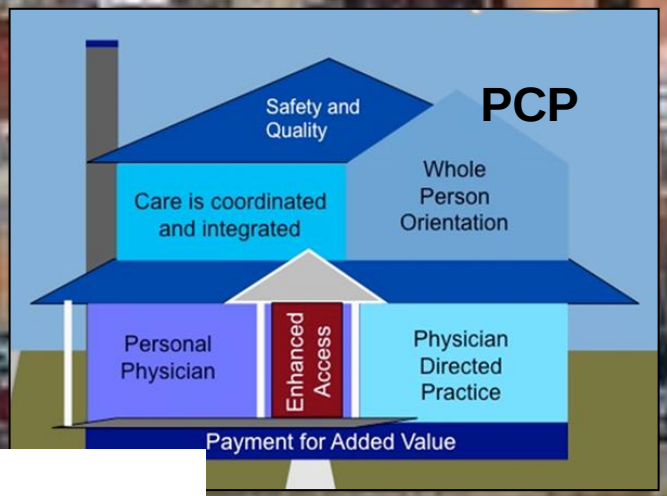
Partnership for Healthy Durham

Wellness City Peer Support

Center for Living

Adult Protective Services

Occupational Therapy



Networks

- **6-County Public Health GIS Network**
  - Funded by the CDC
  - Technical support to Durham applicant
  - Data development, potentially vital records
- **North Carolina Indicators Group**
  - Durham, Charlotte, Greenville, Winston-Salem, Orange County, Wake County, Richmond Federal Reserve…
- **National Neighborhood Indicators Partnership**
  - Sponsored by the Urban Institute
  - 33 cities around the country
  - www.neighborhoodindicators.org

Contact Information

Michelle J. Lyn, MBA, MHA

Assistant Professor and Chief

Duke Division of Community Health

Co-Director

Duke Center for Community and Population Health Improvement

Duke Health

Michelle.Lyn@duke.edu

http://communityhealth.mc.duke.edu/

Discussion

Presenters
Andrew Hamilton, RN, BSN, MS
Chief Informatics Officer and Deputy Director, Alliance of Chicago Community Health Services

Michelle Lyn, MBA, MHA
Associate Director, Duke Center for Community and Population Health

Facilitators
Peter Eckart, AM
Co-Director, Data Across Sectors for Health (DASH)

Alison Rein, MS
Director, Community Health Peer Learning (CHP) Program, AcademyHealth

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- Sign up for news from All In at dashconnect.org
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- Contact information for speakers
  - Andrew Hamilton, ahamilton@alliancechicago.org
  - Michelle Lyn, michelle.lyn@duke.edu
- Evaluation
- A resource list, slides, and recording will be available