ACCORDS is a ‘one-stop shop’ for pragmatic research:

- A multi-disciplinary, collaborative research environment to catalyze innovative and impactful research
- Strong methodological cores and programs, led by national experts
- Consultations & team-building for grant proposals
- Mentorship, training & support for junior faculty
- Extensive educational offerings, both locally and nationally
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<tr>
<th>Date</th>
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<th>Presenters</th>
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<tr>
<td>January 23, 2023</td>
<td><strong>Methods and Challenges in Conducting Health Equity Research</strong></td>
<td>Ed 2 North 1103</td>
<td>Danielle Beatty Moody, PhD (UMBC)</td>
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<td>Racism as a Multilevel Construct and Linkages to Lifespan Health</td>
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<td>January 25, 2023</td>
<td><strong>ACCORDS/CCTSI Community Engagement Forum</strong></td>
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<td>Understanding and Appreciating the Capacities of the Community:</td>
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<td>Pathways to Sustainability and Community Empowerment</td>
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<td>February 1, 2023</td>
<td><strong>Hot Topics in Mixed Methods and Qualitative Research</strong></td>
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<td>Jeffrey Robinson, PhD (Portland State University)</td>
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<td>Applying Conversation Analysis to Healthcare Interaction</td>
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<td>February 13, 2023</td>
<td><strong>Methods and Challenges in Conducting Health Equity Research</strong></td>
<td><em>Virtual</em></td>
<td>Spero Manson, PhD</td>
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<td>&quot;Nothing About Us Without Us&quot;: Meaningful Engagement of Tribal Communities in Research</td>
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<td>June 5-6, 2023</td>
<td><strong>COPRH Con 2023</strong></td>
<td>10:00 -3:00 PM MT</td>
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<td>Reassessing the Evidence: What is Needed for Real World Research and Practice</td>
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*all times 12-1pm MT unless otherwise noted*
Network Science Methods Applied to Health, Public Health, and Social Service Systems

Presented by:
Danielle Varda, PhD
Network Science Methods Applied to Health, Public Health, and Social Service Systems

Danielle Varda, PhD
CEO/Founder at Visible Network Labs
Associate Professor, University of CO Denver, School of Public Affairs
A. Problem We Are Solving:
   - Social Connectedness as a SDOH
B. Network Science as a Unique Lens/Exercise
C. Mixed Methods Examples
There is Ample Evidence That the Quality of Social Connections Influence Health Outcomes

Social relationships—both quantity and quality—affect mental health, health behavior, physical health, and mortality risk (Umberson and Montez 2011).

In a study of 7,000 men and women in Alameda County, Calif., begun in 1965, Lisa F. Berkman and S. Leonard Syme found that "people who were disconnected from others were roughly three times more likely to die during the nine-year study than people with strong social ties," John Robbins (Berkman and Syme 1979).

In another study, published in The New England Journal of Medicine in 1984, researchers at the Health Insurance Plan of Greater New York found that among 2,320 men who had survived a heart attack, those with strong connections with other people had only a quarter the risk of death within the following three years as those who lacked social connectedness (Ruberman, Weinblatt, Goldberg, and Chaudhary 1984).

In a 2010 report in The Journal of Health and Social Behavior, sociology researchers at the University of Texas at Austin, cited "consistent and compelling evidence linking a low quantity or quality of social ties with a host of conditions," including the development and worsening of cardiovascular disease, repeat heart attacks, autoimmune disorders, high blood pressure, cancer, and slowed wound healing. (Debra Umberson and Jennifer Karas Montez)

What we know: Social connections influence mental/behavioral and health outcomes.

What We Don’t Know: How to translate that knowledge into better care coordination and treatments for people.
“Socially isolated women with breast cancer have a 40% higher risk of recurrence, a 60% higher risk of dying from breast cancer, and a 70% higher risk of dying from any cause when compared with socially integrated women.”

Kroenke CH, Michael YL, Shu XO, et al. Post-diagnosis social networks, and lifestyle and treatment factors in the After Breast Cancer Pooling Project [published online ahead of print December 12, 2016]. Cancer
Visible Network Labs

www.visiblenetworklabs.com
Network Science as a Unique Lens on Social Connectedness
Social Care Platform
Screener to Link People to Resources

www.visiblenetworklabs.com/partnerme
Network Science as a Unique Lens
The New Norm: The Network Way of Working
What Are Networks?

Nodes: Organizations, People

Relationships Between the Nodes
Social Network Analysis

• Collects data on who is connected to whom
• How those connections vary and change
• Focus on patterns of relations
• Type, Extent, Quality of Connections

• Nodes (People, Orgs, Etc)
• Lines (Relationships)
Network Science as a Unique Lens

Basic Network Science Principle: More is Not (Always) Better

You can manage relationships to create a network strategy, but you need data to do it.

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1. Building and managing a network doesn’t have to be left to chance – there is a science to help guide you.
2. You are already a network scientist. You use network science every day.
3. You can manage network relationships to develop a strategy, but you need data to do it.
4. More networking is not better networking.
5. You can identify redundancy and holes in your network, which can inform the strategy.
Example:
Systems of Care for Babies and Young Children
With Health and Developmental Needs
With funding from The Colorado Trust
System of Care for Babies & Young Children With Special Healthcare & Developmental Needs
Mental Health Agencies:

Geographically Dispersed but not Connected to Each Other
A Family Map Example

All the different persons with whom the family need to relate.
(The twin girls were born prematurely with multiple complications.)

Please Note: Arrows are only beginning examples. Imagine them all filled in!

**OUR FAMILY**
Michelle
Tanya
Mom/Cindy
Dad/Stephen

**Doctors**
- Pulmonology: Drs. Kale/Herbin/Jamison
- Neurology: Dr. Fieger
- Pediatrics: Dr. Wiener
- Cardiology: Dr. Glaves
- Surgeon: Drs. Huang/Williams

**Neurology**
- Special Needs: Nurse-Lucy
- Rowe: Nurse-Isa
- Tank: Nurse-Jack/Betty

**Pediatrician**
- Pediatrician: Nurse-Babo C.

**ENT**
- Dr. Blockman
- Children’s Home Care: Dr. O’Reilly/Anne
- Children’s Hospital: Dr. C/Janet/Judy, et al!

**Church**
- Supports: Pastor,
- Nursery/Daycare: Volunteers

**Extended Family**
- Grandmas, Grandpas,
- Aunts/Uncles,
- Cousins

**Anthem Clinical**
- Occupational T-Susan
- Physical T-Linda
- Speech T-Lynn
- Respiratory T-Jean

**Newborn Center**
- Neonatologist: NNP
- Nurses
- Respiratory Therapist

**Rose Medical Center**
- Neonatologist
- Nurse
- Respiratory Therapist

**Community Centered**
- Board Infant/Toddler Services
- Service Coordinator: Nurse-Barb
- Family Support SSI:
- OT, Speech, PT, Zach, Sholli

**Anchor Center**
- Visual Therapy

**Insurance**
- HIS: Utilization Manager-Marianne S.

**Slide Courtesy of Debra Paul and Ayelet Talmi**
Systems vs. Family Networks

1 – Families have a preference for tapping into their informal supports for help first; then they will use the system when that’s not enough.

2 – People want to help themselves...they want to be resilient, not dependent or a burden.
This is Interesting – But Can We Use This to Help People?

- Question: Why do we expect people to fit into the system? Why don’t we expect the system to fit around people?
- Hypothesis: If the system is coordinated, then this is reflected in the personal networks of families.
- Outcome Measure: When 100% of families say their personal networks are coordinated, then we know the system is working.

First, Understand personal support networks and needs.

Then, Build an adaptive system to respond to variations.
PARTNERme
Person-Centered Network Tool
Please rate your own health?

How often do you feel lonely?

Who do you rely on when you have problems?

- To what degree do you trust this person to help you when you need it?
- To what degree do you depend on them?
What are your most pressing concerns?

- Childcare
- Education
- Emergency needs
- Health/healthcare
- Food
- Housing & Utilities
- Legal matters
- Mental/behavioral health
- Money
- Social support and guidance
- Transportation
- Work
Who helps you with these concerns?
Social Care Plan

**PERSONAL MAP**

- **High Trust**
- **Low Trust**

- **High Dependency**
- **Low Dependency**

- You
- Husband
- Mother
- Neighbor
- Friend

**NEEDS MAP**

- **High Trust**
- **Low Trust**

- **High Dependency**
- **Low Dependency**

- You
- Husband
- Mother
- Neighbor
- Friend
- Food
- Childcare
- Work
- Transportation

**Additional Information**

- **Member Name**: VNL ID / Patient Name
- **Type**: 9-month visit
- **Appointment Time**: 1:00 PM 10/24/2020
**Social Care Plan**

**Trust Score**
- **Score:** 2.80
- **Range:** 1 (Low) to 4 (High)
- **Description:** Low trust rating for members in their social support system.

**Dependency Score**
- **Score:** 3.20
- **Range:** 1 (Low) to 4 (High)
- **Description:** Highly dependent on members in their social support system.

**Loneliness Score**
- **Score:** 8
- **Range:** 3 (Low) to 9 (High)
- **Description:** Scores that range from 6 to 9 indicate that this person does identify as lonely.

**Social Connectedness Level**
- **Level:** Low
- **Description:** This person is at medium risk.

---

**Resource Map**

[Map with various location markers and icons indicating services such as food, childcare, money, and social support.]
Social Care Plan

Resource Map

Food

<table>
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<tr>
<th>Adventist Community Services LIFT</th>
<th>Arvada Community Food Bank</th>
<th>Aveanna</th>
<th>Bienvenidos Food Bank</th>
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</thead>
</table>

OTHER INFO

Food pantry

Food Assistance 12X per year

Baby formula

Food pantry

See More
Social Care Coordination
- Provider Notes
- Provider Suggested for You

Patient Interaction
- See their Social Care Plan
- See their resources
- Track their behaviors

Resources & Referrals
- Community Resources
- Internal Processes (to other parts of organization)
- Online Resources

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For the System

Local Food Bank
720-407-6674
8745 West 14th Avenue
Lakewood, CO 80215

TAGS
Food

Resource Key
- CHILDCARE
- EDUCATION
- FOOD
- HEALTH/HEALTHCARE
- MONEY
- SOCIAL SUPPORT & GUIDANCE
- WORK
Social Care Plan

Depression Score
- Score: 4.00
- Depression Severity: 0-4 none, 5-9 mild, 10-14 moderate, 15-19 moderately severe, 20-27 severe.

Anxiety Score
- Score: 4.00

Emotional Loneliness Score
- Score: 1.00

Resources Map

Suggested For You
- Denver Urban Ministries
- Food Bank of the Rockies
- Empower Center of Excellence in Family Behavioral Health

Looking at the Quality of Your Support Relationships
- Of the pressing concerns, which are the most immediate?

Questions:
- Which of the following are pressing concerns at this time?
- Childcare
- Food
- Health/behavioral health

Looking at the Quality of Your Support Relationships
- What do you think are the most important support relationships to have in place for your well-being?

Dependency Level
- Your Social Support Network Map
- Summary
- Add Respondent
- Assign Attributes
- Assign Task

Your Most Pressing Need
- Feeling alone or disconnected
- Emotional loneliness

Feedback
- Please provide feedback on the social care plan tool.

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We are also discovering the other ways we can apply this – for kids!
An end-to-end Social Care Coordination solution to improve health and wellbeing.
Data Considerations in Different Settings

- When in the workflow the data are collected
  - How much time does the patient/provider have
  - Intake, At-Home, Pre-Check In
- Who sees the data and when
  - Mental health clinics/Providers: generally want to review data with their clients/patients instead of having clients/patients view data alone
- Capacity to understand the data
  - Varies widely; however becomes more routine
Challenges and Successes

**Challenges**
- Very hard to change a clinical flow
- Providers are tired and burned out – reluctance to adopt new innovations
- Electronic Health Record (EHR) integration

**Successes**
- Implemented as a clinical screener (not a research project)
- Design thinking approach provides rapid feedback, changes, and adaptations
- Policy and funding for Social Care Coordination increasing
- Success billing and reimbursement in clinical settings
Example:
Adolescent Youth Social Connectedness Fellowship

- Funded by the Annie E Casey Foundation -
Adolescent Connectedness

Youth Connectedness Is an Important Protective Factor for Health and Well-being

https://www.cdc.gov/healthyyouth/protective/youth-connectedness-important-protective-factor-for-health-well-being.htm
The Annie E. Casey Foundation develops solutions to build a brighter future for children, families and communities.
Youth Social Support Research Fellowship Resources

The Youth Social Support Research Fellowship seeks to create insights into the ways young people think about, build, and leverage support networks and relationships. By better understanding this unique perspective on social connectedness, we can build improved tools for measuring and strengthening support networks for youth. Learn more about our project, our team of fellows, and the resources we’ve created below.

Fellowship Resources, Articles, & Tools

**Strengthening Social Connectedness Among Young People: A Solution to the Mental Health Crisis?**
This article discusses the role of social connectedness as a component of the ongoing youth mental health crisis in the United States.

**Two-Page Project Brief: How Do Young People View Social Connectedness and Access Resources?**
This short Project Brief includes a high-level overview of our findings from our first semester of research with our Social Support Research Fellows.

**Full Project Summary Report: How Young Adults View Social Connectedness and Access Resources**
This detailed Summary Report provides an in-depth overview of our findings from our first semester of research with our Social Support Research Fellows.
Overall Methods

Develop key informant interview guide

Conduct key informant interviews with youth (n=28)

Modify PARTNERme survey for youth adults

Pilot test PARTNERme survey (n=43)

Fellow’s knowledge and expertise
Areas where white youth reported receiving more help than youth of color

**Anxiety**
- Youth of Color: 56%
- White Youth: 72%

**Depression**
- Youth of Color: 6%
- White Youth: 72%
35% of youth of color indicated none of these were areas they needed help with.
Reflections and Learnings

Reflections on Results
- Youth of color socialized to not ask for help vs. their white peers
- Talking about mental health, encouragement to “be strong”, sharing is not really supported
- Focus on and value financial needs, basic necessities, housing, food insecurities, as well as future, career, school
- Rising epidemic of suicide among black men; video – many older black men do not have family, burned bridges, no family in their corner
- Youth tended to feel stigmatized for asking for help because they don’t like feeling judged and they needed to build trust

Learnings
- Our assumptions are not always right
- Need to authentically ask and listen to people
Questions/Ideas?

danielle@visiblenetworklabs.com
www.visiblenetworklabs.com
A Network Mapping Tool (Resource)
Mapping Your Personal Network
Mapping Your Personal Network

Now, take the list of people (places and things) that you listed on the previous sheet. Draw a circle (a node) for each person and then draw the lines between them to show who has a connection to each other. You might want to use colors to define different types of connections, or dotted or think/skinny lines. You might make the nodes different colors or sizes to show their differences. Keep track of your decisions in the "Key" box.

Is your network more open?
Or do you have a more closed network?
…now you try it.
Personal Network Maps

If you can make one intentional change, what would it be?