Theme 5: Intervention Research, Dissemination, and Implementation
Developing and Disseminating an Evidence-based Practice Model

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- Employment: University of Washington
  - Professor & Chair, School of Medicine; Dept. of Psychiatry and Behavioral Sciences
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- Grant funding
  - National Institute of Health
  - National Corporation for Community Service
  - Center for Medicare and Medicaid Innovation (CMMI)
  - Archstone Foundation

- Contracts
  - Community Health Plan of Washington, Public Health of Seattle & King County

- Advisor
  - Substance Abuse and Mental Health Administration (CMHS)
  - World Health Organization

- Royalties
  - Up To Date: Chapter on Late-Life Depression

- NO FINANCIAL RELATIONSHIPS THAT PRESENT A CONFLICT OF INTEREST FOR TODAY’s PRESENTATION
Major Depression in Late Life

• 5-10% of patients seen in primary care

• Pervasive depressed mood / sadness

• Loss of interest / pleasure
  Lack of energy, fatigue, poor sleep and appetite, physical slowing or agitation, poor concentration, physical symptoms (aches and pains), irritability, thoughts of guilt, and thoughts of suicide

• A miserable state that can last for months or even years
How Good is Current Depression Care?

• Fewer than $2/10$ see a psychiatrist or psychologist
• $5/10$ receive treatment in primary care
• The ‘2-minute mental health visit’ : Ming Tai-Seale; JAGS 2008.
• 4-5 million older adults receive an antidepressant Rx, but only $20\%$ improve
• Few get effective psychotherapy

"Of course you feel great. These things are loaded with antidepressants."
2/3 of PCPs report poor access to mental health services for their patients

Cunningham PJ, *Health Affairs*, 2009;28(3)490-501
How Do We Get Effective Treatment To More People?
IMPACT Collaborative Care

Primary Care Practice
- Primary Care Physician
- Patient
- Mental Health Care Manager
- Psychiatric Consultant

Outcome Measures
- PHQ-9

Treatment Protocols
- Problem Solving Treatment (PST)
- Behavioral Activation (BA)
- Motivational Interviewing (MI)
- Medications

Population Registry

Psychiatric Consultation

John A. Hartford Foundation
IMPACT Doubles Effectiveness of Care for Depression

50% or greater improvement in depression at 12 months

Unützer et al., JAMA 2002; Psych Clinics North America 2004
IMPACT improves physical function

SF-12 Physical Function Component Summary Score (PCS-12)

Callahan et al., JAGS 2005; 53:367-373
ROI for collaborative depression care: $ 6.50 for each $ 1.00 spent

IMPACT: Summary

- Less depression
- Less physical pain
- Better functioning
- Higher quality of life
- Greater patient and provider satisfaction
- More cost-effective

“I got my life back”
Trained > 5,000 clinicians in ~ 1,000 primary care clinics.

<table>
<thead>
<tr>
<th>CPT</th>
<th>Description</th>
<th>Payment/Pt (Non-Facilities)</th>
<th>Payment/Pt (Facilities)</th>
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<tbody>
<tr>
<td>99492</td>
<td>Initial psych care mgmt., 70 min/month - CoCM</td>
<td>$161.28</td>
<td>$90.36</td>
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<tr>
<td>99493</td>
<td>Subsequent psych care mgmt., 60 min/month - CoCM</td>
<td>$128.88</td>
<td>$81.72</td>
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<tr>
<td>99494</td>
<td>Initial/subsequent psych care mgmt., additional 30 min CoCM</td>
<td>$66.60</td>
<td>$43.56</td>
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<tr>
<td>99484</td>
<td>Care mgmt. services, min 20 min – General BHI Services</td>
<td>$48.80</td>
<td>$32.76</td>
</tr>
</tbody>
</table>

*Please note actual payment rates may vary. Check with your billing/finance department.
Older adults served in Community Health Centers

<table>
<thead>
<tr>
<th>Population</th>
<th>Mean baseline PHQ-9 depression score</th>
<th>Follow-up (%)</th>
<th>Mean number of primary care contacts</th>
<th>% with psychiatric consultation</th>
<th>% with significant clinical improvement (PHQ-9 reduced 50% or more)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Adults at baseline (2008) N = 124</td>
<td>15 / 27</td>
<td>63%</td>
<td>3</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>Older Adults in 2012 N = 568</td>
<td>15 / 27</td>
<td>86%</td>
<td>8</td>
<td>69%</td>
<td>51%</td>
</tr>
</tbody>
</table>
Over 3000 psychiatrists trained
WA Mental Health Integration Program
> 50,000 clients served
Clinic-level mean Response at 6-months
Role of Implementation Support

![Graph showing Clinic-level % Response (6 months) vs. count with Level Of Training categories 1 and 2 indicated.](image-url)
MHIP: Pay for Performance initiative
cuts median time to depression treatment response in half

Some Lessons

• There is not ‘depression care system for older adults’ … only a ‘health care system.’
• Research evidence is important but not sufficient for widespread dissemination.
• Money matters: if it can’t make us $, we can’t do it.
• Are people asking for this? If not, why not?
• Implementation support matters.
• There are at least ‘two valleys of death’:
  • Evidence generation … publication … implementation.
  • New billing codes … widespread use.
Thank you.

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Current challenges in implementation science, and implications for improving the care of persons living with dementia

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March 24-25, 2020
Disclosures

- Nothing to disclose
Implementation Science:

How do we put evidence into practice?

How do we incorporate evidence into policy?
Our ability to put effective interventions into routine practice remains limited

• Limited evidence base
• Acceptance of services is limited
• Implementation occurs in widely varied contexts
How can we expand our ability to successfully implement?
Hybrid study designs

Hybrid Type 1: test clinical intervention, observe/gather information on implementation

Hybrid Type 2: test clinical intervention, test implementation strategy

Hybrid Type 3: test implementation strategy, observe/gather information on clinical intervention outcomes
Alternative Designs

• Stepped Wedge Designs

• SMART Designs
  • Develop adaptive implementation strategies
Replicating Effective Interventions

Pre-Conditions
- Identification of need for new intervention
- Identification of effective intervention that fits local settings
- Packaging intervention for training and assessment

Pre-Implementation
- Orientation
  - Explain core elements
  - Customize delivery
- Logistics planning
- Staff training
- Technical assistance

Implementation
- Ongoing support of and partnership with community organizations
- Booster training
- Process evaluation
- Feedback and refinement of intervention package and training

Maintenance and Evolution
- Organizational and financial changes to sustain intervention
- Prepare package for national dissemination
- Re-customize delivery as need arises
How can we more effectively engage patients, caregivers, clinicians?
Participatory Approaches

Participatory
- Collaboration through participation
- Empowerment of participants

Action
- Change – real life experience
- Evidenced in terms of different outcomes

Research
- New knowledge
- Documented lessons
Role of the Caregiver?

- Participant
- Informant
- Proxy
- Partner
How do we implement across widely different contexts?
What is the minimum required intervention? What are the critical contextual factors? What are the emergent interactions between them?
Self-organization

Resources

Processes

Relationships
Opportunities & Needs

Interplay between intervention & context → Adaptive interventions to target microsystem

Partnerships with patients & caregivers → Participatory, human-centered approaches

Dynamic assessments over time → Longer time horizons
Learning Health Systems

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March 24-25, 2020
Disclosures

• I am on the Board of Trustees for the American Board of Internal Medicine Foundation

• My husband is the chair of the Providence TrintyCare Hospice Foundation Board
What is a Learning Health System?

• A system in which:
  • Science, informatics, incentives, and culture are aligned for continuous improvement and innovation
  • Best practices are seamlessly embedded in the delivery process
  • New knowledge is captured as an integral by-product of the delivery experience
A Learning Health System Model

- Monitoring / Analytics
  - Evidence is continually refined as a byproduct of monitoring implementation

- Point of Interaction Tools
  - Actionable information available – to decision makers – “just in time” so that evidence is translated into action

- Learning Health System

- Data

- Information-rich, member/patient focused enterprises

- Information and evidence are generated in response to questions from the system

- Research

Adapted from: “A Learning Health Care System for Cancer Care, Carolyn Clancy, MD, Agency for Healthcare Research & Quality
In Most Learning Health Systems, the “Data” are From Multiple Sources, Heterogeneous & Require Curation to be Usable

Inputs
- Labs
- Inpatient
- Outpatient
- Emergency
- Pharmacy
- Imaging
- Immunization
- Membership
- Financial & Benefits
- Social Needs

Outputs
- Registries
- Stratification
- Patient Management
- Panel Lists
- Protocols
- Prompts
- Outreach
- Reporting
- Research

Kaiser Permanente HealthConnect® (Electronic Health Record)
All Care Everywhere All The Time

KP.org and My Health Manager (PHR)
Data are Likely Available on Multiple Classic & Relevant Health Promotion Actions

• Educational attainment
• Hearing status
• Blood pressure control
• Blood sugar control
• Weight management
• Physical activity
• No smoking
• Depression diagnosis and treatment
• Social engagement
Learning Health System Opportunities Related to Data

• Create registries of patients (observation of natural course, learning from variation, rapid identification of those who would benefit from new treatment)
  • Much of our progress on quality for chronic diseases has leveraged registries

• Determine what data are needed for the questions of interest and figure out how to augment what is already being collection
  • Can include the need to standardize the collection and entry of data

• Take advantage of the growing interest in social needs among health systems to build out data on non-medical needs
  • Emerging tools being integrated in EHRs
Learning Health Systems Can Generate Different Types of Evidence

- RCTs: What works in controlled studies?
- Pragmatic Trials: What works in the real world?
- Observational Studies: What works in the real world?
- Quality Improvement: How can we reliably do what works?

Comparative Effectiveness Research
- Head-to-head comparisons
- Patient subgroups
- Outcomes that matter to patients
Research Quality Evidence Is Needed for Learning

State of Current Knowledge

- We know what to do and it is stable
- We know what to do now but it is changing (rapidly)
- No one is sure what to do, but lots of people have different ideas
- We have no clue what to do

Contribution of Research

- Monitoring for reliable execution
  Opportunities for efficiency
- Methods to integrate new practices
  Rapid cycle change capacity
- Observational studies (variation)
  Intervention studies (testing)
- Exploratory research
  Data mining

Research Continuum
Collaborate with Related Efforts (Thrive Local Example)

• Thrive Local is a Kaiser Permanente (KP) initiative to
  • improve the recognition of social risk factors such as housing instability, food insecurity, and lack of transportation
  • to refer those members to community organizations best able to help them address their needs for food and housing support, transportation services, energy assistance etc.
  • to "close the loop" by providing KP information about the resolution of those needs.

• Thrive Local has three main components
  • an accurate resource directory of community organizations that address social risk factors
  • a network of community organizations that can communicate with KP and each other about the complex needs of participating members
  • a secure IT system, managed by a vendor (Unite Us), to enable bidirectional communication between KP and the community network

• Thrive Local is being accompanied by an effort to standardize data collection, storage and reporting across KP regions using the social needs module in our HER

• KP invested its own funds to conduct an internal evaluation over the next 3-7 years augmented by targeted research and evaluation efforts
Point of Care Tools Make Information Available When It is Needed

- Integrated into work flows
  - Diagnosis (structured tools)
  - Needs assessment
  - Referrals (including for non-medical services)
- Puts the right (and same) information in front of anyone on the team
  - Make the right thing easy to do
- Can facilitate action through prompts
- Needs to be presented in a way that is easy to interpret, easy to use
- May offer a mechanism for driving scalability & sustainability
Ongoing Monitoring & Analytics

• Most of the interventions that seem promising are multi-component and complex (particularly if tailored to individual constellation of needs)

• Ongoing monitoring of how these models are implemented in different locations, what adjustments are made over time, what barriers are encountered is critical for understanding outcomes
  • Making changes systematically and intentionally will help with learning

• Dashboards, qualitative assessments, long term outcomes studies can all contribute to the ongoing assessment
Concluding Thoughts

• Learning health systems are a particularly valuable enterprise for advancing real world systems for delivering best in class care for persons with dementia and Alzheimer’s
  • Two challenges are developing systematic approaches for engaging with non-medical systems and incorporating family- & carer-based perspectives on service delivery

• Systems of systems would be useful for learning but these have been difficult to implement for a variety of reasons (costs, flexibility, variations in priorities)

• Looking for opportunities to engage with related efforts (increased focus on social needs, attention to patients with medical and social complexity) may result in more scalable and sustainable solutions
Research Gaps and Opportunities

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Richard M Fairbanks Professor of Aging Research and Founding Director
Indiana University Center for Health Innovation and Implementation Science

Michael Monson, MPP
Senior Vice President Medicaid & Complex Care and CEO of Social Health Bridge
Centene Corporation

March 24-25, 2020
Disclosures

Malaz Boustani:
   Equity ownership in RestUp, LLC, and PHM, LLC
   Paid Advisor in Eisai, Merck, and Acadia.

Michael Monson:
Research Gaps and Opportunities

- Identify contextual and structural features that would be needed to create learning laboratories to catalyze interaction, collaboration, and coordination of interdisciplinary teams and organizations to shorten the translation of innovation ADRD care services into widespread use.

- Identify factors that create market demand and promote availability of evidence-based tools for the rapid implementation and diffusion of the collaborative ADRD care models within various payment models.

- Develop and evaluate tools, processes, and strategies to incorporate ADRD-focused intervention strategies into the current and future workflow of the busy primary care systems.
Research Gaps and Opportunities

- Develop and evaluate evidence-based tools, processes, and strategies for the most optimal integration of ADRD care services across healthcare delivery and community-based organizations in rural and urban settings.

- Leverage advances in health information technology and network science to develop tools, process and strategies to train, support, and involve family and other caregivers in the care of persons living with ADRD.

- Conduct research to develop and study mechanisms to financially compensate family and other unpaid caregivers of persons living with ADRD when they play essential roles in implementing the care plan of persons living with ADRD.

- Conduct research to understand the effects of strategies to financially compensate community-based organizations that have essential roles in the care of persons living with ADRD.
Research Gaps and Opportunities

• To study how principles of agile design, implementation, and diffusion that integrate science and engineering can promote dissemination of care innovations for persons living with ADRD.

• Develop and evaluate network science tools, processes, and strategies for disseminating evidence-based models of ADRD care in rural areas and within and between demographically diverse populations.

• Develop scalable, sustainable, and actionable ADRD interventions that payers and providers can use “off the shelf” in practice to improve quality, safety, and financial return on investment, with guidelines on how to implement the intervention, including key contextual factors.