Theme 4: Participation of Persons with Dementia and their Caregivers in Research

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Panelists:
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National Research Summit on Care, Services, and Supports for Persons with Dementia and Their Caregivers
March 24-25, 2020
Reporters, Data Sources, and Outcomes in Dementia Research

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March 24-25, 2020
Disclosures

• I have no conflicts of interest.
## Disease-based vs. Patient-defined Outcomes

### Disease-based Outcomes
- Disease-specific
- Medical outcomes
  - Survival, Biomarkers
  - Disease-specific symptoms
- Population health goals
- Universally applied
- For persons with a single chronic disease or longer life expectancy
- Can be person-centered; may not capture what is most important to the person

### Person-defined Outcomes
- Span conditions
- Medical & non-medical outcomes
  - Functional independence
  - Social interaction
- Personal health goals
  - Individually determined
- For persons with multiple chronic conditions, limited life expectancy, or specific disabling diseases
- Always person-centered

What matters most?

*Findings from Focus Groups with Persons with Dementia and their Care Partners*

Patient Reported Outcome Measures (PROMS)

• Efforts to include PROMS as research outcomes
• Examples in dementia research
  • Quality of Life-AD
  • Pain scales in dementia
  • Cornell Scale of Depression in Dementia
  • Neuropsychiatric Inventory Questionnaire
  • Functional status
  • Care partner strain, mood, self-efficacy, social support
• Pros: validated, self-administered; good for symptoms; can be followed longitudinally; easy to compare across studies and health systems

Challenges with PROMS in Dementia Research

• May be too generic
• May not be relevant or high priority to a PLWD
• Progressive worsening of cognition—repeated measures, consent

• Proxy reporting: What can a care partner report for a PLWD?
  • Ex: Pain vs. ADL impairment; Mood vs. Sleep pattern; QoL vs. Mobility

• Multiple care partners or change in care partner
  • Role and relationship of care partner

• Care partner outcomes vs. PLWD outcomes

• Combining data from multiple reporters
  • How to handle reporter discordance?

Personalized or Individual-Specific Outcomes: Goal Attainment Scaling as an Example

• Way to make a personalized health goal S.M.A.R.T.
  • Specific, Measurable, Attainable, Relevant, Time-bound
• Framework for care planning (action plan)
• Measures goal achievement
  • Goal is individualized, measurement is standardized

<table>
<thead>
<tr>
<th>Goal</th>
<th>Much less than expected (-2)</th>
<th>Less than expected (-1)</th>
<th>Expected goal attainment (0)</th>
<th>More than expected (+1)</th>
<th>Much more than expected (+2)</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase social engagement</td>
<td>Not participating in any activities; stops watching movies</td>
<td>Watches movies at home; does not get out (current state)</td>
<td>1 activity outside home once per week; more in-home activities</td>
<td>Activities outside home &gt;1d/wk; more in-home activities</td>
<td>Activities outside home most days; more in-home activities</td>
<td>Hire part-time caregiver</td>
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</table>
# Personalized or Individual-Specific Outcomes

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Challenges</th>
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</thead>
<tbody>
<tr>
<td>Specific, measurable health goals</td>
<td>Time constraints</td>
</tr>
<tr>
<td>Goals are personalized, meaningful to PLWD and care partners</td>
<td>Scaling takes training and practice</td>
</tr>
<tr>
<td>Accommodates diverse preferences</td>
<td>Culture of disease-based care</td>
</tr>
<tr>
<td>Goals can be revised as disease progresses</td>
<td>Some goals may be unrealistic</td>
</tr>
<tr>
<td>Facilitates care planning</td>
<td>Goals of and for others (e.g., family, clinician)</td>
</tr>
</tbody>
</table>

Reuben DB, Jennings LA. J Am Geriatr Soc. 2019;67(7):1342-1344
Novel Approaches to Outcome Measurement in Dementia Research

• Using technology
  • Wearable devices to track mobility, gait or falls
  • Video to observe behavioral symptoms or sleep
  • Smart phone or tablet apps

• Data Analysis: Triangulation of data sources
  • PROMs, individualized outcomes, technology, clinical data (e.g., cognitive testing, biomarkers), processes of care (quality), health care utilization/cost
  • Weighting strategies
Some Opportunities for Future Research

• Further develop methods to address self-report with declining cognition
• Further develop individual-specific outcomes
  • Does the care we deliver help PLWD achieve what is most important to them?
  • How to shift culture from disease-based to person-defined outcomes?
• Identify measures that are most responsive to change and that translate to clinical significance
• Establish homogeneity of instruments across studies (core outcome sets)
• Identify outcomes relevant for payment coverage decisions
• Further development of methodologies to combine data sources and address multiple reporters
References


Nomenclature

Ronald C. Petersen, PhD, MD
Mayo Clinic
Rochester, MN

National Research Summit on Care, Services, and Supports for Persons with Dementia and Their Caregivers
March 24-25, 2020
Disclosures

- Roche, Inc.
- Merck, Inc.
- Genentech, Inc.
- Biogen, Inc.
- GE Healthcare
- Eisai, Inc.
Cross-cutting theme Relevant to Nomenclature

• Ethics
• Health disparities
• Perspectives of persons living with dementia and/or caregivers
• Etiologies
Nomenclature
Words Matter

• Nomenclature issues very important
• Cut across all spheres of investigation
  • Science/Research
  • Clinical Care
  • PLWD and Care Partners, Public Stakeholders
    • Government agencies
    • Advocacy groups
    • Research participants
    • Under-represented groups
Confusion in the field on terminology

• Alzheimer’s Disease
• Frontotemporal Degeneration
• Dementia with Lewy Bodies
• Vascular cognitive impairment-dementia
Alzheimer’s Disease

• Syndrome

• Etiology
Previous and Current Language Encounters

• Previous psychiatric terms
  • IQ 0-25 “idiot”
  • IQ 26-50 “imbecile”
  • IQ 51-70 “moron”

• Alzheimer’s disease: Pre-senile dementia

• Current terms under consideration
  • Pre-clinical Alzheimer’s disease: positive amyloid status, cognitively unimpaired
Old Conception of Alzheimer’s Disease

Cognitively Normal

Dementia
NINCDS-ADRDA Criteria 1984

Clinical diagnosis
of Alzheimer's disease:
Report of the NINCDS-ADRDA Work Group under the auspices of Department of Health and Human Services
Task Force on Alzheimer's Disease

Guy McKhann, MD; David Drachman, MD; Marshall Folstein, MD; Robert Katzman, MD;
Donald Price, MD; and Rosenblatt M, Stadlan, MD

Alzheimer's disease is a brain disorder characterized by a progressive dementia that occurs in middle or late life. The pathologic characteristics are degeneration of specific nerve cells, presence of neuritic plaques, and neurofibrillary tangles. Alterations in transmitter-specific markers include forebrain cholinergic systems, and, in some cases, mesocorticolimbic and somatosensory systems that innervate the telencephalon.

A Work Group on the Diagnosis of Alzheimer's Disease was established by the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) and the Alzheimer's Disease and Related Disorders Association (ADRDA). The group intended to establish and to describe clinical criteria for the diagnosis of Alzheimer's disease of particular importance for research protocols and to describe approaches that would be useful for assessing the natural history of the disease. The need to refine clinical diagnostic criteria has been emphasized because 20% or more of cases with the clinical diagnosis of Alzheimer's disease are found at autopsy to have other conditions and not Alzheimer's disease. Moreover, therapeutic trials may be meaningfully compared only if uniform criteria are used for diagnosis and response to treatment.

The need for this report was suggested by the National Advisory Council of the NINCDS. The report has been reviewed by workshop participants, representatives of the National Advisory Neurological and Communicative Disorders and Stroke Council, representatives of the ADRDA, and designated reviewers representing professional societies concerned with the diagnosis of Alzheimer's disease. (For list of professional societies and designated reviewers, see page 841.)

The report was developed by subgroups that addressed medical history, clinical examination, neuropsychological testing, and laboratory assessments; the report was then discussed in plenary sessions. Based on a consensus of the participants, criteria were developed to serve as a clinical basis for diagnosis. These criteria should be useful also for comparative studies of patients in different kinds of investigations, including case control studies, therapeutic trials, evaluation of new diagnostic laboratory tests, and clinicopathologic correlations.

The criteria are not yet fully operational because of insufficient knowledge about the disease. The criteria are compatible with definitions in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-III) and in the International Classification of Diseases. These criteria must be regarded as tentative and subject to change. Additional longitudinal studies, confirmed by autopsy, are necessary to establish the validity of these criteria in com-
Alzheimer’s Disease as a Clinical – Pathological Entity
Alzheimer’s Disease

1984
NINCDS-ADRDA Criteria
Clinical-Pathological definition

2011
NIA-AA Criteria
Clinical syndrome with biomarkers for amyloid and neurodegeneration

2018
NIA-AA Framework
Alzheimer’s disease as a biological entity
defined by positive biomarkers for amyloid and tau
Clinical Spectra Independent
Alzheimer’s Disease

• Syndrome - not part of definition

• Etiology – defines the disease (plaques and tangles)

Very confusing for most
Nomenclature

Implications for Research

• Science/Research: Must be precise

• Clinicians: Must translate science to patients and vice versa

• Public stakeholders: Stigma, willingness to participate in research
  • Sensitivity in under-represented groups
Plans for Future
Co-chair, Angela Taylor, LBDA

- Convene groups to address these issues
  - Research/Science
  - Clinical practice
  - Public stakeholders

- Present issues and recommendations at future summits
Putting the “Me” in Dementia Research

Tabassum Majid, PhD, MAgS
University of Maryland, Baltimore County
March 24-25, 2020
Disclosures

• I have nothing to disclose.
### Defining Terms

<table>
<thead>
<tr>
<th>Patient Participation</th>
<th>VS.</th>
<th>Engagement (US)/Involvement (UK)</th>
</tr>
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<tbody>
<tr>
<td>• Role is primarily as a subject of the research, not as a contributor</td>
<td>• Role is shaping and contributing to various aspects of the study process</td>
<td></td>
</tr>
<tr>
<td>• “Research is done TO/ON patients”</td>
<td>• Research is done WITH patients</td>
<td></td>
</tr>
<tr>
<td>• Traditional within ADRD Clinical Trials</td>
<td>• Not a new concept in other fields</td>
<td></td>
</tr>
<tr>
<td>• Study outcomes may or may not be <em>relevant or meaningful</em> to patients or caregivers</td>
<td>• Cancer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Diabetes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mental Health</td>
<td></td>
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</table>
Spectrum of Engagement in Research

<table>
<thead>
<tr>
<th>HOW?</th>
<th>Learn</th>
<th>CONSULT</th>
<th>INVOLVE</th>
<th>COLLABORATE</th>
<th>LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Open atmosphere to share knowledge</td>
<td>Priority-setting Focus Groups</td>
<td>Working Groups, Health Panels.</td>
<td>Co-Investigators, Research, Advisory, Committees.</td>
<td>Principal Investigators</td>
</tr>
</tbody>
</table>
### Steps in Designing a Research Study

<table>
<thead>
<tr>
<th>Steps in Designing a Research Study</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Deciding what question to ask</td>
<td>9</td>
<td>47%</td>
</tr>
<tr>
<td>2: Determining who the study subjects should be</td>
<td>11</td>
<td>58%</td>
</tr>
<tr>
<td>3: Figuring out where to identify or recruit the study subjects</td>
<td>6</td>
<td>32%</td>
</tr>
<tr>
<td>4: Deciding what type of information should be collected</td>
<td>16</td>
<td>84%</td>
</tr>
<tr>
<td>5: Deciding what types of comparisons should be made</td>
<td>11</td>
<td>58%</td>
</tr>
<tr>
<td>6: Identifying types of outcomes that should be reported</td>
<td>14</td>
<td>74%</td>
</tr>
</tbody>
</table>

6: Identifying types of outcomes that should be reported

Note: Of the 20 persons in the focus groups, 12 were either PLWD or caregivers who were not affiliated with community groups (not “activated” or “advocates”).

(Adapted from Majid, et. al. ISPE Task Force Paper)
Care Management Concepts added through Engagement

- Atypical behavior observations and management
- Advocating for PLWD
- Navigation of health care and services
- Formal diagnosis and reaction
- Finding and exchanging information
- Building a support network & balance
- Managing future expectations

Themes of Care Management from other Caregiver Studies

- Assessing treatment options & goals
- Managing your own/PLWD's emotions.
- Family & societal dynamics
- Advice for others

Added after Engaging PLWD & Caregivers
Engaged Caregivers & Providers Prioritize & Define Care Management
Design Adaptation: A Resident-Driven Meaningful Music Study

What kind of music is best to play for our residents?

Operational Issue

Alignment with Philosophy, Model, and Stakeholder Engagement

Personalized Study Design, Relevant Clinical Outcomes, External Partnership (JHU)

Data Collection with 20 residents (6 weeks)

Analysis, Evaluation, Dissemination of Results via Program Implementation

Re-examination of new evidence-based practices in the field on personally meaningful music

✓ Increased alertness
✓ More singing & laughing
✓ Family & reminiscence

Ongoing communication with staff, families, residents, and community-wide leadership

Family-driven donation for implementation and care quality

15 minutes per resident (5 minute songs)

Oberved Emotional Rating Scale

Neurobehavioral Ratings

✓ Internal evaluation
✓ Clinical Indicators
✓ Person-directed, family supported intervention

Person-centered lens for residents with dementia prioritized “assent” in choice, dignity, and preference

✓ Family-driven donation for implementation and care quality

✓ Increased alertness
✓ More singing & laughing
✓ Family & reminiscence

Ongoing communication with staff, families, residents, and community-wide leadership
### Challenges & Opportunities of Engagement

**Challenges**

- Ways to incorporate care partners
- Identifying appropriate study methods and defining relevant outcomes
- Bias and representation in both sample and “engaged” group
- Benefits and risk of technology in recruitment, data collection, and participant connection across groups

**Opportunities**

- ID methods to increase engagement
- “Activated patient communities” later in dementia progression (residential setting)
- Optimal study design improvements prior to and during protocol development
- Creation of relevant, meaningful outcomes benefiting the dyadic nature of ADRD progression
REFERENCES


Theme 4: Research Opportunity 1

- Develop and test methods to address fluctuating and/or declining cognition, including loss of insight, to enhance appropriate use of self-report by PLWD.
Theme 4: Research Opportunity 2

• Develop and test methods to combine multiple sources of information, including clinical data, patient- and informant/caregiver-reported data, and technology-derived data, to optimize outcomes measurement; address multiple reporter concordance, discordance, and weighting strategies.
Theme 4: Research Opportunity 3

• Develop and test personalized or individual-specific outcomes as endpoints in intervention trials.
Theme 4: Research Opportunity 4

• Develop and test methods to capture well-being and health-related quality of life of PLWD and those that care for them (both paid and unpaid caregivers), across all stages of disease and symptomatology.
Theme 4: Research Opportunity 5

• Discover how language about aging and cognitive disorders affects the conduct of dementia studies.
Theme 4: Research Opportunity 6

• Understand how nomenclature influences recruitment into research and identify best practices for disclosure of research results.
Theme 4: Research Opportunity 7

• Determine how nomenclature for AD/ADRD and caregiving contributes to stigma, both self and public, and develop and test strategies that can mitigate stigma about dementia and dementia caregiving.
Theme 4: Research Opportunity 8

- Identify methods and implementation strategies to improve representation of underserved and under-included people in dementia care and services research, including for research to treat or prevent dementia.
Theme 4: Research Opportunity 9

• Identify methods to improve the validity, value and efficiency of studies given increased sharing of information among participants and potential participants as part of activated communities.
Theme 4: Research Opportunity 10

• Identify methods to increase stakeholder engagement in dementia studies across the full range of potential stakeholders, including involvement in research question generation and prioritization, review of funding applications, and dissemination of study results.
• Evaluate stakeholder engagement in dementia studies with attention to methods applicable across research settings.