Addressing Complexity in the Face of Scarcity:

Results of the Wisconsin Geriatric Psychiatry Initiative after 7+ Years

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Behavioral Health for Older Adults in Wisconsin

• Need for services
  – Prevalence of MH/SA problems: 30+%

• Supply: current and future
  – Average age of current geropsychiatrists in WI: ?
  – Few geropsychiatrists currently being trained:
    • Nationally: down to 60 graduates/year (2008-9)
    • MVAH/UW GP Fellowship Program: 1 graduate/year 1982-2008
    • MCW GP Fellowship Program: new (2008)
## Projected Population Growth in Wisconsin: 2000-2030

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2000 Census (in millions)</th>
<th>2015 Projected (in millions)</th>
<th>2030 (in millions)</th>
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<td>0-17</td>
<td>1.37</td>
<td>1.34</td>
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<td>18-64</td>
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<td>3.70</td>
<td>3.63</td>
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<tr>
<td>65+</td>
<td>0.70</td>
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Source: WI Department of Administration, 2004
Trajectory Over Time

Estimated Prevalence of Major Psychiatric Disorders By Age Group

Millions

Year

2000 2010 2020 2030

18-29 30-44 45-64 65 >
Graduates of Geriatric Medicine & Geriatric Psychiatry Fellowship Programs
Complexity Issues in Geriatrics at Patient & Clinical Levels

• Complexity of patients’ problems:
  – medical, behavioral, social

• Complexity of care:
  – specialization
  – subspecialization of care providers
  – multiple providers: medical, social, etc.
  – variations in insurance coverage, eligibility for services
  – polypharmacy/“polyprescribing”
Complexity Issues in Geriatrics at Organizational Level

• Lack of integration of services, e.g.:

  – communication problems:
    • ongoing, upon transfers
    • between care providers, organizations

  – executive dysfunction at organization level:
    • piecemeal approaches
    • competing organizations
    • institutional egotism: e.g. centers of excellence (vs. networks of excellence)
Complexity Issues in Geriatrics at the Systems Level

• Responses to size/complexity of challenge:
  – Collective “fight/flight/freeze/engage”

• Immobilization in face of aging “boomers”:
  – “silver tsunami”
    • (Scientific American 2008)
  – nationwide lack of preparedness
    • (Institute of Medicine report, 2008)
  – collective anxiety/helplessness:
    • perceived problems vs. perceived resources
  – inertia: individual/clinical/systems

• Preoccupation with other issues
  – ? “collective ADD”

• Ageism
Complexity Issues in Geriatrics at the Systems Level

- Piecemeal approaches:
  - more research
  - translational research
  - interventions:
    - narrowly-focused
    - narrowly-based
  - inflexible models of care
Addressing Complexity Issues in Geriatrics

• Need for re-integration, initiative/engagement:
  – team approaches at multiple levels
  – network weaving
  – interdisciplinary (vs. multidisciplinary): diversity
  – collective intelligence:
    • novel problem-solving
    • “connecting the dots”

• Amplification of existing (scarce) resources

• Implementation: “Make it so”
Traditional Approaches to Behavioral Health Issues of Older Adults

• Direct care by psychiatrists:
  – Low-integration: e.g. “carved out,” separate MH facilities
  – High-integration: “imbedded” in primary care (PC)

• Problems with traditional approaches:
  – Values: many older adults decline referral to psychiatrists
  – Training: many psychiatrists under-trained/experienced in geriatrics
  – Geography: most psychiatrists in urban/suburban areas
  – Numbers of providers: nowhere near sufficient to meet current/future needs through direct care alone

• Default: most BH care done by under-trained/under-supported primary care providers (PCPs)
Potential Remedy:
Indirect Care with Integrated Methods

- Increase competence of BH workforce/PCPs
- Augment traditional approaches
- Consultative teaching by geriatric psychiatry-trained staff: “co-enzyme” analogy
- BH teams: local, regional, state-wide
- Wisconsin Star Method
- Network weaving to shape existing infrastructure
- On-line resources (virtual network):
  - website to facilitate access to specific information, help
  - training modules
  - links to other BH teams with expertise in specific issues (e.g. hoarding)
Evidence-based Integration of Psychiatry into Primary Care-1

• What does NOT work (for depression in PC):
  – Treatment guidelines
  – Case identification/screening
  – Patient education
  – Physician education: e.g. academic detailing
  – Tracking systems

• What does work:
  – Treatment coordination
  – BH specialist
Evidence-based Integration of Psychiatry into Primary Care-2

• 50 year retrospective review
• Delivery of mental health services enhanced:
  – if the needs/priorities of primary care providers are respected
  – for as long as the integrated effort is sustained
• Cornerstone of psychiatric primary care:
  “learning to develop and maintain effective relationships with patients who have complex problems”

Evidence-based Integration of Geriatric Psychiatry into Primary Care-3

• 1 year retrospective study of MH/SA care in 4 VA primary care clinics
• Intervention: continuous integration (10+ years) of low level (1-2 half-days/week) geriatric psychiatry support in 1 primary care clinic
• Findings: for elderly patients in the larger, non-integrated segment of the clinic, the intervention was associated with significant increases (2-3X) in rates of:
  – screening for, recognizing, and treating MH/SA problems
  – avoiding use of psychotropic medications more frequently associated with major risks when used by elderly patients
• Indirect evidence for potential benefits of indirect & I² care

  • Howell T, Goodman B, Krahn, D. Am J Geriatric Psychiatry 2002; 10(2,Suppl 1):105-6
Effective Strategies for Improving the Management of Depression in Primary Care

- Complex interventions that include:
  - Clinician education
  - Nurse case management
  - Integration between primary and secondary care: consultation-liaison
  - Telephone medication counseling by LPN or trained counselor

Wisconsin Geriatric Psychiatry Initiative (WGPI)

• Goal:
  – to enhance the delivery of mental health services to older adults in Wisconsin by shaping infrastructure of existing resources

• Methods:
  – more widely disseminate principles of geriatric psychiatry to different groups of providers in:
    • health care: medical and psychiatric
    • long-term care
    • aging network
Evidence-based Components of WGPI

- Principles of geriatrics and geriatric psychiatry
- Wisconsin “Star” method:
  - Teaching, utilizing the Wisconsin “Star” method:
    - case-based consultative teaching with teams
    - talks, in-services on topics: e.g. depression, dementia
    - consultations to administrators at systems levels
- Network weaving, utilizing:
  - existing resources: shaping (i.e. not creating) an infrastructure
  - principles of small-world networks
  - strength of ‘weak ties’
- Social entrepreneurial approach to financing
- Advocacy:
  - on behalf of patient/provider partners
  - at multiple levels: from individual persons to statewide systems
Wisconsin Star Method:
Evidence-based Sources

• The strength of weak ties
  – network theory
• Cognitive science
  – neuropsychology
• Communication
  – psychology, linguistics
• Information visualization
  – computer graphics research
• Situation awareness
  – aircraft industry
• Teams
  – airline industry
Evidence-based Components of WGPI: Network Theory

- Networks:
  - elements: individual units/modules
  - organization of elements: random, ordered, & ‘in-between’

- In-between: small world networks

- Degrees of separation: number of links to connect
  - e.g. “6 degrees”

Evidence-based Components of WGPI: Network Theory

• **Strong links: e.g.**
  – atoms in molecule
  – cells in organ
  – members in social group: family, colleagues, team

• **Weak links: e.g. acquaintances**
  – connectors: bridge between clusters of strong links (hubs)
  – decrease degrees of separation -> small worlds
  – provide quicker access to other resources
  – facilitate spread of information
  – increase network resiliency to disruptions

Understanding & Addressing Geriatric Problems: The Wisconsin “Star” Method

- Symptom, Problem
- Medication Issues
- Social Issues
- Personal Issues (Personality)
- Psychiatric Issues
- Medical Issues
WGPI Results:
Wisconsin Star Method

• Successfully employed in different venues:
  – Geriatric clinics: Madison (2), Milwaukee
  – Continuing Medical Education section of the American Geriatric Society’s website: americangeriatrics.org

• Accepted for inclusion on POGOe.org website
  – a free public repository of a growing collection of geriatric educational materials in various e-learning formats, including lectures, exercises, virtual patients, case-based discussions, simulations, as well as links to other resources.

• Linkage with PIECES Program in Ontario, Canada
WGPI Results:
Wisconsin Star Method

• Utilized to establish and organize:
  – a highly successful CBRF for elderly patients with chronic mental illnesses organized & run based on Star Method
  – an ongoing geriatric mental health certification program at the University of Wisconsin Dept. of Professional Development & Applied Services (2008-)
  – a pilot program at the state level (DQA) to address the systemic placement issues in hospitals & LTCF’s for dementia patients with behavioral problems (2008-)
WGPI Results:
WSM Difficult Case Conferences

• Weekly:
  – Aurora-Sinai Medical Center, Milwaukee (Dr. Malone)

• Monthly:
  – Geriatric Medicine Fellowship Programs (2)
    • UW-Madison (3-4 fellows/year)
    • UW-Madison in Milwaukee: linked by teleconferencing to 7 additional GMFP’s in 6 states (Drs. Malone & Howell)
      – Texas (2), Missouri, Minnesota, Wisconsin, Ohio, Maryland
WGPI Results:
WSM Difficult Case Conferences

• Monthly:
  – Brief & Adult Protective Services, MCDA, Milwaukee (2003-)
  – PACE, Partnership, & Family Care program (2005-)
    • CCO (Milwaukee)
  – Partnership & Family Care program (2006-)
    • CHP (Eau Claire, Chippewa Falls, Menominee, River Falls)
  – CBRF (2006-)
    • Abundant Life Manor (Milwaukee)
    • 3 days/month
  – Family Care, MCDA (2003-2008)

• Biweekly->prn:
  – Partnership & Family Care program (2003-)
    • CW (Madison)
WGPI Results:
Networked Organizations
WGPI Results: Difficult Case Conferences

CT sessions
WGPI Results: Funding C-T Days/Month

![Bar chart showing funding C-T Days/Month from 2004 to 2010. The chart compares non-contracted (blue) and contracted (green) funding. The data shows the trend of funding days per month over the years.]
WGPI Results: Common Issues

• Patient-partner attitudes/behaviors distressing to staff:
  – non-adherence: “non-compliance”
  – agitation
  – conflict of values/priorities
  – personality traits/disorders: “manipulativeness”

• Diagnoses

• Medications
  – Indications: ? appropriate use
  – Polypharmacy
  – Drug interactions
WGPI Results (Anecdotal): Variable Responses by Individuals, Teams, Systems

- **Knowledge:** increasing awareness of BH issues, e.g.
  - executive dysfunction
  - side effects of benzodiazepines
  - self-defeating personality traits

- **Skills:**
  - holistic assessment
  - increased empathy
  - comfort with complexity
  - smoother transfer of care:
    - better communication between organizations where both familiar with the Star Method
WGPI Results (Anecdotal):
Variable Responses by
Individuals, Teams, Systems

• Attitudes:
  – external validation of efforts
  – sense of moral support
  – more understanding/patient/confident
  – less stressed
  – “don’t buy it;” “not my job” (infrequent)
  – “we’re all seeking the same goals” (interagency relationships ‘on the same page’ )
WGPI Results

• New diagnoses, approaches:
  – As suggested in CT session
  – Newly discovered by team
• Outcomes: excellent to no change, e.g.
  – Patient-partner & caregivers: less anxiety, greater well-being, no change
  – Team: staff more insightful/confident/optimistic -> patient less anxious -> staff less apprehensive (virtuous cycle) [even where no significant change in patient]
  – System:
    • Fewer frantic calls, ED visits (?1/3 decrease), hospitalizations (? ½ decrease)
    • Reduced CBRF staff turnover: 20% vs. usual 40-70%
WGPI: Challenges-1

• Developing better ways to address:
  – Staff too busy ("fighting fires"): high case loads, high acuity, expanding systems (e.g. Family Care)
  – Staff/team/system attitudes: BH issues “not my/our job”
  – Individual team/organization dynamics: e.g. inflexibility
  – Staff adopting regular use of the Wisconsin Star Method outside of difficult case conferences

• Establishing optimal frequency of CT sessions
• Developing better outcome criteria
• Evaluating outcome data
WGPI: Challenges-2

• Shaping geriatric psychiatry infrastructure:
  – linkages with local partners/resources
  – tele-geropsychiatry CT sessions
  – Network weaving: more hubs/connectors in network
    • developing local/regional BH teams/coalitions
    • **recruiting additional geriatric psychiatrists & geriatricians**
    • linking with regional/state/provincial organizations: e.g. AAA’s, ADRC’s, CMHC’s, CWC, DHS, I teams, MCDA, PH Clinics, PIECES, UW Dept Fam Med, WAHSA, WAI, WALA, WHCA, WHA

• **WGPI website:** to go on-line next month
• Blended funding streams for indirect care
• Advocacy
Understanding & Addressing Geriatric Problems: The Wisconsin “Star” Method

- Symptom, Problem
- Medication Issues
- Social Issues
- Medical Issues
- Personal Issues (Personality)
- Psychiatric Issues
Perspective of Network Medicine (A-L Barabasi)
Cognitive Science: Executive Functions of Human Brain

- Attention
- Response inhibition: blocking distractions
- Memory: working memory ("desktop," "RAM")
- Planning: sense of the future
- Abstract thinking
- Implementing plans: decide/start/sustain/stop
- Set-shifting: flexibility
- Organization: categorizing, sequencing
- Multi-tasking
- Monitoring: awareness of self & others
- Judgment
- Problem-solving: new (vs. familiar/learned)
- Modulation of feelings/emotions/behavior/ego
Situation Awareness

Task/System Factors:
- State Of The Environment
- Perception Of Elements In Current Situation (Level 1)
- Comprehension Of Current Situation (Level 2)
- Projection Of Future Status (Level 3)
- System Capability
- Interface Design
- Stress & Workload
- Complexity
- Automation

Individual Factors:
- Goals & Objectives
- Preconceptions (Expectations)

Feedback:
- Decision
- Performance Of Actions

Information Processing Mechanisms:
- Long Term Memory Stores
- Automaticity

- Abilities
- Experience
- Training
WSM: Graphic User Interface (GUI): Ecological Format for Complex Content

• Single field:
  – simultaneous presentation of all available, potentially relevant information

• Extends users’ working memory:
  – Limit of human brain: working with >5-7 variables at once

• Facilitates attending to, considering, and reconsidering multiple factors

Ware, C. Information Visualization, 2004
WSM: Graphic User Interface (GUI): Ecological Format for Complex Content

• Medical “cockpit” vs. current/cumbersome:
  – paper charts
  – computerized medical record systems

• Highlights need for integration:
  – to avoid errors, poor outcomes

• Facilitates team brainstorming

Ware, C. *Information Visualization*, 2004
WSM: Graphic User Interface (GUI): External Map

- Facilitates reflection:
  - slightly weakens ties between users’ subjective thoughts, feelings, and actions

- Reduces users’ anxiety:
  - generated by perceived challenge vs. perceived resources

- Helps objectify situation:
  - for users’ engagement of cognitive, emotional, and procedural intelligences in the face of complexity
WSM: Graphic User Interface (GUI): Enhanced Situation Awareness & Identification

- diagnostic patterns
- interactions between different levels of nested hierarchy:
  - arms of the star
  - different star levels: patient, ad hoc team, systems
- patterns of interactions:
  - vicious cycles
  - virtuous cycles
- critical junctures between elements:
  - opportunities for interventions
WSM: Integrated Ecological Processing of Complex Issues

- **Shifting between linear/holistic perspectives**
  - Linear: direct causal relationships between factors
  - Holistic: the “big picture”

- **Parallel processing of computationally intractable inter-factorial problems**
  - The greater the number of interacting factors, the longer it takes a computer to calculate all the possible interactions

Howell T. 2008
Gigerenzer G. *Gut Feelings*, 2007
WSM: Integrated Ecological Processing of Complex Issues

• ‘Fast & frugal’ heuristic decision trees integrating:
  – clinical “pearls”/rules of thumb: based on clinical experience, case reports
  – evidence-based guidelines for single problems: based on standard research
  – emotional awareness (listening to how one feels)
  – personal/cultural perspectives and values

Howell T. 2008
Gigerenzer G. Gut Feelings, 2007
Wisconsin Star Method

• Enhances:
  – Executive function of individual/team/system
  – Emotional intelligence of users: affect modulation
  – Respect for all participants: non-hierarchical

• Emergent clinical picture/plan:
  – More sensitive/specific for each unique individual/situation
  – Not just “a case”
  – Restores “big picture”
  – Synthesizes and re-integrates separately analyzed components
Wisconsin Star Method (WSM)

- Synthesis yields integrated ecological approach to:
  - Organizing content: data, information, knowledge
  - Processing content:
    - Clarification of meanings
    - Recognition of patterns and “patterns of patterns”
    - Generation of testable hypotheses
    - Prioritization of interventions
  - Implementation of plans: comprehensive/individualized
  - Monitoring of outcomes
Wisconsin Star Method

• Reduction in medical errors: examples--
  – Cognitive: premature closure, anchoring
  – Affective: blaming between patient/family & provider/system
  – Systemic:
    • lack of communication between staff, organizations,
    • transfer of care problems, “poly-prescribing” by multiple providers

• Flexibility/adaptability:
  – for use by individuals or teams
  – for different audiences with different levels of training
  – for different learning styles

• Credible:
  – utility validated through users’ experience
  – need for research comparing Star Method to usual approaches

• Redelmeier DA. Ann Intern Med; 2005:115-120
• Graber ML, Franklin N, Gordon R. Arch Intern Med; 2005:1493-1499
WSM: Evidenced-based Principles of Communication ("SUCCESSs")

- **Simple**: easy to remember/use
- **Unexpected**: comprehensive, graph
- **Concrete**: star-shaped template
- **Core**: captures essential aspects of clinical complexity
- **Emotional**: addresses affective components of complexity, communication
- **Stories**: easily integrated with clinical pearls

Heath C, Heath D. *Made to Stick*, 2007
Evidence-based Components of WGPI: Teaching & Principles of Adult Learning

• Active participation:
  – Interactive sessions: questions/discussions based on experience
  – Evaluation: audit and feedback

• Outreach

• Contextual (clinical) relevance:
  – Close to actual location of practice
  – Needs assessment: priorities of learners are respected
  – Problem/case-based: knowledge presented in terms of actual patients
  – Operationalize objectives: how to implement knowledge

• Stuart G, Tondora J, Hoge M. Admin Policy Mental Health 2004; 32:107-130
Evidence-based Components of WGPI: Teaching & Principles of Adult Learning

• **Duration:** longer/ongoing  
  – Required to achieve meaningful changes in attitudes and skills

• **Outcome assessments:**  
  – Patients-partners: improvements in health, well-being  
  – Learners: initial reactions, subsequent changes in attitudes, knowledge, skills  
  – Organizational: changes in use of resources

- Stuart G, Tondora J, Hoge M. Admin Policy Mental Health 2004; 32:107-130
Evidence-based Consultative Teaching (CT) Sessions-1

- Initial and on-going assessment of local issues, needs, problems
- Introduce, utilize Wisconsin Star Method
- Small group (6-12 optimal)
- Interactive: dialogue, not lecture
- Case-based (current)
- High specificity/sensitivity to individual patient-partner’s issues
Evidence-based CT Sessions-2: Principles of Geriatric Psychiatry

- Knowledge, skills & attitudes
- Identification, assessment, interventions
- Demonstrated by:
  - development of discussion: emergence of “Star”
  - amplification at strategic points: e.g. re syndromes, diagnostic symptoms, drug interactions, systems issues
  - sharing of information among team members
  - identification of multifactorial problems, patterns of interaction (e.g. vicious/virtuous cycles)
  - generation/testing of hypotheses
Evidence-based CT Sessions-3

• Attention to how team members feel when with patient-partner:
  – additional source of information re patient’s anxieties, personality-related issues, & behaviors
  – personality style videotape, American Academy for Patient & Physician, now AACH [American Academy for Communication in Health Care]
  – enhancement of staff’s emotional intelligence

• Recommendations generated by discussion:
  – further assessment, possible interventions
  – require clinical correlation

• “Indirect-Indirect” ($I^2$) care:
  – Generalization of case-specific knowledge, skills, attitudes to other challenging clinical situations
Evidence-based Components of WGPI: Network Weaving

- Networks: random, ordered, & ‘in-between’
- In-between: small world networks
- Degrees of separation: number of links to connect (e.g. “6 degrees”)
- Strong links: e.g. family, colleagues, team members
- Weak links: e.g. acquaintances
  - connectors: bridge between clusters of strong links (hubs)
  - decrease degrees of separation -> small worlds
  - provide quicker access to other resources
  - facilitate spread of information, knowledge, skills, & attitudes
  - increase network resiliency to disruptions
- Network weaving: cultivation of weak links

- Buchanan M, Nexus 2002; Krebs V, Holley J, 2006
Figure 3 – Multi-Hub Small World Network
Evidence-based Components of WGPI: Social Entrepreneurial Approach

- Current evidence-based dogma: no funding available for novel, unproven systems-based interventions
- Entrepreneurial approach to a social/ethical issue: significant financial risk vs. significant social rewards
- Social ‘venture capital’ as seed funding: ‘gleanings’
- Sustainability: gradually become self-sustaining by contracting for services as ‘proof of concept’ develops
- Avoidance of dependence on grants:
  - Greater flexibility: less encumbered by onerous restrictions
  - Not subject to “de-funding,” expiration at end of grant
  - Enhanced ability for adoption/replication in other venues
Mental Health & Older Adults: The Wisconsin “Star” Method

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Understanding & Addressing Geriatric Problems: The Wisconsin “Star” Method
Geriatrics: Challenges to Usual Clinical Approaches

- Characteristics of geriatric problems:
- Complexity: multifactorial, interacting, changing over time
- Atypical/unusual presentations
- Colored by unique personalities, experiences, and values of participants (patients, families, providers, support staff, administrators, institutions, regulators, etc.)
- Associated with significant, complex feelings/emotions for all involved
Geriatrics: Risks for Cognitive & Affective Errors-1

- High degrees of clinical complexity: computationally intractable
- Higher levels of ambiguity re diagnoses, treatments, & prognosis
- Incomplete clinical information
- Multiplicity of plausible interventions
Geriatrics: Risks for Cognitive & Affective Errors-2

• Common approaches to problems:
  – Occam’s razor: simplest, most elegant hypothesis is best
  – Linear: rigorous, but “piecemeal,” overly focused
  – Holistic: broader, but “piecemeal,” diffuse
  – Practice guidelines:
    • Evidence-based medicine: from research on single problems
    • Clinical pearls (rules of thumb): based on experience, clinical lore, case reports
Geriatrics: Risks for Cognitive & Affective Errors-3

• Economic issues:
  – Productivity, efficiency, effectiveness
  – Limited time and resources

• Lack of integration at multiple levels:
  – Competition vs. collaboration
  – Specialization & subspecialization:
    • complexity-driven
    • different cultures within and between systems
  – Communication: ongoing, on transfer of care

• Conflicting values/priorities:
  – Cultural issues
  – Medical-legal concerns

• Emotionally intense clinical situations

• Need for an integrated ecological approach
Ecology: Interacting Individuals & Interacting Systems

- **Individual:**
  - Atoms, molecules
  - Cells, organs
  - Organisms, groups
  - Organizations

- **Systems:**
  - Chemical solutions
  - Metabolic pathways
  - Executive functions
  - Ideas, values
  - Social networks
  - Cultures
  - Political units
  - Economies
  - Global environment
Ecological Levels in Geriatrics

- Environmental
- Political
- Social
- Family
- Personal
- Physiological
- Metabolic
- Biochemical
- Physical
Social Issues:
Expected changes:
loss of people, roles, independence
Retirement:
freedom/boredom
Environment
Finances; Housing
Transportation; Legal
Access to services

Personality/personal issues:
Stable personality- if this changes, think disease
Unique mix of traits:
assets/liabilities
Coping: flexibility vs. rigidity
Personal/cultural values re:
life, aging, illness, functional decline, mortality, religion
Developmental- meaning, integrity vs. despair

Medication Issues:
Multiple meds/providers
Interactions; Adherence
Rx, OTC, saved, borrowed
Side effects (self/others)

Medical Issues:
Varied rates of decline in organ function
Functional impairments
Chronic illnesses
Excess impairment
Atypical symptoms
Ambiguities:
-diagnostic
-prognostic,
-therapeutic
Young-old vs. old-old

Psychiatric Issues:
Cognition: reduced speed; harder to learn/multi-task, but good retention
Not normal:
-significant memory loss
-sustained low mood
**Social Issues:**
- Retirement
- Family role change
- Unexpected losses: spouse, offspring, sibs, friends, pets
- Physical disability—loss of usual way to cope, find meaning

**Psychiatric Issues:**
- Mood disorders: depression, mania
- Atypical symptoms: denial, irritability, anxiety, physical symptoms (e.g. GI, pain)
- Dementia/Delirium/Anxiety/Psychosis
- Suicide risk: highest—lone, older white men

**Personality/personal Issues:**
- Personality—rigid; guilt/shame
- Hopeless/helpless/worthless—loss of meaning, source of self-esteem: autonomy, skill, control, strength, sexuality, appearance, relationship, job, money, etc.

**Medical Issues:**
- D—dementias, drugs
- E—eye/ear impairments
- M—metabolic, meds
- E—endocrine, epilepsy
- N—nutrition, neurological
- T—trauma, toxic, tumor
- I—infection, immunologic
- A—atherosclerosis(strokes), (sleep) apnea, alcohol

**Medication Issues:**
- Alcohol, caffeine, sedatives, steroids
- Cardiac drugs, antihistamines
- Anticonvulsants, antihypertensives, Anti-parkinson’s, chemotherapy
Anxiety

**Social Issues:**
- Disability
- Dependence
- Finances
- Housing
- Interpersonal conflict
- Caregiving burden
- Crime, abuse

**Personality/personal Issues:**
- Excessive inflexibility re:
  - defense/aggression
  - self-consciousness
  - open/closed to experience
  - trust
  - altruism
  - defiance/submission
  - conscientiousness
  - control
- History of trauma

**Medical Issues:**
- D- dementias, drugs
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- I- infection, immunologic
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**Psychiatric Issues:**
- Adjustment disorder; Phobias
- Generalized anxiety disorder
- Panic disorder; OCD; PTSD
- Mood disorders- esp depression
- Substance abuse- esp caffeine
- Psychotic disorders

**Medication Issues:**
- Antihistamine, anticholinergic
- Stimulants, caffeine, anti-asthma
- Antidepressants, antipsychotics
- Withdrawal- antianxiety, alcohol
Cognitive Impairment: Memory, Executive Function

Medication Issues:
- Antihistamines/anticholinergics
- Antipsychotics - typical/low-potency
- Antidepressants - tricyclics; Steroids
- Sedatives/hypnotics - BZ, OTC's
- GI - cimetidine, antispasmodics

Social Issues:
- Stressors
- Caregiver support
- DPOAHC

Psychiatric Issues:
- Dementia; Anxiety
- Delirium; Depression; Mania; Psychosis
- Personality changes - "LAPD"
- Labile moods: sudden, disproportionate
- Apathy (Amotivation); Aggression
- Paranoia - suspiciousness
- Disinhibition - catastrophic reactions
- Agitation; Sundowning; Wandering
- Reckless/careless/"sexual" behaviors

Medical Issues:
- D - dementias, drugs
- E - eye/ear may aggravate
- M - metabolic, meds
- E - endocrine, epilepsy
- N - nutrition, neurological
- T - trauma, toxic, tumor
- I - infection, immunologic
- A - atherosclerosis: strokes, (sleep) apnea, alcohol

Personality/personal Issues:
- Prior intelligence/knowledge/skills
- Previous personality/attitudes
- Advanced directives
Executive Functions

- Attention
- Response inhibition: blocking distractions
- Memory: working memory (“desktop”)
- Planning: sense of the future
- Abstract thinking
- Implementing plans: decide/start/sustain/stop
- Set-shifting: flexibility
- Organization: categorizing, sequencing
- Multi-tasking
- Monitoring: awareness of self & others
- Judgment
- Problem-solving: new (vs. familiar/learned)
- Modulation of feelings/emotions/behavior/ego
Cognitive Impairment:
Executive Dysfunction with Intact Memory

Draw a clock!

Patient
- Male, 75 years old
- MMSE = 28 points

Diagnosis
- Definite AD
  (4 years after the drawing)
**Psychosis**

**Social Issues:**
- Single: never married, divorced, widowed
- Social isolation:
  - living alone
  - poor relationship with caregiver
  - no children/friends
- Lower social class

**Personal/personality Issues:**
- "Eccentric"
- Suspicious

**Psychiatric Issues:**
- Dementias
- Affective disorders: depression
- Delirium
- Affective disorders: mania
- Schizophrenia: early-/late-onset
- Delusional disorder

**Medication Issues:**
- Analgesics; anticholinergic; digoxin
- Antiparkinsons; steroids; cimetidine
- Sedatives, hypnotics, stimulants
- Antihistamines, anticonvulsants

**Medical Issues:**
- D - dementias, drugs
- E - eye/ear impairments
- M - metabolic, meds
- E - endocrine, epilepsy
- N - nutrition, neurological
- T - trauma, toxic, tumor
- I - infection, immunologic
- A - atherosclerosis (strokes), (sleep) apnea, alcohol
Substance Abuse/Misuse

Social Issues:
- More free time to use
- Norms for drinking:
  - Different communities
  - Peer pressures
- Changes in relationships
- Grief, boredom
- Undue pessimism

Personality/personal Issues:
- Norms for drinking:
  - At different ages
- Prior use of illicit drugs
- Underreporting
- Denial/minimization
- Guilt/shame/hopelessness

Medical Issues:
- Chronic pain
- Chronic fatigue
- Chronic insomnia
- Decreased tolerance, falls
- Mimic other illnesses
- Excess impairment

Psychiatric Issues:
- Chronic anxiety
- Recurrent depression, mania
- Cognitive impairment-secondary
- Alcohol: early- vs. late-onset
- Nicotine; Caffeine; Narcotics
- Increased rate of spontaneous remission

Medication Issues:
- Narcotic analgesics; hypnotics
- Sedatives; stimulants
- Interactions with Rx, over-the-counter (OTC) meds
Personality/Traits & Disorders

Medication Issues:
- Adherence to Rx:
  - poor/ambivalent/good,
  - overuse/underutilization
- Side effects:
  - sensitivity
  - communication

Social Issues:
- Interpersonal relations
- Communication
- Conflict resolution
- Increasing dependence
- Role reversals
- Caregiver stress:
  - instrumental
  - protective
- Cultural norms/values

Personality/personal issues:
- Flexibility/inflexibility:
  - need for others/self-reliance
  - need for admiration, status
- Self-consciousness: sensitivity
- Open/closed to experience
- Trust/suspicion
- Concern for others/self: empathy
- Autonomy: control
- Conscientiousness: order

Medical issues:
- Coping with:
  - age-related frailty
  - Illnesses: acute, chronic
  - Impairments/disability
  - Pain/suffering, mortality
- Communication of symptoms:
  - Embarrassment
  - Minimization (stoic)
  - Exaggerated (dramatic)

Psychiatric issues:
- Communication of symptoms:
  - Psychological vs. somatic
- Coping with:
  - Age-related cognitive changes
  - Psychiatric disorders: acute, chronic
**Social issues:** coping with:
- Interpersonal conflicts:
  - family/marital issues
  - financial/work issues
  - social expectations
  - cultural/religious demands
  - sexual problems
  - role reversals
- Caregiver stress:
  - instrumental
  - protective

**Medication Issues:**
Adherence to Rx-
- poor/ambivalent/(good),
- overuse/underutilization

**“Non-compliance”**
**“Manipulativeness”**

**Medical issues:**
Coping with:
- increased dependence
- age-related frailty
- illnesses: acute, chronic
- impairments/disability
- pain/suffering, mortality

**Personality/personal issues:**
Self-image/existential problems
Coping with internal conflicts
Coping strategies:
- intellectualize
- suppress/deny
- distract
- minimize
- self-blame
- withdraw
- disown (externalize)
- resign
- “dissolve” (e.g. in alcohol, drugs);
- redefine
- share
- comply/adhere
- address
- negotiate

**Psychiatric issues:**
Anxiety, Depression, Mania, Psychosis
Substance abuse (alcohol),
Executive dysfunction w/ intact memory
Coping with:
- age-related cognitive changes
- psychiatric disorders: acute, chronic
Emotional Effectiveness

• Evidence-based way to understand/appreciate relationship between processes of thinking/feeling, ideas/emotions
• Evidence base: cognitive science
• Thinking-Feeling / Reason-Emotion:
  – Represent a false dichotomy
  – Have an integrated neurobiological basis in brain
  – Are integrated in almost all human activities
  – Each modulates the other: at brain & behavioral levels
Cognitive Aspects of Feelings/Emotions

• Constitute appraisals/judgments
  – Computer/robot: “There’s a fire over there.”
  – Person: “There’s a fire over there!”

• Can be correct/incorrect, on-target/off-base, right/wrong:
  – Warranted angry feeling: “You shoved me!”
  – Unwarranted angry emotion: “I resent your having shoved me.” [in context of moving me out of the way of a falling tree limb]
Feelings & Emotions

- Feelings
  - Immediate/transient
  - Basic/simple
- Like single musical notes
- Examples:
  - Fear
  - Anger
  - Attraction

- Emotions
  - Intermediate, on-going
  - Compound
- Like sustained musical chords
- Examples:
  - Anxiety
  - Resentment
  - Love
Feelings & Emotions

• Feelings
  – Happen to you
  – Ways of reacting to others and to situations
  – Involve less responsibility

• Reflexive
  – Snap judgments
  – Basis: immediate situation
  – Limited integration
  – May be correct/incorrect
  – Less blame/praise-worthy

• Emotions
  – Don’t happen to you
  – Ways of being engaged with others and situations
  – Involve more responsibility

• Reflective
  – Measured judgments
  – Basis: ongoing situation
  – More integrated
  – May be correct/incorrect
  – More blame/praise-worthy
Self-neglect: Hoarding, Squalor, Homelessness

Medication Issues: Adherence to Rx-poor/ambivalent, overuse/underutilization

Social issues: -Financial: poverty -Interpersonal: isolation, loss of significant other -Social: housing (quality, availability), hostile neighborhood -Cultural: acquisitiveness, mail order solicitations -Legal: burden of proof to establish incapacity to live alone

Personality/personal issues: Values: overly sentimental, thrifty, practical, independent Cohort: Great Depression Coping styles: less effective Traits: too rigid, too flexible - autonomy, suspiciousness - openness to experience/change - responsibility (guilt/shame) Schizoid, schizotypal, OCPD


Medical issues: -increased dependence -age-related frailty -illnesses: acute, chronic -impairments/disability: ADL’s, IADL’s -chronic pain, falls
Agitation

**Social/Environmental Issues:**
- Stressors: interpersonal
- Noise, temp, relocation, High/low stimulation
- Clothing/shoe fit
- Caregiver support

**Psychiatric Issues:**
- Anxiety
- Dementia
- Delirium
- Depression
- Psychosis
- PTSD
- Personality change - “LAPD”
  - Labile mood
  - Aggression
  - Paranoia - suspiciousness
  - Disinhibition - catastrophic reactions
  - Sundowning; Wandering;
  - Sexually inappropriate behavior

**Medical Issues:**
- D - dementias, drugs
- E - eye/ear impairments
- M - metabolic, meds
- E - endocrine, epilepsy
- N - nutrition, neurological
- T - trauma, toxic, tumor
- I - infection, immunologic
- A - atherosclerosis: strokes, apnea, alcohol

**Personality/personal issues:**
- Premorbid intelligence/knowledge/skills
- Premorbid personality/attitudes
- Boredom
- Exercise
- Meaning

**Medication Issues:**
- Antihistamines/anticholinergics
- Antipsychotics - typical/low-potency
- Antidepressants - tricyclics; Steroids
- Sedatives/hypnotics - BZ, OTC’s
- GI - cimetidine, antispasmodics
Ad Hoc Teams

**Medication Issues:**
Primary Care Providers
Pharmacist; Visiting Nurse Caregivers- adherence to Rx

**Social issues:**
Family
Friends
Social Worker
Case Manager
Attorney
Banker
Clergy
I-team
IT staff

**Medical issues:**
Internal/Family Medicine
Dentist; RN; NP; PA; PT; OT; RD; Speech

**Personality/personal issues:**
Patient
Family- immediate, extended
Friends
Neighbors
Clergy

**Psychiatric issues:**
Psychiatrist- geriatric, general
Psychologist- geriatric, general
RN/NP/CNS- geriatric, general
Mr. B’s Problems

Medication issues:
- Furosemide
- Lisinopril
- Sertraline
- Ibuprofen

Social issues:
- Social withdrawal
- Marginal finances
- Spouse in wheelchair
- Supportive granddaughter next door off to college soon

Personality/personal issues:
- 67 years old, retired bus driver
- Worried about appearance
- Coped through activity—fishing, hunting
- Very loyal to family— as provider

Medical issues:
- Hypertension
- Congestive heart failure
- Kidney Failure
- Arthritis

Psychiatric issues:
- Depressive disorder w/ anxiety
- Memory problems— minimal
- Decreased ability to manage affairs
- No longer fixing things
Ms. A’s Problems

**Medication issues:**
- ? Self-medicating with over-the-counter meds
- ? In need of more appropriate Rx

**Social issues:**
- Widowed
- Estranged from children
- Living alone in squalor
- Marginal finances
- Support- none
- Multiple calls to 911

**Medical issues:**
- ? Hypertension
- Osteoarthritis
- Osteoporosis
- History of falls
- ? Malnutrition
- Family history of sister with Alzheimer’s disease

**Personality/personal issues:**
- 81 years old
- Retired music teacher
- “Fussy”
- “Stubborn”
- Independent

**Psychiatric issues:**
- Delusions of intruders poisoning her
- Hallucinations- visual & musical
- Memory problems- mild
- Anxiety, irritability- ? depression
- ? Alcohol problem- beer
Summary- Assessment

• Problems in the elderly are often:
  – Multifactorial, interacting, initially daunting
  – Characterized by unusual presentations
  – Colored by each individual’s unique personality, lifetime experiences, and personal values
  – Associated with significant feelings/emotions for all involved

• Avoid cognitive/affective errors
  – Cultivate a higher tolerance of ambiguities re diagnosis, treatment (trade-offs), & prognosis, to avoid coming to premature closure
  – Utilize emotional intelligence to avoid affective errors
  – Seek input from collateral sources of information
  – Keep re-assessing, especially as situations change
Summary- Approach

• Build & maintain a therapeutic alliance:
  – Adjust approach according to each participant’s individual cognitive/affective/personality styles, history, values, current abilities/disabilities
  – Appreciate & allow for the underlying anxieties that may be driving dysfunctional behaviors

• Nurture empathy:
  – discover/share some things in common
  – appeal to, build on patient-partner’s strengths/assets
  – facilitate grieving of irretrievable losses:
    • “don’t just do something, be there”
Summary- Interventions

- Take an integrated ecological approach:
  - Attend to factors in all 5 domains (holistic perspective)
  - Look for patterns of interactions (ecological perspective)
  - Respond to situations with cognitive/emotional integrity
  - Look for vicious cycles; foster virtuous cycles (linear perspective)
  - Readjust goals as situations evolve
  - Remember: even small improvements can make big differences in quality of life
  - Establish ad hoc teams with members supporting each other as well as the patient-partner
  - Use analogous approaches to address larger systems issues

- To achieve clinical integrity: Remember the STAR!!*

*D Krahn 2003*
**Social Issues**
SW, Case Managers
ALF’s
Attorneys, Bankers
Insurance Co’s
Public/Private Co’s
Govt-- Municipal, County, State, National:
Executive Agencies, Legislature & Judiciary
Medicaid, Medicare
Information Technology

**Systemic Problem**
**Medication Issues**
Prof Organizations-- RPh, PharmD
Pharmacies & Associations
Pharmaceutical companies

**Medical Issues**
Prof Orgs--MD, RN/NP/CNS,
PA, DDS, PT, OT, RD, Speech
Clinics, Hospitals, LTCFs,
HMOs & Associations

**Psychiatric Issues**
Prof Organizations--
Psychiatrists
Psychologists
RN/NP/CNS, SW

**Personal Issues**
Patient & Family Organizations:
e.g. Alzheimer Assoc, NAMI, AA
Clergy, Dioceses, Associations
Social Issues:
- Social stigma (family, friends, community)
- Financial resources: assets, insurance, incl Medicare/Medicaid
- Transportation
- Availability of services

Not seeking help: Barriers/Opportunities

Medication Issues:
- Multiple meds/providers; interactions
- Adherence: reliable use; OTC’s
- Effects on brain function

Medical Issues:
- Functional decline
- Chronic illnesses
- Excess impairment
- Diagnostic/prognostic ambiguities (medical-psychiatric)
- Young-old vs. old-old

Personality/personal Issues:
- Ignorance; Expectations re age
- Coping: flexibility vs. rigidity
- Beliefs: stoic, shame, guilt
- Cultural/religious values re: MH/SA, therapy/Rx
- Prior MH/SA experiences

Psychiatric Issues:
- Depression/Dementia: executive dysfunction
  e.g. loss of initiative, hopeless/helpless
- Mania/Psychosis: denial
- Atypical sx: irritability, anxiety, physical sx
- Delirium: disorganization
- Anxiety: fear
Local Systemic Barriers/Opportunities:
Availability; Knowledge, Skills, Attitudes

Medication Issues
Primary Care Providers
Pharmacists, Visiting Nurses

Social issues
Family
Friends
Social Worker
Case Manager
Attorney
Banker
Clergy
I-team

Medical issues
Internal/Family Medicine
DDS;RN;NP;CNS;PA;
PT;OT;RD; Speech

Personality/personal issues
Patient’s relationships with:
Family- immediate/extended
Friends
Neighbors
Clergy

Psychiatric issues
Psychiatrist- geriatric, general
Psychologist- geriatric, general
RN/NP/CNS- geriatric, general
Regional & National Systemic Barriers/Opportunities:
Knowledge, Skills, Attitudes; Resources

**Medication Issues**
- Prof Organizations--RPh, PharmD
- Pharmacies & Associations
- Pharmaceutical companies

**Medical Issues**
- Prof Orgs--RN/NP/CNS, MD, PA, DDS, PT, OT, RD, Speech
- Clinics, Hospitals, LTCFs, HMOs & Associations

**Social Issues**
- SW, Case Managers
- ALF’s
- Attorneys, Bankers
- Insurance Co’s
- Public/Private Co’s
- Govt: County, State, National: Executive, Legislature, Judiciary
- Medicaid, Medicare
- Information Tech

**Personal Issues**
- Patient & Family Organizations:
  - e.g. Alzheimer Assoc, NAMI, AA
  - Clergy, Dioceses, Associations

**Psychiatric Issues**
- Prof Organizations--Psychiatrists
- Psychologists
- RN/NP/CNS, SW
Suggested Attributes of Successful Individuals, Teams, Systems

- trust
- openness: non-dogmatic
- flexibility: well-modulated
- tolerance of ambiguities
- initiative
- tolerance of frustration
- perseverance
- respect for self and others
- sober enthusiasm
- tolerance of risk
- tact
- optimism: “hopeless hope”
- healthy executive functions
- emotional effectiveness