I do not currently hold and have not held in the past a financial interest, arrangement or affiliation with the Alzheimer Societies of Kitchener-Waterloo and Cambridge that could be perceived as a direct or indirect conflict of interest in the content of today’s program.
Potential Conflicts of Interest

1. CIHR - Canadian Dementia Knowledge Translation Network (CDKTN)

2. UWO Research and Development Services – International Curriculum Fund (S. Schurr & T. Moosa)
   – Clinical placement in Peru and South Africa: Development and expansion

3. Alzheimer’s Society of Canada and Canadian Nurses Foundation (Ward-Griffin, McWilliam, Klosek & Wong)
   ➢ Building partnerships in community-based dementia care delivery
1. Complexity of human communication
2. Dementia and communication
3. Profiles of language and communication in DAT
4. Importance of communication to caregivers
5. Strategies to enhance communication
   a. Individualized
   b. What is your agenda or purpose?
   c. Optimize residual skills
   d. Levels of success
Speech
(production and perception)

- Medium of oral communication that employs a linguistic code

- Communication through vocal symbols (i.e., sounds)

- Complex, dynamic neuromuscular processes
  - Articulation
  - Resonance
  - Phonation
  - Respiration
  - Prosody (e.g., pitch, speech rate, stress, etc.)
Language

A shared set of mutually agreed upon symbols used to represent concepts or ideas

Symbols governed by set of rules:
- Phonology (sound positions and combinations)
- Grammar (The boy randed to the store.)
- Syntax (to store the boy the ran)
- Semantics (define “car”)
- Pragmatics (multiple interpretations of words, phrases, clauses, or sentences - contextual influence, e.g., “run”, “cold shoulder”)
Communication

- Exchange of concepts or ideas between two or more entities
  - Dynamic role exchange between speaker and listener

- Mechanism whereby we establish, maintain and change relationships

- Consists of multiple forms
  - Socially motivated and mediated = interactional
  - Agenda driven = transactional (e.g., ordering food in a restaurant)
Speech, Language, Hearing and Communication

Output/Expression

- Spoken
- Written
- Nonverbal (e.g., gaze, facial expression, posture, proximity, touch, gestures, pantomime, finger spelling, sign language, etc.)

Input/Understanding

- Auditory (listening) comprehension
- Reading (seeing) comprehension
- Nonverbal
- Senses of smell, touch and taste
Cognition

- Mental processes where sensory information is transformed, reduced, elaborated, stored, recovered and used
- Processes of gaining knowledge, organizing information (new or old), and using what has been learned

- Includes, but is not limited to:
  - Memory systems and processes
  - Attention systems and processes
  - Judgment
  - Reasoning - decision making
  - Insightfulness
  - Other systems and processes
Dementia

 Syndrome of acquired, progressive, persistent decline in 3 of 5 spheres of mental activity

(Cummings, Benson, & LoVerme, 1980)

1. Memory
2. Language and communication
3. Personality
4. Visuospatial skills
5. Cognition (e.g., reasoning, abstraction, judgement, etc.)
Dementia - DSM IV-TR (2000)

- Multiple cognitive deficits of gradual onset and continual decline including both:
  - A. Memory impairment
  - B. One (or more) of the following:
    1. Language problems
    2. Movement programming problems (apraxia)
    3. Perceptions stripped of meaning (agnosia)
    4. Disturbance in executive functioning (e.g., planning, organizing, sequencing ideas, etc.)

- Cognitive deficits:
  1. Cause significant impairment in social or occupational functioning
  2. Represent significant decline from previous functioning

- Not due to other CNS conditions, systemic conditions known to cause dementia, substance abuse induced dementia, delirium, another primary psychiatric disorder
All-Cause Dementia – NIA and AA (McKhann et al., 2011)

- Revised version of NINCDS-ADRDA (McKhann, et al. 1984; Sensitivity 81%, Specificity 70%)

Cognitive or behavioural (neuropsychiatric) symptoms that:

1. Interfere with ability to function at work or usual activities
2. Represent a decline from previous levels of functioning and performing
3. Are not explained by delirium or major psychiatric disorder
4. Cognitive impairment detected and diagnosed through:
   a. Hx from client and knowledgeable informant
   b. Objective cognitive assessment (mental status or neuropsychological testing)
5. Cognitive or behavioural impairment involves a minimum of two of the following:
   a. Impaired ability to acquire and to remember new information (e.g., repetitive questions or conversations, misplacing personal items, forgetting events or appointments, etc.)
   b. Impaired reasoning and handling of complex tasks (e.g., poor understanding of safety risks, poor-decision making, inability to manage finances, etc.)
   c. Impaired visuospatial abilities (i.e., agnosia and apraxia) (e.g., inability to recognize faces, common objects, or environment; inability to operate simple implements or orient clothing to body)
   d. Impaired language functions (e.g., speaking, reading, writing difficulty thinking of common words while speaking, hesitations; speech, spelling and writing errors)
   e. Changes in personality, behaviour or comportment (e.g., uncharacteristic mood fluctuations – agitation, impaired motivation and initiative, apathy, loss of drive, social withdrawal, decreased interest in previous activities, loss of empathy, compulsive or obsessive behaviours, socially unacceptable behaviours)
1. Probable AD/DAT
   A. Meets criteria for dementia
      i. Insidious onset
      ii. Clear-cut Hx of declining cognition by report or observation
      iii. Initial and most prominent cognitive deficits evident on Hx and examination of:
         a. Amnestic presentation – most common presentation including impairment in learning and recall of recently learned information + dysfunction in at least one other cognitive domain
         b. Non-amnestic presentation
            1. Language – word finding problems but deficits in other cognitive domains should be present
            2. Visuospatial - spatial cognition, object agnosia, face recognition, simultanagnosia, and alexia plus deficits in other cognitive domains should be present
            3. Executive dysfunction – impaired reasoning, judgment, and problem solving
Probable AD/DAT

B. Should not be applied when there is evidence of:
   a. Substantial concomitant cerebrovascular disease
   b. Core features of dementia with Lewy bodies other than dementia itself
   c. Prominent features of bvFTD
   d. Semantic variant of PPA or NFPA
   e. Another concurrent active neurological disease or non-neurological medical comorbidity or use of medication that could have a substantial effect on cognition
Selected Examples of Types of Dementia

- DAT/AD
  - Familial-DAT
  - Early onset-DAT
  - Down’s syndrome-DAT

- Mixed (DAT + VaD)

- Vascular dementia (VaD)

- Binswanger disease

- FTLD (FLD [Fv plus sub-variants] + PNFA [Fv] + semantic dementia [Tv]) + logopenia

- Dementia lacking distinctive histology (DLDH)

- Dementia with motor neurone disease and movement disorders
  - Parkinson’s, ALS, MS, HC
  - Progressive supranuclear palsy (PSP) and corticobasal degeneration (CBD)
  - Dementia with Lewy bodies (DLB)

- AIDS dementia complex (ADC)

- Creutzfeldt-Jakob disease (CJD)

- Normal pressure hydrocephalus (NPH)

- Syphilis

- Wernicke-Korsakoff syndrome
Figure 2. Severity of dementia and type of patient impairment.

Figure 1. The intensity of symptoms in various domains throughout the progression of AD.
Reprinted from: Clinical Diagnosis and Management of AD”. Editor, Serge Gauthier.

(Gauthier, Thal & Rossor. In S. Gauthier, ed., 1996, p. 360)
Language and Communication in DAT

- Language and communication problems prominent in DAT but also evidence of preserved skills
  - Subtle onset; problems prominent with progression

- Profiles vary by clinical stage
  - Markers of onset and progression

- Language and communication of utmost concern to caregivers

- Heterogeneity (i.e., broad range of skills) within each stage
DAT – Early/Mild Stage

- Individuals aware of communication difficulties
- Word finding problems for names of people, places, objects and actions
  - Circumlocutions, gesture or associated word used as strategy for word finding problems
- Uses clichés and stereotyped phrases
- Communicates sufficiently for most social situations
- Problems understanding:
  - Complex sentences and concepts (e.g., metaphors and proverbs)
  - Humour, analogies, sarcasm, abstract expressions
- Generally only a few minor problems understanding what is said in 'everyday' conversations
DAT – Middle/Moderate Stage

- Person less aware of language and communication problems
- Pronounced word finding problems; circumlocution
  - Empty and irrelevant utterances (e.g., words such as “thing”, “this”, and “that” often used in place of substantive nouns)
- Frequently repeat words, utterances, and ideas
- Disinhibited; inappropriate utterances (i.e., poor sensitivity to ‘where’ and with ‘whom’ he/she is speaking – context and partner factors)
- Digresses and rambles; poor topic maintenance
- Problems understanding simple commands
- Can be lost in multi-partner conversations
DAT – Late/Severe Stage

- Highly variable
- Spoken vocabulary severely reduced - unrelated words in utterances
- Repeats self and what others say - perseverative
- Word order and word agreement impaired
- "Islands" of fluent, coherent language
- Speech disturbances emerge (i.e., stuttering and pronunciation errors)
- Relies on intonation, syllable and word stress patterns, emotional tone of voice, and familiarity of voice and music
Overall Preserved Abilities

- Use of procedural memories (playing the piano, singing, playing card games, etc.)
- Ability to access early life memories for DAT but not for semantic dementia
- Ability to recite, read aloud and sing with good pronunciation and grammar
- Ability to engage in social ritual
- Desires for interpersonal communication
So What!
Caregivers and Dementia

- Approximately 50% of Canadians diagnosed with dementia continue to live at home (CSHA-I, 1994)

- Family members are typically the primary care providers of individuals with dementia

- Dementia caregivers experience more stress and negative outcomes than those caring for non-demented elderly family members (Clipp & George, 1993; Ory, Hoffman, Yee, Tennstedt & Schulz, 1999)
Impact of Communication Problems on Burden

(Savundranayagam, Hummert, & Montgomery, 2005)
Reducing Problem Behaviours

- Challenging behaviours often the result of the inability to communicate effectively (Burgio, Allen-Burge, Roth, Bourgeois, Dijkstra, et. al, 2000)

- Document problem behaviours and the situations surrounding them; what are the triggers? (Teri & Logsdon, 2000)

- Educating and training caregivers strategies to deal with these behaviours combined the use of memory aids reduces caregiver burden and problem behaviours (Burgio et. al, 2000)
Spouses’ Perceptions

“Sometimes I find it difficult when he is home that he sits there not talking. I have to do the talking, but it’s like to the wall. I don’t get anything back” (Small, Geldart, & Gutman, 2000, p. 297).

“He is not the man he once was. You lose your husband. When I come home now, full of stories, I don’t tell them. It takes such a long time to explain. His language is seriously affected, understanding as well as saying things” (Murray, Schneider, Banerjee, & Mann, 1999, p. 664).
Spouses’ Perceptions (Cont’d)

“I cannot confide in him anymore. It upsets him, and he couldn’t understand. We talk about simple things – what to wear, what day it is, what time it is. I have been exhausted by his repeated questions” (Wright, 1993, p. 49)

“I cannot have a conversation with him. He cannot understand me and gets angry” (Murray et al., 1999, p. 664)
Spouses’ Perceptions (Cont’d)

Well naturally, it (verbal problems) has to have some impact. We have been not only husband and wife but the best of friends. I have always felt that he was my best friend. I could tell him anything and work things out between us. But of course it’s not the same and I do miss it. (Orange, 1991)

Well, not really our relationship. No it’s just, I mourn the days when we could discuss anything and everything. That’s the only thing. (Orange, 1991)
Parent-Child Relationships

In other words, we never had anybody to talk to anymore … He was there physically, but he wasn’t there … He didn’t recognize who I was, I sort of lost that thing, the father-son relationship, and it was hard. (Parsons, 1997, p. 398)

It had to curtail my social life, things I wanted to do. It’s almost better if a person were dead because it is final. (Parsons, 1997, p. 398)
SLP as Spouse

Based on my years of listening to (his) (sic) speech and language, I have concluded that effective conversation is not predictable. It meanders, going from topic to topic and containing an element of surprise. (SLP and Family caregiver - Neustadt, 2001, p. 6)
The curse of dementia

One issue that particularly attracted my attention in your series on dementia is “the death of conversation” and how devastating this is for caregivers, particularly spouses. This has certainly been my experience. I find loneliness the most difficult aspect of my situation to cope with. Friends and family members could mitigate this fairly easily, by increasing the frequency of their contacts with caregivers, if only by e-mail and telephone.

Most people, I realize, have developed a pattern of communication with others, a routine of phoning or e-mailing once a week, for example, that they continue automatically after an Alzheimer’s diagnosis, not realizing how desirable for the caregivers of their acquaintance to have “replacement” opportunities for conversation.

I know I would be very careful, should such opportunities arise, to keep to a minimum any reference to the difficulties of my situation, and suspect other caregivers would likewise try to make communications pleasant for all concerned.

Judith Millar, Victoria
Positive Aspects of Caregiving

- Gives the caregiver role meaning
  - Feelings of accomplishment, usefulness and self-esteem
  - Closer, stronger relationship
- Positive experiences can provide a balance in the relationship and lead to better outcomes
  - Increase in caregivers’ well-being
  - Can reduce caregiver burden and depression

(Piquart & Sorensen, 2003; Carbonneau et. al., 2010)
The ‘Self’ and Personhood (Ryan et al., 2005)

- “A standing or status that is bestowed upon one human being, by others, in the context of relationship and social being. It implies recognition, respect, and trust.”

- Biomedical model views dementia as “loss of self” - NOT true

- Traditional medical model for care for people with dementia focuses on the deficits, the loss, and the decline

- Need to change this, and care for the PERSON, not the disease
The ‘Self’ and Personhood  (Ryan et al., 2005)

- Interdependence and interconnectedness of human beings
- People with dementia are survivors not victims
- Caregivers (formal or family) should act as facilitators for the person with dementia.
- Facilitators that enhance personhood and use personhood-affirming communication
The ‘Self’ and Personhood

Sabat’s (2001) Concept of ‘Self’

1. The self of personal identity – “I”, “Me”, ‘My”, “Mine”, etc. used by persons with dementia

2. Self attributes – descriptions of past and present characteristics, beliefs, abilities, and talents

3. Self as public personae – profile of self in society
   ▶ profession, volunteer, public figure, award winner, etc.
Kitwood’s (1997) Positive Care Interactions – Personhood

1. Recognition – person known by unique characteristics or name(s)
2. Negotiation – person is consulted about preferences, choices, and needs
3. Validation – acceptance of reality, and acknowledging feelings, connectedness and person
4. Collaboration – align with the person with dementia to engage together in tasks; work together to achieve goals
5. Facilitation – enable person to accomplish what he/she would otherwise be unable to do by providing missing parts of intended actions
Institutional caregivers and verbally disruptive residents

- Social isolation
- Cognitive impairments including perceptions and memory systems and processes
- Depression
- Environmental minimalism and overload
- Medical and sensory conditions
- Others

- Over accommodated communication (secondary baby talk, patronizing talk, elderspeak)
The Communication Predicament of Elderly People

(Ryan et al., 1986)
Elderspeak, Patronizing Talk, Secondary Baby Talk
(Caporael, 1981; Caporael & Culbertson, 1986; Caporael et al., 1983)

- Extreme form of patronizing communication
  - High pitch
  - Exaggerated intonation
  - Low grammatical complexity
  - Use of nicknames, first names, terms of endearment (e.g., honey, sweetie)

- Findings:
  - Exists in nursing homes (for all residents, regardless of cognitive ability)
  - Less adult-like than normal adult speech
  - No different from nursery school speech
  - Used by staff with more negative attitudes about abilities of the OA
Elderspeak, Patronizing Talk, Secondary Baby Talk

Different speech styles based on positive/negative age stereotypes

- Nurse (patronizing vs. neutral) – older adult interactions:
  - Evaluations of nurse - less respectful, nurturing, and satisfied with encounter
  - Evaluations of older adult - less satisfied with encounter

- Nurse (patronizing vs. neutral) – older adult (CI vs. alert) interactions:
  - Evaluations of nurse - more nurturing and satisfied in patronizing condition
  - Evaluations of older adult - satisfied with encounter in patronizing and neutral conditions

- Community vs. institutional setting
Elder-Speak, Patronizing Talk, Secondary Baby Talk

- Increased loudness
- Exaggerated intonation
- Higher pitch
- Slow speaking rate
- Simplified syntax
- Simplified content
- Tag question
- Closed-end questions
- Short directives
- Short utterances
- Higher # utterances per conversational turn
- Presumptions of poor memory
- Nonverbal behaviours
- Terms of endearment, pet names, nick names
- Use of first name

(Coupland, Coupland, Giles, & Henwood, 1988; Kemper, 1994; Ryan, Hummert, & Boich, 1995)
Consequences

Kemper: elderspeak

- Negative stereotypes and self-perceptions
- More exposure to elderspeak → lower self-esteem (O’Connor & Rigby, 1996)

What’s not helpful?
- Complex sentences
- Short sentences
- High pitch
- Slow speech

What’s helpful?
- Repetitions
- Paraphrasing
- Simple sentences – grammar, syntax and semantics
Communication Enhancement Model

- Encounter with older person
- Recognition of cues on an individualized basis
- Modified communication to accommodate individual need
- Individual assessment for multi-focused interventions
- Empowerment of client and provider
- Increased effectiveness and satisfaction of provider
- Optimized health, well-being, and competence of elder
- Maximized communication skills and opportunities

(Ryan et al., 1995)
Communication Enhancement
Considerations – Education and Training Programs

1. **What is your agenda (i.e., purpose)?**
   a. Why are you communicating?
   b. Why do you want to communicate with the person?
      i. Social connectedness, personhood and dignity
      ii. Task or activity driven

2. **Consider multiple options**
   - Strategies may work well then not work well later – heterogeneity
Communication Enhancement Considerations (Cont’d)

3. Partnership (speaker and listener; alternating roles)

4. Be an active listener

5. Know strengths and limitations of yourself and your partner

6. Optimize existing skills

7. Raise your awareness of how, what, where and when you communicate
Communication Enhancement Considerations (Cont’d)

8. Not a ‘cookbook-recipe approach’

9. Need to become a problem solver

10. Most strategies emphasize enhancing the ’self’, personhood and quality of life

11. Focus on the person, not the disease

12. Do not turn communication into a test
Language Strategies

Repetition Problems - Strategies

- Listen patiently
- Respond with same answer
- Respond with novel answers (therapeutic lying/bending reality) (Elvish et al., 2010)
  - Going along with a misperception
  - With-holding truth
  - Little white lies
  - Use of tricks
- Ignore
- Validate potential underlying emotional element(s)
Repetition Problems - Strategies (Cont’d)

- Change the topic (linguistic distraction)

- Person reads answers (shift language processes)

- Use memory wallets or conversation notebooks (Bourgeois, 1996, 1999, etc.)
  - Increased use of trained and novel statements
  - Written and behavioural responses to reduce verbal repetition

- Change activity – shift mental and physical sets (food preparation, laundry, family videos, etc.)
Language Strategies (Cont’d)

- Closed ended (forced choice and Yes/No) questions (Small & Perry, 2005; Veall & Orange, 2001) more successful than open ended questions (e.g., Wh questions)
  - May need to avoid Wh questions in middle and later clinical stages

- Semantic memory based questions more successful than episodic memory based questions (Small & Perry, 2005)

- Recent memory based questions more successful than remote memory based questions (Small & Perry, 2005)
Language Strategies (Cont’d)

- Use 1 idea or concept per sentence (Rochon et al., 2001; Wilson et al., 2012)
  - Minimize conjunctions (and, when, as, although, etc.), coordinators (but, yet, because, etc.), and compound sentences

- Place modifiers after nouns and verbs
  - For example:
    - “Do you want juice, apple or orange?”
    - “Let’s go walking slowly.”
Wilson et al., 2012

- 12 caregiver– moderate to severe AD dyads in LTC during ALD hand washing routines real-time video-recorded at 6 separate sessions

- Transcribed interactions

- During successful task completion, caregivers most frequently provided:
  - 1 direction or idea at a time
  - Closed-ended questions
  - Paraphrased repetition
Language Strategies (Cont’d)

- Monitor your use of figurative language (“...gave you the cold shoulder.”) and words with multiple meanings (“run”) (Kempler et al., 1988, 1998)

- Use direct wording – see “Gender” (Tannen, 1990)

- English as Second Language (ESL)
  - Learn ‘social lubricants’
  - Volunteer partnering (staff, family, neighbours, students, etc.)
  - Videos or large print books on tape (CNIB)
  - Translation material (books, notes in chart)
  - (See references on bilingualism and dementia)
Language Strategies (Cont’d)

- Use humor but not sarcasm or ‘play on word meaning(s)’ (Kempler et al., 1988, 1998)

- Use frequently occurring and **personally relevant** vocabulary – avoid jargon

- Place primary clause at beginning of sentence – **R branching** (Kempler 1998)
  - For example:
    “You must be happy your son Evan visited before he left for Montréal.”
    
    vs.
    “Before he left for Montréal, your son Evan’s visit must have made you happy.”
Cognition

- Capitalize on episodic autobiographical memories
  - Remote vs. recent memories

- Use memory notebooks and wallets for episodic memory cues (Bourgeois 1990, 91, 92, 96, 97)

- Montessori programming and spaced retrieval training (e.g., Camp et al., 1996, 2006; Cherry et al., 2004; Hawkley et al., 2004; Hopper et al., 2005; Mahendra, et al., 2006)
Cognition: Memory – Conversation Books

- External, compensatory memory aids that cue, evoke and reinforce specific behaviours

- Draw on preserved skills sets
  - Recognition
  - Long term episodic memory (biographical)
  - Habitual and over-learned skills
  - Oral reading skills

- Includes declarative sentence and picture:
  - Biographical, daily routine, orientation information

Bourgeois, 2007; 2001
What are They?

- **Memory wallet**: collection of declarative sentence and picture stimuli which are designed to prompt recall of the stated facts and other related factual information
  - Topics: biography, family, daily life/schedule, orientation, information
  - Wallet-type cover
  - 20-30 index cards
  - Easy to carry around

- **Memory book**: enlarged version of memory wallet

- iPad also can display pictures and sentences

(Bourgeois, 2007, p.12-15)
Cognition: Memory – Conversation Books

- Generally consist of biographical information, photos of family members, and descriptions of important events.

- Brief and simple memory aids seek to capitalize on patient’s automatic communication abilities, with the goal of improving the structure and quality of communication with others.

- Provide semantic support in the form of sentences, words and images, and access to other semantic information stored in LTM.

- The written support can be used to compensate for certain comprehension deficits that may appear when instructions are provided verbally.

- Can remind individual or current tasks or topic of conversation thus enabling them to better participate in conversations.

(Bourgeois et al., 1990, 1992, etc; Egan et al., 2010)
Developing a Memory Aid Stimuli
(Bourgeois, 2007)

- Size, format, and number of pages based on clients’ needs and desired functions

- Typically 20-30 statements related to 3-4 themes with picture

- Determining size of the font
  - notice the ease or difficulty the client reads at different font sizes

- Bourgeois Oral Reading Screen
Information chosen

- Facts that are important to the client, that he/she wants to talk about
- Be important to the caregiver (activities of daily living, and common topics of conversation)

Sentences

- Short MLU (early = 12-15; later stage 8-10)
- Simple structure – single active declarative (uses the verb to be or to have, “I go grocery shopping on Mondays.”)
Use the person’s vocabulary

How would the person say the sentence?

Pictures

- There are always ways to illustrate sentences even if photographs are not available
- Chose graphically simple visually uncluttered pictures
- Adjust the size of the picture
- Use commercial pictures or drawings
- Take your own photos
Getting the Conversation Started and Keeping it Going

- Asking individual to have a conversation
- Guiding the conversation onto specific topics and redirecting the conversation back to the topic if needed
- Reassuring the person and helping out when she/he get stuck or can not find right word
- Smiling and acting interested
- Thanking the person for talking with you

- What to avoid during conversations
  - Do not quiz the person
  - Do not correct or contradict
Cognition (Cont’d)

- Obtain attention before communicating
  - Verbal – title and name
  - Appropriate touching – alerting
  - Eye contact
  - At person’s level

- Eliminate distractions/noise – across all senses

- Do not argue the logic of an idea – ‘Reality Orientation’ is not often useful
Reminiscing is a type of discourse that recalls “long forgotten”, personal experiences from one’s past.

Emphasis is placed on remembering life experiences for the pleasure of re-experiencing happy or satisfying occasions, and for sharing experiences.

Activates attention, semantic and episodic memory processes, and language associated with relevant concepts, events, and feelings.

Gives the person with dementia conversational control.

Can enhance narrative discourse, conversational discourse, and verbal and nonverbal skills.

Can also improve self-esteem, provide relief from depression, and increase spiritual well-being.

RT provides an opportunity for professional caregivers to listen and interact with patients on a personal level.

(Kim et al., 2006; see Woods et al., 2005 for Cochrane Review)
Cognition – Reminiscence Rx (Cont’d)

- Use multi-sensory personally relevant stimuli (e.g., books, pictures, objects, music, videos, etc)

- Small group size (i.e., 4 to 8); enables participants to develop trust and willingness to share personal information

- Participants with similar cognitive-linguistic and social skills; however, various ages, employment, education, and socio-economic backgrounds can increase richness

- Topic selection – ‘event’ approach-historical themes; ‘calendar’ approach holidays; ‘ladder of life’ approach-developmental milestones of life

Cognition – Simulated Presence Rx

- Family member or caregiver makes an audio- or video-recording about positive events in life of the person with dementia; played to simulate presence of Fx

- Family member should convey positive emotion through voice and content

- Creates environment that is reassuring and familiar; can reduce problem behaviours through stimulation of preserved memories and create positive emotions through stimulation of those memories

- Shown to reduce social isolation, agitation, and verbal or physical aggression

- Evidence only for moderate-severe dementia, but may have a positive impact on people with mild dementia as well (Bayles et al., 2006)
Spaced Retrieval Training
Camp (1989)

“Gives individuals practice at successfully recalling information over progressively longer intervals of time”

“To enable individuals to remember important information for clinically meaningful periods of time”

Based on “expanding rehearsal technique”

Spacing vs. massed practice + reduced cognitive effort

Reduced learner effort

Errorless learning

Difficulty of items matched to learner’s ability

Training is social and enjoyable
Spaced Retrieval: What is it?
(Grandmaison et al., 2003)

- Memory intervention

- Involves testing for repeated recall of newly acquired information:
  - at increasingly longer intervals of time
    - 5 sec, 10 sec, 60 sec...after presentation of the item to learn
    - 2 days, 4 days...20 days after the last test
  - OR

    - with an increasing number of intervening items
      - 0, 3, 9...interpolated items b/w recalls of the learned item

- Sessions range from 30 to 60 min
Spaced Retrieval: Goal
(Hopper et al., 2005)

“the goal is to alleviate specific problems in activities/participation associated with the memory impairment rather than to restore memory processes or improve general memory functioning” (p. xxx)
Spaced Retrieval: How it Works
(Camp et al., 1995; Mahendra et al., 2001: Malone et al., 2010)

- Requires the person to generate a response during each retrieval attempt and be actively engaged in learning process

- Provides the person with repeated opportunities to recall info and to bring it into consciousness; makes info more accessible

- Capitalizes on strengths of persons with AD:
  - Engages implicit (procedural) memory processes

- Minimizes errors
SRT Candidates
(Brush et al., 1998; Malone et al., 2010)

- Declarative (explicit) memory impairments resulting from progressive dementia
- Cognitive severity ranging from mild-severe
- Ability to engage in structured training task
- Note: hearing loss, visual impairments, or other co-morbid conditions may affect response to treatment

Studies indicate SR can be effective in persons with:
- AD
- PDD
- Korsakoff’s Syndrome
- VaD
- Mixed dementia
- Post-anoxia dementia
- Dementia related to HIV
- Traumatic brain injury
Functional Goals Trained Using SR

- Recalling the location of one’s room
- Recalling swallowing strategies (e.g., chin tuck, turn head to damaged side, liquid wash, etc.)
- Teach client to use voice amplifier, hearing aid, etc.
- Teach client to make eye contact when speaking
- Remembering to take medication
- Remembering to use compensatory strategies for word finding difficulties (e.g., synonyms)
- Remembering to hydrate oneself by drinking water
- Remembering to look at an external aid
  - Nametag
  - Daily schedule
  - Cue card w/ safety written precautions
  - Cue card to decrease repetitive questioning
Speech

- Normal rate (~150-180 words/min) (Bourgeois et al., 2003; Burgio et al., 2001; Dijkstra et al., 2002; Small, Andersen, & Kempler, 1997; Small, Kemper et al., 1997; Tomoeda et al., 1990)

- Normal pitch or slightly lower

- Highlight important information
  - Sound and syllable stress
  - Clear intonation patterns
  - Pauses (chunk information)

- Person sitting or standing supports respiration vs. lying down
Nonverbal

- Use calm, non-threatening and ‘inviting’ gestures, facial expressions, posture and position
  - Eye contact culturally, age and sex dependent

- Match nonverbal with speech and language
  - See ‘Elderspeak’

- Use appropriate touch (limbs vs. central part of body) along with spoken language to gain attention

- Get to person’s level – sitting or standing
Have hearing, vision and tactile sensations tested routinely
   - Effects on mobility

Use supportive devices regularly
   - Glasses, hearing aids and other assistive listening devices, lens magnifiers, book holders, etc.

Hearing aids, listening devices and glasses fully functioning
   - Microphone, Telephone, OFF, Noise Suppression
   - Trouble shooting assistive devices
      - Hearing aid battery life ($M = 10-14$ days @ 15-16 hrs/day)
Minimize ‘noise’ across all senses (cognitive considerations)

Also consider multiple, integrated sensory stimulation

- Aromas, music, taste, massage, etc.
Environments (See Lubinski, 1991)

- **Physical Considerations**
  - Light
  - Temperature
  - Floor
    - Carpets vs. tile vs. linoleum
  - ‘Noise’/distractions
  - Distance from rooms
  - Location
  - Confidentiality
  - Furniture
    - Arrangement
    - Access

- **Psychosocial Considerations**
  - Create a ‘culture of communication’
    - Communication is valued as important
Montessori-Based Programming: Hx
(Orsulic-Jeras et. al., 2001)

- Developed by Italian educator, Maria Montessori, in early 1900’s

- Based on the belief that learning can occur by alternating the ways of experiencing the environment

- Results showed that problem behaviours decreased when structure and purposeful activities were introduced
Goal of Montessori-Based Interventions
(Mahendra, N. et al., 2006)

“To design interventions for persons with dementia…to provide these individuals with opportunities to be meaningfully stimulated, engaged, socially interactive and, involved in activities of daily living.”
Montessori Principles
(Mahendra et al., 2006)

1. Design a prepared environment, adapted for persons with dementia, with intent of providing meaningful stimulation and purposeful activities

2. Progress from simple and concrete to complex and abstract activities

3. Break down activities into component parts and train one component at a time using external cues to reduce errors and to minimize the risk of failure (EL)

4. Allow learning to progress sequentially (learn in stages through observation and recognition to recall and demonstration)

5. Use real-life, tangible materials that are functional and aesthetically pleasing

6. Emphasizing auditory, visual and tactile discrimination through activities
1. Turn-Taking and Organization (i.e., turn length and order)
   - Not usually impaired until the late clinical stage (Causino Lamar, 1994; Ripich et al., 1991)

2. Sequential Organization – recurring patterns
   - Retained until the late stage
Conversation Strategies (Cont’d)

3. **Topic** (Acton et al., 1999, $N=20$)
   - Positive comments about family caregivers
   - Awareness of cognitive limitations
   - Humour
   - Repetitive ideas
   - Positive comments about the past
   - Spiritualism, religion and faith
   - Their own usefulness (caring for others and themselves)
3. **Topic** *(Abbott & Orange, 2001; Garcia & Joanette, 1997; Mentis et al., 1995)*

- Autobiographical memories accessed (i.e., episodic memory)
- Topics focused primarily on immediate context *(Wilks & Ste. Pierre, 1995)*
- Open ended questions useful for conversation initiation *(Tappen et al., 1995)*
- Topic introductions occurred at instances of communication misunderstandings (TSR sequences)
  - Initiators, extenders, and closers

Type and manner of topic introductions related to TSR sequences
- *Introductions* problematic for *middle* stage dyads
- *Reintroductions* problematic for *early* and *middle* stage dyads

- Use clear signals
- Possible misunderstandings ("Do you mean ______?")
  - Requests for confirmation and specification
- Avoid not so clear, non-specific terms ("Eh?", "What?", "Pardon me?", "Huh?")

- Repair Processes
- Repetition and paraphrasing (i.e., substitutions) more successful than elaborations (i.e., adding new information)
- Use synonyms rather than adding new information to fix misunderstandings
- Three signals and repairs then continue on same or different topic
(Orange, Higginbotham & Lubinski, 2004)
Several classes (i.e., types) of medications well known to interfere with cognition, language and communication:

- **Sedatives** (i.e., sleeping pills -> drowsiness, less attentive, lethargy)
- **Antidepressants** (i.e., to elevate mood -> blurred vision)
- **Anxiolytics** (i.e., tranquilizers, to calm mood -> drowsiness, learning difficulty, sustained attention problems)
- **Antipsychotics** (i.e., to treat psychoses and obsessive compulsive disorders -> slurred speech (dysarthria), mental slowing, problems with sustained attention)
Medications (Cont’d)

- Anticoagulants (i.e., blood thinners -> increased drowsiness)

- Antihypertensives (i.e., lower blood pressure -> distractibility, irritability, problems with sustained attention)

- Narcotic based analgesics (i.e., strong pain killers such as morphine -> reduces attention span, distractibility, slurred speech, blurred vision)
Emotions

- Respond to **message** not **words**
  - Words may give one message (e.g., anger) but real meaning may be fear or frustration – consider Validation Therapy
  - Use calming communication after verbal outbursts; do not respond to words but potential underlying message

- Words can have multiple interpretations, especially if emotionally charged
  - For examples:
    - “I need to see my wife/husband/mother/father.”
    - “You're not my wife/husband/daughter/son.”
    - “I need to go home.”
Emotions (Cont’d)

- Acknowledge/validation isolation, loneliness, and loss related to communication problems

- Use empathetic speech tone and inviting nonverbal gestures to acknowledge feelings of loneliness, anxiety, helplessness, and to acknowledge visual and auditory hallucinations

- Provide opportunities to express anxieties and frustrations
Avoid saying information in the presence of the person which you do not want her/him to know

Show an interest in what person says

Thank her/him for talking with you; this expresses your appreciation for her/his willingness to talk

Act as the "comforter" and not the "bad guy"; soothe rather than provoke
Gender (Tanner, 1990)

- Men use direct questions vs. women who use indirect questions.

- Women use modals “would”, “could”, “should”, etc.

- Men use directives vs. women who use tag questions.
Communication Enhancement Education and Training Programs

FOCUSED program (Ripich et al., 1995, 1996)

- 6 modules
  1. Introduction to AD and communication
  2. Memory and depression
  3. Importance of communication in AD
  4. Cultural aspects of communication
  5. The FOCUSED programme
     F = Face to face
     O = Orientation to the topic, repeat key words
     C = Continuity (stay on topic)
     U = Unsticking (shared background knowledge), suggest words
     S = Structured (give choices in questions)
     E = Exchange (maintain interactions)
     D = Direct statements, nouns vs. pronouns,
  6. Implementing FOCUSED techniques at each stage of AD
Communication Enhancement Education and Training Programs

- Training program for professional caregivers
- Designed to be implemented by speech-language pathologists or other professionals educated and trained in communication, aging and dementia

Goals of Program:
1. increase knowledge about communication skills and deficits in this population
2. improve communication between themselves and clients, family members, and each other

- 12 modules, quizzes, overheads, etc.

(Santo Pietro & Ostuni, 2003)
Communication Enhancement Education and Training Programs

TRACED program (Small et al., 2005; 2012)

Compensatory strategies

1. Using one-idea sentences
2. Asking questions that do not place demands on recent memory
3. Speaking at a normal rate without exaggerated intonation
4. Eliminating distractions
5. Redirecting with cueing cards for repetitions
6. Using specific cues to signal need for repair
7. Avoiding ambiguous reference
8. Not suddenly shifting the topic
9. Repeating when necessary and according to whether the listener misunderstood vs. forgot what was said
TRACED program (cont’d)

Connecting strategies

1. **Encourage**: making comments that support or facilitate the family member’s participation in a conversation
2. **Invite**: making comments that suggest a place for the family member in the activity or conversation
3. **Assist**: supplying a possible answer when the family member has difficulty, but not to answer for her/him
4. **Support conversation**: providing a context for apparently unconnected statements or by selecting and expanding a topic that is introduced out of context
5. **Link-up**: partnering and making comments that indicate a caring, shared history
6. **Expand**: building on words or ideas shared by the family member
7. **Positivism**: using positive suggestions instead of directives
Other Considerations (Cont’d)

- Brain Storms – 52 week, cognitive-communication stimulation program for individuals with dementia

- Music, pet, stuffed animals/dolls, massage, gardening, art therapies, poetry, etc.

- Student partnerships (conversation notebooks, dance, physical activity and exercise programming) (Arkin et al., 1991-2001)

- ADL based programming (e.g., Breakfast Clubs) (Boczko & Santo Pietro; Small et al., 2000)

- Computer-assisted cognitive interventions (See Mahendra et al., 2005)
Other Considerations (Cont’d)

- Computer-assisted cognitive interventions (See Mahendra et al., 2005)
- TANDEM – Communication training for informal caregivers of people with dementia (Haberstroh et al., 2011)
- Cognitive Stimulation Therapy (CST) (Spector et al., 2010)
Animal-Assisted Therapy (AAT) and AD*

- No change in standardized tests scores demonstrate stability of language of AD participant over 12-weeks of study

- Participant with AD initiated more topics of conversation during lunch and topics were less repetitive by end of study

- Conversation difficulties of AD participant rated as much less problematic post-AAT on PCI-DAT

- Actions of AD participant rated less helpful in overcoming conversation difficulties post-AAT on PCI-DAT

- Ability of participant with AD to carry on conversations rated as improved, but word finding skills declined

* (Robertson, 2004)
Animal-Assisted Therapy (AAT) and AD*

- Raters judged participant with AD:
  - Talked more
  - Used language for more varied reasons
  - Used more gestures
  - More involved in the communication tasks

- “Overall communication ability” score highest during Dog Training activities of AAT sessions, regardless of phase

- CMAI & Burden Interview: No change

- RMBPC: 19% increase in problem behaviours had a two-fold (i.e., 100%) increase in caregiver’s reactions

- PCI-DAT: Minimal improvement in caregiver’s feelings towards husband’s communication difficulties

(Robertson, 2004)