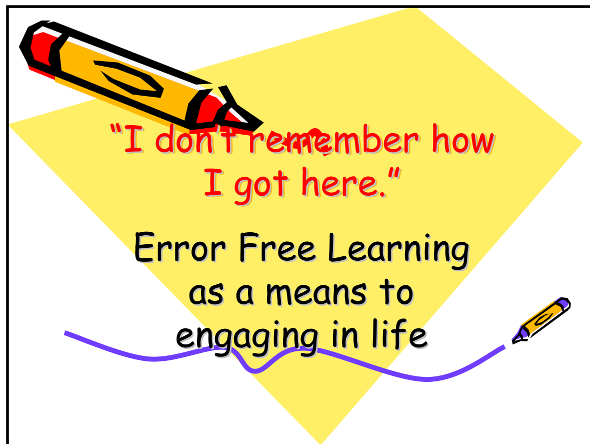
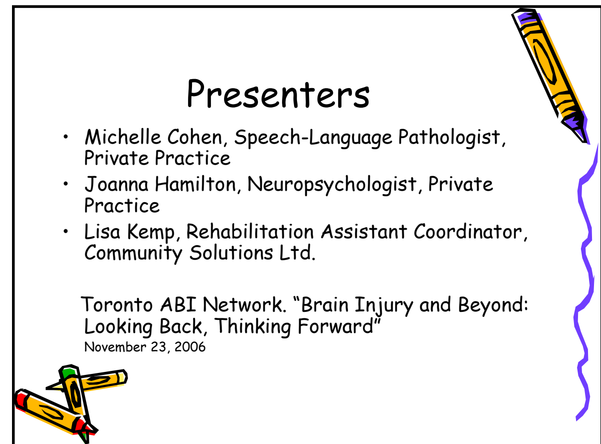
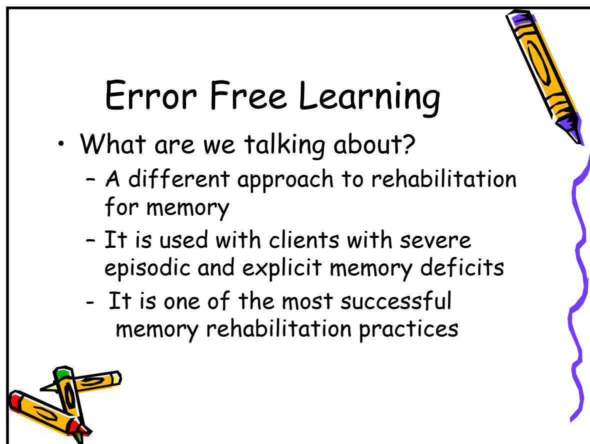
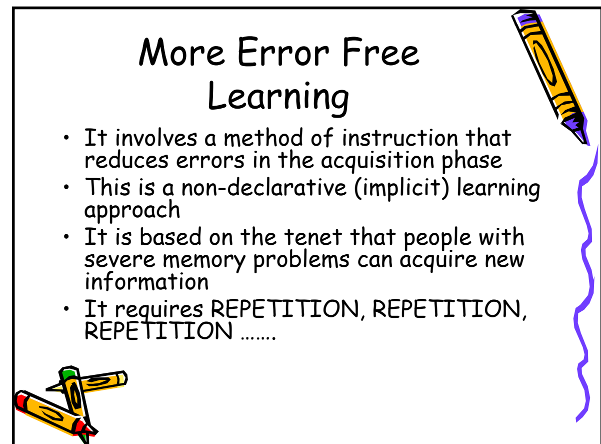
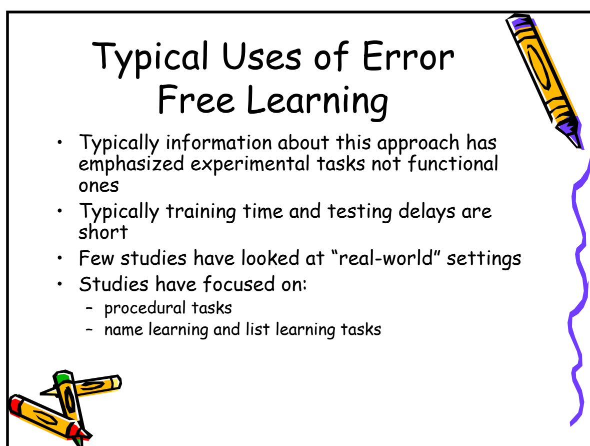
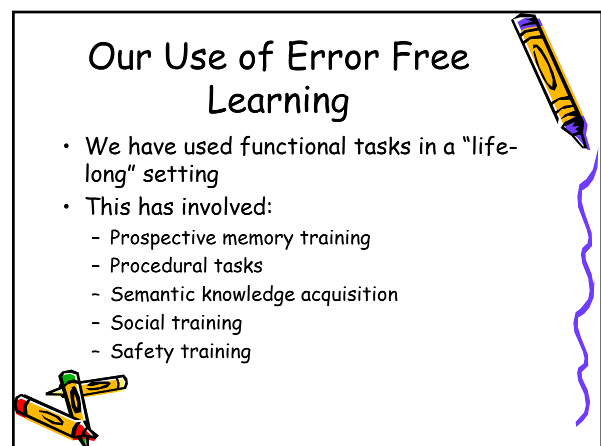

"I don't remember how I got here."
Error Free Learning as a means to engaging in life


Presenters
• Michelle Cohen, Speech-Language Pathologist, Private Practice
• Joanna Hamilton, Neuropsychologist, Private Practice
• Lisa Kemp, Rehabilitation Assistant Coordinator, Community Solutions Ltd.
Toronto ABI Network. "Brain Injury and Beyond: Looking Back, Thinking Forward"
November 23, 2006


Error Free Learning
• What are we talking about?
– A different approach to rehabilitation for memory
– It is used with clients with severe episodic and explicit memory deficits
- It is one of the most successful memory rehabilitation practices

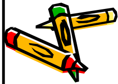

More Error Free Learning
• It involves a method of instruction that reduces errors in the acquisition phase
• This is a non-declarative (implicit) learning approach
• It is based on the tenet that people with severe memory problems can acquire new information
• It requires REPETITION, REPETITION, REPETITION …….


Typical Uses of Error Free Learning
• Typically information about this approach has emphasized experimental tasks not functional ones
• Typically training time and testing delays are short
• Few studies have looked at "real-world" settings
• Studies have focused on:
- procedural tasks
- name learning and list learning tasks


Our Use of Error Free Learning
• We have used functional tasks in a "life-long" setting
• This has involved:
- Prospective memory training
- Procedural tasks
- Semantic knowledge acquisition
- Social training
- Safety training

Our Use of Error Free Learning

- Therapy focuses on our client's chosen goals and quality of life
- Learning never ends – keep adding knowledge every time there is a new context



Shelley

- Severe brain injury
- 35 at the accident
- Pre-accident history of seizures and transcortical selective amygdalo-hippocampectomy as well as developmental delay
- As a result of accident – diffuse axonal injury, subarachnoid hemorrhage, significant orthopedic injuries, pulmonary, diaphragm and abdominal injuries

Shelley

- Post-accident – no explicit memory or ability to retain information
- Initially – aphasic, verbal expressive apraxia, no initiation of conversation or asking of questions, minimal eye-contact, limited insight
- Disconnected between events and emotions
- Severe cognitive limitation, perseveration, no judgment

How did we get here?

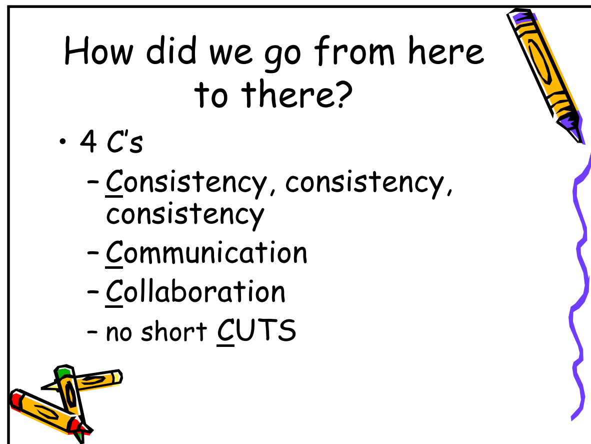
- Focus in therapy was to reteach Shelley skills as well as teach her new skills
- Used implicit and procedural learning tasks to address memory, safety and social challenges

How did we do it?

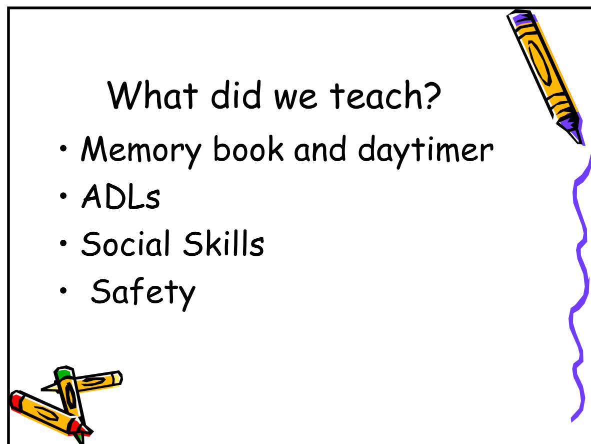
- The three "T's"
- Therapy, therapy, therapy
- Used mediators (RA's and family)

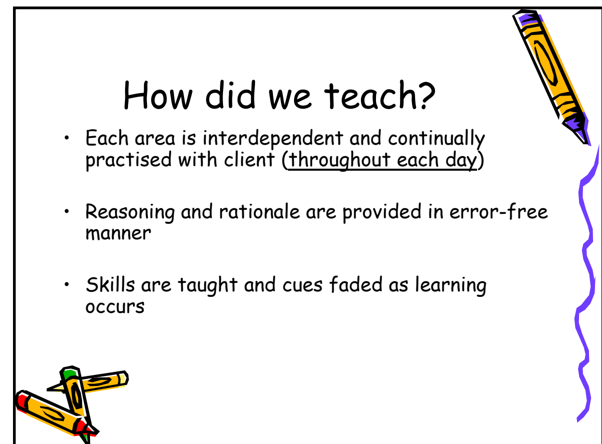
How did we get here?

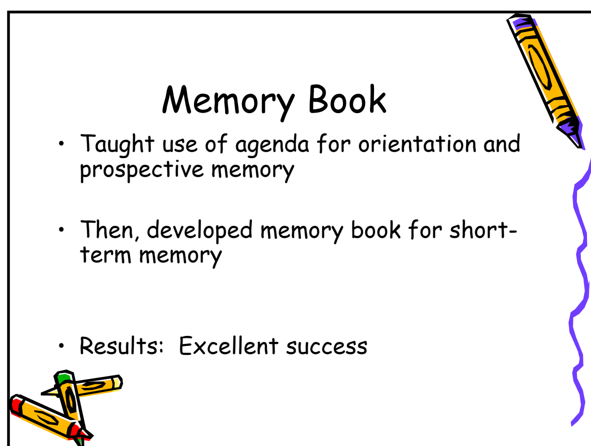
- One step to multi-step
- Increase time delays (expanded rehearsal)
- Increased distractors
- Associated prompts to initiate tasks
- Used domain specific knowledge
- Used everyday people to generalize

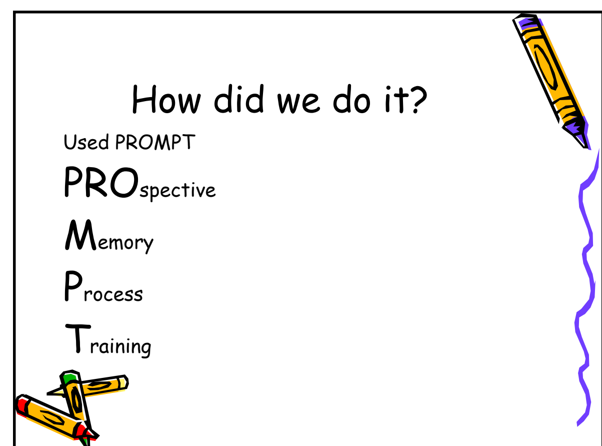

How did we go from here to there?
4 C's
Consistency, consistency, consistency
Communication
Collaboration
no short CUTS

How did we go from here to there?
Moving from therapy session to the community
Using everyday people and supports
Rehabilitation Assistants
Family
Using exact procedures learned in therapy sessions in community situations


What did we teach?
Memory book and daytimer
ADLs
Social Skills
Safety

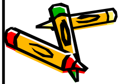

How did we teach?
Each area is interdependent and continually practised with client (throughout each day)
Reasoning and rationale are provided in error-free manner
Skills are taught and cues faded as learning occurs


Memory Book
Taught use of agenda for orientation and prospective memory
Then, developed memory book for short-term memory
Results: Excellent success


How did we do it?
Used PROMPT
PROspective
Memory
Process
Training

ADLs

- Established use of a series of one step cue cards for morning routine
- Developed series of cards for a number of daily activities (bathing to doing laundry)
- Results: Excellent success

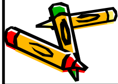


Social Skills

- Cards were developed to address specific social skills e.g. inappropriate lecturing, hugging, greetings
- Results:
  - Partial success (greetings have been most resistant to change)
  - Involved in many community activities particularly through Four Counties B.I.A.
  - Occasionally initiates and helps others

Safety Skills

- Sets of cards were developed for safely crossing the road, picking up money, etc.
- Results: Good success (sometimes impulsive)



Behavioural

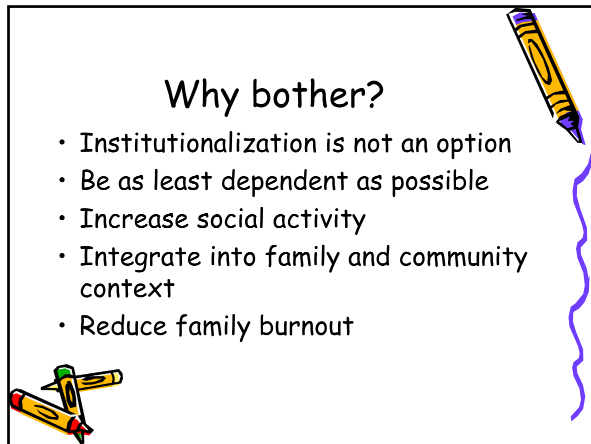
- Takes direction and cues well from therapists and rehabilitation assistants
- Less willing to take direction from family

Solution

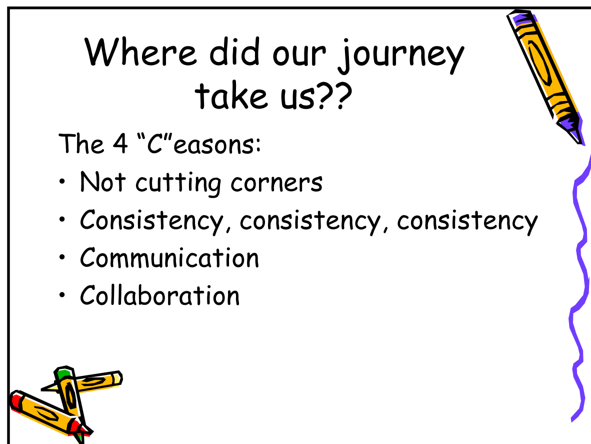
- Introduced Palm Pilot which is programmed by family
- Schedule is entered for the week with alarms corresponding to activities; e.g. alarm goes off, client refers to agenda and follows instructions (e.g. take out laundry cards and do laundry)
- Education and support to family
- Results: Excellent success

Now, where are we?

- Scales of Independent Behaviour
- Skill improvement but no improvement in judgment
- With no cards, she is the same but with the cards and cues there is increased function and independence (in activity)


Why bother?
Institutionalization is not an option
Be as least dependent as possible
Increase social activity
Integrate into family and community context
Reduce family burnout

I WILL NOT CUT CORNERS. I WILL NOT CUT CORNERS.


Where did our journey take us??
The 4 "C"easons:
Not cutting corners
Consistency, consistency, consistency
Communication
Collaboration