

**Baycrest**

Enriching Care  
Enhancing Knowledge  
Enlightening Minds

Taking Charge of Our Health: Partnership Development  
Initiative, Building the Self-Management Community  
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# Self Management and Exercise for Arthritis, Parkinson's and Stroke: Demonstrated Success – Evaluation Findings

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# Presentation Overview

- Baycrest condition-specific program description
- Program Outcome Evaluation
  - Data collection (quantitative & qualitative)
  - Demographics
  - Outcome evaluation findings
    - Self administered questionnaires, Physical performance measures, Focus group

## Definition of Chronic Disease Self Management (CDSM):

- **Learning and practicing** the skills necessary to carry on an **active** and **emotionally satisfying** life in the face of a chronic illness (Lorig, 1993)

# CDSM Key Concepts & Key Program Areas

## Psychosocial & Behaviour Change Theories

- Health Belief Model
- Social Cognitive Theory
- Transtheoretical Model
- Self-Determination Model

## Participatory and Interactive Learning

- Adult learning principles
- Condition related information sharing

## Emphasis on Behaviour Change

- Goal setting
- Self-management skills practice

## Support and Feedback

- Building confidence (self-efficacy)
- Peer supported problem solving

## **Baycrest Self Management Programs (SMPs):**

Offered by Physiotherapy through the Community & Ambulatory Program

- **Arthritis** – Program for Arthritis Control through Education & Exercise (PACE-Ex) since 1994
- **Parkinson** – Parkinson’s Early Management Program (PEMP) since 1997
- **Stroke** – Moving On after STroke (MOST) since 1999

# Baycrest Self Management Emphasis

Collaborative learning partnership involving clients, care partners and health care professionals

**Participants take back control of their lives & learn to:**

- Actively manage their chronic condition
- Set meaningful personal goals
- Create & implement goal action plans
- Develop problem solving skills
- Practice self management behaviours
- Participate in exercise
- Identify community resources & supports

## **General SMP Criteria to Participate:**

- Adults over the age of 21 with the program specific condition
- Living in the community
- English, hearing & comprehension for group learning processes
- Commitment to attend the full program
- Ready to take an active role in managing one's own condition

## Referral & Intake Process:

- Self-referral process
  - **Indicates readiness to take action**
- Call the SMP Telephone Information Line
- Call returned by Program Coordinator and telephone screen conducted
- Medical clearance required for exercises in the warm water pool
- **Care partners are welcome to attend educational discussion portion of program**

## General SMP Format:

- 16 to 20 sessions
- 2 hour sessions held twice a week
- 2 health professional facilitators and a volunteer program graduate
- Educational discussions, skill & goal setting practice, and problem solving
- Exercise component (land and/or water)
- Care partners encouraged to attend
- Comprehensive participant manual

## Sample SMP Discussion Topics from PACE-Ex:

1. Program Introduction & Evaluations
2. Goal Setting
3. Coping with Arthritis
4. Exercise
5. Understanding Arthritis & Related Conditions
6. Communicating with Health Professionals
7. Meal Preparation
8. Self-Care, Grooming & Dressing
9. Household Management
10. “Hand”-Y-Hints
11. Medications
12. Heat & Cold
13. Relaxation & Mind Over Matter
14. Sleep
15. Alternative Therapies
16. Community Resources
17. Nutrition
18. Walking Aids & Falls Prevention
19. Osteoporosis
20. LTG Goal Review & Evaluations

## Goal Setting Practice:

Focus on lifestyle changes & condition management rather than impairments

- **Short term goals (STG)** set and reviewed weekly during the education session
- **Long term goal (LTG)** set in first 3 weeks
  - Individual 30 minute appointment
  - Goal attainment scaling (GAS) format
  - Personal goal attainment action plan
  - LTG review at the end of the program

Stolee, et al, 1992

**SMP GOAL ATTAINMENT SCALING**

**NAME:**

**DATE GOAL SET:**

**DATE GOAL EVALUATED:**

**Step 1: Document client goal as the expected level**

**Step 2: Document goal levels for below and above expected level**

**Step 3: Document client plan to achieve goal and any relevant comments**

**Step 4: At end of program time frame, check off goal attainment level achieved by the client**

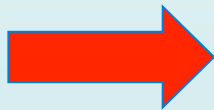
Attainment levels	Level	My Goal	Level reached
Much Less Than Expected	-2	In 2 months, I will walk for 30 minutes at a time, once a week	
Somewhat Less Than Expected	-1	In 2 months, I will walk for 30 minutes at a time, twice a week	
Expected Level	0	In 2 months, I will walk for 30 minutes at a time, 3x/week	
Somewhat Better Than Expected	+1	In 2 months, I will walk for 30 minutes at a time, >3x/week	
Much Better Than Expected	+2	In 2 months, I will walk for > 30 minutes at a time, >3x/week	
<b>Plan/Comments:</b> I will walk with a friend I will take my pain medication regularly and time my walk accordingly Alternate walking days and other physical activity Build up gradually, and keep an exercise log			Confidence Level% 75%

## SMP Exercise Component

<b>PACE-Ex</b>	<b>PEMP</b>	<b>MOST</b>	
Warm water exercise (93°F)	Land exercise & one pool session	Alternating land & pool exercise	
<ul style="list-style-type: none"> <li>•Joint range of motion</li> <li>•Strengthening</li> <li>•Aerobics</li> <li>•Stretching</li> <li>•Relaxation</li> </ul>	<ul style="list-style-type: none"> <li>•Axial mobility (Schenkman, 1994)</li> <li>•Stretching → Offset postural &amp; MSK changes</li> </ul>	<p><b>Circuit</b></p> <ul style="list-style-type: none"> <li>•Mobility</li> <li>•Function</li> <li>•Fitness</li> <li>•Stretching</li> </ul>	<p><b>Pool</b></p> <ul style="list-style-type: none"> <li>•Balance</li> <li>•Mobility</li> <li>•Aerobics</li> <li>•Stretching</li> </ul>
Builds confidence, develops healthy exercise behaviours and prepares participants for ongoing community based physical activity and fitness			

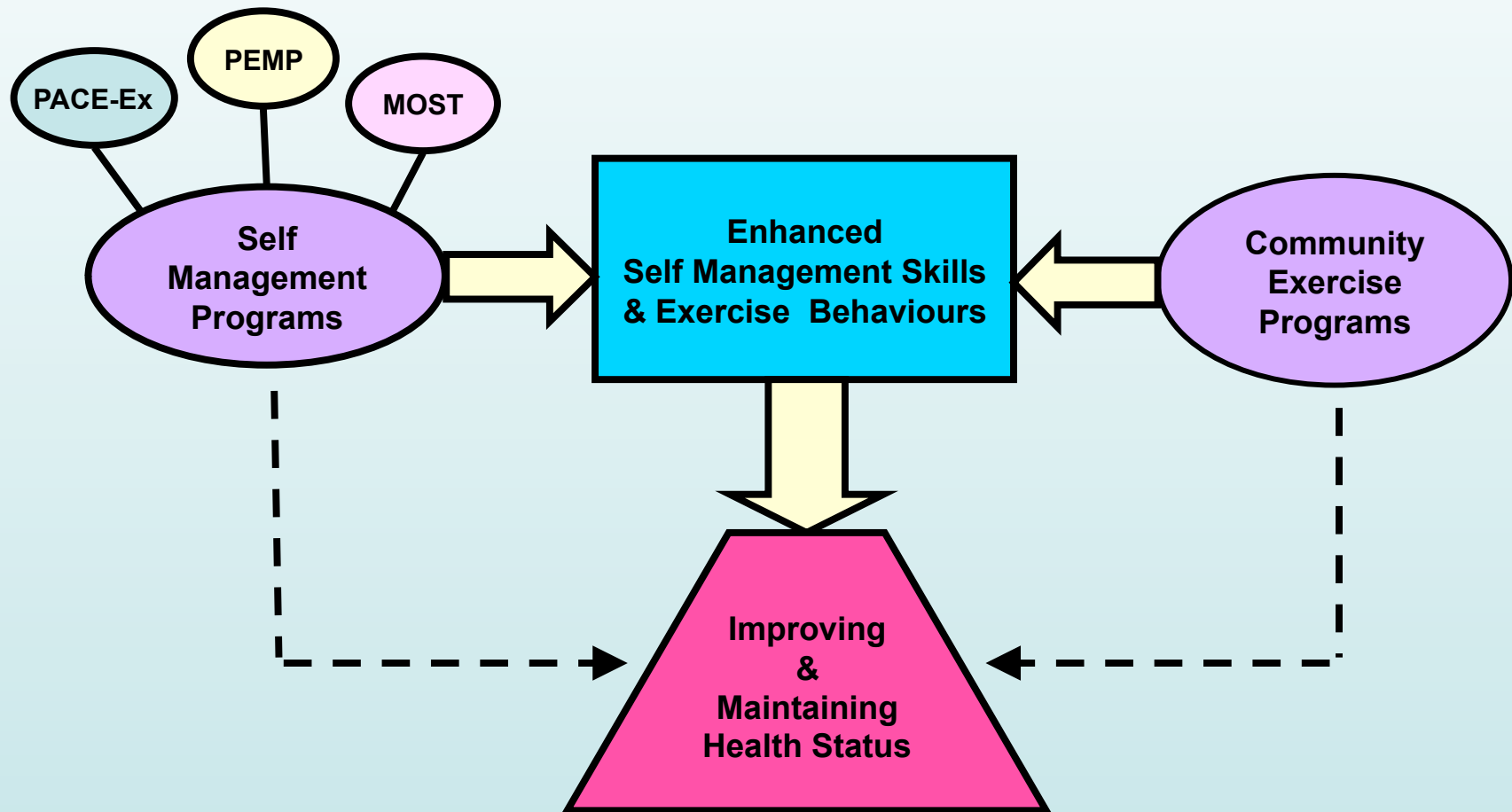
## Building Self Management at Baycrest

- Condition specific self management programs
- Include exercise practice to support ongoing healthy exercise behaviours
- Sustain ongoing exercise participation with community exercise programs



**Integrate self management with health promotion**

## Integrating Self Management with Health Promotion









# SMPs Data Collection & Outcome Evaluation / 1

- **Quantitative (Pre and Post Program)**
- **Qualitative (post program)**

# SMPs Data Collection & Outcome Evaluation /2

## Quantitative (pre/post program)

### Self Administered Questionnaires

#### ➤ **Self management**

- Stanford Chronic Disease Questionnaire (SCDQ)
- Health Education Impact Questionnaire (heiQ)

#### ➤ **Activity related**

- Activity specific Balance Confidence Scale (ABC)
- Re-integration to Normal Living Index (RNLI)

#### ➤ **Mood**

- Geriatric Depression Scale (GDS)

#### ➤ **Condition specific**

- Stroke Adapted Sickness Impact Profile (SA-SIP(30))

## **SMPs Data Collection & Outcome Evaluation /3**

### **Quantitative (cont'd)**

#### **Physical Performance Measures**

- 2 minute walk test (2MW)
- Berg Balance Scale (BBS)
- Functional Axial Rotation (FAR)

#### **Goal Setting**

- Goal Attainment Scaling (GAS)

### **Qualitative (post program)**

- Focus group

## Baycrest SMP Review

Demographics	PACEEx	MOST	PEMP
# of programs reviewed	8 (n= 93)	9 (n=67)	4 (n=40)
Mean Age	70.9	64.4	62.3
Age Range	33-91	37-86	44-80
Gender	83.7% F	40.3% F	40% F
Living with condition (mean)	14.2 yrs	2.2 yrs	1.3 yrs
Living with condition (range)	1- 60 yrs	0.6- 5.7 yrs	0.2 - 5 yrs
Attendance Rate	84.4%	88.4%	91.9%

## PACE-Ex

	N	Pre	Post	P value	
SCDQ	Symptoms *	82	2.3	1.9	<b>0.02</b>
	Health Status	83	3.4	3.4	1.0
	Aerobic Exercise (min/wk)	72	74.7	110.9	<b>0.01</b>
	Coping	81	1.44	1.72	0.06
	Daily Activities *	83	2.1	1.8	<b>0.02</b>
	Confidence	82	5.4	6.0	0.06
	Med. Care	83	2.7	3.2	<b>0.006</b>
	Pain *	79	6.4	5.7	<b>0.03</b>
	ABC	55	56.1	60.1	0.1
	GDS *	53	5.2	4.2	<b>0.007</b>
2 Min Walk Test (meters)	25	118.2	133.9	<b>0.000</b>	

\* Lower score better outcome

Pre- Post comparisons were analyzed by paired t tests  
 $p < 0.05$  considered statistically significant

## MOST

SCDQ

	N	Pre	Post	P value
Symptoms *	28	1.8	1.5	0.33
Health Status	28	3.1	2.9	0.13
Stretch & Strength (min/wk)	33	67.3	66.4	0.9
Aerobic Exercise (min/wk)	29	122.1	160.3	0.2
Coping	33	0.95	1.5	<b>0.002</b>
Daily Activities *	28	2.0	1.5	0.06
Confidence	28	5.9	6.8	<b>0.04</b>
Med. Care	33	2.3	2.8	<b>0.01</b>
ABC	53	54.4	60.9	<b>0.004</b>
GDS *	39	4.5	4.1	0.2
RNLI *	57	6.9	8.0	<b>0.04</b>
SA-SIP(30) *	54	13.9	10.8	<b>0.000</b>
2 Min Walk Test (meters)	41	83.2	91.1	<b>0.000</b>

\* Lower score better outcome

## PEMP

	N	Pre	Post	P value	
SCDQ	Symptoms *	31	1.9	1.8	0.5
	Health Status	31	2.7	2.7	0.7
	Stretch & Strength (min/wk)	30	50.0	89.5	<b>0.008</b>
	Aerobic Exercise (min/wk)	27	106.1	86.1	0.3
	Coping	31	0.9	1.4	<b>0.002</b>
	Daily Activities *	32	1.2	1.1	0.8
	Confidence	32	7.4	6.9	0.07
	Med. Care	31	2.9	3.2	0.4
	ABC	31	83.7	83.2	0.8
	RNLI *	32	3.8	4.2	0.5
	FAR (degrees)	26	100.6	108.5	<b>0.008</b>
2 MW Test (meters)	24	134.0	157.1	<b>0.003</b>	

\* Lower score better outcome

## Summary of Outcome Evaluation Findings

Participants showed statistically significant improvements ( $p < 0.05$ ) in:

<b>PACE-Ex</b>	<b>PEMP</b>	<b>MOST</b>
<ul style="list-style-type: none"> <li>• Time spent exercising</li> <li>• Reduction in pain</li> <li>• Frustration/fear with symptoms</li> <li>• Health interfering with social activities and chores</li> <li>• Medical Care</li> <li>• Depression</li> <li>• 2 minute walk (MW) test</li> </ul>	<ul style="list-style-type: none"> <li>• Time spent stretch &amp; strength</li> <li>• Coping</li> <li>• Parkinson's specific physical measures</li> <li>• 2 MW test</li> </ul>	<ul style="list-style-type: none"> <li>• Balance confidence</li> <li>• Coping</li> <li>• Self - efficacy</li> <li>• Medical Care</li> <li>• Impact of stroke on daily life</li> <li>• Physical: BBS + 2MW</li> </ul>
60.1% reached or exceeded goals (GAS)	72% reached or exceeded goals (GAS)	76.2% reached or exceeded goals (GAS)

## Health Education Impact Questionnaire – HeiQ

	<b>PACE-Ex n= 36</b>	<b>MOST n= 22</b>	<b>PEMP n=11</b>
Health and directed behaviour	38.9%	25%	27.3%
Positive and active engagement	44.4%	15%	9.1%
Emotional well being	5.6%	0%	0%
Self monitoring and insight	36.1%	50%	45.4%
Constructive attitude shift	27.8%	30%	0%
Skill and technique acquisition	58.3%	50%	18.2%
Social integration and support	36.1%	25%	0%
Health service navigation	16.7%	30%	9.1%

Data is expressed as a percentage of clients who made a substantial change (SC) from pre to post program. SC = 0.5 x standardized individual effect size

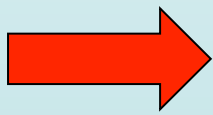
## Focus Group findings from all SMPs

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- Discussions and shared learning
- Knowledge on access to information and resources
- Learning and practising exercises
- Provided feedback towards quality improvements
- Interested in
  - **a follow-up program**
  - **on-going group support**
  - **continuing with exercises in warm water**
  - **programs to sustain and support behaviour change**

# Conclusion

- Baycrest's condition specific SMPs which include goal setting and exercise practice are effective at improving:
  - participants' self management skills
  - self efficacy
  - coping strategies
  - participation in exercise
  - impact of chronic condition on daily life
  - physical mobility



**Empowering people to  
live better with chronic disease**

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**Baycrest Self Management Telephone  
Information Line (416) 785-2500 x 2683**

