

Outcome-Focused Physical Activity Programming in Long-Term Care Homes





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Partners in Knowledge Transfer

Seniors Health Research Transfer Network (SHRTN) is the 'place to go' in Ontario for the latest knowledge about seniors' health and supports a variety of topic-specific communities of practice (CoPs). Within SHRTN, the Activity and Aging CoP provides opportunities for knowledge exchange and knowledge translation between caregivers, policy makers, researchers and other professionals regarding seniors' physical activity in long-term care homes, adult day programs, and the community.

One of the goals of the Activity and Aging CoP is to educate and advocate on behalf of frail older adults living in care homes for the purpose of establishing realistic, outcome-focused program guidelines that can help provide benchmarks for activity program effectiveness for all homes in Canada. This will be done through the collaborative development of Policy, Procedures and Practice Guidelines for care facilities, specifically for Adult Day Programs and Long-Term Care settings.

These recommended guidelines have been brought to you as a direct result of the support and active involvement of key stakeholders - organizations and motivated individuals working in the field of activity programming for the older person. The Activity and Aging Community of Practice would like to extend appreciation to the following organizations and individuals for working with us to ensure these guidelines are practical and meaningful.

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A Case for Evidence Based Recommended Practice Guidelines

Scientific evidence suggests that regular physical activity can dramatically and positively influence the health and well-being of people of all ages and abilities (Cress et al., 2005). We argue that this should certainly include the "frail elderly" living in Ontario's long-term care homes. Currently in Ontario there are no evidence-based practice guidelines available to support physical activity programming with health and well-being outcomes for seniors in long-term care homes. With an aging population increasing demands on our long-term care system, such physical activity programming for functional, recreational and restorative outcomes for older adults will remain critical to the health system and to improve quality of care.

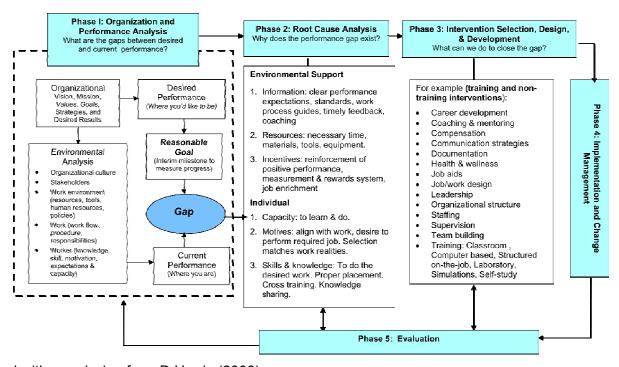
Various stakeholders involved in seniors' health care from across Ontario, including researchers, policy makers and caregivers who work directly with seniors in the community and in long-term care homes have come together in the Seniors Health Research Transfer Network (SHRTN) Activity and Aging Community of Practice. The Community of Practice is interested in finding ways to improve the quality of care that is delivered to seniors throughout Ontario, particularly activity programming. The need to develop outcome-based physical activity programming practice guidelines has been identified by the community and long-term care stakeholders, researchers, policy makers and caregivers across Ontario (SHRTN, 2008). In response to reguests from members, the Activity & Aging Community of Practice, supported by the Seniors Health Research Transfer Network Information Services, completed a literature review in the form of an Evidence Based Brief (EBB) that was published and distributed in February, 2008. These recommended practice guidelines are in follow-up to the findings in the EBB and provide a starting point for discussion among care providers as we work together to improve the client-based outcomes of physical programming in long-term care homes across Ontario.

How to use this document

In order to improve front-line performance the first step is to look at what you are currently doing (i.e., current practice) and compare it to what you would like to be doing (i.e., desired practice) and identify the performance* gap. Once the gap has been identified between current and desired practice, in collaboration with the care team, management can select reasonable goals that link back to the mission of the organization. This document should be used to support the identification of performance gaps as it represents suggestions for 'desired practice' and can be used to help set reasonable goals.

Job Aid: Performance Improvement (PI)

Performance = Activity + Result. PI focuses on accomplishments, takes a systems view, adds value, and establishes partnerships



Used with permission from D Harris (2008)

(Harris, 2008; ISPI, 2007)

In addition, effective practice change at the front-line requires the support, understanding and encouragement of the management team. To help ensure the expectations of the activation professional are clear we encourage management teams to share this document with all members of the care team. Management teams may also use this document as a tool to guide questions during the interview process for new staff.

^{*}Practice = Performance = Activity + Results



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Copies of this document may be accessed and downloaded from the SHRTN Resource Centre at: www.shrtn.on.ca





Defining 'Activation Professional'

For the purposes of this document, the term 'Activation Professional' refers to the front-line staff member who is responsible for assessment, planning, implementation and evaluation of physical activity programming (or a combination thereof) in the long-term care home. Through a survey completed in April, 2008, the Activity and Aging Community of Practice members provided a comprehensive (but not exhaustive) list of job titles to be encompassed by the term 'Activation Professional' in this document. These terms include the following, but it should be noted that other terms are currently in use, and will likely be expanded in the future, which may also fall within the meaning of our term "Activation Professional":

- Activationist
- Activity Aide
- Activity Assistant
- Activity Coordinator
- Activity Director
- Activity Manager
- Activity Programmer
- Adjuvant
- Fitness Supervisor
- Health Promoter
- Kinesiologist
- Life Enrichment Coordinator
- Occupational Therapy Aide
- Personal Service Provider
- Physiotherapy Aide
- Exercise Specialist
- Fitness Consultant

- Program Aide
- Program Facilitator
- Recreationist
- Recreation Assistant
- Recreation Therapist
- Recreation Aide
- Recreation Programmer
- Restorative Care Aide
- Restorative Care Professional
- Recreation Therapy Aide
- Recreation Manager
- Recreation Assistant
- Recreationist
- Rehabilitation Specialist
- Fitness Specialist
- Older Adult Fitness Specialist

The Community of Practice recognizes that other health professionals (Registered Nurses, Occupational Therapists, PhysioTherapists, Physiatrists etc.) support activity programming in long-term care homes and when performing these functions may also be included in the above definition of the Activation Professional.



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Core Competencies & Characteristics for Activation Professionals

The Activity and Aging CoP members also provided input into the recommended core competencies of the activation professional. These core competencies represent the 'popular vote' of a representative sample of CoP members. As such, the CoP-recommended core competencies and characteristics for the activation professional include (but are not limited to) the ability to:

- 1. Assess task and function-specific abilities of the person within 24 hours of admission using reliable, peer-reviewed tools
- 2. Use the A.C.T.I.V.E. model to guide a systematic and comprehensive approach to activity programing in long-term care homes (see next page).
- 3. Access and utilize peer-reviewed tools and resources that will help design and implement an outcome-focused physical activity program that includes components of strength, balance and flexibility
- 4. Use judgment to determine the most appropriate program/intervention for the person and recognize when an in-depth assessment may be required by a physiotherapist
- 5. Plan care with others (internal and external to the organization)
- 6. Value the person being supported as a core member of the care team
- 7. Value the person's interests and desires in terms of physical activity and integrate these into the care plan
- 8. Utilize technology to research, collaborate on, plan, implement and evaluate physical activity programming
- 9. Coach other staff to support follow-through programming and to adopt a committment to support meaningful physical activity on a daily basis*
- 10. Evaluate based on the goals developed in the care plan

*It is important to ensure that staff in care facilities promote the highest level of functioning amongst the people they support. It is a challenge for care staff to allow sufficient time and to provide the person with sufficient resources to follow through with many of the activities of daily living (ADLs) that they are working towards in the activity programs. Unless people are given the opportunity to follow through on trying to do these activities as independently as possible we sometimes contribute more to learned helplessness (a person becoming more dependent than they really are and relying on staff support to do more of their ADLs for them than strictly necessary). It is important to promote an environment where people are positively recognized and supported for maximizing their functional abilities.



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Summary of Recommendations – A•C•T•I•V•E• (<u>A</u>ssessment; <u>C</u>are Planning; <u>T</u>eam Commitment; <u>I</u>mplementation; <u>V</u>erification of Approach; <u>E</u>valuation of Outcomes

What	Who	When	Why	How
<u>A</u> ssessment	Activation professional and Personal Support Worker (PSW)	Within 24 hours of admission	Assess task and function-specific abilities prior to possible environment-related decline	Assessment tools and recom- mended resources (see below – Assess- ment section)
<u>C</u> are Planning	All residents have a care plan developed by an assigned member of the care team	Developed or modified following assessment	Ensure person is optimally challenged to improve health and quality of life without frustration or boredom	Outcome-focused program planning and planned follow-through
<u>Team Commitment</u>	All LTC home staff; management of the LTC home; external professionals who treat the person	Ongoing	Live by the philosophy of care that engages the person in purposeful and outcome-based activity	Communication between team members, outline goals and areas of focus via Cardex system and/or other communication methods
<u>/</u> mplementation	Care team, led by the activation professional	After a care plan is developed	Support the improvement of functional and task-specific fitness, quality of life and overall health	Delivery of individual, small group, or larger group programming and follow-through programming
<u>V</u> erify Approach	Care team, led by the activation professional and Personal Support Worker	Ongoing	Ensure care plan is meeting the needs of the person and informs minor adjustments to care plan	Continuous informal feedback received from the person on regular basis and communication between care team
<u>E</u> valuate Outcomes	Care team, led by the activation professional	Quarterly re- assessment and annual evaluation of outcomes	Allow the person to measure his/her functional and task-specific progress and inform the next set of goals for an updated care plan	Repeat or modify assessment and subsequent goals



A – Assessment

Recommendation

A measure of what the person can do, and areas for improvement, should be completed by the activation professional within the first 24 hours of admission, in the presence of a Personal Support Worker, or another team member who has a close relationship with the person. This measure should comprise at least three reliable tests which will be retained for followup re-testing as an objective measure of progress over time.

Outcomes are optimized when program decisions are informed by an assessment of the person's abilities (Demers, 2005). Assessment is the first step to providing individualized physical activity programming in long-term care homes. Only once the activation professional has an understanding of the person's abilities and possible areas for improvement, can the care team design a program that is safe, effective, and enjoyable. Assessment provides the baseline information required for the activation professional to set individual goals, in collaboration with the person, and to tailor programs to align with abilities and expectations. Assessment also allows the activation professional to examine the extent of progress across groups of people and over time to determine the proportion that are improving and their range and rate of improvement. (Meyers, 1999). This assists program development in the larger sense, where individuals can benefit from small-group and large-group programs, and it also informs policy at the management level.

Evidence suggests that a decline of physical functioning has been associated with admission to a long-term care home (Jacob Johnson et al., 2005). Resident decline can result from poor staff attitudes towards physical activity, misguided or conflicting organizational policies and procedures, resource constraints, or an underestimation of a person's abilities (Johnson et al., 2005; Lazowski et al., 1999). This may account for the research finding of a decline of resident functioning of up to 30 per cent over six months (Resnick & Simpson, 2003). Research has shown that residents have tended to spend much of their time being immobile (either sitting or lying) and wheelchair use has been found to increase dramatically following admission (Jacob Johnson et al., 2005). By completing an assessment within 24 hours of admission, the activation professional will gain insight into the person's true abilities, prior to any potential environmentally associated decline.

At minimum, the assessment team should consist of the person, the activation professional and the Personal Support Worker (PSW) most familiar with the person. Research has shown that actively engaging the person in assessment and goal-setting* positively influences his or her sense of control, possibly helping to prevent or inhibit premature dependence and improving health outcomes (Marmot, 1996). Typically spending more time with the person than other members of the care team (OHCA,



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2007), PSWs are involved in the person's activities of daily living and help the person become adjusted to living in a new home. They are often the first to alert the care team to subtle changes in a person's condition and through their close relationship with the person have insight into his or her needs (OHCA, 2007). As such, PSWs are in an excellent position to provide support to the person and insight to the activation professional by helping to ensure the assessment is a comfortable and non-threatening experience for the person, and is an accurate representation of the person's physical abilities. Family, friends and sometimes volunteers are also in a similar position to alert the care team to any functional changes and should be included when possible during the person's assessments to provide the care team support.

*See Care Planning section

IMPLEMENTATION TIP: To ensure the assessment is concise, yet effective, choose a few powerful peer-reviewed tools, and follow-up at least quarterly and immediately (within 72 hours) after there has been a significant change of condition.

SAMPLE TOOLS

It should be noted that the list below includes only some suggested tools and is by no means exhaustive. Please contact the SHRTN library for more comprehensive and upto-date information.

- Endurance: Self-paced Walk
- Mobility: Timed Up and Go (see Podsiadlo and Richardson, 1991)
- Stair climbing power: Time required to climb three steps using handrail and gait aids as needed (see Bassey et al., 1992)
- Lower body flexibility: Sit and Reach test (Keith et al., 1987)
- Vitality Plus Scale (VPS) (Myers et al.)
- Gait Assessment Rating Scale (GAR's)
- Falls Efficacy Scale (FES)
- Functional Abilities Confidence Scale (FACS)
- Senior's Fitness Test: 8 item assessment tool with norms and risk zones.
 Includes: Chair stand (lower body strength), arm curl (upper body strength), 6-min. walk or 2-min. step test (cardiovascular endurance), chair sit-and-reach (lower body flexibility), back scratch (upper body flexibility), 8-foot up-and-go (agility) (Rikli and Jones, 2001)
- Berg Balance Scale
- Tinetti Balance Subscale
- Mobility Fall Chart
- Grip Strength Test
- Functional Reach Test



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In addition to using a comprehensive assessment process to establish a person's physical capacities, it is important to compare the person's performance against realistic benchmarks for people of that age and condition. Although most such tools include "norms" or "benchmarks" for such comparisons, some do not, and in many cases, these are subject to change. It is important to regularly review and obtain new benchmarks as they are published in the literature. These updated benchmarks can be obtained (if they exist) by contacting the SHRTN library.



C – Care Planning

Recommendation

Information from the assessment should be summarized into goals within the care plan in the form of individualized, small group, or larger group outcome-focused activities, and follow-through activities, that will meet functional prerequisites and coincide with the person's personal preferences.

In order to ensure the care team can and will address the physical activity needs of the person, every care plan must integrate:

- the goals as determined by the person and family
- the program format (large or small group, or individual)
- the follow-through programming recommendations

The standard non-weight bearing range of motion exercises provided by most long-term care physical activity programs are not challenging enough even for the frail person (Lazowski et al., 1999). The exercises selected for the care plan should be specific to the functional outcomes sought for the person (determined during assessment). Likewise, they should benefit an independent living lifestyle and the exercises should mimic as closely as possible activities of daily living (Ciesla et al., 1993). Informed by the assessment, the goals will guide program planning, implementation and evaluation. As such, it is critical that these goals are an accurate reflection of the assessment findings and incorporate the personal aspirations and preferences of the person. Patients and families have a broad range of goals that are not always identified by the healthcare team (Glazier, 2004). By actively engaging the person and the family in the development of goals, the activation professional can help shift the locus of control toward the person and positively influence health outcomes (Marmot, 1996).

Long-term care homes can deliver exercise programs individually or in small or large group formats. Large or small group formats are appropriate only when the individuals in those groups sufficiently share common needs and abilities. This approach requires the activation professional to identify those with higher and lower mobility and provide suitable options or variations of exercises for the person to self-select the intensity level needed to optimize challenge and minimize frustration or boredom (Lawoski et al., 1999).

In addition to scheduled opportunities for physical activity, a commitment to follow-through programming should be made by all members of the care team to ensure the person has chances throughout the day to be active, and any barriers to such activity are removed or minimized. Supporting active living on a daily basis will lead to greater physical gains and improve quality of life. Follow-through programming recommendations must be included in the care plan.





IMPLEMENTATION TIP: Utilize case conferences to discuss physical activity programming and ensure care planning is a collaborative team effort.

IMPLEMENTATION TIP: Building a base of programs will help the activation professional have a toolkit of physical activity options to choose from when developing care plans and lead to a more resource-efficient planning process.

Resources

- Functional Fitness in Long-term Care (FFLTC): Canadian Centre for Activity and Aging, www.uwo.ca/actage; www.ccaa-outreach.com
- Functional Fitness for Older Adults (CCAA)
- Home Support Exercise Program (CCAA)
- FAME program (Fitness and Mobility Exercise) an evidence-based exercise program for stroke survivors (Eng. 2006).

It is important to note that when implementing a program in your care facility it should be directed to residents with similar or complementary needs and abilities and be designed with specific SMART goals and measureable outcomes (SMART – Specific, Measureable, Attainable, Realistic and Timely – Rockwood and Stolee, 1997)

IMPLEMENTATION TIP: Utilizing a PDSA ("Plan Do Study Act") Rapid Cycle Improvement Model of Quality Improvement (Brown and Hare, 2002) will help to establish improved standards of physical activity in complex systems (on a small scale, with opportunities for extending successful plans on the basis of evaluation and review), that otherwise might have difficulty embracing or successfully implementing such change (see next page). The opportunity to practice this model begins with one or several residents through their care plan.



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Rapid Cycle Improvement: Controlling change

BY PAMELA BROWN, RN, BSN, CPHQ DEBORAH HARE, RN, BSN, CPHQ

ealthcare today is dynamic and ever changing. Advances in technology drive the need for professionals and organizations to actively maintain a high level of quality. Other challenges include work force shortages, a focus on public reporting, greater consumer awareness, an escalating competitive market and patient safety as a priority — to name just a few. Traditionally, quality improvement efforts seem to be driven by the steps in the process ACT: rather than by the adopt improvements themadapt selves. This can delay abandon progress and distract us from what we really

One way to accelerate the process and keep a focus on targeted improvements is through rapid cycle methodology. Rapid cycle is not eliminating traditional quality improvement tools but using them to expedite change and results. By answering three questions you can quickly prepare for action: 1) What do we want to accomplish?

want to accomplish.

2) What changes can we make to result in an improvement? 3) How will we know an improvement has been made? These questions will assist the team in maintaining focus on the desired improvement. (Figure 2)

When deciding what you want to accomplish, first consider estab-

FIGURE 1

Shewhart Cycle: PDSA

PLAN: based on theory/prediction

STUDY:

lished guidelines and current performance. Using information that is already being collected can give an idea of baseline performance. If

to learn

information is not already being collected, just enough concurrent data collection should be conducted to determine whether accepted standards are being met. Looking at a small population in this way through Rapid Cycle helps put the focus on reducing failure rates rather than just improving performance. For example, examine the discharge records of patients with myocardial infarction for a month

to determine whether betablockers were prescribed to patients who did not have contraindications. This data will allow a comparison of practice to the accepted standard. DO:

small

scale

A team approach, including all those involved in the process, helps to determine what process changes can lead to improvement. When considering strategies, the team makes changes that team members predict will

result in improvement. These can include clarifying procedures, revising protocols, educating staff, or using a new form. A Plan-Do-Study-Act (PDSA) cycle can help execute and test the change. (Figure 1) After planning the

The Arkansas Foundation for Medical Care is the Quality Improvement Organization for Medicare and Medicaid in Arkansas. AFMC works collaboratively with providers, community groups and other stakeholders to promote the quality of care in Arkansas through evaluation and education. For more information about AFMC quality improvement projects, call 1-877-375-5700. This material was prepared by Arkansas Foundation for Medical Care (AFMC) under a contract with the Centers for Medicare & Medicaid Services (CMS). The contents presented do not necessarily reflect CMS policy.

2 • The Journal Volume 98 improvement, apply it on a small scale. If the desired improvement results, apply the change to a larger population to test for continued improvement.

For example, test a new process for administration of preoperative antibiotics to one orthopedic physician's patients for one week. This allows the team to test changes and make adjustments before affecting a large group. It also helps build team members' confidence in the improvement process because they see immediate results. If successful, the change could then be applied to all orthopedic physicians or more than one surgical procedure.

The team will know if the changes resulted in improvement through concurrent measurement. Performing 100% review is not necessary to determine whether improvement has been made. The focus is on the improvement, not the measurement. If all those involved in the process are represented on the team, data collection is usually less complicated than one might assume. Informing staff and senior leaders about the measurements and progress quickly, instead of after 3 or 6 months of data collection, will help gain support for efforts to rapidly improve processes.

Rapid cycle improvement can quickly create an environment that promotes excellence. It encourages health care professionals to actively work toward and meet the highest standards of care and to stay ahead of an ever-changing environment. Excellence in care not only improves outcomes but also builds consumer confidence in those providing the care. A quick comparison of traditional and rapid cycle quality improvement can be seen in Figure 3.

For more information about rapid cycle improvement or other

FI	GL	JRE	2.
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FOCUS	•	
FIND	· · · · · · · · · · · · · · · · · · ·	What are we trying to accomplish?
ORGANIZE	111 111	How will we know the change is an improvement?
CLARIFY		What are we trying to accomplish?
UNDERSTAND		How will we know the change is an improvement?
SELECT		What changes can we make that will result in an improvement?

FIGURE 3.

Improvement comparison

TRADITIONAL QUALITY IMPROVEMENT

Pros	Cons
High level of comfort with	Longer cycles of decision-making in the FOCUS-PDSA model.
familiar processes and methods. Larger samples analyzed.	Delays in making changes.
Intermittent, retroactive data collection.	Impact of improvement measures are not realized on a timely basis.
Longer process allows for the multiple levels of communication.	Potential for resistance.
Adaptations can occur to measures taken when failures occur.	Adaptations lag due to process

RAPID CYCLE QUALITY IMPROVEMENT

Pros	Cons
Quick improvements noted with small tests that can be disseminated. Goals reached in 6 to 12 months.	Discomfort from new processes and "rapid" testing.
Failures are noted quickly and affect few cases.	Several small tests necessary to achieve desired results.
Measurement is concurrent and on small samples.	Concurrent data collection requires continuous commitment.
Testing small populations before spreading change increases confidence in the success of the process and minimizes resistance.	Without leadership buy-in, this process is difficult to initiate from the grassroots level.

quality improvement issues, call AFMC at (501) 375-5700.

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T - Team Commitment

Recommendation

It is the responsibility of all long-term care staff to support purposeful and outcomefocused activity; and, as such, program decisions and implementation are communicated to inter-professional teams using the care plan.

In order for a long-term care home to live by a philosophy of care that engages the person in purposeful and resident outcome-focused activity each day, communication between team members regarding programming goals and care plan decisions is critical (including the management team and external health-allied practitioners treating the person).

Some of the other characteristics of successful "team" approaches include:

- Holding an awareness of, and understanding of each member's personal attributes, skills, knowledge and attitudes – and how these diverse member contributions may be vital to important team outcomes.
- Celebrating and appreciating all contributions by team members.
- Displaying an "absence" of territoriality and within-team unhealthy competitiveness.
- Recognizing the informal leadership and influences that any team member may bring to the mission and believing in the power of a good idea, even when it may conflict with the idea of someone who has power because of their position.
- Maintaining the team's own internal discipline, guarding against member behaviour that threatens cohesiveness, or loss of focus on the mission, or the group's diverse composition. Every member of the team takes responsibility for this.
- Being supported by management, especially in otherwise hierarchically organized workforces with autocratic styles of leadership.
- Tolerating the inherent risk in "democratic" decision-making in order to get the increased benefits that are usually associated with creative and innovative ideas, and workforce "buy-in".
- Establishing and maintaining trust between members of the team, and in the mission itself.
- Developing clear roles and responsibilities and tracking performance of the team as a whole and individual members' commitments upon which the team's performance depends.
- Allowing sufficient time to maintain team commitments and to ensure that member needs are being met, such as for meetings, communications and information sharing, troubleshooting and reviewing progress.



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There is also a need to ensure a "follow-through" commitment in settings where an action may be decided by one person, initiated by a second person, continued by a third person, finished by another, and evaluated by yet another. This is a characteristic of most, if not all care settings. Generally, in addition to operating as a team with the characteristics listed above, organizations will ensure good "follow-through" commitment by:

- Clearly stating the intended outcomes, providing sound reasons and evidentiary support where available, for all activities associated with the intended outcomes, and tying them all to the overall purpose and mission of the organization.
- Ensuring "buy-in" by involving stakeholders and others who are likely either to be staunch, trusted allies or influential opponents who are also trustworthy (though opposing you), in the early stages of planning and implementation.
- Embedding responsibilities for teamwork and for follow-through commitment within an overall employment contract or code of conduct for employees, and supporting this through regular employee feedback and evaluation.
- Regularly restating the importance of goals and objectives, teamwork, faithful
 implementation and follow-through of activities for residents, and regularly
 acknowledging and where possible, rewarding, efforts to this end.
- Regularly reviewing (see "Verify" and "Evaluate" below) performance of the team
 as well as its individual members against goals and objectives (see "Care
 Planning" above).

Resources and Communication Strategies

- http://thegoodmanager.com A website with excellent articles about teamwork and performance improvement, as well as managing change
- "The Five Dysfunctions of a Team" by Patrick Lencioni: 1. Absence of Trust; 2.
 Fear of Conflict; 3. Lack of Commitment; 4. Unwillingness to Hold One Another Accountable; 5. Inattention to Results. Jossey-Bass Publishers
- http://www.asq.org American Society for Quality website with articles on performance improvement and teamwork
- http://kuuc.chair.ulaval.ca Chair on Knowledge Transfer and Innovation website on health services.
- http://www.rnao.org

 Registered Nurses' Association of Ontario website where you can locate Best Practice Guidelines refer especially to Developing and Sustaining Effective Staffing and Workload Practices which can be downloaded from the site.

I – Implementation Strategies

Recommendation

Restorative programs should at least include exercises that focus on strength, balance and flexibility and should be based on the principles of specificity*, progressive overload** and FITT (frequency, intensity, time and type)***. Programs should be targeted to people with like needs and abilities to ensure success of programs and performance specific outcomes.

Where possible, program designs should incorporate the Components of Functional Mobility (RCET, 2004), including:

- cardiorespiratory endurance
- anaerobic capacity
- muscular strength
- muscular endurance
- flexibility
- balance
- coordination
- body composition

*Principle of Specificity: Specific activities produce specific adaptations in specific components. For example, if the person wants to be able to get up from a chair more easily, exercise the muscles of the quadriceps (front of upper leg) group to enhance their strength

**Progressive Overload: This principle is important when planning for improvement in any component of functional mobility. As the body adapts to activity, the prescription can be manipulated (adding increased challenge) to result in a progressively greater effect. Older adults can progressively improve their cardio-respiratory, strength, balance and flexibility training when appropriately, increasingly challenged.

Frequency – the number of activity sessions per week. A minimum of 2-3 times
per week is recommended. In addition, moving in some way (reach, bend,
stretch, walk, etc.) everyday is an acceptable and effective prescription for
maintaining overall health and well-being.

^{***}Frequency, Intensity, Time, and Type

Activity+Aging Community of Practice

Recommended Practice Guidelines

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- Intensity considers the level of exertion required for the activity. The activity should be of sufficient intensity to challenge the individual without being perceived as unduly strenuous. A simple measure of intensity can measure this.
- Time the amount of time spent performing the activity. It is recommended that a program for more frail individuals last between 20-30 minutes.
- Type refers to the activity performed. This relates back to the principle of specificity. The activity selected should be specific to the desired goal.

Resources

- CSEP documents See Canadian Society for Exercise Physiology http://www.csep.ca
- Can Fit Pro Older Adult Fitness Specialist manual (see Training for Uptake page 26 this document)
- http://www.phac-aspc.gc.ca/pau-uap/paguide/older/index.html Canada's Physical Activity Guide for Older Adults
- CCAA's FFOA course (see Training for Uptake page 26 this document)
- Alan, K., and Jones, J (2005) Teaching and leadership skills. In *Physical activity instruction of older adults: Essentials for Instructors*. Jones, C.J. & Rose, D.J. (Editors). Champaign, IL: Human Kinetics, 301-315.
- International Society for Aging and Physical Activity (2004). International curriculum guidelines for preparing physical activity instructors of older adults. Champaign, IL: Human Kinetics. <u>www.humankinetics.com</u> or www.isapa.org/guidelines/index.cfm
- Rikli, R. & Jones, C.J. (2001). Senior fitness test manual. Champaign, IL: Human Kinetics. <u>www.humankinetics.com</u>
- Jones, C.Jessie and Rose, Debra J. (2005). Physical activity instruction of older adults in C. Jessie Jones and Debra J. Rose, editors. Champaign, IL: Human Kinetics



Principles of Conditioning

The biggest health gains are achieved when you go from being sedentary to meeting the recommended physical activity guidelines. But doing a little more, a little more often, means even greater benefits. The following principles can help understand what to consider to "do a little more, a little more" safely.

The F.I.T.T. Principle

Improvement in physical fitness requires certain minimal conditions, referred to as the F.I.T.T. Principle. Positive adaptations will occur when frequency, intensity, type and time/duration of physical activity are adequate.

F.I.T.T. F	Principle and the	Physical Activity Guide for Adults
Frequency	Number of activity sessions per week	Endurance: 4-7 days a week Flexibility: 4-7 days a week (daily for older adults) Strength: 2-4 days a week
Intensity	Level of exertion required	Related to time and frequency. Measured by Talk Test, Perceived Exertion or Heart Rate Monitoring. Light: 60 min./day, every day Moderate: 30-60 min./day, 4 days/week Vigorous: 20-30 min./day, 4 days/week
Туре	Type of activity performed	Endurance Flexibility Strength (strength & balance for older adults)
Time	Amount of time spent doing the activity	Related to intensity and frequency. Should be accumulated in segments of at least 10 minutes. Light: 60 min./day, every day Moderate: 30-60 min./day, 4 days/week Vigorous: 20-30 min./day, 4 days/week

The Overload Principle

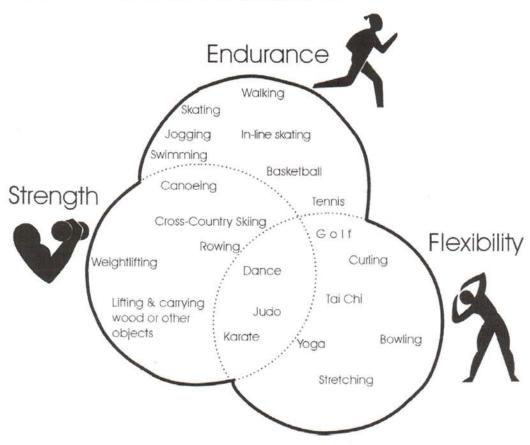
The Overload Principle (sometimes called *progressive overload*) is important when planning for improvement in endurance, strength or flexibility. It is applied when one of the components of F.I.T.T. is increased beyond the body's accustomed level of tolerance. The body adapts to this

new stress by increasing its work performance. Overload should be added in short, gradual increments to allow the body to recover adequately between physical activity sessions (progressive).

People new to physical activity should start at a low level of intensity to allow time for adaptation and learning and to minimize soreness and possible injury. Duration and frequency can be manipulated first, then intensity.

Specificity of Training

Specificity of training states that training effects occur only in the muscle groups and systems that are involved in that particular mode of training. For example, stretching will not improve endurance. Doing resistance training for the biceps will not improve strength in the quadriceps. However, many activities can promote more than one component of physical activity, as seen in the graphic below.



Produced by the Physical Activity Resource Centre, 2003 Funded by the Government of Ontario



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V – Verify

Recommendation

The activation professional should support the care team to engage in a continuous and informal feedback process with the person and support the communication of this feedback between care team members to ensure the care plan is meeting the needs of the person and to address any subsequent plan adjustments.

A question that should often cross the mind of the activation professional is "why *this program* for *this person*?" In answering this question, the activation professional will, on an ongoing basis, take a critical look at what the care team is trying to achieve and review if the approach is appropriate.

If necessary, the verification process can be formalized during weekly team meetings, monthly case conferences or quarterly reviews; the specific interval may vary from place to place or from person to person.

Ongoing verification provides the activation professional with the information needed to adjust the program in a timely manner to further tailor the care plan to better meet the needs of the person. Tailoring the intensity of the program minimizes frustration and boredom, ensures safety, and optimizes the level of challenge for the person (Lazowski et al., 1999).

Resources

- http://www.aafp.org/fpm/990400fm/25.html A Team Approach to Quality Improvement in April, 1999 American Academy of Family Physicians by Miriam Schwarz, MPA, RRA, Suzanne E, Landis, MD, MPH, and John E, Rowe, MD
- http://www.asq.org/learn-about-quality/project-planning-tools/overview/pdsa-cycle.html
 The PDCA (Plan-Do-Check-Act) cycle (also sometimes called the PDSA Plan Do Study Act or the Deming Cycle or the Shewart Cycle), is W. Edwards Deming's four-step model for continuous quality improvement. The Cycle repeats for continuous improvement. The V for Verify Approach in our A.C.T.I.V.E. Guide has the same meaning as the C ("Check") or S ("Study") in the PDSA.
- http://bmj.bmjjournals.com/archive/7031ed.htm A primer on leading the improvement of systems by Donald M Berwick, Based on the plenary address to the First Annual European Forum on Quality Improvement in Health Care, London, 9 March 1996



E - Evaluate

Recommendation

The activation professional should engage in a formal evaluation process, as directed by an evaluation plan that has been developed by the care team. This should include, at a minimum, re-testing on the (minimum) three objective measures used in the original and followup assessments. At least annually, the A.C.T.I.V.E. cycle should be repeated.

At least quarterly re-assessment (there should also be a re-assessment when there is a signficant change of condition) and an annual evaluation of outcomes at minimum will provide the activation professional with an ongoing assessment of the person's physical activity experience and progress. Periodically 'checking-in' will also help the activation professional ensure the program continues to suit the person's needs and preferences. Measurement and communication of physical gains can provide powerful motivation for the person.

Resources

- Program Evaluation for Restorative Care (PERC): Canadian Centre for Activity and Aging, www.uwo.ca/actage, www.ccaa-outreach.com
- Fitzgerald, C et al. 2004. Restorative Care Education and Training Manual (RCET). London, ON
- Meyers, A.M. 1999. Program Evaluation for Exercise Leaders. Human Kinetics, Champaign IL. Program Evaluation for Restorative Care course. Canadian Centre for Activity and Aging.
- Rikli, R. & Jones, C. J. (2001). Senior Fitness Test Manual. Champaign, IL: Human Kinetics.

These are just a few suggestions for resources – others may be continuously published and available. Contact the SHRTN library for up-to-date and more comprehensive information.



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Recommended Training Available for Uptake of these Guidelines

Physical Activity Leadership Courses

Nationally available leadership courses for health care workers, volunteers or family members of older adults. The Leadership training programs promote accountable and effective functional mobility opportunities for well and frail older adults participating in programs in various settings such as Community Centres and Long Term Care Facilities.

- Post Rehab Exercise for Stroke (PRES): This one day workshop will instruct
 guidelines for fitness and mobility exercise program for community based group
 exercise programs for stroke survivors. One of the following courses is highly
 recommended to be completed before taking this course: RCET, FFOA, FF ADP,
 SFIC
- Get Fit for Active Living (GFAL): Get Fit for Active Living is an eight week
 education and exercise program designed to introduce older adults to the
 benefits of exercise and an active lifestyle. The program consists of two aerobic
 exercise classes, one weight-training class and a one-hour education class each
 week. Participants learn how to get started on a regular exercise program, and
 about the importance of a healthy, active lifestyle for maintaining independence.
 Facilitator Course also available through the CCAA pre requisite SFIC
 certification
- Functional Fitness For Adult Day Programs: Developed for adult day centre staff. This course focuses on exercise design and delivery of safe and effective exercise programs for their clients. Those who are already leading exercise programs will learn important exercise principles and techniques for incorporating them, as well as exercises that improve strength, balance, flexibility and posture.
- Functional Fitness for Older Adults (FFOA) Workshop: Designed for staff
 working in long-term care facilities, retirement residences and adult day
 programs who want to learn how to instruct appropriate physical activity
 programs for residents/clients; emphasis is on maintaining or improving balance,
 leg and arm strength and mobility of the frail older adult.
- Home Support Exercise Program (HSEP): An evidence-based in-home exercise program consisting of 10 simple, yet progressive exercises designed to enhance and maintain functional fitness, mobility, balance and independence. This 4-hour workshop is designed for front-line service providers, caregivers and family members in a position to help the frail, homebound older adult.
- Restorative Care Education and Training Course (RCET): Designed for staff
 and those interested in working in long-term care facilities who want to learn how
 to develop an effective and beneficial restorative aide program with an emphasis
 on mobility, transfers, eating, and communication.



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- Seniors Fitness Instructor Course (SFIC): The SFIC was developed to
 address a need for training and information about appropriate physical activity
 programs for older adults. It is a certification program for anyone (older adults,
 young adults and volunteers) who want to learn how to design and lead effective
 fitness classes for seniors.
- Train the Trainer is a course designed for individuals with a university degree in a health-related field or a college diploma with related experience who have taken one or more of the CCAA courses and become certified if applicable (SFIC). Ideal for individuals who desire to facilitate the growth and development of the CCAA's leadership training programs.

Visit <u>www.ccaa-outreach</u> for information on upcoming courses or e-mail us at ccaa@uwo.ca



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