STRIDE Provider Training

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Outline

• Introduction to STRIDE
• Falls risk factors
• Exercise Providers: Putting Evidence into Practice
• Essential elements of exercise interventions
• Fidelity
• Self-management
• Interactive discussions
STRIDE Clinical Trial

Joint Principal Investigators

Shalender Bhasin MD (Harvard)
Tom Gill MD (Yale)
David Reuben MD (UCLA)
Why are We Here?

- Why STRIDE?
- What is STRIDE?
- Partnerships
Partnerships for Exercise Interventions

- Home Health
- Community Based Exercise
- Outpatient PT

Local Patient and Stakeholder Council
Why STRIDE?

Falls: A National Concern

- 1 of 3 people > age 65 fall annually
- Leading cause of fatal and non-fatal injuries
- >95% of hip fractures caused by falls
- Direct costs in people >65 yr = $30 BIL; $68 BIL by 2020

Despite evidence that falls can be prevented by multifactorial interventions, the quality of care for falls remains poor

What is STRIDE?

- Clinical trial of a multifactorial fall injury prevention strategy in older persons
- $30 Mil award from PCORI in partnership with NIA

PCORI: Patient-Centered Outcomes Research Institute
NIA: National Institute on Aging
STRIDE Study Design

- A pragmatic clinical effectiveness trial
  - implemented in the context of clinical practice
  - Cluster randomized: Unit of randomization - a practice
- 6000 participants ≥ age 75
  - recruited across 10 sites
  - 75 participants from each of 80 practices over 18 months
- Intervention duration: 1.5-3.0 yr.
- Study duration: 5 years
Clinical Trial Sites

- Essentia Health
  - Duluth, MN
- University of Iowa Health Alliance
  - West Des Moines, IA
- University of Michigan
  - Ann Arbor, MI
- Reliant Medical Group
  - Worcester, MA
- Partners Healthcare
  - Boston, MA
- Mount Sinai Health System
  - New York, NY
- Johns Hopkins Medicine
  - Baltimore, MD
- University of Pittsburgh Medical Center
  - Pittsburgh, PA
- HealthCare Partners
  - Torrance, CA
- University of Texas Medical Branch at Galveston
  - Galveston, TX
Key Features of the Trial’s Design

• Patient-centered
  – Multifactorial, individually-tailored, risk factor-based
  – Practice guidelines: CDC's "STEADI" toolbox and AGS/ BGS Guidelines

• Primary outcome
  – Serious fall injuries leading to medical attention

• Secondary outcomes
  – All injurious falls
  – All falls regardless of injury
  – Patient well-being
    • fall efficacy
    • physical function and disability
    • anxiety, depressive symptoms
Can redesigning medical practices and engaging patients reduce serious falls-related injuries?
The Participants

- Community dwelling persons
- 75 years of age or older
- One or more risk factors for falls
  1. Fallen and been hurt in the past year
  2. Fallen two or more times in the past year
  3. Fear of falling because of balance or gait
  4. Balance problems when bathing, dressing or getting in and out of a chair
  5. Use of cane or walker when walking
Process for Each Patient

- Screening and recruitment
- Information gathering (risk assessment)
- Patient engagement
- Care plan formation
- Care plan implementation
- Monitoring and revision
Flow of Participants from Recruitment to Exercise Providers

List of Age Eligible Patients from Practice Site EHR to Yale

Yale Central Recruitment & Screening Consent Patients

Consented Participants List Given to Site Coordinator/FCM

FCM Initial Visit Assessment

Recommendations to PCP

Collaborative Decision Making: Patient & FCM

Home Health Care, Outpatient PT, CBE, or Self-Management

PCP Approval
Multi-risk Factor Management of Falls

Risk Factors for Falls

- Medications
- Postural hypotension
- Visual impairment
- **Strength, gait, or balance disorder**
- Feet and footwear
- Vitamin D deficiency
- Osteoporosis
- Home safety
Algorithm for Flow of Patients into Different Exercise Programs

Information in PVQ: Section II-IV, V-VIII

Assessments during Initial Visit: Mini-Cog, SPPB

SPPB > 10

SPPB 4-10

Patient preference

Mini-Cog

NI Abnl

Signs, Symptoms

CBE

≤3 BPI > 3

SPPB < 4

Homebound?

Yes

Patient preference

Outpatient PT

Home Health PT

Signs, symptoms:
- Asymmetry/weakness of leg, abnormal gait (observed during SPPB)
- Vestibular symptoms, excessive fear of falling, need for mobility device (reported on PVQ)
- Parkinson’s disease in EHR (or “signs” observed during SPPB)
# My Independence Plan

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Why Does It Matter?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in leg strength, balance and/or walking</td>
<td>People with decreased leg strength and changes in balance and/or gait are more likely to trip, slip and fall.</td>
</tr>
<tr>
<td>Medications</td>
<td>Medications that cause lightheadedness or tiredness (e.g., sleeping pills) can increase the likelihood of falling.</td>
</tr>
<tr>
<td>Postural hypotension</td>
<td>A drop in blood pressure when a person changes positions, which in turn, increases the chances of falling.</td>
</tr>
<tr>
<td>Feet, footwear and walking aids</td>
<td>These things can make it more difficult to walk:</td>
</tr>
<tr>
<td>Home/Environmental hazards</td>
<td>- Foot numbness, sores or deformities</td>
</tr>
<tr>
<td></td>
<td>- Shoes that don’t fit well or provide proper support</td>
</tr>
<tr>
<td></td>
<td>- Walking aids that are not the right size</td>
</tr>
<tr>
<td></td>
<td>Objects on the floor, loose throw rugs, low lighting, and not having handrails can increase the likelihood of tripping, slipping, and falling.</td>
</tr>
</tbody>
</table>
My Independence Plan

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Improve my balance, strength and walking

**How?**
Begin Otago program

**When?**
By November 8.

**What will be done by Falls Care Manager?**
Falls Care Manager will order Otago through Happy Days Home Health.

**What I need to do?**
If I have not heard from them by November 4, I need to call 612-308-1414.

**How do I monitor progress?**
- Home health started
- In exercise program
- Improved strength/balance
- Follow up appointment with Falls Care Manager on December 15 at 2pm
WHY EXERCISE FOR FALL PREVENTION?
Relative Risk Ratio (RR) or Odds Ratio (OR) for Falls

- Age > 80 years
- Muscle weakness
- Gait deficit
- Balance deficit
- Impaired ADL
- Cognitive impairment
- Depression
- Arthritis
- Visual deficit
- History of falls
- Use assistive device

* Associated with muscle weakness

Mean RR or OR

J Am Geriatr Soc. 2001
Rate Ratio = 0.84
P<0.001

16% overall reduction in falls

Sherrington et al., 2011
**Value of Single Leg Stand**

- RCT of 94 postmenopausal women
  - Control vs. Exercise
  - Exercise: 6 mo., single leg stand, 1 min per leg 3 x per day
    - Those aged >=70 yr. (n=31): significant increase in hip BMD
    - Those aged <70: no significant change

Sakai et al. J Bone Min Metab 2009
Best Practice Recommendations for Exercise Training in Fall Prevention

- **Moderate to high challenge to balance**
- Includes strength training
- **Provides sufficient exercise dose: 50 hours with ≥ 2 hr./wk**
- On-going exercise
- Delivery strategies appropriate to ability
- Both group and home-based exercise is effective

- **Avoid brisk walking in high risk individuals**
  - [These accounted for the most benefit in successful fall reduction between studies.]

  Sherrington *et al.*, 2011
Ways in Which Interventions May Not Reduce Fall Risk

Insufficient

- Duration
- Intensity
- Modification or specificity of training
- Progression
- Weight bearing
- Limitation or elimination of brisk walking in high fall risk groups
Objectives in Exercise Training for Fall Prevention

• Develop lower extremity strength and power *
• Improve balance and stability
• Increase joint mobility and flexibility
• Address functional strengths, weaknesses, and injury risk
• **Progression: ”Start Low and Go Slow”**
• Maintain regular, comfortable, yet challenging exercise appropriate to ability and competence
• Provide an environment that builds self-efficacy

* Muscle power:
  1. How fast force can be applied
  2. Better associated with physical function than strength
Essential Elements of STRIDE Exercise Programs

- Exercise Programs for Fall Prevention
  - Tai Chi (other than sitting unless it progresses to standing)
  - Stepping On
  - Otago

  OR exercise programs that contain
  - Balance plus at least one of the following:
    - Strength training (preferred)
    - Flexibility exercises
    - Endurance exercise
  - Some forms of dance (e.g., line, ballroom, jazzercise, Zumba)

- Adaptability
- Potential for progression: frequency, duration, or intensity
- Exercises that offer high challenge “Without challenge we can’t change”
- Instruction in exercise techniques
- Supervision
- Brisk walking as the only type of exercise should be excluded
In partnership with primary care physicians and FCMs

- Home Health Care Physical Therapy
- Outpatient Physical Therapy
- Community-Based Exercise Programs
- Self-Management
OUTPATIENT PHYSICAL THERAPY
Communication: FCM to Outpatient Physical Therapist

• Please see Communication Template in Training Materials
STRIDE Exercise Interventions
Participants Recommended for Outpatient Physical Therapy

• Moderate to severe mobility limitations (SPPB 4-10)
• Possible clinically significant pain
• Possible cognitive impairment
• Deliver Otago Exercises
• Training (with CEU) available at

http://www.med.unc.edu/aging/cgec/exercise-program
http://www.med.unc.edu/aging/cgec/exercise-program

Otago Resources

The Otago Exercise Program is a series of 17 strength and balance exercises delivered by a Physical Therapist in the home that reduces falls between 36 and 40% for frail older adults. This evidence-based program, developed in New Zealand, calls for PTs to assess, coach and progress patients over the course of six months to one year.

**Course Description** Find out more about the self-paced online training 3 CEUs only $25. The course is also certified for 2 CEUs in 19 states by The Federation of State Boards of Physical Therapy - [Procert](http://www.med.unc.edu/aging/cgec/exercise-program). Over 1,000 PTs have completed this online training.

[Click here](http://www.med.unc.edu/aging/cgec/exercise-program) if you need to submit a justification for CEUs to your local CEU granting agency.

Use this to help educate [Payers](http://www.med.unc.edu/aging/cgec/exercise-program).

Our next FREE Let's Talk Otago webinar is the 2nd Wednesday of each month at 5 pm email otago@unc.edu to be invited. Phone to call in is 919 962 2734

Or check out the [Q&A from our last Ask the expert Webinar](http://www.med.unc.edu/aging/cgec/exercise-program)
Otago Exercise Program

• Evidence-based, highly successful
• Administered initially by physical therapist
• Home or office based

Otago Exercise Programme

to prevent falls in older adults

A home-based, individually tailored strength and balance retraining programme
Evidence for Otago’s Effectiveness

- **Meta-analysis** (Robertson, 2002)
  - 1,016 participants aged 65-97
  - High risk of falling per physician assessment

- **35% reduction in falls**, RR = 0.65 (0.57-0.75).
- **35% reduction in fall-related injuries**, RR = 0.65 (0.53-0.81)

- Improved balance and strength at 6 months

“This exercise program was most effective in reducing fall-related injuries in those aged 80 and older and resulted in a higher absolute reduction in injurious falls when offered to those with a history of a previous fall.”
## Overall Otago Plan

<table>
<thead>
<tr>
<th></th>
<th>Strengthening</th>
<th>Balance retraining</th>
<th>Walking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activities</strong></td>
<td>5 leg muscle strengthening exercises, with up to 4 levels of difficulty*</td>
<td>12 balance retraining exercises, with up to 4 levels of difficulty*</td>
<td>Advice about walking</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>The amount of weight in ankle cuff should allow 8–10 repetitions before fatigue</td>
<td>Set each exercise at a level that the person can safely perform unsupervised</td>
<td>Discuss present walking activities</td>
</tr>
<tr>
<td><strong>Intensity</strong></td>
<td>Moderate</td>
<td>Moderate</td>
<td>Usual pace with usual walking aid</td>
</tr>
<tr>
<td>*<em>Progressions</em></td>
<td>Increase to 2 sets of repetitions. Increase the weight of the ankle cuff</td>
<td>From supported exercise to unsupported exercise</td>
<td></td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>At least 3 times a week, with rest day between</td>
<td>At least 3 times a week</td>
<td>At least 2 times a week</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Approximately 30 minutes to do the flexibility, strength and balance exercises; exercises can be divided up over the day</td>
<td></td>
<td>30 minutes; can be broken down to three 10-minute walks throughout the day</td>
</tr>
</tbody>
</table>
# Otago Exercise Program Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Exercise Visits</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Telephone Follow-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Monitoring of Exercises Completed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Monitoring of any Falls</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
The Otago Activity Booklet

• Daily Monitoring Calendar
  – 3 days per week
  – Balance
  – Strength
  – Can split into different times of day

• Safety reminders

• Guidelines for walking and general increased PA

• Warm up ROM exercises

• Guidelines for strength and balance exercises
Flexibility Exercises

Trunk Movements
• Stand up tall and place your hands on your hips.
• Do not move your hips.
• Turn as far as you can to the right, comfortably.
• Turn as far as you can to the left, comfortably.
• Repeat five times to each side.

Ankle Movements
• Either stand or sit.
• Pull the foot towards you, then point the foot down.
• Repeat 10 times for each foot.
Progressive Otago
Strengthening Exercises

Seated Leg Extension
w/o weight    with weight

Leg Flexion
w/o weight    with weight
Otago Strength Exercises

- Sit-to-Stand Two Hands
- Sit-to-Stand One Hand
- Sit-to-Stand No Hands
Otago Balance Exercises

- **Supported and Unsupported Heel – Toe Walking**
- **Supported and Unsupported One Leg Stand**
Otago Exercise Videos

• Available from
  – CGEC – UNC:
    http://www.med.unc.edu/aging/cgec/exercise-program/videos
  – Integrating Otago Exercises In the Context of Activities of Daily Living – STRIDE Website
HOME HEALTH CARE
STRIDE Exercise Interventions
Participants Recommended for Home Health Physical Therapy

• Severe mobility limitations (SPPB <4)
• Possible clinically significant pain
• Possible cognitive impairment
• Must be homebound
• Deliver Modified Otago exercises performed in the context of activities of daily living
• Online Training available (URL TBD)
Challenge:
Evidence for effective exercise interventions (>50 hours of exercise, 2 d/wk) may not be consistent with episodes or frequencies of home health care

Solutions:
• Support self-management of exercise interventions
• Support caregivers for incorporation of exercises in the context of activities of daily living.
  – Selected resources may be found in the tool box for this module
• Refer to Community-based Fall Prevention Programs
Balance and Strength Training in the Context of Activities of Daily Living

The LiFE study (Clemson et al: BMJ 2012;345:e4547)

• Subjects: 83 yr of age; history of falls

Interventions

• Lifestyle Integrated Functional Exercise (LiFE) approach (n=107; taught principles of balance and strength training and integrated selected activities into everyday routines),

• Structured program (n=105; exercises for balance and lower limb strength, done three times a week)

• Sham control program(n=105; gentle exercise).
After 12 months follow-up,

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Falls</th>
<th>Incidence of falls (Person years)</th>
<th>Reduction in Rate of Falls Relative to Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiFE</td>
<td>172</td>
<td>1.66</td>
<td>31%</td>
</tr>
<tr>
<td>Structured Exercise</td>
<td>193</td>
<td>1.90</td>
<td>Not significant</td>
</tr>
<tr>
<td>Control</td>
<td>224</td>
<td>2.28</td>
<td></td>
</tr>
</tbody>
</table>

- Measures of static balance, ankle strength, physical function, and adherence were significantly better in the LiFE group than in controls and structured exercise.
- LiFE and structured groups had a significant and moderate improvement, respectively, in dynamic balance, compared with controls

Clemson et al: BMJ, 2012 46
LiFE Manuals Available
From Amazon (not the river)

Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls

PARTICIPANT’S MANUAL

Lindy Clemson, Jo Munro & Maria Fiatarone Singh

Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls

TRAINER’S MANUAL

Lindy Clemson, Jo Munro & Maria Fiatarone Singh
Examples of Otago Exercises Applied to ADL

- Stand on toes when reaching to get something out of kitchen cabinet
- Sit to stand without using arms for 10 repetitions when getting up from chair or off the toilet
- Walk sideways around kitchen table
- Stepping over objects

Training video for providers available at: (URL TBD)

Integrating Otago Exercises In the Context of Activities of Daily Living – STRIDE Website
Select Balance Activities With Patients to Incorporate Training Principles

<table>
<thead>
<tr>
<th>Balance principle</th>
<th>Balance activity</th>
<th>Example of daily tasks. How, when and where?</th>
<th>Tick if done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease base of support</td>
<td>Tandem stand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tandem walk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>One-leg stand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shifting weight and moving to the limits of stability</td>
<td>Leaning side to side</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaning forwards and backwards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stepping over objects</td>
<td>Stepping forwards and backwards</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stepping side to side</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Select Strength Activities With Patients to Incorporate Training Principles

### LIFE Activity Planner: strength training. Week starting / /

<table>
<thead>
<tr>
<th>Strength principle</th>
<th>Strength activity</th>
<th>Example of daily tasks. How, when and where?</th>
<th>Tick if done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bend your knees</td>
<td>Bend knees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sit to stand</td>
<td>Normal chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On your toes</td>
<td>Stand on toes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walk on toes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On your heels</td>
<td>Stand on Heels</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walk on heels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up the stairs</td>
<td>Up stairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Move sideways</td>
<td>Step sideways</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tighten muscles</td>
<td>Move Ankles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bend / straighten knees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tighten / relax buttocks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Communication: FCM to HHC PT and Other HH Services

- Physician’s note will document homebound services and need for skilled services
- Each HH referral includes a summary of falls care management assessment
- Copy of the patient falls care plan developed in collaboration with the therapists
- In addition to referrals for physical exercise, the HH referral will request a home environmental assessment by an occupational therapist
- In-home evaluation of patient’s medication management
Communication: FCM to HHC PT and Other HH Services

• Please see Communication Template in Training Materials
After your home health evaluation please send us a plan of care (CMS Form 485)

At discharge please send a summary of treatments that were provided including number of home health visits by each provider. We are requesting that you please list of any home modification recommendations that were implemented. Please advise us

- Number of Home Health Visits by Each Provider
- What services were provided (medication management, the results of the home environmental assessment and recommendations made, the exercises implemented and the frequency, intensity, and duration of physical therapy interventions
- Please list all medical equipment patient received
- Please list all changes in medication
- Your referrals to community based exercises or recommendations for continued self-management
- Provide results of beginning and final SPPB

Our falls care manager is XXXX and can be reached at XXX if you have any questions or need to discuss the program with Dr.......
# HOME HEALTH CERTIFICATION AND PLAN OF CARE

1. Patient's Hi Claim No.  
2. Start Of Care Date  
3. Certification Period From:  
4. Medical Record No.  
5. Provider No.  

6. Patient's Name and Address  
7. Provider's Name, Address and Telephone Number  

8. Date of Birth  
9. Sex  
10. Medications: Dose/Frequency/Route (New (C)hanged  

11. ICD-9-CM Principal Diagnosis  
12. ICD-9-CM Surgical Procedure  
13. ICD-9-CM Other Pertinent Diagnoses  

14. DME and Supplies  
15. Safety Measures:  

17. Allergies:  

18.A. Functional Limitations  
18.B. Activities Permitted  

19. Mental Status:  
20. Prognosis:  

21. Orders or Discipline and Treatments (Specify Amount/Frequency/Duration)  
22. Goals/Rehabilitation Potential/Discharge Plans  

23. Nurse's Signature and Date of Verbal SOC Where Applicable:  
24. Physician's Name and Address  
25. Date HHA Received Signed POT  
26. I certify/receive that this patient is confined to his/her home and needs intermittent skilled nursing care, physical therapy and/or speech therapy or continues to need occupational therapy. The patient is under my care, and I have authorized the services on this plan of care and will periodically review the plan.  
27. Attending Physician's Signature and Date Signed  
28. Anyone who misrepresents, falsifies, or conceals essential information required for payment of Federal funds may be subject to fine, imprisonment, or civil penalty under applicable Federal laws.
COMMUNITY-BASED EXERCISE
STRIDE Exercise Interventions
Participants Recommended for Community-based Exercise

- Mild mobility limitations (SPPB 11-12)
- No clinically significant pain
- No cognitive impairment
- Deliver a CDC-endorsed OR Approved alternative CBE program
STRIDE Exercise Interventions
Participants Recommended for Community Based Exercise

CDC-endorsed
• Otago
• Tai Chi
• Stepping On
• YMCA-Moving for Better Balance

Alternatives*
• Matter of Balance
• SilverSneakers Classic
• SilverSneakers Strength & Balance
• Bone Builders
• Silver and Fit
• Otago group exercise

* If programs contain Essential Criteria for exercise programs and if program is given by trained and experienced instructors
STRIDE Exercise Interventions
Community Based Exercise – UTMB

CDC-endorsed

• Tai Chi

Alternatives

• Stretch and Balance
• Zumba, Jazzercise, Line Dance, BR Dance
• SilverSneakers Classic
• Beijing Exercise Assn. Whole Body Exercise
Communication: FCM to CBE Providers

• Please see Communication Template in Training Materials
Included in Communication FCM to CBE Providers

• Assessment data
  – SPPB
  – Pain
  – Cognition

• Essential elements of exercise training

• Option for documenting adherence

• Messaging for self-management
Roles of Providers

• Understand STRIDE and its components
• Support your FCM’s recommendations
  – Encourage participation in your exercise intervention
  – Encourage and assist with self-management
• Deliver program with high fidelity, challenge, and progression
• Assist participant in monitoring adherence
• Cheerlead: Take pride in STRIDE
Promoting Exercise to Reduce Falls and Injuries

All providers should promote

• Benefits of exercise
• Best practice recommendations
• Strategies to support patients’ decisions to initiate and maintain fall reducing strategies, particularly exercise
• Establish communication mechanisms for building and maintaining partnerships with FCM and other providers
Delivering High Fidelity Exercise Interventions

1. Knowledge of the protocol
2. Goal setting and decision making
3. Participant safety
4. Equipment use
5. Hands-on training skills
6. Patient participation
Fidelity of Exercise Interventions
Local Fidelity Working Groups

• Fidelity: Delivering a program as intended.
• Local patient and stakeholder Fidelity Working Group
  – reviews intervention fidelity to ensure that the HH, PT, and CBE programs are administered
    • faithfully
    • comply with the essential elements of exercise training
  – Possible membership
    • Representatives from Home Health Agencies, Outpatient Physical Therapy, Community-based Exercise Programs,
    • Falls Prevention Coalitions
    • Site PI, Co-I, Clinical Site Director, and/or Site coordinator.
Local Fidelity Working Groups

Patients

Home Health

Outpatient PT

Community Based Exercise
Monitoring

• **Purpose**
  – To assist the FCM in follow-up conversations with participants regarding future exercise decisions

• **Assess and reassess as appropriate to intervention**

• **Track progress through**
  – Attendance
  – Progression

• **Help problem solve barriers to exercise participation**

• **Report to FCM**
Objectives for exercise providers:

- Support participant’s ability to implement and continue their Plan* as it changes over time
- Establish a collaborative partnership with participants to implement and refine their Plan* according to preferences, capacity and progress
- Used from patient’s first visit with FCM and throughout any course of home care, PT or CBE program

*My Independence Plan
# My Independence Plan

## Risk Factor

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Why Does It Matter?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in leg strength, balance and/or walking</td>
<td>People with decreased leg strength and changes in balance and/or gait are more likely to trip, slip and fall.</td>
</tr>
</tbody>
</table>

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## Improve my balance, strength and walking

### How?

Begin Otago program

### When?

By November 8.

### What will be done by Falls Care Manager?

Falls Care Manager will order Otago through Happy Days Home Health.

### What I need to do?

If I have not heard from them by November 4, I need to call 612-308-1414.

### How do I monitor progress?

- [ ] Home health started
- [ ] In exercise program
- [ ] Improved strength/ balance
- [ ] Follow up appointment with Falls Care Manager on December 15 at 2pm
Additional Resources

• Training
  – Otago: [web site URL]
  – Modified Otago for HH [web site URL]

• Training Modules, e.g.:
  – Module 22: Home Safety Risks
  – Module 15: Visual Impairment
  – Module 21: Medication Risks
  – Module 20: Postural Hypotension
FREQUENTLY ASKED QUESTIONS
When Will I Start Seeing Patients?

• First patients available for FCM in about third week of June

• All practices should be ready for to see patients by August 1, 2015

• All practices should be up to full capacity by September 1, 2015
Discussion
SUPPLEMENTAL INFORMATION
Muscle Strength Differs Between Older Fallers and Non-fallers

- Community Dwelling >65 years
- Compared to non-fallers, fallers have
  - ↓ front/back thigh strength (quadriceps/hamstrings)
  - ↓ hip abductor/adductor strength
  - ↓ ankle strength (plantar flexion, dorsiflexion, inversion and eversion)
  - ↓ lower limb explosive power
  - ↑ asymmetry between limbs in strength and power

Skelton D et al. Age Ageing 2002
Progressive, Challenging Exercise and Balance Programs Include

Exercise Selection

– Progressive from variable starting levels
  • Easy to hard
  • Simple to complex
  • Known to unknown
  • Stable to unstable
  • Weight bearing as much as possible

– Systematic
  • Stabilization with progressing to adding
  • Strength with progressing to adding
  • Power
Otago
Flexibility Movements

Head Movements
• Stand up tall and look ahead.
• Slowly turn your head as far as you can to the right.
• Slowly turn your head as far as you can to the left.
• Repeat five times to each side.

Neck Movements
• Stand up tall and look ahead.
• Place one hand on your chin.
• Guide your head straight back.
• Repeat five times.

Back Extension
• Stand up tall with feet shoulder-width apart
• Place your hands on the small of your back
• Gently arch your back. Repeat five times
Otago Strengthening Exercises

- Hip Abduction with weight
- Supported Heel Raises
- Unsupported Heel Raises
- Supported Toe Raises
- Unsupported Toe Raises
Progressive Otago Balance Exercises

- Supported Knee bends
- Unsupported Knee bends
- Supported Backward Walking
- Unsupported Backward Walking
Otago Balance Exercises

Sideways Walking

Supported Heel – Toe Standing

Unsupported Heel – Toe Standing

Walking and Turning Around
Otago Balance Exercises

Supported Toe Walking

Unsupported Toe Walking

Backward walking

Stair Walking
Basic Elements of Balance Training

• Exercise in a standing position
• Practice controlled movements that increasingly challenge balance.
  – Wide base of support → narrow base of support → single leg
  – Hold on with 2 hands → one hand → fingertips only → none
• Move center of mass away from and back to midline
  – Controlled, safe movements
  – Weight shifting: side-to-side; forwards-backwards, turning
  – Increasingly move center of mass
  • Away from midline
  • Outside base of support
  • In all three planes of movement
• Changing surfaces: firm → soft; stable → less stable; horizontal → vertical
• Add upper extremity movements
• Add head and eye movement