Stand Up & Be Strong

Reduce Your Risk of Falling

APTA

Stand Up & Be Strong
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Co-Sponsored by the MN Department of Human Services

Stand Up & Be Strong!

Minnesota Chapter
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APTA
Combined Sections Meeting
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Co-sponsored by the
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MN Chapter, APTA

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Project Description

Kris Gjerde, PT

Project Manager

State of Minnesota Falls Prevention Initiative

The Vision

Older Minnesotans will have fewer falls and fall-related injuries, maximizing their independence and quality of life.

Minnesota Falls Prevention Initiative

- MN Board on Aging, MN Dept. Human Services CSSD grants to decrease LTC costs
- MN Department of Health
- Tier 1 Planning team:
  - broad range of public/private partners (including MN Chapter)
  - State, regional and local levels
  - Implementation of coordinated evidence-based falls prevention strategies

Falls – The Evidence

- One third of adults 65 and older fall each year
- Falls are the leading cause of injury death among older adults
- 95% of hip fractures are caused by falls
- People 75 and older who fall are 4-5 times more likely to be admitted to LTC for one year or longer

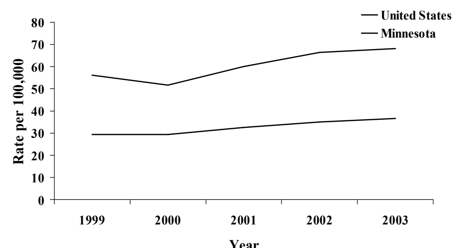
CDC (2007) Retrieved Jan. 1, 2008 from http://www.cdc.gov/ncipc/factsheets/adultfalls.htm

Falls in Minnesota

- Leading cause of hospitalized injury
- Leading cause of ER-treated injury
- Fourth highest unintentional fall death rate in the country (all ages)
- Fifth highest death rate from falls, age 65 & older
- Rate of falls is increasing at a faster rate than the rest of the country
- Falls in the elderly are driving rates

MN Dept. of Human Services, (2006)

Unintentional Fall Death Rates, United States and Minnesota, 1999-2003



CDC (2006) Rates are Age-Adjusted to US 2000. MN 68 US 37

MN State Falls Prevention Initiative Objectives

1. Increase awareness of prevalence and risk factors
2. Increase assessment of fall risk
3. Increase availability of evidence-based interventions
4. Increase access to these interventions
5. Enhance quality assurance efforts related to falls prevention
6. Create a replicable model for falls prevention

MN Dept of Human services, 2007

MN State Falls Prevention Initiative Key Elements

- Education of public & providers
- Exercise to increase lower-body strength and balance
- Conduct home assessments and modification
- Review medication use and modification
- Support self-management of risk factors and fear

Why MN Chapter?

- Membership expertise & creativity
- Membership provided program dissemination vehicle
- Funding opportunity through grant
- PTs with Community Partners provide positive community action team
- The workgroup had a good idea & plan

MN Chapter Acknowledges

Cheryl Anderson, PT, PhD. GCS
Corinne Ellingham, PT, MS
Laura Gilchrist, PT, PhD
Kris Gjerde, PT
Judy Hawley, PT, MAPL
Kiri Ness, PT, PhD, GCS
Marilyn Woods, PT
Sarah Noonan, PT
Consultant: Blake T. Andersen, PhD
HealthSciences Institute, www.healthsciences.org/

MN Chapter Workgroup

- Reviewed the falls prevention evidence
- Reviewed Fall Risk Factors
  - Decreased strength and balance
  - Medication use
  - Vision impairment
  - Unsafe home environment
  - Unsafe outside environment
  - Having fallen in past year
  - Fear of falling

Guiding Evidence

Falls Prevention Interventions in the Medicare Population, Rand (2003)

- Multifactor approaches are most effective
- Two most effective interventions are: lower body strengthening and medication review
- Strengthening was recommended or provided but was not sustainable in the nine programs reviewed

Rand. Falls prevention interventions in the medicare population(2003) Retrieved Jan. 1, 2008 from http://www.rand.org/pubs/reprints/RP1230/

MN APTA Project Goals:

1. Create a community-based system of fall risk assessment & prevention that is readily available
2. Enable individuals to self assess lower body strength & fall risk
3. Enable individuals to take action to decrease risk or maintain low risk

MN APTA Stand Up & Be Strong!

- System Change proposal submitted to MN DHS to create falls prevention community based model
- Funded by MN DHS CSSD grant to encourage decreased LTC usage
- Demonstration project created to prevent falls in older adults

Stand Up & Be Strong! What is it?

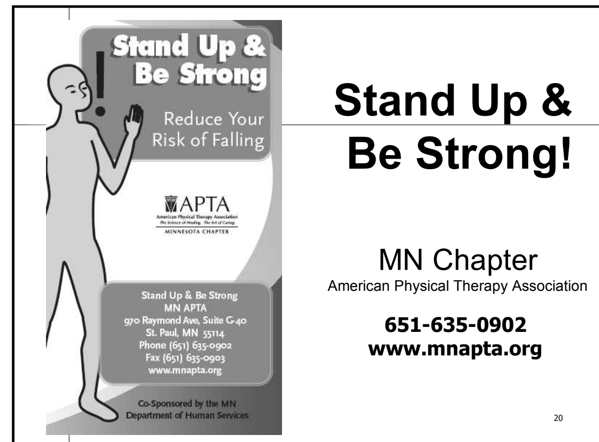
- Community Based Falls Prevention program
- Screening tool of lower body strength
- Simple promotion of physical activity
- Easily replicated public application
- Public relations/marketing tool: encourages interaction between colleagues, public, and students

Development

- Assumptions:
  - Physical therapists will serve as trainers & consultants
  - Focus: community dwelling older adults
  - Adults currently perform single repetition of sit to stand
- Requirements of screening tool:
  - Enables self assessment
  - Applicable to groups or individuals
  - Community based, not medical intervention
  - Includes action steps that allow technique variation
  - Simplicity

Initial Phase

- Brochure development
- Oct. 2005: MN APTA invited members in 10 pilot counties to participate
- Apr 2006: MN APTA trained 30 PTs
- May-Dec. 2006 PTs trained 587 community partners
- Jun. 2006: Community partners started screening participants



Stand Up & Be Strong!

MN Chapter
American Physical Therapy Association

651-635-0902
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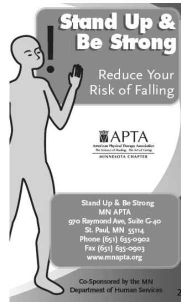
Primary Fall Risk Screen

1. Have you fallen in the past year?
2. Are you afraid that you might fall?
3. Do you frequently need to use your arms to rise from chairs?

"YES" indicates that you may be at risk



Physical Prescreen

- Cross your arms
- Rise to standing
- Successful rise: continue with timed sit to stand
- Unable: Proceed to high risk category

Timed Sit to Stand

Rikli, R.E., Jones, C.J., (1999) Development and validation of a functional fitness test for community-residing older adults. Journal of Aging and Physical Activity. 7 (129-161).

Risk Assessment

Record Your Fall Risk Score

- ☐ 8 or less times = **High Risk**
- ☐ 9 to 12 times = **Moderate Risk**
- ☐ 13 or more times = **Low Risk**

Action Steps

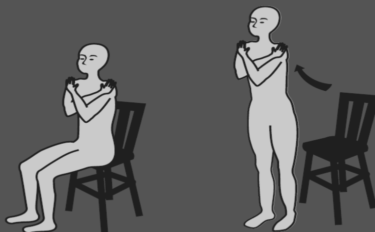
- **High Risk**: Consult your doctor or Physical Therapist for advice & instruction to improve your strength. Do the exercises only if you feel safe doing them on your own.
- **Moderate Risk**: Do the exercises. Seek assistance if you do not feel safe
- **Low Risk**: Continue your active lifestyle, add the exercises to your program
- **Groups: Add the exercises to your program**
- Reassess every 3 months

Exercises

- Sit to Stand
- Side Hip Raise

SIT TO STAND

A great exercise for strengthening thighs & buttocks.
Do three to five times each week.



1. Sit in a straight back chair with your feet shoulder-width apart. Count to four as you SLOWLY rise up to a standing position.

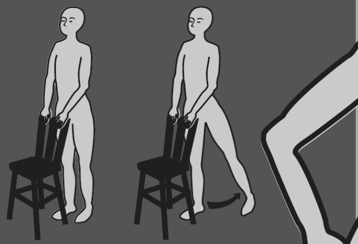
* *If this exercise is too difficult, start by using your hands for support. Using your hands will still build your strength.*

2. Pause. SLOWLY lower yourself towards the chair as you bend your knees to the count of four.
3. Repeat 10 times. Rest for one minute. Complete a second set of 10. If this is too difficult, start at a lower number and build up to 10.

* *Note: If you can't sit all the way down, or, if you feel pain or discomfort, place a cushion on the chair or squat down only four to six inches.*

SIDE HIP RAISE

The side hip raise targets the muscles of your hips and thighs.
Do three to five times each week.



1. Stand behind a sturdy chair with feet slightly apart and toes facing forward. Keep your legs straight. Place both hands on the back of the chair for support.
2. SLOWLY lift your left leg out to the side as you count to four. Keep your leg straight. (Only a small amount of movement is necessary).
3. Pause. Then, SLOWLY lower your left foot back to the ground to the count of four.
4. Repeat 10 times with the left leg and 10 times with the right leg. Rest for 1 minute. Complete a second set of 10 repetitions with each leg.

* *Note: As you become stronger, you can further increase your strength by holding on to the chair with only one hand. Progress to one finger support as you are able.*

Home Care Application

- Screening / Assessment tool
- PT referral indicator
- In-home strengthening program that does not require skilled care
- Enables measurement of progress

Benefits to Minnesota

- Support the health of Minnesota residents
  - Providing common protocol and material
  - Sharing the protocol with our communities
- Health Promotion for Community Partners
- Leverage lessons learned
  - Provide assistance &
  - Limited technical support to PTs and Community Partners
- Encourage physical therapist connections
  - Other health professionals
  - Community partners
  - Payers
  - Consumers

Benefits to MN Chapter Membership

- Support, protocol, and materials available to members
- Method to foster connections between physical therapists and their community
- Establish physical therapists as a key community resource for falls prevention
- Effective community marketing tool for PT practice
- Service to Members / increased engagement
- Health Plan relationships

Initial Postcard Response

Total age 60 and older = 2710

Score		Percent
High	929	34%
Moderate	776	29%
Low	673	25%
Unknown	332	12%

Postcard Demographics

Male	21%	n= 564
Female	69%	n= 1876
Not indicated	10%	n= 270
Fell in past year	32%	n= 864
Afraid of falling	46%	n= 1247
Frequently use arms	53%	n= 1424

Postcard Data

Who performed the screen?

1534	Health care worker
608	Other
430	Family member
238	Tested self
250	Not indicated

Stand-Up and Be Strong: Initial Outcomes

Laura Gilchrist PT, PhD

College of St. Catherine DPT Program

Data Collection

- Follow up calls at 3, 6, 12 months
  - Revised to 1, 3, 6 months July 2007
- Retention of information
- Action taken after screening
  - MD, PT visit
  - Performed exercises
  - Falls since screen
- Overall functional mobility
  - 4 mobility questions

Initial Data Collection

3 month follow-up phone calls, made between November 2006 and Feb 2007

In that time:

– 418 participants eligible for follow-up

– 70 Follow-up interviews completed by student researchers

Program Evaluation was approved by the IRB of the College of St. Catherine

Results - Demographics

418 total subjects returned postcards

- Age 79.27 ± 9.21
- 82 men (19.6%)
- 326 women (78.0%)
- 8 not indicated
- 96.1% rural
- 3.9% urban

70 subjects, follow-up phone calls at 3 mo

- Age 79.06 ± 11.28
- 17 men (24.3%)
- 52 women (74.3%)
- 1 not indicated
- 92.86% rural
- 7.14% urban

Fall Risk Comparison

Fall Risk Category	Participants (Total)	Participants (Follow-up)
Low	17.9% (n=75)	12.9% (n=9)
Moderate	28.2% (n=118)	28.6% (n=20)
High	50.7% (n=212)	57.1% (n=40)
Not Indicated	1.7% (n=7)	1.4% (n=1)
Total	n=418	n=70

Percent of Participants Reporting a Fall in last year

- 31.8% (133/418) Total Participants
- 21.4% (12/56) Interviewed

Fall Risk Category	Self-Reported Fall (Total)	Self-Reported Fall (Follow-up)
Low	9.8%* (n=13)	0% (n=0)
Moderate	21.1%* (n=28)	41.7% (n=5)
High	67.7%* (n=90)	58.3% (n=7)
Total	n=133	n=12

* $P < 0.05$

Follow-up at 3 months

- Remembered screening: (n=62; 4 declined)
  - 37.1% Remembered without prompting
  - 32.3% Remembered with prompting
  - 30.6% Did not remember
- 28% correctly remembered risk
- Falls since screening
  - 19.4% (12/62)
    - 8 at High Risk (20% of 40)
    - 4 at Moderate Risk (20% of 20)
    - 0 at Low Risk (0% of 9)

Following Recommendations

- 41.1% Reported completing exercises within the last week
  - Avg 2.6 ± 2.3 times per week
  - No significant correlation between exercise adherence and fall risk category (p=0.31)
  - Exercise encouragement was not shown to be statistically significant in regard to exercise adherence (p=0.77)
- 25% (8/32) individuals at High-Risk reported following up with MD or PT
  - 5 MD → 1 referred to PT
  - 3 PT

Adverse Events

- 1 Fall reported due to Exercises
  - No injury needing attention from health care provider
- No significant change in self-reported fear from initial screening to follow-up (p=0.08)

Preliminary Data

- Suggest that screening into the moderate or high risk category increases future risk of falls
- Screening prompted action (exercise or referral) across risk categories
- No major safety concerns
- Data collection continued by research firm, will start analysis of large dataset soon

Acknowledgements:

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Health Plan Connections

Cheryl Anderson, PT, PhD, GCS

Consultant

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Health Plan/ Payer Interest

- Medicare plans and Part D sponsors have specific quality initiatives to meet every year
- Dually-eligible plans (Medicare and Medicaid) must provide health promotion programs that are age appropriate
- Private insurers are interested in member benefits and health promotion
  - Private insurers follow Medicare's lead
- Falls are receiving national interest from all levels of government, with many current initiatives

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Health Effectiveness Data Information Set (HEDIS)

- HEDIS health plan measurement of provider compliance with evidence-based medicine
- 90% of health plans participate in HEDIS including most state Medicaid plans
- Setting the Quality initiatives for EBM by health plans and the providers that participate with those health plans
- HEDIS 2008 has 71 specific measures; 4 relate to falls in the older adult

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HEDIS continued

- HEDIS 2008 measures recognize the issues of falls in older adults
- These measures are considered "actionable"
- Health plans are looking for partners to provide the action
- Physician practice settings will need assistance to improve HEDIS scores

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HEDIS continued

- Four measures specifically address falls and falls outcomes, including:
  - Falls Risk Management
  - Osteoporosis Testing in Older Women
  - Osteoporosis Management in Women who had a fracture
  - Physical Activity in Older Adults

Health Plan Interest – Quality Initiatives

- Focus studies – minimum requirements
- Performance Improvement Projects (PIPs)
  - Mandated research studies of at least 3 years
  - New projects begin yearly for every health plan
  - Certain projects must address older adults specifically
  - Directed at high cost or high risk diagnoses
  - Often based on HEDIS measure outcomes and trends

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Health Plan Interest – Quality Initiatives

- Rationale for support – health plans need application of knowledge
- Paradigm change – health plans are charged with creating EBM change
- Falls prevention activities offer inexpensive health promotion
- Measurement: Change in E 880 codes, ED visits, V15.88 codes

Health Plans = Unique Opportunity for PTs

- Health plans present unique opportunities for PTs
  - Consulting
  - Population-based health promotion
  - EBM promotion
- Provide potential practice venue outside of 1/1 patient care
- Consider the health plan needs:
  - Employer-based/private – HEDIS is crucial; health promotion is a growing piece to push responsibility of health to the employee
  - All Medicare/Part D plans – focus studies and PIPs; HEDIS
  - Medicaid – HEDIS; focus studies; health promotion
  - PPOs/HMOs – will follow Medicare's lead

What's Next?

- **Train your community partners**
  - County Pubic Health Departments
  - Assisted Living Facilities
  - Home Health Agencies
  - Senior Centers
  - Area Agency on Aging
  - Senior Dining / Meals On Wheels
  - Parish Nursing
  - Elder Networks
- **Provide ongoing support to partners**
- **Get involved with health plans and large employer groups**

Questions?

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