

## Falls Prevention and Intervention

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- Alixe Bonardi, MHA, OTR/L Shriver Center
- Melissa Pepin, MS LifeStream, Inc.



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## Speaker Introduction

**Courtney Dutra, MPA** and **Alixé Bonardi, MHA, OTR/L** are researchers at the Shriver Center/UMass Medical School who have been studying falls in the ID population for the past 8 years. They conducted a statewide falls prevention pilot in 2011 to reduce the rates of falls and train DDS providers on falls prevention risk factors and prevention strategies. They are currently working with Visiting Rehabilitation Services on a grant funded by the Agency for Healthcare Research and Quality to study specific falls prevention intervention programs in residential group homes.

**Melissa Pepin, MS** is the Therapy Services Director at LifeStream, Inc. She led efforts to create the agency's internal falls prevention program and actively manages the ongoing implementation. She has participated on numerous state-wide falls prevention initiatives and has over 20 years of experience in the ID population.



## Today's Agenda

- Overview of falls data in the DDS population
- Fall risk factors
- Prevention strategies
- Assessing for falls risk
- Internal falls tracking system - LifeStream
- Case study
- Questions



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3

## Falls in the DDS population

- Nationally, about **30%** of adults with I/DD fall each year
- About **two-thirds** of adults who fall will fall more than once
- 15% of falls result in serious injury

**May be as many as 3,000 people who fall each year in DDS residential programs**



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4

## Reported Falls



- **HCSIS data\* (2006 – 2007)**
  - ✓ 1,500 reported *serious* injuries related to falls
  - ✓ As many as 10,000 falls?
- **S.T.O.P. Falls Pilot Data (2009) Track all falls**
  - ✓ 473 falls reported over 6 months for 910 adults
    - ✓ 10% experienced more than one fall
  - ✓ 197 adults (24%) in Res/Day with 1 or more fall
- **Emergency Room Visits\* (2011-2012)**
  - ✓ 31% of ER visits were from physical injuries
  - ✓ 49% of physical injuries were from falls



\*Data is for adults in residential and individual support services

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## What else do we know from the data?

- People with I/DD have a similar **risk** for falling and a similar **risk of injury** from falling as the elderly population (over age 65), but this risk is experienced at much younger ages.



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6

## More risk at earlier ages

- 57% of people with ID living in residential settings experienced one or more falls over a 33-month period. A third of these falls resulted in injury. (Wagemans and Cluitmans 2006)
- In a 2010 study, falls were **more common** among people with ID aged 18-64 than in the general population. (Finlayson 2010)
- Adults with ID aged 18–64 years were significantly more likely (RR= 2.9) than the adults in the same age group in the general population to have experienced at least one **injury caused by a fall** (Finlayson 2010)

**Why do you think younger people with ID are at risk for falling?**

7

## Falls Risk Factors

- Poor eyesight or vision loss
- Weak muscle strength
- Weak or unstable balance
- Unsteady gait (walking)
- Elimination problems

**\*\*Previous falls are a risk factor for more serious falls\*\***



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8

## Other Fall Risk Factors

- Dizziness
- Low blood pressure
- Fatigue
- Delirium (sudden confusion)
- Dehydration
- Urinary Tract Infections

### Low Blood Pressure:

- Dizziness can be in place for as long as 25 – 30 minutes after moving from lying or sitting to standing
- In nursing homes, most falls happen after a meal



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9

## Vision Loss

- 41% of adults have some form of ocular anomaly
- 17% of adults have significant Vision Loss
  - 55% of this group is 40 years of age or older



Pictures courtesy of Lisa DiBonaventura, M.A., COMS

## Vision Related Risks

- Impaired depth perception
- Poor edge contrast sensitivity



## Vision Related Risks

- Blur from lower lens of multifocal glasses
- Decreased ability for eyes to adjust to light levels
- Sensitivity to glare

**Check vision annually!**



## Associated Conditions

- Seizure or other neurological disorders
- Aggressive behaviors
- Impaired ambulation or mobility
- Osteoporosis



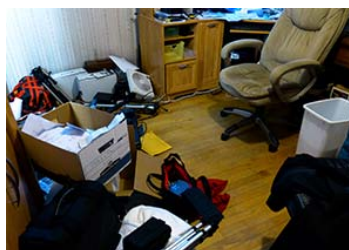
## Medication Use

- Common side effects like dizziness, confusion, fatigue, and sleepiness can affect a person's fall risk
- Anti-seizure, psychotropic and antidepressants are most likely to cause this fall risk
- New drugs can cause new interactions



## Environment

- Slippery or wet floor surfaces
- Low-seated chairs and toilets
- Poor or dim lighting
- Lack of bathroom handrails
- Clutter



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## Environment

- Unstable furniture
- Lack of handrails on stairs or steps
- Broken canes, walkers, wheelchairs
- Improper footwear



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16



## Prevention Strategies

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## Medical Strategies

- Recognize signs and symptoms of underlying illness
- Review medication usage and potentially discontinue inappropriate or excessive medications

Diagnose and treat osteoporosis



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## Rehabilitative Strategies



- Exercise programs
  - Walking and endurance
  - Training geared towards increasing balance, strength, and flexibility
- Ensure footwear fits properly and is slip-resistant
- Consider canes and walkers to improve balance



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19

## Environmental Strategies



- Identifying and eliminating hazards
  - Reduce clutter
  - Install grab bars and handrails
  - Replace lights
  - Remove unstable or low furniture
  - Use color contrast
- Simplifying the environment to improve mobility
  - Reposition furniture
  - Consider door alarms



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20

# Fall Assessment

Who is most at risk?

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## Fall Assessment Cont'd

- Use the fall risk checklist
- Assess fall risk at least annually

<http://www.mass.gov/eohhs/docs/dmr/awp/hpci-falls-prevention-campaign-checklist.pdf>

### Falls Risk Checklist

The purpose of this form is to assess an individual's risk for falling. A falls risk assessment is completed upon admission to services, after any change in condition, and annually.

Name of Individual _____	
Date: _____	
When assessing an individual's risk for falling, consider the following significant factors. An individual's risk for falling increases with the number of checked items.	
	Check if applicable to individual
Did the individual experience any fall(s) in the last month?	
Is the individual confused (i.e., unable to make purposeful decisions, has disorganized thinking and memory impairment)?	
Is the individual disoriented (i.e., lacks awareness of or is mistaken about time, place, or person)?	
Is the client agitated (i.e., shows fearful affect, makes frequent movements, or is anxious)?	
Are there any alterations in urination (e.g., frequency, urgency, incontinence)?	
Is the individual's vision impaired (with and without glasses)?	
Is the individual's hearing impaired?	
Is the individual taking more than four prescription drugs?	
Does the individual have a seizure disorder?	
Does the individual have postural hypotension/dizziness?	
Does the individual have weak arm or leg strength?	
Does the individual have unsteady balance?	
Does the individual need verbal or physical assistance when walking or transferring? (i.e. from a bed to standing position)?	
Does the individual require a walking aid?	

Reviewer's signature \_\_\_\_\_

Remember: The more checks an individual has, the more at risk they are for a fall. Based on this information, staff may need to consider a more thorough falls assessment.

## Spectrum of Okay-ness



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## Fall Assessment

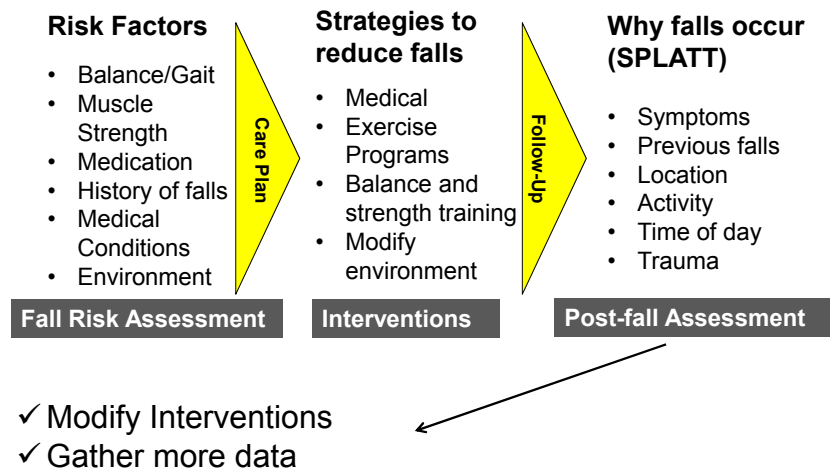
- Timed get up and go test
  - Person rises from seated position, walks about 10 feet (3 meters), turns, walks back then sits again
  - Watch for unsteady balance and gait and refer as necessary.

[http://www.cdc.gov/homeandrecreationalafety/pdf/steady/timed\\_up\\_and\\_go\\_test.pdf](http://www.cdc.gov/homeandrecreationalafety/pdf/steady/timed_up_and_go_test.pdf)



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## Fall Prevention Components



**Impact: Reduce fall risk and falls**

## Post-Fall Assessment

- S** Symptoms preceding the fall
- P** Previous falls
- L** Location of fall
- A** Activity
- T** Time of day
- T** Trauma

## LifeStream's Experience



### LifeStream, Inc.

- LifeStream provides the following services to approximately 330 individuals: day habilitation, supported employment, 24/7 residential, individual supports, shared living and AFC homes
- Participated in the falls pilot program in 2009
- After completion of the pilot program, LifeStream developed a Falls Prevention Program



## Falls Prevention Program:

- Individuals are assessed for falls as part of acceptance into LifeStream programs
- The results of Fall Assessment determines whether or not care plan needs to be developed
  - High Risk: reviewed quarterly
  - Moderate Risk: reviewed semiannually
  - Low Risk: no follow up (unless a change in status)



## Post Fall

- Staff member who witnessed a fall completes a Post Fall Report.
- If fall is reported to staff, staff completes a Post Fall Report based on what is reported by individual.



## Manager Review

The Post Fall Report is reviewed by the manager who includes the following information:

- Number of falls in past 6 months?
- Was fall reported in HCSIS?
- Has fall assessment been completed? What is the risk level?
- Is a care plan in place?



## Residential Director Review

The following is determined:

- Does a Fall Assessment need to be completed (if individual hasn't already been assessed, or if there has been a change in status)
- Does care plan need to be modified?
- Does a care plan need to be developed?
- Does the individual need to be referred to the agency IDT/Risk committee for review?

The information from Post Fall Report is entered into HCSIS as an Optionally Reportable Event (ORE)



## Tracking

- LifeStream was using ORE reports to track falls
- We developed a database to track all falls
- We enter information from the Post Fall Report and can develop reports based on location, time, activity of time of falls, whether or not fall prevention devices were utilized, injuries, and how often individuals are referred to IDT/Risk Committee



## Training

- All employees receive Falls Prevention Training annually
- Fall Risk information is included on consumer specific checklist
- Training is conducted as needed for individuals
- Falls Risk brochure

### Other:

- Follow-up



## Falls Data Tracking Results

- **Results of pilot program:**

March – August 2009:

63 individuals – 166 falls

Day programs: 83 falls; Residential: 83 falls

- **Latest statistics:**

March – August 2014:

35 individuals – 56 falls

Day program: 37 falls; Residential: 19 falls



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35

## What have we learned?

- The most important thing in falls prevention is education of staff and individuals.

- Falls happen, it's how we respond to each one that determines future falls.

- Our program has been successful in decreasing total falls:

By individual: 44.5% reduction

Number of falls: 66.3% reduction



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36

## Case Study

- 72 year old individual
- Severe MR, Bilateral lens Opacities, Asymptomatic PVC's, Scleroderma, Bipolar Disorder, Atypical Psychosis, Partial Epilepsy, Congenital Cataracts, Gastric polyps, Anemia, Dysphagia, Asthma, COPD, Leukopenia, Hyperlipidemia, Chronic ITP
- Psychiatric and medical issues impacting his gait and ambulation safety.
- Fall risk assessed and determined to be 'high'



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27

## Strategies

These strategies allowed him to stay in his home safely and reduce falls risk:

- Transition wedge with railing
- Bed alarm
- ½ rails for support (assist to stand)
- Gait belt and wheelchair PRN
- Participation in Falls Pilot program with Visiting Rehab Services

## Result?

- Decrease in falls



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38

## DDS Resources

- DDS Falls Risk checklist  
<http://www.mass.gov/eohhs/docs/dmr/awp/hpci-falls-prevention-campaign-checklist.pdf>
- DDS Vision resources: [www.mass.gov/dds/visionloss](http://www.mass.gov/dds/visionloss)

## Other

- Medication and falls handout
- CDC Community-based compendiums  
<http://www.cdc.gov/HomeandRecreationalSafety/Falls/pubs.html>
- MA falls coalition:  
[http://www.maseniorcarefoundation.org/Initiatives/Falls\\_Prevention/Massachusetts\\_Falls\\_Prevention\\_Coalition.aspx](http://www.maseniorcarefoundation.org/Initiatives/Falls_Prevention/Massachusetts_Falls_Prevention_Coalition.aspx)

27

## Thank you!

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