

# Identifying and Reducing the Risk of Falls

A joint Project of the Massachusetts Department of Developmental Services (DDS)

and

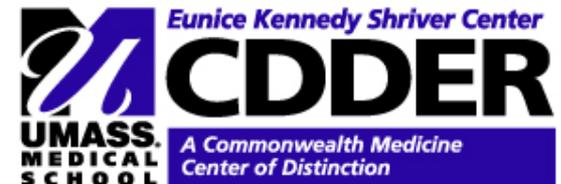
UMMS/ Shriver Center's Center for Developmental Disabilities Evaluation and Research (CDDER)

*NASDDDS - - Reinventing Quality Conference*  
*August 9, 2010*



**DDS**

Massachusetts  
Department of Developmental Services



# Massachusetts Department of Developmental Services Incident Data Analyses

- Periodic analyses of HCSIS Incident Reporting System Data by incident type (e.g. Missing Persons reports, Physical Altercations, Unexpected Hospitalization, Injuries)
- “Incidents with Associated Injury” report January 2008: **a fall** was identified as a contributing factor in **1,505 reported injuries** in the initial analysis period (9/06 to 8/07)



# Review and ‘planning for action’ by MA DDS Quality Council

- MA DDS has Regional and Statewide Quality Councils including external stakeholders
- Review of the injury analysis prompted desire for action because...

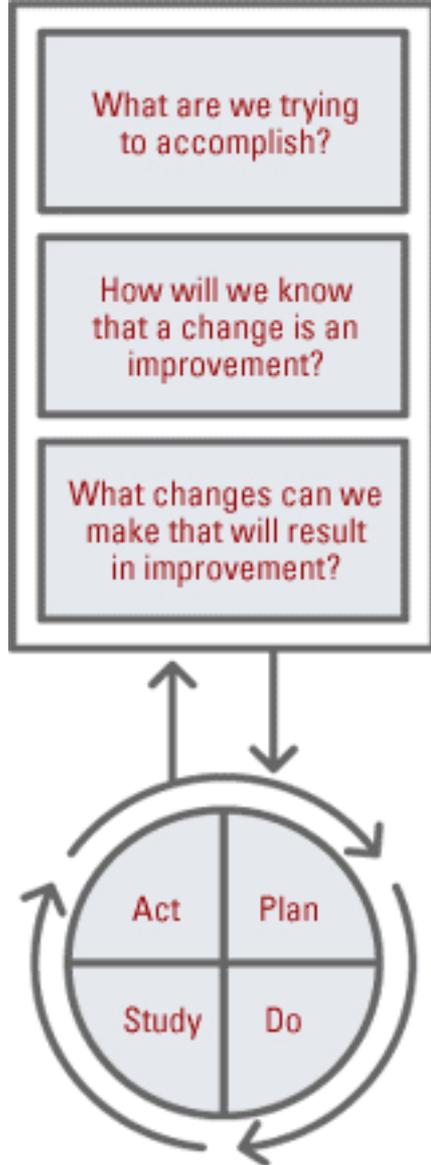
High proportion of injuries resulted from a fall

Preventable?

‘Falls hurt’

Tangible problem – significant body of evidence  
based intervention in elderly population





**Goal:** Reduce falls and injurious falls

**Measures:**

1. Reduction in total falls
2. Reduction in reported injuries (via HCSIS) that have falls identified as a contributing factor

Source : Institute for Healthcare Improvement (IHI)



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# ‘What changes can we make that will result in an improvement?’

Lit. review and expert consultation resulted in two components in action plan:

1. Training materials to all provider agencies.

*“Falls and People with Intellectual and Developmental Disabilities” R. Tideiksaar 2007 Health Professions Press Inc.*

2. Pilot study to gather enhanced data on falls, risk factors, and rates of falls in order to monitor ALL falls, and further target intervention.



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# Training and enhanced data collection: The S.T.O.P. Falls Pilot

- 5 agencies, 6 months
- 910 DDS consumers participated, 814 were receiving residential and/or day programs supports
- Training provided at each agency
- Information collected for all falls (both injurious and non-injurious)
- 417 total falls reported during the pilot for consumers in residential and/or day programs (rate of 5.1 falls per 10 consumers)



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# Pilot activities

- Training

Modified *“Falls and People with Intellectual and Developmental Disabilities”* R. Tideiksaar 2007 Health Professions Press Inc.

- Falls Risk Assessments

- Completed at start of 6 month period

- Post-Fall Assessments

- Completed after a fall

- Environmental Assessments

- Completed after a fall

- Post-Fall Risk Assessments

- Completed after one fall, or multiple falls



# Post Fall Assessments: Symptoms

<u>Symptom</u>	<u>N</u>	<u>% of falls</u>
Dizziness	12	3%
Trip/slip	93	22%
Loss of balance	130	31%
Legs gave way	38	9%
Experiencing urgency	22	5%
Disorientation/Confusion	4	1%
Seizure	19	5%
Pushed/Shoved	9	2%
Unknown	75	18%

# Risk Factors for Falls (Falls Risk assessment)

- Subgroup of 341 adults in residential and/or day services
  - Fall risk screening tool was used to gather information about the person that may be related to falls.
  - All falls tracked during 6-month pilot period
- Adults with intellectual disabilities who experience **one or more falls in the recent past** have 5 times the risk of falling in the next six month period compared to other adults with intellectual disabilities.  
(Relative Risk 95% CI: 3.37, 7.49)



# Risk Factors

Adults who are reported to ...	Falls risk factor relative to other adults with ID (Relative Risk with 95% CI)
Have alteration in urination (frequency, urgency, incontinence)	<b>1.7</b> (95% CI: 1.08, 2.77)
Take more than four prescription drugs	<b>2.4</b> (95% CI: 1.21, 4.97)
Have seizure disorder	<b>1.7</b> (95% CI: 1.06, 2.70)
Experience unsteady balance	<b>5.0</b> (95% CI: 2.69, 9.32)
Require a walking aid (any type)	<b>2.5</b> (95% CI: 1.61, 4.01)
Over the age of 60 years	<b>1.9</b> (95% CI: 1.48, 2.38)

# Heightened support-provider awareness: an anticipated result

- Pilot agency staff:
  - Received falls prevention training,
  - Requirement for documentation of circumstances of all falls (checklist emphasized questions staff should consider)
- Narrative examples from staff who were able to pursue ‘why’ individual fell, and then make changes to prevent falls



# Impact of Pilot Intervention on Fall Frequency

- Rate of falls: First month compared to rate of falls in the subsequent 5 months after training.
  - Includes all participants that received residential and/or day services (811 adults)
- Statistically significant decrease observed in the rate of reported falls for adults in residential and/or day services.  
(Rate Ratio = 1.50 for Pre/post, 95% CI: 1.20, 1.87)
  - Month 1 rate of falls = 12.3 falls per 100 people per month
  - Month 2-6 rate of falls = 8.2 falls per 100 people per month
  - **33% reduction in the monthly rate of falls** between the pre-intervention period and the post-intervention period.



# Using the data to guide service planning and delivery

- Multiple formats for dissemination to range of stakeholders
- ‘Peeling Back the Onion’ approach
  - ‘Living Well’
  - ‘Quality is No Accident’
  - HCSIS Data Analysis Reports

Available at [www.mass.gov/dds](http://www.mass.gov/dds)

[>Publications > QA and Improvement Reports]



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# 'Quality is No Accident' Newsletter

[www.mass.gov/Eeohhs2/docs/dmr/qa\\_qina\\_brief\\_falls\\_prevention.doc](http://www.mass.gov/Eeohhs2/docs/dmr/qa_qina_brief_falls_prevention.doc)

Bringing the data to people who can use it:

- Means of disseminating research findings to those most able to change systems to improve quality / reduce risks.
  - Primary Audience: **Provider Agency Directors and Managers**
  - Newsletter articulates **how** to use the information



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# Next steps

- Additional analyses underway
  - pre/post training questionnaires
  - Self-controlled pre-/post- injury rates
  - linkage to health records
- Training specific to transportation providers



# Project team

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