

# Falls in Assisted Living Facilities: Matching Patient Needs with Appropriate Care

A Public/Private Partnership with  
Doctors Making House Calls and  
Wake County EMS System

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# Realigning Reimbursement Policy and Financial Incentives to Support Patient-Centered Out-of-Hospital Care

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**668** JAMA, February 20, 2013—Vol 309, No. 7

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By Abby Alpert, Kristy G. Morganti, Gregg S. Margolis, Jeffrey Wasserman, and Arthur L. Kellermann

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# Giving EMS Flexibility In Transporting Low-Acuity Patients Could Generate Substantial Medicare Savings

Health Affairs 32(12);2013:2142-48

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# Does This Sound Familiar?

- Elderly female in assisted living dispatched for a fall
- During one year, EMS is summoned 11 times for this chief complaint for this one patient, with:
  - 11 ED transports
  - 15 CT scans
  - 13 labs panels
  - 39 hours in the emergency department
  - 1 positive finding – non-op SDH (admitted with sun-downing, requiring restraints)

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# RETROSPECTIVE VALIDATION OF A PROTOCOL TO LIMIT UNNECESSARY TRANSPORT OF ASSISTED-LIVING RESIDENTS WHO FALL

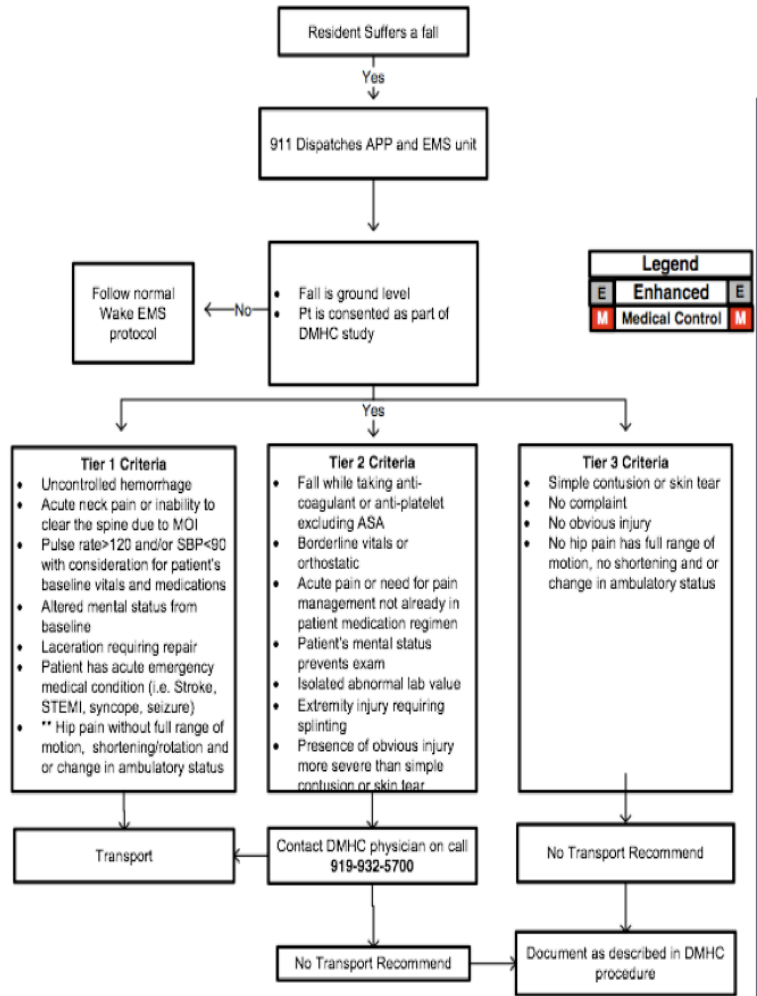
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# Doctors Making House Calls Falls in Assisted Living



Medical Protocols

The Wake County EN

\*\* This criterion added after retrospective analysis in order to increase sensitivity prospectively

nically Excellent Care



**Protocol**  
This protocol is unique to the Wake County EMS System



# Retrospective Validation

- Primary Outcome = The Presence of Time Sensitive Injury:
  - wound repair
  - fracture
  - readmission to ED < 48 hours
  - death within 72 hours
  - admission to ICU, OR, or cardiac cath lab

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# General Findings

- 644 cases in one year were identified
  - EMD chief complaint of “fall”
  - In assisted living facility covered by DMHC
- Utilization:
  - Mean LOS in ED was 5 hours
  - Total of 793 CT scans
  - 1100 lab panels

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# Outcome

Protocol	TSI Present	TSI Absent
Positive	190	204
Negative	7	447

Sensitivity = 96 % (95% CI 93-98%)

Specificity = 54% (95% CI 50-59%)

NPV = 97% (95% CI 93-99%)

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# Outcome

- Of the 7 false negatives:
  - 3 had return to ED within 48 hours
    - All three were for recurrent simple fall
    - All three were subsequently discharged from the ED without TSI
  - 1 had a lumbar compression fracture of uncertain acuity
  - 3 had hip fractures requiring surgical repair

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# What Is the Ideal Situation?

- All Patients with a TSI will be transported to the appropriate hospital for care
- Patients without a TSI will avoid unnecessary transports and receive timely follow-up from PCP
- Patient and/or power of attorney wishes guide treatment and transport decisions

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# What Are We Doing?

- Patients and/or the POA may sign a written consent to participate in the following:
  - EMS is summoned for a fall in an assisted living facility
  - The protocol derived from our published study is applied to the consented patients
  - Patients are transported if protocol indicates probability for TSI
  - Patients are followed-up by DMHC within 18 hours if protocol indicates transport can be avoided

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# What Have We Found Thus Far?

Protocol	TSI Present	TSI Absent
Positive	57	59
Negative	4	191

Sensitivity = 94 %

Specificity = 76%

NPV = 98%

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# What Are the Concerns?

- Assisted Living Facilities:
  - Are we exposing ourselves to further risk?
    - Answer: No. Patients are consented and the risk is borne by EMS and DMHC, not the facility.
  - Does staff have to do anything differently?
    - Answer: No. The 9-1-1 EMS response is identical to the current process

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# What Have We Found?

- This initially was not supported by some EMS providers
  - Perceived delay waiting on APP
  - Concerns about “safety”
- Only complaint we have had from families/patients is delay from consent to enrollment
- Administrative staff at ASF has been somewhat of a challenge

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# What Is Next?

- Expansion to other sites/facilities
  - Fewer falls calls than anticipated
  - Need ~ 1500 cases to have sufficient power to analyze results
- The program is now embraced by most medics

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# Discussion

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