



IEMSA
Iowa Emergency Medical Services Association

Building Falls Prevention
into Paramedicine

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The Problem: A steady increase in fall related injuries in Iowa, expected to increase even more with an aging population

"...Among U.S. adults 65 and older, falls are the leading cause of non-fatal injury and injury death."



National Findings

Information from the Agency for Healthcare Research and Quality (AHRQ) reveals:

- **More than 2 million patients aged 65 and older** were seen at a hospital ED nationwide for a fall-related injury.
 - **29.6% of these visits** resulted in a hospital admission.
 - **Cost to hospitals?** Nearly \$7 billion
- **Future trends** suggest that the high cost of burden will likely **increase** at a marked pace with the aging population.
 - **Estimates in Iowa** predict that the population for those over age 65 is going to increase by 52% by 2030.
 - **Predicted strain** on patients, the healthcare system, and society overall



Iowa Trauma Registry Data

- Review of Iowa's Fall Injury Report, a retrospective study using information supplied by the Iowa Trauma Registry
 - Trends over a 10-year period from 2002 through 2012 were analyzed by examining the number of fall patients vs. trauma patients
 - Study population: 56,612 patients admitted to an Iowa Trauma Care Facility due to a fall-related injury
 - 1,344, or 2.6% died
 - Rate for falls INCREASED 30% from 35.6 to 46.4 per 100 trauma patients in 2002-2012
 - Rate for all other trauma DECREASED
 - Finding → the gap in fall rates and other trauma has narrowed; why?



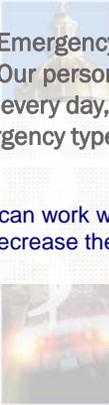
What type of fall is most common in the older adult population?

- "Same level" falls are most common, caused from slipping or tripping



The Role of Emergency Medical Services Personnel: Our personnel care for you in your homes every day, on either emergency or non-emergency types of calls

EMS providers can work within the community to decrease the incidence of falls in several ways



Who Are Iowa's Emergency Medical Services (EMS) Providers?

- Approximately 12,000 individuals serve as EMS providers in our state, many in a volunteer capacity.
- Types of EMS Providers
 - Emergency Medical Responders (EMR)
 - Emergency Medical Technicians (EMT)
 - Advanced Emergency Medical Technicians (AEMT)
 - Paramedics
 - Critical Care Paramedics
- Service Delivery Models
 - Volunteer Operations
 - Fire Departments
 - Hospital-based
 - Private Providers
 - Not-for-profit
 - For profit
- EMS Systems were originally developed to care for patients with serious emergencies, but have become a part of the solution for the underserved in our nation's healthcare system



How Does an EMS System Work?

- A patient or patient representative calls 911 or a non-emergency line to place a call for service
- True emergencies exist in only about 5-10% of all EMS calls
- The fragmentation and inefficiencies of healthcare services in our country are particularly evident for patients outside of the hospital setting, especially for:
 - The chronically ill,
 - The elderly, and
 - The mobility impaired
- Multiple providers offer only niche care, commonly during "normal business hours," which doesn't always meet the needs of the patient
- Patients routinely referred to the Emergency Department, even though it's not the most appropriate place for them to receive care



Transitioning to a New Healthcare Structure

- For many years, the healthcare industry has been structured around a fee-for-service model
- Recent healthcare reform efforts such as the Affordable Care Act are predicated on converting to a value-based model that considers metrics such as:
 - Customer satisfaction ratings,
 - Patient outcomes, and
 - The avoidance of readmission
- What other options exist?
- Shift to value-based health care will have dramatic effects on EMS delivery
 - Historically, primary source of revenue is gained from transporting patients to emergency departments
 - Patients expect to be transported to emergency departments
 - Concerns regarding potential litigation for non-transport
 - Inefficient, costly, and challenging



Consideration of Mobile Integrated Healthcare Practice (MIHP)

- A delivery strategy for interprofessional medicine, also known as Community Paramedicine
- Does not intend to replace or disrupt patient care delivery models already in place
- Intended to serve a range of patients in the out-of-hospital setting by providing patient-centered, team-based care using mobile resources
- Goals of care are to provide:
 - The right care,
 - At the right time,
 - In the right location, and
 - At the right cost
- Successful MIHP programs are community based!



MIHP Program Design should address all three elements of the Institute for Healthcare Improvement's Triple Aim, including:

1. Improve the health of the population
2. Enhance the patient experience of care, including quality, access and reliability
3. Reduce or control the per-capital cost of care



Features of a Successful, Comprehensive and Accountable MIHP Program

- Utilizes a restructuring of existing healthcare resources
 - NOT a means to increase healthcare spending
 - Must be patient-centered AND financially sustainable
- Program Features
 - Program and healthcare outcome goals developed from a population health needs assessment
 - Patient access through a patient-centered mobile infrastructure
 - Delivery of evidence-based interventions using multidisciplinary and interprofessional teams of providers operating at the top of their respective scopes of practice
 - Improved access through 24-hour availability
 - Integrated health records
 - Provider education and training
 - Physician medical oversight in program design, implementation and evaluation
 - Strategic partnerships engaging key stakeholders



EMS Strategies to Reduce Falls

- A full command of available community resources is essential
- Trends over a 10-year period from 2002 through 2012 were analyzed by examining the number of fall patients vs. trauma patients
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 - Finding → the gap in fall rates and other trauma has narrowed; why?
- EMS MUST be an integral part of the Community Health Needs Assessment & Health Improvement Plan (CHNA&HIP)



EMS Providers Can Perform a Fall Risk Assessment

- **When?**
 - **Could be on any encounter, but the time to conduct a thorough falls assessment** may not be on a life or death 911 call
 - Scheduled home visits by a member of the MIHP team could be considered when time is not a critical factor
 - Should be routinely scheduled for patients in the post-acute transitional care phase, which would also assist in preventing hospital readmissions
- **Education?**
 - **For EMS Providers on:**
 - **Conducting** a fall assessment,
 - **Providing education** to patients on how to reduce fall risk, and
 - **Initiating referrals to recognized fall prevention programs**
 - **For patients and families** to reduce fall risk



Accountability: How to Know if Your MIHP Program Works

What key performance indicators should be used to measure the effectiveness of EMS fall prevention efforts?

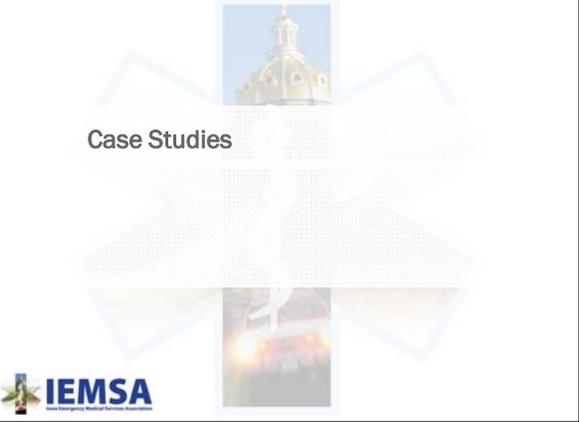


KPI Measurements

- Pre and Post-Fall Prevention Program Measurement of:
 - Fall rates
 - Number of Fall-related Ambulance Dispatches/Transports
 - Number of Fall-related Hospital Readmissions,
 - Customer Satisfaction (Patient/family/Medical Home Provider)
 - Fall Prevention Program Encounter Rates



Case Studies





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Questions or Comments?
