Onsite Farmstead Medication Assessments to Prevent Injury and Improve Safe Medication Use

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Objectives

0 Identify medicines which increase the risk of falls and secondary injury on the farm/ranch.

0 Examine the impact of a medication assessment service on Missouri AgrAbility clients’ confidence in safe medication use and health-related quality of life.

0 Discuss ways to prevent medication-related falls and injuries on the farm/ranch.
Case study

- RJ is a 72 year old Missouri farmer

- Hobby farm on roughly 300 acres which includes: hay, corn, and 95 head of beef cattle

- Medical conditions:
  - Parkinson’s disease
  - Arthritis pain
  - Hypertension
  - Diabetes
  - Constipation
  - Depression
  - Seasonal Allergies

- Past surgical history:
  - Hip replacement 1 year ago
Impact of Falls

- 1 in 3 adults ≥ 65 years experience a fall
- Leading cause of both fatal and nonfatal injuries
- Fear of falling
- Most common cause of traumatic brain injury
- Fracture
- Reduces ability to function independently
- $30 billion in medical cost

Figure 3. Rate (per 100,000) of ER visits and hospitalizations for injuries from falls (defined as a fall or jump) for adults 65 years of age and older in 2009

Source: Missouri Information for Community Assessment (MICA) 2009 injury data (http://health.mo.gov/data/mica/InjuryMICA/)

http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html
Medication-Related Agricultural Injury

- Use of medications alone and in combination
- Regular medication use increases risk 1.4-2.6 times
- Stomach, laxative medicines increase risk 2.8 times
- Heart, circulatory medicines increase risk 4.2 times
- Narcotic pain relievers increase risk 9.3 times
- Non-narcotic pain relievers increase risk 2.4 times
- Incontinence medicine increases risk 2.95 times
- Anxiety or sleep medicine increases risk 3 times

Objective 1: Identify medicines which increase the risk of falls and secondary injury on the farm/ranch.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis/Chronic pain</td>
<td>Narcotics</td>
</tr>
<tr>
<td>Heart disease</td>
<td>Water pills</td>
</tr>
<tr>
<td>Stroke</td>
<td>Blood pressure medicine</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>Heart rhythm</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Oral diabetes medicine</td>
</tr>
<tr>
<td>Seizure disorders</td>
<td>Insulin</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Anticonvulsants</td>
</tr>
<tr>
<td>Parkinson’s disease</td>
<td>Antidepressants</td>
</tr>
<tr>
<td>Depression</td>
<td>Anti-anxiety medicine</td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>Antipsychotics</td>
</tr>
<tr>
<td>Dementia</td>
<td>Anti-nausea medicine</td>
</tr>
<tr>
<td>Psychosis</td>
<td>Allergy medicine</td>
</tr>
<tr>
<td>Spasms</td>
<td>Anti-spasm medicine</td>
</tr>
<tr>
<td></td>
<td>Bladder medicine</td>
</tr>
<tr>
<td></td>
<td>Sleeping pills</td>
</tr>
</tbody>
</table>
Side effects of some medicines

- Dizziness
- Confusion
- Lightheadedness
- Drowsiness
- Blurred vision
- Gait disturbance
Objective 2: Examine the impact of a medication assessment service on Missouri AgrAbility clients’ confidence in safe medication use and health-related quality of life.
Knowing Your Population...

Rural Missouri

- 58% of Missouri hospitals
  - Majority with fewer than 25 beds
- 18% of Missouri’s primary care physicians

Map 11: Primary Care Physicians per 10,000 Residents, March 2010

Source: Missouri Department of Health and Senior Services, License Renewal Data

PHARM to FARM
Why pharmacy students?

- "most accessible healthcare profession"
- "among most trusted healthcare professionals"
- medication expert

Knowledge and Training
- Assessment
- Safe medication use

Communication skills
- Health literacy
- Adherence
- Counseling
- Education

Patient advocate
Safe medication use

- No medication is benign
- Assess drug interactions
- Prevent adverse effects
- Patient-centered
- Educate and empower patients
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Identify risk
- Advocate
- React
- Empower
- Connect with resources
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- During the past 12 months were you injured seriously enough that you got medical advice or treatment?
- Do you visit a primary care provider regularly?
- Predisposing conditions
- Do you take medicine for a condition?
- Multiple physicians
- Decreased alertness
- Onsite Farmstead Assessment
Identifying Potential Risks

- Sedation
- Dizziness
- Confusion
- Lightheadedness
- Blurred vision
- Gait disturbance
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Advocate
- React
- Connect with resources
- Empower
- Identify risk
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Determine if changes to farm work
- Recognize that medication side effects could be contributing
- Recognize that chronic conditions could be contributing
- Express concern for potential risks
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Extension
- Refer to pharmacist or physician for medication review—especially at Transitions of Care!
- Telehealth Networks
- Health fair screenings
- Falls Prevention Resources
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Encourage overall health
- Motivate client to:
  - Place value to seeking care
  - Ask questions of their healthcare providers
  - Voice concerns about injuries or medicine
Objective 3: Discuss ways to prevent medication-related falls and injuries on the farm/ranch

- Services & resources to resource-poor areas
- Extension
- Access to care
Red Flags

- Balance impairment
- Changes in sensorimotor function/skills
- Recent falls
- Recent hospitalization
- Altered confidence in ability to work on the farm
- Changes to farm management
- Changes to family involvement
Case study

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Case study

Onsite Farmstead Visit information collected:
- Recent fall 1 month ago
- Fall resulted in hospitalization
- Requests assistive devices for stability
- RJ states: “I’m just not as strong as I was before the fall.”
Case study: How would you provide assistance to RJ?
Questions?

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