Transition of Care: The Perfect Storm

2015 Annual NICHE Conference

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Objectives

Describe the impact of a flawed transition to the Emergency Department in the older adult residing in senior facilities
List “toolkit” strategies to improve transition of care in both directions
Discuss the benefits of a care transition team and checklist on improving communication

Background

- Older adults, age over 65, are the fastest growing population in U.S.
- Estimated to increase to > 20% of the population by 2030.
- Proportion of aged that reside in a skilled, assisted, or independent care facility will increase
- Approximately 5% reside in a nursing home
- Estimated one million residents making their home in assisted living/residential care communities
- Approximately 25-40% will require institutionalism at some point in their lives (U.S. Census Bureau, 2012)
- 1/5 patients admit to ER at SMML reside in nursing facility
**ER Impact**

- Increasing volume of older patients
- In 2013, estimated number could reach 11.7 million annually; 2.7 million visits by NH residents (1/5 admitted to SMML)
- Vulnerable transition period of time
  - Gaps in transition of key information
  - Complex medical history, pharmacological profile with visual, hearing, functional and or cognitive impairment becomes a perfect storm for adverse events if care is not coordinated.

**Emergency Departments**

- High acuity
- High stress
- Rapid decision
- Rapid diagnosis
- Rapid disposition
- ED admission can become a sentinel event
- Incomplete information creates obstacles to provide high quality care

**IOM Report on ER**

- Emergency care: weak link in the US healthcare system
- Overcrowding, long lengths of stay, long waiting times
- Disability and death from delayed diagnosis and intervention
- Smooth patient flow is critical for ED patients
- Lack of transferred info contributes to time delays
- Staff is diverted away from responsibilities due to calling facilities for information
“the set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care in the same location”

is broken

**Transition: The Perfect Storm**

- Healthcare facilities and EDs traditionally operate independently
- Poor communication cited as the root cause
- 10% of NH residents transported to EDs without any documentation
- Essential information typically missing in the other 90%: ED care rendered in an episodic fashion by an emergency physician (EP) who is unfamiliar with the patient
- Forced to treat blindly due to lack of key information setting up the Perfect Storm

**Problem Intensifies**

- Predisposes the patient to receiving more or less quality care, unnecessary tests, and wrongful resuscitation
- A flawed care plan, safety issues such as medication errors, re-hospitalization thus increasing health care costs.
- Medication management, continuity of care plan lead the list
STARForUM Story
Safe Transition of All Residents For you & Me

Three years ago...

Invitation extended to local nursing facilities, home health care providers and EMS to focus efforts on improving transfer of information in both directions.

Could the group ensure current, accurate health information flow decrease discontinuities of care in both directions between nursing facilities and EDs by the use of a care transition checklist?

Could these efforts reduce medication errors leading to possible adverse events and readmissions; reduce omissions in care and or eliminate care not needed; and reduce frustration between patients, families, health care professionals?

Invitation

Process Flow: Nursing Facility (adapted NTOCC)
Why ER needs the information: Q & A

Why is it necessary to document the patient's current ADLS, mental status, medical/surgical history and immunization status?

Current ADLS function assists us to maintain the patient's current functional status. ADLS include bathing, dressing, and toileting, transferring, continent and feeding. Please document if the patient is independent, with assist, or dependent and type of assistive device (walker, cane).

Mentation – Mental status baseline assists us to determine changes in behavior and or level of consciousness. A change in baseline mental status is a feature of delirium. Delirium can be caused by infection (i.e. urinary tract infection, pneumonia, electrolyte imbalance, adverse drug reaction, dehydration). Info helps to identify a potential increase in needs, supports and services within the patients living environment.

Medical and Surgical History – to help with decisions, diagnosis and can help with determination of abdominal pain

Immunization status – to help with decisions, diagnosis and prevent unnecessary vaccination.

Sample Q & A

Why is it necessary to send the current medication list (MAR) with doses and last time dose administered?

Current MAR with doses and documentation of times allows assessment of potential meds that be contributing to presentation; offers an overview of meds added, or changed. Correct information assists with review of adverse drug reactions or drug-to-drug interactions especially if patient presents with mental status changes. Recent antibiotic use (past 30 days) along with condition being treated along with approximate time of last dose and amount help promote antibiotic stewardship.

Why is it necessary to document fall history?

Accuracy of fall history is necessary to determine the plan of care, facilitate necessary and or avoid unnecessary exams and tests and determine eligibility for skilled home care services.
Data Collection (adapted NTOCC)

Transition (Transfer) ER Envelope

Plan in a Can
STARForUM PERFORMERS

- SKITS ON TRANSITION OF CARE “THE PERFECT STORM”
- SKITS ON END OF LIFE “HOW WILL YOUR STORY END”

IS WHAT WE ARE DOING WORKING?
Quality Improvement

The purpose of this study is to determine if the STARForUM participating facilities outperform the non-STARForUM facilities by ensuring 15 key elements are sent with the patient to the Emergency Department.

A transition form/checklist was used as the instrument.

Checklist

- Simple tool for improved communication
- Standardize information is collected and sent with the patient instead of relying on human memory alone
- Formalizes tasks that must be performed anyway
- Communication will be structured and standardized
- May also clarify system problems and develop effective solutions.
- Key instrument in reducing the risk of costly miscommunication and improving overall patient outcomes.

Research Methods

Retrospective study
November 19, 2013 –February 14, 2014
Nursing facility residents admitted to SMMH ED
N= 123
Compliance measured on a 15-point scale
Chi-square and Student’s t-test
Two-tailed P values <0.05 was considered statistically significant

(Statistical analysis using Statistical Analysis Software (SAS, version 9.4, SAS Institute Inc., Cary, NC).)
Key elements scoring tool

- Vital signs prior to transfer
- Baseline VS if transferring parameters abnormal for patient
- Reason for transfer documented
- Medication time listed for meds administered day of transfer
- Medication Administration Record on file
- Code status/Advanced Directive
- Signed copy of Code Status/Advanced Directive
- Facility phone number, address
- Family/DPOA notification documented
- Family/DPOA phone number listed
- Medical History
- Surgical History
- Baseline Mental Status
- Baseline Functional Status
- Dietary concerns: i.e. pureed, thickener, crush pills
- The following demographic elements will be obtained:
  - Age, gender, facility type

Results

EMRAP: Nelson Yu, Amanda Whitehouse, Tim Hewitt, Camden Burk, Jerrit Yang
Dr. Daniel Keyes, Research Physician
Patients Admitted to SMMH ED
n= 123

- STARForUM Facility: 37%
- Non-STARForUM Facility: 63%

Patients Admitted to SMMH ED
n= 123

Age (mean ± SD)

- STARForUM
- Non-STARForUM

Facility Type

- STARForUM
  - Skilled Nursing Facility: 28%
  - Assisted: 7%
- Non-STARForUM
  - Skilled Nursing Facility: 23%
  - Assisted: 4%

P= 0.002
P= 0.0002
### Type of Facility

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>STARforUM Facility (n=46) (37%)</th>
<th>Non STARforUM Facility (n=77) (63%)</th>
<th>(P) Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Functional Status</td>
<td>31 (67%)</td>
<td>17 (22%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Baseline Mental Status</td>
<td>32 (70%)</td>
<td>19 (25%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Reason for Transfer documented</td>
<td>34 (74%)</td>
<td>30 (39%)</td>
<td>0.0002</td>
</tr>
<tr>
<td>Signed Copy of Code Status/ AD</td>
<td>26 (57%)</td>
<td>20 (26%)</td>
<td>0.0007</td>
</tr>
<tr>
<td>Surgical History</td>
<td>17 (37%)</td>
<td>12 (16%)</td>
<td>0.002</td>
</tr>
<tr>
<td>Info/Check List</td>
<td>16 (35%)</td>
<td>11 (14%)</td>
<td>0.008</td>
</tr>
<tr>
<td>Facility Address</td>
<td>40 (87%)</td>
<td>52 (68%)</td>
<td>0.02</td>
</tr>
<tr>
<td>Family/DPOA Contacted</td>
<td>20 (43%)</td>
<td>19 (25%)</td>
<td>0.03</td>
</tr>
<tr>
<td>Today's Med Admin. Time Documented</td>
<td>26 (57%)</td>
<td>29 (38%)</td>
<td>0.04</td>
</tr>
<tr>
<td>Diet</td>
<td>21 (46%)</td>
<td>37 (48%)</td>
<td>-</td>
</tr>
<tr>
<td>Med List w/ MAR</td>
<td>31 (67%)</td>
<td>39 (51%)</td>
<td>-</td>
</tr>
<tr>
<td>Code Status/ AD</td>
<td>35 (76%)</td>
<td>47 (61%)</td>
<td>-</td>
</tr>
<tr>
<td>Facility Phone #</td>
<td>16 (78%)</td>
<td>49 (64%)</td>
<td>-</td>
</tr>
<tr>
<td>Medical History</td>
<td>39 (83%)</td>
<td>56 (73%)</td>
<td>-</td>
</tr>
<tr>
<td>Family/DPOA Phone #</td>
<td>42 (91%)</td>
<td>63 (82%)</td>
<td>-</td>
</tr>
</tbody>
</table>

### Mean score of 15 point scale

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>STARforUM (n=46) (37%)</th>
<th>Non STARforUM (n=77) (63%)</th>
<th>(P) Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled Nursing Facility</td>
<td>11 ± 3</td>
<td>9 ± 3</td>
<td>0.02</td>
</tr>
<tr>
<td>Assisted</td>
<td>12 ± 3</td>
<td>6 ± 2</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Independent</td>
<td>8 ± 3</td>
<td>6 ± 3</td>
<td>-</td>
</tr>
<tr>
<td>Group Home</td>
<td>-</td>
<td>5 ± 2</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>10 ± 3</td>
<td>7 ± 3</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

### Conclusion

Hospital-senior facility program “STARforUM” successful in significantly improving transfer of critical information to ED personnel.
Will the use of an Emergency Care “Preflight” Transition Checklist provided by EMS improve the number of key elements sent with a Senior Facility resident to the ED by EMS?

Is there a difference between participants in a hospital organization STARForum™ “Safe transition of All residents For you and Me” versus non-STARForum™ facilities.

**CURRENT RESEARCH**

EMS
Clinical information is also vital during transport. Information quality or quantity EMS receives from the sender (facility hand-over) is the hand-over report the ED receives. Poor information exchange creates a serious quality problem and substantial danger for the person during transport especially for residents cognitively impaired who may not be able to articulate their chief c/o, reason for visit, medical history, allergy, end-of-life wishes etc.

**Study Design**
This prospective study will employ a cross-sectional pre/post intervention design. The improvement will be measured by the number of elements answered in relation to the number of elements requested. A 15 item emergency care transition checklist (ECTC) will be summed and represent “transfer-of-care score” (i.e. “0” (no elements) to “15” (all elements)). The mean score of pre and posts will be compared. Content of the ECTC validity was established through expert panel review. Data will be analyzed using SAS statistical software. Data is being collected now.
Study Instrument

Each essential element is considered one point. Each point represents a key point of information established as critical for emergent decision, diagnosis, and disposition.

Additional necessary information collected:
- baseline vital sign parameters,
- stroke symptom last known time normal,
- fall history

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Preflight Checklist

<table>
<thead>
<tr>
<th>Item</th>
<th>YES</th>
<th>NO</th>
<th>Unavailable</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>REASON FOR TRANSFER &amp; VITAL SIGNS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REASON FOR TRANSFER:</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Current VS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood sugar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulse ox</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline parameters if above are not the patient's normal</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>MEDICATION HISTORY (MAR is preferred over the Med List)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information sent with patient?</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Medication Administration Record (daily med record includes med times, meds given, D/C, or refused, changed etc.)</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Today's medications given?</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Medication Allergies</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>CODE STATUS or ADVANCE DIRECTIVE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information sent with patient?</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Signed copy of Code Status or Advanced Directive (if status is FULL CODE, circle N/A if there is no signed form)</td>
<td>YES</td>
<td>NO</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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EMS arrives at nursing facility

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EMS gives ECTC to facility staff and completes documents

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Facility staff review ECTC and departs to the ED

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Open door to ED, EMS (and even ECTC) adds patient information to form

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Facility staff gathers documents and completes ECTC

---

EMS prepares patient for transport

---

EMS reviews ECTC and departs to the ED

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Upon arrival to ED, EMS hands over ECTC and/or communicates the information will be faxed within 15 minutes

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Facility staff hands over ECTC and transfer documents to EMS unless patient condition warrants EMS the inability to wait for documents. The NF will fax over ECTC and documents.
STOP! OMIT THIS SECTION IF REASON FOR TRANSFER IS NOT RELATED TO STROKE SYMPTOMS OR FALL

<table>
<thead>
<tr>
<th>Transfer due to stroke (symptoms)</th>
<th>Information sent with patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>information (select unavailable)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transfer due to fall</th>
<th>Information sent with patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>信息 (选择不适用)</td>
<td></td>
</tr>
</tbody>
</table>

Preliminary results
References


Resources
- NICHE  www.niche.org
- Improving on Transitions of Care: How to Implement and Evaluate a Plan  http://www.ntocc.org
- Better Outcomes for Older Adults Through Safe Transitions (BOOST)  http://www.hospitalmedicine.org/BOOST
- Project Re-Engineered Discharge (RED)  http://www.bu.edu/fammed/projectred/
- INTERACT  http://interact.geri.u.org
- Remington Report (Interventional strategies and programs to improve care transitions with supporting evidence)  www.remingtonreport.com
- GENE  www.ena.org
- AORN toolkit for hand-off  www.aorn.org
- STARForUM  www.stmarymercy.org/starforum