Best Practice with Anticoagulants to Decrease Readmissions

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I do not have relevant financial relationships with commercial interests

(I will be speaking favorably of what pharmacists can do to reduce rate of hospitalization / readmissions)
Objectives

• Describe clinical scenarios leading to actual or potential hospital readmissions in patients receiving anticoagulants

• Provide updates on usage and adverse events associated with oral anticoagulants, including warfarin and direct oral anticoagulants (DOACs)

• Recommend strategies to prevent occurrence of adverse events associated with the use of anticoagulants, leading to fewer readmissions
Questions

- What percentage of ER visits or hospital readmissions is associated with the use of anticoagulants at your institution?
- Based on the above, what are associated risk factors that are preventable?
- After this presentation, what specific interventions will you consider implementing to reduce readmissions associated with the use of anticoagulants?
Prevalence of Readmissions

- 1 in 5 Medicare patients (~2.6 million) annually are readmitted within 30 days of discharge
- Translates to $26 billion cost to the healthcare system.
- Cost to Medicare for potentially preventable 30-day readmissions: $12 billion, preventable readmissions ~ 27%
- Strong associations with:
  - ED decision making
  - Failure to relay important information to outpatient providers
  - Discharging patients too soon
  - Lack of goals of care discussions with patients re: serious illnesses
  - Interventions not provided during initial hospitalization
# AHRQ Trends in Hospital Readmissions 2009-2013

## Table 1. High-volume conditions ranked by rate of readmission for all causes within 30 days, 2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>Principal diagnosis for index hospital stay</th>
<th>Number of index admissions</th>
<th>Number of all-cause readmissions</th>
<th>Aggregate cost of readmissions, $ millions</th>
<th>Rate of all-cause readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Congestive heart failure, non-hypertensive</td>
<td>782,079</td>
<td>183,534</td>
<td>2,728</td>
<td>23.5</td>
</tr>
<tr>
<td>2</td>
<td>Schizophrenia and other psychotic disorders</td>
<td>366,256</td>
<td>83,245</td>
<td>772</td>
<td>22.7</td>
</tr>
<tr>
<td>3</td>
<td>Respiratory failure, insufficiency, arrest (adult)</td>
<td>290,892</td>
<td>62,864</td>
<td>961</td>
<td>21.5</td>
</tr>
<tr>
<td>4</td>
<td>Diabetes mellitus with complications</td>
<td>486,886</td>
<td>99,108</td>
<td>1,204</td>
<td>20.4</td>
</tr>
<tr>
<td>5</td>
<td>Acute renal failure</td>
<td>431,452</td>
<td>87,537</td>
<td>1,190</td>
<td>20.3</td>
</tr>
<tr>
<td>6</td>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>570,077</td>
<td>114,067</td>
<td>1,384</td>
<td>20.0</td>
</tr>
<tr>
<td>7</td>
<td>Complication of device, implant or graft</td>
<td>581,289</td>
<td>111,838</td>
<td>1,973</td>
<td>19.2</td>
</tr>
<tr>
<td>8</td>
<td>Alcohol-related disorders</td>
<td>261,072</td>
<td>50,081</td>
<td>366</td>
<td>19.2</td>
</tr>
<tr>
<td>9</td>
<td>Septicemia</td>
<td>1,011,496</td>
<td>181,156</td>
<td>3,154</td>
<td>18.9</td>
</tr>
<tr>
<td>10</td>
<td>Fluid and electrolyte disorders</td>
<td>358,840</td>
<td>65,704</td>
<td>839</td>
<td>18.3</td>
</tr>
<tr>
<td>11</td>
<td>Complications of surgical procedures or medical care</td>
<td>426,917</td>
<td>76,292</td>
<td>1,212</td>
<td>17.9</td>
</tr>
<tr>
<td>12</td>
<td>Pancreatic disorders (not diabetes)</td>
<td>271,749</td>
<td>47,111</td>
<td>563</td>
<td>17.3</td>
</tr>
<tr>
<td>13</td>
<td>Gastrointestinal hemorrhage</td>
<td>328,428</td>
<td>55,173</td>
<td>741</td>
<td>16.8</td>
</tr>
<tr>
<td>14</td>
<td>Urinary tract infection</td>
<td>470,448</td>
<td>73,833</td>
<td>854</td>
<td>15.7</td>
</tr>
<tr>
<td>15</td>
<td>Intestinal obstruction without hernia</td>
<td>314,811</td>
<td>48,753</td>
<td>696</td>
<td>15.5</td>
</tr>
<tr>
<td>16</td>
<td>Pneumonia</td>
<td>824,700</td>
<td>127,801</td>
<td>1,809</td>
<td>15.5</td>
</tr>
<tr>
<td>17</td>
<td>Mood disorders</td>
<td>747,029</td>
<td>114,385</td>
<td>930</td>
<td>15.3</td>
</tr>
<tr>
<td>18</td>
<td>Acute myocardial infarction</td>
<td>485,462</td>
<td>71,300</td>
<td>1,043</td>
<td>14.7</td>
</tr>
<tr>
<td>19</td>
<td>Dysrhythmia</td>
<td>651,881</td>
<td>94,883</td>
<td>1,225</td>
<td>14.6</td>
</tr>
<tr>
<td>20</td>
<td>Coronary atherosclerosis and other heart disease</td>
<td>433,782</td>
<td>55,265</td>
<td>793</td>
<td>12.7</td>
</tr>
</tbody>
</table>

*Note: Only conditions with greater than 250,000 index stays are shown. Principal diagnosis is based on the Clinical Classification of Health Outcomes (CCHOut).*
## Risk Factors for Readmissions

### 1. High Risk Diagnoses
- Heart Failure
- Acute MI
- Advanced COPD
- Community acquired pneumonia
- GI bleed
- Diabetes
- Cancer
- ≥ 6 chronic conditions

### 2. High Risk Medications
- Antibiotics
- Glucocorticoids
- **Anticoagulants**
- Narcotics
- Hypoglycemic agents
- Antiepileptic medications
- Antipsychotics
- Antidepressants
- Polypharmacy

### 3. Demographic Factors
- Prior admission within last 6-12 mo
- Reduced social network indicators
- Black race
- Low health literacy
- Lower socioeconomic status
- D/C AMA
Association Between Anticoagulation Therapy and Risks of Mortality and Readmission

Mortality

Heart Failure

Bleeding

Stroke

Other CV Events

## Anticoagulants Adverse Events

<table>
<thead>
<tr>
<th>ISMP / FAERS 2016 Reports</th>
<th>CDC Study: ER Visits 2013-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 21,996 severe injuries in the U.S.</td>
<td></td>
</tr>
</tbody>
</table>
  - 3,018 deaths |
  - 17,218 hemorrhages (8,495 GI bleed) |
  - 835 renal impairment or failure |
| • Rivaroxaban (68.4%) > |
  Apixaban (14.3%) > |
  Dabigatran (8.8%) > |
  Warfarin (8%) > |
  Edoxaban (0.5%) |
| • Anticoagulants accounted for more ED visits than opioids, antibiotics, and antidiabetics. |
| • National Electronic Injury Surveillance System-Cooperative ADEs Surveillance System |
| • Anticoagulants accounted for 17.6% of all ED visits for drug adverse events. |
| • Hospitalization occurred for: |
  - 63.8% receiving dabigatran |
  - 50.4% receiving rivaroxaban |
  - 48.5% receiving warfarin |
  - vs. 24.6% taking therapeutic opioids, 7.1% antibiotics |
| • Anticoagulant drug injury related visits incr from 2005/6 to 2013/4 > 2x |
Most hospitalization expenditure were attributed to nursing and pharmacy cost.

Reducing anticoagulation ADR’s have the potential to decrease hospitalization costs and improve patient safety.

### Table 6

Cost associated with adverse drug reactions (ADRs).

<table>
<thead>
<tr>
<th>Overall and departmental costs</th>
<th>Mean ($) ± standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hospitalization</td>
<td>88842 ± 166708</td>
</tr>
<tr>
<td>Hospitalization pre-ADR</td>
<td>29851 ± 49264</td>
</tr>
<tr>
<td>Hospitalization post-ADR</td>
<td>58991 ± 146065</td>
</tr>
<tr>
<td>Nursing</td>
<td>33189 ± 81236</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>7451 ± 21878</td>
</tr>
<tr>
<td>Blood products</td>
<td>2318 ± 9235</td>
</tr>
<tr>
<td>Clinical laboratory</td>
<td>2001 ± 5069</td>
</tr>
<tr>
<td>Radiology</td>
<td>1864 ± 4175</td>
</tr>
<tr>
<td>Surgical</td>
<td>225 ± 1349</td>
</tr>
<tr>
<td>Intervventional procedure</td>
<td>210 ± 1485</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>46 ± 257</td>
</tr>
<tr>
<td>Drug-related costs</td>
<td></td>
</tr>
<tr>
<td>Argatroban</td>
<td>1570 ± 7097</td>
</tr>
<tr>
<td>Bivalirudin</td>
<td>1102 ± 8929</td>
</tr>
<tr>
<td>Thrombolytic therapy</td>
<td>579 ± 579</td>
</tr>
<tr>
<td>Low molecular weight heparin</td>
<td>49 ± 154</td>
</tr>
<tr>
<td>Unfractionated heparin</td>
<td>35 ± 64</td>
</tr>
<tr>
<td>Lepirudin</td>
<td>34 ± 327</td>
</tr>
<tr>
<td>Warfarin</td>
<td>23 ± 45</td>
</tr>
<tr>
<td>Fondaparinux</td>
<td>14 ± 76</td>
</tr>
<tr>
<td>Aprotinin</td>
<td>4 ± 51</td>
</tr>
<tr>
<td>Vitamin K</td>
<td>2 ± 6</td>
</tr>
<tr>
<td>Desmopressin</td>
<td>2 ± 12</td>
</tr>
<tr>
<td>Protamine</td>
<td>1 ± 6</td>
</tr>
<tr>
<td>Aminocaproic acid</td>
<td>0 ± 1</td>
</tr>
</tbody>
</table>
Risk Factors for Readmissions in Patients Receiving Anticoagulants

- Age
- Lack of education about anticoagulants and lack of follow up
- Medical conditions
  - Alcohol
  - Heart failure
  - Severe infections
  - Hepatic impairment
  - Renal impairment
- Inappropriate dosing or administration
  - Inadequate INR levels for high thrombotic conditions
  - Excessive INR levels
  - Lack of appropriate bridging
  - Nonfamiliarity with new anticoagulants
- Drug-drug interactions
  - Additive antiplatelet effects
  - Metabolic CYP and P-gp interactions
Case 1: Readmitted after CATH

- 77yo with hx NSTEMI (2013), CAD s/p DES x2 (2015), severe MS, Afib
- Warfarin regimen: 4-6mg daily (2-3 tabs of 2mg warfarin)
- Hospitalized on 7/5/17 for cardiac CATH
- DC 7/7/17 with warfarin 6mg tablets #90, sig: 1 tab daily, INR 1.82
- Anticoagulation f/u on 7/17/17: INR 7.32. Clinic instructions: hold warfarin x 4 days.
- 7/21/17 FUP, INR 2.9, warfarin resumed: 4mg daily (2x 2mg tabs daily). Note: Med rec performed w/out full accuracy d/t patient not bringing medication bottles; acknowledged having supply of 2mg tabs at home.
- 7/28/17 FUP, INR>12! Patient again did not bring medication bottles, only med organizer. When asked to identify tablet color, described 6mg color strength. Med organizer had both 2mg and 6mg warfarin tabs mixed in the same compartment.
## Multi-factorial Factors from Root-Cause Analysis - 1

<table>
<thead>
<tr>
<th>Contributing Factors</th>
<th>Necessary Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Poor med rec: admission, discharge, clinic</td>
<td>1a. Education on pill ID, always bring Rx bottles to all planned visits</td>
</tr>
<tr>
<td></td>
<td>1b. Train and retrain personnel performing med rec</td>
</tr>
<tr>
<td></td>
<td>1c. Better care transitions</td>
</tr>
<tr>
<td>2. Change in warfarin mg Rx not caught by pharmacy</td>
<td>2a. Pharmacy to raise alert level on dispensing different anticoagulants or different mg Rx</td>
</tr>
<tr>
<td></td>
<td>2b. Prescribers to order same strength tablet or specify reason for different strengths</td>
</tr>
<tr>
<td>3. Duplicate Rxs not caught by clinic</td>
<td>3a. Clinic providers take extra caution during phases of care transitions</td>
</tr>
<tr>
<td></td>
<td>3b. Repeat education to raise patient’s level of awareness; better methods of assessing understanding</td>
</tr>
<tr>
<td></td>
<td>3c. Emphasize importance to bring Rx bottles to visits</td>
</tr>
</tbody>
</table>
Case 2: Near Miss

- 59yo with hx CAD s/p stent x2 (2014), HF, LV thrombus 6/2017, NSTEMI 7/2017, admitted to outside hospitals, dc’d 7/2017
- Original warfarin 4mg Rx from 6/2017 but patient did not take until 4 days before Anticoagulation Service appointment on 8/20/2017
- 8/20/2017 med rec:
  - 2 bottles of ASA 81mg (taking 162 mg/d)
  - 3 bottles of atorvastatin 80mg + 1 bottle of atorvastatin 40mg (taking 260mg/d)
  - 2 bottles of clopidogrel 75mg (taking 150mg/d)
  - 2 bottles of spironolactone 25mg (taking 75 mg/d)
  - 1 bottle of warfarin 4mg (took 4mg daily x last 4 days)
- Labs:

<table>
<thead>
<tr>
<th></th>
<th>Hgb (12-14.6)</th>
<th>Plt ((160-360)</th>
<th>SCr (0.5-1.0)</th>
<th>eGFR</th>
<th>K+ (3.5-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/20/17</td>
<td>14.8</td>
<td>112K</td>
<td>1.73</td>
<td>30</td>
<td>3.8</td>
</tr>
<tr>
<td>8/20/17</td>
<td>12.2</td>
<td>84K</td>
<td>2.17</td>
<td>24</td>
<td>5.0</td>
</tr>
</tbody>
</table>
### Contributing Factors

<table>
<thead>
<tr>
<th>Contributing Factor</th>
<th>Necessary Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Poor med rec upon admission, discharge</td>
<td>1a. Education on pill ID and purpose</td>
</tr>
<tr>
<td></td>
<td>1b. Train all on improving medication reconciliation</td>
</tr>
<tr>
<td>2. Poor transitions between hospitals</td>
<td>2a. D/C summaries provided and explained to patient</td>
</tr>
<tr>
<td></td>
<td>2b. D/C medication education provided to patient and caretaker</td>
</tr>
<tr>
<td></td>
<td>2c. Confirm f/u appointments</td>
</tr>
<tr>
<td>3. Multiple “blood thinners” putting patient at high bleed risk</td>
<td>3a. Purpose of medications explained and understood by patient.</td>
</tr>
<tr>
<td></td>
<td>3b. Consequence of suboptimal therapy should be described to patient</td>
</tr>
<tr>
<td></td>
<td>3c. Provide ER precautions</td>
</tr>
<tr>
<td>4. Renal impairment also increases potential for readmission</td>
<td>4a. Providers to be alerted to monitor Rxs that affect kidney function.</td>
</tr>
<tr>
<td></td>
<td>4b. EHR alerts to providers and pharmacy to monitor and verify orders</td>
</tr>
</tbody>
</table>
Reasons for Non-adherence to Discharge Medications

- 50% of patients cannot recall discharge orders; of these, 70% likely to be readmitted
- Discharged late, unable to wait or make extra stop to pharmacy
- Lack of understanding of purpose and importance of continuous treatment (i.e., lower health literacy, lower cognitive function)
- Fear of potential side effects
- Change in dosing regimen not communicated or explained at discharge OR explained but not understood or recalled by patient
- Health plans not covering the specific therapy prescribed
- Increased number of prescribed medications
- Financial burden, unable to pay for medications
Case 3: Near Miss

- 46yo 15-yr hx of NVAF, warfarin therapy monitored by anticoagulation service until provider switched from warfarin to rivaroxaban Feb. 2016
- Dec. 2016: RTC to cardiologist, anticoagulation clinic was consulted whether rivaroxaban could be lowered from standard dose of 20mg daily to 15mg daily due to gum bleeding
- Med rec with anticoagulation clinic Dec. 2016:
  - Did not adhere to rivaroxaban after 1 month of treatment d/t gum bleeding
  - No anticoagulation therapy for the past 9 months
### Contributing Factors

1. Lack of communication regarding switch of anticoagulants
2. Misconception that new anticoagulants (DOACs) do not require monitoring
3. Patient not educated regarding risk of non-adherence
4. Switch of providers (btwn 2/2016 and 12/2016): no continuum of care
5. Pharmacy did not flag no f/u refill of anticoagulants
6. Potential of inadequate dosage from minor bleeding not directly caused from new agent

### Necessary Improvement

1. Improve communication between prescribers and anticoagulation service
2. In-service to prescribers regarding proper dosage per renal function monitoring for DOACs (ADRs, renal function, etc.)
3. Proper patient education regarding risks and necessary monitoring for all anticoagulants, including DOACs, at initiation and continuous
4. Provide EHR alerts to all providers to monitor patients closely on all anticoagulants
5. Pharmacy to put in auto monthly alerts for patients who do not refill anticoagulant Rxs
6. Provider education to avoid prescribing suboptimal dose without proper indications, such as poor renal function (in some cases w/DAPT)
Successful Care Transition Components

- Medication Reconciliation
- Anticoagulation Management
- Bedside Counseling
- Discharge Instructions
- Follow-up Care
Hospital National Patient Safety Goals

Reconciling Medications

Elements of Performance for NPSG.03.06.01

1. Obtain information on the medications the patient is currently taking when he or she is admitted to the hospital or is seen in an outpatient setting. This information is documented in a list or other format that is useful to those who manage medications.
   Note 1: Current medications include those taken at scheduled times and those taken on an as-needed basis. See the Glossary for a definition of medications.
   Note 2: It is often difficult to obtain complete information on current medications from a patient. A good faith effort to obtain this information from the patient and/or other sources will be considered as meeting the intent of the EP.

2. Define the types of medication information to be collected in non-24-hour settings and different patient circumstances.
   Note 1: Examples of non-24-hour settings include the emergency department, primary care, outpatient radiology, ambulatory surgery, and diagnostic settings.
   Note 2: Examples of medication information that may be collected include name, dose, route, frequency, and purpose.

3. Compare the medication information the patient brought to the hospital with the medications ordered for the patient by the hospital in order to identify and resolve discrepancies.
   Note: Discrepancies include omissions, duplications, contraindications, unclear information, and changes. A qualified individual, identified by the hospital, does the comparison. (See also HR.01.06.01, EP 1)

4. Provide the patient (or family as needed) with written information on the medications the patient should be taking when he or she is discharged from the hospital or at the end of an outpatient encounter (for example, name, dose, route, frequency, purpose).
   Note: When the only additional medications prescribed are for a short duration, the medication information the hospital provides may include only those medications. For more information about communications to other providers of care when the patient is discharged or transferred, refer to Standard PC.04.02.01.

5. Explain the importance of managing medication information to the patient when he or she is discharged from the hospital or at the end of an outpatient encounter.
   Note: Examples include instructing the patient to give a list to his or her primary care physician; to update the information when medications are discontinued, doses are changed, or new medications (including over-the-counter products) are added; and to carry medication information at all times in the event of emergency situations. (For information on patient education on medications, refer to Standards MM.06.01.03, PC.02.03.01, and PC.04.01.05.)
Impact of Pharmacy-Led Medication Reconciliation

- Observational prospective cohort study in 2015 at a 531-bed hospital x 3m

- **Conclusion:** medication reconciliation promotes cost savings based on potential reventable ADE; ensures patient safety

- Systematic Review and meta-analysis in 2016:
  - 19 studies, 15,525 adult patients
  - **Conclusion:** pharmacy-led medication reconciliation interventions effective strategy to reduce medication discrepancies; had greater impact when conducted at admission or discharge

### Table 3. Extrapolated annual cost impact of medication reconciliation process.

<table>
<thead>
<tr>
<th>Actual Cost Impact of Project</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Interventions</td>
<td>143</td>
</tr>
<tr>
<td>Estimated Cost per Preventable ADE</td>
<td>USD 8,750*</td>
</tr>
<tr>
<td>Gross Costs</td>
<td>USD 1,251,250</td>
</tr>
<tr>
<td>Average Student Pharmacist Time per Medication Reconciliation</td>
<td>47 minutes</td>
</tr>
</tbody>
</table>
Hospital National Patient Safety Goals
Safe Use of Anticoagulant Therapy

2. Use approved protocols for the initiation and maintenance of anticoagulant therapy.

3. Before starting a patient on warfarin, assess the patient’s baseline coagulation status for all patients receiving warfarin therapy, use a current International Normalized Ratio (INR) to adjust this therapy. The baseline status and current INR are documented in the medical record. Note: The patient’s baseline coagulation status can be assessed in a number of ways, including through a laboratory test or by identifying risk factors such as age, weight, bleeding tendency, and genetic factors.

4. Use authoritative resources to manage potential food and drug interactions for patients receiving warfarin and DOACs.

5. When heparin is administered intravenously and continuously, use programmable pumps in order to provide consistent and accurate dosing.

6. A written policy addresses baseline and ongoing laboratory tests that are required for anticoagulants, including renal function for DOACs.

7. Provide education regarding anticoagulant therapy to prescribers, staff, patients, and families. Patient/family education includes the following:
- The importance of follow-up monitoring
- Compliance
- Drug-food interactions
- The potential for adverse drug reactions and interactions
Anticoagulation Management

- Appropriate indications
- Patient specific recommendations: select the right agent and give appropriate dose
- EHR alerts
- Quantity limits
- Lab monitoring alerts
- Resources for safe management (dz and drug interactions)
- Apply pharmacogenetics principle
  - 2C9 and VKORC1 mutation in patients alters response to warfarin
  - Mutations in genes affecting DOACs also identified
  - 2C19 mutation for clopidogrel lowers efficacy
  - 2C19 mutation for prasugrel increases risk bleed
## DOACs in Transition

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid onset of action, no need for bridging</td>
<td>Potential for not starting or continuing therapy until the next FUP visit</td>
</tr>
<tr>
<td>Fixed dose gives predictable effect, minimize prescribing error</td>
<td>Risk of stroke with skipped doses</td>
</tr>
<tr>
<td>Low potential for food interactions</td>
<td>Still need to monitor renal function and potential drug interactions</td>
</tr>
<tr>
<td>(Lower potential for drug interactions)</td>
<td>Non-familiarity of first responders to the new agents</td>
</tr>
<tr>
<td></td>
<td>Reversal agents pending</td>
</tr>
<tr>
<td></td>
<td>Uncertainty of managing clinical scenarios</td>
</tr>
</tbody>
</table>
What about Patient’s Responsibilities to Stay Well and Lower Readmission Rate?

Impact of Teach Back on Readmission Rate and 2nd Stay Length-of-Stay

*J of Nursing Administration 2015;45(1):35-42*
Bedside Counseling

Single-center, retrospective cohort study conducted at a CA 462-bed hospital

- Pharmacist discharge counseling program implemented in July 2013
- Patients targeted if had these risk factors: (1) concurrent use of >5 scheduled medications, (2) ESRD, (3) pneumonia, (4) COPD, (5) diabetes, (6) CHF, (7) MI, (8) high-alert medications like warfarin
- 889 patients evaluated, 488 (55%) received counseling from a pharmacist
- Readmission rate 30-days after hospital discharge, counseled vs. non-counseled patients: 11.3% v 15%, (p=.009) or ED visits: 10.6% v. 15%, (p =.005)
- Other benefits: improve patient outcomes & satisfaction, reduced delay in receiving discharge medications, identifying financial issues up front

Take home points:

- Target high risk patients (slide 11)
- Discharge medications need to be available for effective teaching or learning

*J Hosp Adm.* 2017; 6(2): 68-73
Key to Success of a Bedside Discharge Medication Program

- Hospital leadership and physician support
- Nursing, case management, pharmacy collaboration
- Communication of benefits of service to patients early during hospital stay
- Navigators as key communicator, coordinator, and implementation of the program
- Must not delay or interfere with workflow for patient discharges
- Must be easy for patients to participate
Discharge Instructions
6 Elements of a Successful Hospital Discharge

- Evaluation
  - Of needs soon after admission
  - Identify treatment and recovery goals
- Discussion
  - Patient advocates, family members, caretakers
  - Inter-professional team to anticipate needs
- Planning
  - Transition sites, identify receiving providers and care teams
- Determining
  - Needs vs. feasibility / coverage
  - Beyond medical needs
  - Logistics
- Referrals
  - Start early to secure necessary follow-ups
- Arranging
  - Make appointments for follow-ups and monitoring

6 Elements of a Successful Hospital Discharge, Professional Skills, Professional Patient Advocate Institute
http://www.patientadvocatetraining.com/2011/10/12/6
### Patient PASS: A Transition Record

Patient Preparation to Address Situations (after discharge) Successfully

<table>
<thead>
<tr>
<th>I was in the hospital because</th>
<th>I should ...</th>
<th>Important contact information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I have the following problems ...</td>
<td>1. _____</td>
<td>1. My primary doctor: _____</td>
</tr>
<tr>
<td>2. _____</td>
<td>2. _____</td>
<td></td>
</tr>
<tr>
<td>3. _____</td>
<td>3. _____</td>
<td></td>
</tr>
<tr>
<td>4. _____</td>
<td>4. _____</td>
<td></td>
</tr>
<tr>
<td>5. _____</td>
<td>5. _____</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>My appointments:</th>
<th>Tests and issues I need to talk with my doctor(s) about at my clinic visit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On: <em>/__/</em>___ at _<strong>:</strong> am/pm For: _____</td>
<td>1. _____</td>
</tr>
<tr>
<td>2. On: <em>/__/</em>___ at _<strong>:</strong> am/pm For: _____</td>
<td></td>
</tr>
<tr>
<td>3. On: <em>/__/</em>___ at _<strong>:</strong> am/pm For: _____</td>
<td></td>
</tr>
<tr>
<td>4. On: <em>/__/</em>___ at _<strong>:</strong> am/pm For: _____</td>
<td></td>
</tr>
<tr>
<td>5. Other: _____</td>
<td></td>
</tr>
</tbody>
</table>

Tests and issues I need to talk with my doctor(s) about at my clinic visit:

1. _____
2. _____
3. _____
4. _____
5. _____

I understand my treatment plan. I feel able and willing to participate actively in my care:

Patient/Caregiver Signature

Provider Signature

_____ /__/____ Date

Other instructions: 1. _____
2. _____
3. _____
Follow-up Care

Key: Provider Communication

- Communication breakdown - a root cause of ineffective transitions of care
- Care providers do not effectively or completely communicate important information among themselves, to the patient, or caregivers
- Center for Transforming Healthcare’s hand-off project found several risk factors relating to communication:
  - Expectations differ between senders and receivers of patients in transition
  - Culture does not promote successful hand-off (e.g., lack of teamwork and respect)
  - Inadequate amount of time provided for successful hand-off
  - Lack of standardized procedures in conducting successful hand-off, e.g. use of SBAR (situation, background, assessment, recommendation)
- Areas of improvement:
  - Standardized hospital discharge process
  - Educate discharge team members re: potential of anticoagulation mis-haps
  - Efficient and timely transfer of patient data and information
  - Providing high-quality information to the post-discharge accepting provider

https://www.jointcommission.org/assets/1/18/Hot_Topics_Transitions_of_Care.pdf
Anticoagulation Service as a Transition Team

- **Inpatient services**
  - Educate
  - Optimize therapy selection and dosing
  - Facilitate patient-centered discharge process

- **Outpatient services**
  - Include NOACs and antiplatelet management in addition to warfarin
  - Stewardship on antithrombotic services
    - Educate
    - Communicate
    - Involve patients and providers
Questions

• What percentage of ER visits or hospital readmissions is associated with the use of anticoagulants at your institution?

• Based on the above, what are associated risk factors that are preventable?

• After this presentation, what specific interventions will you consider implementing to reduce readmissions associated with the use of anticoagulants?
References