**Facilitator Guide**

**Description**: This guide is intended to help the faculty deliver this interactive, 60-minute session on a practical approach to high value hospitalization. This is the fourth in a series of six sessions. The slides do include notes so you may want to print out a version with the notes along with this guide prior to your presentation.

**Learning Objectives**:

* Compare charges for inpatient and outpatient services
* Appreciate how delayed diagnosis and diagnostic errors increase cost by extending hospitalizations and increasing morbidity and mortality
* Recognize the out-of-pocket costs associated with different types of hospital discharge
* Optimize medication reconciliation as a key component of safe care transitions

**Audience and Setting:** The intended audience for this module is Internal Medicine residents. A large group setting with time and space for small group work within the session works best.

**Equipment Required**: A computer with projector for PowerPoint presentation, a white board or flip chart for recording group work, and an internet connection to facilitate participants searching databases for costs of medication.

**Optional**: Clinical pharmacist to help facilitate this session and answer questions

**References:**

1. Gogniat P, Papier A, Schneider S. Quality initiative focuses on cellulitis and the problem of diagnostic error. May 24, 2017. <https://www.psqh.com/news/quality-initiative-focuses-on-cellulitis-and-the-problem-of-diagnostic-error> Accessed 11/20/17
2. Yarbrough PM, Kukhareva PV, Spivak ES, Hopkins C, Kawamoto K, Evidence‐Based Care for Cellulitis. *J. Hosp. Med* 2015;12;780-786. doi:10.1002/jhm.2433
3. Burgess, M. J., Enzler, M. J., Kashiwagi, D. T., Selby, A. J., Sohail, M. R., Daniels, P. R., Baddour, L. D. (2016). Clinical study of an online tool for standardizing hospital care. *Journal for Healthcare Quality*, *38*(6), 359-369.
4. Graber ML, Wachter RM, Cassel CK. Bringing diagnosis into the quality and safety equations. JAMA. 2012 Sep 26;308(12):1211-2. [PMID: 23011708]
5. Saber Tehrani AS, Lee H, Mathews SC, et al. 25-Year summary of US malpractice claims for diagnostic errors 1986-2010: an analysis from the National Practitioner Data Bank. BMJ Qual Saf. 2013 Aug;22(8):672-80. [PMID: 23610443]
6. Croskerry P. A Universal Model of Diagnostic Reasoning. Academic Medicine. 2009;84(8):1022
7. Croskerry P. The importance of cognitive errors in diagnosis and strategies to minimize them. Academic Medicine. 2003;78:775-780
8. American College of Physicians, Practice Advisor 2.0. Improving Clinical Care: Collaborative Medication Management Module. Updated 7/18/2011. Available at: <http://www.practiceadvisor.org/Modules/improving-clinical-care/collaborative-medication-management> Accessed 12/20/17

**Presentation #4 Instructions**

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| Step | Description | Estimated Time |
| 1 | Welcome participants; introduce speakers; identify the reason for the discussion, including:   * Explain the learning objectives on slide #2 * Share the outline for the talk on slide #3; this presentation will explore opportunities to provide high value care throughout various stages of hospitalization | 3 minutes |
| 2 | **Case 1: Admission Decision**   * Present the case on slide #4. * Ask the participants to divide into small groups and discuss what they think the diagnosis is and how/where they would treat this patient. What lab results, exam findings or patient factors would help you decide? Encourage the residents to consider cellulitis management from a systems level - what systems-level interventions can they think of to improve the management of cellulitis patients (especially concerning disposition decisions)? Ask the groups to report back on their disposition decisions and what testing would help them decide. * Describe two examples of system-level approaches to cellulitis management (slides #6-7). The first is an example of a visual aid tool to help clinicians make an appropriate diagnosis in the first place. Tools like this can be posted in the workplace, or embedded into the electronic medical record. Slide #7 shows the logic behind a clinical decision pathway that is embedded in the electronic health record. If an ED clinician enters a diagnosis of severe cellulitis, they are prompted to call the medical admission team, prior to starting MRSA coverage. * Turning back to the small groups, prompt students to discuss the cost implications of different dispositions, and whether/how much cost should play in the decision process. Have each of the small groups report back implications of one of the dispositions to the larger group. * Compare estimated charges that our patient might incur on the inpatient versus outpatient services listed in the table on slide #9. Ask the large group what surprised them about the charge comparison if anything? Point out two other options- observation (lower overall costs, but higher out-of-pocket to the patient) and direct admissions (cut out ED costs). Remind the residents that there are important non-financial considerations as well (how ill the patient is and how his presentation evolves over time, degree of home support, ability to get antibiotics from the pharmacy, availability of a follow up appt, transportation to the follow up appt, etc.). We are focusing on comparative charges here because very few of us were trained to incorporate cost concerns into hospitalization decisions. | 15 minutes |
| 3 | **Inpatient management**: For the purposes of this session, you decide to admit the patient to the hospital. For the inpatient management, we will focus on avoidance of diagnostic error.   * Provide follow up from the first case (slides #11-12): The patient did get admitted and had a short stay for cellulitis. He then represents with recurrent unilateral swelling and leg pain. He is initially treated for cellulitis again, but then is found to have a PE, and in retrospect his swollen leg was a DVT. * Slide #13: Ask the participants to discuss in their small groups the factors or biases that led to misdiagnosis in this case. Ask the residents to share with their group an experience where they have seen diagnostic error lead to patient harm. Have the small groups report out the errors they identified, both in our patient case and the stories they shared. * Introduce the concept of diagnostic errors on slide #14. Discuss the three categories of error (no-fault, cognitive and systems-based). Highlight that cognitive errors are more common, expensive and harmful than other categories. * In order to consider cognitive error, it’s important to review the diagnostic reasoning process. If the group has completed HVC Session 3, ask a resident to review the dual process theory of clinical reasoning. If this is their first time with the material, describe the process to the class (see notes section of the slides). Highlight that biases arise primarily from system 1 thinking. * Explain examples of common biases on slide #16. All of these biases were present in this case. * Present strategies to prevent diagnostic errors on slide #17. | 15 minutes |
| 4 | **Discharge Decision**   * Review the continued case of our patient with cellulitis and PE on slide #19. He ended up having MRSA bacteremia (secondary to the original cellulitis) and needs to complete a 6-week course of antibiotics. * Return to small groups and ask the residents to discuss possible discharge options for this patient. What are the criteria/requirements for each of the plans? Rank the relative costs of each discharge option. * When the groups are finished, share the table on slide #21. Are these similar to the options the groups came up with? After seeing all of these, what would they suggest for this patient? | 10 minutes |
| 5 | **Medication Reconciliation**   * Return to small groups and prompt the residents to discuss potential sources of harm or error in the discharge reconciliation process. Ask the residents to share a story where they saw a patient harmed by an inadequate medication reconciliation. Have the groups report back to the large group with themes they identified. * Back in small groups, ask the residents to think of potential strategies or interventions to help improve the safety of discharge reconciliation process. Have the groups report back to the large group. * Share with the residents that there are many available interventions to improve medication management within a particular healthcare system. The ACP Practice Advisor® is one example- medical practices can join and get guidance assessing the current state of their medication management system, as well as access to education materials, evidence-based guideline for medication management and practice improvement materials. | 10 minutes |
| 6 | Summary   * Review the key concepts discussed in this presentation on slide #30. | 2 minutes |