**Facilitator Guide**

**Description**: This guide is intended to help the faculty deliver this 60-minute discussion on health care waste and over-ordering of tests. It will include a review of several common outpatient and inpatient clinical scenarios (indications for C. difficile testing, acute nephrolithiasis imaging) with a focus on the cost implications (direct and indirect) of the diagnosis and treatment of each. As the first in a series of discussions, this module introduces five-step models for High Value Care and High Value Quality Improvement.

**Learning Objectives**:

* Define and articulate the importance of high value care.
* Introduce a simple five-step model for delivering High Value Care; compare with a five-step model for High Value Quality Improvement.
* Discuss the cost implications of several common clinical scenarios and the evidence-based guidelines for appropriate diagnosis and treatment.
* Identify clinical reasoning tools to assist in management of uncertainty.

**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/Steps Required**:

* A computer with projector for PowerPoint presentation and a white board or flip chart for recording group work

**References**:

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12. American College of Radiology. Available at <https://rscan.org/>. Accessed 11/20/2017
13. Friedlander J, et al "The consequences of delaying stone treatment" *AUA* 2015; Abstract MP75-15

 **Presentation #1 Instructions**

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| Step | Description | Estimated Time |
| 1 | Welcome participants, introduce speaker, and identify the reason for this discussion:* The primary goal of this curriculum is to provide trainees with the tools to become leaders in eliminating health care waste.
* Explain the learning objectives.
 | 3 minutes |
| 2 | Introduce health care spending and health care wastes.* Introduce Value Equation on slide #3, emphasizing that cost and value are not interchangeable. Tell participants that they will be asked to return to this equation throughout the curriculum.
* Explain the graph on slide #4: Health care spending continues to escalate at an astounding rate; 30% of these costs are wasted care, which is care that either does not benefit or harms patients. We want to continue providing care that benefits patients while eliminating the wasteful care. Despite the high percentage of GDP, unfortunately, US healthcare outcomes are worse than countries that spend much less.
* Explain the material on slide #4: Discuss the estimates of health care waste and highlight the approximately $210 B spent each year on “unnecessary services” (slide #5). Looking at this another way on slide #6, physician-driven waste accounts for 53% of healthcare waste, and the majority of that is made up of unnecessary services, including labs and imaging.
* Ask the participants for reasons why residents over-order tests; after they discuss some common reasons, reveal the list on slide #7. Point out that the reasons fit into categories of knowledge, process and culture.
 | 5 minutes |
| 3 | Importance of HVC, Role of physician advocacy.* Remind the residents that while the numbers are large and the barriers high, this problem still represents an opportunity for change and to make a difference, and that residents are at the front line. Introduce the Choosing Wisely campaign, which many residents may know about. Ask whether the residents have ever visited the website or incorporated any of the recommendations into their practice.
* Help contextualize the Choosing Wisely campaign as one part of the role of physicians in healthcare advocacy. Introduce the Quadruple Aim, which started as the triple aim to improve patient experience, population health and reduce costs and was recently expanded to improve clinician well-being. Ask the group how the fourth aim is related to the first three objectives. (We have to attend to the health and wellbeing of our clinicians so that they will be able to work towards achieving the first three aims.)
* Remind residents about the IOM (now National Academy of Medicine-NAM) reports- many are probably familiar with “To Err is Human” and “Crossing the Quality Chasm”- both are examples of physician advocacy bringing to light important issues that drove policy changes at the national level. The newest report, which they may not be as familiar with, addresses and prioritizes high value care.
* Introduce the 5 steps toward high value, cost-conscious care on slide #11.
* Introduce the 5 steps for high value quality improvement, comparing with the high value care framework. These steps are adapted from a combination of different QI models, which they will learn more about in session 6.
 | 10 minutes |
| 4 | Case #1- Appropriate C. diff testing* Slide #13: Present the case of a man with a history of C. diff infection coming in to the hospital with sepsis, likely secondary to pneumonia. Ask the audience whether or not they would order c. diff testing as part of their sepsis work up.
* As a large group, ask the residents to consider: whether they think the patient has an active C. diff infection, what the options for working up C. diff are and how a positive test will change their management?
* Return to the value equation to help form their thinking- in this case the quality of the test is how likely it is to identify true disease and whether it will influence management. There are both financial and nonfinancial downstream costs. Point out the numerator of the value equation is zero (even if C. diff is negative, you won’t treat in the absence of diarrhea); this test is of low value regardless of the costs. This is step 1 of the HVC Framework.
* Spend a moment on cost, though, ask what they think a c. diff PCR costs and if they did end up treating, how much 10 days of metronidazole might cost? Try to elicit the potential downstream costs if the C. diff is positive and he is treated with metronidazole.
* Present the remainder of the patient’s case to the group, and on the following slide, present the approximate charges from both the initial episode and the follow up visit. Be sure to point out that unnecessary suffering and lost work are additional downstream costs that are often overlooked.
* Coming back to the 5 step framework, point out that we’ve completed the first step and now are transitioning to the second step, eliminating low benefit or harmful interventions. The Choosing Wisely Campaign’s goal is to motivate clinicians and patients to eliminate waste. Review the IDSA Choosing Wisely recommendation for C. diff testing.
 | 10 minutes |
| 5 | Diagnostic Uncertainty* Transition from the C. difficile case by reflecting that the guidelines for that situation are fairly straightforward (the test is never indicated in the absence of diarrhea); however, we encounter many more complex situations in practice that lead to a great deal of uncertainty.
* Slide #21 Ask the participants to share with their small groups an experience in which they have seen or personally over-ordered testing on a patient. Asks the small groups to report back themes or common factors from the stories that were shared.
* Present the schematic showing the role of diagnostic uncertainty in the decision-making process, and how uncertainty can lead to ordering. Go through the data showing that increased physician anxiety and concern about uncertainty translates into higher charges for patients (slide #23).
* Suggest strategies that are available to clinicians to assist in management of diagnostic uncertainty. Solicit any other suggestions from the group.
* Present the case on slide #25 of a young woman presenting with acute flank pain concerning for nephrolithiasis versus pyelonephritis. Ask the group what imaging they would consider ordering, if any.
* Introduce the American College of Radiology Appropriateness Criteria (slide #26). These criteria present evidence-based guidelines to assist physicians in making appropriate decisions regarding imaging studies for various conditions. Slide #27 contains the ACR ratings for different types of imaging in this scenario. With this information in mind, the next best test is non-contrast CT scan of the abdomen and pelvis.
* Introduce R-SCAN, a free resource that brings together ordering clinicians and radiologists to optimize high value imaging utilization, by providing access to clinical decision support tools and support for forming a collaborative action plan. In small groups, have the students discuss concerns that stakeholders may have about participating in R-SCAN. This leads into discussion of the limitations of support tools, which you can review together (slide #30).
* Slide #31-32: Present the clinical course of the patient, as well as the costs analysis.
* Highlight the idea that high value is not always equivalent to low cost. In this example, the higher cost test (CT scan) may have made this diagnosis sooner than alternative lower cost testing and interventions, saving significant costs down the road.
 | 20 minutes |
| 6 | Summary * Briefly review the themes of this module, emphasizing that residents play a key role in reducing health care waste.
 | 2 minutes |