Getting From Choosing Wisely to Spending Wisely

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It is intuitively true that the most just ways of reducing health care costs are to reduce unnecessary tests and interventions and improve the efficiency of care. Neither of these imperils outcomes (and may improve many) nor involves restricting care (and developing efficient care may require expansion of overall care). The first activity comes under the aegis of reducing waste, and the second, under improving processes. The two are not necessarily mutually exclusive.

In 2010, Howard Brody proposed that specialty societies commit to the development of a top-five list. This would identify five diagnostic tests or treatments that were commonly used but had no evidence of meaningful benefit. Simultaneously, the National Physicians Alliance, supported by a grant from the American Board of Internal Medicine Foundation, was charged with developing and deploying “activity lists of evidence-based, quality-improving, resource-sparing activities that could be incorporated into the practices of primary care providers in family medicine, internal medicine and pediatrics.” The process for selection of these activities was proposed and tested and the initial report published in 2011.

From this initial work, the Choosing Wisely campaign emerged. Nine specialty societies were recruited to begin the initiative, including the American Society of Clinical Oncology (ASCO). Since then, more than 35 specialty societies have developed more than 200 recommendations. ASCO has now released its second set of five Choosing Wisely recommendations, and the American Society for Radiation Oncology (ASTRO) has issued its first set of five. This represents great progress, but the intent of the program purportedly remains modest. These “recommendations should not be used to establish coverage decisions or exclusions. Rather, they are meant to spur conversations about what is appropriate and necessary treatment.” The mandate is to reinforce the discussions physicians have with patients and educate patients as to what is best for them based on the best science. But it is fair to ask if something more profound is occurring.

One can take what can be called a strict constructionist view of evidence and value. This can be addressed symbolically with the value equation:

\[ V = O/C, \text{where } V = \text{value, } O = \text{outcome, and } C = \text{cost} \]

A strict constructionist is fussy about the evidence for outcomes, and only high-level evidence is acceptable. When we say there is no evidence of benefit, we are saying the outcomes are harmful, or the outcomes are unknown, with no high-level supporting evidence. When we discuss various options, we are discussing relative value and comparing the relative value of one test or treatment versus another:

\[ RV1 = O1/C1 \text{ versus } RV2 = O2/C2 \text{ versus } RV3 = O3/C3 \]

A rule of value determination then becomes: When an outcome for an intervention is unknown, the RV for an alternate intervention with a known best outcome, and the lowest cost has the highest value. Rather than fall back on the dictum “absence of evidence is not evidence of absence,” we are saying “absence of evidence is absence of proven value.” A culture of evidence in our professional societies and a rejection of rationales and defenses represent a high bar toward which the campaign is successfully pushing.

American Society for Clinical Oncology Top Five

1. Do not give patients starting on a chemotherapy regimen that has a low or moderate risk of causing nausea and vomiting antiemetic drugs intended for use with a regimen that has a high risk of causing nausea and vomiting.

2. Do not use combination chemotherapy (multiple drugs) instead of chemotherapy with one drug when treating an individual for metastatic breast cancer unless the patient needs a rapid response to relieve tumor-related symptoms.

3. Avoid using positron emission tomography (PET) or PET–computed tomography scanning as part of routine follow-up care to monitor for a cancer recurrence in patients who have finished initial treatment to eliminate the cancer unless there is high-level evidence that such imaging will change the outcome.

4. Do not perform prostate-specific antigen testing for prostate cancer screening in men with no symptoms of the disease when they are expected to live < 10 years.

5. Do not use a targeted therapy intended for use against a specific genetic aberration unless a patient’s tumor cells have a specific biomarker that predicts an effective response to the targeted therapy.
American Society for Radiation Oncology Top Five

1. Do not initiate whole-breast radiotherapy as a part of breast-conservation therapy in women age ≥ 50 years with early-stage invasive breast cancer without considering shorter treatment schedules.

2. Do not initiate management of low-risk prostate cancer without discussing active surveillance.

3. Do not routinely use extended fractionation schemes (>10 fractions) for palliation of bone metastases.

4. Do not routinely recommend proton beam therapy for prostate cancer outside of a prospective clinical trial or registry.

5. Do not routinely use intensity-modulated radiotherapy to deliver whole-breast radiotherapy as part of breast-conservation therapy.

Although explicitly not for coverage decisions, and explicitly for informing physician-patient conversations, the individual recommendations and the program overall cry out for measurement of impact. There are a number of factors that make this difficult. The first is that some of these recommendations are complex, and therefore, discrete data elements are difficult to retrieve. Second, there are concurrent secular trends that mirror the recommendations, such as disease, drug, or technology management programs. For example, 24 of the first 45 recommendations (and three of first five ASCO recommendations) concerned imaging.\(^{10}\) Any measurement over time may reflect the spread of imaging management programs as well as Choosing Wisely recommendations. Third, the scope of measurement, especially to reach an individual physician level and include all costs (eg, false positives, imaging, laboratory services, hospital use, and so on), requires collaboration among numerous entities, including electronic health record platforms, billing software, providers, and payers, including the Centers for Medicare and Medicaid Services.

However, some of that information would be valuable, and not just to payers. More and more, providers are taking responsibility for costs of care in accountable care organizations, risk contracts, bundles, and shared-savings models. It would help if the Choosing Wisely recommendations were distilled, with some simple rules of data collection. The effect of a recommendation could be retrievable if two or at most three data points were sufficient to track a behavior. For two data points, an example would be a disease code and a treatment, test, drug, or imaging code. It would be easier if these could be retrieved from a single database. A threshold of variability would have to be established, such that for example, in more that 95% of cases where codes X and Y occur together, the intervention is not indicated. Alternatively, a baseline could be established, and variation around that baseline could be measured. And that is what makes the ASTRO and ASCO recommendations so interesting.

For example, the first recommendation from the first set of five from ASCO (ASCO Set One, No. 1) addresses the issue of chemotherapy for solid tumors by listing the characteristics of a patient for whom chemotherapy is not appropriate as having all of the following: “poor performance status, no benefit from prior evidence-based interventions, not eligible for a clinical trial, and no strong evidence supporting the clinical value of further anticancer treatment.”\(^{3(p1716)}\) This recommendation is entirely consistent with the charge from Choosing Wisely in that it informs an important discussion with a patient involving substantial cost implications. However, given all the conditions needed to identify the appropriate patient, the ability to measure whether this conversation occurred is devilishly difficult.

There are two recommendations from the ASTRO top five that are in sharp contrast to this latter example. ASTRO No. 4 is: “Don’t routinely recommend proton beam therapy for prostate cancer outside of a prospective clinical trial.”\(^{7}\) ASTRO No. 5 is: “Don’t routinely use intensity-modulated radiotherapy (IMRT) to deliver whole breast radiation in breast conservation therapy.”\(^{7}\) It is pretty simple logic to mine billing data to determine the numerator and denominator to measure how often either of these nonrecommended practices occur and establish benchmarks.

This does not mean that developing efficient metrics for the complex recommendations is a lost cause. For example, for ASCO Set One, No. 1, how does having a conversation about unneeded chemotherapy relate to chemotherapy administered in the last 2 weeks of life or, if we could get the data, death in the intensive care unit, or hospice enrollment? For other recommendations, there may also be simple metrics, such as any carinoembryonic antigen with a breast cancer diagnosis (ASCO Set One, No. 4) or the yearly use of positron emission tomography/computed tomography in a physician’s entire population of patients with breast cancer (ASCO Set One, Nos. 3 and 4) or lymphoma or lung cancer (ASCO Set Two, No. 3). Should WBC growth factors ever be used in metastatic colon cancer (ASCO Set One, No. 5)? It is not necessary that every recommendation have a corresponding metric. It is more important that a few metrics be done well. Critical metrics reported on a physician level tied to performance-based payment systems is the overall goal. This approach does not erode the intent of the Choosing Wisely campaign but instead expands its utility.

The response of professional societies to the Choosing Wisely campaign is both dismaying and encouraging: dismaying in that there have been so many circumstances where costs
were not justified by evidence (“we have met the enemy and he is us”\textsuperscript{11}), and encouraging in that the professional societies have responded so vigorously. Brody\textsuperscript{12} recognized that there would be headwinds in implementing top-five lists, not least of which would be economic, because reduction in cost for some is loss of income for others. Brody’s question was: “Will US physicians rise to the occasion, committing ourselves to protecting our patients from harm while ensuring affordable care for the near future?”\textsuperscript{12(p1951)} It seems professional societies have made that commitment.

Choosing Wisely does not have an unlimited horizon. The number of discrete instances of unproven, wasteful activities is limited. Whether or not Choosing Wisely continues to exist in some fashion, its presence has been impactful. It has demonstrated that there are multiple instances of wasteful activity readily identified by professional societies, it has reinforced the importance of evidence, and it has demonstrated that these societies can act for the general good. The next step for specialty societies is to translate these recommendations into classical process improvement activities to improve efficiency by validating feasible quality metrics, encouraging cross-talking of information systems, fostering collaboration among delivery entities, generating constant feedback on the physician level, restructing processes and remeasuring performance, and supporting us as we learn to spend wisely.

Author’s Disclosures of Potential Conflicts of Interest

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