**UNIT 9: Shared Decision Making**

Overview: Patient Decision Making

9A: Patient Decision Making Background: The video reviews a study showing patient influence on prescriber and illustrates how framing and status quo biases in patient decisions can follow from loss aversion.

9B: Shared Decision Making: The video defines preference-sensitive decisions and shared decision making. I note the role of decision-aids in helping to encourage patient deliberation and reduce the impact of biases.

Learning Objectives:

1. Be aware of the possibility that patients might influence provider decisions or recommendations
2. Be aware that decision biases (such as framing and status quo) can influence patient (and other) decision makers
3. Understand the rationale for using shared decision making and decision aids in clinical contexts characterized by preference-sensitive decisions

Role in Course: Unit 9 transitions into the third section of this course, where we very explicitly bring in the patient and discuss the patient’s active role in co-producing health outcomes. Unit 9 focuses on decision making relatively generally, setting us up to talk about patient adherence in Unit 10 and patients as consumers in Unit 11.

**Patient Influence on Prescribing**

Kravitz et al (2005 *JAMA*) use standardized patients (i.e., SPs or actors posing as patients) to explore whether patient requests that are seemingly generated by Direct to Consumer (DTC) television advertising influence physician prescribing of antidepressants. The following table illustrates the percentage of antidepressant prescribing across six conditions essentially defined by SPs using differing scripts: 1) SPs either said nothing regarding pharmaceuticals, asked for a pill they had seen on TV, or asked for Paxil by name; 2) SPs either reported stereotypical symptoms of depression or of adjustment disorder.

**Percent of all SPs receiving any antidepressant,**

**by experimental condition:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **No request for drugs** | **General request for a pill** | **Specific request for Paxil** |
| **Depression** | 31% | 76% | 53% |
| **Adjustment Disorder** | 10% | 39% | 55% |

The top, left cell within the table tells us that when SPs reported symptoms of depression and did not make a request for drugs, they received an antidepressant prescription 31% of the time. There are many interesting findings in this study. The main conclusion is that when SPs make requests that are transparently driven by DTC television advertisements (an indirect source of influence often explicitly resisted or downplayed by clinicians), prescribing behavior is statistically significantly altered (i.e., differences across columns are meaningful).

The authors of this study also did some follow up by checking patient charts. They found that either general or Paxil requests increase the probability of minimally acceptable initial care for depression symptoms (i.e., prescription and/or talk therapy referral). However, either general or Paxil requests also increase the probability that a diagnosis of depression was recorded, even when the patient was portraying symptoms of adjustment disorder.

This is a very specific illustration in a very specific setting and certainly more work is needed in this general area. This illustration is consistent with one of the primary conclusions from the general decision making literature: decision processes and outcomes can be biased or influenced by a wide range of factors (here, direct patient requests but these requests essentially model indirect impact of DTC advertising). It is not unusual for the decision maker to be unaware of the full extent of these influences.

**Presentation of Choice Information**

One way to illustrate decision bias is to show that the presentation of choice information, or equivalently the **framing** of that information, matters. When the same, objective information can be presented in different ways, decision makers will often say that factors purely related to information presentation shouldn’t or won’t matter to them, but then we see it does.

One important example is whether the same outcome is described as a gain in health received versus as a loss in health avoided. This is related to the more general question of what is considered as the baseline, or reference, state? If I am currently acclimated to being in pain, is the alleviation of that pain a gain? Or is the pain state a loss as compared to a pain free state? I can think of the same states in different ways depending in part on how choices are presented to me.

An early example of the phenomenon of framing comes from research inspired by Kahneman and Tversky’s model of decision behavior called Prospect Theory. For instance, the same “surgery versus radiation” decision can be explained in one of two ways.

Imagine (in both cases below) that 100 patients receive surgery and 100 patients receive radiation:

* We can inform the decision maker that for those who choose Surgery, *10 will die* during surgery and 66 will have died by 5 years. For those who choose Radiation, 0 will die during radiation and 78 will have died by 5 years.
* Equivalently, we can inform the decision maker that for those who choose Surgery, *90 will survive* the surgery and 34 will survive through 5 years. For those who choose Radiation, 100 will survive the radiation and 22 will survive through 5 years.

Note that the two descriptions above convey exactly the same numerical information (see for instance the italics illustrating the two equivalent descriptions of a 90% survival rate for surgery applied to 100 patients). However, in experiments comparing choices across groups who see one frame or the other, we tend to find that preference for surgery is statistically significantly lower, on average, for the loss (“die”) frame (the first bullet point above). In that frame, those initial deaths, representing terrible losses, seem to have a greater impact on decision makers, pushing them towards radiation with its estimate of zero deaths during treatment.

Below, a different sort of experimental setup that again illustrates the impact of choice presentation. Imagine that a patient is choosing between two treatments, as shown in the table. Now, imagine there used to be a different standard of care that is no longer available to that patient:

|  |  |  |
| --- | --- | --- |
|  | **Nausea** | **Back Pain** |
| ***Prior Standard of Care (now unavailable)*** | *Substantial* | *None* |
| **Treatment Option A** | None | Moderate |
| **Treatment Option B** | Moderate | None |

The prior standard of care is normatively irrelevant, because the patient can’t have it. However, what we find is that the prior standard can act as a reference state or reference point. What we tend to see in these conditions is that losses loom larger than gains. So, participants will tend to become more bothered by the prospect of back pain when it’s a loss (because there was no back pain under the prior standard of care, or equivalently the prior status quo, scenario). Participants will be less concerned about nausea because both new options present a gain (again as compared to the prior standard) on nausea. This will push choices towards preference for Option B on average.

What this sort of effect illustrates is that choice presentation can influence decision making through **loss aversion**. As decision makers, we weight losses more heavily than gains, making us sensitive to reference states such as the current situation or the standard of care. If and when we need to change from a reference state, we tend to focus on the losses associated with the change, overweighting them and underweighting any gains we would receive by changing. This general phenomenon contributes to the **status quo bias**, that is the tendency to avoid change. (Loss aversion is also used to explain the general survive/die frame effect from the surgery versus radiation example above. For brevity, I did not go into the specific mechanisms there.)

The decision biases reviewed in this section, and many others, have been documented in both patient and physician decision making. However, we often worry more about the impact of bias when decisions are patient-driven, as patients often make decisions once and so do not have the experience that would allow them to consider multiple perspectives (e.g., differing frames and reference states).

**Preference-Sensitive Decisions**

*Definition*

It is often useful to distinguish preference-sensitive decisions from other clinical decisions. First, some clinical situations *do not* involve preference sensitive decisions, even if they involve treatments that are new to the patient. This occurs when the evidence base is clear on the best choice and providers generally want patients to adhere to best practices and adopt evidence-based recommendations. Note that these situations may feel like decisions to patients (and in fact patients almost always must decide to consent; however, from a clinical perspective, if there is one clearly best choice, then we hope patients will adhere to that choice. Provider relationships can be important for adherence, as will be discussed in Unit 10. In contrast, and the focus for the rest of Unit 9, are preference-sensitive decisions. Preference-sensitive decisions occur in contexts where the current evidence base concludes that there is more than one viable treatment option. In these cases, patient preferences should influence (or determine) decision outcomes. However, the key tradeoffs and outcomes may not all be clear to the patient, so the patient often relies on the provider to help present information. Preference-sensitive decisions are usually the focus of shared decision making and decision aids.

*Comparing Models for Patient-Physician Decision Making*

Most treatments of patient-provider decision making distinguish across three decision making models for preference sensitive decisions.

* The first model is **paternalistic**. Here, the objective is patient compliance with physician directives. This model is often considered old fashioned if not outdated for specifically preference-sensitive decisions.
* The **Autonomous** model assumes that the key objective is physician compliance with patient requests. This is a very simple-minded “consumer” model. It’s often also not very viable, because patients need physicians to provide information. That is, the natural information asymmetry in healthcare decision making means many clinicians and policymakers resist this model.
* In between paternalism and autonomy, we have **Shared Decision Making**. The objective here is a two-way exchange between provider and patient, each informing the other. Shared decision making models can also explicitly deal with the issue that patients and providers each have a different knowledge base. The physician is relied on to provide information about options, benefits, and harms. The patient is relied on to provide information about his or her own preferences. The decision is explicitly framed as a joint effort. Because there is often a good deal of relevant information, and because clinician time is valuable, this approach often includes (and is facilitated by) Patient Decision Aids

*Focus on Implementing Shared Decision Making*

Shared decision making is generally very attractive as a concept, but can become difficult to implement. Below are some generally supported suggestions for implementation:

* Providers need access to evidence-based information about diagnostic and treatment options, as with any decision-making model.
* Providers need support in understanding and implementing techniques for helping patients understand clinical information and weigh the pros and cons of different options (often including some techniques for comprehension checks ensuring patients understand the relevant information). Patient understanding is often aided by an attempt to clarify three different aspects of the relevant decision, in stages:
  + First, it’s important to explicitly introduce the idea that a choice exists, in a way that the patient understands that he or she will be actively involved.
  + Next, it’s useful to describe options in detail, including both benefits and risks of each course of action.
  + Finally, it’s useful to help the patient explore his or her own preferences and understand how these preferences map to options. That is, the provider helps the patient sort through what matters most to the patient in terms of potential benefits and harms.
* Finally, for shared decision making to work, providers have to operate in a clinical culture that facilitates and values patient engagement. The provider must trust that he or she will be supported by colleagues in making patient-driven decisions.

One issue with these recommended support systems for physicians is that shared decision making often takes a bit more time than other approaches and is also more challenging for the provider because different patients will have differing questions, concerns, and points of emphasis. Decision aids often help here.

**Decision Aids**

Patient decision aids are tools (e.g., interactive multimedia tools, websites, even brochures) designed to facilitate active patient participation in clinical decisions. The goal of decision aids is simply to help patients make informed choices about healthcare, and for those choices to take into account patients’ personal values and preferences.

Decision aids can validated, tested, and optimized to have particular qualities. For instance:

* We can test whether they promote both understanding and also deliberative reasoning. This can be particularly helpful when protected values are relevant and hence some background is necessary even to encourage an active, decision making mindset.
* Second, decision aids can be set up to mitigate some common decision biases such as loss aversion. For instance, to mitigate the impact of loss aversion, we find that it is helpful to represent probabilistic outcomes graphically and also to use a full frame, or stating numbers from both a gain and loss perspective (e.g., “1 out of 10 will die, meaning 9 out of 10 will survive”). Because decision aids can be shared across many patients, it’s often worth considerable effort to optimize descriptions, empirically testing different versions of aids.

Note that decision aids are often intertwined with shared decision making initiatives for patient interactions, but the ideas are distinct. Shared decision making focuses on roles in the patient physician dyad while decision aids are directed towards increasing patient understanding. Better understanding can, in turn, make the patient more informed and effective coming into shared decision making, ultimately saving provider time. Hence, these initiatives are often combined, and sometimes even conflated in practice.

**Summary**

Unit 9 is focused on the role of the patient in influencing clinical care. The Kravitz study illustrates the potential strength and pervasiveness of patient influence on clinical decision making. The important the idea of decision bias in clinical decision making, in part illustrates why we may not want to leave all clinical decisions up to patients.

In terms of patient-provider interactions, we see that shared decision making is particularly useful for preference-sensitive decisions. Partly because shared decision making is labor intensive and hence costly, it is often combined with decision aids to improve both efficiency and quality of the relevant decision processes. For instance, decision aids can be developed to help mitigate decision biases associated with framing of choice information or salience of particular reference states.