

# The Paradox of Choice in Healthcare

Here's a look at dealing with decision paralysis.

BY NEIL BAUM, MD, BRITTNEY BAUER, PHD, AND ERIC POWELL

*Reprinted with permission from The Healthcare Administration Leadership and Management Journal, Volume #1 Issue #5, pages 233-237, American Association for Physician Leadership\*, 800-562-8088, www.physicianleaders.org*

**I**magine that you need milk. You go to the supermarket to pick some up, knowing they will have a lot of options and you will be able to find exactly what you want. When you arrive at the dairy aisle, you find dozens of options from which to choose. While being able to choose from many options is what brought you to that particular supermarket, now that you are faced with the task of making the final decision, you are overwhelmed by the number of choices. Not only do you have to decide on the percentage of fat that you want (e.g., 1%, 2%, skim), but you also must

choose from what source you want your milk (e.g., cows, almonds, soybeans, oats). You stand in front of the aisle and have no idea what milk to pick. There are so many choices that you are unable to decide.

This situation is an increasingly common occurrence as people are inundated with a greater number of choices than ever before across all aspects of life. People initially may like the idea of being presented with a range of choices to increase the likelihood that they find the particular option that is best for them, but once faced with the burden of choosing among so many alternatives, they become overwhelmed by the sheer magnitude of the task. This phenomenon is known as the paradox of choice. The paradox of choice model states that while people might believe that being presented with multiple options makes it easier to choose the one that will make them the happiest

and increase their overall satisfaction, having to choose from an abundance of options actually requires more cognitive effort and can leave them feeling unsatisfied with their final choice.<sup>1</sup>

For example, if you only had to choose between 1% and 2% milk, it would be simple to determine your preferred option, because you can easily weigh the pros and cons of the two offerings. When the number of choices increases, so does the difficulty and effort required to know which option is best. People become overwhelmed when faced with choice overload, often resulting in decision paralysis.<sup>2</sup>

Decision-making is a complex and anxiety-inducing task that can generate cognitive dissonance: "A person forced to commit [oneself] to one of several alternatives is faced with mental conflict that comes with

*Continued on page 82*



## *Healthcare Choice (from page 81)*

having to reject all other possibilities.”<sup>3</sup> Cognitive dissonance is the psychological discomfort or anxiety associated with choosing only one out of a wide selection of potentially attractive alternatives, especially when the selected option lacks desirable qualities that the rejected alternatives possess. Hence, counter to the widely accepted belief that having more choices is inherently positive,

for their patients becomes increasingly challenging.

The paradox of choice becomes even more evident when choices must be made by the patient. For instance, a physician was treating a patient with multiple verruca. To select the proper medication, the patient was asked to test all of the topical prescriptions and report to the doctor which of the three medications was the most effective. The patient was actually requesting advice from

(3) actually made a purchase. The psychologists found that although more people visited the display table and sampled products in the extensive-choice condition, people in the limited-choice condition were significantly more likely to make a final purchase. The researchers concluded that although having an abundance of options initially might seem attractive to consumers, being presented with too many options ultimately caused consumers to not make any decision at all.

This phenomenon was later named the paradox of choice and popularized by psychologist Barry Schwartz, who was interested in studying the ways in which economics and psychology intersect. In particular, Schwartz’s work investigated the extent to which choices were affecting the happiness of citizens in Western societies. He posited that the range of choices that we have available to us in modern times is far greater than the number of choices that people had in the past. Interestingly, having more choices in life has not increased overall human satisfaction as much as traditional economic theories might expect.<sup>4</sup>

One of the central tenets of Western societies, especially in the United States, is freedom. Freedom is often closely tied to choice, with a belief that greater choice equates to greater freedom and results in enhanced satisfaction and well-being.<sup>6</sup> In essence, instead of being forced to choose between only one or two different options, people have more freedom when they can choose between a nearly unlimited number of options, which should increase their satisfaction with the outcome and improve their quality of life. The healthcare profession typically follows this same ideology, believing that more choices of treatment plans will lead to greater patient satisfaction.

There is a fine line between having the freedom to choose what you want and being paralyzed in the face of too many options. However, counter to this generally accepted assumption, Schwartz found that the array of choices available in the modern world was actually causing people

*Continued on page 83*

---

## **There is a fine line between having the freedom to choose what you want and being paralyzed in the face of too many options.**

---

past research consistently finds that increased choice is significantly associated with decreased well-being.<sup>4</sup>

Instead of increasing our freedom to have what we want and maximizing our satisfaction and personal well-being, the paradox of choice suggests that having too many options actually limits our freedom and creates more cognitive dissonance.

How does the paradox of choice impact healthcare? Unlike our supermarket example, the decisions that physicians, administrators, and patients in the medical practice make are potentially life-altering and vital to their physical, mental, and financial well-being. As the importance of the decision-making task increases, so does the potential for decision paralysis, dissatisfaction, and diminished well-being.

Decision-making should come easily for physicians, because they have nearly a dozen years of training and have learned how to interpret complicated data and statistics. They must make choices on behalf of their patients many times a day. Whether prescribing medications or recommending a study or treatment plan, they must select the option that they feel is the best course of action for their patients. However, as technological and medical advancements provide more treatment options than ever before, choosing the particular option that is optimal

the doctor regarding which medication was the most beneficial for him, and he wanted the doctor with knowledge of all three prescriptions to make the decision. However, when faced with making the decision himself, the patient felt so overwhelmed by the task and anxious over choosing the “right” medication that he ultimately failed to make a choice at all and left the practice without a treatment plan.

### **History of the Paradox of Choice**

The effects of choice overload originally were studied by psychologists Sheena Iyengar and Mark Lepper in the context of consumption decisions. The researchers found that consumers were less likely to buy a product when given too many options from which to choose.<sup>5</sup> In their field experiment at a grocery store, they set up a free sample table of gourmet jam and offered people a discount coupon if they tasted at least one jam (they were free to try as many as they liked). In the limited-choice condition the table only displayed six types of gourmet jam, whereas in the extensive-choice condition (i.e., choice overload) the table displayed 24 different varieties of gourmet jam.

Iyengar and Lepper measured the number of people in each condition who: (1) visited the display table; (2) sampled the gourmet jams; and

# TREATMENT OPTIONS

---

---

*Healthcare Choice (from page 82)*

to be less happy with their decisions: “the fact that some choice is good doesn’t necessarily mean that more choice is better.”<sup>4</sup> He found that instead of providing greater autonomy and control to make the exact choice that will increase overall satisfaction, having too many options is ultimately debilitating and associated with decision paralysis, cognitive dissonance, and diminished well-being. Freedom is important, but there is a fine line between having the freedom to choose what you want and being paralyzed in the face of too many options.

## **The Paradox of Choice in Healthcare**

As we make social, scientific, and technological advances, we find ourselves with more options than previous generations. The increasingly complex decision regarding what kind of milk to buy is just one example of how we have become overwhelmed by an abundance of choices. There are hundreds of options for what kind of clothes we should purchase, the groceries we should buy, the type of car we should drive, the beauty prod-

---

---

**Physicians face increased pressure from the complex task of finding the one treatment option among many that is the best fit for the needs and wants of each patient.**

---

---

ucts we should use, the restaurants we should patronize ... and the medications we should use. Although on the surface the profusion of options might seem like it should increase patient health and satisfaction, choosing from among an abundance of treatment options is not only a paralyzing decision for patients, but it can also be a debilitating task for their doctors.

Physicians face increased pressure from the complex task of finding the one treatment option among many that is the best fit for the needs and wants of each patient. It is easy to make a decision when there is only Option A or Option B from which to choose, but it becomes much more difficult to gauge the value and utility of Option A when there are multiple factors and dozens of other options to consider.

Physicians must attempt to maximize clinical effectiveness, minimize harm or side-effects, avoid wasting scarce healthcare resources, respect patient choice, and consider the cost of the various options.

Other considerations include the age of the patient; the biological sex of the patient; the route of delivery of the medication (i.e., oral, intramuscular, intravenous); the frequency of dosing the medication (i.e., once a day to multiple times a day); the compatibility of the selected drug with other medications that the patient is currently taking; and the length of time for which the drug is to be

*Continued on page 84*

## *Healthcare Choice (from page 83)*

used. Finally, the doctor will consider the results and evidence of previous clinical trials, such as studies that were double blind, placebo-controlled trials, and so on. As a result, the physician is likely to experience some degree of choice overload, making the final decision more difficult and uncertain.

It is easy to make a decision when there is only Option A or Option B from which to choose, but it becomes much more difficult to gauge the value and utility of Option A when there are multiple factors and dozens of other options to consider.

It is quite understandable that the physician might experience a moment of decision paralysis, increased anxiety about whether they made the best decision for their patient, cognitive dissonance when considering the other potentially helpful treatment plans that were ruled out, as well as burnout and diminished personal well-being caused by the stress and burden of the complex decision task.

The same issues resulting from an overabundance of choice also are

more options or possible treatments represent a greater potential for failed pathways to treating their ailment(s). In this case, the more is certainly not the merrier. If many treatment options are offered, the patient may falsely interpret that the provider—whom they were expecting to be the expert with a clear and concise diagnosis and treatment plan—is unsure

options. So, what is the ideal number of options capable of increasing overall satisfaction and personal well-being?

The decoy effect suggests that we feel more strongly about a choice when there are three options rather than if there are only two. The decoy effect may at first appear counter to the paradox of choice, because it finds that more options are better than fewer op-

---

## **Although the paradox of choice cautions people against the debilitating effects of too much choice, it is difficult to identify at what point choice is ideally maximized.**

---

of what is wrong with them or how to treat their condition.

### **Critiques of the Paradox of Choice**

Despite significant practical and anecdotal corroboration, a few critics have argued against the idea of the paradox of choice, saying there is not enough concrete and scientific evidence to support it. Some have offered competing anecdotal evidence in favor of increased choice, such as the fact that Starbucks offers hun-

ditions. It is important to note, however, that the decoy effect only works when managing a limited-choice set. The decoy effect would not work when a decoy is introduced into a set of 24 options, as compared to a set of 2 options.

Specifically, the decoy effect argues that when we choose between two alternatives, the addition of a third and less attractive option (i.e., the “decoy”) can influence our perception of the original two choices.<sup>8</sup> Decoys are completely inferior to one option (i.e., the “target”), but only partially inferior to the other option (i.e., the “competitor”).

For instance, imagine that you are in the lobby of a movie theater, and you join the line for the concession stand to buy some popcorn. You are quite hungry, so you think that you will get a medium-sized bag of popcorn. When you reach the counter of the concession stand, you see that the small popcorn costs \$3.00; the medium popcorn is \$6.50; and the large popcorn is \$7.00. You do not really need an entire large-sized tub of popcorn, but you end up buying it anyway because it is a much better deal than the medium-sized bag of popcorn.

In an ideal decoy situation, there are three choices available:

1) The “target” is the choice someone else (e.g., a business) wants you to make.

2) The “competitor” is the option challenging the target.

3) The “decoy” is the option that is added to nudge the person toward the target.

*Continued on page 85*

---

## **The decoy effect suggests that we feel more strongly about a choice when there are three options rather than if there are only two.**

---

felt by the patient. Patients often go through the process of scheduling and seeing a specialist, often after having been required to complete numerous steps beforehand (e.g., pre-registration, initially visiting and obtaining a referral from a primary care physician, completing questionnaires, and reciting all their relevant issues to schedulers, nurses, and med-techs, and so on). They are seeking and expecting a single solution for their medical issue, but—just in case—they end up being offered a range of possible treatments and suggested alternatives “if this does not work.”

This decision-making process was not what they were looking for—

dreds of possible product options and customizations, yet remains an incredibly popular and profitable company. Further, although the paradox of choice cautions people against the debilitating effects of too much choice, it is difficult to identify at what point choice is ideally maximized. According to the single-choice aversion model, people are unwilling to choose an attractive option if there are no alternative options with which to compare it.<sup>7</sup>

Therefore, the single-choice aversion model suggests that people are less satisfied when given too few options, whereas the paradox of choice contends that people are negatively impacted when they are given too many

## TREATMENT OPTIONS

---

### *Healthcare Choice (from page 84)*

The crux of the decoy effect is that the decoy must be asymmetrically dominated by both the target and the competitor, with respect to at least two factors (e.g., A and B). This means that the target is rated better than the decoy on both A and B, while the competitor might only be better on A but worse on B. In the popcorn example, the customer is evaluating the options based on two factors: size and price. The large popcorn is the target, the small is the competitor, and the medium popcorn works as a decoy because it is asymmetrically dominated by the other two. Although it is bigger than the small one, it is also more expensive, making it only partially superior. The large, however, contains more popcorn and is only slightly more expensive than the medium, making it less expensive per unit. Although very few people purchased the large popcorn when their only other option was the small popcorn, once the medium popcorn was added as a decoy the large-sized tub of popcorn became irresistible.

Although it is inadvisable to advocate for fewer medication and treatment options, or to recommend that physicians consider fewer options so as to minimize the burden of the decision-making task, we provide a few recommendations for both practitioners and patients to help manage choice overload and decision paralysis:

- Primary care physicians and specialists should work in tandem to coordinate care for their patients, rather than operating as separate entities. Interdisciplinary collaboration could help with streamlining treatment options for a patient based on the combination of knowledge and expertise about the individual patient, the diagnosis, and the treatment options.

- Healthcare systems could encourage and incentivize patients to receive preventative services and steer patients to their primary care physicians instead of urgent care centers. Prescheduled primary care physician visits are down, while urgent care services are up over the past decade. Regularly scheduled visits to a primary care physician would allow doctors to identify and diagnose health concerns at an earlier stage, potentially minimizing the need for more complex and compounding treatments.

- Physicians could be more active in the decision-making process and gather additional details about the patient and their mindset prior to offering treatment options. This allows doctors to possibly rule out and discard undesirable options prior to discussing them with the patient.

- Physicians could offer patients a tiered decision-making approach (i.e., limited-choice sets) to help provide information on medications or treatments in manageable amounts. For example, doctors could use their superior knowledge and expertise to start by only discussing a few treatment options which they think are the best choices for the patient (i.e., limited-choice set of the best options), and then ask the patient if they would still like to learn about additional options (i.e., limited-choice set of the next best options). Instead of presenting all potential options at the same time, increasing the likelihood

*Continued on page 86*

## Healthcare Choice (from page 85)

that the patient experiences choice overload and decision paralysis, the physician can first present only the treatment options that are the most likely to be desirable and effective.

- Patients should be urged to take control of their own healthcare choices. Patients need to see themselves as the pilot and the physician as their guide. There seems to be an expectation that patients do not need to play an active part in their own health, and that they can just see an urgent care doctor who has no knowledge

effect of the number of choices once they are presented.

It is vitally important to be aware of the consequences of choice overload, and how too many options may actually be associated with decision paralysis, dissatisfaction, and diminished well-being. We want to make sure that no patient leaves the practice without receiving the treatment that they need.

When there are many treatment options available, it becomes harder for both physicians and patients to determine the best course of action.

### When there are many treatment options available, it becomes harder for both physicians and patients to determine the best course of action.

about their healthcare history to get a prescription as a quick solution, rather than regularly visit their own primary care physician who is uniquely familiar with their medical history.

- Patients should also be active in the decision-making process and understand that they need to be more candid about their individual preferences and outcome goals during their office visits so that the provider can steer them towards the best treatment option for them.

- Patients need to be encouraged to have more patience and mindfulness when dealing with their own healthcare needs. Current generations spend 10 hours a day on social media, yet they seem unwilling to spend 10 minutes to see a physician. Patients should be encouraged to view their healthcare as a continuous process that requires their full involvement, not as a quick decision with instantaneous results.

- Patients should be more aware of the pitfalls of the paradox of choice phenomenon so they do not allow themselves to be overwhelmed by choice overload. Being prepared for what to expect in advance (i.e., that they will likely be given a complex choice between several potentially varied medication or treatment options) could limit the paralyzing

**Bottom Line:** The paradox of choice not only is a concern for selecting a medication or treatment plan for our patients, but it is also an issue that is popping up across various aspects of our lives as possibilities come nearer and nearer to being endless. The Internet and social media have made it easier for people to see the different options that are available to us without needing to be physically present in a store or office. Furthermore, people now have access to an almost unlimited amount of medical information and advice than ever before, and it is available at their fingertips the very moment it is desired. Instead of empowering patients to be champions of their own healthcare, however, this often inhibits their decision-making and slows the course to treatment. Our take home message: When there are many treatment options available, it becomes harder for both physicians and patients to determine the best course of action. **PM**

#### References

<sup>1</sup> Schwartz B. The Paradox of Choice: Why More is Less. New York: Harper Perennial; 2004.

<sup>2</sup> Scheibehenne B, Greifeneder R, Todd PM. Can there ever be too many options? A meta-analytic review of choice overload.

Journal of Consumer Research. 2010;37:09-425. <https://doi.org/10.1086/651235>

<sup>3</sup> Kaish S. Cognitive dissonance and the classification of consumer goods. Journal of Marketing, 1967;31(4):28-31. <https://doi.org/10.1177/002224296703100406>

<sup>4</sup> Schwartz B, Ward A. Doing better but feeling worse: the paradox of choice. In: Linley A, Joseph S, eds. Positive Psychology in Practice. Wiley; 2004:86-104. <https://doi.org/10.1002/9780470939338.ch6>

<sup>5</sup> Iyengar SS, Lepper MR. When choice is demotivating: can one desire too much of a good thing? Journal of Personality and Social Psychology. 2001;79:995-1006. <https://doi.org/10.1037/0022-3514.79.6.995>

<sup>6</sup> Schwartz B. Are we happier when we have more options? National Public Radio. November 15, 2013. <https://www.npr.org/2013/11/15/245034685/are-we-happier-when-we-have-more-options>

<sup>7</sup> Thompson D. More is more: Why the paradox of choice might be a myth. The Atlantic. August 19, 2013. [www.theatlantic.com/business/archive/2013/08/more-is-more-why-the-paradox-of-choice-might-be-a-myth/278658/](http://www.theatlantic.com/business/archive/2013/08/more-is-more-why-the-paradox-of-choice-might-be-a-myth/278658/). Accessed September 19, 2022.

<sup>8</sup> Hendricks K. The decoy effect: Why you make irrational choices every day (without even knowing it). KentHendricks.com. February 12, 2018. <https://kenthendricks.com/decoy-effect/>. Accessed September 19, 2022.



**Dr. Baum** is Professor of Clinical Urology, Tulane Medical School, New Orleans, Louisiana, and author of *The Three Stages of a Physician's Career—Navigating From Training to Beyond Retirement* (American Association for Physician Leadership, 2017); email: doctor-whiz@gmail.com.



**Dr. Bauer** is Assistant Professor of Marketing, Quinlan School of Business, Loyola University Chicago, Chicago, Illinois.



**Eric Powell** is System Director of Physician Services, LCMC Health System, New Orleans, Louisiana.