



How behavioral science can improve virtual healthcare adoption



Introduction

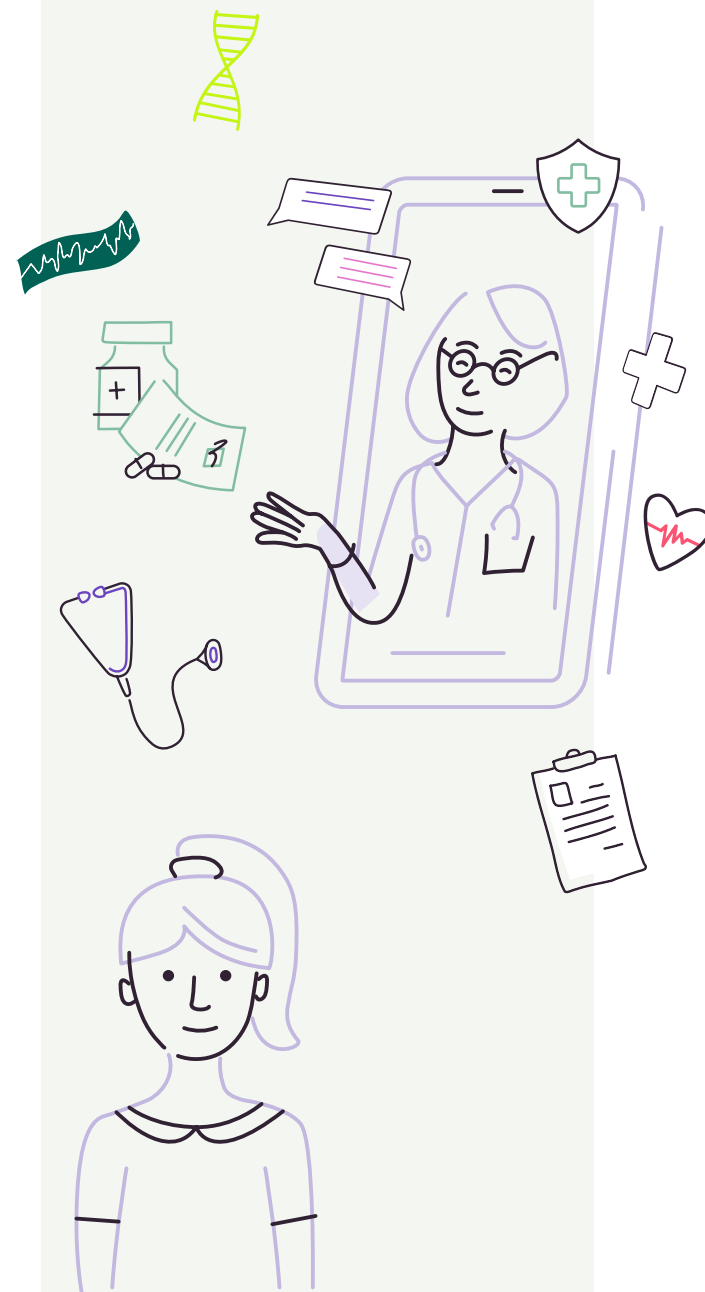
Telehealth and virtual healthcare have the potential to drastically improve the health and wellbeing of millions of Americans by bringing the benefits of timely primary care into their living rooms. While payers and providers across the United States have seen a surge in uptake of remote primary healthcare during the coronavirus pandemic, there is still a gap between where telehealth is today and where its potential lies.

Behavioral science is one of the methods that forward-thinking healthcare organizations are utilizing to address and close this gap. By using design and science to change habits and behaviors, TytoCare's partners have seen massive increases in utilization and ROI associated with virtual healthcare.

By guiding members and patients to view virtual offerings as the starting point for their healthcare journey, you create the opportunity for better access to better care and simultaneously experience higher ED diversion and savings. This ebook will explain what behavioral science is and how it can benefit your members, your patients, and your business.

Behavioral science

seeks to help patients
change the habits that
prevent them from taking up
telehealth services

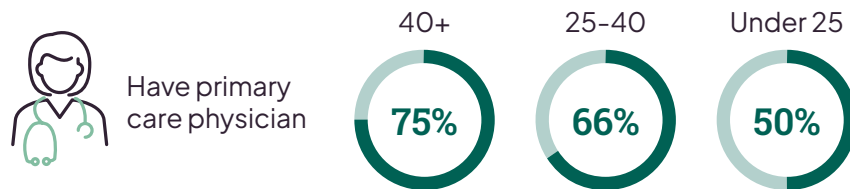


01 What is behavioral science, and why is it important for virtual healthcare?

Behavioral science emerged from the observation that, contrary to traditional thinking by economists, humans don't always make rational decisions. While it's tempting to believe that we always coolly evaluate the options in front of us and choose those in our best interests, in reality, we all know it doesn't really work that way.

Who hasn't had good intentions to eat healthily or do more exercise yet found themselves reaching for a chocolate bar and skipping the gym? These irrationalities are the essence of what makes us human, but they can have serious negative consequences.

Declining numbers of Americans have a primary care physician, and the younger they are, the less likely they are to have one. According to Statista, 75% of people in their 40s to mid-50s have a primary care physician, which drops to 66% among those between 25-40, and only 50% when looking at adults under 25.

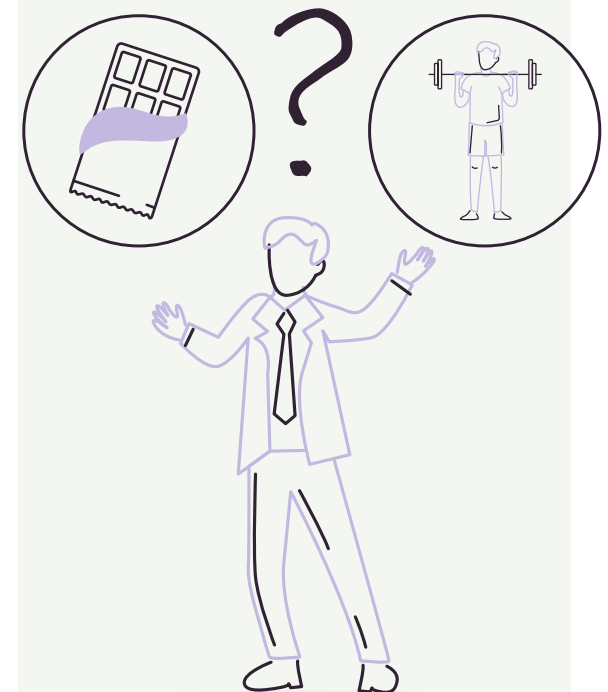


Even people who are registered at a primary care practice may not attend or may be put off attending, due to difficulties in accessing the service or simply finding the time in busy work and home-life schedules to go.

The result is that conditions that could be easily treated or prevented if caught early are missed, leading to increased morbidity down the line. Clearly, no one believes this outcome to be in their own best interest.

Given that our customers are humans and not rational self-interest machines, it stands to reason, then, that merely explaining the benefits of a product or service won't always persuade them to take it up. That's where behavioral science comes into play.

Humans **don't** always make **rational** decisions



01 What is behavioral science, and why is it important for virtual healthcare?

Behavioral science draws on behavioral psychology to understand how people make decisions, and combines that understanding with data gathering to design products that take into account how people actually use them. Or, as T. Dalton Combs and Ramsay A. Brown define it in their book [Digital Behavioral Design](#), “a framework: a set of ideas that describe and predict how and why people behave the way they do. It’s also a set of practices for changing those behaviors.”

A word of caution here: given that behavioral science involves persuading people to alter their behaviors, the ethics of such practices must be carefully considered. Behavioral designers urge practitioners to only use behavioral science techniques in a transparent way that helps customers to achieve their own desires to become happier and healthier.

Behavioral science:

“A framework: a set of ideas that describe and predict how and why people behave the way they do. It’s also a set of practices for changing those behaviors.”

The three foundational concepts of behavioral science

Would you rather have \$180 in thirteen months’ time or \$150 in a year? The answer seems obvious – a 20% increase is well worth waiting an extra month – and indeed, when asked, most people say they would wait for the higher reward.

How about \$180 in a month’s time, or \$150 today? Rationally speaking, the answer should be the same; most people ought still to opt to wait the extra month for \$30. In fact, when given this choice in a research setting, the majority of people will take the lower amount immediately, rather than wait. Why?

Studies like this shed light on what has been termed “present bias,” that is, the tendency of people to opt for a smaller immediate reward over a greater reward in the long term. This innate behavior has real-world effects: ‘present bias’, as it’s termed, explains why millions of people who have expendable income are not putting any money aside for retirement, even when they work for a company that would also contribute.

And present bias is just one of dozens of biases (DecisionLab lists 98 “most relevant” biases in behavioral economics alone) that skew human decision-making in all sorts of irrational ways.

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Choice overload, for example, runs directly contrary to the assumption that the more choices are on offer, the more customers are likely to make a purchase. In the real world, too much choice leads to confusion, procrastination, indecision, and ultimately in a retail setting, lower sales.

For example, a study in which family physicians were given a choice of medicines to prescribe for patients with osteoarthritis found that those who were given three to choose from were significantly less likely to prescribe anything at all than those who were given two choices.

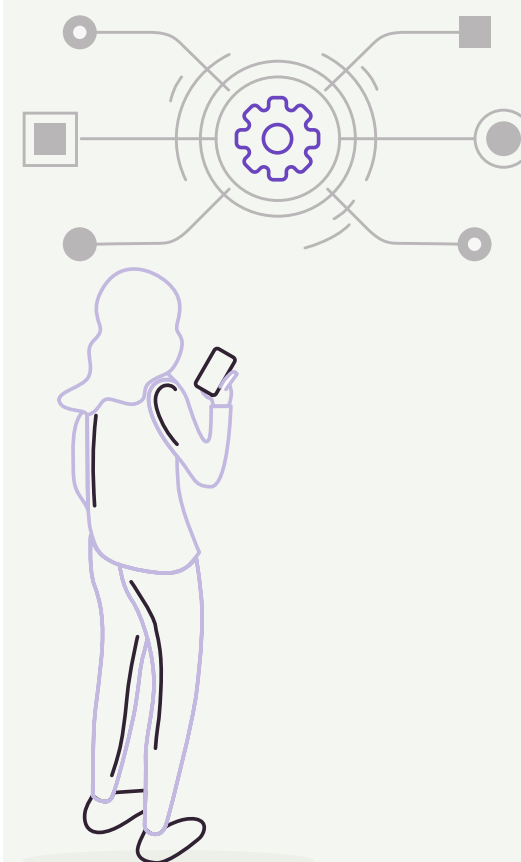
Similarly, restricting choice increases the chances of overcoming status quo bias, which is the tendency of people to stick with what they know if the alternatives are too confusing. In Switzerland, it was found that when the time came for people to renew their healthcare policy, people in areas where there were fewer insurance plan choices on offer were more likely to make a change than those in regions where there was a wide range of policies on offer.

The bottom line is that people are not always rational when making decisions, even those important decisions that will affect their and their family's health and happiness in the long run.

This truism is the first of three foundational concepts of behavioral science. Understanding it allows for a paradigm shift in the way companies present their products and services to their customers.

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The Three Foundational Concepts:

- 1 People are not always rational when making decisions
- 2 Information doesn't change behavior
- 3 Situation and context matters

Bridging the intention-action gap can impact healthcare

Because people are not always rational in their decision-making, simply giving people more information does not necessarily help. Rather, it contributes to information overload, and may actually impede people from taking beneficial decisions.

Often consumers understand very well why or how a product or service could help them, have every intention of using it, and yet fail to find the motivation to actually take it up. In all sorts of ways, most of us live our lives in this gap between intention and action, which is why New Year's resolutions are so rarely achieved.



41%

of Americans make New Year's resolutions

but only **9%**

feel they were successful in keeping their resolutions

The second foundational concept, therefore, is that, because decision making isn't a rational process, information alone does not change behavior. Instead, behavioral designers look for other ways to influence decision-making.

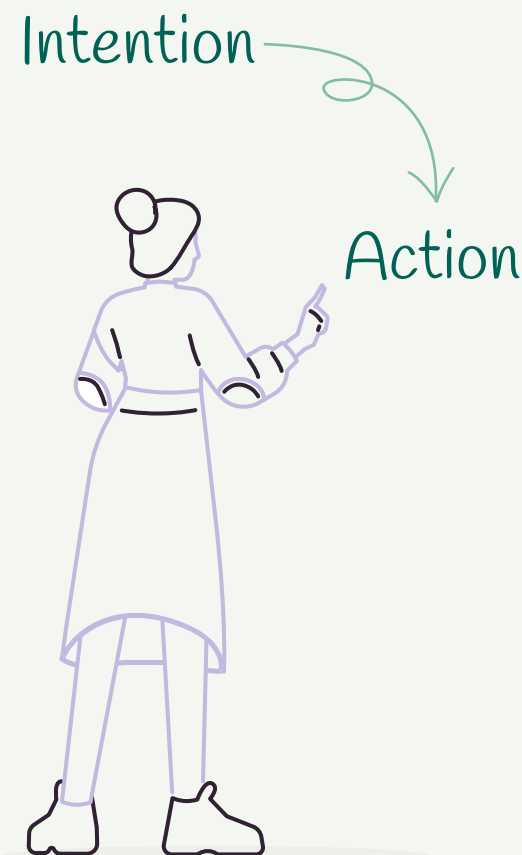
Those other ways are found within the environment in which the decision is taken - and that's our third foundational concept: situation and context matters. It's this concept that Combs and Brown's definition of behavioral science as a "set of practices for changing those behaviors" rests upon.

The practice of behavioral science involves identifying what changes can be made to a product, or process, that will help people to bridge the intention-action gap. These might be as straightforward as simplifying a form to reduce the barriers to filling it in, or as complex as arranging the produce in a large supermarket to more closely map the way people naturally move through retail spaces.

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- Information alone does not change behavior
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In order to design for behavior change, three elements need consideration:



Behavior:

Which action needs to happen?



Barriers:

What is stopping people from carrying out the action?



Benefits:

What will encourage people to take the action?

A behavioral science success story

For behavioral scientist Michael Kremer, leader of a team with Innovation for Poverty Action, behavioral science meant finding a way to persuade people in Africa to [chlorinate their water](#) to drive down diseases such as cholera, typhoid, and dysentery.

Worldwide, 785 million people lack chlorinated water. The most common approach to introducing safe water is to supply bottles of chlorine for a low cost, or even for free so that people can chlorinate their own water. However, only around 10 percent of households use this bottled chlorine regularly.

Kremer and his team took a different approach. Research shows that the best way to embed a new habit is to set it in a stable environment and to piggyback on an existing behavior. The team did this by installing a dispenser at the local community water sources, tying the new action of chlorinating water in with the already established habit of gathering water.

Placing the dispensers in a public space incentivized the behavior by making it social; people are more likely to do something if they believe others are doing it too. And in later iterations, the team colored the dispenser bottles bright blue to make them stand out, overcoming attention bias.

Finally, the team designed the dispensing unit to release the correct measure of chlorine for the average size water container in the village with just one turn of the tap, removing the need to calculate the correct amount beforehand and demolishing another barrier to taking action.

The cumulative effect of these measures meant that, in a controlled experiment in Kenya, 50 to 61 percent of households with public dispensers used the chlorine treatment, against 6 to 14 percent in the control group.

In Kenya, up to **61%** used the behavioral science influenced public dispensers, compared to up to **14%** of control group

02 What does behavioral science have to do with virtual healthcare?

Technology is driving behavior change in virtual healthcare consumption

The way primary medicine is delivered is undergoing a sea change, as technologies driving the shift toward virtual consumption across other industries are increasingly adopted for primary care. This impacts the kinds of plans and offerings that can be built, and how they could be marketed towards potential members.

But as with other industries, although the benefits of the new technologies are often understood, there are psychological barriers to take up.

In 1997, things weren't looking good for Amazon. The company was making about \$60 million a year in sales, had 125 employees, and Barnes and Noble - who were making \$30 billion in sales and had 30,000 employees - had just launched their own website. One headline simply read: "Amazon. Toast". In 2020, Barnes and Noble posted revenue of 1.8 billion, a loss of 9% on the previous year, while Amazon's revenue for 2020 was \$386 billion, a 37.62% increase on 2019's figure.

	amazon	BARNES&NOBLE
1997	\$60m revenue 125 employees	\$30b revenue 30,000 employees
2020	\$386b revenue	\$1.8b revenue

During the last two decades, Amazon has completely changed the way people shop. Whereas before they would have headed out to Main Street, now they reach into their pockets to check Amazon's prices on their phones. And if they do visit a brick and mortar store, it's to engage in "showrooming" - the practice of checking out a product physically before making the purchase on Amazon at a better price.



VS.



02 What does behavioral science have to do with virtual healthcare?

The result is a generational shift in shopping habits. This shift can be tracked in a breakdown of Amazon's customer demographics: in 2019, nearly one in five people aged 27 – 32 made an online purchase every day, against just one percent of those aged 60 and over. The same survey found that 89% of Amazon's customers would rather buy from Amazon than other e-commerce sites.



27-32 year olds
20%
make online purchases daily



60+ year olds
1%
make online purchases daily

This success has been achieved through reducing as many barriers to purchasing with Amazon as possible, from an easy-to-search catalog of products to a 'one click' purchase process, to free deliveries, to a returns process as easy as the initial purchase.

Now a similar shift is occurring in telehealth. Patients who are used to the convenience that comes with digital retail services want the same level of service from their healthcare as they get when purchasing a book or, well, anything else, really.

In April 2020, telehealth usage experienced a huge surge, with uptake 78 times higher than it had been just two months before in February, equating to just shy of one in three office and outpatient consultations occurring via telehealth services.

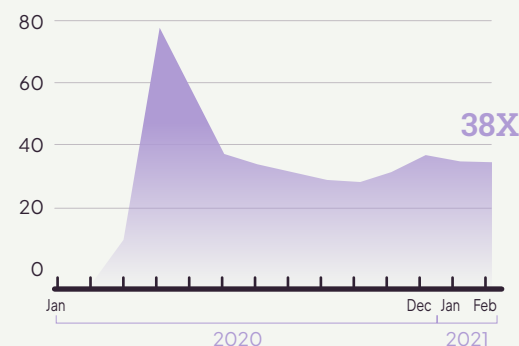
The cause of this mass adoption was, of course, the COVID-19 pandemic, which necessitated healthcare be delivered remotely where possible. Not only were both consumers and providers more willing to use telehealth, but regulatory changes were also introduced to enable greater access and reimbursement.

By June the uptake had abated somewhat, but through the rest of the year went on to stabilize at 38 times the February benchmark, or around 17 percent of all outpatient and office visits.

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Growth in telehealth usage peaked during April 2020 and has since stabilized

Telehealth claims volumes, compared to pre-Covid-19 levels (February 2020=1)¹



McKinsey & Company report, July 2021

In behavioral science terms, the shift was created by 'habit discontinuity' prompted by COVID-19. The principle is that the easiest way to change a habit is to change your environment, so if someone wants to quit smoking or take up exercise, the best thing they can do is move house.

For many people, COVID-19 served as habit discontinuity as people changed their work, childcare, and social arrangements. As many of their daily habits moved online, telehealth became an obvious step to take, in line with remote learning and zoom calls with family members.

At TytoCare, we've watched this paradigm shift take place from our viewpoint at the forefront of the technological revolution in primary medical care. From our experience with telehealth for urgent care and our work with payers and payviders implementing virtual healthcare plans, TytoCare has found that, in order to really succeed with virtual healthcare, some additional challenges need to be overcome to see real mass adoption.

A paradigm shift in behaviors for patients and physicians

Despite the priming that the digital retail revolution, and more recently, COVID-19, have delivered, patients are still used to going out to receive medical care, whether it's to their primary physician if they have one, or to the ER for emergency care. They are not used to picking up the phone or turning on a video app, and this status quo creates a psychological barrier to the take up of virtual healthcare. And unlike retail, in which there is a low cost to switching between brands, the trust built up between doctor and patient over time constitutes another major barrier to going digital.

Visiting a family physician is traditionally a highly personal event. The physician is likely to greet the patient by name, know about their family, understand their medical background, and in smaller communities, may even mix socially.

The **easiest** way to change a habit is to **change** your environment.

Even in situations in which the patient and doctor are not familiar with one another, the setting of a doctor's surgery inspires trust.

Visiting a family physician is traditionally a highly personal event.



02 What does behavioral science have to do with virtual healthcare?

Even in situations in which the patient and doctor are not familiar with one another, the setting of a doctor's surgery inspires trust. Physicians may display their credentials in framed certificates on the wall. They tend to chat socially during the consultation, even if only for a minute or two. Even minor details such as using a fountain pen to sign the prescription give an impression of professionalism, and the sense that the physician took the time to give the patient their full attention.

The result is that, when a prescription or advice is given, the patient is more likely to trust it and follow through.

Not only are these social cues missing in a telehealth consultation, but patients typically don't necessarily speak to the same physician each time, making it much harder for a relationship built on trust to be established.

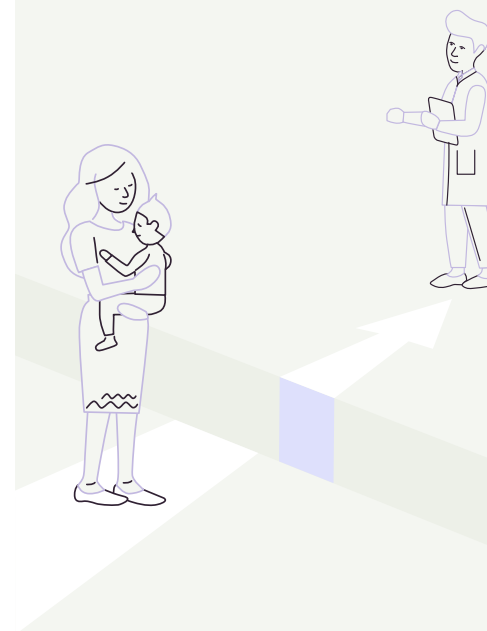
On the physician's side, too, the way virtual healthcare is carried out poses barriers to trust. Physicians were taught at medical school to conduct exams in person with tools they hold in their own hands. Many are reluctant to make diagnoses and write prescriptions with the same level of confidence when seeing patients through a video screen, especially as they are missing key diagnostic exams such as taking blood pressure, listening to chest sounds, examining patients' ears, and listening to their heart.

TytoCare overcomes that particular barrier by allowing physicians to carry out exams remotely and make a diagnosis with a much higher level of confidence than they otherwise could. However, more can still be done to reduce the barriers and increase the benefits to physicians and patients alike who want to take up telehealth as a more convenient alternative to in-person care, but have yet to bridge the intention-action gap.

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03 What are some tools for **virtual healthcare** adoption?

As we mentioned in Section 1, when planning for behavior change three elements need consideration:



Behavior:

Which action needs to happen?

In telehealth, the answer to this question is likely to be something like 'People need to call our number as their first point of contact, rather than heading out to a physical surgery or ER'.



Barriers:

What is stopping people from carrying out the action?

To answer this question, map out a full list of the individual actions the person needs to take to carry out the behavior, then for every action, ask: why might they not do it? For example, if the behavior is to make a phone call, they need to have the number at hand or they won't be able to make that call.



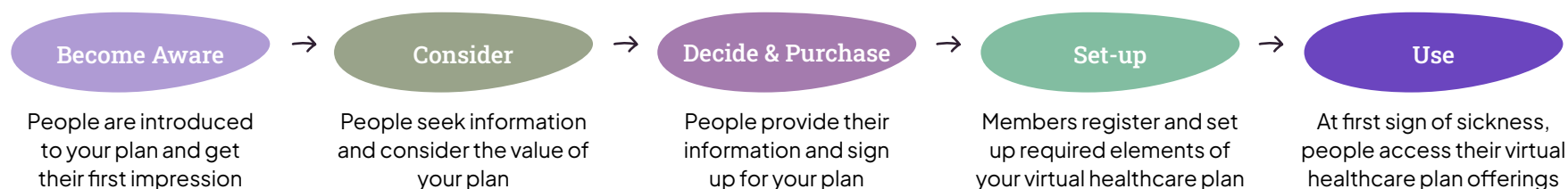
Benefits:

What will encourage people to take the action?

Another way of thinking about this question is: how can the barrier be overcome? To go back to our phone call example, printing the number on something that is already associated with health care, such as a thermometer, could act as a prompt to overcome that particular barrier.

Mapping a health plan member's journey

In order to be truly effective, our opportunity to change behavior has to happen at every touchpoint throughout the user journey. A typical journey for telehealth use looks like this:



At each of these stages, consider what the barriers are to engagement at this point and how they can be overcome.

<p>What are the most effective channels to generate awareness?</p> <p>What are the pains we should touch on when talking to consumers?</p> <p>What is the right frequency as we walk the line between communication and spamming?</p> <p>What are some of the mental and psychological models we can leverage?</p>	<p>How do we set the right first impression?</p> <p>How do we teach consumers what to expect (and what not to)?</p> <p>What concerns might potential buyers have? How can we allay them?</p>	<p>What price point makes it an attractive option?</p> <p>How easy is our purchasing process? How can it be made easier?</p> <p>What is the most efficient way to deliver their purchase?</p>	<p>If there is a product or app to be set up, how easy is this to do? How can we make it even easier?</p> <p>Can the product be personalized at this stage?</p> <p>Can users familiarize themselves with the system ahead of needing to use it in an emergency setting?</p>	<p>How do we encourage and help users to use our solution next time they're sick?</p> <p>How do we keep it top of mind?</p> <p>How do we set them up for a successful visit and ongoing care?</p>
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Trial and iterate

Once you understand the barriers preventing your potential clients from bridging the intention-action gap, the next step is to design potential solutions to help them overcome those barriers and to trial them.

Gathering data on where in the journey the biggest barriers lie can be extremely useful, as it allows you to prioritize. As ever with experimentation, it is best to change one variable at a time, in order to pinpoint what is making the difference and how.

It has been said that “the only constant in life is change,” and this applies as much to a dynamic industry such as telehealth as anything. So don’t be afraid to evolve constantly to better meet your customers’ needs as you support them on their telehealth journey. Together we can make telehealth the answer to our patients’ most pressing health needs.

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Intention → Action



TytoCare:

Technology meets behavioral science for virtual healthcare plan adoption

Virtual healthcare, when delivered correctly, has the potential to vastly improve the health and wellbeing of our customers, by making effective primary healthcare readily available from the comfort of their own homes. But accessing those benefits requires a shift in habits and behavioral patterns, and that means payers taking the initiative to help their customers overcome the barriers to behavioral change.

TytoCare is a remote physical exam solution, that provides better virtual care for every member of the family, where they spend most of their time, across different modalities - urgent, primary, preventive, longitudinal. The AI-enabled solution includes TytoCare's FDA-cleared handheld device, mobile app, and a remote visit telehealth platform, which seamlessly integrates into existing ecosystems.

As part of the solution, TytoCare provides end-user engagement plans required to drive behavioral change. These include playbooks, KPIs, analytics, and communication plans which ensure that not only do you have the tools to launch a virtual healthcare plan, but also the capabilities to make it successful. Within the last year we have seen a Tier 1 US payor's virtual healthcare plan utilization jump more than 50% thanks to the unique offering and the communications around it.

A Tier 1 US payor saw a
utilization jump of more than 50%

Virtual healthcare requires a holistic approach. Not only must there be a plan in place, but that plan must enable real virtual care with remote medical exams. It must be tailored to the right audiences, and be communicated at the right times in the correct ways. At TytoCare we take that holistic approach and support you every step of the way.

If you would like to see similar benefits to your program, we invite you to work with us on a behavioral science program that can transform your customers' lives.

Telehealth, when delivered correctly, has the potential to vastly improve the health and wellbeing of our customers, by making effective primary healthcare readily available from the comfort of their own homes.





About TytoCare

TytoCare works with leading health plans and providers to roll out Home Smart Clinic solutions that enable accessible, high-quality primary care from home, with no compromises. The Home Smart Clinic solutions include remote physical exams that work across primary care modalities, and can be tailored to any cohort or population. Together with Tyto Insights™ AI-powered guidance, provider integrations, and Tyto Engagement Labs™ which include member journeys and engagement frameworks, Home Smart Clinic solutions ensure more equitable access to care across the globe, and enable healthcare organizations to meet their KPIs. TytoCare's solutions resolve 59% more conditions than audio and video telehealth solutions, and reduce the cost of care by 10-20%. Co-founded by Dedi Gilad and Ofer Tzadik in 2012, TytoCare has FDA and CE clearances and partners with over 180 major health systems, health plans, and strategic partners in the U.S., Europe, Asia, Latin America, and Israel.