

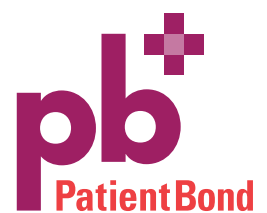


A PatientBond Whitepaper

Psychographic Segmentation

and its Practical Application in
Patient Engagement and Behavior Change

Traditionally, healthcare has taken a “one size fits all” approach to patient engagement, assuming everyone with the same health condition thinks and acts alike, treating patients like a “walking health condition.” Patients are people, with distinct personalities, values and priorities.



Engagement **Amplified**



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EXECUTIVE SUMMARY

Patient engagement is a critical factor in the achievement of positive health outcomes. Many studies have shown that patients who are actively engaged in their health, wellness and healthcare experience better health outcomes¹. Patients who are active participants in their care and engage healthcare professionals productively are more likely to pursue regular health screenings and checkups and exhibit healthy behaviors, such as exercise, proper nutrition and the avoidance of smoking or excessive drinking. Consequently, health issues are detected earlier or avoided altogether, leading to healthier people and less costs to the healthcare system.

Traditionally, healthcare has taken a “one size fits all” approach to patient engagement, assuming everyone with the same health condition thinks and acts alike, treating patients like a “walking health condition.” Patients are *people*, with distinct personalities, values and priorities. Two people may share common characteristics, such as health condition, demographic or socioeconomic variables, and they may even behave the same way, but their *motivations* may be different. If patients’ personalities and motivations are different, an engagement message – whether clinical, educational or marketing – needs to also be different to activate desired behaviors.

Technology and digital health are playing a greater role in consumers’ healthcare. Digital health promises to extend providers’ care beyond the walls of the practice and engage patients on their terms. However, while health apps are increasingly available, addressing a spectrum of health, wellness and prevention needs, two-thirds of Americans indicate they do not regularly use a health app on a smartphone or tablet². Healthcare providers who engage patients through other digital channels, such

as email, typically use the same channels for all patients, further reinforcing a “one size fits all” approach. Some patients may prefer email while others prefer text messages or phone calls. Other patients may still even prefer printed materials.

PatientBond, a platform for digital, personalized patient engagement, addresses healthcare consumers’ needs for messaging and channel mix designed specifically for each individual. PatientBond has a proprietary and proven psychographic segmentation model developed by healthcare consumer experts from Procter & Gamble, the leading consumer products company and advertiser in the world. Psychographics pertain to people’s attitudes, personalities and lifestyles and are the core to their motivations and communication preferences.

PatientBond’s psychographic segmentation model leverages these factors and enables messaging and channel mix (email, text/SMS, Interactive Voice Response, in-app/portal, print and interpersonal) designed to enhance the likelihood of patient activation and behavior change. While psychographic segmentation has historically been challenging to operationalize and scale, PatientBond achieves this to help its clients succeed with their clinical and business goals.

PatientBond is cloud-based and API driven, integrating easily with any Electronic Medical Record (EMR), Customer Relationship Management (CRM) or practice management system. PatientBond offers an extensive set of use cases and applications to address health outcomes, patient/member loyalty & acquisition and payment collections/Revenue Cycle Management.

PATIENT ENGAGEMENT: THEORY VS. REALITY

For years now, the healthcare industry has promoted the idea that providers and patients collaborating and communicating with each other is a powerful and important concept. In a healthcare marketplace that has been evolving toward a model of consumerism, it is frequently said that patients want to be engaged in their own healthcare decisions, delivery and interactions. It is generally accepted that the more engaged a patient is, the more likely they are to be generally healthy and/or experience better health outcomes when issues arise.

Technology can also be a powerful enabler of patient-provider engagement, extending care beyond the walls of the practice or hospital. Digital communications are becoming increasingly important as consumers are more and more reliant on mobile technologies (e.g., smartphones, tablets), and effective engagement means meeting consumers on their own terms. Moreover, 72 percent of consumers indicated that technology is important for managing their health³.

However, despite years of trying, employing an extensive number of technologies and tools, and millions of dollars spent by providers, systems, and payers, the reality is that robust patient engagement is still a big challenge:

- Only 16% of people prefer to get a post visit follow up message via text⁴
- Only 21% of people used a smartphone app to manage their health in the last 12 months⁵
- Only 4.7% of people respond to SMS messages for advocacy and marketing by a practice⁶
- Only 0.8% of people responded to the same message via email⁷

With all the benefits of communications and collaboration technologies available, and a true desire by providers and patients alike to embrace patient engagement, why are these technologies

underperforming? Well, the truth is, patient engagement technology isn't very engaging.

The tools that providers have available today — no matter whether they are embedded in an EHR system, leveraging a powerful CRM platform or as a stand-alone mass communications tool — may be hindering actual progress and real-world impact.

Patients are generally treated as a homogeneous population, as if they all think and behave the same way. Communications focus on a health issue rather than each patient as a unique, *human* individual with his or her own motivations, priorities and communication preferences. Patients receive the same communications and content in a “one size fits all” approach.

Additionally, many healthcare providers believe that throwing enough educational content at a patient is enough to drive positive behavior change. The more information the better, right? The answer is a definite “No.”

Consider the percentage of physicians in the United States who are overweight or obese. Despite years of healthcare education and practice, as well as access to the world's leading medical information, nearly half of physicians are overweight or obese⁸. UCLA found that a quarter of all Licensed Practical Nurses smoke⁹.

These are the most health-educated people in the world, yet they act in a way that is inconsistent with wellness and healthy living. If healthcare professionals continue to indulge, how can we expect patients to make the right choices just by providing them with more and more information?

These approaches can disenfranchise people — they process information differently and value different elements of information. Blasting email messages into the ether may connect with some, but not the majority, of the desired audience.

Consequently:

- People feel overwhelmed
- People aren't motivated to act
- People don't make the information received a priority
- People can't make a decision

Dr. Brennan Spiegel from Cedars-Sinai sums it up:

"Digital Health... is a behavioral science. Creating the tech isn't the hard part. The hard part is using the tech to change patient behavior."

Effective engagement, in which the patient understands and internalizes information and is motivated to act upon it and provide reciprocal information, requires personalization. Traditionally, personalization in digital communications simply meant adding the recipient's name in the introduction of an email or calling out a health condition he or she may be managing. Traditional, mass approaches to patient communications (whether education or marketing) are insufficient. Communications should appeal to the recipient's motivations through preferred channels.

To address this opportunity, healthcare providers can look toward the consumer products, retail and financial industries, who have pioneered true personalized engagement to influence choices and behaviors. One methodology they rely upon is consumer segmentation.

"Digital Health is not a computer science or an engineering science. It is a... behavioral science. Creating the tech isn't the hard part. The hard part is using the tech to change patient behavior."

– Dr. Brennan Spiegel
Cedars-Sinai Medical Center
Fortune – April 2018

CONSUMER SEGMENTATION

Segmentation involves taking a heterogeneous population of consumers and employing data analysis to break the population into smaller, more homogeneous groups composed of individuals with shared traits. Healthcare organizations already do this to some degree:

- **Demographic & Socioeconomic segmentation:** Grouping people by gender, age, ethnicity, income, education and other physical or situational characteristics. Women's health or Senior health programs use these segmentation methods to better meet the needs of specific groups of patients. Social Determinants of Health (SDoH) are also data that can be used to meet the needs of higher risk or underserved patients.
- **Health Condition/Status segmentation:** Grouping people according to a shared disease, a stage within a disease or a degree of healthiness. Condition management programs are an example of such segmentation.
- **Behavioral segmentation:** Grouping people according to their health behaviors, based on medical claims, hospital utilization data, screenings, etc. Predictive analytics make use of past behavioral data to anticipate future behaviors and medical needs.

Each segmentation method is useful and offers valuable insights on patients and other healthcare consumers. However, each method listed above stops short of explaining **why** people think and behave the way they do. Not all men think and act alike. Not all Hispanics think and act alike. Not all Millennials think and act alike. Not all patient with diabetes think and act alike.

Additionally, two people who behave the same way may not be motivated by the same things. These two people may show up in an Electronic Medical Record (EMR) with similar diagnoses, tests, labs and visit frequency; however, what compels them to seek care may be very different. For example, one patient may be motivated by a sense of duty to family, while another patient is driven by a need for personal control over a disease. Different motivations and priorities require different messages to activate and sustain desired behaviors.

So how does one identify these different motivations and priorities and group consumers accordingly? Psychographic segmentation.

PSYCHOGRAPHIC SEGMENTATION

Psychographics pertain to people's attitudes, beliefs, values, lifestyles and personalities. It is the product of "nature & nurture" and the aggregate of a person's experiences. Psychographics are core to a person's motivations and communication preferences and help explain *why* people do what they do.

Psychographic segmentation divides consumers into sub-groups based on these shared psychological characteristics, including subconscious or conscious beliefs, motivations and priorities to explain and predict consumer behavior¹⁰. Developed in the 1970's, it has been used extensively in consumer-focused industries by world-class companies such as Procter & Gamble, Walmart, CVS and Walgreens to design products, advertising, promotion and user experience. However, it is relatively new to healthcare.

Psychographic segmentation does not replace other forms of segmentation, it complements and supplements those forms of segmentation that healthcare organizations may already be using. It provides a "consumer lens" to interpret data from a patient's point of view, offering context that cannot be gleaned from other types of data and avoiding a provider's or marketer's personal attitudes and biases.

These insights can help providers and healthcare organizations understand consumers' decision-making processes and improve the relevance and resonance of engagement – whether to improve health outcomes, drive patient acquisition and loyalty, or even increase patient financial responsibility collections.

THE PATIENTBOND PSYCHOGRAPHIC SEGMENTATION MODEL

[PatientBond](#) amplifies patient engagement through digital workflows and channels (e.g., emails, text messages/SMS, Interactive Voice Response phone calls, in-app/portal messaging, etc.). PatientBond uses a proprietary psychographic segmentation model to personalize all messages and channel mix according to an individual's psychographic profile.

This psychographic segmentation model was developed by healthcare consumer experts from Procter & Gamble who led such work for its Healthcare division since the early 2000's, developing several models and improving their predictability and practicality through several generations. These psychographic segmentation models informed P&G strategy and were shared with institutional customers as a value-added service.

In 2012, these healthcare consumer experts left P&G to start their own company, [c2b solutions](#), bringing psychographic segmentation and consumer insights to the healthcare market to help improve patient outcomes and provider marketing. After developing its "fourth generation" psychographic segmentation model (evolved from the previous three generations developed over the years at P&G), c2b solutions soon partnered with PatientBond to scale psychographic segmentation across large populations via its digital platform, and the combination of capabilities yielded significant results. In December 2017, PatientBond acquired c2b solutions and its proven psychographic segmentation model, the developers of which became members of the PatientBond leadership team.

MODEL METHODOLOGY

Psychographic segmentation starts with the development of a survey that includes attitudinal, values- and belief-based statements, to which respondents react using a 5-point Likert Scale format – for example, from “Strongly Agree” to “Strongly Disagree.” The survey should be completed by a representative sample of consumers, based on the desired target audience.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
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PatientBond’s model is based upon an online survey, initially fielded in 2013 (and followed up with national studies in 2015 and 2018), that was completed by a representative sample of U.S. adults age 18+ with an over-quota of respondents with various health conditions, health insurance coverages and employment status (n=4,878). This was to ensure that sub-populations important to PatientBond’s customers would offer sufficient base sizes for analyses and comparisons with a high level of statistical confidence (95%). The survey was fielded by [Ipsos](#), a leading global consumer research firm.

The robust survey examined 384 attributes and yielded more than 15 million data points on consumer attitudes and behaviors regarding:

- Health, wellness, and healthcare delivery
- The roles of various healthcare professionals
- Rx and OTC medicines, including where purchased and attitudes around brand vs. generic
- Media preferences and trusted information sources influencing decisions around health products, hospitals and health insurance
- Plus many other subjects

Thus, this psychographic segmentation model would describe consumers’ approaches to health and wellness, in general, versus a specific product or service category. This lends to a more flexible and broadly applicable model.

A factor analysis using statistical clustering procedures was conducted to examine response patterns to the survey questions. More than 90 segmentation solutions were examined, and the optimal solution was determined by profiling each solution on critical market evaluation variables. The optimal solution meets four criteria:

1. Provides the most differentiation when comparing segments
2. Produces segments that are internally consistent
3. Provides actionable market insights
4. Creates solutions that are stable and reproducible

The model should also balance predictability and practicality; while additional segments may add predictability to the model, too many segments are difficult to manage in a business or clinical application.

The PatientBond psychographic model recognizes five unique segments, each with a different approach to health and requiring a different engagement strategy. This paper will cover these segments in-depth in the next section.

Statistical analysis identified 12 questions from the study to inform an algorithm that is 91.1% predictive as to which of the five segments a consumer belongs. Respondents indicate the degree to which they agree or disagree with each of the following 12 statements:

1. I believe that I can directly influence how long I will live, regardless of my family history
2. I'm more worried about other family members' health than my own
3. I prefer alternative medicine to standard medical practice
4. I believe alternative/holistic/natural medicines are effective for helping maintain my health and wellbeing
5. I don't let being sick get in the way of my work
6. There are better things in life to focus on than healthy behavior
7. I am successful in maintaining healthy nutritional habits
8. I will go to the doctor at the first sign of health concerns
9. My doctor is the most credible authority for my health & wellness needs
10. I actively seek information about nutrition and healthy diets
11. I would be willing to experience major delays in getting a doctor appointment if it meant everyone could get the healthcare they need
12. I give a significant amount of money to charity

Predictability ranges from 86% to 95% by individual segment. The attributes selected to classify respondents were statistically identified as the strongest predictors of segment classification. It is important to keep in mind that for each segment the numbers are average classifications. Reapplication of the algorithm may yield estimates that vary from 5 to 7 percentage points above or below the average. External factors, such as question order, sample definition and respondent level variability in the survey responses can have a significant impact on classification accuracy, both overall and by segment.

This quantitative study was followed by qualitative research known as Psychosymbology. Participants are recruited by segment for focus groups, in which a symbolic picture sorting and interpretation technique is used to surface unarticulated motivations and subconscious drivers unique to each segment. This helps bridge the gap between emotional and language centers in the brain, to help participants describe feelings and emotions associated with various aspects of health and healthcare. This same technique has been used – with remarkable success – by many P&G brands to inform advertising strategies.

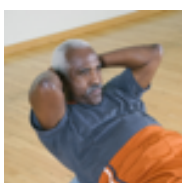
THE PATIENTBOND PSYCHOGRAPHIC SEGMENTS

The five PatientBond psychographic segments are distinct in their beliefs, attitudes, motivations and priorities. Some require directive guidance from healthcare professionals while others prefer options and choice for self-direction. Some segments will put doctors on a pedestal, while some believe doctors are just one of many sources of healthcare information. Some are health-proactive and wellness oriented while others are reactive or disengaged with health.

Figure 1 describes each of the five segments in detail, including their percentage of the U.S. population age 18+ :

Figure 1. The PatientBond Psychographic Segments

SELF ACHIEVERS 19%



Self Achievers are the most proactive when it comes to their wellness, investing what is necessary toward their health and appearance. **Self Achievers** may actually have health issues, but they stay on top of them with regular medical checkups, health screenings and research. Purpose-driven, **Self Achievers** are task-oriented and will tackle a challenge if they are given measurable goals.

BALANCE SEEKERS 17%



Balance Seekers are generally proactive in their health and are wellness-oriented. **Balance Seekers** are open to many ideas, sources of information and treatment options when it comes to their healthcare. However, **Balance Seekers** themselves – not healthcare professionals – define what success looks like in their health. Physicians and other healthcare professionals are useful resources, but not the only resources, for leading a healthy life.

PRIORITY JUGGLERS 18%



Priority Jugglers are very busy with many responsibilities. Because of their schedule, **Priority Jugglers** may not take the time to invest in their own wellbeing and they are reactive when it comes to health issues. However, **Priority Jugglers** are very proactive when it comes to their family's health and will make sure their loved ones receive the care they need.

DIRECTION TAKERS 15%



Direction Takers believe their physician is the most credible resource for their healthcare needs. **Direction Takers** look to their physician and other healthcare professionals for direction and guidance because of their expertise and credentials. However, **Direction Takers** may not always follow a physician's advice (they're not Direction Followers) if it's not easy to fit into their daily routine.

WILLFUL ENDURERS 31%



Willful Endurers live in the “here and now” and believe there are more important things to focus on than improving their health for the future. **Willful Endurers** are not necessarily unhealthy, but they do what they like, when they like, and typically do not change their habits. **Willful Endurers** are self-reliant and can withstand whatever life throws at them, going to the doctor only when they absolutely must.

Note, two segments may behave the same way, but their motivations for that behavior can be different. For example, a Self Achiever may go for an hour-long walk for aerobic exercise, because she knows it will burn 300 calories and is part of her plan and regimen for staying healthy. On the other hand, a Balance

Seeker will also go on an hour-long walk, but this is “me time” and a chance for the Balance Seeker to disengage from other responsibilities and think about things that are important to him. He is well aware that the walk is healthy – he's wellness-oriented – but there is an entertainment and enjoyment factor to this walk.

Both segments exhibit similar healthy behaviors, but the motivations are different. If the motivations are different, messaging to activate these behaviors must also be different. What one says to motivate a Self Achiever may fall flat with a Balance Seeker. All five segments require different engagement strategies.

MODEL STABILITY

Nationally representative market research studies were conducted again in the winter of 2015 (n=4,039 respondents) and the fall of 2018 (n=4,105 respondents) to verify the stability of the psychographic model and continue building extensive insights on the segments and healthcare consumers, in general. While many questions from the 2013 study were included in 2015 and 2018 for trend analysis, new topics were also explored based on market need.

The 2015 study:

- Expanded the list of information sources influencing choice of hospitals and health insurance companies
- Measured message receptivity and fatigue
- Added health conditions that a respondent might have (n>50)
- Included anti-vaccination attitudes
- Explored retail clinic behaviors and needs

The 2018 study:

- Expanded questions on urgent care behaviors and needs
- Added many questions on health technology, Artificial Intelligence and telehealth
- Included HIPAA and HCAHPS measures
- Built additional insights cardiovascular health
- Analyzed marijuana and opioid use and treatment

Across all three studies, the distribution among the psychographic segments, as well as each segment's attitudes and behaviors, remained consistent.

Figure 2 illustrates this stability, offering a sample of the 12 survey questions used to classify the segments, with statistically significant (95% confidence) differences among segment responses.

Figure 2. Comparison of Segment Answers to Survey Questions, 2013 vs 2015 vs 2018

Segment Classifier Survey Questions (Strongly Agree/Agree)	Self Achievers b			Balance Seekers c			Priority Jugglers d			Direction Takers e			Willful Endurers f		
	2013	2015	2018	2013	2015	2018	2013	2015	2018	2013	2015	2018	2013	2015	2018
I'm more worried about other family members' health than my own	31%	43%	41%	59%	66%	64%	73%	69%	71%	49%	56%	54%	55%	59%	61%
I prefer alternative medicine to standard medical practice	12%	15%	16%	52%	57%	58%	1%	1%	>1%	3%	1%	1%	31%	40%	43%
I don't let being sick get in the way of my work	47%	57%	55%	68%	73%	66%	83%	82%	79%	45%	44%	47%	48%	52%	55%
There are better things in life to focus on than healthy behavior	4%	7%	7%	4%	5%	3%	19%	17%	18%	13%	13%	13%	36%	42%	45%
I am successful in maintaining healthy nutritional habits	73%	74%	76%	66%	67%	67%	39%	46%	40%	32%	36%	37%	27%	38%	43%
I will go to the doctor at the first sign of health concerns	58%	64%	66%	7%	5%	5%	3%	2%	3%	64%	75%	76%	23%	33%	36%

Each psychographic segment is assigned a letter b – f (e.g., Self Achievers are designated b). If a percentage in Figure 2 above has a letter(s) below it, this means that percentage is statistically greater than the percentage corresponding to the letter(s) listed at 95% confidence. For example, in 2018, 76% of Self Achievers agreed with the statement, "I am successful in maintaining healthy nutritional habits." The letters c, d, e and f are listed below that 76%. This means the 76% of Self Achievers is statistically greater than the 67% of Balance Seekers (c), 40% of Priority Jugglers (d), 37% of Direction Takers (e) and 43% of Willful Endurers (f) who also agreed with this statement.

Additional data tables and charts comparing the psychographic segments will be shared in the next section of this paper. However, the predictive power of the model and its ability to isolate the differences among segments is underscored by Priority Jugglers’ attitude regarding alternative medicine in Figure 2 above: how often does a market research survey achieve near unanimity among hundreds of respondents in their agreement (or, in this case, disagreement) to a topic or question?

In addition to the three national health & wellness studies, category-specific national studies were also conducted for clients to determine whether the psychographic model could be applied in certain markets or applications:

In January 2017, a study focused on **dental care/oral health** was fielded among 500 consumers and the psychographic segments were consistent in distribution and attitudes relative to the other studies.

In October 2017, a study focused on **religion and charitable giving** was fielded among 1,000 consumers to determine how a religious organization can reframe its value proposition to increase member participation and giving of time, talent and treasure. Again, the psychographic segments were consistent in distribution and attitudes relative to the other studies, reinforcing the stability of the model.

PSYCHOGRAPHIC SEGMENT INSIGHTS AND DIFFERENCES

More than 100 million data points have been collected across PatientBond’s market research studies, enabling a significant depth and breadth of insights and understanding regarding healthcare consumers and the psychographic segments. While it is beyond the scope of this paper to share a comprehensive inventory of these insights, this section will offer a sample of 2018 study data to illustrate the similarities and differences among the segments.

Important to keep in mind is that the five psychographic segments appear in every sub-population (though only validated in the U.S.), but the distribution of the segments may differ in each group.

Figure 3 provides a selection of demographic and socioeconomic groups to show the varying segment distributions.

Willful Endurers represent the largest segment in the General Population (31%), but they are also overdeveloped among certain sub-populations, such as Millennials (39%) and Medicaid members (41%). Self Achievers have a higher representation among African Americans and patients with diabetes relative to the General Population.

Figure 3. Psychographic Segment Distribution Across Sub-Populations

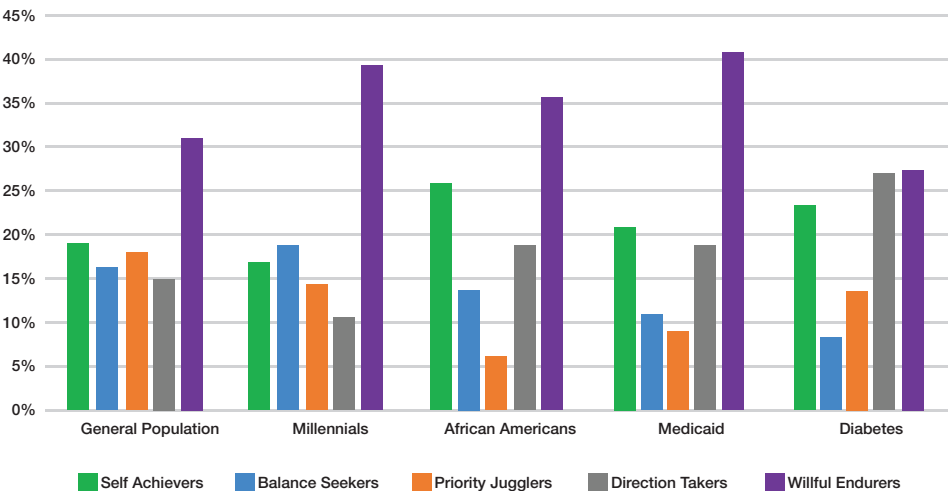
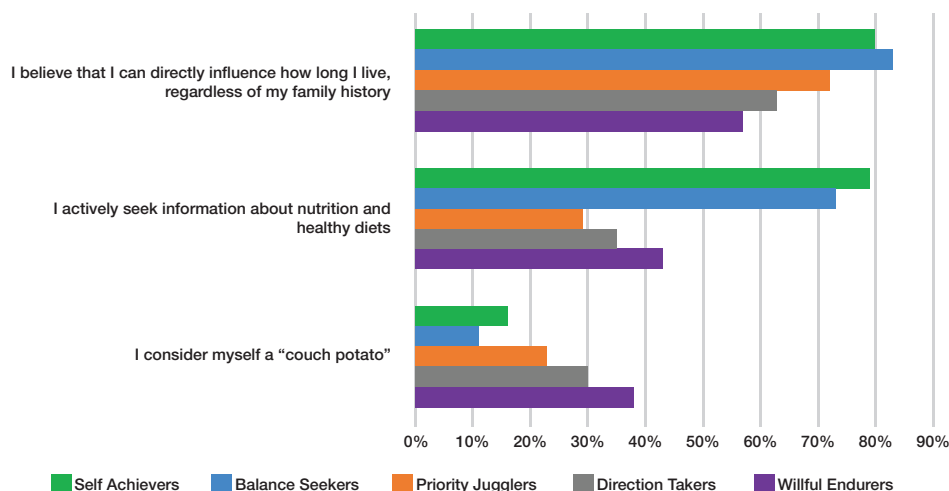


Figure 4 offers further insights on the differences among the segments with regard to proactive versus disengaged approaches to health and wellness. Self Achievers and Balance Seekers are the most likely to feel like they can control their health status regardless of family history, and these segments are much more likely to be dedicated to nutrition and healthy diets.

Figure 4. Health Attitudes (Strongly Agree/Agree)

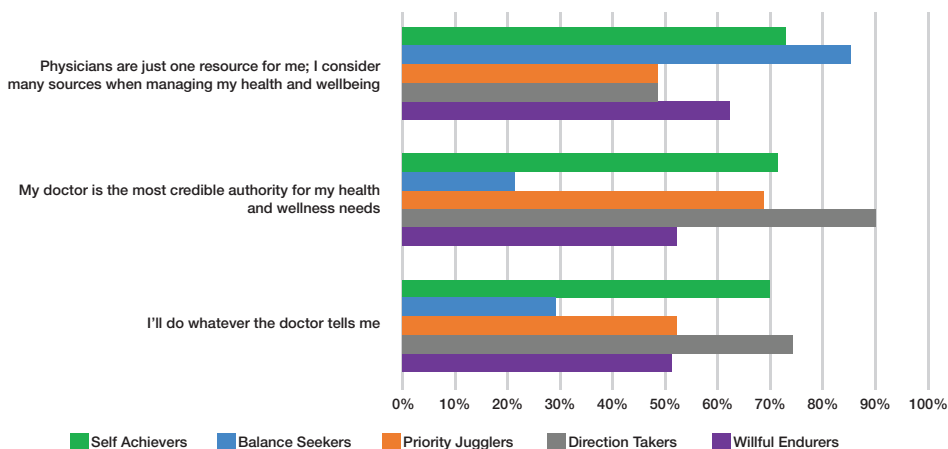


On the other hand, Willful Endurers are most likely to indicate that they consider themselves a “couch potato.” The good news is that the majority of respondents do not characterize themselves as a couch potato, but these data help providers anticipate which patients may require extra motivation or intervention.

Demonstrating how two segments can exhibit the same behaviors but have different attitudes and

priorities, Self Achievers and Balance Seekers are the most health-proactive, but they differ significantly in their estimation of physicians. Figure 5 shows that Self Achievers and Direction Takers consider physicians as the go-to authority for health and wellness. However, Balance Seekers are the least likely to favor physicians as the most important factor in their decisions. Interestingly, Balance Seekers with cancer are even **less** likely to prioritize physician advice.

Figure 5. Attitudes Regarding Physicians (Strongly Agree/Agree)



As described in Figure 1 earlier in this paper, Willful Endurers tend to live in the “here and now” and want immediate service and gratification. They do not focus on the future, so they are the least likely group to pursue preventative care and wellness behaviors. They generally accept that they may get sick down the road, but that’s a bridge they’ll cross when they come to it; after all, 10 years is ten lifetimes away.

Consistent with this mindset, Willful Endurers do not like to wait to get the care they need now, once it’s time to cross that bridge. Rather than schedule an appointment days or weeks out with their primary care physician, Willful Endurers are the most likely segment to use the Emergency Room. Figure 6 looks at the segment distribution among patients who visit the ER at least once every three months. Willful Endurers represent **68% of frequent ER visitors**.

Figure 6. Among Patients Visiting an Emergency Room at Least Once Every 3 Months



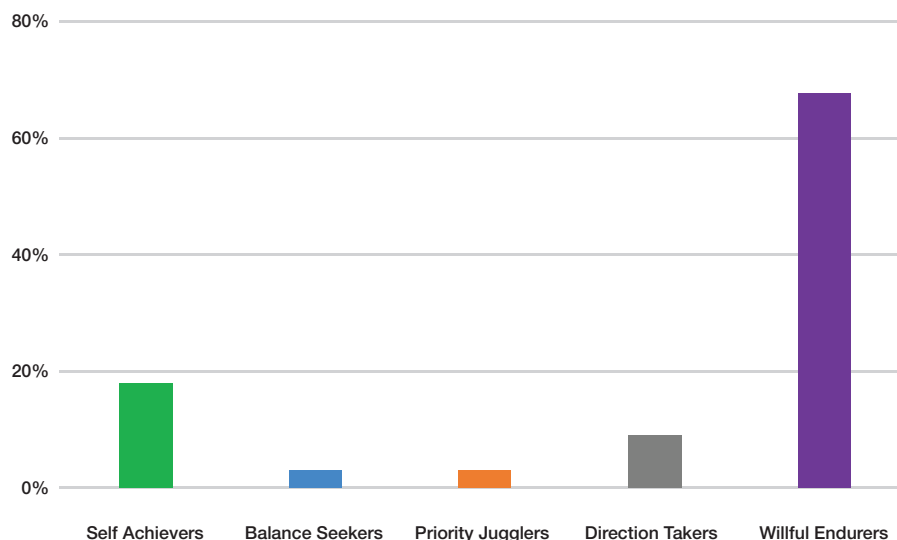
A national for-profit hospital network employs a significant number of nurses who make outbound calls to patients who were recently discharged from the ER to get them to follow-up with an in-network physician (salaried and employed with the hospital network). This significant investment has only resulted in a low percentage (single digit) of patients converted to seeing an employed physician, though the annual value of such a patient is \$1,500 and the investment pays out. However, this hospital network employed PatientBond to improve these results using its psychographic insights.

Recognizing that Willful Endurers were the most probable target for this effort, the hospital network’s call center nurses were trained in Willful Endurer-centric engagement. Call scripts were edited using Willful Endurer “language” (i.e., words and phrases that resonate with this segment) and the nurses role played phone interactions and patient objection handling using these psychographic insights. After several months, primary care conversions increased +50%.

Urgent care is another preferred source of care for Willful Endurers. As with ER's, two-thirds of frequent urgent care visitors – those that visit at least once every three months – are Willful Endurers (Figure 7).

In fact, 11% of Willful Endurers across the U.S. indicate they visit an urgent care clinic at least once every three months, which is *five times* the percentage of the other segments.

Figure 7. Among Patients Visiting an Urgent Care Clinic at Least Once Every 3 Months



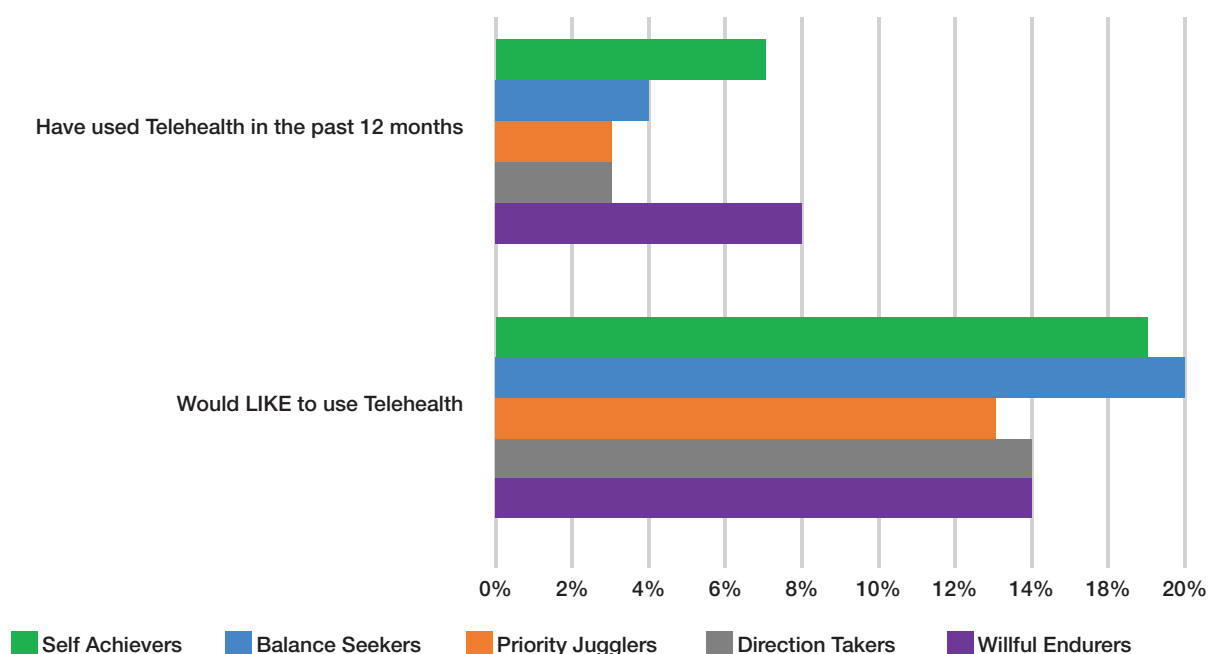
A national nonprofit hospital network with whom PatientBond is working also operates more than 70 urgent care clinics across its service geography. The hospital network's centralized data analytics team looked at an exhaustive list of variables to identify the best predictors of clinic success (or lack thereof). One of the most predictive variables for success was a concentration of Willful Endurers within a five-mile radius of a clinic. The hospital network's Mergers & Acquisitions team is now using these data for urgent care site selection.

Separately, a network of primary care practices – another PatientBond client - was losing patient traffic to urgent care. This client was trying to communicate “immediate availability” of its practices to combat urgent care's perceived access advantage via an email campaign to current patients. PatientBond developed a Willful Endurer version of the client's email, because this group was the most likely to leave for urgent care. An A/B test was executed by the client with thousands

of patients in each leg of the test, comparing a Willful Endurer version versus the client's existing email campaign. The Willful Endurer version achieved **three times** the number of appointments made with a network physician.

Convenience is an obvious driver for Willful Endurers, and alternative forms of care appear to be well-suited to them. Telehealth can be a good option for this segment, as it offers easy access to a provider wherever the patient may be, especially in the comfort of one's home (and couch). Figure 8 shows which segments have used telehealth (defined in the study as live medical consultation over mobile phone or internet) in the past 12 months, as well as whether each segment would like to use telehealth to manage their healthcare.

Figure 8. Telehealth — Current Utilization & Future Interest



Willful Endurers are, in fact, the most likely to have used telehealth in the past 12 months, but it is still a relatively low percentage at 8%. Note, however, that Self Achievers – on the opposite end of the wellness spectrum – are almost as likely to have used telehealth (7%). While “wired” differently for health & wellness, Self Achievers are likely to explore various avenues of access to physicians.

When asked to consider telehealth, Balance Seekers lead the pack as most interested for future use. Note, Balance Seekers are less likely than other segments to access the healthcare system, even while they independently pursue good nutrition, fitness and emotional health. They may not be aware of telehealth as an option, and once made aware of it, are the most likely to use it. Self Achievers are just behind Balance Seekers in wanting to pursue this treatment option.

Patients’ ability to pursue appropriate care, or willingness to purchase additional services, can stem from their perception of their ability to pay for it.

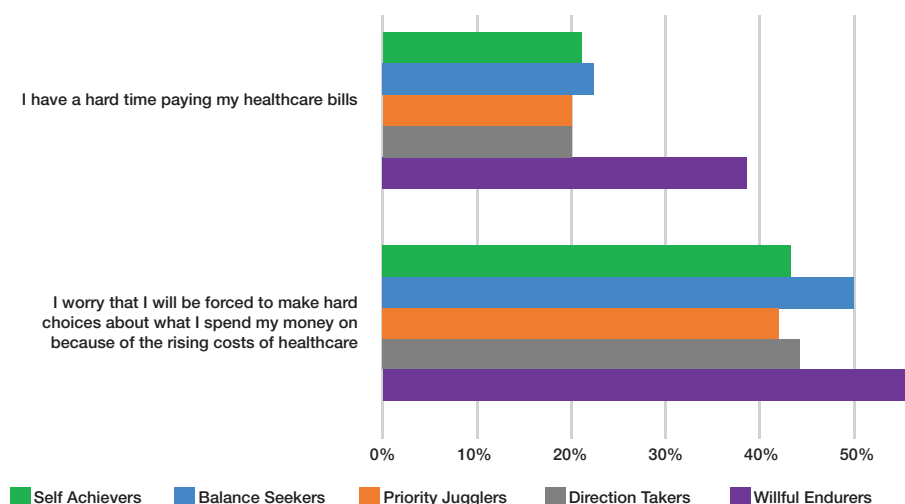
Figure 9 offers the segments’ attitudes regarding

finances and medical care. Willful Endurers are the most likely to believe that they face challenges paying for healthcare, though Balance Seekers are almost as likely to anticipate potential future barriers to healthy choices.

One might assume that Willful Endurers make less income than the other segments; however, Willful Endurers in the study report an average annual household income that is only \$6,000 less than the General Population (\$65,035 vs. \$71,855, respectively). Note, Willful Endurers (13%) and Balance Seekers (15%) are statistically the most likely (95% confidence) to indicate they do not currently have health insurance. Because Balance Seekers tend to lead a more wellness-oriented life, they may be less inclined to worry about paying for health bills in the present.

Now that the profiles of the psychographic segments have been established, this paper will discuss the practical application of these insights in clinical and business opportunities.

Figure 9. Financial Considerations (Strongly Agree/Agree)



OPERATIONALIZING PSYCHOGRAPHIC SEGMENTATION

One challenge for psychographic segmentation is that it has historically been difficult to scale across a population. While databases like EMR's or Customer Relationship Management (CRM) platforms exist with an abundance of demographic, health condition and behavioral data from which to segment and target populations, psychographic data have not typically been kept in patient files. Operationalizing psychographic segmentation has been challenging – but this is changing.

As Alexandra Samuel wrote in her *Harvard Business Review* article¹¹, “Psychographics Are Just as Important for Marketers as Demographics:”

“Until recently, however, it was a lot harder to get psychographics than demographics, and even if you had psychographic data, it wasn’t always obvious how to make it actionable.”

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– Alexandra Samuel
Psychographics Are Just as Important for Marketers as Demographics
Harvard Business Review – March 11, 2016

Operationalizing a psychographic segment model entails two components:

1. Identifying the consumer’s segment
2. Employing an effective psychographic segment-specific engagement strategy

This paper will address each of these components.

Identifying the consumer's segment

As mentioned earlier in this paper, PatientBond has developed an algorithm informed by a 12-question survey, which identifies a consumer's psychographic segment with 91.1% accuracy. This survey can be administered in a variety of ways, depending on a client's needs. The following are just a few of the ways PatientBond has administered the Classifier survey for its clients:

- Completed on a tablet or mobile device at hospital discharge
- Completed on a tablet or mobile device when checking into a medical practice
- Calling up the survey on a smartphone via a QR code displayed in a practice waiting room
- Emailing a link to the survey to patients to be completed before or after an appointment
- Texting a link to the survey to patients on their phone
- Inviting patients to take the survey on the client's website or health portal

The survey only takes about 90 seconds to complete. A link to PatientBond's psychographic segmentation Classifier can be found here: [Psychographic Classifier](#)

A healthcare organization can have many thousands of patients, and a health insurance company can have millions of members. It may not be feasible to get such large populations to answer the 12-question Classifier survey in a short period of time. Recognizing this challenge, PatientBond collaborated with a National Data Compiler to "pre-segment" adults age 18+ across the U.S.

A National Data Compiler is a company that accesses many publicly available and third-party data sets to develop records for consumers. For example, companies that calculate consumers' credit scores are National Data Compilers, accessing purchase and loan data from retail stores and banks to determine a person's credit-worthiness.

Data scientists from the National Data Compiler that partnered with PatientBond used PatientBond's market research data and national third party data to develop an algorithm that can statistically project PatientBond's segment model across the U.S. population of adults age 18+. PatientBond can thus append a client's consumer database with these data, assigning a segment to each member of that database. PatientBond can also identify the segment for individuals in a client's competitive service area, who are not currently in the client's database, for marketing and acquisition purposes. This secure and HIPAA-compliant process may only take 5-7 business days, allowing large numbers of people to be "pre-segmented" in a short time period.

A statistical projection is not as accurate as having a patient complete the 12-question Classifier survey. While the Classifier is 91.1% accurate, predictability is much less with the statistical projection. However, with a five segment model, one has a 20% chance of getting the right message to the right segment by guessing and random targeting (1/5); with this statistical projection, one is significantly more likely to get the right message to the right person to activate desired behaviors. Across a population, this increase in odds can pay big dividends.

Many of PatientBond's clients will start with the statistically projected segments in their engagement efforts. When there is an opportunity to have the patient or member complete the Classifier survey (e.g., at hospital discharge, during health plan open enrollment, when checking into an urgent care center), then if there is any difference between projected and actual segment, PatientBond will recognize the actual segment and personalize engagement accordingly. The actual segment will also be captured in the client's EMR, CRM or practice management system.

Employing an effective psychographic segment-specific engagement strategy

Because each psychographic segment has different motivations, priorities and communication preferences, each requires a unique engagement strategy. What works for Willful Endurers will not be as effective with Self Achievers, Balance Seekers, Priority Jugglers and Direction Takers.

Through their decades of research and practical application of psychographic insights, the healthcare consumer experts at PatientBond have developed a “Code Book” for effective engagement with each of the five segments. Segment-specific key words and phrases, propositions, channel preferences and message frequency insights are used to personalize PatientBond communications.

While a comprehensive overview of this proprietary information will not be provided in this paper, examples will be used to demonstrate these segment differences. **Figure 10** provides a simple reference to the themes informing segment-specific messaging.

Using these segment themes as a guide, PatientBond takes a client’s desired message and develops five versions designed to resonate with each segment.

Figure 11 is an example of a flu shot reminder text message. While each version says, “Get your flu shot,” the wording varies according to the segment’s profile with the appropriate segment language.

Figure 10. Segment-Specific Message Themes

Self Achievers 19%		Achieve the Goal; Improvement
Balance Seekers 17%		Choices, Options; Knowledge; Context
Priority Jugglers 18%		How the Family/Others Benefit; Commitment, Duty
Direction Takers 15%		Expert, Credentialed Physician Says So
Willful Endurers 31%		Here & Now; Live For Today; First Step

Figure 11. Segment-Specific Messaging

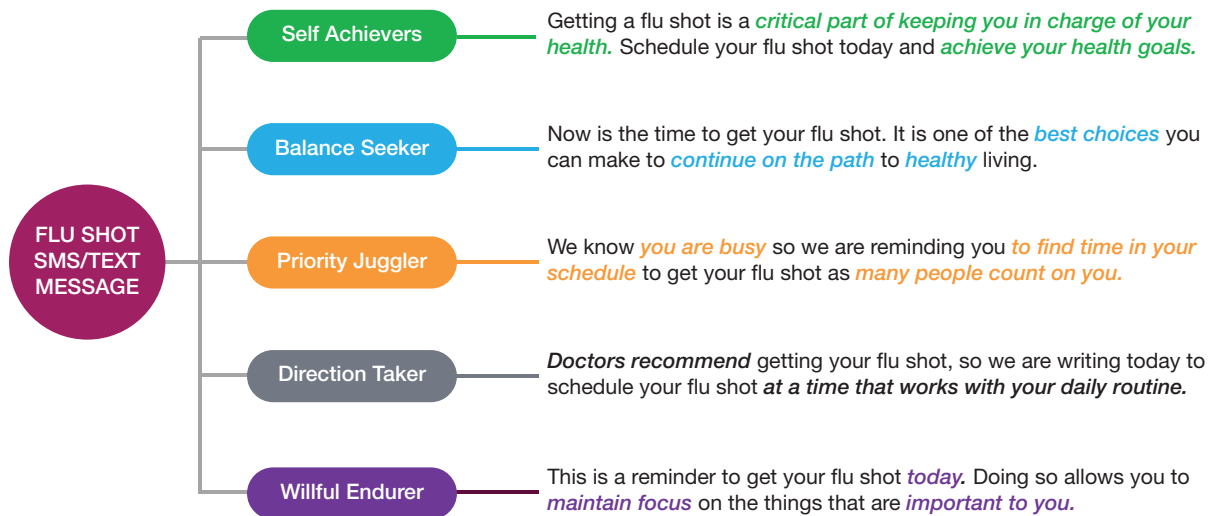


Figure 12 compares a Self Achiever email to a Willful Endurer email sent to motivate women to get a mammogram. Segment-specific words and phrases are highlighted, calling attention to the themes that work with each segment. Self Achievers focus on success, plans and action. Willful Endurers prioritize immediacy, quick & easy and free.

Figure 12. Segment-Specific Emails

Self Achiever Email

Dear Jane Doe,

You are great at taking care of your personal health care needs. We also know when you are **armed with** a plan you will be **successful**.

The **best part** of an **effective plan** that you can **act on today** is a breast cancer screening, or mammography. Understanding your risk for breast cancer and taking **preventive action** could help you lower your risk of breast cancer or find it at an early stage when treatment **works best**.

Mammograms have helped reduce many breast cancer deaths and we could catch cancer early, often before it can be felt and when it is most treatable.

Being proactive with your health, we are sure **you intend** to get a screening, but just haven't had a chance to schedule your mammogram. Schedule your mammogram now as it only takes a few minutes to book your visit and scheduling is easy.

Please click on the statement below that best fits your situation:

- ☐ I will call my primary care physician (PCP) or gynecologist (GYN) to discuss my mammography screening needs.
- ☐ I have already scheduled or completed a mammogram screening appointment.
- ☐ My physician has informed me that I no longer need to have mammograms.

Mammography preventive health screenings are provided free to you by Priority Care through your health insurance plan. This is an important step in staying **as healthy as you can be**.

To **learn more** about our preventive care tools, click here: www.prioritycare.com/prevention

In good health,
Your Team at Priority Care

This email is provided as a service by Priority Care. [Click here to Unsubscribe](#).
This message contains information which may be confidential and/or privileged. Unless you are the intended recipient (or authorized to receive for the intended recipient), you may not read, use, copy or disclose to anyone the message or any information contained in the message. If you have received the message in error, please delete the message and any attachment(s) thereto without retaining any copies.
Powered by [PatientBond](#)

Willful Endurer Email

Dear Jane Doe,

It's time we talked about breast cancer and the **importance of early** detection. Did you know **every two minutes** a woman is diagnosed with breast cancer? **The great news** is you can prevent this from happening to you **if you act now**, and you can **rest easier** knowing you've made **today a better day**.

Mammograms help reduce many breast cancer deaths. Mammograms could catch cancer early, and often **before it can be felt** and when it is most treatable.

Schedule your mammogram **now** – it's **quick** and **easy** as it only takes a **few minutes** to book your visit. You'll also be **happy** to know that mammography preventive health screenings are provided **free** to you by Priority Care through your health insurance plan.

Please click on the statement below that best fits your situation:

- ☐ I will call my primary care physician (PCP) or gynecologist (GYN) to discuss my mammography screening needs.
- ☐ I have already scheduled or completed a mammogram screening appointment.
- ☐ My physician has informed me that I no longer need to have mammograms.

It is time to take an **important step** for your health. **Please** get a mammogram to screen for breast cancer **as soon as possible**.

In good health,
Your Team at Priority Care

This email is provided as a service by Priority Care. [Click here to Unsubscribe](#).
This message contains information which may be confidential and/or privileged. Unless you are the intended recipient (or authorized to receive for the intended recipient), you may not read, use, copy or disclose to anyone the message or any information contained in the message. If you have received the message in error, please delete the message and any attachment(s) thereto without retaining any copies.
Powered by [PatientBond](#)

To be clear, a single segment-specific email or text message is not sufficient to activate and sustain behavior change. Nor will the same channel mix be as effective across the segments. It takes multiple engagements using the right frequency of patients' preferred channels to maximize the likelihood of behavior change. In their previous careers at Procter & Gamble, the healthcare consumer experts at PatientBond learned that it takes 4 to 6 touchpoints with a consumer to trigger a desired behavior and 8-12 touchpoints to sustain that behavior (assuming the consumer's experience with a product or service met or exceeded expectations).

Self Achievers and Balance Seekers like to explore a lot of data and like emails with links to additional references and resources. Priority Jugglers need to get right to the point and appreciate how a well-worded text message, in under 160 characters, conveys the necessary information. Willful Endurers and Direction Takers want the human touch and respond better to voice calls.

Figure 13 illustrates how the channel mix and frequency may vary by psychographic segment. Note, this is for illustration purposes only. The actual

segment-specific channel mix varies by topic (e.g., health education, appointment reminders, provider marketing, etc.), and these workflows are proprietary to PatientBond.

Important to remember is that patient engagement is a two-way street. Engagement is not about providing information to a patient and hoping it is sufficient. Engagement requires an exchange of information, in which the patient provides feedback and asks questions while the provider listens and responds in kind.

PatientBond communications include response mechanisms called “patient actions,” in which the recipient of a PatientBond communication answers simple questions or clicks a link to acknowledge comprehension of the content provided. Patients can also request a change in channel mix or a call from a nurse (if appropriate). Figure 14 provides an example of “patient action” links from the Self Achiever email example used in Figure 12 above. The patient would click on the option that best describes her needs, followed by the opportunity to explore more preventative care resources (consistent with a Self Achiever's needs).

Figure 13. Segment-Specific Channel Mix

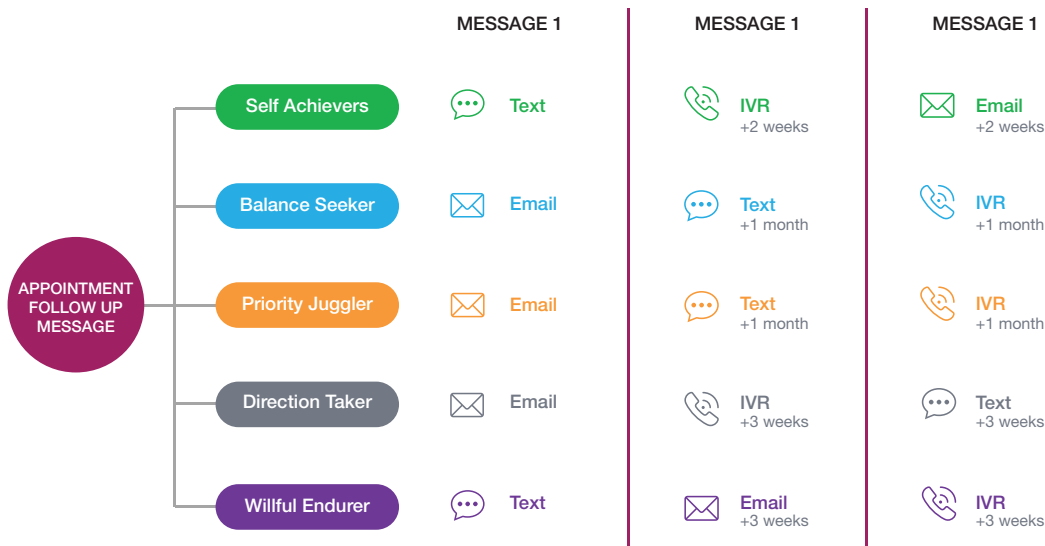





Figure 14. Patient Action/Response in PatientBond Communications

Please click on the statement below that best fits your situation:

 I will call my primary care physician (PCP) or gynecologist (GYN) to discuss my mammography screening needs.

 I have already scheduled or completed a mammogram screening appointment.

 My physician has informed me that I no longer need to have mammograms.

Mammography preventive health screenings are provided free to you by Priority Care through your health insurance plan. This is an important step in staying as healthy as you can be.

To learn more about our preventive care tools, click here:
www.priority.com/prevention

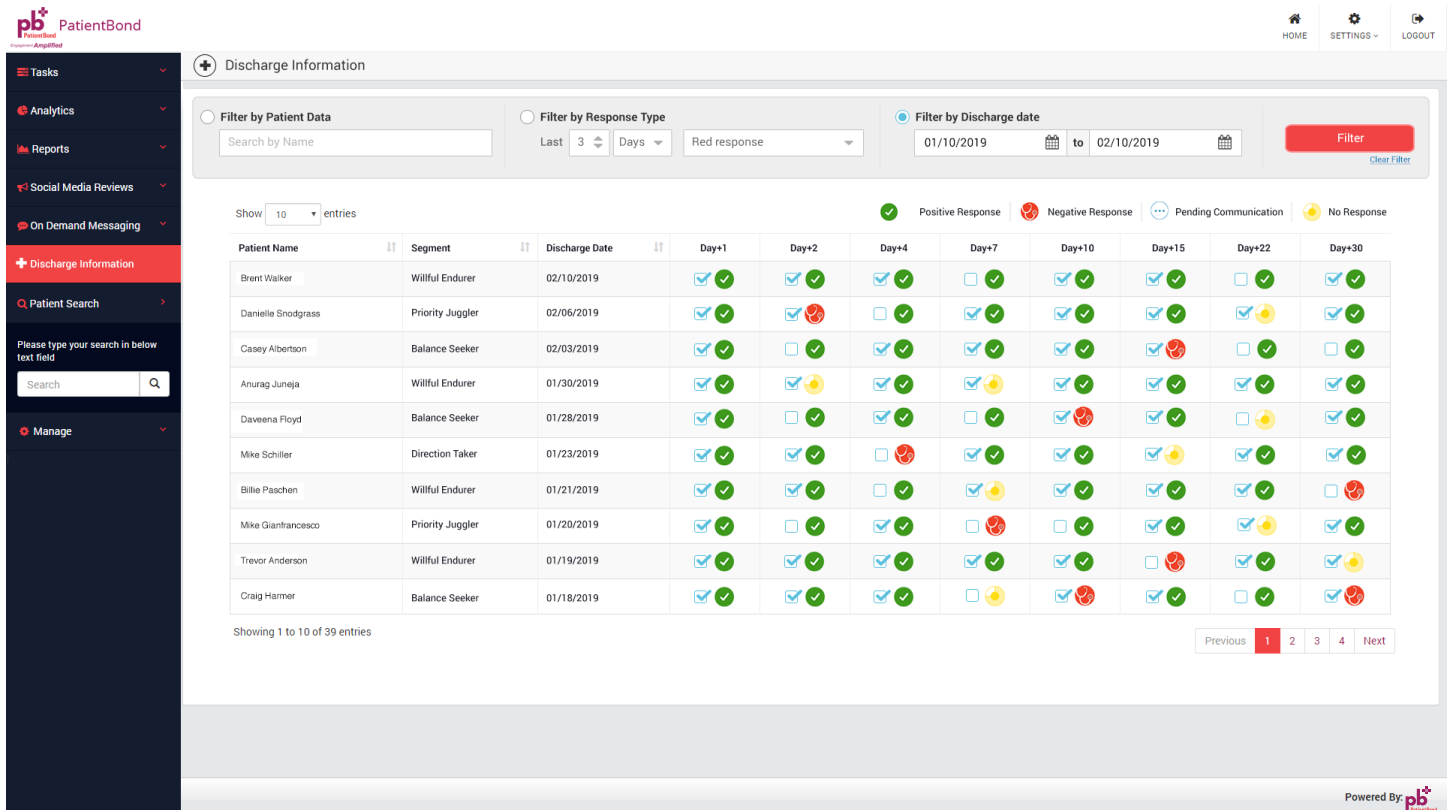
In good health,

Your Team at Priority Care

Patient responses are recorded in real time on a dashboard (Figure 15) used by the client to track and measure engagement. A green light indicates the patient received the communication and responded in a positive manner that required no follow-up or intervention. A red light indicates the patient responded in a way that needs clinician follow-up or immediate

medical attention. A yellow light means the patient has not yet responded to the communication. All communications are archived for audit purposes, and the patient can have the same communications go to a designated family member or caregiver for added support and reinforcement.

Figure 15. PatientBond Engagement Dashboard



Personal Versus Digital Engagement

PatientBond primarily relies upon digital channels to reach large populations of healthcare consumers, but the psychographic insights can be used to enhance personal communications between provider and patient. Healthcare professionals can be trained to anticipate patients' motivations and likely behaviors and interact with patients using segment-specific words and messages, whether in person or over the phone.

Earlier in this paper (page 13) a hospital network was referenced in which nurse phone call scripts were modified to be more Willful Endurer-centric, and it resulted in a 50% increase in performance. Another health system, TriHealth of Cincinnati, Ohio, has been using the PatientBond psychographic segmentation model with its Corporate Wellness health coach program for several years.



TriHealth's health coaches have been trained to interact with patients (referred to as clients) using psychographic insights, both face-to-face and over the phone. Health coaches focus on diabetes management, musculoskeletal issues, smoking cessation and other lifestyle modification. PatientBond also developed a dashboard for health coaches to reference psychographic engagement insights (e.g., words to use, objection handling) and send segment-specific appointment reminders to reinforce the importance of sustained session attendance.

This initiative started as a three-month pilot in which four health coaches applied psychographic insights to the coaching of 210 clients. Personal health goals (e.g., nutrition, fitness, lifestyle changes to reduce A1C, etc.) increased 90% among patients with diabetes, and the health coaches reported that this approach reduced the time to form a trusting relationship with clients and engage effectively.

When the pilot was judged successful, the initiative was expanded to more than 30 health coaches and thousands of clients across dozens of employers. This was covered in *Hospitals and Health Networks*¹², the publication of the American Hospital Association, and was the 5th most read article in *H&HN* in 2016. Note, this article references c2b solutions, as this work was started before PatientBond acquired c2b in 2017.

Psychographic segmentation has been demonstrated to amplify engagement in both digital and personal interactions between provider and patient. The next section of this paper will offer additional case studies to show the promise of integrating this consumer science in healthcare.

CASE STUDIES

The following case studies provide examples of how psychographic segmentation integrated with digital workflows has amplified patient and member engagement to achieve significant clinical and business results.

CASE STUDY 1:

Reducing Hospital Readmissions for Congestive Heart Failure

Background:

A progressive health system, part of one of the largest nonprofit hospital networks in the United States, was achieving a 30-day readmission rate for Congestive Heart Failure (CHF) of 18.5%, ahead of the national average, which is above 20%. Its nurses followed up with all CHF patients after discharge to monitor their status and ensure they were taking the appropriate steps to facilitate recovery.

Despite intensive follow-up through phone calls and a relatively successful readmission rate, this health system wanted to improve its readmission rate. The health system wanted to see if psychographic segmentation could enhance patient engagement and satisfaction, and whether PatientBond's automated, digital engagement capabilities could drive efficiencies in their efforts.

Approach:

The health system participated in a five-month pilot involving PatientBond, with 315 CHF patients

discharged during this time period. CHF patients answered PatientBond's 12-question Psychographic Classifier survey before hospital discharge. PatientBond sent 14 communications over 30 days post-discharge with education supporting recovery (Figure 16). Each communication was personalized with psychographic insights and included a patient response mechanism (e.g., short survey) to gauge recovery.

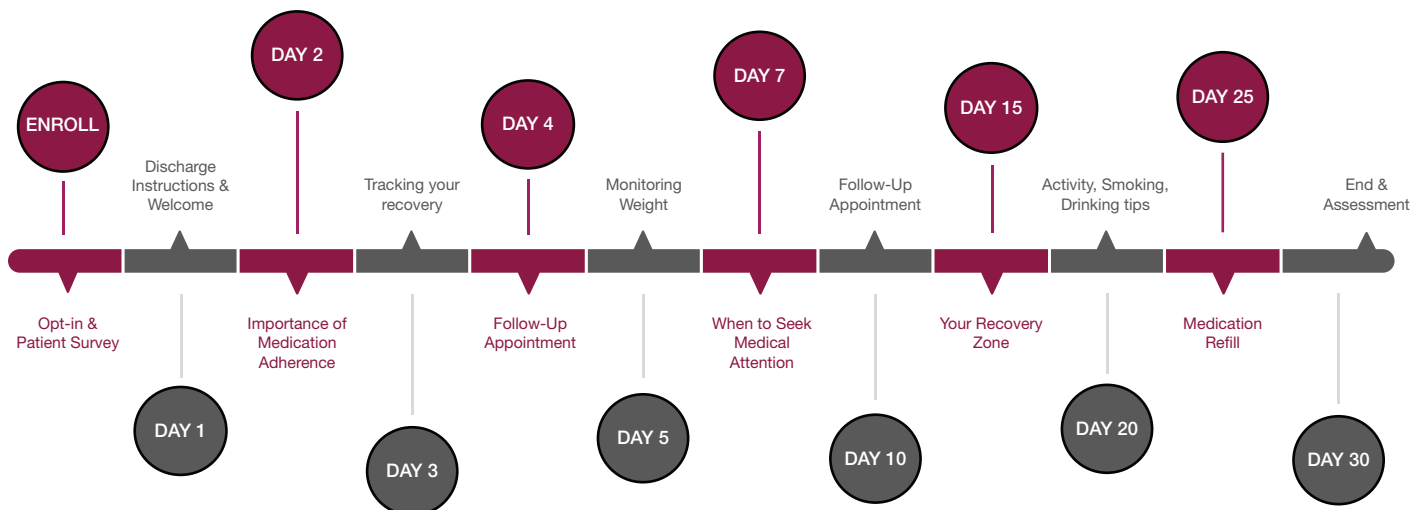
If a patient answered these survey questions in a way that flagged them as a readmission risk (e.g., gained 2 pounds in a day or 5 pounds in a week, indicating fluid retention), then call center nurses would receive text message and email alerts, as well as a "red light" warning on PatientBond's dashboard. Patients who responded with no issues appeared as a "green light" on the dashboard.

Results:

- **90 percent reduction in 30 days all-cause readmissions** (from 18.5% to <2%)
- 62% patient response rate to all 14 waves of communications
- 94% of patients (age 65+) liked the electronic discharge process and digital communications

Additional information on this case study can be found in the **FierceMarkets** whitepaper, "[Breakthroughs in Patient Engagement and Behavior Change: Reducing Hospital Readmissions and Promoting Prevention of Cardiovascular Events.](#)"

Figure 16. CHF Post-Discharge Engagement Workflow



CASE STUDY 2:

Boosting Patient Loyalty

Background:

Midwest Express Clinic offers family care, injury care and a variety of other services at six suburban locations in Illinois and Indiana. Midwest Express Clinic felt that its patient loyalty growth rate had plateaued and that it could be improved. Its staff was spending 2-3 hours per day calling patients to remind them about appointments, which was a resource-intensive process. In addition, patients had no way to share direct feedback with each clinic in the network, so there was a significant opportunity to identify location-specific issues and enhance the patient experience.

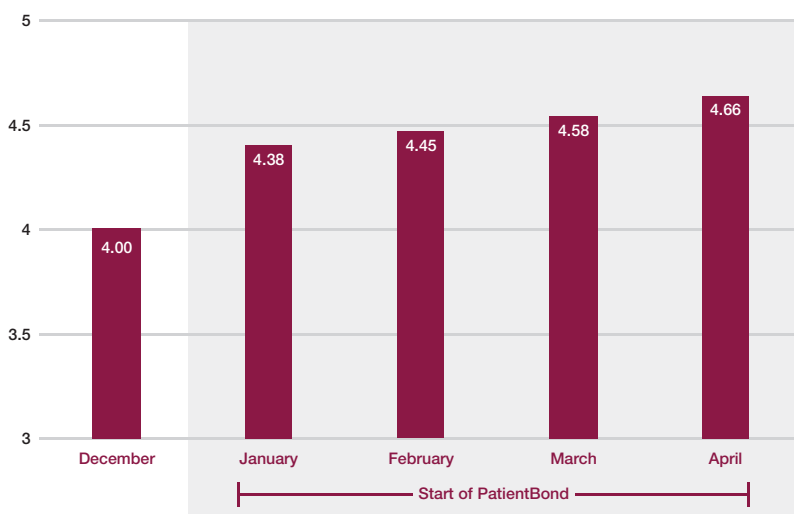
The urgent care center enlisted PatientBond to engage patients beyond the walls of its clinics to improve patient retention and appointment show rates. PatientBond's digital workflows would also reduce operating expenses by automating phone follow-up.

Approach:

PatientBond executed various applications, sending an average of 10,000 messages per month via text/SMS, email and Interactive Voice Response (IVR), focusing on:

- Appointment reminders
- Follow-up messages after clinic visits
- Patient surveys
- On-demand messaging

Figure 17. Average Social Media Star Ratings Across All Clinics



The patient surveys would help identify ways to improve the patient experience at each Midwest Express Clinic location, but it would also provide the opportunity to share excellent reviews on social media, which PatientBond could facilitate.

Results:

- 40 percent annual growth rate in patient loyalty/retention
- 43 percent improvement in appointment show rates
- Increased average social media ratings from 4.0 to 4.7 stars. [Figure 17](#) illustrates this impact
- Saved approximately \$75,000 in annual operating expenses (2-3 hours/day/clinic in phone follow-up). In addition, this reduced staff turnover as they felt empowered to address patient experience improvements rather than chasing nonresponsive patients via phone calls.

Additional information on this case study can be found in the case study, [“Boosting Patient Loyalty & Improving Online Reviews at Urgent Care Centers: A PatientBond Case Study.”](#)

“PatientBond has helped our operations/processes on many parts of our business, and overall has been one of the best tools implemented and we saw immediate improvement. PatientBond is priced reasonably and we’ve seen our monthly cost recaptured, not just in labor savings, but in building a loyal patient base that is more engaged.”

– Owner, Midwest Express Clinic

CASE STUDY 3:

Maximizing Patient Payment Collections

Background:

Priority Care (client name changed for confidentiality), a chain of clinics in three states (Arizona, North Carolina and Texas), had a backlog of past due patient invoices. In one state alone, Priority Care was faced with \$197,151 in patient payments due. Priority Care invested significant staff resources for making follow-up calls and mailing printed reminders to recover patient payments at a rate of only 5 percent. Additionally, collections agencies charge service fees between 25 and 30 percent of revenue recovered, representing a substantial opportunity cost.

Priority Care turned to PatientBond for its automated payment reminders application to increase collections in a more effective and efficient manner.

Approach:

PatientBond sent automated payment reminders via text message/SMS, email and IVR that prompted patients to pay their bills. These simple yet effective reminders promoted payments by following the sequence:

- 1 - 29 days: "Statement due"
- 30 – 59 days: "Balance due"
- 60 – 89 days: "Second reminder"
- 90+ days: "Pay now to avoid a collections agency"

Priority Care started with just one of its three service geographies to evaluate PatientBond's capabilities.

Results:

In just one week, Priority Care experienced:

- **4X increase** in collections
- \$75,000 savings per year in statement printing & postage through payment reminder automation
- A Return On Investment of **20 to 1**

Additional information on this case study can be found in the case study, "[Using Digital Engagement and Automated Reminders to Maximize Patient Payment Collections A PatientBond Case Study.](#)"

“Going with PatientBond was one of the best decisions our company could have made. No more wasted paper and postage, quicker patient reaction time to balances and ease of payments for patients have made for higher incoming revenue.”

– Medical Billing Supervisor

SUMMARY

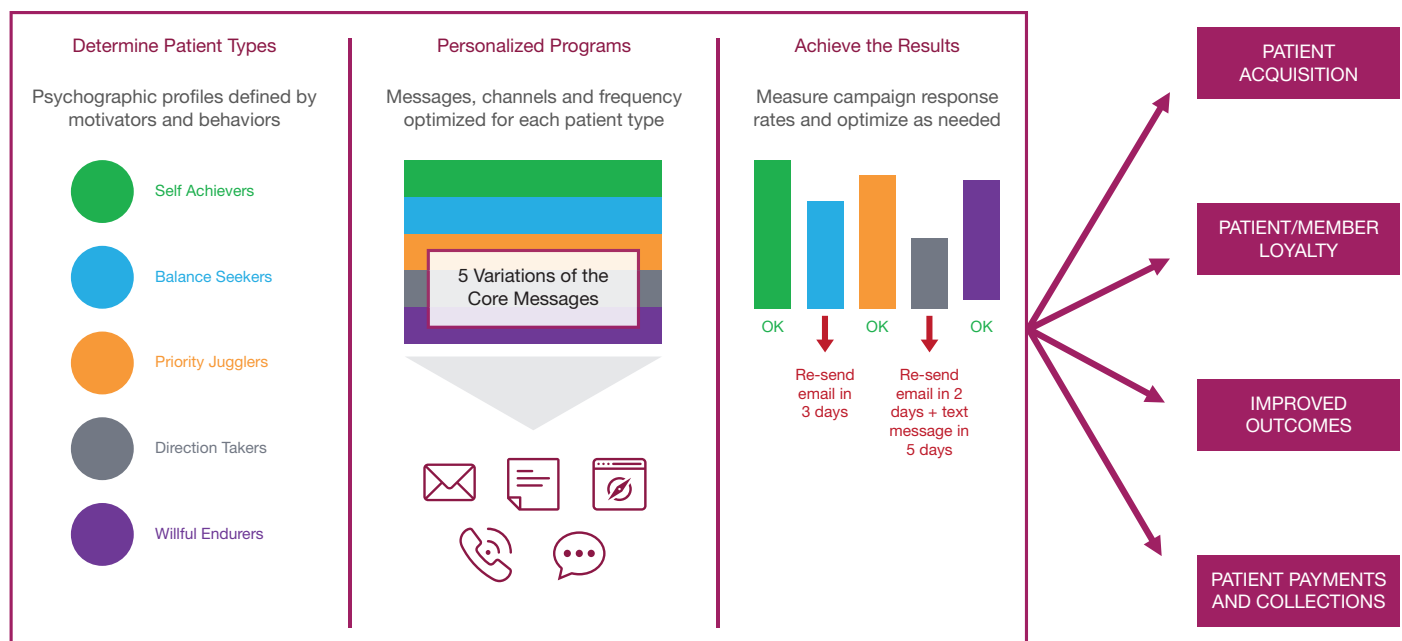
Psychographic segmentation has been used for decades by the world's most successful consumer products and retail companies to influence decisions, behaviors and user experience. However, psychographic segmentation is relatively new to healthcare and represents a way for consumer science to augment and support the delivery of care, as well as help healthcare providers achieve their business goals.

Healthcare has historically taken a “one size fits all” approach to patient engagement, using the same message and channel mix with every person who shares, or seeks to prevent, a given health condition. Patients are people who happen to have a health

issue, but do not define themselves solely by that issue. They have distinct personalities and motivations, which influence their choices and behaviors.

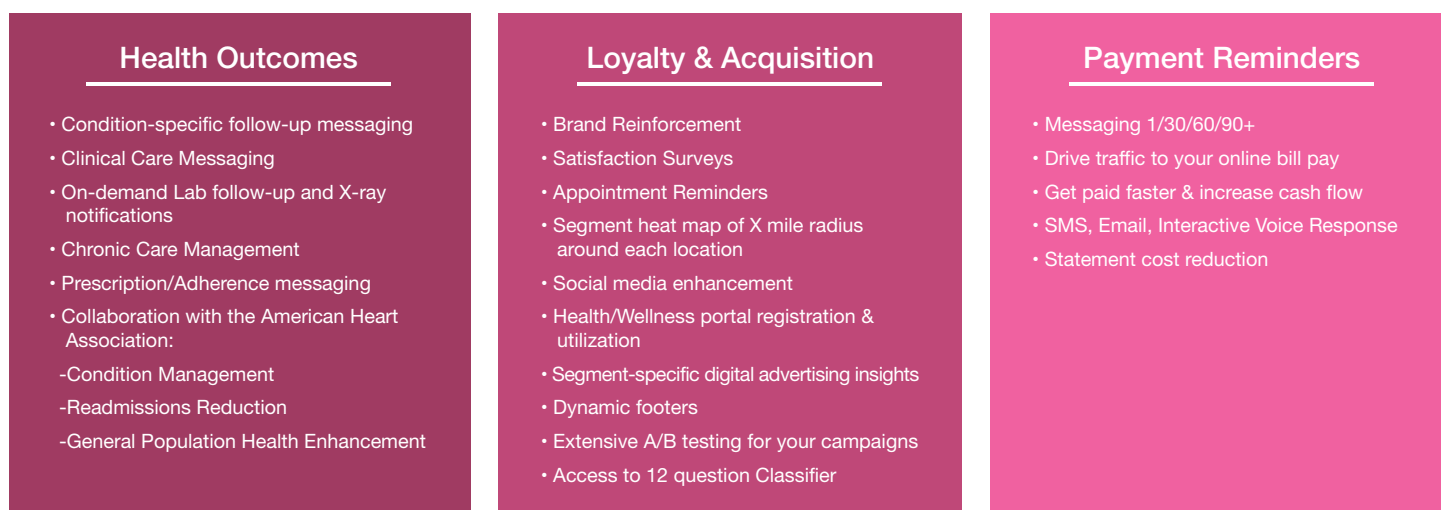
Psychographic segmentation helps classify people according to their motivations and communication preferences to optimize targeting, messaging and the engagement experience. Psychographic insights can inform and enhance both digital and personal engagement, and PatientBond has demonstrated that psychographic segmentation and messaging can be operationalized for clinical and business applications. Figure 18 illustrates the process PatientBond follows to deliver its unmatched results.

Figure 18. PatientBond Process & Outcomes



PatientBond has been able to leverage its proprietary psychographic segmentation model and digital workflows across a wide variety of use cases and applications for hospitals & health systems, Accountable Care Organizations, health insurance companies, urgent care centers, employers and other healthcare stakeholders. Figure 19 outlines a sample of use cases that PatientBond has delivered for its clients:

Figure 19. PatientBond Use Cases — Single Vendor, Complete Solution



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For more information or to discuss how PatientBond can help you achieve your clinical or business goals, please contact us at:

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