When executives at payer, provider and life sciences organizations think about their greatest challenges in making a successful transition to a value-based care and shared risk world, often their focus is on the technical challenges of gathering and using Big Data. They understand that data and analytics are key for discovering care gaps and managing patients or members in the context of a population.

What they often overlook as they prepare their reports and dashboards, however, is one simple factor: the best-designed programs and care plans in the world won’t work unless patients and members are willing and active participants.

In an ideal world, healthcare organizations would have the resources to focus on each patient or member individually to determine their understanding of the treatment options available and willingness to make real changes in their lives to drive better outcomes. For those members/patients not yet ready to take action, healthcare professionals would be able to spend the time learning about what motivates each individual in order to tailor their plan in a way that maximizes participation.

That degree of individualized approach simply isn’t practical in the real world.

Physicians, for example, already report that they don’t have enough time to spend with patients - time that is necessary for getting to know them, listening to them and developing a relationship.

Today, financial and resource pressures tend to limit primary care physician (PCP) visits to 15 minutes – not nearly enough time to build a healthy relationship, according to both patients and physicians.
While there may be individual differences within the group (i.e., some exhibit more or less of certain characteristics than others), their overall profile is fairly similar.

The development of personas has been a staple tactic in retail for years, used to understand how to market to large groups more effectively.

This is an issue that is expected to worsen over the next decade. The Association of American Medical Colleges forecasts a shortfall of between 14,900 and 35,000 PCPs by 2025, as well as a deficit of 37,400 to 60,300 non-primary care specialists. Nurses won’t be able to gather that information effectively either – the projected nurse shortage over that time period will be even greater.

Addressing this need to help healthcare organizations transition successfully into value-based care and shared risk arrangements requires a different way of thinking. This is where thinking outside of the box can help healthcare providers make a significant difference to outcomes. The concept of using personas could help to migrate patients toward better compliance, faster.

**Personas Defined**

At their core, Personas are profiles that are applied to cohorts of individuals who share similar characteristics or attributes.

While there may be individual differences within the group (i.e., some exhibit more or less of certain characteristics than others), their overall profile is fairly similar.

The development of personas has been a staple tactic in retail for years, used to understand how to market to large groups more effectively.
Multiple parameters are incorporated to develop these consumer personas— for example, retailers may take geography, socioeconomic status, estimated income, age group, gender, ethnicity and other factors into account when determining the product mix for store locations in a particular neighborhood. Consumer packaged goods (CPG) companies use similar types of information to develop personas to help determine how and where to advertise their products (among other decisions).

In healthcare, the challenges get more complicated. Typical healthcare analytics regarding patients and members rely primarily on two sources: claims and clinical data. Both are readily available, especially to payers and providers. But they only provide a limited view of who the patients and members are, and very little about their actions or what motivates them.

Personas bring in a much broader set of data, including socioeconomic and behavioral data, to create a holistic, 360-degree view of patients/members. This data helps organizations understand the factors and influences that can have a profound effect on the success of care for those groups.

One of the most significant examples is Zip Code. People who live in a particular area tend to have similar levels of income and education, two key factors in predicting whether a patient/member will adhere to a particular plan of care such as taking medications. Those in lower-income areas may not have the disposable income to pay $500 per month for medications, no matter how badly they are needed. They are unlikely to adhere to the regimen and thus will not deliver the desired outcomes.

Patients/members in these areas also will tend to have a smaller mailbox, which means mail order medications may not be viable for them. If their medications won’t fit into the mailbox they may have to pick their prescriptions up at the post office. For patients with limited mobility and transportation, that again may not be a viable option.
Zip Code data can also show factors such as the density of fast food restaurants in an area that may affect the ability of patients/members to control chronic conditions such as diabetes, high cholesterol/heart disease, hypertension, and obesity. By bringing all of this data together that would never show up in claims or clinical data, healthcare organizations can gain a better understanding of the challenges patients/members face in their daily lives. They can then develop care plans that take these factors into account, greatly improving their chances for success.

Personas can also be developed and applied within other groups the organization wants to affect and motivate. For example, providers can develop personas for physicians to help them understand how to drive standardization, adherence to best practices and change management efforts. Life sciences organizations can create personas for managed markets strategy and brand teams to use in demonstrating market potential within a given region, or to better understand that because their drug or device fits a certain population’s sensibilities, it will be more effective within that population- thus leading to better predictability of compliance.

In short, personas can provide a distinct advantage anywhere there is a statistically large enough group of people for whom a detailed, 360-degree view of information can be obtained.
Capturing Attitudinal Data

Sometimes we find the data is easily available, and in other cases it's much more challenging to obtain. Socioeconomic, psychographic, gender, healthcare utilization and many other types of outside data can generally be acquired through partnerships (such as those between payers and providers, payers and life sciences organizations, etc.) or by purchasing them.

Attitudinal data, which plays a large part in predicting a successful course of action that will improve outcomes, can be more challenging. For example, some people don’t like to go to their PCP because they fear bad news. Maybe they’re exhibiting signs of diabetes or hypertension, but believe as long as they don’t hear it confirmed they don’t have to acknowledge its reality. That kind of data isn’t available through typical sources.

Culture is another influential factor that can be difficult to quantify. For example, parents in locations where football is king may be reluctant to take their son in for an annual physical because he might be diagnosed with asthma, which hurts his chances of making the high school football team or becoming a starter.

Gathering this type of attitudinal data often requires participants to answer survey questions. 

“Attitudinal data plays a large part in predicting a successful course of action that will improve outcomes.”
As mentioned in Chapter One, survey-based data is not always as accurate as empirically gathered data, since it’s easy to say one thing while actually doing or intending to do something different.

A simple example is a survey at the beginning of the year asking people what their New Year’s Resolutions are. Data gathered from this survey might indicate that 50% of Americans plan to lose at least 20 pounds by exercising more and eating less. They may even believe it at the time. But if you were to measure them at the end of the year, the number who actually reached that goal are far fewer than 50%. Or there could be a situation where a group of people are asked their opinions about something controversial. While some will undoubtedly favor an unpopular position, they may respond in support of a different stance to avoid social ostracism or another undesirable consequence. This is a situation that frequently appears in social media, leading to a belief that social sentiment is greater on one side than it may actually be.

Still, gathering attitudinal information through surveys and a basic understanding of the social fabric can at least begin to factor into this all-important consideration – especially if the answers can be tied to other behaviors, such as parents of asthma patients filling prescriptions or participating in online asthma education after a visit to the PCP or emergency department.

This information can help determine the patient’s “impactability” and “intervenability.” Impactability is the likelihood that a particular intervention or plan of care will reduce risk and improve outcomes. Intervenability is the likelihood that the patient/member will follow that plan. With sufficient behavioral data to create a 360 degree view for these personas, and the proper algorithms, both factors can be assigned a risk score that helps healthcare organizations determine how best to help each patient/member and where to assign their human and financial resources.
Another approach to gathering attitudinal data is to look at behaviors that would normally be consistent with a positive, proactive attitude toward health. The food that patients and members purchase, or the activities they participate in, can be good indicators of their attitude toward their health in general. This information can often be obtained from credit card data.

Take food shopping patterns. Do patients and members shop at Whole Foods or at a big box store for groceries? Zip Code information can show if they even have convenient access to healthier choices. What do they buy there? Raw meats and vegetables are normally an indicator of a more conscious approach to health than a basket filled with salty snacks or a lot of processed foods.

A higher-than-normal level of sweet snacks or baking supplies could be a marker of an undiagnosed diabetic. Regular and excessive purchases of alcohol may be an indicator of a substance abuse problem (unless it turns out that particular patient or member is a party planner or caterer, which would change that view).
Membership and attendance at a gym, participation in 5K races and subscriptions to outdoors magazines are other indicators that someone will be more receptive to health advice from providers or information from payers. Purchasing generic foods may indicate that cost is a consideration, making that person a good target for generic drugs from life sciences companies.

This is why the 360-degree view is so important. The more an organization knows about the person’s and the population’s habits, the more accurately they can be placed within appropriate personas.

**Building Personas**

The first key to building effective personas is making the information compatible for behavioral analytics. Doing this requires obtaining multiple sources of data, many of which come from outside the organization, and then normalizing the data so it can all be accessed within the behavioral analytics solution.

Once the data sources become available, the data must be analyzed to bring out the facts that are most important – the data that binds certain groups of people together, as well as the factors that separate them.

*The goal is to ensure the similarities within the group are as close as possible while the differences between each group are distinct.*
This type of analysis involves going beyond traditional demographic age breaks to determine which factors are most important to the behaviors of each group.

For example, a typical demographic age range group might show one group that is 18-35, a second that is 36-49 and a third that is 50-64. Yet the analysis for this group of patients or members may show little change in behaviors or attitudes between the second and third groups. In that case, it makes more sense to view them as a single entity and then base their personas on other factors – such as their risk level, highest education level achieved and/or estimated income, where there are greater differences.

Personas designed to classify healthcare professionals can follow a similar thinking. While area of specialty might seem a natural breakout, that categorization actually may not provide enough differences. But there may be significant differences between those who are tech-savvy (as evidenced by early adoption of new technologies and fewer calls to the help desk) and those who are technology-challenged.

Whatever technical form of analytics are used, the key is to ensure that each persona presents an intelligent, cohesive view of all those within it while remaining distinct from other personas. The key is to ensure that each persona presents an intelligent, cohesive view of all those within it while remaining distinct from other personas. If too many patients, members, physicians, etc. fit into more than one persona, the program requires more work.
CHAPTER 2

PERSONAS: UNDERSTANDING THE HUMAN DRIVERS THAT INFLUENCE HEALTH OUTCOMES

Sample Persona Breakouts

Figure 1 shows a concrete example of the types of personas that can be created. In this case, they are being applied to help a life sciences organization understand the members of a payer’s population to determine which represent the greatest opportunities for a particular pharmaceutical within that region.

Reading left to right, the first group are the **Healthy & Affluent**. They do not exhibit many chronic conditions, but if they fall ill they will use hospital services because they can afford it. In fact, they have the second-highest emergency department (ED) utilization of all the personas. Yes, they spend on healthcare, but they are an unlikely target for medications treating chronic conditions.

Next are the **Balanced Adults**. They have some of the lowest overall utilization of hospital resources. In a value-based care or shared risk arrangement, this is the group that all parties would like to see the bulk of their patients and members join, due to the overall assumption that quality is higher and costs are lower.

**High Utilizers** (sometimes referred to as frequent flyers) are one of the most costly groups. Their frequent use of the most expensive services, the ED, not only drives costs higher, but also contributes to higher readmission penalties for hospital and health systems.

"This is just one of many ways to break out personas based on the 360-degree view that has been created by the inclusion of behavioral data."
PERSONAS: UNDERSTANDING THE HUMAN DRIVERS THAT INFLUENCE HEALTH OUTCOMES

Since their level of chronic conditions is still less than 1.0, the data suggests that educational efforts in this group might be of tremendous value in addressing these issues. There may also be other issues, such as cost or ability to physically obtain medications from a pharmacy, which should be taken into consideration when trying to improve the performance of this group.

The **Quality-Driven** group also appears to be generally healthy, based on low utilization of inpatient and ED services. But they have more chronic conditions overall than the Balanced Adults, so they require additional awareness and input. Overall, however, it appears that money invested in them is well-spent.

The **Cost-Conscious** have similar numbers to the Quality-Driven, but this may be a matter of circumstance more than of an active effort to improve their health. They have almost double the level of inpatient utilization, although they use the ED less. This suggests that prescribing generics or suggesting alternative treatments (such as over-the-counter medications) may result in better adherence.

The **Chronic Older Adults** group has higher risk scores and tends to use more services. They may benefit from additional education, or perhaps social services to help them improve adherence to medications.

Finally, the **High-Cost Baby Boomers** present some of the greatest challenges. Care for this group may fall into palliative more than preventive. They have a lot of complexities – understanding how to manage them properly will ensure they receive the quality care they require without expending resources in areas that will not make much of a difference.

This is just one of many ways to break out personas based on the 360-degree view that has been created by the inclusion of behavioral data. Each circumstance will differ. But by establishing these personas, payers, providers and life sciences organizations can instantly gain a better understanding of where individuals fit on the healthcare quality continuum. This knowledge will allow them to more effectively address the big-picture needs of patients and members- faster, smarter and more accurately.
Using Personas to Improve Care and Compliance

Once the personas are established and refined, and the patient or member population is placed within them, healthcare organizations can begin to use this information to make decisions.

The better that each of these groups – payers, providers and life sciences organizations – understands who their audiences are and what drives and motivates them, the better their chances of creating real and lasting change.

Payers can use this information to determine not only in which states they should be offering individual plans on the healthcare marketplace, but also how to design those individual plans. Personas driven by behavioral analytics will display how healthy the people within the various personas are (generally), their level of utilization of various services, any ancillary coverages (such as dental or vision) that may be important to them, how to balance premiums and co-pays, and offer many other pieces of critical information.

Life Science companies (biopharma, medical device, etc.) can develop patient personas that classify undiagnosed diabetics, and then compare behavioral information across the U.S. to determine the best markets to target in order to increase sales of diabetic treatments.
Sharing this information with physicians not only helps boost revenue, but also provides a value-add from the pharmaceutical company to the providers. This allows all parties to work toward their mutual goal of bringing uncontrolled diabetics under control in shared-risk arrangements.

Providers can use personas in a number of ways. With patients and members, they can determine which ones will be most receptive to the idea of participating in a proactive care management program so they can efficiently deploy their limited resources and receive the best ROI. They can also use personas to determine if a group or department will be more amenable to standardizing a set of best practices or other changes, creating the best opportunity for success that will encourage others to participate enthusiastically later.

**Constant Refinement**

While personas are typically established at the onset, they are not set in stone. As healthcare organizations learn more about their constituencies – especially in terms of what works and what doesn’t work – they must constantly refine their current personas, add new ones or remove existing ones if needed, and move members within them to ensure they have the most accurate 360-degree view. Only then will they be prepared to enhance the level of performance of all their programs.

In the next chapter, we will look at how the personas derived from behavioral analytics can be used in conjunction with more specific data about impactability – the likelihood that an intervention such as closing care gaps will produce the desired result – to reduce risk and drive better outcomes.
About SCIO Health Analytics®

Based in West Hartford, Connecticut, SCIO Health Analytics® is a leading health analytics solution and services company. It serves healthcare organizations across the continuum including over 20 provider groups and 30 health plans representing more than 90 million members, four of the top six PBMs, and clients in 30 countries for Eight of the top 15 global pharmaceutical companies. SCIO® provides predictive analytic solutions and services that transform data into actionable insights, helping healthcare organizations create the understanding that drives change through care, network and reimbursement optimization as well as commercial effectiveness.

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