



# WELLNESS TRANSFORMED

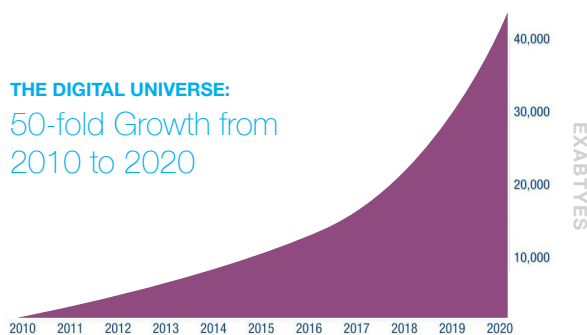
Understanding the Power of Persona-Based Engagement

Onlife<sup>®</sup>  
HEALTH

## Welcome to the Revolution

The ability to collect, analyze and store information about consumers is growing at a phenomenal, almost incomprehensible rate. The digital universe is doubling in size every two years and will experience a 50-fold increase from 2010 to 2020.<sup>1</sup>

For wellness programs, the new possibilities created by this Revolution in Big Data are profound. As this tsunami of information continues to accumulate and the analytical power to reveal its insights becomes faster and more powerful, wellness programs will possess even greater opportunities to connect with consumers on a more personal level.



Source: IDC Digital Universe Study

One of the key tools in creating this more personalized experience is the persona, a representation of a particular subgroup of users who share certain values, behaviors, goals and other characteristics. Personas provide organizations with the opportunity to see their users/customers with a new depth of understanding that goes beyond mere demographics in order to create a deeper connection with their customers.

In this white paper, we'll take a closer look at how the Informatics team at Onlife Health developed five data-driven personas that represent a cross-section of our population. We'll examine how these personas provide greater understanding of the behavior, preferences and expectations of our users and explore four practical applications of personas that demonstrate their ability to transform multiple dimensions of a wellness program.

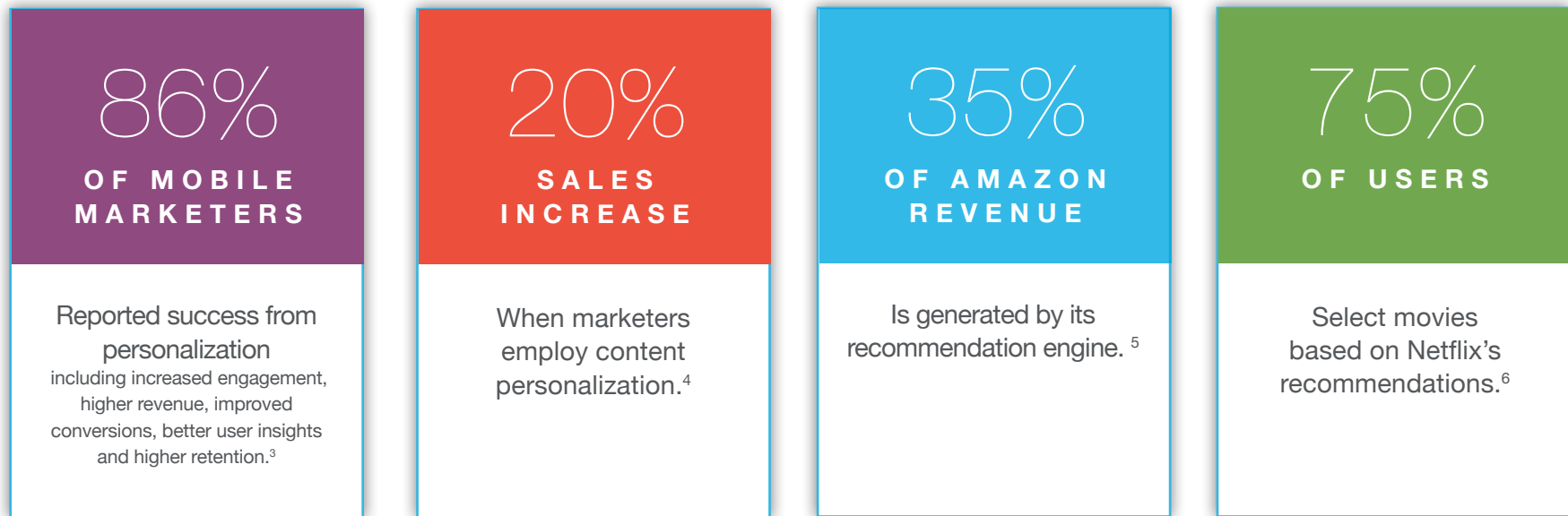
First, let's take a closer look at the power of personalization.

## KNOW YOUR CUSTOMER

At Onlife Health, we see the Revolution in Big Data as a once-in-a-generation opportunity to transform every aspect of our wellness platform, from changing the way we communicate with users to providing insights for our product innovation. We already provide a wellness experience in which the content, visuals, motivational tools, support groups and other features of our platform are tailored to match user profiles. As we continue to capture and develop richer amounts of information, our goal is to create a level of personalization that drills down and establishes a 1-to-1 relationship with each user, creating a bond that supports day-to-day healthy behavioral changes and delivers a new level of engagement and results.

# The Power of Personalization

Personas have been used by retailers for years to better understand consumers and align their marketing and communications with the customer's needs and expectations. Consumers naturally gravitate toward messages that fit their ideas of who they are and communicate an understanding of what they want.<sup>2</sup>



Even though the use of personas has become widespread in the retail sector, the healthcare market has lagged behind embracing this marketing tool. Still, the potential is there. Just as personalization can help retailers more effectively influence buyers, wellness programs can also use personas to inspire users to become more engaged and build stronger relationships that result in a healthier membership or workforce. Consider these two examples.

If the user is a millennial and therefore more likely to use a wearable fitness device, that option should be offered up-front instead of one-on-one coaching, which a baby boomer is more likely to choose. Likewise, someone who is competitive and likes to be in control requires a different kind of motivation than a person who is more socially oriented and needs frequent nudges and expressions of support from family and friends.

## CREATING PERSONAS

# OUR METHODOLOGY

The team at Onlife Health started with a baseline dataset of approximately 700,000 users who had completed a Health Assessment. The data points employed ranged from Age and BMI to Alcohol Use and Sleep.

To determine the most suitable machine-learning algorithm for clustering, the team conducted tests using k-means clustering, hierarchical clustering with a variety of metrics, and k-prototypes clustering. K-means was selected because it proved to be fast, highly scalable and easy-to-interpret.

We then analyzed multiple k-means runs to determine the optimum number of personas to create. Using the technique commonly known as the “Elbow Method,”  $k=5$  (five personas) was selected as the most efficient and usable cluster number based on statistical analysis, business needs and the significant diminishing returns that occurred beginning with  $k=6$ .

After the clusters were formed, a principal component analysis (PCA) identified the key drivers of the clusters and visualized the dataset. The variables that most strongly drove the clustering were BMI, overall health, eating habits, minutes of exercise, education level and stress.





## KNOW YOUR POPULATION:

# A Closer Look at Two Personas

Using machine-learning algorithms and inferential statistics, the Informatics team at Onlife Health developed five personas for our user population. Each persona received a descriptive name to capture the essence of each type of member. Here's a summary of two of the personas.

### Fresh Start Persona

#### Defining Characteristics

- High stress related to multiple facets of life
- Clinically obese
- Engages in less than one hour of exercise per month
- Frequently sleeps less than six hours a night
- Understands their diet and overall health need to improve

#### Key Finding

Most likely of all personas to use trackers.

#### Engagement Insights

The Fresh Start persona is self-aware. They know they need to improve their health. As a result, what's required is not a motivational pep talk from a Health Coach (a much better fit for the Laid-Back persona) to jump start their wellness journey, but the right tools to keep them engaged. For the Fresh Start persona, the tracker is the most commonly used tool, and it's easy to see why. Trackers are easy to use, require minimal effort to employ and provide ongoing motivation as the user sees progress.



## Busy Professional Persona

### Defining Characteristics

- Higher education levels
- Higher stress levels and alcohol use
- Slightly overweight; dietary choices are not ideal
- Gets a moderate amount of physical activity
- Young enough in general to change their habits

### Key Finding

More likely to take a self-directed course and/or connect a device.

### Engagement Insights

The Busy Professional values his or her autonomy. They see themselves as being highly competent, in charge of their lives and capable of managing their affairs. Because of their high education level, they are comfortable processing information and using old-fashioned “book” learning (reading an article) to provide guidance on their wellness journey. They are also more comfortable with technology. As a result, the key to reaching the Busy Professional is to make self-directed courses and fitness devices available upfront to grab their interest and allow them to engage when it best fits their schedule.



## MORE INSIGHTS:

# Busy Professional vs. Fresh Start

This side-by-side comparison demonstrates how a wellness program can use personas to create two different courses of engagement to achieve the same goal (losing weight, in this case).

Matching the wellness program with the user's preferences, inclinations, medical condition and level of motivation creates the personalization that ensures a greater likelihood of success.

### Busy Professional

**Key Goal:** Help them find time to fit exercise into a busy schedule.

**First Step:** Recommend that they connect to a wireless scale and fitness devices. Offer tips on how to fit short bits of exercise into a busy schedule.

**Motivation:** Seeing progress being made as recorded by a fitness device or other technology they use.

**Communication Mode:** Occasional encouragement through text messaging in order to respect their sense of autonomy.

**Ongoing Education:** Direct this persona to take online courses and read informative articles about weight reduction.

### Fresh Start

**Key Goal:** Provide them with the right tools to help them on their wellness journey.

**First Step:** Congratulate them on being self-aware of the need to improve their health.

**Motivation:** Using a tracker to see the progress they're making.

**Communication Mode:** Provide encouraging text messages when a tracker indicates progress has been achieved or a goal reached.

**Ongoing Education:** Recommend they take self-directed courses or read articles about stress reduction, improving their diet and sleep quality (all issues related to losing weight).



## THE POWER OF PERSONAS:

# Four Practical Applications

Once personas have been established for a particular population, they can be used in multiple ways to enhance the performance of a wellness program, from improving operational procedures to assisting strategic development. Here are four practical applications.

### 1. Create a Consumer-Driven User Experience

With personas, wellness programs can create a friendlier experience for consumers, one that better matches their age, physical condition, stress level, sleep quality, eating habits, exercise preference, even learning style—just to name a few characteristics. The images and content can be customized for each persona in order to speak “to” that particular audience, not “at” them.

### 2. Create a Communication Timetable

The timing of communication can be customized, too. Take, for example, the Laid-Back persona. Increasing the number of push notifications to remind and encourage this user to complete his or her goal can help overcome the lack of motivation often found in this sub-group. On the other hand, treating a Busy Professional in the same way may lead to notification overload and become counterproductive.

### 3. Boost Initial Engagement through Predictive Modeling

Initial engagement rates, defined as having potential users log in and perform at least one action, have been historically low for traditional wellness programs. To address this problem, Onlife recently conducted a study. Using a minimal amount of demographic information together with publicly available survey results from County Health Rankings & Roadmaps and BRFSS (the CDC system of health-related telephone surveys), we were able to predict a person’s persona with up to 2 ½ times greater accuracy than a random assignment. By matching each user with a persona even before a Health Assessment is completed, a wellness program can communicate more effectively with those who are not currently engaged and encourage them on a more personal note to “get with the program.”

### 4. Gain an In-Depth Understanding of a Population

Every population is different. Discovering and understanding those differences can improve any wellness program. For example, when Onlife Health conducted k-mean clustering for one specific client, it resulted in the creation of five personas, three of which were significantly different than the personas generated for Onlife’s total population. The clustering also revealed that sleep quality played a more significant role in the health of this population. By discovering these insights, unique to that population, we then were able to modify the program and more precisely address the specific health issues for each persona.



Personas are just one tool available to wellness programs to create a more personalized, engaging and effective experience for users. In the near future, Onlife Health plans to combine information from health assessments and biometric screenings with other data sources, such as medical, pharmaceutical and claims data, and possibly consumer behavior information, to generate even more accurate predictive modeling and detect patterns of activity that can be used to influence behaviors even more effectively.

At Onlife Health, we see the growing interconnectivity of data across multiple platforms as an opportunity to develop a simpler, easier-to-use wellness experience. Here are three scenarios.

## PERSONAS ARE JUST THE BEGINNING:

### A Look at the Future of Wellness



1) At the age of 54, Robert has just been diagnosed with diabetes during a routine medical exam. A life-altering event such as this often becomes the catalyst that leads people to finally adopt a healthier lifestyle. In this case, Robert's wellness program is immediately updated to reflect his new diagnosis because it's linked to his electronic health records. So, the next time Robert logs in, he has immediate access to the information and motivation to help him manage his diabetes.



2) Carol is a 76-year-old Medicare Advantage subscriber who has no means of transportation to an upcoming medical appointment. She also does not have the technical know-how to download and use a ride-service app. But in the near future, she'll simply log in to her wellness program, which she is already familiar with, and arrange for a ride to and from the appointment through a ride-share service such as Lyft.



3) Steve is an HR manager for a large manufacturing employer. Through an HA question, he's discovered that many of the company's employees are not eating enough or don't have access to fresh vegetables. To address this issue, he contacts Community Supported Agriculture (CSA) and arranges for the company's headquarters and factory to serve as a pickup location for locally grown produce. In addition, on the company's wellness portal, he shares a list of local farmers' markets, which might be a more convenient source of produce for some families.

## Summary

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The generation of consumer data from multiple sources continues to grow exponentially. Wellness programs with the capability for high-level data analytics can transform this wealth of information into personas, reliable and realistic profiles of key segments of the population who share specific characteristics. Incorporating these personas into the wellness platform transforms the user experience, providing the content, visuals, communication modes and other features that match the preferences, inclinations, and motivational triggers of each user profile. The result is a new degree of personalization that activates a higher level of engagement and is more effective in producing long-term behavioral changes.

## About the Authors

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The Informatics team at Onlife Health is experienced and highly trained in a wide range of sophisticated analytical skillsets and data sciences, including AI and machine-learning techniques, statistical modeling, predictive and prescriptive analytics, and data consultation. The team holds doctorate and master's degrees in Mathematics, Human Performance, Public & Community Health, and Statistics. They have authored articles for trade and academic journals and serve as adjunct faculty at several universities. With this depth of knowledge and expertise, they provide both Onlife Health and our clients with the information required to make insightful, data-driven decisions.

## References

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<sup>3</sup> Global FocusNorth America. *"The User Experience: It's Also about Data – Not Just Design."* Knowledge@Wharton. February 15, 2016. Accessed July 09, 2018. <http://knowledge.wharton.upenn.edu/article/the-user-experience-why-data-not-just-design-hits-the-sweet-spot/>.

<sup>4</sup> Soojian, Cameron. *"Content Personalization: It's What Consumers Want!"* Social Media Today. April 04, 2015. Accessed July 09, 2018. <https://www.socialmediatoday.com/marketing/2015-04-04/content-personalization-its-what-consumers-want>.



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