Unlocking "household DNA" to deliver a personalized customer experience in health and human services

The value of segmentation

W E ALL HAVE a unique combination of characteristics that makes us individuals: our employment history, financial circumstances, and educational background, among other things. The environment in which we live, where we live, and with whom we live further shapes us as individuals. Moreover, we exhibit specific behaviors in our reactions to different situations. Taken together, these characteristics and dispositions make up a kind of distinct profile that we call "household DNA."

Delivering personalized, outcome-based services that aren't cost-prohibitive has long been the holy grail in health and human services (H/HS). With the adoption of efforts such as real-time eligibility and mobile applications, increases in home placements and care, and the never-ending need to do more with less, face-to-face interactions with clients have been declining. These changes are driving H/HS agencies to rely more heavily on digitized information and, even more so, on client and household insights from what clients and other

sources provide. With the growth and availability of data, we have entered a period in which agencies are able to utilize an individual's or household's DNA to help provide personalized customer experiences.

Exposing individual and household DNA

Take the case of Jennifer, for example. When Jennifer requests services, a lot of what we know about her and her household stems from what she has reported. Her application data may be augmented with data from other state, federal, third-party sources, or anywhere she may have left a digital footprint. While agencies may capture Jennifer's data in a way that supports speed and accuracy, the data is not always presented in a way that easily exposes her individual or household DNA.

With this initial set of data the agency captured, what does it know about Jennifer's DNA? Is she working? If she is, for how many hours? Is someone in the house receiving child support? Have people moved in and out of the house? Are there income fluctuations or personal safety issues? Are the kids in school full time? What about how Jennifer completed the application—did she enter her answers quickly, change her responses to certain questions, or complete it in a certain location or at a certain point in the day? While aggregating this data may move us closer to a 360-degree view of Jennifer, it doesn't go far enough. It stops short of providing much-needed guidance for what services and types of interactions are likely to have the most impact for Jennifer and her household, based on her DNA. It also does not indicate what parts of her DNA matter the most for her current situation and the future.

Segmenting customers with DNA commonalities

While each of us has our own unique DNA profile, we also share commonalities with others at different points in our lives. Commonalities may stem from financial or nonfinancial characteristics, how individuals interact with agencies, and other lifestyle behaviors. Some of these change over an individual's lifetime while others remain constant. By grouping clients according to their individual or household DNA commonalities, distinct clusters or segments emerge. These customer segments offer agencies insight into distinct attributes of the different customer groups they serve. They can use these insights to determine individual service needs based on the desired outcome and the most effective method and frequency of communication. More broadly, segmentation can help them better understand the needs of the population that they serve and how those needs and preferences may evolve over time.

How might this apply to Jennifer? In her 18th month of assistance, Jennifer reports that her employer has reduced her hours by 10 hours a week and her husband has moved out. How has Jennifer's DNA changed? How does she align with the individual and household DNA segments based on her latest changes? Going beyond her current circumstances, what specific services and interactions have helped people like Jennifer increase their employment hours and overall financial health, and improve their family situation? By isolating discrete events from the cohort group, agencies can identify and recommend the services that have successfully worked in the past for individuals with DNA similar to Jennifer.

Getting started

When getting started with segmentation, it's important to keep the old maxim "Don't let perfect be the enemy of the good" in mind.

Selecting where the data should come from invariably raises questions about data quality, completeness, and accuracy. While many struggle to get over this hurdle, data does not need to be perfect and complete.

Agencies can narrow their data needs for creating the DNA segments by starting with a small population based on a focused business need, such as fostering financial independence. To address this topic, teams may identify potential characteristics that impact financial self-sufficiency, such as income (both type and amount), income fluctuations, time on assistance, assistance needed, household composition, and geography. By selecting those individuals that have achieved financial self-sufficiency, agencies can explore the characteristics that had the most influence on that outcome. As common characteristics start to emerge, agencies can uncover individual DNA segments across the population of individuals that are financially self-sufficient.

With an initial set of DNA segments that group the population according to financial factors that support self-sufficiency, how can agencies use that information to change the way they serve clients? In other words, if Jennifer walks in tomorrow to request services, what could we do differently to personalize her experience based on what the data tells us about people like Jennifer who have successfully achieved financial self-sufficiency? By looking at Jennifer's DNA and what has worked for others with a similar profile who have gone on to achieve financial self-sufficiency, agencies can tailor the services and supports they deliver and the way in which they are delivered, to effectively personalize Jennifer's experience. So, the communications Jennifer receives through the customer contact center, in addition to SMS and text messages, along with the frequency of the communications, can all be personalized using her DNA.

It's important to note that segmentation is not a one-time exercise. As new program data becomes available and new data sources introduced, DNA characteristics may expand. This requires ongoing refinement to understand which characteristics truly differentiate the DNA segments, while still keeping the number of characteristics manageable. It's also important to recognize that as individuals change over time, so must their individual and household DNA profiles. Personalization, then, cannot be a one-time effort, but rather an ongoing exercise to be effective.

About the author

Rachel Frey | rfrey@deloitte.com

Rachel Frey is a principal in Deloitte Consulting LLP's State Government Health and Human Services practice. For the past 15 years, she has worked with state and local government agencies defining approaches and implementing business and technology solutions to enhance service delivery; prevent and detect fraud, waste, and abuse; streamline business operations; refine organizational structures; and evaluate policies that drive these efforts. Frey has a master's degree in public policy and management from the Heinz School at Carnegie Mellon and currently leads Deloitte's Human Services Analytics solution offerings.