Reducing Racial Health Disparities

Impact of Digital Health Coaching on African Americans in the Deep South

While America has the world's largest economy, it also has massive disparities in health outcomes. This issue has been well documented, going back as far as the 2002 report: Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care by The Institute of Medicine, which showed that even when controlled for health insurance type, income, access to the same doctor, and need for treatment, outcomes are different for African Americans (AA) – often drastically so.

The Deep South

Social circumstances, such as living location, contribute to a person's likelihood of better or worse health outcomes.

This research prompted the Agency for Healthcare Research and Quality (AHRQ) to add equity to the list of aims for the US healthcare system, yet a 2010 follow up report found that little progress has been made to reduce health disparities in the US. These disparties are particularly pronounced in the region known as the Deep South (AL, MS, GA, FL).

This paper will examine the issues facing African Americans in the Deep South and the impact of digital health coaching on health behaviors and outcomes.

THE DISPARITY GAP

The statistics of health disparities are staggering. For example, when compared to Non-Hispanic whites (NHW), African Americans (AA) have higher rates of Type 2 diabetes prevalence (12.7% vs 7.4%), retinopathy (26.5% vs 18.2%), end stage renal disease, peripheral arterial disease, and mortality rates (98 vs 38 per 100,000). AA are also more likely to die from cancer, be overweight or obese, be diagnosed with asthma, or die from heart disease, and less likely to receive preventive care or have HIV infections.

Disparities have a high personal and community cost, but they also impact the rising costs of health care. For example, the increase in the prevalence of end stage renal disease accounts for nearly 15 billion dollars a year in cost.

SO WHAT'S GOING ON?

There is not a singular reason (e.g. biology) that explains the vast differences that exist in health outcomes across the US.

African-American Health Outcomes Compared to Non-Hispanic Whites

➤ *More likely* to die from cancer and heart disease.

➤ *Less likely* to receive preventative care.

➤ *More likely* to be overweight or obese.

The problem is driven by complex mechanisms that influence the core behaviors of health such as nutrition, exercise, medication adherence, stress, loneliness, financial wellbeing, or even sleep. These core behaviors are the result of outside influences, but are also responsible for outcomes across all chronic diseases. An individual can make the personal choices to overcome barrier after barrier, but a system that provides equal opportunity to all must ultimately address the underlying causes of disparity. For the purpose of this analysis, we will discuss two barriers facing AA: Structural Inequities and Social Determinants of Health.

SOCIAL DETERMINANTS *of* HEALTH

THE SOCIAL DETERMINANTS OF HEALTH (SDOH)

The social determinants of health are the inequalities that shape how people live a healthy or unhealthy life. Health behaviors that drive outcomes often come down to individual-level factors, such as smoking or physical activity. However, these individual behaviors are influenced by environments, settings, resources, policies, and economics.

72%

of smokers come from low-income communities.

Using smoking as an example, a poor AA community is ten times as likely to have tobacco ads, youth are more likely to live with a smoker, there are more tobacco retailers, a greater percentage of ads are placed at child level heights, and tobacco retailers are more likely to be 1000 yards from a school. While a person could choose not to smoke, their choice is influenced by a number of factors that are beyond their control.

That is not to say these factors are unalterable. However, most, if not all, of these factors can be changed with the right approach through individual action, public policy, or outside assistance.

STRUCTURAL INEQUALITIES

Structural inequality includes the business practices, policies, laws, governance, and culture that produce systematic disadvantages. These issues lead to social determinants of health that ultimately drive the disparity that exists across health outcomes.

Structural inequality is different from individual inequality behaviors such as racism or sexism. Structural issues are typically not individual biases that can be overcome if people "were just nicer to everyone" or "stood up for themselves". Often these structural inequalities are produced by historic issues which have ramifications in the present.

ADDRESSING SDOH

One way to address social determinants is with a personalized holistic approach to individual care and engagement such as digital health coaching. The success of coaching is built on a person-centered process that helps individuals overcome their barriers to health.

At Pack Health, this coaching process includes goal-setting and encouragement of self-discovery as well as content education and mechanisms for developing accountability in health behaviors.

In addition to improving health outcomes, Pack Health provides care coordination services such as finding a doctor, arranging for transportation, signing up for medication assistance programs, creating a custom meal or exercise plan, or helping individuals understand their insurance. This approach creates a personalized program for each member that is tailored to meet their unique needs and circumstances.

The Pack Health Approach

➤ *A structured program* **to help people manage chronic conditions**

➤ *Weekly* **calls from a personal Health Advisor**

➤ *Digital nudges* **via text or email, according to communication preference**

➤ *Educational materials* **that are easy to understand**

A flexible but replicable process is the key to addressing the needs of an individual while improving the entire population. Pack Health utilizes a custom build of Salesforce.com that allows for multiple communication methods and data collection protocols, but delivers a consistent approach.

The digital platform provides a structured and systematic program to foster behavioral changes, and help people better manage and improve their chronic conditions. Enrolled individuals have no username or password to remember, they simply receive a weekly call from their personal Health Advisor along with digital nudges via text messages and easy to understand education materials.

This approach creates a personal connection between the person and their Health Advisor and it has shown consistent outcome improvements across all of the over 30 existing Pack Health programs.

Allowing for virtual frictionless communication means Pack Health's Health Advisors can work with any person in country. This includes people who only have access to a landline, prefer email or text communication, or live in a remote rural environment. Having proactive one-on-one communication translates to increased engagement with all communities.

A Frictionless Experience Means *no usernames or logins required*

IMPACT OF HEALTH COACHING

To date, Pack Health has provided assistance to an enrolled population that is 48% racial or ethnic minorities, and seen a tremendous movement in AA outcomes.

The data used for this analysis was gathered from inidividuals in the Deep South (AL, GA, FL, MS), enrolled from several channels including health plan population health outreach (36%), wellness offerings for employers (26%), direct provider referrals (22%), non-profit engagement (6%), and others (10%). All of the data reported below utilize research grade patient-reported outcomes (PRO) using validated tools. Improvements compare 12-week achievement with and enrollment established baseline for the African American population (n=1608) engaged by Pack Health.

IMPACT OF HEALTH COACHING ON AFRICAN-AMERICAN POPULATION, *n = 1,608 members*			
HGBA1C ▼ 0.78	**MEDICATION ADHERENCE** ▲ 14%	**DEPRESSION (PHQ-4)** ▼ 2%	**NIGHTLY SLEEP** ▲ 20%
STRESS (PSS4) ▼ 9%	**PHYSICAL ACTIVITY** ▲ 36 Minutes per week of moderate to strenuous exercise	**PHYSICAL HEALTH** ▲ 17%	**HEALTHY EATING (STC)** ▲ 17%
FINANCIAL TOXICITY ▼ 13%	**ANXIETY (PHQ-4)** ▼ 3%	**WEIGHT LOSS** ▼ 4.6 lbs.	**HEALTH SELF-EFFICACY** ▲ 17%

The data reported utilizes research grade patient-reported outcomes (PRO) using validated tools. Improvements compare 12-week achievement with and enrollment established baseline for the African American population (n=1608) engaged by Pack Health.

These results reflect that people want to be healthy, and can acquire the knowledge, skills, and confidence they need to make the daily choices that overcome their social determinants of health. Digital health coaching is a key piece of the puzzle to help individuals systematically undercover and overcome barriers, build healthy habits, and achieve better health.

REFERENCES

1. Monica E. Peek, Algernon Cargill, and Elbert S. Huang, "Diabetes Health Disparities," Medical Care Research and Review : MCRR 64, no. 5 Suppl (October 2007): 101S-156S, https://doi.org/10.1177/1077558707305409.

2. Eileen B. O'Keefe, Jeremy P. Meltzer, and Traci N. Bethea, "Health Disparities and Cancer: Racial Disparities in Cancer Mortality in the United States, 2000–2010," Frontiers in Public Health 3 (April 15, 2015), https://doi.org/10.3389/fpubh.2015.00051.

3. Katherine M. Flegal et al., "Prevalence of Obesity and Trends in the Distribution of Body Mass Index among US Adults, 1999-2010," JAMA 307, no. 5 (February 1, 2012): 491–97, https://doi.org/10.1001/jama.2012.39.

4. Lara J. Akinbami et al., "Trends in Asthma Prevalence, Health Care Use, and Mortality in the United States, 2001-2010," NCHS Data Brief, no. 94 (May 2012): 1–8.

5. CDC, "African American Health," Centers for Disease Control and Prevention, July 3, 2017, https://www.cdc.gov/vitalsigns/aahealth/index.html.

6. Kimberly E. Lind et al., "Ethnoracial Disparities in Medicare Annual Wellness Visit Utilization: Evidence From a Nationally Representative Database," Medical Care 56, no. 9 (September 2018): 761, https://doi.org/10.1097/MLR.0000000000000962.

7. "HIV Surveillance Report 2017" 29 (n.d.): 129.

8. Susanne B. Nicholas, Kamyar Kalantar-Zadeh, and Keith C. Norris, "Racial Disparities in Kidney Disease Outcomes," Seminars in Nephrology 33, no. 5 (September 2013): 409–15, https://doi.org/10.1016/j.semnephrol.2013.07.002.

9. Elizabeth M. Barbeau et al., "Tobacco Advertising in Communities: Associations with Race and Class," Preventive Medicine 40, no. 1 (January 1, 2005): 16–22, https://doi.org/10.1016/j.ypmed.2004.04.056.

10. Jeffrey Drope et al., "Who's Still Smoking? Disparities in Adult Cigarette Smoking Prevalence in the United States," CA: A Cancer Journal for Clinicians 68, no. 2 (2018): 106–15, https://doi.org/10.3322/caac.21444.

11. Andrew B. Seidenberg et al., "Storefront Cigarette Advertising Differs by Community Demographic Profile," American Journal of Health Promotion : AJHP 24, no. 6 (2010): e26–31, https://doi.org/10.4278/ajhp.090618-QUAN-196.

12. William J. McCarthy et al., "Density of Tobacco Retailers Near Schools: Effects on Tobacco Use Among Students," American Journal of Public Health 99, no. 11 (November 2009): 2006–13, https://doi.org/10.2105/AJPH.2008.145128.

13. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health, The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General, Reports of the Surgeon General (Atlanta (GA): Centers for Disease Control and Prevention (US), 2014), http://www.ncbi.nlm.nih.gov/books/NBK179276/.

14. WHO Commission on Social Determinants of Health and World Health Organization, eds., Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health: Commission on Social Determinants of Health Final Report (Geneva, Switzerland: World Health Organization, Commission on Social Determinants of Health, 2008).