

EMBARGOED UNTIL THURSDAY, MARCH 15, 10 A.M. (PST)

Media Background Information Healthy Nevada Project Phase Two Enrollment Details

Open Enrollment, Eligibility Requirements & Testing Details:

- For phase two, the Healthy Nevada Project is opening 10,000 testing slots to any Nevadan interested in taking part. In order to be a population health study, we must accurately represent the demographics of our region. For the remaining 30,000 testing slots, researchers will focus on matching the demographics that makeup northern Nevada. This means study participants will be eligible based on specific demographic variables including: gender, age group, ethnicity and residence in a rural or urban area of Nevada.
- If you want to participate, but testing slots matching your demographics are full at the time, please don't lose interest. We encourage you to provide your basic demographic information and we will keep you updated as additional testing slots open in the future. We hope to expand the study to all Nevadans.
- Our testing facility at 780 Kuenzli St., Suite 201 will be open Monday through Friday 7 a.m. – 7 p.m. and Saturdays from 8 a.m. – 4 p.m.
- On average, the testing appointment takes about 20 minutes but please keep in mind, you can't eat or drink (even water) for 30 minutes prior to the saliva test.

What Participants Receive:

- Study volunteers will:
 - Take Helix's DNA saliva test
 - Receive access to global ancestry app, [Geno 2.0 by National Geographic](#)
 - Create a Helix.com account that lets them explore additional DNA-powered products on the [Helix App store](#)
 - Have the chance to pick an additional health and wellness app specific to their individual genetic results, if they choose to complete a follow-up survey from the Healthy Nevada Project
- Helix's Exome+ assay testing using Next Generation Sequencing (NGS) reads all 20,000 protein-coding genes and other regions in the body important to providing genetic insights.

Moving Into the Next Generation:

- For phase two, Renown IHI research teams will have greater depth and quality of DNA data thanks to Helix's Next Generation Sequencing (NGS) technology and one of the world's largest CAP- and CLIA-accredited exome sequencing labs. The Helix.com marketplace model will also enable the Healthy Nevada Project to work with other research groups and industry-leading companies at the forefront of using genetics to drive better health outcomes.
- The pilot phase used genotyping, which was a great start, but moving to exome sequencing and inviting an additional 40,000 people to participate will dramatically accelerate what we can learn about the human genome and has the potential to greatly improve preventive health and create incredible potential for new scientific discoveries.
- Think of your DNA as a book. Genotyping looks at a couple letters or words on a page while sequencing is more like reading the entire book with full sentences and context. With sequencing, we get more information which can be important to understanding our unique differences, especially when it comes to health insights and less common variations that cannot be detected through genotyping. By sequencing your Exome+ and storing that information for you, we are able to provide you with new insights as scientists make new discoveries, without having to collect another sample.
- Helix partners with experts ranging from health systems to fitness coaches and dietitians to bring these products to the Helix Store, allowing consumers to purchase the products that are best for them. Healthy Nevada Project participants are not required to purchase any products.

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Media Background Information Healthy Nevada Project Pilot Phase Insights

Clinical Integration Based on Pilot Phase Insights:

- Renown IHI researchers will begin working on a number of clinical programs and scientific studies focused specifically on Washoe County's high age-adjusted death rates for heart disease, cancer and chronic lower respiratory disease. Collectively these stand at 33 percent above the national rate. (Cumulative deaths in these three categories = 501.5 per 100,000 in Washoe County vs. 416.5 per 100,000 in Nevada vs. 385 per 100,000 in the United States).
- In the coming months, Renown IHI will begin providing advanced calcium score screenings to pilot phase participants at higher risk for cardiovascular disease. This will allow researchers to examine the link between genetics and calcium buildup in the heart.
- Based on pilot phase data, researchers have seen increased use of regional healthcare correlated with fluctuations in air quality and so-called "bad air events" such as wildfires and atmospheric inversions. In phase two, Renown IHI will evaluate possible links between genetics and increased susceptibility to respiratory ailments.
- Researchers are also evaluating future studies focused on age-related macular degeneration and breast cancer risks in northern Nevada.

Pilot Phase Demographics & Testing Details: (September 15, 2016 – December 21, 2016)

- The pilot phase of the study enrolled 10,000 participants in less than 48 hours.
- DNA sample collection from each participant was completed in just 69 working days.
- The only inclusion criteria for the pilot phase required participants to be 18 years or older. While we saw a wide range of study participants, ranging in age from 18-90 years old, certain age groups were over- and under-represented. Ages 31-70 were overrepresented and those over the age of 70 were underrepresented.
- Pilot study participants came from 135 zip codes in northern Nevada. 1,052 of the study participants were residents from rural communities outside of Washoe County such as Fallon, Winnemucca and Yerington. To ensure greater participation from rural areas, we will provide routine testing appointments and outreach during phase two.
- The pilot phase was made up of more women (66%) than men (34%). Study participation was also less racially and ethnically diverse than our community. For example, the study was made up of 88.8% white vs. 86.7% in northern Nevada; while we only had 3.2% of Hispanic participants vs. the Census estimate of 22%. We will work to closely match the makeup of northern Nevada by implementing eligibility requirements surrounding gender, age group, ethnicity and rural versus urban residents.
- The pilot phase of the Healthy Nevada Project proved Nevadans are excited to know more about themselves and want to contribute to research that could improve health outcomes for our entire state.
- For the pilot phase, DNA genotyping was done with personal genetics company, 23andMe.

Insights from Pilot Phase Survey:

50% of pilot study participants responded to a comprehensive, socioeconomic survey, which revealed:

- Study participants had parents who died from cancer and heart disease at a higher rate than the age-adjusted national average.
- Study participants exercised less than recommended by the American Heart Association and expressed interest in receiving help with behavior modification using diet/nutrition and weight loss tools. In phase two, if study participants choose to complete a follow-up survey, they will have the chance to pick an additional health and wellness app specific to their individual genetic results.

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- High rates of lower respiratory disease in northern Nevada and co-morbidities such as diabetes and hypertension suggest air pollution in northern Nevada is a confounding and significant factor in health.

Key Facts on Health in Nevada:

- Depending on the data source used, Nevada ranks in the bottom half of overall health rankings in the United States. The 2016 annual report of America's Health Ranking ranks Nevada 35th.
- In the case of healthcare spending per capita, Nevada ranks 45th at \$5,735. That is 16% below the national average.
- According to the 2016 U.S. Census, Washoe County's catchment area includes 6,302 square miles and is home to more than 453,000 people (population per square mile 71.9).
- Northern Nevada's healthcare catchment spans 100,000 square miles and serves almost 1 million people. The diverse population, generational healthcare data and innovative combination of leading-edge research tools and detailed environmental databases make the region an ideal location for advanced health science.

The Partners:

Renown Institute for Health Innovation is a collaboration between **Renown Health** - a locally governed and locally owned, not-for-profit integrated healthcare network serving Nevada, Lake Tahoe and northeast California; and the **Desert Research Institute** - a recognized world leader in investigating the effects of natural and human-induced environmental change and advancing technologies aimed at assessing a changing planet. Renown IHI research teams are focused on integrating personal healthcare and environmental data with socioeconomic determinants to help Nevada address some of its most complex environmental health problems; while simultaneously expanding the state's access to leading-edge clinical trials and fostering new connections with biotechnology and pharmaceutical companies. Learn more at www.healthynv.org.

Helix is a personal genomics company with a simple but powerful mission: to empower every person to improve their life through DNA. We've created the first marketplace for DNA-powered products where people can explore diverse and uniquely personalized products developed by high-quality partners. Helix handles sample collection, DNA sequencing, and secure data storage so that our partners can integrate DNA insights into products across a range of categories, including ancestry, entertainment, family, fitness, health and nutrition. Helix is headquartered in the San Francisco Bay Area and operates a CLIA-and-CAP-accredited Next Generation Sequencing lab in San Diego, powered by Illumina (NASDAQ:ILMN) NGS technology. Helix was founded in 2015 with support from Illumina, its largest shareholder. Learn more at www.helix.com.

Renown Health is a locally governed and locally owned, not-for-profit integrated healthcare network serving Nevada, Lake Tahoe and northeast California. Renown is one of the region's largest private employers with a workforce of more than 6,700. It comprises three acute care hospitals, a rehabilitation hospital, skilled nursing, the area's most comprehensive medical group and urgent care network, and the region's largest and only locally owned not-for-profit insurance company, Hometown Health. Renown has a long tradition of being the first in the region to successfully perform leading-edge medical procedures. For more information, visit renown.org.

Desert Research Institute (DRI) is a recognized world leader in investigating the effects of natural and human-induced environmental change and advancing technologies aimed at assessing a changing planet. For more than 50 years DRI research faculty, students, and staff have applied scientific understanding to support the effective management of natural resources while meeting Nevada's needs for economic diversification and science-based educational opportunities. With campuses in Reno and Las Vegas, DRI serves as the nonprofit environmental research arm of the Nevada System of Higher Education. For more information, please visit www.dri.edu.