

UAB MEDICINE

Health Across the Lifecourse: A Precision Population Approach



Health Across the Lifecourse
(HEAL)

The University of Alabama at Birmingham | Heersink School of Medicine

A Lifecourse Approach...

Considers the cumulative impact of circumstances, events, and experiences across different stages of one's life.

While our unique genetic makeup shapes our risk of experiencing diseases like sickle cell anemia, cystic fibrosis, diabetes, and cancer, a host of factors over the lifetime influence our health and health outcomes.

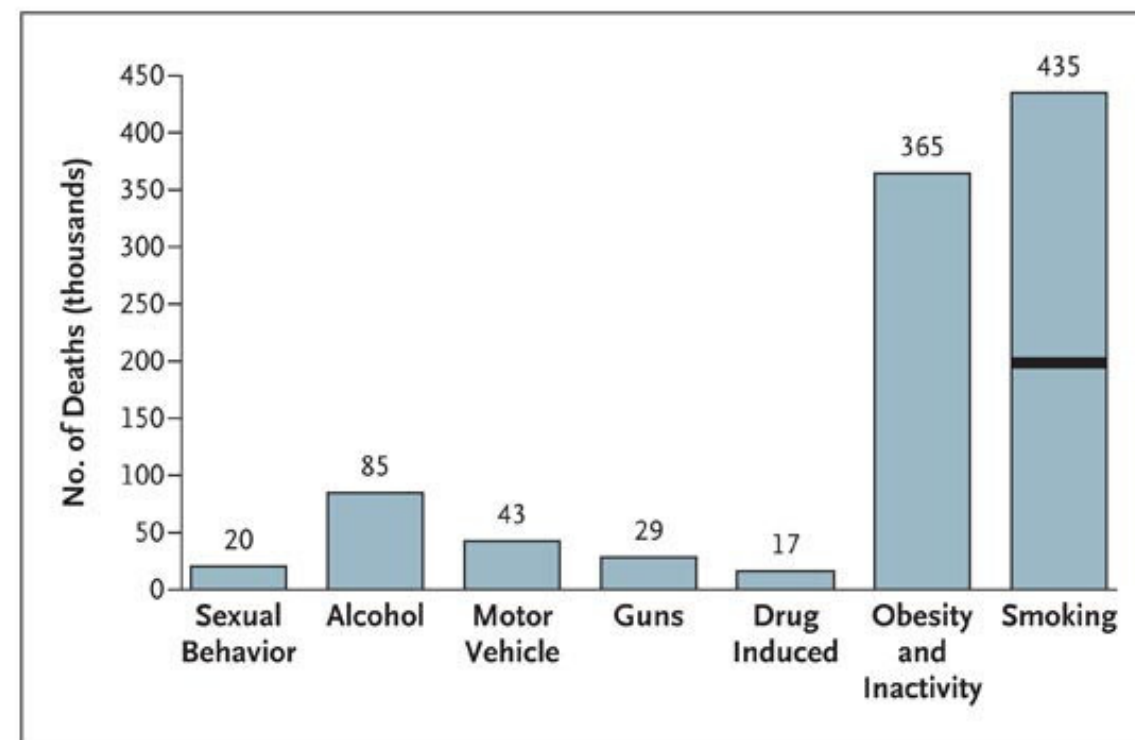
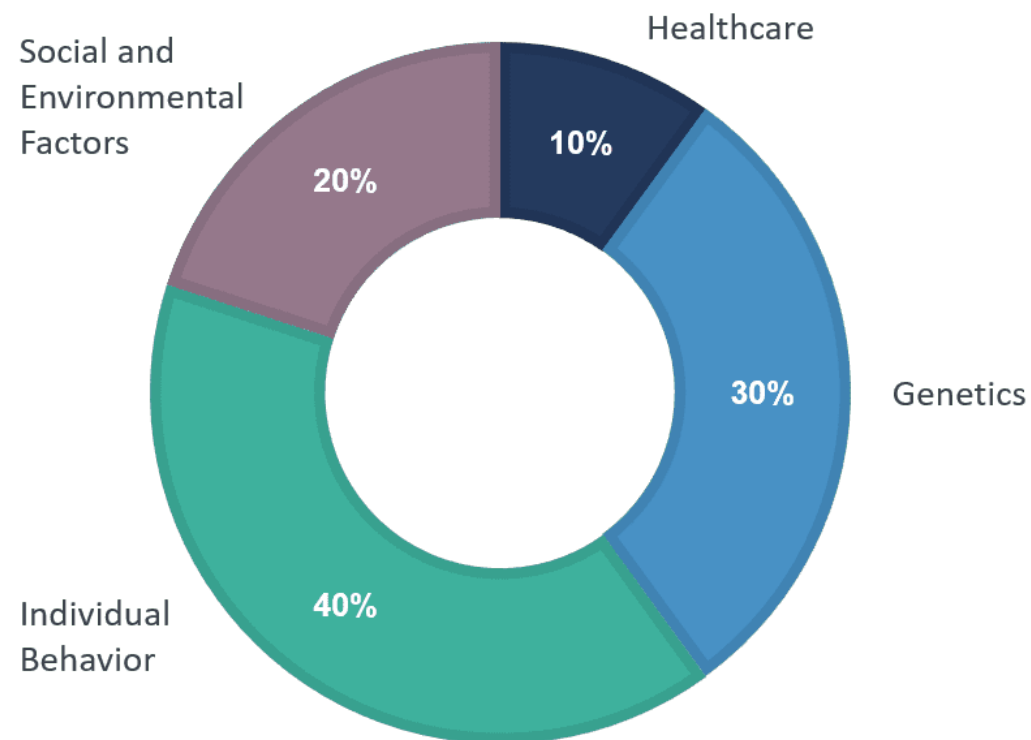
We Can Do Better — Improving the Health of the American People

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Author: Steven A. Schroeder, M.D. [Author Info & Affiliations](#)

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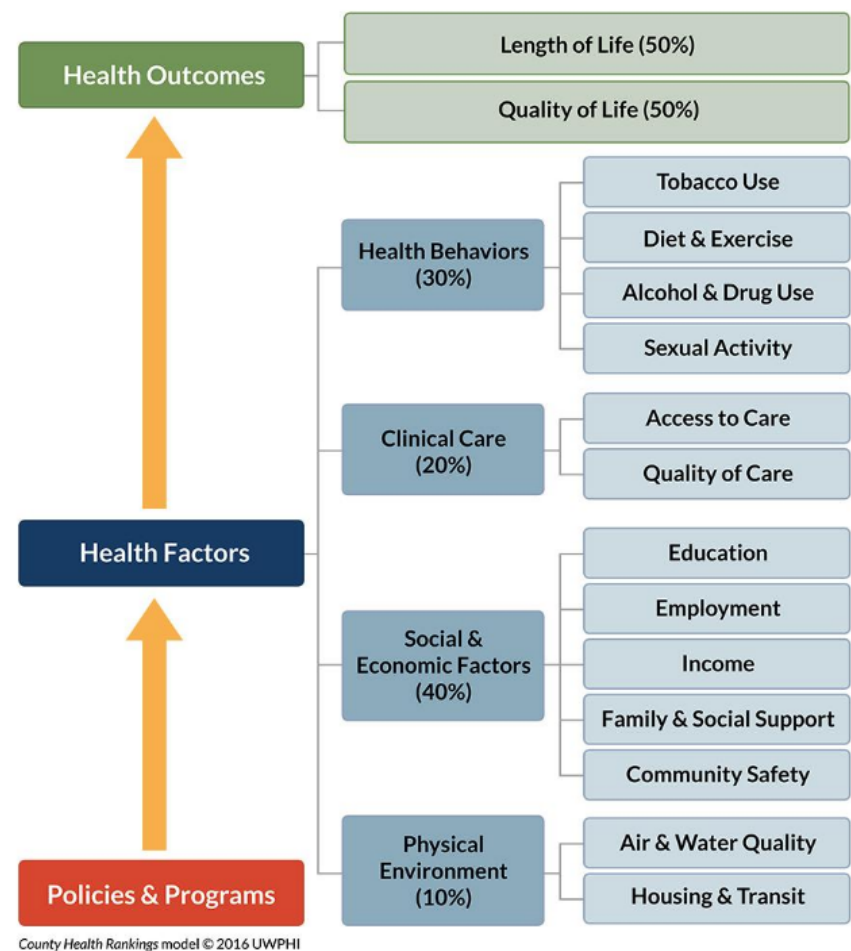
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Precision Population Health

Data-driven approaches (qualitative & quantitative) to incorporate individual genetic, behavioral, and environmental factors for tailored population-level prevention, screening, and treatment of disease and promotion of health.

HEAL: Non-genetic factors influencing health



Magnan S. Social Determinants of Health 101 for Health Care: Five Plus Five. NAM Perspectives. 2017.

Figure 1 | County Health Rankings & Roadmaps | Source: Reprinted with permission from County Health Rankings & Roadmaps, <http://www.countyhealthrankings.org/our-approach> (accessed July 18, 2017).

Social Determinants of Health 101 for Health Care: Five Plus Five - NAM

HEAL: A Precision Population Approach...

Is particularly salient in Alabama, where rural hospital closures and limited availability of primary, maternal, and mental healthcare impose formidable challenges to health and healthcare delivery for populations with a high burden of disease.

Health Across the Lifecourse (HEAL)

A Precision Population Approach

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What is HEAL Research?

HEAL (Health Across the Lifecourse) research focuses on understanding and improving health at every stage of life by studying how biological, behavioral, environmental, and social factors shape health outcomes and care needs over time.

Why is HEAL Research a Priority in Alabama?

Alabama experiences some of the **highest rates of chronic disease, early mortality, and limited access to essential care**, particularly in areas with geographic or economic barriers. Without focused, data-driven research, these challenges will continue to strain the healthcare system and slow economic progress. **HEAL research at UAB supports health improvement across the lifespan by developing real-world solutions that enhance outcomes for individuals and communities.**

In Alabama...

Diabetes	↑ 73%	<i>compared to the national average</i>
Heart Disease	↑ 62%	
Poor Overall Health	↑ 45%	

Alabama's life expectancy is 4.4 years shorter than the national average

HEAL: A Call to Action

It is imperative that we move beyond describing differences in rates and severity of disease to addressing their underlying drivers and mechanisms through implementation of multilevel interventions so that everyone can achieve their full health potential.

HEAL Goals

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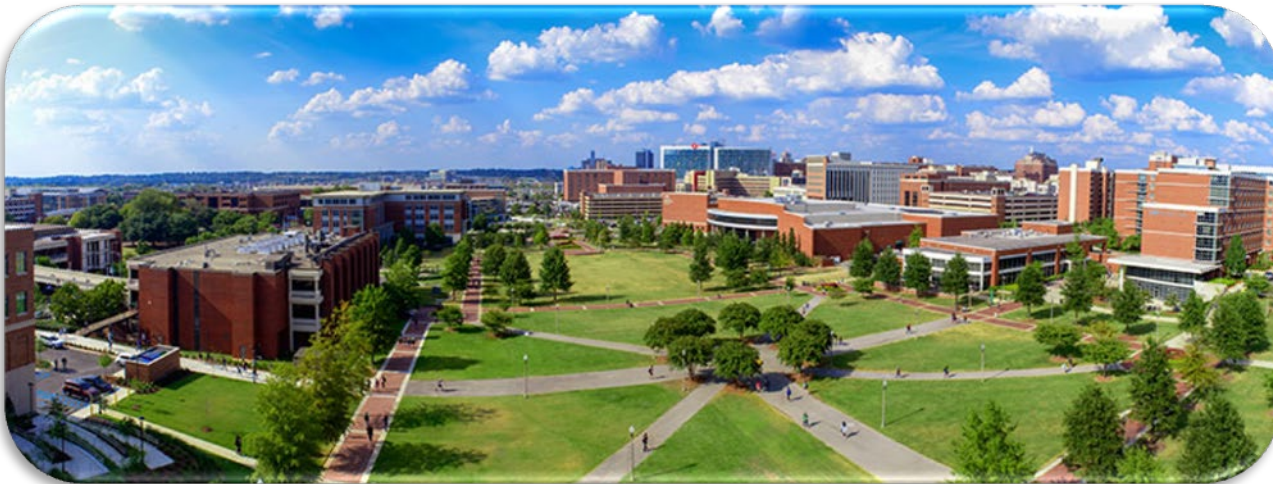
1. Advance scientific understanding of the multilevel pathways and mechanisms of health outcomes across multiple disease conditions through basic, behavioral, clinical, implementation, and community-led research.
2. Develop and improve scientific methods, measures, and tools that support HEAL research.
3. Develop, screen, evaluate, and disseminate multilevel interventions that promote HEAL priorities.
4. Leverage health system data to inform HEAL initiatives and achieve the UAB Medicine vision *“to be the leader in improving the health and lives of all we serve.”*
5. Translate HEAL knowledge to practice to enhance individual healthcare access and outcomes while improving population health indices.

HEAL: Foundational research methodologies

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- Genetic / Genomic Medicine – data-driven integration of individual's genome into health care decisions
- Mixed Methods Research – integration of rigorous qualitative and quantitative research methods
- Epidemiological Research – the study of the distribution of health-related conditions in populations
- Decision Science – use of quantitative methods to inform individual or population preferences
- Clinical Trials, including Behavioral and Multilevel Intervention Trials – traditional and novel (e.g., adaptive) trial designs to provide “gold standard” efficacy evidence
- Health Services and Outcomes Research – the study of the multilevel factors affecting health care access, quality, cost, and outcomes; include observational & interventional (“effectiveness”) designs
- Implementation Science – the study of strategies that facilitate the uptake of evidence-based practices
- Dissemination Science – the study of processes that facilitate the distribution and communication evidence-based practices
- Community-led Research – engagement with patients, health systems, public health, and community groups by healthcare practitioners and policymakers

The HSOM Health Across the Lifecourse (HEAL) catalyzes research to improve health at every stage of life so that everyone can achieve their full health potential.



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THANK YOU!!



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