


HEALTHCARE DETERMINANTS

This diagram is a model of all factors correlated with health outcomes for an individual, and their relative contributions.



METHODOLOGY

A list of determinants were collected from several health organizations [1 - 8]. These were used to create a combined list of determinants. The following categories of health determinants were chosen due to their consistency across most organizations [1, 2, 4, 5, 6, 7, 8]: genetics, medical care, social circumstances, environment, behavior. Research determining the contribution of each category was found. The relative contribution to one health was determined by averaging the weights found from each primary source referenced here [9 - 13].

The final weights for each category were based on the following sources:

DHHS[9]: Behavior 50%, genetics 20%, environment 20%, medical care 10%

JAMA[10]: Behavior 38%, environment 7%

Health Affairs[11]: Behavior 40%, genetics 30%, social 15%, environment 5%, medical care 10%

JAMA[12]: Behavior 39%, environment 5%

PLoS Medicine[13]: Behavior 36%

WHO[14]: Behavior 45%, environment 3%

U. Wisconsin[15]: Behavior 30%, social 40%, environment 10%, medical care 20%

Each determinant category was averaged based on the values from each source:

Behavior: $(50 + 38 + 40 + 39 + 36 + 45 + 30) / 6 = 46.33$

Social: $(15 + 20 + 30 + 2 + 25) / 6 = 17.17$

Environment: $(20 + 7 + 5 + 5 + 3 + 10) / 6 = 8.4$

Medical care: $(10 + 10 + 20) / 3 = 13.33$

The ratio for each determinant was based on the total of the averages:

Behavior: $46.33 / 120.56 = 38.43\%$

Social: $27.5 / 120.56 = 22.81\%$

Environment: $8.4 / 120.56 = 7\%$

Medical care: $13.33 / 120.56 = 11.06\%$

Final determinant %'s were rounded to whole numbers:

38 (behavior) + 23 (social) + 21 (genetics) + 7 (environment) + 11 (medical care) = 100%

Final percentages:

Behavior: 38%

Social: 23%

Genetics: 21%

Medical care: 11%

Environment: 7%

REFERENCES

1. NCHHSTP Social Determinants of Health. (2014). Retrieved March 14, 2016, from <http://www.cdc.gov/nchhstp/socialdeterminants/definitions.html>
2. The determinants of health. (n.d.). Retrieved March 14, 2016, from <http://www.who.int/mediacentre/factsheets/220/en/>
3. Social Determinants of Health. (n.d.). Retrieved March 14, 2016, from <https://www.healthypeople.gov/2020/topics-objectives/priority-social-determinants-of-health>
4. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. (n.d.). Retrieved March 14, 2016, from <http://www.ahrq.gov/qualityandSafety/institute-BeyondHealthCare-role-social-determinants-promoting-health-and-health-equity>
5. Schneider, S. A. (2007). We Can Do Better—Improving the Health of the American People. New England Journal of Medicine, 357(12), 1221-1228.
6. The Relative Contribution of Multiple Determinants to Health Outcomes. (n.d.). Retrieved March 14, 2016, from http://healthaffairs.org/healthpolicybriefs/brief_policy_briefs_beyond_healthcare/relative_contribution_of_multiple_determinants_to_health_outcomes.html
7. Coping social and behavioral domains and measures in electronic health records: Phase 2. (2014). Washington D.C: The National Academies Press.
8. Grazioli, S., & Jorm, L. (2010 December). Public Health Classification Project (Rep.). Retrieved March 15, 2016, from New South Wales Department of Health website: <http://www.health.nsw.gov.au/authorised/Publications/classifications-project.pdf>
9. DHHS, Public Health Service. "Ten Leading Causes of Death in the United States." Atlanta (GA): Bureau of State Services, July 1980
10. JAMA/Genes and WHO/FRGs. "Actual Causes of Death in the United States." JAMA 270, No. 18 (1993): 2207-12
11. JAMA/Genes et al. "The Case for More Active Policy Attention to Health Promotion." Health Affairs 21, no.2 (2002):78-93
12. A. Mokdad et al. "Actual Causes of Death in the United States 2000." JAMA 291, no. 10 (2004): 1238-43
13. G.Dorion et al. "The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors." PLoS Medicine, 6, no. 4 (2009):e1000598
14. World Health Organization, Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks. Geneva: WHO, 2009
15. A. Bookwala et al. "Different Perspectives for Assigning Weights to Determinants of Health." County Health Rankings and Roadmaps, University of Wisconsin Population Health Institute, 2010
16. S. Schramm, N. Heron, C., & Sogol, S. D. (2005). STRESS AND HEALTH: Psychological, Behavioral, and Biological Determinants. Annual Review of Clinical Psychology, 1, 167-218. Retrieved March 16, 2016, from http://annureviews.org/doi/abs/10.1146/annurev-clinpsy.1.02803/044147?url_ver=239-88-2003&ipf_ext_id=pubmed&ft_id=onnetcrossref.org/journalCode/clpsy