



VISION

The model for healthcare is personal responsibility using behavioral health as the first option.

MISSION

Help lifestyle medicine providers motivate people to make healthy lifestyle choices with

- a validated interactive Healthy Behaviors Knowledge Base mapping lifestyle habits to health consequences to identify needed behavior change,
- engaging, easy-to-use, animated multimedia coaching tools to support habit change.

Marel Norwood PhD, Founder 206-361-9991 <u>marel@healthedd.com</u> **PROBLEM WITH HEALTH CARE**: About 80% of US health care costs and preventable deaths are caused by chronic illnesses due to poor lifestyle choices¹. Yet 95% of both healthcare spending² and health research³ are for biomedical approaches that have no impact on lifestyle factors. Lifestyle behaviors are critical to health: they can affect organ systems, transmit infectious diseases, elevate other risk factors and alter gene expression. Our US health care system is woefully flawed: it is the most costly medical system in the world, but an ineffective one, ranked #37 to #77 in the world on a variety of performance and quality measures.⁴ Moreover, 79% of online users utilize the Internet to research healthcare information⁵. Yet the health information system is equally as flawed, confounding the public with a wide range of information that is conflicting, confusing, and often produced by vested interests giving incorrect or deceptive information.⁶

GENERAL SOLUTION: The key to affordable healthcare is disease prevention, NOT treatment, dramatically demonstrated in the Archives of Internal Medicine⁷ report that the cumulative protective effect of just four healthy lifestyle factors lowers the risk of developing the most common and deadly chronic diseases by 80%.

HealthE-D-D SOLUTION: Our solution is to provide a first-of-its-kind, state-of-the-art Health Behaviors Knowledge Base and from that foundation create different delivery systems for different markets. For healthcare professionals, the interface will be professionally geared toward diagnosis, data mining, and physiology since few are given any training in lifestyle options in medical school. For consumers, simple multi-media materials will provide engaging lifestyle behavior information and innovative behavior modification techniques enmeshed within social networks. The system can be built within a few years *without FDA approval.* The innovative elements to our "Life-As-Medicine" approach include:

- KNOWLEDGE BASE—A scientifically and clinically-validated knowledge base of the physiological effects of lifestyle factors on health, associating behavior and consequences. We will use knowledge engineering and the semantic web to map the biochemical pathways, mechanisms and probabilities of the health consequences of over a dozen lifestyle behaviors and create a query system. Validating the critical impact of these behaviors will help persuade physicians and consumers to "prescribe" lifestyle changes before using medical options to help change the model of healthcare from the "top down".
- 2. PHYSIO-FLOW CHARTS—These unique, proprietary flow charts illustrate simply how the body works and capture the physiological tipping point of ordinary behaviors, thus making obvious the "# 1 Thing To Do" for each category, providing a bridge between our knowledge base and the educational delivery system.
- 3. ENTERTAINING DELIVERY—for consumers, the products (e.g., web sites, mobile apps, DVDs, games, TV shows and shorts) will combine humor, video, illustration and animations of how the body works, what to do and how to do it for each lifestyle behavior. Using humor has been shown to initiate, maintain, and enhance learner interest⁸, while video substantially cuts learning time and increases retention by 50%.⁹
- 4. RESOURCES FOR BEHAVIORIAL CHANGE—Covering all stages in the standard Change Model, we will provide a wide variety of tools and techniques to help motivate and sustain behavioral change, including our Habit's for Habit Change© and multiple, diverse ways to personalize and gather more information (e.g., coaching, webinars, mobile apps, self-evaluation, testing) and to participate in community via social media. Sharing information will help change the model of healthcare from the "bottom up."

Based on our extensive market research, the most likely markets include health care professionals with 686,000 doctors (MD, ND, DO, DC), Insurance and HMOs (4000), Corporate Wellness programs (over 600,000), the Wellness Promotion Companies that supply those corporate health promotion efforts with an average ROI of 4:1.¹⁰ Other markets include government mandates, medical school training, and of course K - 12 schools, perhaps the most desirable market. We will partner with health clinics and Lifestyle-Integrative-P4 Medicine practitioners to conduct outcome research to assess behavior changes and health status (e.g., diabetes) and establish proof of concept for future leveraging to improve healthcare and reduce costs.

REFERENCES

- ¹ MULTIPLE SOURCES: Centers for Disease Control and Prevention. The Power to Prevent, The Call to Control: At a Glance 2009, assessed at http://www.cdc.gov/chronicdisease/resources/publications/ AAG/chronic.htm; Gerard Anderson, et al., Chronic Conditions: Making the Case for Ongoing Care (2007), assessed at
 - http://www.fightchronicdisease.org/sites/fightchronicdisease.org/files/docs/ChronicCareChartbook_FIN AL_0.pdf.
- ² J.M. McGinnis, et al., "The Case for More Active Policy Attention to Health Promotion," *Health Affairs* 21, #2 (2002)
- ³ IBID
- ⁴ World Health Report 2000 World Health Organization (WHO); Davis , et al "Mirror, Mirror on the Wall: How the Performance of the U.S. Health Care System Compares Internationally, 2010 Update, Commonwealth Fund
- ⁵ Pew Internet & American Life Project. "Internet Activities." July 22, 2008; and Plunkett Research. "Information Technology and Health Care" (2007)
- ⁶ MULTIPLE SOURCES: Bayh-Dole Act (1980); Cline, R. J. W. and Haynes, K. "Consumer health information seeking on the Internet: the state of the art ", Health Educ. Res. (2001) 16 (6): 671-692. McLeod, S. D. (1998) "The quality of medical information on the Internet: a new public health concern", Archives of Ophthalmology, 116, 1663–65; Pharmaceutical Industry Is Biggest Defrauder of the Federal Government under the False Claims Act. Public Citizen, December 16, 2010; The Department of Justice Health Care Fraud and Abuse Control Program Annual Report for Fiscal Year 2010 see http://www.dgshealthlaw.com/uploads/file/hcfacreport2010%5B1%5D.pdf
- ⁷ E. Ford, et al., "Key to Affordable Health Care: Healthier Lifestyles" Archives of Internal Medicine,169(15 (2009)
- ⁸ B. Dodge & A. Rossett, Heuristic for humor in instruction. NSPI Journal, 5, 11-14, 32 (1982)
- ⁹ MULTIPLE SOURCES: Choi, H. J., and Johnson, S. D. (2007). The Effect of Problem-Based Video Instruction on Learner Satisfaction, Comprehension, and Retention in College Courses. British Journal of Educational Technology, 38, 5, 885-895, and Jonassen, D. H., Peck, K. L. & Wilson, B. G. (1999). Learning with technology: a constructivist perspective. Upper Saddle River, NJ: Prentice Hall.
- ¹⁰ MULTIPLE SOURCES: American Chronicle "Employee Health Promotion Programs: The Bottom-Line Booster" see http://www.americanchronicle.com/articles/view/75301 (2008); Are Worksite Health Promotion Programs Cost-Effective? see http://xpowerideas.blogspot.com/2008/06/are-worksitehealth-promotion-programs.html (2008); and X-Powered Employer "Are Worksite Health Promotion Programs Cost-Effective?" see http://xpowerideas.blogspot.com/2008/06/are-worksite-healthpromotion-programs.html (2008)