

**Community and National Biomonitoring Support Upstream Change**

DRA Project Report 06-07

Surveillance and biomonitoring systems are providing an increasing awareness of risk factors, health conditions, and disease states in communities and among at-risk populations. As these systems evolve and improve, we will be able to target individuals and communities for “upstream” prevention. We already have key components of a system for community and national biomonitoring in place, such as national surveys and emerging community and regional information systems. Over the next decade, other major components will be added such as ubiquitous electronic medical records. Some of the current monitoring systems include:

- **BioSens:** A CDC initiative to support enhanced early detection, quantification, and localization of possible biologic terrorism attacks and other events of public health concern on a national level.
- **Behavioral Risk Factor Surveillance System (BRFSS):** Monitors factors critical to serious health conditions such as smoking, alcohol consumption, and failure to exercise through a large scale ongoing telephone health survey.
- **National Health and Nutrition Examination Survey:** A CDC initiative collecting demographic, socioeconomic, dietary, and health-related data through repeated detailed interviews, medical and dental exams.

Over the next ten years, biomedical research will develop a greater knowledge of diseases at the genetic, molecular and cellular levels. This will allow intervention during the pre-disease stage before symptoms appear. Personal biomonitoring devices will become common, increasing the amount of data that can be used to determine individual risk factors for disease. This information will likely be stored in electronic medical records which will be aggregated through a national or community health system. This data can be used to investigate trends at the population level and influence policy. In-person and virtual health coaching based on these biomonitoring technologies and personal health records will be an expected component of wellness programs. If these interventions are not accessible to the poor and under-served, we will bifurcate into a healthcare system that prevents illness for the fortunate and only documents disease and death for the less fortunate.

**Recommendations:**

- **Biomonitoring & Surveillance Confidentiality:** Develop Confidentiality agreements that the public and public health agencies are comfortable with by looking to the agreements used in other arenas, such as AIDS and STDs
- **Prevention Promotion Pathway:** Study and identify promising advances in social marketing for individual behavior change and community change to address the social determinants of health and disparity.
- **Community health clinic Experiments with Information integration:** Organize a users technical support group among community health clinics to accelerate the effective integration of the electronic medical record., the personal health record, biomonitoring and related communications devices for patients
- **Leveraging Social Determinants:** Address how information from individual and population level monitoring can be used to promote improvement in the social determinants of health.

Review the full report at: [http://www.altfutures.com/dra/Biomonitoring\\_Upstream\\_Change.pdf](http://www.altfutures.com/dra/Biomonitoring_Upstream_Change.pdf). For more information on the DRA Project, visit our website at [www.altfutures.com/draproject](http://www.altfutures.com/draproject).

*“The challenge is not only to anticipate the future, but to create it.”*

The DRA Project - Institute for Alternative Futures

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