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# Challenging Our Comfort Levels

## Lifestyles, Research, and the Ongoing Legacy of the Robert Wood Johnson Foundation

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Life unfolds as a series of nonlinear biological and environmental interactions mediated through semi-permeable membranes. Complexity is its character. Research is designed as carefully crafted observations filtered through semi-artificial controls. Simplicity is its aim. The tension is clear and the consequence can be limiting. Science startles when it finds power in singularity, but it matures when it reveals the nature and impact of multiplicity. Both as individuals and as scientists, patterns of behavior to which the dominant incentives have been directed over the past half century have left us sluggish in our lifestyles and constrained in the reach of our research.

Ten years ago, the Robert Wood Johnson Foundation (RWJF) set out to change this. As an expression of the overall population health strategy of the Foundation, the Active Living family of programs has challenged us not only to greater motion in our lifestyles but to greater ambition in our research endeavors—to look directly and creatively at concepts, issues, and approaches most central to fostering broad health findings and gains.

Informed by a generation of insights establishing that health is determined neither by fate nor by accident, but by the intersecting dynamics within and among five domains of influence—genetic predispositions, social circumstances, physical environments, behavioral choices, and medical care<sup>1</sup>—the Foundation committed to building the field of population health. Its aim was to contribute to population health science much as it had contributed over the previous quarter century to growing the field of health services research.

The Foundation had important experience on which to build. In the face of the devastating impact of substance abuse on the lives and health of certain populations, it had begun in the late 1980s to combat drug and alcohol abuse, and it expanded its focus during the 1990s with a major commitment to fight tobacco as the nation's leading single cause of preventable death. In 1999, RWJF decided to devote half of its resources to prevention and population health.

Two new Foundation initiatives—on population health

science and on physical activity—were established to complement its strong leadership to counter substance abuse and to strengthen front-line community capacity for behavioral and social interventions important to health. The population health science initiative was designed to serve as an incubator for the training, leadership, and research necessary to advance the frontiers of the field. Along with the launching of a variety of creative projects, its two flagship efforts are the Health & Society Scholars (H&SS) program and the Young Epidemiology Scholars (YES) program. H&SS is a 2-year post-doctoral program intended to attract the nation's most promising minds to interdisciplinary collaboration in health research. YES is a regional and national competition introducing and encouraging our brightest high school students to become interested and engaged in projects in epidemiology as the basic science of population health. Both are aimed at creating the first generation of scientific and program leaders who have a high comfort level working across disciplines, at the intersections of the various domains influencing health.

Physical activity was chosen as a categorical focus for Foundation emphasis for several reasons: (1) the science base on the relationship of physical inactivity to human pathology is steadily growing; (2) it is an issue relevant to virtually the entire population, and activity trends were moving in the wrong direction; (3) it is half of the dyad of nutrition and physical activity that represented the second leading, and most rapidly increasing, source of preventable death and disease in the nation; and (4) the commitment of national resources and leadership in the arena was paltry, substantially less even than that directed to improving diet and nutrition.

At the outset, the physical activity initiative consisted of two components: a modest investment targeting physical activity among older people, in anticipation of the potential for near-term gains; and a broader and longer-term program targeting the more difficult central challenge of addressing the cultural, social, political, and environmental factors that had systematically engineered physical activity out of the American lifestyle. This initiative was, and is, the Active Living family of programs intended to marshal leadership, community action, economic incentives, and research compel-

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ling a sharper focus on physical activity as a key feature of the national health agenda, and paving the way for the RWJF program of leadership on the vital issue of childhood obesity.

Active Living Research (ALR) is a model for the type of research envisioned as central to population health progress—research that directly engages the multiple factors shaping health status, supports and encourages interdisciplinary collaboration, recruits to the effort the support and involvement of those who may not necessarily self-identify as health scientists, and designed to yield findings that can motivate policy change.

Even though all but a handful of the studies supported by the program to date are still in progress, the reports in this supplement to the *American Journal of Preventive Medicine*<sup>2-6</sup> are testament to the vision of the initiative and its focus on the potential of interdisciplinarity. Active Living Research projects have brought participants not just from medicine and public health, but from transportation, urban planning, environmental science, architecture, geography, public safety, parks and recreation, education, and others to the task. In fact, more than one third of the grantees to date are from disciplines related to use of the physical environment, and urban planning is the single largest discipline represented (about one fifth of all grantees), more than those identified as health scientists.

Active Living Research has also leveraged the engagement of new relationships, young researchers, and additional funds to the task. Nearly six of seven grantees reported that the program prompted new collaborative arrangements with those outside their discipline and one third of the principal investigators are 5 years or less out of training. Grantees also report unusual success using their ALR grant to leverage additional funding from government or local philanthropy. Over the time the program has been in the field, there has been a 6-fold increase in publications on environmental and policy research, a boost at least in part associated with the program's influence.

It is clear that the “signaling effect” of the creation by RWJF of Active Living Research has stimulated awareness and interest in the real health consequences of environmental influences on activity patterns, evidenced by the increased news coverage, policy discussions, and curricular innovations related to the issue.<sup>7</sup> But results already available have developed new measurements, implementation insights, understanding of the health impacts of urban sprawl, policy- and media-related products, and have even been instrumental in some local policy changes fostering safer walking and biking opportunities.

Just as we can be encouraged by the early returns, we can anticipate that in the years ahead the work supported will drill down to help clarify the policy strategies that might be most productive, the potential health and economic returns to those strategies, and the

consequences if they are ignored. Hints of the potential for exciting new analytic tools, insights, and collaborations that can motivate policy change are offered in the myriad features of the research possible, including examples like:

- novel rapid-response research approaches for glean-ing new insights from the increasing numbers of natural experiments arising in various state and local initiatives;
- a research network of those involved in the design and implementation of multi-level interventions, facilitating collaboration and innovation;
- impact models that can help identify—at the national, community, or organizational level—the possible health and economic returns to investments in activity friendly communities, schools, neighborhoods and workplaces;
- incentive structures and models to build physical activity, diet, and related chronic disease prevention efforts into an integrated primary care experience;
- innovative use of electronic health records in large healthcare delivery organizations with the potential for rapid implementation of multifaceted interventions;
- building statistical algorithms into electronic health records that will expedite real-time insights on the results from clinically-based behavior change initiatives;
- geospatial tools to improve capacity to track at the neighborhood level the results of different environmental features, and model the prospective changes with environmental improvements;
- assessment, networking, and standards development for community surveillance efforts to monitor the key social, behavioral, and environmental influences on health outcomes;
- Internet-based technologies to facilitate tracking and reporting of the activities and impact of key commercial forces at the local and national levels on dimensions most important to health outcomes;
- alliances forged with LEED (Leadership in Energy and Environmental Design) initiatives for collaborative work that can bring synergy to both fields;
- advancing the science of health impact assessments aimed at estimating the consequences of social or environmental policy change on health outcomes;
- creative partnerships with organizations such as those made up of professionals in law, city planning, design and architecture, economics, and the environment, to monitor and enhance legal and regulatory initiatives that affect community and economic factors in health; and
- supporting the research community with the capacity to share the personal stories important to helping in the translation process as the communication and policy communities are engaged.

These are but a few of the possibilities ahead, but their breadth is reflective of the breadth of knowledge, skills, and experience necessary to chart a reliable course of health enhancement for the nation's most vulnerable. The urgency is clear in the need to reverse the consequences for our youngest and our oldest citizens from a half century of an increasingly sedentary society.

But the issue is much broader. Five chronic conditions—mood disorders, diabetes, heart disease, asthma, and high blood pressure—account for more than one half of all U.S. healthcare expenditures,<sup>8</sup> and 20% of Medicare recipients now live with five or more conditions, accounting for two thirds of all Medicare expenditures.<sup>9</sup> These are matters that can be addressed only by engaging, understanding, and changing their complex and interacting underlying determinants with the benefit of perspectives informed by multiple disciplines.

Active Living Research suggests that this just may be feasible. The Robert Wood Johnson Foundation, its Trustees, and the program's leadership and participants should be commended for using their resources and creativity to foster the dynamics of change in a fashion that will enhance our lifestyles, introduce more relevance to our research, and improve the health of all Americans.

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