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- to assure that all Americans have access to basic health care at reasonable cost;
- to improve care and support for people with chronic health conditions;
- to promote healthy communities and lifestyles; and
- to reduce the personal, social and economic harm caused by substance abuse—tobacco, alcohol and illicit drugs.

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THE
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Active Living Policy and Environmental Studies Program Special Solicitation



2002



► Purpose

Active Living Policy and Environmental Studies (ALPES) is a \$12.5-million national program of The Robert Wood Johnson Foundation® (RWJF), created to stimulate and support investigator-initiated research to identify environmental factors and public and private policies that influence physical activity within communities and populations.

“Active living” means that people get at least 30 minutes of moderate physical activity as a natural part of their daily routines. This usually occurs when people walk or cycle to do errands in their neighborhoods. Active living also can include going to the park, taking a walk for enjoyment, working around the house or gardening. It is believed that, in order to engage in active living, people need to live in activity-friendly communities. But what are the factors that make a community conducive to physical activity?

Policies related to land use, transportation and recreation can have a significant impact on physical activity. In addition, activity-related policies in schools, work sites and health systems also can affect how active we are.

ALPES will support research to examine relationships among policy issues, characteristics of natural and built environments, and personal levels of physical activity. The program has three primary objectives. The first is to establish a strong research base of data about the environmental and policy correlates of physical activity. The second is to support research that will be instrumental in guiding decisions about policies and policy changes that can affect active living. The third is to help build a vibrant, transdisciplinary field of physical activity policy and environmental research.

In order to support first-class scientific research, ALPES initially will fund studies that create or improve measurement tools and methods of inquiry. Therefore, this *Special Solicitation for Proposals* seeks research that will develop, test and validate measurement tools and methods that can be used to identify environmental and policy correlates of

physical activity and to evaluate interventions. Up to \$700,000 has been set aside for studies in four topics. Transdisciplinary projects involving researchers from diverse fields, such as public health, transportation, urban planning, parks and recreation, behavioral science and exercise science, are encouraged.

Subsequent Calls for Proposals to be issued later in 2002 will address the broader objectives of ALPES.

► Background

Physical inactivity is one of the most important modifiable threats to health and to our ability to function independently as we age. Despite the well-documented social, physical and mental health benefits of physical activity, at least 60 percent of adult Americans do not meet the recommendations of the U.S. Surgeon General for accumulating 30 minutes of moderate-to-vigorous physical activity most days of the week. Physical inactivity is estimated to be responsible for more than 200,000 deaths and \$77 billion in direct health care costs each year. Physical inactivity is widely recognized as one of the nation's most pressing health problems.

While we know that many people are insufficiently active, we do not fully understand why. Preliminary research supports the idea that physical activity has increasingly been engineered out of our daily lifestyles because of changes in the way buildings and communities have been designed, growing dependence on the car for transportation, and increased sedentary work and recreation patterns. Yet little is known about these influences. The chief aim of the ALPES program is to help identify environmental factors and innovative public and private policies that are capable of substantially increasing levels of physical activity among Americans of all ages, incomes and ethnic backgrounds. The entire spectrum of physical activity will be considered, with an emphasis on moderate-intensity daily lifestyle and recreational activity, such as walking, bicycling and other means of nonmotorized transportation, or so-called active living.

► The program

Many environmental and policy variables are believed to be related to physical activity, but methods for measuring them are underdeveloped. There is also a need for new approaches to the reliable measurement of physical activity behavior itself. The four topics selected for this *Special Solicitation* and outlined as follows constitute critical first steps for building evidence of the environmental and policy influences on physical activity. Subsequent Calls for Proposals will solicit a broader range of environmental and policy studies.

Only studies addressing one or more of these four topics will be considered for funding. Investigators are encouraged to submit proposals that address more than one topic in an integrated way.

Deliverables include the measure itself; guidelines for use of the measure; procedures for data collection, data cleaning and scoring; preparation for input into geographic information systems (GIS) databases, if applicable; and any other information essential for proper use of the instrument.

Numerous background documents and research papers that may be of interest for respondents to this *Special Solicitation* are listed on the ALPES Web site at <www.alpes.ws>.

Topic 1: Develop and evaluate objective measures of urban and suburban land-use variables that are believed to be related to physical activity.

(Grants of up to \$100,000 each will be awarded for this research.)

The highest research priority for ALPES is to identify multiple characteristics of built environments that are related to physical activity and are potentially modifiable through policy change. A small number of land-use variables already have been shown to be related to walking and cycling as means of transportation. At present, it is unclear which of the many possible environmental variables are most closely associated with walking, cycling or overall physical activity. In addition, it is likely that

different variables or combinations of variables are important in different settings (e.g., urban versus suburban, high-income versus low-income neighborhoods), for different domains of physical activity (e.g., transportation versus recreation), and for different population subgroups (e.g., young, adult, older adult, families with children).

Investigators are encouraged to develop new hypotheses for environmental correlates of physical activity for a range of settings and populations, and to include variables that previously have been hypothesized to be associated with physical activity. They also are urged to develop more refined measures of variables that already have been studied (e.g., more detailed measures of mixed land use). Objectively measured variables and those that can be used in GIS will be particularly useful.

Two categories of environmental variables are of most interest for this topic.

1. Community design or land-use characteristics:

- mixtures of land use (e.g., residential and commercial),
- characteristics of streetscapes (e.g., heights and set-backs of buildings, parking patterns/policies),
- building designs, and
- attractiveness of destinations.

2. Walking and cycling infrastructure:

- presence, quality and characteristics of facilities built for these purposes (e.g., sidewalks, walking/cycling trails, bike lanes),
- connectivity of streets (e.g., grid versus cul-de-sac),
- traffic-calming methods and pedestrian street-crossing aids, and
- protection from the sun and general aesthetics of the walking and cycling environment.

Proposals should describe conceptual frameworks, hypotheses and rationales to support the selection of the proposed measures. They also should specify methods of (a) developing and pilot testing

multiple measures; (b) assessing reliability; (c) assessing some aspect of validity, if appropriate; and (d) documenting the costs and limitations of the measures.

Topic 2: Develop and evaluate objective measures of the physical characteristics of green spaces, parks, walking trails and other public recreational areas and open spaces that may be associated with physical activity

(Grants of up to \$100,000 each will be awarded for this research.)

A better understanding of the characteristics of recreational areas that facilitate physical activity could guide development or redevelopment of these resources so that they can contribute more to promoting both physical activity and public health.

Proposals should emphasize recreational areas that can be used frequently by large numbers of people. Walking or cycling trails, neighborhood parks, school grounds and playgrounds that are accessible to the general public are high priorities. A national park that is distant from population centers would be a low priority.

There should be a systematic process to identify appropriate variables to assess. The perceptions of diverse community residents and input from recreation professionals should be evaluated and considered in the selection of variables.

Objective measures of physical characteristics of recreation areas should be the primary focus of the project. Examples include:

- size, shape and location,
- type and amount of playground equipment,
- type and number of facilities (e.g., walking and cycling trails, swimming pools, running tracks, tennis courts), and
- maintenance of facilities, including presence and quality of amenities (e.g., restrooms, parking, benches, lighting).

Multiple methods for collecting objective measures of environments can be used, including direct

observation techniques and analysis of aerial photographs. Incorporation of variables into GIS is strongly recommended. Projects also might include measures of policy variables, such as rules for reserving facilities, characteristics of supervised activity programs, hours of operation, usage fees, maintenance standards, budgets and facility staffing.

Proposals should describe conceptual frameworks, hypotheses and rationales to support the selection of the specific measures that will be developed. Proposals should specify methods of (a) developing and pilot testing measures; (b) assessing reliability; (c) assessing some aspect of validity, if appropriate; and (d) documenting costs and limitations of the measures.

Topic 3: Assess physical activity in specific environments, such as trails, sidewalks and stairways.

Most measures of physical activity do not reveal the location of the behavior. The inability to link behavior with its setting hampers our efforts to understand these important associations. Thus, it is necessary to assess physical activity in specific settings of interest.

Two types of studies under this category are targeted:

*A. Evaluate automated systems of assessing physical activity in specific environments.
(Grants of up to \$100,000 will be awarded for this research.)*

Electronic sensors are commonly used to monitor motor vehicle traffic, and similar technology has been used for counting people who are being active in specific environments. Automated systems that count people using trails, stairways and sidewalks could be useful to researchers studying the environmental correlates of physical activity. The purpose of this research topic is to evaluate one or more types of automated “people counters” that can assess the use of defined settings for physical activity.

The proposed system or device should be able to count people in a variety of indoor and outdoor settings, with emphasis on specific areas through which people are likely to walk, cycle or skate. The essential outcome variable is the number of people who pass by the counting device within a specified period of time. Infrared and video technologies appear to be ready for use in physical activity research, but other technologies may be relevant for this topic as well.

Proposals should specify a detailed evaluation plan that addresses the following issues: (a) likely modifications or adaptations of the automated device and systematic development of any new procedures for collecting or scoring data; (b) reliability of the measure (i.e., inter-instrument and/or inter-coder); (c) criterion validity of the measure (i.e., the sensitivity and specificity of counting people as opposed to dogs and birds); (d) reliability and validity in diverse weather conditions; (e) the degree to which the unit is tamper-resistant; and (f) costs of purchasing the equipment, installation, data collection and data processing. The evaluation may include laboratory testing, but *must* include field testing in a variety of activity-related settings. Proposals that evaluate more than one device will be favored.

*B. Develop and validate reliable self-report measures of frequency (e.g., times/week) and duration (e.g., minutes/event) of use of specific facilities, such as walking/cycling trails and parks.
(Grants of up to \$50,000 will be awarded for this research.)*

Although electronic people counters can provide basic information about the quantity and timing of use of recreational facilities, there are questions that automated monitoring cannot answer. Despite the inherent limitations of self-report, such measures can play an important role in research into the environmental correlates of physical activity.

Different physical activity settings may require different questions. A set of brief self-report measures should be developed in a modular format that can easily be adapted to assess the use of settings as various as neighborhoods, downtown centers, worksites, retail malls, parks, trails, school grounds and playgrounds. The resulting instruments should be simple and brief, as well as appropriate for use with diverse populations and as part of larger surveys.

Proposals should specify methods of (a) developing and pilot testing modules of questions to measure several physical activity settings; (b) assessing the test-retest reliability of the measures with diverse samples; (c) assessing some aspect of validity; and (d) documenting costs and limitations of the measures.

Topic 4: Develop and validate combined measures of travel behavior and physical activity

(Grants of up to \$50,000 will be awarded for projects that evaluate paper-and-pencil instruments. Grants of up to \$100,000 will be awarded for projects that evaluate methods incorporating a strong technology component.)

Researchers in the health sciences have developed numerous measures of physical activity. Transportation researchers have developed many ways of assessing travel behavior and mode choice. As transdisciplinary teams are formed to conduct research on the environmental correlates of physical activity, it is essential that the research be relevant to all contributing fields. For example, combined travel behavior and physical activity measures will be useful for both transportation and physical activity researchers, will lead to research that can be published in a wider variety of journals and will strengthen transdisciplinary partnerships.

Self-report methodology is likely to be the basis for most measures developed as part of this research topic. Because travel diaries are commonly used in transportation research, a diary or log approach for the combined measure may be most appropriate. Self-reports may be collected using paper forms, personal data assistants or other technology. The

resulting measures should be suitable for use with broad populations and as part of larger surveys. Proposals should specify methods of (a) selecting or developing the measure; (b) pilot testing measures; (c) assessing the test-retest reliability of the measures with diverse samples; (d) assessing some aspect of validity, using an objective measure as the criterion; (e) documenting the feasibility of implementing the measures in diverse groups of people; and (f) documenting costs and limitations.

► Eligibility and selection criteria

Preference will be given to applicants that are tax-exempt under Section 501(c)(3) of the Internal Revenue Code and are not private foundations as defined under Section 509(a).

Proposals must demonstrate the potential to produce high-quality quantitative measurement approaches, methods and/or tools capable of being used in a variety of subsequent research studies. A committee composed of RWJF staff, National Program Office staff and advisers, and outside reviewers will assess proposals using the following criteria:

- the proposed research addresses one or more of the topics listed in this *Special Solicitation*;
- the timeliness of the project for informing and advancing physical activity research and policy, including its potential to provide standardized measures for future studies and the potential susceptibility of such measures to policy change;
- a clear theoretical framework, conceptual model or logical rationale for the proposed measurement methods and data-collection procedures;
- the quality and availability of data to be collected, with high value placed on objective measures;
- the strength of the proposed methodology, including the adequacy of proposed reliability and validity assessments, systematic development of new measures, community and professional

input into the development of new measures, and breadth of settings and diversity of population subgroups with which the measures are evaluated;

- the likelihood that resulting measures could be used by many other researchers;
- the use of transdisciplinary research approaches and teams;
- the experience, qualifications and time commitment of the applicant and key project staff for conducting the proposed project;
- the reasonableness of the budget request in view of the proposed amount of work; and
- the strength of the applicant's plan to assist in the dissemination of research results, including presentations at professional forums and meetings, articles in peer-reviewed publications and communications with key audiences.

All primary data collected under the program are subject to RWJF's general requirement for producing datatapes for public use. In addition, the tools, measures, software and supporting materials developed will be made available in the public domain. A commitment to complete projects within 18 months is critical to the effectiveness of this *Special Solicitation* in developing methodologies that will benefit research under future ALPES Calls for Proposals.

Applicants should refer to the ALPES Web site at <www.alpes.ws> to review frequently asked questions, access lists of related documents and request further information. RWJF's Web site also provides helpful information for applicants. Go to <www.rwjf.org> and click on *Applying for a Grant*.

► Use of grant funds

Project funding will be commensurate with the size and scope of the proposed activity. Grant funds may be used for project staff salaries, consultant fees, data collection and analysis, meetings, supplies, project-related travel and other direct project expenses, including a limited amount of essential equipment. In keeping with Foundation policy, grant funds may *not* be used to subsidize individuals for the costs of their health care, to support clinical trials of unapproved drugs or devices, to construct or renovate facilities, for lobbying, or as a substitute for funds currently being used to support similar activities.

Timeliness in completing and reporting studies funded under this *Special Solicitation* is a high priority, because measures developed and validated under this initiative will be used by future ALPES grantees. The grant period, therefore, is a maximum of 18 months, with the possibility of a no-cost extension for an additional six months, when justified.

Principal investigators are expected to participate in annual grantee meetings or technical assistance training sessions, and funds for such meetings should be included in the proposed budget. In some instances, principal investigators and co-investigators may be asked to participate in media and policy briefings and other forums that will help communicate research results to a wide audience.

► Program evaluation and monitoring

Grantees will be expected to meet RWJF requirements for the submission of narrative and financial reports. Grantees also will be required to submit periodic information needed for overall project performance monitoring and management. Project directors may be asked to attend periodic meetings and to give progress reports on their grants. At the close of each grant, the grantees are expected to provide a written report on the project and its findings that is suitable for wide dissemination.

▶ Program direction

Direction and technical assistance for this program is provided by San Diego State University, which serves as the National Program Office (NPO). James F Sallis, Ph.D., professor in the Department of Psychology at San Diego State University, directs the program. Leslie S. Linton, J.D., M.P.H., is the deputy program director. Julie Weitzel, M.A., is the research coordinator.

At The Robert Wood Johnson Foundation, responsible staff are M. Katherine Kraft, Ph.D., senior program officer; C. Tracy Orleans, Ph.D., senior scientist and senior program officer; Marla Hollander, program associate; Kathryn Thomas, senior communications officer; Stacey Sandrey-Groman, financial analyst; and Cynthia Kiely Isaacson, program assistant.

▶ How to apply

A formal application package is available from the NPO. Please contact:

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San Diego, CA 92103
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Note: Proposals that do not address one or more of the four research topics in this *Special Solicitation* will not be reviewed. The Foundation does not provide individual critiques of applications or proposals submitted.

The NPO will host applicant conference calls (listed under Timetable) to answer questions about the program, as well as the application and selection processes. Participation in these calls may be helpful to applicants, but is not required. For additional

information, please see the ALPES Web site at www.alpes.ws. Direct other inquiries regarding this program to:

Leslie Linton, Deputy Director
Phone: (619) 260-5534
e-mail: llinton@projects.sdsu.edu

▶ Timetable

The timetable for proposal submission and review is as follows:

June 17, 2002

Teleconference for prospective applicants
12 p.m. PST (details and preregistration to be posted on www.alpes.ws).

June 27, 2002

Teleconference for prospective applicants
12 p.m. PST (details and preregistration to be posted on www.alpes.ws).

July 29, 2002

Deadline for receipt of applications.

Late September 2002

Notification of awards.