

Health Information Services Workgroup DRAFT Starter List of Research Priorities

Purpose of the Starter List

The Starter List is for discussion purposes at this stage of the CDC Research Agenda Development Process. It is a DRAFT listing of broad research concepts that are not yet integrated into a specific research agenda for CDC. Suggestions and modifications to the Starter List will be used to develop a draft CDC-wide Research Agenda that addresses critical research needs and health protection goals.

There are seven focus areas on the Starter List, one corresponding to each of the six Research Agenda Development Workgroups, plus a seventh for cross-cutting research that serves as a foundation for many types of public health research and programs.

You will find the Starter List for Health Information Services research ideas on the following pages of this document. The Starter List for other focus areas is also available on the OPHR Website (see URL below).

Your opportunities for input

You will have two opportunities for input to the CDC-Wide Research Agenda development process:

1) Commenting on the Starter List

We welcome your input on both the Starter List and the CDC-wide Research Agenda development process. We will be accepting public comments on the Starter List and process through April 15, 2005. You can provide suggestions and comments by visiting the following URL:

http://www.rsvpbook.com/custom_pages/792_CDC_comments.php

2) Commenting on the Public Comment Draft

Later this summer, you will have another opportunity to provide input by offering comments on the Public Comment Draft of the CDC-wide Research Agenda. The Public Comment Draft will be published in the *Federal Register* and on the CDC Office of Public Health Research (OPHR) Website below. The target date for release of the public comment draft is mid-June 2005.

The OPRH website will also provide periodic updates on the Research Agenda development process. Please visit our Website at:

<http://www.cdc.gov/od/ophr/cdcra.htm>

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Theme ID#	Research Theme Title and Description	Examples of Research Activities
S1	Statistical and Data Science Identify, develop, and provide quantitative methods and software needed to ensure sound and reliable data collection, analysis, presentation, and quality assurance in support of public health science and decision making.	<ul style="list-style-type: none"> • Develop reliable quantitative methods for data mining while preserving individual confidentiality; • Combine multiple data sets or inferences; and • Enhance data and analysis quality assurance, anomaly detection, spatial analysis, visualization, epidemiological analysis, trend detection, and data collection.
S2	Data Collection Identify, develop, and establish strategies to develop efficient and effective data collection instruments and surveys.	<ul style="list-style-type: none"> • Develop best practices to select appropriate sample populations, reduce respondent errors, increase response rates, improve quality checks, and ensure the use of appropriate statistical, analytical, and reporting techniques; and • Identify the most efficient way to capture and share best practices.
S3	Integrating Health and Policy Data Identify and explore strategies to assess the value of integrating policy interventions with population-based surveys and health data.	<ul style="list-style-type: none"> • Integrate policy interventions, such as state Medicaid programs and Department of Health and Human Services block grants, with health data.
S4	Analytical Methods Develop algorithms and conduct analyses for public health detection and monitoring of diseases and health conditions.	<ul style="list-style-type: none"> • Develop outbreak detection algorithms; • Conduct pattern recognition research; • Integrate multiple data sources from public health systems; and • Explore advancing technologies in outbreak detection and disease monitoring
S5	Data Mining Identify and develop the best practices to aggregate, classify, and extract data from multiple and divergent data sources.	<ul style="list-style-type: none"> • Develop multiple data source registries; • Conduct real-time trend analysis monitoring; and • Conduct natural language processing.

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S6	Decision Support Explore technologies and methodologies that would assist decision-makers in developing public health solutions.	<ul style="list-style-type: none"> • Promote the use and value of expert data systems; • Identify and develop consequence management technologies; and • Identify and develop measurement and data evaluation tools.
S7	Information & Data Visualization Explore approaches and best practices to visualize, analyze, and map public health-related data.	<ul style="list-style-type: none"> • Identify and develop Geographic Information System (GIS) technologies; and • Conduct dynamic mapping, spatial analysis, environmental modeling, and plume modeling for air dispersal patterns.
S8	Electronic Medical Records Explore practices and strategies for using electronic and personal health records for public health.	<ul style="list-style-type: none"> • Investigate clinical data to evaluate public health outcomes; • Provide public health information to electronic medical records to support the creation of clinical decision support tools; and • Conduct evaluation studies on data use in healthcare settings.
S9	Knowledge Management Explore strategies and approaches to efficiently manage public health knowledge so that it may be appropriately used, based on need and audience.	<ul style="list-style-type: none"> • Identify and develop technologies and approaches to find the most relevant data and resources to support a public health emergency; and • Apply standards to public health knowledge management practices.
S10	Communications and Alerting Technologies Explore strategies and technologies to facilitate communication and collaboration between different groups focused on health promotion and preparedness activities.	<ul style="list-style-type: none"> • Apply "small world network groups" within public health; and • Identify and develop emergency communication strategies focusing on internal response materials and public health education.
S11	Informed Consumer Health Choices Develop, evaluate, and implement strategies and approaches for consumers to evaluate and self-manage their health.	<ul style="list-style-type: none"> • Develop feedback/measurement tools and techniques for consumers to assess their health; and • Develop effective approaches for presenting health information across racial and ethnic populations.

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S12	<p>Health Communication Explore strategies to develop effective tools and practices that will translate public health messages into health practices and will inform and motivate people to make behavior changes to maintain healthy lifestyles, improve their health status, and prevent or minimize the impact of disease, injury and disability.</p>	<ul style="list-style-type: none"> • Explore tools to effectively translate messages into health practices; • Assess the ability of care/information delivery settings (e.g., health care settings, schools, public health programs, community partners, etc.) to disseminate and implement messages; and • Improve our understanding of how successful dissemination of public health messages may differ by audience groups.
S13	<p>Customizing Health Communication Campaigns Explore strategies and practices to develop effective health communication and health marketing campaigns customized to specific groups, particularly those with health disparities.</p>	<ul style="list-style-type: none"> • Develop approaches and strategies to identify and segment populations with health disparities; and • Create, test, and evaluate customized public health messages and campaigns.
S14	<p>Public Health Brand Explore how specific populations, especially those that may not be familiar or comfortable with branded organizations, perceive the public health brand.</p>	<ul style="list-style-type: none"> • Explore ways to measure and assess specific audiences' perception of the public health community; and • Develop strategies and practices to build trust of the public health community.
S15	<p>Integrated Health Marketing Programs Explores practices and strategies to enable public health professionals to design, create, and evaluate effective and integrated health marketing campaigns.</p>	<ul style="list-style-type: none"> • Develop and test approaches and strategies that will provide health professionals with the information and tools necessary for creating integrated health marketing programs and public health initiatives.
S16	<p>Health Literacy Explore strategies and approaches to develop health literacy practices that can be incorporated within health marketing and health communication campaigns.</p>	<ul style="list-style-type: none"> • Create and improve health literacy skills among non-literate, low-literate, and non-English speaking populations.

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S17	<p>Health Awareness to Health Action Identify, develop, and produce tools that will equip those who develop health marketing campaigns to move individuals further from health awareness to health action, resulting in a more sustained health impact.</p>	<ul style="list-style-type: none"> • Determine how the design, delivery, and reception of messages contribute to informing and instigating behavior change in various populations; • Develop and evaluate health messages; and • Address factors for sustaining health behaviors through successful communication interventions.
S18	<p>Message Bundling Explore strategies and practices to combine individual or similar health messages for common audiences.</p>	<ul style="list-style-type: none"> • Evaluate the best ways to "bundle" or combine individual or similar health messages for common audiences; • Identify the channels, messengers, and supplementary supports necessary to influence hard-to-reach populations; and • Determine the efficiency of bundling and the effectiveness of bundled health messages.