

ATSDR Input to SBRP's External Advisory Panel

The charge to the EAP and the request to stakeholders is to provide the SBRP with independent analyses and recommendations to the four interconnected questions below that relate to its three *primary objectives*: (1) address both current research needs and emerging issues pertaining to hazardous substances in the environment, (2) attract researchers conducting the best and most cutting-edge science and (3) proactively accelerate the use of the science emanating from the Program.

1. What are the key, fundamental scientific issues ATSDR faces regarding hazardous substances that should frame the SBRP research enterprise?

Response:

- 1) Validating the accuracy of default values for uncertainties used in risk assessment.
 - 2) Research that helps to create accurate methods for converting biomarkers of exposure into exposure values in various media pathways to enable the use of biomarkers in quantitative risk assessment. Another way to express this could be establishing methods to estimate biologically relevant dose vs. external/applied doses.
 - 3) Establishing LOAEL values for priority emerging and re-emerging hazardous substances.
 - 4) Research that establishes the relative harm associated with a biomarker of effect.
 - 5) Data that assist ATSDR to fill its published priority data needs (PDNs). The latter is more a task for the NTP but still, if SBRP investigators were to incorporate some modest studies into their proposed SBRP tasks, it would be most helpful.
 - 6) Research to better evaluate cumulative risks (different hazards acting through a common mechanisms) and the effects of mixtures (multiple hazards acting through different mechanisms).
 - 7) Epidemiologic research that examines the health outcomes associated with hazardous substances.
2. What are the emerging health risks and remediation issues that the SBRP should anticipate and incorporate into future initiatives?

Response:

- 1) Evaluating the human health risks from emerging and re-emerging hazardous substances

Candidate substances include ...

Vapor intrusion into indoor air spaces.

Naturally occurring asbestos

Perchlorate

Perfluorinated compounds

Consolidated Animal Feed Operations

Construction Landfills.

2) The effects of short-term exposures on health (e.g., SO₂, PM, NO_x and respiratory health in vulnerable populations.

3) Remediation of large waste lagoons related to power plants, mining operations, and CAFOs.

3) How can the SBRP best support the communication of research findings that may have direct and immediate application by ATSDR?

Response: 1) First and foremost by focusing on research that has a direct impact on our work. 2) Participation on ATSDR working groups (e.g., interagency MRL workgroup). 3) Using findings from NCEH/ATSDR programs such as biomonitoring and health tracking as a platform for establishing research priorities for SBRP.

a. What program structures and strategies would best support this at the grantee level?

Response: 1) Annual or biannual retreats to discuss priorities between SBRP and NCEH/ATSDR staff. 2) Participation on ATSDR working groups, 3) dissemination of NCEH/ATSDR findings to SBRP grantees. 4) Including in research announcements references to NCEH/ATSDR priorities and findings.

b. What can SBRP program managers do to facilitate this process?

- Example: host conferences or workshops; establish federal partnerships with more direct coordination and interaction with ATSDR.

Response: All of the above are appropriate and it may be useful to form an SBRP-ATSDR working group to specifically address the translation of SBRP investigators findings into informational products easily understood by non-technical audiences.

4. What activities and relationships would suit the primary objectives stated above?

a. In consideration of the SBRP legislative mandates, what types (basic vs. applied) and mix (basic/applied) of research best meets the needs of ATSDR?

Response: The mission of ATSDR is primarily focused on the applied end of the scientific spectrum but there is strong ATSDR intramural interest in the development of new basic scientific approaches such as identifying new biomarkers and applying computational toxicology modeling methods to help support our primary mission. There are intramural ATSDR scientists who are interested in collaborating on these and other cross-cutting approaches.

b. Are structures needed to encourage data sharing and coordination with ATSDR?

Response: - Definitely yes. Development of such structures would be of great value to ATSDR scientists who are actively collaborating with FDA and EPA in the development of data sharing approaches in the area of computational toxicology.

Are SBRP conferences and workshops helpful for sharing research findings and exploring vital research issues? What other mechanisms should the SBRP employ?

Response: Yes. Such mechanisms for information sharing are valuable. Other mechanisms like formation of a standing inter-agency SBRP-ATSDR workgroup to increase information exchange would be another useful approach.

- c. Is it important for the SBRP to continue with Community Outreach? How could it be better used to serve the nation's Superfund program?

Response: Outreach and engagement of communities in research and intervention design are important in applied research practice and should be expanded in basic research conducted within communities. Engagement of communities is a long held competence of ATSDR. Community outreach and engagement is essential in understanding the context of environmental contamination and its impact on the cultural, economic and ecological systems of a community. ATSDR staff are experienced and published in community engagement and constituency development. ATSDR experience in conducting community outreach and education is an ongoing activities in multitude communities where environmental risk assessments or exposure investigations are occurring and possibly offer locations that may allow either the conduct of some basic research or locations to test communication products designed to translate basic scientific findings to vulnerable population that ATSDR routinely serves. Collaborative efforts in community outreach and engagement could improve design of outreach and engagement models for use in contaminated communities with the most vulnerable populations to the health effect of environmental contamination reside.