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## **Protecting children from established and uncertain chemical threats: Tools and mechanisms for information towards prevention**

### **Background and discussion questions**

#### **Background**

The IFCS (Intergovernmental Forum on Chemical Safety) Forum IV made a recommendation on children and chemical Safety: “*Governments and stakeholders should commit to sharing information on options for taking effective action to protect children<sup>1</sup> from established chemical threats and from chemical risks where there is a degree of uncertainty.*”

Based on this mandate the workshop will focus on innovative mechanisms and tools for collecting and sharing information on preventive actions. The overall goal of the workshop is to provide guidance to governments, NGOs and different stakeholders/parties, on how they can contribute to developing and implementing initiatives to protect children from hazardous exposures to chemicals.

The key issues of the meeting are: *chemicals, uncertainty, children and their environments and prevention*. Children are the main target of the prevention measures. Responsible parties, including parents, teachers, caregivers, community groups and policy and decision-makers should be aware of new tools and mechanisms for conveying information and prevention. The special challenge of communicating risk and prevention opportunities in case of uncertainty to a wide range of audiences is to be addressed.

The workshop brings together experts from a variety of relevant fields (children health, public interest, industry, government, communications, information management) to brainstorm and discuss best practice tools and mechanisms for communicating and disseminating information on options for preventive action to protect children from established chemical risks and, especially from chemical risks when there is a degree of uncertainty.

The meeting discussions should provide input to a guidance document that builds on the Intergovernmental Programme on Chemical Safety Guidelines on the *Prevention of Toxic Exposures - Education and Public Awareness Activities* which summarizes a variety of active and passive strategies to implement prevention. The guidance document is intended to bring the special focus needed when addressing children's hazardous exposures.

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<sup>1</sup> When assessing the protection of children, consideration should be given to chemical exposures that can occur during pre-conception throughout gestation, infancy, childhood and adolescence.

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## **Objectives**

Specific objectives of the workshop include:

- To address the information needs of different sectors in the community, from the children themselves, to direct protectors of children (parents, teachers, health care providers) and decision-makers, as well as industry, the mass media and other sectors in the community for preventing toxic exposures in children from both established and uncertain chemical threats
- To present and assess new, innovative tools and mechanisms for communicating information and undertaking prevention
- To discuss barriers and opportunities for more effective use of existing prevention communication resources and development of new ones
- To present and discuss specific case study examples that illustrate the different options, new tools and mechanisms, how information is conveyed to different audiences, and current challenges in taking effective action to protect children from certain and uncertain chemical risks
- To make recommendations on future actions and/or guidance and other materials that may be useful to promote effective prevention of children's exposure to chemicals.

## **Rationale for the Workshop and Guidance**

The aim of communicating information for prevention of hazardous exposure is empowerment and providing the skills, capacity, and confidence for applying prevention now and in the future. Further, communicating prevention should also encourage dialogue, participation, learning, feedback, and stimulate innovative thinking and action applicable for individual situations and cases so as to achieve the most benefit from the communication effort.

While many chemical threats to children are well known, such as lead and mercury, there are many others for which great uncertainty exists. This uncertainty includes uncertainty about chemical effects (variability in susceptibility, about the hazards themselves) and exposure (including cumulative and interactive effects of multiple exposures).

In the face of uncertainty regarding the effects of chemicals on children, there is a frequently a disincentive to take preventive actions until greater knowledge is accumulated about causal relationships. Meanwhile, exposure is often allowed to continue with the potential for irreversible impacts on children's health and their health as adults. Government, industrial, and other resources are, as a result, frequently focused

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on reducing uncertainties in the risk estimates when communicating prevention options may be a more cost and health effective approach.

A barrier that stands in the way of preventive actions to protect children is the lack of information on how to undertake prevention of exposure. This would include, for example, alternative chemicals and processes, reduced chemical use, and information on safe handling (personal precautions and hygiene).

In the case of prevention information, particularly in the face of uncertain risks, information should: (1) raise awareness of problems and need for prevention; (2) increase knowledge about the problem and prevention options; and (3) change attitudes and behavior (which could include individual, corporate, or even government – ie through legislation or voluntary policy).

Information, particularly through examples, is one of the most powerful tools available to public health professionals to stimulate prevention. Well-designed and effectively communicated information on prevention options can facilitate actions despite gaps in knowledge, and even when there is clear evidence of a risk to children.

Information on preventive options can help avoid the often confrontational and time-consuming debates over the fine details of the risk to children by focusing on alternative options and opportunities for prevention. In the face of information about safer, technically and economically feasible alternatives, practices and other options, prevention – without waiting for complete information – becomes an eminently reasonable course of action. It provides a mechanism to stimulate government, industrial, and personal actions – including research and development, innovation, reductions in chemical use, and implementation of safer chemicals and handling practices - that may not have occurred otherwise. Further, lack of information can result in ignorance about simple preventive options.

Even when there are known preventive options for particular chemical threats, this information may not reach key stakeholders involved in decision-making, be it government authorities or community advocates, companies themselves, or parents and teachers. There is a need for innovative mechanisms for communicating and disseminating clear and concise information on options for preventive action in the face of uncertainty so as to empower and inform policy makers, communities, public health officials, public interest groups, and industry.

There are numerous case studies from around the world – from governments and NGOs – of dissemination of information on preventive options that has stimulated actions in the face of uncertainty (and in the face of well-established risks). We need to learn about the strengths and weaknesses of various approaches to collecting and disseminating information on prevention (both existing and potential new ways) and their applicability to different audiences (government, public health, industry, NGO) across cultures.

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**A number of issues to be considered:**

- Tools should be broadly applicable across cultures and constituencies. The most effective tools provide information that can be shared across regions and constituencies.
- Need to assess and meet the needs of different providers of information (physicians, health communicators, government, NGOs) and users of information (parents/teachers, the public, governments, industry, NGOs). In other words, tools and mechanisms need to be adapted to the providers, users, and cultures involved.
- Types of information that should be communicated according to issues and responsibilities (Box 1). For example, are we trying to communicate primary prevention (intervening before harm occurs, for example information on safer pesticides), secondary prevention (actions after exposure has occurred to prevent more serious impacts, for example removing lead dust from houses), or tertiary prevention (minimizing the impacts of damage already done, for example information on chelation). Are we trying to communicate information for active prevention (personal or population or industrial behaviors) or passive prevention (changing chemicals or processes to avoid the risks in the first place) (see the IPCS guidelines)?
- How to communicate the information. Clearly the message and methods of communication should be appropriate to the provider and target group. Some of the key aspects of target groups that must be known include – size and composition; cultural background; existing and available channels of communication; existing political, economic, and environmental circumstances (WHO, 2004) The choice of method will vary depending on the type of information that a provider is trying to communicate (subject matter) as well as goals of the information (to provide facts or change behaviors), the available resources, the target audience, and the geographic scope of the information.
- The choice of communication tools/mechanisms will depend on the goals of the information (see box 2)

Box 1 - There are many types of prevention information that could be communicated, including:

- Information on safer chemicals, products, and practices (e.g., information on less toxic cleaners or pesticides or other materials)
- Information on safe handling of hazardous materials (eg., labeling)
- Information on avoiding exposures (e.g., avoiding contaminated fish, keeping chemicals away from children)
- Information on preventive production process modifications (e.g., improved maintenance, using less chemicals to achieve a function)
- Information on how to plan for prevention – in other words the types of decision-making processes that can help lead to *the creation* of new prevention options, for example pollution prevention planning or integrated pest management.
- Information on public policies and strategies for promotion of prevention
- Information on who and how to contact assistance for prevention
- Information on efficacy and benefits of particular preventive interventions.
- Information on the risk trade-offs of different options.
- Information on uncertain risks that can be used as a stimulus for prevention

Box 2 - There are many ways to disseminate/communicate information that could be discussed:

- Labels
- Factsheets
- Case studies
- Guidance
- Websites
- Oral presentations/workshops
- Reports
- Videos
- Popular media (television, radio, newspaper)
- Telephone and in person support – individual and technical assistance providers

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## **Outcomes**

The outcomes of the workshop are:

- 1) Development of a practical guide that will enhance existing materials on the effective use of information for prevention of childhood exposures, describing new tools and mechanisms, stressing the roles of different stakeholders, stating the types of information that could be used by/with different audiences (e.g. parents, pediatricians, teachers, legislators, industry, mass media), emphasizing certainty/uncertainty issues and other.
- 2) Illustrating or complementing this guide, by publishing a series of case study examples of information that resulted in protective action and lessons learned from them. These cases - addressing both certain and uncertain chemical risks- outline the pros and cons and lessons learned of various different approaches to communicating prevention to different audiences.
- 3) Development of recommendations from the workshop for further action at the international level, as well as proposals for building partnerships and/or undertaking specific activities at the country/community levels.

## Reference

International Programme on Chemical Safety. 2004. Guidelines on the prevention of toxic exposures: Education and public awareness activities. Geneva, WHO.  
[http://www.who.int/ipcs/poisons/prevention\\_guidelines/en/index.html](http://www.who.int/ipcs/poisons/prevention_guidelines/en/index.html)

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## **Annex**

### *Discussion questions:*

- Are there differences between the tools and mechanisms for communicating possible preventive actions situations where there is a degree of uncertainty with respect to the chemical risks versus those for more established ones?
- How would information on uncertainty be provided?
- What is the importance of choosing the mechanism (e.g. print vs. radio, format, language) to deliver prevention information to ensure that it meets the needs and is understood by the target audience, particularly in the face of uncertain risks.
- What other important factors should be considered (e.g. economic, technical, political and human resources)?
- Are there important other projects for which this work could provide synergistic benefits?
- What are some of the most innovative and effective tools currently available for collecting and communicating information on prevention? Are these easily accessible to providers and users of information? How can these be improved upon?
- How can the mechanisms be evaluated (successes/failures be measured)?
- What are the most important needs, barriers, and opportunities to improved communication of prevention options?
- How can information be most readily adapted to different providers and target audiences taking into account specific local conditions and circumstances?
- How can information be made more available, accessible and understandable.
- What are the key cost and resource issues to be considered in evaluating the existing mechanisms and development of new one?