

Though starter: Health Elements to Consider in the UNEP Negotiation Process on Mercury

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UNEP Mercury negotiation process

- *“The UNEP negotiation process on mercury currently taking place aims to reduce or eliminate exposure to the negative, critical, and irreversible effects on human health and other species.”*

Mercury and men

- **Anthropogenic mercury in the environment:**

Mercury is recognized as one of the many chemicals whose environmental presence has increased significantly in recent decades due to anthropogenic activity.

Mercury and health

- Mercury is an important neurotoxic, cause central nervous system damage including memory, concentration and hearing loss, language problems, motor functions deficit, paralysis and central palsy, hypertension and other damage that may bring to severe health consequences, coma and death.
- Mercury interfere with the normal development of the brain and is present since the same moment of conception.

Health elements in the mercury negotiation

Is important to understand:

- the health elements in the context of each country and region's environmental situation.
- that this elements are foundational for the positions and decisions making process of the parties,
- that play an important role later in the success of the implementation
- the impact on Public Health and other sectors involved.

Health elements in the mercury negotiation

And because...

- It is necessary to forecast the financial resources for proper implementation and economic impact, taking into account all elements (included the burden of health elements) to present a comprehensive report.

Health elements in the mercury negotiation

- The identification and analysis of information on health elements related to various activities and situations where mercury is significantly involved fuels the negotiation process
- It aims to help better understand, from a health perspective, the evolving current scenario involving different elements

Health elements in the mercury negotiation

The current approach and timely analysis of the health elements is an exercise to facilitate the work during the negotiation process;

Can also help to improve the process of post-treaty implementation in different sectors and at the national and regional levels.

Health elements in the mercury negotiation

This document presents the health elements of the negotiation process so as to

- promote mercury research,
- identify information and gaps, and
- stimulate debate in countries and regions by encouraging interaction among actors

Where are health elements identified in the negotiation process?

The Preamble

- The health element is reflected in the opening of the first documents produced by the secretary of the negotiations and is the element that guides the entire negotiation process towards its key objective.
- The UNEP negotiation process on mercury aims “*to reduce or eliminate exposure to the negative, critical, and irreversible effects on human health and other species*”.

Mercury in the Public Health sector

- At this point there are two aspects to consider:
 - mercury in medical devices and procedures
 - mercury content in waste or elemental mercury as waste from health institutions
- The importance of reducing the health impact of the activities in the Public Health sector, has been well identified and addressed in local and global initiatives from governmental and non-governmental sectors.
- Changes in the Public Health sector have been successfully introduced and Hg free alternatives promoted to reduce Hg use in health care devices and procedures,
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- There are also guidelines on the proper handling, collection and (temporary/final) disposal of mercury-containing devices,
- Additionally, activities have been developed to train and create awareness in the Public Health sector.

Mercury in the Public Health sector

- *Apart from those mentioned above, there are two very important issues in the field of Public Health which deserve special attention, research, and information to enable and encourage more debate and analysis of the situation by understanding the impact and differences in the approaches used in different countries and regions.*

These two issues include mercury in amalgams and vaccines.

Mercury in dental amalgams

In addressing this issue there are the following points to consider:

- *Feasibility of implementing the alternatives*
- *Health effects of chemicals present in alternative products to mercury amalgams*

Mercury in dental amalgams

– *Feasibility of implementing the alternatives*

Countries must consider

- social and economic capacity of introducing mercury-free alternatives.
- burden of the health impacts on patients and workers producing and managing mercury compounds or handling of waste or in the process of the cremation of bodies.
- socio-economic determinants regarding the challenges faced to implement Public Health policies to strengthen oral health actions in developing regions (based on improving access to safe drinking water, not an easy task in developing regions even when found among the Millennium Development Goals).
- the costs involved for the Public Health system must be carefully analyzed in developing countries, but may be also an opportunity to improve...

Mercury in dental amalgams

– *Health effects of chemicals present in alternative products to mercury amalgams*

- This has not been enough addressed when presenting alternatives to mercury amalgams
- Scientific information on potential health effects of chemicals contained in the alternatives to mercury amalgams on the market should be made available.
- Information is available and publications on the potential nature of endocrine disruptors in some chemicals found in alternatives to mercury amalgam)
- Is important to protect health and avoid creating new problems.
- The cost of the alternatives is also important information to consider.
- No less important is the role played by the World Health Organization, WHO, in strengthening its capacity to implement the necessary changes in the Public Health system, especially in developing regions and countries.
- WHO and the WHO Regional Office may help the countries representatives and lead the discussions on this topic by presenting strategies and action plans during the negotiation process to facilitate and support decision making.

Mercury compounds in vaccines

- While there has not been sufficient evidence accumulated to identify the relationship between early and repeated exposure to mercury compounds present in different vaccines, one must bear in mind that some of the more developed countries and regions have already decided or taken alternative measures to administer mercury-free vaccines.
- In decision making, the most developed countries have taken community perception into account as well as consumer demand for access to safer alternatives based on the concept that the lack of information does not mean a lack of definitive scientific evidence.
- In some developing countries, Public Health authorities have analyzed the situation under a precautionary approach and explored the possibility of making a change to mercury free alternatives. It is conceivable that these developing countries could receive technical assistance to enable a change now that alternatives are available on the market.

Thiomersal or thimerosal

- Thiomersal (also called thimerosal) is used as a preservative in many vaccines.
- In several countries the hypothesis was presented that the marked increase in autism related spectrum diseases was related to the thiomersal.
- Vast research has documented otherwise, but the public fear persists in some quarters.
- There are problems with not having adequately preserved vaccines and with decreased public acceptance.
- The results of decreased polio vaccine in Africa because of rumors of its ability to sterilize girls caused large deadly and disabling outbreaks of that preventable disease.
- Likewise, when pertussis (whooping cough) vaccine was stopped in 1977 in UK because of public fear an outbreak of the illness promptly occurred and caused more ill health than was ever attributed to vaccine use.

Mercury compounds in vaccines

At this point it is important to clarify important related issues:

- In considering the self-determination of countries to decide on the choice of mercury-free alternatives given the fact that not all have the same Public Health conditions.
- Some developing countries have already explored the possibility of implementing a change to mercury-free vaccines based on the same arguments as those of developed countries and regions.

Mercury compounds in vaccines

It is important to note that:

- it is necessary to share clear information on the reasons why mercury compounds are still being kept in vaccines;
- the Public Health situation is different in developing countries and the decisions may vary;
- countries which have already made the decision to switch to mercury-free vaccines and those who are in a position to change should be identified;
- technical support should be provided to countries wishing to adopt mercury-free alternatives in the implementation of the Treaty as part of steps taken to eliminate the different uses of mercury;
- the World Health Organization's important role by providing technical support to countries for a change to mercury-free vaccines, by providing technical support developing technical guidelines, by instructing its regional offices in order to develop strategies and execute action plans to help implement the countries' decisions and the mandates of Treaty;
- financial assistance should be made available to countries to facilitate decision-making and implement the change to mercury-free vaccines once decided.

Mercury compounds in vaccines

Moreover, in relation to the production of mercury compounds used in vaccines (*thimerosal*), a dilemma to be considered is the continuing industrial process involving mercury and where these activities take place.

- This issue should be identified and analyzed. Currently, due to restrictions on mercury imports in some developed regions and countries, the mercury compounds for pharmaceutical uses are generally produced in the developing countries and regions.

Mercury compounds in vaccines

These facts lead us to explore new health elements of the debate:

- firstly, considering the fact that maintaining the industrial usage of elemental mercury in developing countries which produce mercury compounds for vaccines would involve the introduction of elemental mercury in their territory;
- secondly, assessing the cost for developing countries involves the handling and disposal of mercury waste as well as the mercury containing waste derived from this activity;
- thirdly, evaluating the impact on the health of workers who are involved in this kind of activity is another health factor under the topic of workers' health.
- This analysis shows how the issue at hand introduces a health element that goes far beyond the simple decisions made by Public Health and points out other elements in decision making because it could widen the gap between developed and developing countries and is not holistically addressed.

Sites contaminated with mercury and health

- Mercury polluted sites must be identified, evaluated and remedied. It is important to develop this approach in the negotiation process and will surely be reflected in the Treaty.
- Health elements to be considered at contaminated sites include the ways of exposure to the contaminant, the number of people exposed, and their vulnerability and possible health effects.
- This information will be used in order to assess costs, feasibility and guide decision-making to determine the urgency and strategies to be implemented along with the economic implications and costs of those decisions.
- The health elements regarding this point play a very important role and also determine the costs of inaction or delay of interventions.

Biomarkers as health indicators of the successful implementation of the Treaty.

- The WHO, healthcare NGOs, and participants of INC1 have already stressed the importance of health indicators (biomarkers) in monitoring the implementation of this Treaty.
- As explained clearly in the Preamble, the Treaty's objective is to reduce the impact on health. Clearly monitoring the implementation involves monitoring the concentration of mercury in humans, especially the most vulnerable, through the implementation of biomarkers.
- This issue involves centralized coordination, possibly to be assumed by WHO in order to develop a strategy to establish benchmarks and test groups (sentinel groups) to observe, assess and strengthen capacities to promote and assure active participation of countries and regions more exposed and less developed.
- Mobilizing financial and technical resources to achieve this goal in a harmonized manner is also an important health element in the successful implementation of the Treaty in a timely manner.

Workers' health

- This topic comprises both new and old obstacles.
- Health workers (and their families) involved in industrial activities that have worked or are currently working in contact with mercury or mercury compounds should be monitored. The labor unions must cooperate and participate in providing information and actively join in the successful implementation of the Treaty to protect the health of their workers.
- Also, the workers in the industrial sectors who will continue to manage mercury or mercury compounds according to the exemptions included in the Treaty must be trained and monitored. The person responsible for the safety of these potentially-exposed workers must be considered and defined. This is undoubtedly more of a problem in the developing regions and countries given that the more developed countries have worker monitoring in place and have made the necessary changes to phase out processes using mercury in their territory.
- This health element could mean an extra financial burden for developing countries and regions because they must carry out the control of emissions and support the health costs of the mercury remaining in the industry covered by the exemptions.
- An additional health cost to consider is the exposure of workers involved in the break down and waste management of mercury containing elemental mercury or as residue from plants in disuse. Procedures should be established to train and protect workers involved in this kind of work.

Workers' health

- Finally, it is important to ensure that workers who are involved in the collection, transportation, temporary or permanent disposal of elemental mercury and mercury waste or contaminated items, cleaning activities, and the remediation and/or reclamation of mercury-contaminated sites be properly informed, trained, and monitored.
- Another important health element to consider is the exposure of workers involved in dismantling industrial plants and structures containing and contaminated with mercury. In this case the workers are involved in the dangerous work of managing mercury containing elements on an industrial scale. In this case workers should be informed in advance of the kind of dangerous work that they will be performing. They have to be prepared and trained to work and handle dangerous waste as well as monitored biologically. Workers involved in these kinds of hazardous activities, activities that in many cases will be a consequence of the treaty, will be in grave danger of exposure to mercury. To avoid workers health effects and exposure to mercury during these activities, workers must be correctly informed, trained and monitored.

Conclusiones

In presenting health elements in this way is clear that other sectors than the health sector are involved as impacts goes beyond health issues interacting with other areas.

To avoid widening the gap between developed and developing countries, all components have to be analyzed in an holistically and comprehensive way during the negotiation process.

It is important to specifically highlight the presence of the health components and reinforce them along the text of the treaty.