

# Mercury Products in Health Care

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# Health effects: exposure to mercury

- Mercury is toxic to human health
- Affects the nervous, gastrointestinal and immune systems, lungs and kidneys
- Harmful to the development of the child *in utero* and early in life: children are especially vulnerable
- Exposure occurs through inhalation, ingestion, skin
- In subsistence fishing populations, between 1.5/1000 and 17/1000 children showed cognitive impacts



# Mercury products in healthcare



- Blood pressure measuring devices (BPMD)
  - WHO Recommends phase-out of mercury BPMD
  - Affordable solar-powered device, field tested and validated by WHO
  - Will take time to replace mercury BPMD
  - Safe disposal is important
  - Recommend limited number retained for validation and calibration purposes in designated laboratories

# Thermometers

- Breakage results in exposure of patients, health care workers, etc and creates hazardous waste
- WHO recommends the use of mercury-free thermometers in health-care and domestic settings
- Affordable alternatives are available
- Safe disposal is important



# Momentum growing to phase out mercury BPMD and thermometers

- European Union policy
- WHO-HCWH two year progress report
  - Argentina and Philippines have national policies
  - Four mega-cities' health systems phasing out mercury: Buenos Aires, Delhi, Mexico City and Sao Paulo
  - Fourteen additional countries are piloting mercury-free healthcare



# WHO-HCWH Two Year Progress Report

Number of Hospitals in Developing Countries Committed or Already Mercury-Free	
Argentina	1722
Brazil	134
China	3
Chile	16
Costa Rica	5
India	1742
Mexico	40
Philippines	1847
South Africa	127
<b>Total Hospitals</b>	<b>5636</b>



# Dental amalgam



- About 300 tonnes of mercury per annum
- Some countries, e.g. Denmark, Norway and Sweden have imposed tight restrictions on dental amalgam.
- However most countries still use dental amalgam as alternatives are more expensive
- Potential alternatives include glass ionomers and composites

# WHO Expert Consultation November 2009

- In some cases amalgam is preferred choice for dental restoration, ie when there is excess moisture in the mouth, or there is a need for reduced placement time for a dental filling
- Recognized differences in needs of developed and developing world
  - Cost
  - In developing countries, shortage of dental materials would imply more tooth extractions, particularly for the poor and disadvantaged population groups





# WHO Expert Consultation November 2009

- A global near term ban on amalgam would be problematic for public health and the dental sector, but phase down should be pursued by:
  - Promoting disease prevention and alternatives to amalgam
  - Research and development of cost-effective alternatives
  - Education of dental professionals and raising public awareness

# Vaccine preservative

- Thiomersal preservative used in very limited quantities in vaccines and antivenom and antisera preparations
- Safety extensively studied and reviewed by WHO Global Advisory Committee on Vaccine Safety which did not find any safety grounds to change current practices
- Preservatives required for multidose inactivated vaccines to be kept open for several weeks
- Single dose more expensive and need additional cold storage space
- Multiple dose needed for vaccination campaigns



# Mercury Containing Cosmetics



Mercury based soaps and lotions (marketed as skin lighteners) banned in some countries.

Action is needed in other countries to ensure these products are no longer available.

# Conclusions

- Affordable alternatives for mercury BPMD and thermometers are available and should be implemented to avoid mercury exposure to workers, patients and the community.
- Alternatives to dental amalgam need to be promoted.
- Vaccine use is very small and is essential.
- Production and use of mercury containing cosmetics needs to be stopped.



# Thank you

Please refer to WHO information provided in  
UNEP(DTIE)/Hg/INC.1/INF/7  
and documents at the health sector exhibit

For more information:

<http://www.who.int/ipcs/en/>