

Research Based Policy Outreach in Provinces

Environmental Protection Agency (EPA), Khyber Pakhtunkhwa (KPK) – Sustainable Development Policy Institute (SDPI) Joint Stakeholders Meeting: “Mercury Dental Amalgam Use in KPK - Health and Environmental Impacts”

Dr. Mahmood A. Khwaja (Khwaja@sdpi.org)

Adverse health impacts due to mercury exposure especially on children, pregnant women and the elderly are well known and established. Mercury ranked as the third most hazardous substance, is a fast emerging global issue of grave concern and have led to enacting “Minamata Convention on Mercury,” already signed by Pakistan and many other countries. The main objective of the convention is to reduce mercury use and control its emission and release by 2020, for safeguarding public health and environmental protection.

Two recent SDPI studies carried out at selected dental teaching institutions, clinics and hospitals, have indicated alarming high mercury indoor air levels. There is little emphasis in the current Bachelor of Dental Surgery (BDS) curriculum/syllabus offered to students at dental teaching institutions, regarding occupational health & safety, control of mercury emissions/releases and waste management. Mercury air monitoring results have been reported of 34 dental sites (teaching institutions = 17, general hospitals = 7 & dental clinics = 10) in five main cities of Pakistan (Peshawar, Abbottabad, Rawalpindi, Islamabad and Lahore). Highly alarming levels of mercury vapors in air have been observed which are known to be , injurious to public health in general and healthcare workers in particular. The findings of another study/survey at 38 dental teaching institutions in the country indicated that the currently offered BDS curriculum did not effectively lead the outgoing future dental professionals and did not provide them adequate information, knowledge and training on the mercury/mercury amalgam human health related issues. The respondents overwhelmingly supported the review and revision of the dental curriculum at the earliest time possible.

In view of the above, EPA, KPK and SDPI, Islamabad, jointly organized a stakeholders meeting on “Mercury Dental Amalgam Use in KPK - Health and Environmental Impacts” in Peshawar on February 25, 2005. The objectives of the meeting were to impress upon EPA,KPK and provincial government to consider putting up a ban on mercury amalgam use in dentistry or at least restrict its use for pregnant women and children below 12 years age as well as awareness raising of stakeholders and getting their feed backs including recommendations, on mercury related issues of national and global concerns, environmental & public health risks resulting from continued mercury amalgam use in the province and the control measures to minimize mercury exposure resulting from mercury emissions/releases at dental sites. The focus of the roundtable meeting was also to discuss and define pathways through on-going and future research work, training, awareness raising, advocacy and collaboration, at the national level. The participants for the meeting were invited from dental teaching institutions (colleges and teaching hospitals), general hospitals, private clinics representatives from districts EPA, KPK, provincial Health departments, professional bodies (Pakistan Medical and Dental Council, PMDC, Pakistan Dental Association, PDA & Pakistan Higher Educational Commission, HEC), academic and R & D institutions.

Registered participants from Abbottabad, Mardan & Peshawar/outskirts of Peshawar were 35, including 12 from provincial health department/dental institutions and 10 from national/local media. The inaugural and closing sessions were, respectively, chaired by Dr. M. Bashir Khan, Director General EPA and Mr. M. Mushtaq Jadoon, Secretary, Health, Government of KPK. There were 3 technical presentations: **“Dental Health and Amalgam Use in Dentistry,”** *Dr. Syed Nasir Shah, SB Dental College, Peshawar;* **“Minamata Convention on Mercury and Phasing Down Mercury Dental Amalgam Use”** *Dr. M. Bashir Khan, KPK Environmental Protection Agency;* and **“Need for Phasing Out/Restricted Mercury Amalgam Use in Dentistry - SDPI Air Monitoring at Dental Sites and Dental Curriculum Survey”** *Dr. Mahmood A. Khwaja, SDPI, Islamabad.* Prior to technical session, a short video documentary on the well known tragedy, resulting from mercury exposure, among local population of Minamata Bay, Japan, , was shown to the participants.

Presentations were followed by over 90 minutes questions/answers and open discussion, moderated by Dr. Khwaja, in which Secretary, Health, KPK also participated and shared his views. Mercury dental amalgam related health & environmental issues were discussed and workable solutions proposed. Participants supported immediate review and revision of present curriculum offered at dental teaching institutions. The opinion with regard to “Ban on Mercury Dental Amalgam Use in KPK,” was divided (among dental and health professionals) in view of scientific evidence/research based controversy regarding severe health impacts from mercury vapor releases from dental amalgam, its low cost and the on-going use of it in many other Asian countries. Some main recommendation made and accepted were as follows:

- As a signatory of the Minamata Convention on Mercury, dental mercury amalgam use be regulated in Pakistan.
- At present, KPK province is not in a position to impose a ban on mercury-based dental amalgams as dentists have very few alternatives available
- An immediate review and revision of the current curriculum offered for bachelor of dental surgery (BDS) at dental teaching institutions in the country
- Preparation of guidelines for mercury amalgam use by EPA, KPK, with support from SDPI, dental institutions and other academic and R & D institutions.
- Government of KPK and EPA would highlight the mercury dental amalgam issue and PC-1 would be submitted.
- Students would be encouraged to undertake further research work on mercury amalgam use in dentistry at dental colleges and universities.