

STATEMENT FOR THE RECORD

**William J. Walsh
American Dental Association
before the**

**Domestic Policy Subcommittee
Oversight and Government Reform
“Assessing State and Local Regulations to Reduce Dental Mercury
Emissions”
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2154 Rayburn HOB**

The ADA is the world's largest and oldest dental association, representing more than 155,000 dentists nationwide. For nearly 150 years, the ADA has actively sought to promote the oral health of the public and promote the development of scientifically accurate information. Based on our understanding of the subject of this hearing, the ADA is pleased to comment on its voluntary efforts to limit the already small environmental impact of dental amalgam.

Dental amalgam is an alloy made by combining silver, copper, tin and zinc with mercury. It has been studied and reviewed extensively and, based on the best available science, dentists continue to rely on it as a safe and effective option for treating dental decay. The use of dental amalgam is steadily declining. In 1990 dental amalgams constituted 67.6 percent of all dental restorations. By 1999, that figure had dropped to 45.3 percent. Our most recent estimate is approximately 30 percent. We expect this trend to continue, driven primarily by many patients' preference for tooth-colored composite restorations. In other words, this is an issue shrinking on its own. That said, amalgam remains a valued option for some patients, including those with large cavities in back teeth, for which amalgam's unique durability remains a desirable quality.

It is also important to understand that dentistry plays a very small role in the overall issue of mercury in surface waters. Dentistry contributes less than one percent of the total mercury found in our lakes and streams. This is not simply a statement by the American Dental Association. This fact was stated by EPA in a 1997 report to Congress, attributing 0.4 percent of the mercury in surface waters to dentistry. (1997 EPA report to Congress EPA-452/R-97-004.) The minimal role of dentistry was restated by EPA's Director of the Office of Science and Technology in the Office of Water, in testimony before another House subcommittee in 2003: "Dental amalgam contributes a small proportion of all mercury released to the environment from human activities." Testimony of Benjamin Grumbles, Director, Office of Science and Technology, U.S. Environmental Protection Agency, Before THE SUBCOMMITTEE ON WELLNESS AND HUMAN RIGHTS OF THE COMMITTEE ON GOVERNMENT REFORM, UNITED STATES HOUSE OF REPRESENTATIVES, October 8, 2003.

However, despite the very small share of mercury in surface waters from dental amalgam, America's dentists want to do the right thing and minimize even further their impact on the environment. Adherence to the ADA's best management practices (BMPs) does that.

For many years now, organized dentistry has voluntarily sought to limit the environmental impact of delivering dental care. For example, the ADA developed and actively promoted its (BMPs) for handling waste amalgam. And our voluntary efforts have had a very positive impact. Dentists used to have bottles of liquid mercury in the office for mixing their own dental amalgam. Now, through our voluntary efforts, we have virtually eliminated the use of bulk mercury in dentistry. Today, dentists use encapsulated amalgam, capsules containing a small amount of elemental mercury and the powdered metals with which it is mixed to form dental amalgam. The mercury and metals are separated by a membrane which is ruptured while the capsule remains intact. Because amalgam is now encapsulated, mercury spills are virtually eliminated in the dental office.

The ADA's voluntary BMPs have also greatly promoted the recycling of waste amalgam, eliminating this potential source of mercury from entering the environment. The ADA has worked voluntarily with the U.S. Environmental Protection Agency (EPA) to help make greater amalgam recycling a reality. Together, we developed a national consensus standard to make amalgam recycling better and more universal. That standard is known as American National Standards /American Dental Association Specification 109 "Procedures for Storing Dental Amalgam Waste and Requirements for Amalgam Waste Storage/shipment Containers." In developing this standard, we reached out to EPA, recyclers and other parties of interest. We now provide dentists with lists of available recyclers, and we advocate compliance by these recyclers with this new consensus standard.

ADA's BMPs call on all dentists to use chair-side traps and (where compatible with the suction system used in the office), vacuum pump filters, and these standard control methods remove approximately 77 percent of the scrap amalgam from dental office wastewater. The waste amalgam captured by these devices can be recycled, rather than going down the drain. Now, the ADA has gone further and included amalgam separators as part of its BMPs, resulting in the capture for recycling of more than 95% of all the waste amalgam.

We want to make it clear to the Committee; even if every dentist installed a separator, it would have little effect on the environment. Based on a recent study by the National Association of Clean Water Agencies and on previously published work, separators will do little to reduce mercury levels in surface waters. [See Vandeven J, McGinnis SL. An Assessment of Mercury in the Form of Amalgam in Dental Wastewater in the United States. Water, Air and Soil Pollution 2005, 164:349-366.] The reason for this is that both separators and wastewater treatment plants remove approximately the same portion of waste amalgam. In other words, the amalgam is either captured in a separator or at the treatment plant. However, the ADA supports the use of separators because we see two chief advantages: (1) they permit the captured amalgam waste to be available for recycling; and (2) they likely prevent a significant amount of waste amalgam from being deposited in wastewater treatment plant biosolids.

This data and much more is presented fully in a peer-reviewed article commissioned by the ADA on the environmental impact of dental amalgam. [Vandeven J, McGinnis SL. An Assessment of Mercury in the Form of Amalgam in Dental Wastewater in the United States. Water, Air and Soil Pollution 2005, 164:349-366.] This paper is by far the most comprehensive examination of this question. A copy of this paper was filed with the Committee along with our comments as part of the last hearing on this issue.

The ADA supports the use of its BMPs, but does not believe that mandatory separator programs are needed. Dentistry's record of voluntarily meeting the highest standards of health and safety make that clear. Dentistry did not need the government to mandate the use of encapsulated

amalgam; we did that on our own. Dentistry did not need the government to mandate development of and outreach on best management practices; we did that on our own. And dentistry did not need the government to force a recycling standard on it; dentistry developed just such a standard itself, in cooperation with EPA and other stakeholders. The government does not need to mandate amalgam separators, other specific technologies or practices related to the profession's environmental impact. This very point was made just last year by EPA when it recognized in a Federal Register notice, "It appears that the dental industry is already actively working towards voluntarily reducing its mercury discharges." [EPA's effluent guideline and pretreatment plan for 2008, 72 Fed. Reg. 61335, 61348, October 30, 2007].

There are a number of other reasons why a voluntary program is preferable. First, there is little incremental difference in the amount of amalgam collected and recycled using a voluntary separator program compared to a mandatory plan (see attached ADA Comments, particularly Attachment 1, submitted to EPA). Thus, a voluntary program will be just as effective as a mandatory approach, but without the added administrative burdens for both dentistry and the regulators.

A voluntary program is also more appropriate to attain mercury reduction from a professional group such as dentists than a "command-and-control" approach. Nearly all US dentists are small business owners, and EPA policy strongly favors a voluntary program when small businesses are involved. The ADA also believes that the best results of any effort occur when the state authorities work closely with state dental associations.

In Minnesota, the state dental association working with the Metropolitan Council of Environmental Services launched a voluntary effort to install separators. One hundred percent of the dentists in the metropolitan area have complied and currently 80 percent of the dentists in the rest of the state have separators. But the dental association expects to have 100 percent statewide by the end of the year. In 2004, the Massachusetts Department of Environmental protection worked with the state dental association to establish a voluntary program. By the end of the first year, 75 percent of the dentists had installed separators, exceeding by 25 percent the expected outcome. It has been suggested that these and other voluntary programs were not truly voluntary, because there was a possibility of later government enforcement. That is always the case. If the threat of some future government action negated the voluntary nature of an effort on virtually any issue, nothing in this country would ever be considered voluntary. The fact that various state dental associations fully supported efforts in Minnesota, Massachusetts, and elsewhere is enough to demonstrate that they undertook participation in these programs voluntarily.

As stated earlier, a mandatory separator requirement would have little or no effect on the concentration of mercury in the treatment plant's effluent entering surface water or deposition of mercury into surface water from land applied or landfilled amalgam. The mercury having (by far) the greatest impact on our surface waters is mercury from air deposition and not mercury bound up as amalgam.

The ADA and organized dentistry are fully mobilized to protect the environment. We are acting voluntarily, educating our members, encouraging recycling and promoting highly effective best management practices. This system works. Mandates are unneeded and will only increase the cost of dental care, as well as the cost of regulating dentistry. Dentistry's record of voluntarily meeting the highest standards of health and safety make it clear: The government does not need to mandate amalgam separators, other specific technologies or practices related to the profession's environmental impact.

Dentistry is proud of all of its efforts to protect the environment, just as we have always protected the health and well being of our patients. We pledge to continue our efforts. We appreciate the opportunity to share these views with you.