Reducing Dental X-Ray Chemical Use

A Pollution Prevention Perspective





A survey of dental radiography in the San Francisco area was conducted. This survey was part of a cooperative project sponsored by CA Dental Association, local dental societies, city agencies, and the US Environmental Protection Agency.

WHAT WE FOUND

- A dentist processes an average of 70 x-ray exposures per week.
- On average, two of these exposures (~3% of total) are spoiled due to patient movement, film orientation, and developing problems.
- Approximately 0.5 oz of both developer and fixer are used for each exposure.
- Digital radiography is used by 28% of the surveyed practices.

WHAT WE RECOMMEND

These survey responses give us clues on how dental practices can reduce their radiographic chemical use. Three primary strategies are:

- Check your developer & fixer use. If you are significantly above 0.5 oz of each per exposure, then investigate why. Also, check product mixing instructions.
- Decrease your rate of spoiled exposures by resolving problems from film orientation, film processing, and other issues you discover.
- If feasible, change to digital radiography.

The last two of these approaches have the important added benefit of decreasing patient and staff exposure to x-ray emissions.

MORE INFORMATION

Visit the Dental P2 Project website for additional information

http://www.wrppn.org/dental

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