

## Not just another infection control editorial

**W**hich of the following functions have dental professionals adopted within the last decade, adding to the cost of care, but with no proven effectiveness?

Exorbitant professional liability plans? No, but a good choice.

National marketing strategies for dentistry? Closer, but still not what I'm looking for.

Universal precautions against infection? Right! Believe it or not, controlled clinical studies to justify universal precautions in dentistry are not there. The techniques we use represent the opinions of experts in infectious disease, but few modifications, alone or in combination, have withstood rigorous scientific scrutiny.

I would be irresponsible to come out against the use of universal precautions for infection control in dentistry. They are our best defense, and, in view of the risks involved and the lack of an alternative, the only choice. Like most dentists (I assume), I practice "safe sacks," and cover surfaces and handles with varieties of plastic baggies, sterilize what can be sterilized, and use disposables. My use of gloves has become so ingrained that my hand recoils at the thought of touching a patient without wearing a "clinic contraceptive."

What is troubling to me, though, is that all these efforts are often, at best, patchwork. Despite all our efforts, in almost every procedure, the chain of infection control is broken, either by human error, or because of the inadequacy of the finger-in-the-dike fix we've imposed on dentistry to try to control the transmission of disease. Isn't it time that we looked at how dentistry is practiced and start all over again, with infection control as the driving force? Will we build a thousand offices this year, train several thousand dental professionals, and treat millions of patients, using techniques which are cumbersome and remain unproven?

One might argue that what we do seems to work, since so few cases of dentist-to-patient infection have been documented. The Acer case remains a mystery, but has caused such a stir that a few more unexplained cases like it might compromise the system, or put some other burden on the health professional to quell the fears of the public. Surveys and the lay press suggest that neither Congress nor the public share the

confidence we have in infection control procedures. It is interesting and perplexing to me that this one case has prompted us to create a range of invasive procedures with varying risks — yet we continue to support universal precautions. We've entered the era of the infectophobic.

Another cause for concern for me is the daily environmental burden of our procedures — the tons of plastic, paper, and latex we add to landfills, the biodegradation of the gallons of disinfectant added to our sewage treatment and water systems, the chemicals inhaled or absorbed through contact, and the energy costs associated with producing and maintaining universal precautions.

How long can we continue on this path? Hasn't anyone asked if we can do it better? Our answer to infection control has been to break the chain of transmission at every step of a contamination-rich delivery system, rather than to prevent infection from the start.

Now is the time to devote attention to restructuring dental delivery. This year, hundreds of dental offices or facilities will be built from scratch or renovated. One perspective is that this many infection-propagating facilities will be built. By refusing to address the basic way in which dentistry is practiced, we perpetuate the potential for infection and the need to apply costly methods to prevent it from occurring.

Let's zero-base dental delivery for infection control. Beginning with the dental provider as point A and the recipient as point B, let's attack the relationship from an infection control standpoint. Here are some thoughts, basic as they are, to ponder.

- Why not eliminate counters and redesign our dental procedures so that they are unnecessary? Just think what elimination of cabinetry would do to reduce office construction cost and how much disinfectant we'd save.
- Why do dental chairs and lights need to move? Most patients don't. Each movement means a contact and contamination. Even improved foot pedal technology would eliminate some "let-tuce" bags from our routine!
- Are double-ended instruments the 'ninja throwing stars' of dentistry, looking for a dentist's or assistant's hand to puncture? For that matter,

why do we need all those hand instruments to practice dentistry? Why not look at restoration with minimal instrumentation, so that there are fewer sharps to stick (and sterilize)?

- Why does the handpiece detach at the hose? Why not sterilize both hose and handpiece? This may be best for all the hosed tools we use.
- Is it more effective to garb the patient rather than the dentist and dental assistant?
- Are we making full use of light-cure technology to allow us to go to unit-dosing, yet still buy in bulk to hold down costs?
- Have we applied ergonomics to infection control: "clean in — dirty out" as it relates to movement of people and instruments. Human error in the midst of busy and complicated procedures accounts for many breaks in the infection control process.
- In the last five years, we've seen an explosion in visual technology in home entertainment, yet we still need to pick up radiographs and write in charts. The funniest commentary on our patchwork approach to infection control is the "pencil condom."

So, let's start moving in the right direction. Shouldn't we in pediatric dentistry take the lead? We have high patient turnover, perform relatively simple and consistent procedures, have the potential to use auxiliaries better than most dentists, and have demonstrated flexibility in the past in modifying practice to meet demand. Imagine, if you will, the benefit to other nations of improved techniques. China has almost 400 million children and almost 100% prevalence of caries. In some parts of Africa, it is predicted that by the year 2000, a third of the children will carry HIV. Does anyone really believe that our current approach to infection control can work in the Third World?

I'd like to see a consortium of industry, epidemiology, education, and practice consider the opportunities in redefining dental delivery as it relates to infection control. If we all got together to redefine how to get from A to B, I predict dental care would be cheaper and safer. We could go back to dealing with just good old dental phobia.

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*Pediatric Dentistry* (ISSN 0164-1263) is published bi-monthly in February, April, June, August, October, and December. Second class postage paid at Chicago, Illinois and additional mailing offices. **Publications Department:** American Academy of Pediatric Dentistry, 211 E. Chicago Ave., Suite 1036, Chicago, IL 60611-2616. Return postage guaranteed.

**Subscription Information:** Contact American Academy of Pediatric Dentistry, Publications Dept., 211 E. Chicago Ave., Suite 1036, Chicago, IL 60611-2616. Subscription rates:

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