

**TESTIMONY
REPRESENTATIVE SHARON ANGLIN TREAT**

SPONSOR, L.D. 1361

Resolve, To Ensure Patient Safety in the Use of Certain Imaging Equipment

Joint Standing Committee on Health & Human Services
April 27, 2011

Good afternoon Senator McCormick, Representative Strang Burgess, and members of the Joint Standing Committee on Health & Human Services. I am Representative Sharon Treat and I represent House District 79, Farmingdale, Hallowell, and West Gardiner. I am pleased to present for your consideration, L.D. 1222, *Resolve, To Ensure Patient Safety in the Use of Certain Imaging Equipment*.

L.D. 1361 proposes a review the use of cone beam computed tomography scanners, or cone beam CT scanners, as used in dental offices, leading to recommendations to the Legislature as to whether current practices are appropriate in the state's licensing, training, continuing education and other provisions with respect to their use and oversight. The Resolve has a particular focus on children's health and would require data collection on the frequency of use of these scanners on children. The review would be conducted jointly by the Advisory Committee on Radiation and the Board of Dental Examiners, with input from stakeholders, with a report back to the Legislature next year with any recommended action.

Children and adolescents are particularly vulnerable to radiation, and three years ago medical doctors mounted a national campaign to protect them by reducing diagnostic radiation to the minimum necessary. This focus has been on medical diagnosis and treatment and not on dentistry. Dental offices use x-ray equipment with great frequency and on children on a regular basis, and an equivalent focus on children's exposure to radiation in dentistry is appropriate.¹

Cone beam CT scanners are a relatively new technology just starting to be used in Maine. They provide a 3-D image which can be very useful to dentists and orthodontists. However, their use raises questions if used unnecessarily or improperly, and it is unclear whether anyone in Maine is looking at the effect of these scanners on young people, as well as the cumulative effect with

¹ New York Times, November 22, 2010, "*Radiation Worries for Children in Dentists' Chairs*" (attached)

other dental x-rays. I believe that it makes sense to take a look at this issue now before the use of this equipment is widespread, and make sure that our oversight is appropriate to the potential health effects.

Recently a lot of attention has been focused on the new full-body scanners used by TSA at airports. I've enclosed a chart showing the amount of radiation from properly calibrated cone beam CT scanners compared with the airport scanner, a chest x-ray, and medical CT scanners, which have been getting a lot of attention lately because of concerns about high doses of radiation. The dental cone beam CT scanners are in bold print in the chart. As you can see, airport scanners have tiny amounts of radiation compared to cone beam scanners, even though some of the promotional literature about this equipment makes it seem like radiation levels are comparable.²

You will also see that several of the cone beam models have extremely high radiation levels, and according to a report in the *British Journal of Radiology*, "significantly higher" levels of radiation than conventional dental imaging. The standard orthodontic scan for the i-CAT cone beam produces 5 times as much radiation as a 2-D panoramic scan, and other scanners produce 4 to 67 times as much as conventional x-rays.³ Keep in mind that most braces are fitted for children and adolescents who are most susceptible to radiation health effects, and that multiple fittings and x-rays are a normal part of this procedure. Thus, the approach of collecting data on the use of these machines on children, which was suggested to me by Dr. Jonathan Shenkin, a children's dentist and past president of the Maine Dental Association, just makes good common sense.

I am not here to say today that we have a huge health problem in Maine needing lots of new regulation. But I am saying that a wise course of action would be a preventative approach that takes a look at the use of this equipment and reports back to this Committee if the review finds that additional oversight is warranted. I know that this approach is consistent with the American Dental Association, which has also started to look into the use of these scanners.

Thank you for your consideration, and I would be happy to respond to any questions you may have.

² New York Times, November 23, 2010, "*Radiation Worries Rise with 3-D Dental Images.*"

³ According to Dr. John B. Ludlow, a professor at the University of North Carolina who has widely published on dental radiation, as reported in the New York Times, November 23, 2010, "*Radiation Worries Rise with 3-D Dental Images.*"