The National Council on Radiation Protection and Measurements and the U.S. Department of Health and Human Services have determined that lead aprons are not generally necessary for dental x-ray examinations because technological and procedural improvements have significantly reduced the amount of radiation exposure a patient will receive from a panoramic or full-mouth intraoral exam due to the narrow x-ray beam used in dental x-ray machines. The Utah Division of Waste Management and Radiation Control notes that state law does not require that dental patients use shielding such as aprons. Dentists may make exceptions and recommend aprons in some circumstances.