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BILL ANALYSIS

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House Bill 4675 (Substitute S-5 as reported by the Committee of the Whole)
Sponsor: Representative Barb Vander Veen
House Committee: Health Policy
Senate Committee: Health Policy

Date Completed: 2-18-04

RATIONALE

A May 2000 U.S. Surgeon General Report, "Oral Health In America", revealed that the number of dentists in the country is declining slightly, while the number of dental hygienists is increasing: From 1996 to 2000, the number of dental hygiene positions grew by 11%. This could explain, in part, why dentists reportedly are delegating more responsibilities to hygienists, who traditionally have been responsible for cleaning teeth and gums, and dental assistants. Public Act 423 of 2002 amended the Public Health Code to allow dental hygienists who meet certain educational requirements to administer local anesthesia. Public Act 35 of 2003 expanded a hygienist's scope of practice to include taking impressions for orthodontic appliances, mouth guards, bite splints, and bleaching trays; and allow a dental assistant under a dentist's direct supervision to place, condense, and carve amalgam restorations and take final impressions for indirect restorations, as well as perform specific intraoral dental procedures. Some people believe that dental hygienists also should be allowed to administer, and dental assistants should be allowed to assist in and monitor the administration of, nitrous oxide.

CONTENT

The bill would amend the Public Health Code to allow a dental hygienist to administer nitrous oxide and allow a dental assistant to monitor and assist in the administration of the drug. The bill also would prescribe educational requirements for a dental assistant who performs certain procedures that are presently within dental assistants' scope of practice.

Dental Hygienists

Under the Code, upon delegation by and under the direct supervision of a dentist, a dental hygienist who meets certain educational requirements and has passed a State board exam may administer intraoral block and infiltration anesthesia to a patient who is at least 18 years old. The bill would expand the scope of practice for hygienists to include the administration of nitrous oxide analgesia in situations in which the concentration of the drug was not more than 50%. (Under the Code, "direct supervision" means that a dentist designates a patient of record upon whom the procedures are to be performed and describes the procedures to be performed; examines the patient before prescribing the procedures to be performed and upon completion of the procedures; and is physically present in the office while the procedures are being performed.)

In order to administer intraoral block and infiltration anesthesia, a dental hygienist must successfully complete a course in local anesthesia administration offered by a dental or dental hygiene program accredited by the Commission on Dental Accreditation of the American Dental Association (ADA) and approved by the Department of Community Health (DCH). The course must contain a minimum of 15 hours of didactic instruction and 14 hours of clinical experience. The bill would retain this requirement for the administration of local anesthesia, and also require a hygienist to complete a similarly accredited and approved course in nitrous oxide administration containing a minimum of four hours of didactic instruction and four hours of clinical experience. The course would have to include content on nitrous oxide analgesia emergency medical techniques, the pharmacology of nitrous oxide, nitrous oxide techniques, and, if such a course were available, selection of pain control modalities.

The Code also requires a hygienist to complete successfully a State or regional board-administered written examination on local anesthesia within 18 months of completing the required coursework. The bill would extend this requirement to nitrous oxide analgesia, if such an examination were available and approved by the DCH.

Under the Code, application for certification in the administration of local anesthesia is at the discretion of each individual hygienist. The bill would extend this provision to nitrous oxide administration. The bill would require the DCH or its designee to issue a certificate to a hygienist who met the educational requirements and passed the board exam for both local anesthesia and nitrous oxide administration. The certificate would not be subject to renewal but would be part of the hygienist's permanent record and would have to be displayed prominently in his or her principal place of employment. The fee for a person seeking certification would be $10.

Dental Assistants - Nitrous Oxide

Upon delegation by and under the direct supervision of a dentist, a registered dental assistant could assist and monitor the administration of nitrous oxide by the dentist or dental hygienist if the dental assistant had successfully completed an ADA-accredited and DCH-approved course in the assisting and monitoring of the administration of nitrous oxide analgesia. The course would have to contain a minimum of five hours of didactic instruction and include content in nitrous oxide analgesia medical emergencies techniques, the pharmacology of nitrous oxide, and nitrous oxide techniques. Under the bill, "assisting" would mean setting up equipment and placing the face mask. The term would not include titrating and turning on or off equipment. "Monitoring" would mean observing levels and reporting to the dentist or hygienist.

When an otherwise qualified registered dental assistant assisted in the administration of nitrous oxide, the nitrous oxide levels would have to be preset by the dentist or hygienist and could not be adjusted by the dental assistant except in an emergency, in which case the dental assistant could turn off the nitrous oxide and administer 100% oxygen.

Monitoring and assisting the administration of nitrous oxide analgesia would be at the discretion of each individual registered dental assistant who fulfilled the educational requirement.

Dental Assistants - Educational Requirements

Under the Code, upon delegation by and under the direct supervision of a dentist, a registered dental assistant may place, condense, and carve amalgam restorations, and take final impressions for indirect restorations. The bill would require the dental assistant to whom these duties were delegated to have completed an ADA-accredited and DCH-approved course offered by a dental or dental assisting program. The course would have to contain at least 20 hours of didactic instruction, followed by a comprehensive clinical experience of sufficient duration that validated clinical competence through a criterion-based assessment instrument.

The Code also allows a registered dental assistant, upon delegation by and under the general supervision of a dentist, to perform the following intraoral procedures:

-- Performing pulp vitality testing.
-- Placing and removing matrices and wedges.
-- Applying cavity liners and bases.
-- Placing and packing nonepinephrine retraction cords.
-- Applying desensitizing agents.
-- Taking an impression for orthodontic appliances, mouth guards, bite splints, and bleaching trays.
-- Drying endodontic canals with absorbent points.
-- Etching and placing adhesives prior to placement of orthodontic brackets.

The bill would require the assistant to whom those duties were delegated to complete an ADA-accredited and DCH-approved course containing at least 10 hours of didactic and clinical instruction.

(Under the Code, "general supervision" means that a dentist designates a patient of record upon whom services are to be performed and is physically present in the office while the procedures are being performed.)

MCL 333.16611

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

The bill would increase patient access to dental care. The number of dentists has declined in recent years; the State experienced a net loss of 52 dentists in 2003. Dentists increasingly delegate more responsibilities to dental hygienists and dental assistants. Dental hygienists are educated, licensed professionals who, with the proper training, could administer nitrous oxide safely and effectively. A dental assistant would provide another pair of eyes to monitor the patient. Under the bill, the hygienist or assistant would have to work under the direct supervision of a dentist, and administration by a hygienist would be limited to situations in which the concentration of the drug was 50% or lower. Because there currently are no laws regulating who can administer nitrous oxide, the bill would enhance patient safety.

Dental hygienists in 20 other states are allowed to administer nitrous oxide, and in some states have been able to do so since the 1970s. According to Senate Committee testimony, none of those states' boards has ever had to take disciplinary action against a hygienist for harming a patient while administering nitrous oxide. A hygienist must be certified in cardiopulmonary resuscitation (CPR) in order to maintain a license, and a dental assistant must be trained in cardiac life support, should a critical incident occur. The bill also would allow a dental assistant to administer 100% oxygen in an emergency. Furthermore, the equipment in dental offices is required to have a built-in safety mechanism that automatically shuts off the nitrous oxide if the oxygen fails. Nitrous oxide administration actually might be safer in a dentist's office than in a hospital because a much lower concentration is used in a dentist's office, and nitrous oxide generally is not administered in combination with other drugs, as it sometimes is in a hospital. In a hospital, the patient's nose and mouth are covered; in a dentist's office, only the patient's nose is covered, so he or she can still breathe through the mouth if necessary.

Opposing Argument

The bill should include a mandatory reporting requirement for all critical incidents. Although none of the other states' boards, referred to above, reported a situation in which a hygienist harmed a patient while administering nitrous oxide, critical incidents still might have occurred. A person can have an adverse reaction to a sedative, even if it is administered properly. Neither the ADA nor any state board requires that a critical incident that was not due to practitioner error be reported. While Federal law does require these incidents to be reported to the ADA's National Practitioners Data Bank, such incidents must be reported only after a medical malpractice case has been closed, and the information is not available to the general public.

Furthermore, although hygienists and assistants are trained in CPR, dental offices are not required to have the life-saving equipment, such as an automated external defibrillator, that is readily available in a hospital. According to an article entitled, "Adverse Sedation Events in Pediatrics: A Critical Incident Analysis of Contributing Factors" (*Pediatrics,* April 2000), many critical incidents related to pediatric sedation in a nonhospital setting have occurred in dentists' offices. Of the 95 adverse reaction cases studied, 32 occurred in dental offices. Of those, 29 patients suffered permanent neurological injury or died. While lower concentrations of the drug are used in dental offices, and it generally is not combined with another sedative, this does not mean that receiving nitrous oxide in a dentist's office is safer than in a hospital. What matters most in these situations is the health professional's ability to resuscitate a person who has had a severe adverse reaction.

Response: The State does not have a mandatory reporting requirement for any other health profession. Critical incidents due to practitioner error already are handled appropriately by the licensing board through the disciplinary process. To single out dental hygienists and assistants would be unfair.

Legislative Analyst: Julie Koval

FISCAL IMPACT

Currently, there are 9,024 licensed dental hygienists in the State of Michigan. It is unknown how many of these hygienists would apply for the certification in this bill. The revenue generated by the $10 fee would be used to support the operating costs of the Bureau of Health Professions.

Fiscal Analyst: Dana Patterson

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