Child Abuse Awareness in the Dental Profession

A Peer-Reviewed Publication
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Abstract
Children who have been physically or sexually abused or who experience medical/dental neglect may present to a dental health professional for evaluation. It is an ethical and legal responsibility for the dental clinician examining such a child to report their findings to the appropriate child protective agency. This course provides information to help the dental professional identify child maltreatment. There is discussion of what constitutes child maltreatment, what external and intraoral signs may be seen, the past history which may suggest abuse and neglect, the risk factors that may predict maltreatment, and how to proceed when the appropriate authorities need to be notified.

Educational Objectives
At the conclusion of this educational activity participants will be able to:
1. Identify what constitutes child maltreatment.
2. Describe the facial and oral injuries consistent with physical child abuse.
3. Identify the oral signs that may be associated with sexual abuse.
4. Implement examination protocols that help to identify possible abuse.

Author Profile
Dr. Richard Nagelberg has been practicing general dentistry in suburban Philadelphia for 32 years. He has international practice experience, having provided dental services in Thailand, Cambodia, and Canada. He is co-founder of Periofrogz.com, an information services company, and an advisory board member, speaker, key opinion leader and clinical consultant for several dental companies and organizations. Richard has a monthly column in Dental Economics magazine, “GP Perio-The Oral-Systemic Connection.” A respected member of the dental community, Richard lectures internationally on a variety of topics centered on understanding the impact dental professionals have beyond the oral cavity. Dr. Nagelberg can be reached at gr82th@aol.com.

Author Disclosure
Dr. Nagelberg is Editorial Director, Dental Education, PennWell Publishing.

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Children who have been physically or sexually abused or who experience medical/dental neglect may present to a dental health professional for evaluation. It is an ethical and legal responsibility for the dental clinician examining such a child to report their findings to the appropriate child protective agency. This course provides information to help the dental professional identify child maltreatment. There is discussion of what constitutes child maltreatment, what external and intraoral signs may be seen, the past history which may suggest abuse and neglect, the risk factors that may predict maltreatment, and how to proceed when the appropriate authorities need to be notified.

Introduction
Reporting child maltreatment, including physical and sexual abuse and neglect is legally required of dentists in all states and the District of Columbia, among others. In some states this requirement also applies to hygiene practice. Failure to report suspected abuse can result in civil and criminal penalties and forfeiture of a license. The ADA's 'Principles of Ethics and Code of Professional Conduct' stipulates that dentists should become familiar with the signs of abuse and neglect and to "report suspected cases to the proper authorities, consistent with state laws".

Current statistics related to the reporting of child abuse by dentists or dental health care professionals are not available. However, statistics reported from 20 years ago indicate that only one percent of reported child abuse cases were made by dental professionals. Since that time there have been multiple dental publications related to the reporting of child abuse and increased public awareness of the problem. Nonetheless, there continues to be a thread in the dental literature suggesting that child abuse may still be under-reported by dental professionals. Underlining this suspicion, some studies suggest that basic dental training may not adequately prepare students to face the challenge of detecting and reporting child abuse in clinical practice.

On the other hand, when professional hygienists were provided post-educational training on identifying and reporting child abuse, post test questioning indicated that 100 percent felt they would be able to make a report of child abuse if it was suspected and 96% reported that they knew how to make a report. These findings provide support for the benefit and the importance of providing professional education as it pertains to child maltreatment.

What Constitutes Child Maltreatment
Critical to identification of child abuse or neglect is an understanding of what constitutes maltreatment. According to the Centers for Disease Control and Prevention and other authoritative bodies, child maltreatment includes several subtypes: physical abuse, sexual abuse, psychological (emotional) abuse, and neglect. Physical abuse is defined as 'intentional use of physical force against a child that results, or has the potential to result in, physical injury'. The exception to this is "injury to the anal or genital area or surrounding areas......that occur during attempted or completed sexual abuse or other physical injuries that result from the attempted or completed sexual abuse" which is categorized as sexual rather than physical abuse. The sexual abuse definition does not specifically include injury to the oral region associated with sexual abuse but a reasonable assumption is implied by the wording.

Sexual abuse is defined as "any completed or attempted (non-completed) sexual act, sexual contact with, or exploitation (i.e. noncontact sexual interaction) of a child by a caregiver". Psychological abuse is defined as: "intentional caregiver behavior that conveys to a child that he/she is worthless, flawed, unloved, unwanted, endangered, or valued only in meeting another's needs". Neglect is further subdivided into the failure to provide and the failure to supervise. The general definition of neglect is the "failure to provide for a child's basic physical, emotional, or educational needs or to protect a child from harm or potential harm. Failure to provide constitutes: 'failure by a caregiver to meet a child’s basic physical, emotional, medical/dental, or educational needs, or a combination thereof' and failure to supervise is defined as "failure by the caregiver to ensure a child’s safety within and outside the home given the child’s emotional and developmental needs".

Physical abuse is the form of child maltreatment that is most likely to be observed in dental practice but some forms of sexual abuse may also be encountered. The dental literature suggests that training of dentists in identifying 'psychological' or 'emotional' abuse is minimal at best. With respect to 'dental neglect' both the American Academy and the British Society of Pediatric Dentistry have provided the following definition: "The willful or persistent failure to meet a child’s basic oral health needs by not seeking or following through with necessary treatment to ensure a level of oral health that allows function and oral health (freedom from pain and infection)".

The Signs of Physical Child Abuse
Studies reported in the literature indicate that the age range for childhood abuse is approximately 2-18 years with most
physical abuse occurring between the ages of 8 and 13. In at least one study, trauma to the face and mouth was common in children who had been physically abused and was observed in equal numbers of boys and girls. In another study of 1070 confirmed victims of physical abuse, males in the 13-17 year-old age range were the most frequent victims. In addition, 58.2% of children presented with just one external injury, most often a soft tissue laceration of the upper lip. Additional studies support these findings. A retrospective study of case records for children with suspected physical abuse revealed that bruising to the head, neck and face was observed in 95.2% of the records sampled. Of the bruises, most (65.2%) were found on the face. Approximately 33% of children had abrasions with 22.9% of these occurring on the face. The abused children had been punched, slapped, or struck by an object. Several types of external face/head trauma are described as follows.

**Extraoral Trauma**

General bruising or patterned bruises such as bite marks and cigarette burns, pinch marks, scars, and welts are some of the different injuries that may be present on or around the face and neck of an abused child.

**Bite marks**

Bite marks are typically ovoid or elliptical and associated with various degrees of bruising. The healing process results in slow resolution of bruising and color changes can be used to grossly determine the relative period of time that the injury occurred. Northwestern University Dental School’s classification system correlates bruising with days since injury as follows: Red-blue-purple, 0-1 day; blue-black, 1-3 days; green-blue, 3-6 days; brown-yellow-green, 6-10 days; and tan-yellow, 14 days. It should be kept in mind that many extrinsic factors can confound healing including the child’s age, coagulation rates, and medication use.

**Other traumas**

Other signs of external head/face physical abuse include bald spots on infants (traumatic alopecia) and bruising behind the ears (termed Battle’s sign), retinal hemorrhage, blackening of one or both eyes, facial scratches and abrasions, external cheek/face swelling and lip laceration, and what has been termed lichenification (which is thickening of the skin and scarring at the corners of the mouth from the repeated application of gags).

Figure 1. Human bite mark on face of child.

Figure 2. Bite mark behind ear.

Figure 3. Bite mark on the arm.

Figure 4. This is an example of severe lip swelling, lip abrasion and laceration, and extrusion of a central incisor from blunt trauma.
Figure 5. (a) Frontal and (b) lateral profiles of the patient showing facial asymmetry in the left submandibular to infra-orbital region and swollen lips. Courtesy of Kemoli AM, Mavindu M. Child abuse: A classic case report with literature review. Contemp Clin Dent. 2014 Apr-Jun; 5(2): 256–259. (open source)

Figure 6. Lateral face showing scratch marks and bruising. Courtesy of the British Dental Journal (Hinchliffe J. Forensic odontology, part 5. Child abuse issues. BDJ 210, 423 - 428 (2011) Published online (open source).

Figure 7. For reference, this image shows a cigarette burn in a non-facial region. Courtesy of http://www.forensicmed.co.uk/wounds/burns/.

Figure 8. This image shows the avulsion of tooth number 10 with gingival and lip swelling, laceration, and erythema. Used with permission, courtesy of: http://www.oralhealthgroup.com/news/paediatrics-dentistry-s-responsibility-to-child-abuse/1000110711/?&er=NA

Figure 9. An example of subluxation (loosening without displacement) In: www2.aap.org/oralhealth/pact/ppt/Oral-Injury.ppt. Provided by Rebecca Slayton DDS PhD – University of Washington

Intraoral Trauma
Intraoral traumatic injury resulting from physical abuse can include mucosal laceration, bruising, or hemorrhage; tooth chipping, avulsion, loosening, or fracture, and fracture of the mandible or maxilla. Tearing of the frenum and tongue laceration are also commonly reported oral injuries. In fact, it has been suggested that a torn frenum (also termed frenulum or phrenum) is pathognomonic of physical abuse.21, 23 To assess the possibility that a torn frenum is a sentinel sign of physical abuse, Maguire, et al, reviewed 154 studies with 20 meeting their inclusion criteria for oral physical abuse. Information for 591 children was reported in the various studies. Nine studies documented torn labial frena in 30 physically abused children, twenty-seven (90%) of whom died as a result of their abuse. Most were aged five or younger.22 Their review, however, failed to provide support for a cause and effect relationship between physical abuse and this specific injury as documented blows to the face were recorded in only two children and no other details related to possible physical mechanisms were provided. In addition, the authors of the study note the lack of comparative studies evaluating other characteristics of abusive and non-abusive intra-oral injuries. Thus, frenum injury should not be considered pathognomonic of physical abuse but it still may occur as a result of physical abuse (see below).

A large case series reporting physical abuse by Naidoo notes the most common injury seen during medical evaluation was lip trauma (22 of 300 children). Also observed was fracturing of the mandible, oral mucosal injury, tooth injury, and gingival and tongue trauma. Unfortunately, the full extent of intraoral injury might not have been documented because dentists were not involved in the physical evaluation of these children. This may also have been the reason why only 11% were defined as having intra-oral injury.24 Reported intra-oral injury can also include pharyngeal trauma and retropharyngeal abscess.

Fracture of the mandible or maxilla has also been reported as a consequence of physical child abuse but such injury, based on review of reported cases, appears to be rare.25, 26, 27 Traumatic dental injury has also been associated with abuse. This can include intrusion or subluxation of the teeth, tooth fracture, tooth avulsion, the fracture of fillings, and the loosening of teeth. Discolored teeth also suggest a history of pulpal trauma from past abuse.28

In: www2.aap.org/oralhealth/pact/ppt/Oral-Injury.ppt. Provided by Rebecca Slayton DDS PhD – University of Washington
The Signs of Sexual Child Abuse

As previously noted, sexual child abuse constitutes any act involving sexual contact of a child with a caregiver. The literature suggests that it may be the least reported form of child maltreatment.29

With respect to the oral cavity and oral penetration there is, unfortunately, very little documentation from case studies or case series defining the physical features that might be indicative of sexual child abuse. References that do describe oral injury related to sexual abuse are either obtuse, without adequate citation, or use citation that is not evidence based. As an example of the latter, Stavrianos C, et al. in an article titled: Dentist’s action after identifying child sexual assault; Research Journal of Medical Sciences, (2010, 4(3):157-165) sites Cameron, et al, 1966 as a reference for the statement that “unexplained injury or petechiae of the palate particularly at the junction of the hard and soft palate may be evidence of forced oral sex”. However Cameron’s article appeared in the journal ‘Med. Sci. Law’ with the title: The Battered Child Syndrome and there is no supportive citation based on published research for this claim. In another example of inadequate research support for a citation, a symptom (versus clinical finding) that has been suggested as indicative of sexual abuse is “pain around the …throat and complaints of trouble swallowing”.30 However, the statement made by the author of this article is also made without supporting evidence. Thus, it should be appreciated that some described intraoral symptoms and observed signs may not constitute child abuse in the absence of additional historical factors suggesting this potential.

Sexual abuse can result in oral infection. However, as with the anogenital evidence,31 a number of conditions potentially related to sexual abuse, including non-infective disease more typically associated with genital lesions such as oral lichen sclerosus32 can occur in the absence of abuse.33 Nonetheless, the odds of a young child developing a sexually transmitted disease such as condylomata acuminatum, multiple oral papillomas, gonorrhea, syphilis, or HIV (ruling out perinatal or other forms of transmission) is very low in the absence of sexual contact, so the suspicion of child abuse in cases where such infection is found and confirmed should be high.

Infection with human papillomavirus results in exophytic papules or nodules that occur on the intraoral mucosa. Lesions may be single or multiple, smooth or corrugated, and white or tan in appearance. The conditions related to this virus include papilloma (squamous papilloma), verruca vulgaris, condyloma auminatum, and focal epithelial hyperplasia (Heck’s disease). The virus can be transmitted by hand-to-mouth (i.e. the fingers) contact but the mucosa may also be inoculated by genital touch. Lesions, as in the case of the five year old boy below (Figures 11 and 12), reported to have been sexually abused by a neighbor, are typically painless.

Figure 10. An example of anterior maxillary tooth fracture, lip swelling, laceration, and bleeding caused by blunt force trauma. The injury is provided by Rebecca Slayton DDS PhD – University of Washington

Figure 11. The photo shows a tongue lesion with pedicle base in a five year old male. Also note the lesion on the palate. Histology confirmed condyloma acuminatum. From: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4114792/figure/F1

Figure 12. Photo shows a palatal lesion with sessile base in a five year old male. The histology was consistent with condyloma acuminatum. From: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4114792/figure/F1

Figures 13 and 14 below illustrate the clinical presentation of condyloma acuminatum (HPV) and syphilis in adults. The presentation in children is likely to look similar to what occurs with adult infection.

Figure 13. Condyloma acuminatum in an adult. Multiple lesions such as these observed in a child would be unusual and could suggest sexual abuse.
Regardless of the paucity of scientific evidence associated with the above conditions and child abuse, dentists and hygienists have the obligation to consider the possibility of sexual abuse when the clinical oral findings are not consistent with what would be considered appropriate for a child’s age. Various diseases and accidental oral injury must be differentiated from abuse by way of a thorough evaluation of the patient’s history as well as thorough oral examination.

History Factors Associated With Abuse

A number of monographs and articles describe the psychosocial factors that should be considered in deciding whether presenting injury/disease is related to physical or sexual abuse. The dental professional may find that asking questions related to the patient’s behavioral status or psychological state is difficult, but such inquiry can be fruitful when framed in a gentle manner so as to gain the child’s and parent’s trust. Ideally, if abuse is suspected, each party should be questioned separately but this may be difficult if the parent/guardian insists on sitting in while the child is being examined. An assistant also needs to be present when the initial historical interview is conducted.

The psychological and behavioral factors that need to be considered as a part of the history taking include: notation of delayed or late reporting of an injury, inconsistent descriptions of how the injury occurred or inconsistency between the parent/custodian’s and the child’s version of the events and the injury that is observed, a history that changes with each person interviewed (e.g. child, mom, caretaker), and multiple dental and medical visits spread out over time demonstrating similar or repeated lesions/traua.

The psychological and behavioral status of the child is an important component of the history taking. The literature suggests that with ongoing abuse there will be evidence of psychological pathology (e.g. depression, PTSD symptoms, depressive symptoms, acute stress disorder, depression with acute stress, anxiety disorders). Additional behavioral issues associated with childhood abuse include acting out, prepubescent sexuality or sexual precociousness, a change in behavior such as withdrawal from friends or usual activities, loss of self-confidence or self-esteem, new aggressive or rebellious behavior, anger, hostility or hyperactivity, a dramatic change in school performance, frequent absences from school, a reluctance to leave school activities or go home after school, and attempts at running away or even suicide.

Parental behaviors that should raise red flags for possible abuse include: lack of parental concern for the child, failure to recognize their child’s physical or emotional distress, blatant denial of any problems occurring at home or school or blaming the child for the problems that are identified, the belittling or berating of the child during the history or describing the child as worthless or evil (or using other negative terms), acknowledge- ment of harsh physical punishment if the child misbehaves or demanding absolute perfection with schoolwork or household chores, parental limitation of normal childhood interactions (e.g. with friends or others), and as noted above, parent or caretaker inconsistency with the child’s version of events related to the trauma. Also suspicion of abuse should be elevated when the parent/guardian who cannot provide any explanation for the observed injury.

A number of other factors have been identified as high risk for child maltreatment and need to be taken into consideration when evaluating the patient for possible abuse. These variables include: the gender of the child (female), the child’s family situation (e.g. children that are unaccompanied or who are in foster care, adopted, or who are stepchildren or being raised by a single parent or who reside in a broken home), children who are physically or mentally challenged, children with a history of past abuse, children living in poverty, children who are psychologically or cognitively vulnerable, children who are socially isolated and appear to lack emotional support (e.g. from other family, friends, etc.), and a parent with mental illness or alcohol or drug dependency.

It needs to be noted that not only are the above considerations related to psychology and behavior relevant at the time of abuse, but it is well documented that significant physiological, psychological, and behavioral abnormalities often follow child abuse into adulthood. But, with respect to the effect of childhood abuse on adult oral health, the impact is unclear. N. Byambaa, et al, provide a systematic review of 120 studies assessing long term health consequences related to physical and emotional abuse and neglect. In five studies eating disorders and bulimia, which could lead to oral problems, were identified.

Child Neglect

Another form of child maltreatment is neglect. This abuse is defined by the U.S. Department of Health and Human Services as “a type of maltreatment that refers to the failure by the caregiver to provide needed age-appropriate care although financially able to do so or offered financial or other means to do so”. With respect to dentistry, the American Academy of Pediatric Dentistry has further specified that neglect is the: "Willful or persistent failure to meet a child’s basic oral health needs."
needs by not seeking or following through with necessary treatment to ensure a level of oral health that allows function and freedom from pain and infection”. Dental neglect may occur in conjunction with neglect of a child’s general health but it also may be observed independently. It has been reported that neglect is the most common form of abuse that is reported to child protection agencies in the U.S. CB Lourenço, et al, suggest that in dentistry a “child neglect act is manifested in several ways: lack of caregivers’ interest in acquisition of information related to dental care, lack of preventive care that shall be performed at home by caregivers (e.g. oral hygiene), dental appointment no-shows, among others”.

The above definitions may generally define dental neglect, but clinical decision-making in the identification of neglect may be problematic for a variety of reasons and these need to be carefully considered in the evaluative process. One significant problem is bias. There are several types of clinician bias that can play a role in decision-making: selection bias, confirmation bias, and implicit bias. With selection bias, the dental professional confronted with potential dental neglect may evaluate the patient from a ‘nice family’ differently than one from a ‘bad family’. A clinician’s sense of ‘good’ and ‘bad’ can be deceiving and lead to either over or under diagnosis of abuse. Confirmation bias affects how a clinician proceeds with questioning of a patient or parent. In this case the emphasis is on acquiring data that affirms a preconceived notion and information that does not conform to the preconception is overlooked. For example, a parent’s explanation for why a child has multiple carious teeth or an abscessed tooth may be considered with greater authority when filtered through the ‘good family’ bias versus when the same explanation is filtered through a ‘bad family’ bias. An example of implicit bias is the clinician’s perception related to poverty and race. The epidemiological evidence with respect to medical neglect suggests that minority children are much more likely to be reported to child protective services even though abuse occurs within all racial groups. It is unclear if this reporting bias also occurs with respect to dental neglect but this potential bias should be considered in the decision-making process.

Keeping in mind the above concepts, child neglect should be considered after information regarding the child’s diagnosis and treatment needs as well as directions related to alternative care facilities are provided, and the professional advice is ignored by the child’s caretaker or parent. However, two caveats are pertinent: 1. In many cases lack of access, overburdened public health or dental school treatment centers, and money are important restraints to the pursuit of professional dental care, even when such care facilities are available. 2. As indicated by some researchers in the field of neglect, differentiating dental caries (as an example) from dental neglect is difficult and unfortunately there is lack of an evidence base for providing a distinction.

What to do if Child Abuse and Neglect is Suspected

The most important consideration, once it has been decided that there may be grounds for child mistreatment, is complete documentation of the case. This should include the charting of dental and mucosal findings, intra and extraoral photos of injury or suspected neglect (e.g. swellings, lesions, lacerations, bleeding sites, broken or chipped teeth, etc.), measurement of the noted injury or injuries, complete description of areas of suspected injury (e.g. color, skin surface texture, etc.) notation of any other non-dental injuries to observable sites (e.g. head, neck, arms, hands), x-ray imaging of teeth and bone, a detailed subjective history (e.g. reason for presentation and a history of the chief complaint), any quoted disclosures or remarks made by the patient to dental staff or by the parent or caretaker (e.g. “he is always falling on his face”), and observations related to the patient’s general health and demeanor (e.g. weight, mood, fatigue or listlessness, personal hygiene, voice inflection, interaction with the caretaker/parent, etc.). If the patient is to be referred for additional medical evaluation this should be noted.

As noted previously, the most ideal situation is for the patient (child) to be evaluated without the parent or caretaker present. But a child can occasionally be questioned away from a parent by the assistant or hygienist (e.g. when x-rays are taken or there is some other reason for separation). Comments made to an assistant or hygienist need to be noted. If both parent/caretaker and the child cannot be separated, the child’s explanation for the injury should be sought first (without interruption) before the parent provides an explanation. Any hesitancy in reporting by the child or constant looking toward the parent during the history taking should be noted.

In addition to the above, it is important to document your own opinion related to suspicion of child maltreatment. Finally, if consideration is to be made for filing a report with the authorities, the parent should be so informed.

Filing a Report

State statutes regarding reporting of child physical or sexual abuse and neglect vary. The following web sites provide information on reporting statutes for each state:


All states and territories have information available on the internet on how to report child abuse or neglect.

In general, if there is a question about filing a report you can call your local Child Welfare Service. Most have hotlines which are usually toll-free and available 24/7. It is important to note that there may be historical reports already related to a family and your patient in the system and the added information might be helpful in protecting he/she from additional abuse.
Some states require reporting within 48 hours. Codes mandating reporting time vary from state to state. Eighteen states, the District of Columbia, and the Virgin Islands, among others require those who file reports to provide their names and contact information, either at the time of the initial oral report or later as part of a written report. Excel and Word (PDF) forms are also available online to allow the documentation of child abuse or neglect. Once a report is made, the decision related to abuse is often made via a team of individuals or a field supervisor. Typically a full report includes the name, address, and age of the child, the name and address of the child’s parent, guardian or other person having custody of the child, the nature and extent of the abuse or neglect, the evidence related to prior incidences (if any), and for any other information thought useful in establishing the cause of the child’s abuse or neglect and the identity of the perpetrator (which is not likely to be known by the dental professional). This information is used to make a decision on the child’s safety.

Conclusion

Childhood abuse and neglect is a very serious problem that has long term consequences for those involved and for society in general. In a 30 year follow-up on a prospective investigational study of physical health outcomes in abused and neglected children, it was found that childhood abuse increased the risk for a number of adult physical and psychosocial problems. For physical abuse this included an increased risk of chronic pain, diabetes, and malnutrition. For sexual abuse, risk increased for hepatitis C and HIV and for neglect, the risk increased for oral health problems, diabetes, poor lung function, and vision problems. Many other physical and emotional adult problems have been associated with child maltreatment.

Dental professionals have an ethical obligation to report suspected child abuse and neglect. However, it is unclear how dentists currently view the reporting of child abuse and how many actually make reports when abuse is suspected. A study in 1981 indicates, at least at that time, dental professionals felt unprepared to evaluate or be a part of a child-protective role in cases of suspected abuse. Studies performed in England from 2003-2009 suggest that this perception may continue today. It is important to remember that physical and sexual abuse and neglect involving the oral region is not typically an isolated issue but may be one part of a larger mosaic of abusive trauma experienced by a child. Professionals in the field of child protection say that “It is better to over-report than under-report potential abuse” as the consequences of non-reporting can be catastrophic for the abused child in the short run as well as long term.

Bibliography

Online Completion
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Questions

1. Which of the following statements is accurate?
   a. The reporting of child maltreatment is a legal requirement in all states
   b. In some states this also applies to hygiene practice
   c. Failure to report suspected abuse can result in civil and criminal penalties
   d. All of the above

2. Studies suggest that dental professionals may under-report child abuse. What is suggested as the cause of this problem?
   a. Basic dental training may not adequately prepare students to face the challenge of detecting child abuse
   b. Dental professionals are not likely to see maltreated children
   c. Both a and b
   d. Neither a or b

3. What was the result of post-educational training of hygienists to help them identify child abuse?
   a. After training, 100 percent said that they would be able to make a report
   b. After training, 96 percent reported that they knew how to make a report
   c. Both a and b
   d. Neither a or b

4. The Centers for Disease Control and Prevention identifies several types of child maltreatment. These include:
   a. Physical abuse
   b. Sexual abuse
   c. Neglect
   d. All of the above

5. Physical abuse is defined as:
   a. Injury to the anal or genital area that occurs during attempted or completed sexual abuse
   b. Intentional use of physical force against a child that results, or has the potential to result in physical injury
   c. Both a or b
   d. Neither a or b

6. The general definition of neglect is:
   a. Failure to provide for a child’s basic physical needs
   b. Failure to provide for a child’s emotional needs
   c. Failure to provide for a child’s educational needs
   d. All of the above

7. Neglect is further subdivided into:
   a. Failure to provide
   b. Failure to supervise
   c. Both a and b
   d. Neither a or b

Author profile
Dr. Richard Nagelberg has been practicing general dentistry in suburban Philadelphia for 32 years. He has international practice experience, having provided dental services in Thailand, Cambodia, and Canada. He is co-founder of PerioFrogz, a communications service company, and an advisory board member, speaker, key opinion leader and clinical consultant for several dental companies and organizations. Richard has a monthly column in Dental Economics magazine, “GP Perio-The Oral-Systemic Connection”. A respected member of the dental community, Richard lectures internationally on a variety of topics centered on understanding the impact dental professionals have beyond the oral cavity. Dr. Nagelberg can be reached at gr82th@aol.com.

Author Disclosure
Dr. Nagelberg is Editorial Director, Dental Education, PenWell Publishing.
8. When considering psychological or emotional abuse, the literatures suggest that:
   a. Dental health care providers are ill-equipped to make decisions regarding psychological or emotional well being of a child
   b. Dentists are very well trained in the arena of childhood psychological and emotional well being and what to look for when examining a patient
   c. Both a and b
   d. Neither a or b

9. Dental neglect is defined by the American Academy of Pediatric Dentistry as:
   a. The willful or persistent failure to meet a child’s basic oral health needs by not seeking or following through with necessary treatment
   b. Allowing caries to become rampant for no reason
   c. Both a and b
   d. Neither a or b

10. Childhood abuse is reported to occur during which of the following ages?
    a. 2-5
    b. 8-13
    c. 14-18
    d. All of the above

11. Childhood abuse most commonly occurs between the ages of:
    a. 2-5
    b. 8-13
    c. 14-18
    d. None of the above

12. Which of the following statements accurately portrays statistics related to physical abuse?
    a. It can involve face, head, and neck bruising
    b. Children can present with just one external injury or many
    c. Injury to the lip is quite common
    d. All of the above

13. External trauma associated with abuse may include:
    a. Facial bruising
    b. Facial lacerations
    c. Facial scratches
    d. All of the above

14. Which of the following statements is not accurate?
    a. Physical abuse may include mucosal laceration or bruising
    b. Teeth may be chipped, avulsed, or loosened as a result of physical abuse
    c. A torn frenum is a sentinel sign of physical abuse
    d. None of the above

15. The type of dental trauma suggesting child abuse includes:
    a. Tooth subluxation
    b. Tooth avulsion
    c. Both a and b
    d. Neither a or b

16. Which of the following statements accurately describes the research associated with child sexual abuse and oral injury?
    a. There are few case studies or case series to help define the physical features that might be indicative of sexual abuse
    b. Multiple studies are available documenting the various physical features indicative of childhood sexual abuse
    c. Both a and b
    d. Neither a or b

17. When considering the possibility of childhood sexual abuse, which of the following is accurate?
    a. Physical signs alone accurately predict that abuse occurred
    b. Physical signs need to be correlated with historical factors when considering potential abuse
    c. Both a and b
    d. Neither a or b

18. Oral infectious disease can result from sexual abuse. Which statement most accurately describes the risk?
    a. The odds of a young child developing a sexually transmitted disease is low in the absence of actual sexual contact
    b. The odds are high that children will develop a sexually transmitted disease in the absence of sexual contact
    c. Both a and b
    d. Neither a or b

19. The type of sexually transmitted diseases that can be associated with sexual child abuse includes:
    a. Lichen sclerosis
    b. Gonorrhea
    c. Both a and b
    d. Neither a or b

20. The likelihood of child abuse increases when:
    a. There are inconsistent descriptions of how an injury occurred
    b. There is inconsistency between the history of trauma and the type of injury observed
    c. There have been multiple medical and dental evaluations for trauma
    d. All of the above

21. Which of the following is the proper way to interview a child thought to have been abused?
    a. With both parent/caretaker and child together
    b. Child and parent/caretaker interviewed separately
    c. Do not interview the child but rely on the parent/caretaker’s explanation
    d. Do not interview the parent

22. Which of the following psychological pathologies is associated with abuse?
    a. Depression
    b. PTSD symptoms
    c. Acute stress disorders
    d. All of the above

23. Many behavioral issues are associated with childhood abuse. Which of the following might a clinician observe when evaluating a patient?
    a. Loss of self-confidence or low self-esteem
    b. The child reporting that they have an excellent school attendance record
    c. Both a and b
    d. Neither a or b

24. Which of the following are parental behavior red flags suggesting possible child abuse?
    a. Lack of parental concern for the child
    b. Failure to recognize their child’s physical or emotional distress
    c. Belittling or berating of the child during their interaction at chairside
    d. All of the above

25. Making a judgment about child neglect on the basis of whether a family is ‘good’ or ‘bad’ is considered what type of bias?
    a. Selection bias
    b. Confirmation bias
    c. Both a and b
    d. Neither a or b

26. The time to consider whether observed dental pathology represents child neglect is when:
    a. Professional advice is ignored by the child’s parent or caretaker
    b. A child presents with multiple carious teeth
    c. A child presents with an abscessed tooth
    d. None of the above

27. The documentation of child abuse and neglect should include which of the following?
    a. Intra and extraoral photos of the injury
    b. Measurement of the noted injury
    c. Notation of any other non-dental injuries that are observable
    d. All of the above

28. Which of the following statements is accurate?
    a. It is not necessary to note remarks made by the parent or caretaker to staff other than the dentist
    b. X-ray imaging of teeth and bone is important if fracture is suspected
    c. Both a and b
    d. Neither a or b

29. Which of the following statements should be considered when reporting child abuse?
    a. It is better to over-report rather than under-report suspected child abuse
    b. Dentists should err on the safe side if abuse is suspected and not report it unless the evidence is beyond reasonable doubt
    c. There is no need to report abuse because it will be picked up by the patient’s physician
    d. None of the above

30. A typical child report of abuse will include which of the following factors?
    a. Name of the child
    b. Age of the child
    c. The nature and extent of the abuse or neglect
    d. All of the above
Child Abuse Awareness in the Dental Profession

Educational Objectives

1. Identify what constitutes child maltreatment.
2. Describe the various facial and oral injuries consistent with physical child abuse.
3. Identify the oral signs that can be associated with sexual abuse.
4. Implement examination techniques that help to identify possible abuse.

Course Evaluation

1. Were the individual course objectives met?
   Objective #1: Yes No  Objective #2: Yes No
   Objective #3: Yes No  Objective #4: Yes No

   Please evaluate this course by responding to the following statements, using a scale of Excellent = 5 to Poor = 0.

   2. To what extent were the course objectives accomplished overall? 5 4 3 2 1 0
   3. Please rate your personal mastery of the course objectives. 5 4 3 2 1 0
   4. How would you rate the objectives and educational methods? 5 4 3 2 1 0
   5. How do you rate the author's grasp of the topic? 5 4 3 2 1 0
   6. Please rate the instructor's effectiveness. 5 4 3 2 1 0
   7. Was the overall administration of the course effective? 5 4 3 2 1 0
   8. Please rate the usefulness and clinical applicability of this course. 5 4 3 2 1 0
   9. Please rate the usefulness of the supplemental webpage. 5 4 3 2 1 0
   10. Do you feel that the references were adequate? Yes No
   11. Would you participate in a similar program on a different topic? Yes No
   12. If any of the continuing education questions were unclear or ambiguous, please list them.
   13. Was there any subject matter you found confusing? Please describe.
   14. How long did it take you to complete this course?
   15. What additional continuing dental education topics would you like to see?

Requirements for successful completion of the course and to obtain dental continuing education credits: 1) Read the entire course. 2) Complete all information above. 3) Complete answer sheets in either pen or pencil. 4) Mark only one answer for each question. 5) A score of 70% on this test will earn you 3 CE credits. 6) Complete the Course Evaluation below. 7) Make check payable to PennWell Corp. For Questions Call 216.398.7822