

Indian Health Diabetes Best Practices:
Oral Health Care and Diabetes



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Indian Health Diabetes Best Practice: Oral Health Care and Diabetes

Contents

| | |
|--|----|
| What is oral health care? | 2 |
| Why is oral health care important? | 2 |
| Best practices for oral health care and diabetes | 2 |
| Best practices for health care organizations | 15 |
| Essential elements of best practice oral health care programs..... | 16 |
| Evaluating your oral health care program | 19 |
| Sustaining your oral health care program..... | 19 |
| Contacting others for help | 20 |
| Real-world best practice programs..... | 20 |
| References..... | 21 |

What is oral health care?

People with diabetes can have special issues with their teeth and gums, especially if their blood sugar is high. Oral health programs can help people with diabetes by providing routine and preventive dental care and by conducting clinical dental assessments. A program that focuses on oral health is an essential element of a diabetes program.

Why is oral health care important?

The most common oral health problems associated with diabetes are (Vernillo, 2003):

- Periodontal (gum) disease.
- Tooth decay.
- Salivary gland dysfunction.
- Fungal infections.
- Lichen planus and lichenoid reactions (inflammatory skin disease).
- Infection and delayed healing.
- Taste impairment.

Periodontal disease is the most common complication of diabetes and will be the focus of this best practice (Vernillo, 2003). Periodontal disease is an infection of the supporting tissues of the teeth caused by specific bacteria. Consider these facts:

- Among American Indians and Alaska Natives with diabetes, advanced periodontal disease occurs at rates two to three times higher than for individuals who do not have diabetes (DHHS, 2001).
- Infections associated with advanced periodontal disease can interfere with an individual's blood sugar control and can actually cause blood sugar levels to rise (Taylor, 1996).
- Periodontal disease can result in the loss of all teeth in approximately one third of American Indians and Alaska Natives with diabetes. People without teeth can suffer not only emotionally, but also nutritionally because they may not have the ability to eat many types of important foods (DHHS, 2001).

The good news is that many cases periodontal disease can be *prevented* through primary care and secondary treatment interventions.

Best practices for oral health care and diabetes

The best practice for oral health care and diabetes describes the best methods for:

- Conducting annual dental examinations and dental cleaning in all patients with diabetes.
- Prioritizing dental treatment.
- Providing periodontal treatment and continuous periodontal therapy.
- Providing education for providers, staff, and patients.

Table 1 summarizes the best practices for oral health care and diabetes.

Table 1. Best practices for oral health care for people with diabetes.

| Provider Recommendations | Best Practices |
|---|---|
| <p>1. Conduct annual dental examinations and dental cleaning in all patients with diabetes</p> | <p>Why?</p> <p>Regular dental examinations provide opportunities for prevention, early detection, and treatment of periodontal disease. Regular dental cleaning has been shown to improve blood sugar control in patients with poorly controlled diabetes (Eke <i>et al.</i>, 2005; Grossi, 1999).</p> <p>How?</p> <ul style="list-style-type: none"> - Obtain a complete medical history to determine health status, presence of an established diagnosis of diabetes, physician who is treating the patient, date of last visit, type of diabetes, control of diabetes, and presence of cardiovascular or neurologic complications. - Conduct a thorough review the patient’s medical chart. - Conduct a dental examination, including: <ul style="list-style-type: none"> • Bitewing and panoramic radiographs, at a minimum. Additional x-rays, such as vertical bitewings and periapicals, can be taken as needed. • Conduct periodontal evaluation: <ul style="list-style-type: none"> - Use the Community Periodontal Index of Treatment Needs (CPITN) or the Periodontal Screening and Recording (PSR) to determine the periodontal status during each dental examination. - Identify and record the deepest pocket in each sextant based on radiographic evidence and probing with the World Health Organization (WHO) probe. • Determine if there are any teeth with a hopeless periodontal prognosis: <ul style="list-style-type: none"> - Hopeless teeth are those that are visibly depressible and/or have one or more apices that can be instrumented. - Hopeless teeth can be removed at the appropriate time during treatment. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|--|---|
| <p>2. Prioritize dental treatment</p> | <p>Why?</p> <p>Patients with diabetes and periodontal disease (CPITN scores of “4” in two or more sextants) should have priority for treatment because people with diabetes are at higher risk of developing severe periodontal infections (Grossi, 1998).</p> <p>How?</p> <p>Prioritize dental care using the following system:</p> <ol style="list-style-type: none"> 1. Emergency care (trauma, acute pain, infections, etc.). 2. Control of rampant caries and eminent pulpal involvement. 3. Initial periodontal therapy (full mouth treatment). 4. Restorative treatment. 5. Elective surgical treatment (third molars, periodontal, etc.). 6. Prosthetics. 7. Other higher levels of care. 8. Recall (follow-up). |
| <p>3. Provide periodontal treatment</p> | <p>Why?</p> <p>Dental treatment, and specifically periodontal therapy, has been associated with improved blood sugar control in people with type 2 diabetes (Stewart, 2001).</p> <p>How?</p> <p><u>Initial periodontal treatment</u></p> <p>The periodontal treatment protocol for dental patients with diabetes uses a combination of non-surgical (ultrasonic) instrumentation with systemic antibiotic and anti-infective agent irrigation. The protocol calls for 2-1/2 mouth treatment sessions, which are usually scheduled for one hour per session. A description of the treatment protocol follows:</p> <p>A. Ultrasonic Setup</p> <p>An ultrasonic instrument that is capable of delivering an antimicrobial irrigant is the suggested instrument of choice in this treatment protocol. However, other ultrasonic instruments capable of delivering antimicrobial solutions can also be used (e.g., Odontoson, Cavitron Dual Select, Piezon Master 400/600, etc.).</p> |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|--|--|
| <p>3. Provide periodontal treatment (continued)</p> | <ol style="list-style-type: none"> 1. Prepare irrigant solution and chlorhexidine solution: <ol style="list-style-type: none"> a. Use Peridex, Periogard, or generic 0.12% chlorhexidine gluconate as the irrigant of first choice. Place the chlorhexidine in the plastic irrigant bottle provided with the Piezon Master. Fill the bottle approximately 3/4 full. The chlorhexidine solution should be used full strength and never diluted. (The 0.12% chlorhexidine is approved by the Food and Drug Administration at a minimum effective concentration.) b. A 5% iodine solution can be used if chlorhexidine is unavailable or the patient has a known allergy to chlorhexidine. To prepare the 5% povidone iodine solution, mix equal parts of 10% povidone iodine (e.g., Betadine) with sterile saline solution (0.9% sodium chloride irrigating solution [e.g., USP from Baxter]). The Betadine or other generic 10% povidone iodine solutions can be obtained from all Indian Health Service (IHS) pharmacies, usually in 16 ounce bottles. Fill the plastic irrigant bottle approximately 3/4 full with the prepared 5% povidone iodine solution. Note: Make sure no iodine allergy exists for the patient prior to beginning the procedure. Also, if iodine is to be used as the irrigating solution, the patient’s clothing should be appropriately protected from potential iodine stains. A surgical drape can be used for this purpose. 2. The following information was provided for the Piezon Master 400. Similar settings can be made for other ultrasonic machines. Plug in the Piezon Master 400 and turn on, using the switch on the back of the machine. Be sure the selector switch found on the right side of the Piezon Master is in the scaling/irrigating position. Place the plastic bottle containing the irrigating solution into the receptacle on the top of the machine, and with a gentle clockwise 1/2 turn, lock the bottle into position. Use full power and approximately 1/2-volume settings on the Piezon Master. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|--|---|
| <p>3. Provide periodontal treatment (continued)</p> | <p>3. The “P” tip should be selected and placed on the Piezon Master hand piece for the initial debridement procedure. The “P” tip should be considered the universal operating tip for subgingival use. On other brands of ultrasonics, a tip made specifically for subgingival use should be used. Note: During operation, the Piezon Master moves the instrument tip in a linear, back-and-forth motion. For this reason, the Piezon Master tip is effective only when the thin, blade-like edge of the tip is applied to the tooth surface. This is unlike the magnetostrictive instruments, such as the Dentsply Cavitron, which moves its instrument tip three-dimensionally, or in all directions. The Piezon Master is ready to use.</p> <p>B. Initial Treatment Procedure</p> <ol style="list-style-type: none"> 1. Oral hygiene: Provide the patient with oral hygiene instructions, emphasizing the use of a soft bristle brush and rubber tip, as well as a brush with a rubber tip. For patients with sufficient interproximal space, demonstrate the use of and provide interproximal brushes. However, to avoid overwhelming the patient at the first visit, it is helpful to phase the oral hygiene instructions. Simple techniques of brushing and rubber tipping can be introduced initially, while more advanced home care instructions, such as proxabrush and floss use, can be taught at subsequent visits. 2. Set up the ultrasonic machine and have a mirror, explorer, and probe available. 3. Anesthesia and probing: Anesthetize upper and lower quadrants on the same side of the mouth. Use nerve blocks or regional anesthesia as appropriate. Following anesthesia, a full mouth probing and recording can be started on the half-mouth to be treated. If the patient tolerates the probing of the unanesthetized half of the mouth, complete the full-mouth probing and recording at this time. However, if the patient is too sensitive for probing on the unanesthetized side, complete the probing at the next treatment visit. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|--|--|
| <p>3. Provide periodontal treatment (continued)</p> | <p>4. Initial ultrasonic debridement: Start on the distal of the most posterior tooth of the given quadrant and proceed around the buccal aspects to the midline with the Piezon Master, placing the tip of the instrument apically along the axis of the tooth until bony resistance is felt. You should feel the osseous tissue and the contours of the tooth as this process occurs. Debride all surfaces carefully. Although the procedure emphasis is on root debridement, all supragingival calculus should also be removed. Irrigate each tooth for approximately one minute as you proceed around the buccal/facial. Repeat the ultrasonic debridement from the lingual, again debriding each tooth for one minute. Granulation tissue, pocket epithelium, and plaque will be removed, and often the interdental papilla will be released. It is important to go to the depths of the pocket and completely around (360°) each tooth to remove all plaque and calculus in the lateral and apical projections of the pockets. It is also important to remove the diseased cementum into which bacteria and calculus have penetrated.</p> <p>5. Check all surfaces for smoothness and hardness.</p> <p>6. Final ultrasonic debridement:</p> <ul style="list-style-type: none"> a. Debride again with the ultrasonic machine and irrigating solution, approximately 30 seconds per tooth, from the buccal and the lingual as in the initial debridement. Concentrate on those areas that feel rough upon root surface testing. The total ultrasonic debridement (initial and final) per two quadrants may use 6–10 ounces of irrigating solution. b. If the interdental papillae become detached as a result of the debridement procedure, simple pressure on both sides of the papilla (forcing the buccal and lingual papillae back into their natural positions) for several minutes may be all that is necessary. c. All overhangs should be removed at this time with the dental hand piece and a flame-shaped or other appropriate bur. <p>7. Extract all periodontally hopeless teeth at this time.</p> |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|---|
| <p>3. Provide periodontal treatment (continued)</p> | <p>C. Postoperative Care</p> <ol style="list-style-type: none"> 1. Give patients doxycycline (100 mg bid) for 14 days. Note: It is essential for patients to be scheduled to receive their second half mouth initial treatment during the 14-day period while taking the systemic antibiotics. It is often helpful to make two, one-hour treatment appointments for the patient following their dental examination. The two appointments should be within a 14-day period of time. This will allow both treatment sessions to occur during the course of antibiotic coverage. 2. The patient should rinse two times per day with 30 ml of 0.12% chlorhexidine solution for one week after each debridement procedure. 3. Patients should be given appropriate analgesics (e.g., ibuprofen 400 mg, acetaminophen 650 mg, etc.) either before or immediately after the debridement procedure(s). A seven-day supply of these analgesics should also be prescribed to the patient. For patients with lower pain thresholds or for patients in whom you anticipate more extensive pain, a stronger drug can be prescribed, such as acetaminophen with hydrocodone or codeine. 4. Post-operative emergencies: Treat abscesses with incision and drainage, and with local irrigation using povidone iodine (10%) and hydrogen peroxide. Alternatively, a small open-flap surgical procedure can often be helpful in gaining access to the affected tooth root as well as encouraging drainage. Do not use systemic antibiotics unless patient is febrile. |
| <p>4. Provide continuous periodontal therapy</p> <p>(Table 1 continued on next page)</p> | <p>Why?</p> <p>Results of the Sacaton Periodontal Disease Clinical Trial indicate that patients will experience periodontal improvements (e.g., attachment gains, pocket depth reductions, reduced gingival bleeding, etc.) for six months or more following the initial debridement procedure(s). According to the study results, the six-month post-treatment period marks the beginning of harmful bacterial recolonization of the periodontal pockets in diabetes patients. Therefore, <u>periodontal</u> treatment should intervene at this time by, again, removing and/or destroying the subgingival periodontal pathogens (Grossi, 1999).</p> <p>How?</p> <ul style="list-style-type: none"> – All patients who are receiving the diabetes and periodontitis treatment protocol should be recalled at six months following their initial periodontal treatment. Continuous treatments at six-month intervals should maintain the diabetes patient’s periodontal health. |

Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|--|
| <p>4. Provide continuous periodontal therapy (continued)</p> | <ul style="list-style-type: none"> - Conduct a periodontal examination at the recall visit because patients who received the initial treatment will return for their six-month recall in a variety of clinical conditions. The periodontal examination will document the six-month periodontal health status. It will also provide clinical evidence from which an appropriate recall interval can be established. - Follow the procedures listed below for the six-month recall visits: <ul style="list-style-type: none"> A. Six-month recall and periodontal examination <p>At the first six-month visit, and at all subsequent six-month recalls, conduct a periodontal pocket assessment in all sextants. Using the CPITN, identify and record the deepest pockets in each sextant. Base the extent of treatment on the presence or absence of deep pockets. Deep pockets are defined as CPITN scores = 4 (> 6 mm in depth).</p> <ol style="list-style-type: none"> 1. Deep pockets—Retreatment procedure (CPITN = 4) <p>Retreat any deep pockets (CPITN = 4) in any area of the mouth if identified six months following the initial treatment or at any recall visit. Perform retreatment only in those specific sites where deep pockets exist. Do not attempt to retreat the entire sextant or full mouth unless deep pockets are generalized. The retreatment procedure should follow that described in the initial periodontal treatment section above.</p> <p>Piezon Master 400 set-up: The instrument set-up for the follow-up treatment is the same as the set-up for the initial treatment(s). Use the Piezon Master 400 as the primary instrument, and use chlorhexidine as the irrigating agent. Alternatively, you can use a 5% povidone iodine solution for individuals sensitive to chlorhexidine.</p> <ol style="list-style-type: none"> a. Local anesthesia: Use local anesthesia for the specific sites that will require retreatment. b. Calculus removal: Heavy subgingival calculus should not be expected at the subsequent recall appointments. However, light, supragingival calculus may be encountered, particularly in the mandibular anterior areas and the buccal aspects of the maxillary molars. All calculus should be thoroughly removed at recall visits. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|---|
| <p>4. Provide continuous periodontal therapy (continued)</p> | <p>c. Retreatment procedure: As described in the initial treatment procedure, apply the tip of the ultrasonic instrument to the coronal aspect of the tooth. Moving in small circular motions, remove all soft and hard debris from the crown and root surfaces. Continue this process apically along the axis of the tooth until bony resistance is felt.</p> <p>d. Systemic antibiotics: Do not prescribe systemic antibiotics for retreatment visits.</p> <p>e. Locally delivered antibiotics: Isolated deep pockets are excellent candidates for treatment with locally delivered antibiotics. Therefore, locally delivered antibiotics can be used in conjunction with the retreatment procedure(s). The currently available commercial product is a non-resorbable, tetracycline-laden fiber called Actisite. Actisite fibers are packed into deep pockets, where they are left for 10 days. The fibers then must be removed from the placement site, which will require an additional appointment. Therefore, appointment compliance is essential for Actisite use.</p> <p>2. No deep pockets—Deplaquing procedure (CPITN < 3)</p> <p>Piezon Master 400 set-up: The instrument set-up for the follow-up treatment is the same as the set-up for the initial treatment(s). Use the Piezon Master 400 as the primary instrument, and use chlorhexidine as the irrigating agent. Alternatively, you can use a 5% povidone iodine solution for individuals sensitive to chlorhexidine. The thinner Piezon Master “PS” tip is recommended for most shallow pocket recall treatment. This tip is smaller and able to reach into deep pockets without distention of the soft tissue.</p> <p>a. Local anesthesia: Usually, no local anesthesia is required for recall treatment visits. Patient sensitivity can normally be controlled through adjustment of the Piezon Master power setting. For very sensitive patients however, topical or local anesthesia may be needed.</p> <p>b. Calculus removal: Heavy subgingival calculus should not be expected at the subsequent recall appointments. However, light, supragingival calculus may be encountered, particularly in mandibular anterior areas. Thoroughly remove all calculus at recall visits.</p> |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|---|
| <p>4. Provide continuous periodontal therapy (continued)</p> | <p>c. Deplaquing: The main objective of continuous six-month periodontal recall treatment is to remove all soft root debris and to disinfect the periodontal pocket. The process of removing the soft, bacterial plaque is often referred to as “deplaquing.” The deplaquing procedure should be carried out with a fine subgingival tip. Use the ultrasonic instrument and chlorhexidine irrigant to debride and irrigate all supra and subgingival tooth surfaces. Note: A significant difference in the debridement procedures exist between the initial treatment(s) and subsequent recall or continuous therapy visits. Perform apical debridement “until bony resistance is felt” only during the initial treatment visits. Recall treatment should involve debriding root surfaces apically only to the level of soft tissue attachment (i.e., to the base of the periodontal pocket). In order to maintain periodontal attachment gains, do not attempt to feel the osseous tissue during the debridement procedures at recall visits where CPITN scores are < 4.</p> <p>d. Systemic antibiotics: No systemic antibiotics will be required at six-month recall visits. Exceptions may occur to this general rule for refractory patients. However, consultation with a periodontist is suggested to determine specific therapy. Note: Some patients may demonstrate periodontal abscess formation and/or generalized pocket suppuration prior to the six-month return visit. These “refractory” patients will require more frequent and perhaps more specific periodontal therapy. Consultation with a periodontist for treatment and possible bacterial culturing is recommended for these individuals.</p> <p>B. 12-months and beyond (continuous six-month recall)</p> <p>Individuals with diabetes and periodontal disease will require constant monitoring and continuous periodontal therapy. The treatment protocol described above allows the dental provider to effectively manage diabetes patients who are at higher risk for periodontal breakdown. A continuous six-month recall treatment for life is recommended for most protocol patients. For individuals who practice excellent oral hygiene and whose periodontal tissues remain healthy, you may consider recall intervals longer than six months. Each dental provider will have to assess the status and progress for their diabetes and periodontal</p> |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|--|
| <p>4. Provide continuous periodontal therapy (continued)</p> | <p>patients at each appointment. However, even for periodontally stable patients, periodic monitoring of periodontal status is essential for the maintenance of periodontal health. The provision of an effective treatment protocol for individuals with diabetes and periodontal disease is important. However, clinic management activities are also essential to carry out the treatment program. The establishment of the following systematic approaches to support the treatment protocol are also suggested:</p> <ol style="list-style-type: none"> 1. Diabetes and periodontal patient register: The establishment of a method to identify and follow diabetes and periodontal patients is necessary for tracking patients and their recall needs and for long-term patient success. Currently, standalone personal computers with database software, or the Resource and Patient Management System (RPMS) and Dental Data System, exist which allow the development of a diabetes and periodontal patient register (i.e., database) and tracking system. Any of a number of other systems is possible, including a notebook and pencil. 2. Patient monitoring: To determine the long-term success of the treatment, you will need to obtain clinical status measurements for each patient at a regular time interval. Unfortunately, CPITN serve only as crude indicators of periodontal status. For a more definitive measure of periodontal health, a full-mouth probing and recording is recommended at least annually for patients on the diabetes and periodontal patient protocol register. 3. Program drop-out: It is inevitable that some individuals receiving the treatment protocol will choose not to continue with the program. This noncompliance will manifest itself in many different ways. Some patients will return every six months, some once a year, and others only occasionally. Two important issues must be considered with noncompliant patients: <ol style="list-style-type: none"> a. Clinic access: An important question arises concerning what clinic access non-compliant patients should have. Diabetes patients with periodontal disease should have special clinic access despite less than perfect compliance. These patients represent a special “risk group” within the population. As such, extra efforts should be attempted to reach this group. Although problems will occur with broken and cancelled appointments for these patients, continued special clinic access should be given. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|---|
| <p>4. Provide continuous periodontal therapy (continued)</p> | <p>Compensation for broken appointments can be managed in several different ways (e.g., over-scheduling, local callback lists, confirming appointments, etc.).</p> <p>b. “Back to go”: At some point, the following question will occur for “protocol drop-outs” who periodically present to the dental clinic: “Shouldn’t this patient start all over with the treatment?” The clinical conditions that would indicate starting the treatment protocol over are somewhat variable. However, here are some general rules to follow:</p> <ul style="list-style-type: none"> – Patients who did not finish the initial treatment: For patients who received only partial initial treatment and then dropped out (and it has been <i>less than two years</i>), perform the initial treatment protocol on the untreated portion of the mouth using chlorhexidine and doxycycline according to the protocol. The previously treated area of the mouth can be debrided according to the six-month recall instructions (i.e., the presence or absence of deep pockets). From this point on, six-month recall visits should be scheduled. – Patients who finished the initial treatment, then dropped out <i>less than two years</i> since the initial treatment: Schedule the patient for six-month recall treatment procedures (based on CPITN scores), with six-month recall. – Patients who finished the initial treatment, then dropped out <i>more than two years</i> since the initial treatment: Schedule the patient to begin the initial treatment protocol again, with six-month recalls. |
| <p>5. Provide education for providers, staff, patients</p> | <p>Why? Education on oral health can improve and maintain quality of care among providers and staff and may help to prevent and reduce adverse outcomes. (CDC, 2004).</p> <p>How?</p> <ul style="list-style-type: none"> – Train providers and dental staff on the implementation of this protocol prior to beginning the first treatment. However, after the initial training needs have been met, ongoing program monitoring, maintaining quality of care among the providers, and training new staff members may provide continuous training challenges for dental managers. |

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Table 1. Best practices for oral health care for people with diabetes. (continued)

| Provider Recommendations | Best Practices |
|---|---|
| <p>5. Provide education for providers, staff, patients (continued)</p> | <ul style="list-style-type: none"> - Offer patients dental health care education annually, and reinforce education during follow-up visits. The goal and content of the education should include: <ul style="list-style-type: none"> • Preventing dental disease by directing patient education at controlling blood sugar and implementing good oral hygiene. For example, include: <ul style="list-style-type: none"> - Brushing teeth twice a day (with a fluoride toothpaste). - Flossing teeth every day. - Visiting a dentist routinely for a check-up and professional cleaning. - Eating a well-balanced diet. - Visiting a dental care provider on a regular basis. - Avoiding putting infants and children to bed with a bottle. • Encouraging patients who use tobacco to quit. • Advising patients who and when to call. For example, the patient should contact an oral health provider when the patient experiences: <ul style="list-style-type: none"> - Bad breath that will not go away. - Red or swollen gums. - Tender or bleeding gums. - Painful chewing. - Loose teeth. - Sensitive teeth. |

Best practices for health care organizations

A health care organization that wants to improve oral health care must be motivated and prepared for change throughout the entire organization. The organization’s leadership must identify oral health care improvement as important work. They must also develop clear improvement goals, policies, and effective improvement strategies. This will help encourage the entire organization to make changes that will help improve oral health and diabetes care.

Table 2 describes the best practices for health care organizations.

Table 2. Best practices for health care organizations.

| Organization Recommendations | Best Practices |
|---|--|
| <p>System and Programmatic Changes</p> | <p>Who? Administration and diabetes team members can work together to implement the system and programmatic changes.</p> <p>Why? Changes in health care systems have been associated with increased delivery of appropriate diabetes care.</p> <p>How? The evidence suggests that the following activities can help improve diabetes care:</p> <ul style="list-style-type: none"> – Implement registries and appointment systems to improve diabetes clinic participation and follow-up. – Use clinical practice guidelines to facilitate evidence-based clinical decision-making and improve diabetes oral health care outcomes. – Use flowsheets and standing orders to improve documentation of appropriate care. – Provide training and continuing education to health care providers to help increase frequency of diabetes oral exams. – Provide community oral health care education to help increase clinic participation and reduce adverse outcomes. |

Essential elements of best practice oral health care programs

High quality oral health and diabetes care involves implementing six essential elements* in your health care organization. These elements are:

- Community resources and policies.
- Health care organization leadership.
- Patient self-management support.
- Delivery system design: Services, programs, systems, and procedures.
- Decision support: Information and training for providers.
- Clinical information systems: Collecting and tracking information.

Table 3 summarizes how these elements apply to basic, intermediate, and comprehensive-level diabetes dental care.

*Adapted from the Chronic Care Model, which was developed by the MacColl Institute for Healthcare Innovation at the Group Health Cooperative. For more information on the Chronic Care Model, visit their website at www.improvingchroniccare.org.

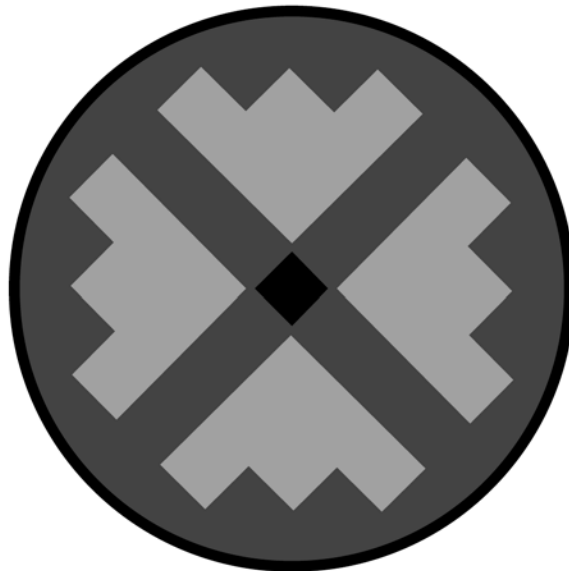


Table 3. Essential elements of basic, intermediate, and comprehensive best practice oral health care programs for patients with diabetes.

| Basic Oral Health Program | Intermediate Oral Health Program Basic program <i>plus</i> : | Comprehensive Oral Health Program Basic and intermediate programs <i>plus</i> . |
|---|---|---|
| Community resources and policies | | |
| <ul style="list-style-type: none"> - Raise awareness of the importance of oral health in the community. - Develop clear mechanisms for referring patients to field health workers and oral health care. | <ul style="list-style-type: none"> - Conduct oral health awareness programs, such as health fairs, and disseminate information. - Train field health personnel in oral health risk assessment and oral health care education. - Inventory community oral health resources. | <ul style="list-style-type: none"> - Train field health personnel on good oral health strategies. - Develop and implement community education programs on oral health care. |
| Organization leadership | | |
| <ul style="list-style-type: none"> - Provide strong policies for oral health promotion. | <ul style="list-style-type: none"> - Provide program support and oral health resources (e.g., space, staff, equipment, and funds). | <ul style="list-style-type: none"> - Commit stable funds for permanent staff positions |
| Patient self-management support | | |
| <ul style="list-style-type: none"> - Provide ongoing, interesting, and effective oral health programs (e.g., develop age-relevant and culturally appropriate materials). | <ul style="list-style-type: none"> - Provide education within the framework of an IHS-certified (or equivalent) curriculum. | <ul style="list-style-type: none"> - Provide a comprehensive oral health education program with modules on periodontal disease prevention and care. |
| Delivery system design: Services, programs, systems, and procedures | | |
| <ul style="list-style-type: none"> - Establish a diabetes team that meets on a regular basis and includes oral health. | <ul style="list-style-type: none"> - Make oral health care available on-site or through a referral mechanism that is easy for the patient to use and ensures communication back to the primary care provider. | <ul style="list-style-type: none"> - Include the oral health team as part of the diabetes team. - Ensure oral health care is available on-site or through mechanisms convenient to both patients and providers. |

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Table 3. Essential elements of basic, intermediate, and comprehensive best practice oral health care programs for patients with diabetes. (continued)

| Basic Oral Health Program | Intermediate Oral Health Program Basic program <i>plus</i> : | Comprehensive Oral Health Program Basic and intermediate programs <i>plus</i> : |
|--|--|--|
| Decision support: Information and training for providers | | |
| <ul style="list-style-type: none"> – Provide training to the health care team on the risk factors for diabetes-related dental disease. | <ul style="list-style-type: none"> – Provide training to the health care team on effective oral health interventions | <ul style="list-style-type: none"> – Adapt effective strategies for oral health for American Indian and Alaska Natives. |
| Clinical information systems: Collecting and tracking information | | |
| <ul style="list-style-type: none"> – Use data to persuade people that oral health is an important diabetes and public health issue. – Establish an evaluation plan to assess outcomes of oral health activities. | <ul style="list-style-type: none"> – Document oral health efforts and outcomes in periodicals that reach community members (e.g., newsletters, magazines, <i>Indian Country Today</i>, and <i>Health for Native Life Magazine</i>). | <ul style="list-style-type: none"> – Evaluate and report results of oral health programs in peer-reviewed journals. |



Evaluating your oral health care program

Evaluation is important because it helps you see what is working and what is not working in your oral health care program for people with diabetes. It will show you if adjustments or changes need to be made in order to improve your program. Evaluation also provides you with information that you can use to share your successes with patients, providers, tribal leaders, administrators, the community, funders, and other stakeholders.

Consider including the following when developing your program and evaluation:

- Dental examinations and dental cleaning procedures.
- Rates of periodontal disease.
- Patient education.
- Training and continuing education for health care providers, dental staff, and field workers.
- Number of oral health care team meetings held (e.g., monthly), including diabetes audit reports as an ongoing meeting agenda item.
- Documentation that oral health is included in the health care organization's long-term strategic plan.
- Documentation that policies have been put in place at schools, work sites, tribal offices, senior centers, wellness centers, and other environments to promote oral health.

Sustaining your oral health care program

Often, for care goals to be reached, programs must be in place for more than a few years. Here are some helpful tips for sustaining your program:

- Billing for dental cleaning and other dental services.
- Obtaining third party reimbursement for dental prosthetics.
- Reporting successes and dental education messages through community newsletters and other media.
- Offering walk-in dental care services and making dental care services user-friendly.
- Tracking and reporting clinical outcomes and sharing successes to the clinic and other providers.
- Ensuring oral health is a priority for the health care organization and is included in the long-term strategic plan.
- Including activities that promote good oral health in schools, work sites, tribal offices, and other environments.

Contacting others for help


Contacting other people involved in oral health care is important because they can help you get started with your program. Your peers at other health care organizations can share their expertise, materials, and ideas, and can also tell you what has worked for them and what has not worked. This can help you avoid reinventing the wheel. Here are some tips on how to connect with others:

- Ask your Area Diabetes Consultant for the names of people who may be able to help you.
- Contact the IHS Division of Diabetes Treatment and Prevention for ideas. They may be able to point you in the right direction.
- Ask the IHS Integrated Diabetes Education Recognition Program for suggested contacts. They have names and contact information for people who work with IHS-accredited diabetes education programs.
- Flip through issues of *Health for Native Life Magazine*. The magazine profiles many diabetes programs throughout Indian Country. The articles may give you ideas for activities to try and people to contact.
- Review resources from the National Diabetes Education Program (NDEP). NDEP offers materials that will help your program get started, including information specifically for American Indians and Alaska Natives. You can access these resources at the website: www.ndep.nih.gov

Real-world best practice programs

ACL Dental Program


Dr. William Morningstar

 (505) 552-5310

This program recently began using the treatment protocol outlined in this best practice.

Crow Indian Hospital Dental Program


Dr. Steve Torna

 (406) 638-3569

This program has been operating for five years.

Huhukam Memorial Hospital Dental Program


Dr. Tom DeCaro

 (502) 562-3321

The clinic and staff have a decade of experience with the treatment approach outlined in this best practice.

Northern Cheyenne Dental Program

Ms. Torrey Darkenwald

 (406) 477-4400

This program has been operating for five years.

Phoenix Indian Medical Center (PIMC)

Dr. G. Todd Smith

☎ (602) 263-1200 ext. 1472

PIMC has vast clinical experience and a comprehensive oral health care program.

Santa Fe Hospital Dental Clinic

Dr. Rick Vaccarello

☎ (505) 946-9485

This program recently began using the treatment protocol outlined in this best practice.

Zuni Indian Hospital Dental Program

Dr. Eric Coontz

☎ (505) 782-4431

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