CONSULTANT'S CORNER

CDT 2021

Claims Processing Tips:

- How to make your life easier and get paid on time
- How to Improve Your Endodontic Claims Submissions
- Processing Policy Code Primer: Part 1-3
- Tips for Proper Documentation
- Narratives: What you need to know
- Periodontal Chart Requirements and Procedure Code Criteria
- Periodontal Charting: "it's more than just probing depths!"

Coding:

- Miscoded or Misunderstood Procedure Codes
- Misunderstood Periodontal Procedures
- Understanding D4355 – Full Mouth Debridement
- Understanding D4346 – Scaling in Presence of Generalized Moderate or severe gingival inflammation

Miscellaneous:

- Dental Sealants
- Did You Know
- HDS Performance Measures
- Implant Benefits
- Implant Maintenance and Apexification Procedures
- Post Placement in Endodontically Treated Teeth
- Total Health Plus

X-Ray Topics:

- Dental X-ray Recommendations
- Image Gently Campaign and ALARA
- How Many Dental X-rays Do Your Kids Need?
- Optimal X-rays Selection

Consultant's Corner: CDT 2021
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The American Dental Association has recently published and released the 2021 version of *Current Dental Terminology: The ADA Practical Guide to Dental Procedure Codes* commonly referred to as the CDT.

The purpose of this Consultant's Corner is to:

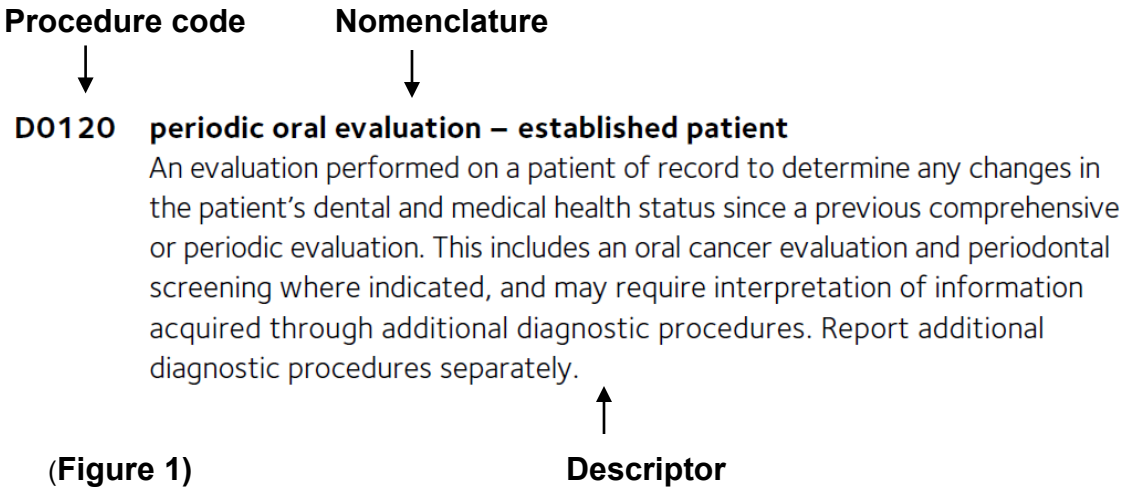
1. Provide information regarding changes to CDT 2021 that are currently in effect 1 January 2021.
2. Indicate the HDS benefit status of new 2021 procedure codes.
3. Identify four deleted CDT codes and indicate their replacement codes.

The American Dental Association's (ADA) Code Maintenance Committee (CMC) is responsible for the revision and maintenance of existing procedure codes and the development of new dental procedure codes. The CMC composition consists of 24 voting members representing the ADA, Academy of General Dentistry (AGD), American Dental Education Association (ADEA), five representatives from the Dental Benefit Industry, and a representative from each of 12 dental specialties. The CDT is revised annually and goes into effect each January. The 2021 version contains 28 new codes, 7 revisions to existing codes, 4 deleted codes and 22 minor editorial changes that do not change the purpose or intent of the code. I will attempt to cover only the new and deleted codes for 2021.

Background: For review purposes, the three basic components of a dental procedure code are:

1) Procedure code
2) Nomenclature
3) Descriptor (not applicable for every code)

Each procedure code begins with the bolded capital letter D that indicates a dental procedure. This is then followed by a sequence of four numbers that are specific for the category of service as well as the procedure. The code is accompanied by the nomenclature (in bold font) that states what the specific dental procedure is. Some but not all dental codes have an accompanying descriptor that is utilized to define the nature, the intended use and to provide other pertinent information related to the procedure. It is essential for dental offices to fully understand the elements of all three components to avoid confusion and allow accurate and timely processing of dental claims. See Figure 1 below.



(**Figure 1)**

Deleted Codes

There are four deleted procedure codes listed under each specific Category of Services (below) and are no longer valid in 2021. I have included the new replacement procedure codes that should currently be utilized when submitting dental claims in 2021.

Endodontics Category:

D3427 periradicular surgery without apicoectomy

This deleted code has been replaced by the following six new codes:

D3471 surgical repair of root resorption – anterior

D3473 surgical repair of root resorption – premolar

D3473 surgical repair of root resorption – molar

D3501 surgical exposure of root surface without apicoectomy or repair of root resorption – anterior

D3502 surgical exposure of root surface without apicoectomy or repair of root resorption - premolar

D3503 surgical exposure of root surface without apicoectomy or repair of root resorption - molar

Maxillofacial Prosthetics Category:

D5994 periodontal medicament carrier with peripheral seal – laboratory processed

This deleted code has been replaced by the following two new codes:

D5995 periodontal medicament carrier with peripheral seal – laboratory processed – maxillary

D5996 periodontal medicament carrier with peripheral seal – laboratory processed – mandibular

Implant Services Category:

D6052 semi-precision attachment abutment

This deleted code has been replaced by the following two new codes:

D6191 semi-precision abutment –placement
D6192 semi-precision attachment – placement

Oral and Maxillofacial Surgery Category:

D7960 frenulectomy – also known as frenectomy or frenotomy

This deleted code has been replaced by the following two new codes:

D7961 buccal / labial frenectomy (frenulectomy)

D7962 lingual frenectomy (frenulectomy)

New 2021 CDT Codes

* Denotes a non-billable service in HDS benefit plans. By contract, patients should not be billed or charged a fee.

+ Denotes a non-covered service (denied) in HDS dental benefit plans. By contract, patients can be billed or charged a fee.

# Denotes a benefit/covered service in HDS dental benefit plans.

Diagnostic

In light of the devastating COVID-19 pandemic the CMC has added two (2) new procedure codes related to point of care testing in the dental office for public health pathogens such as coronavirus. The codes are based on whether the office is testing for specific antigens or antibodies. Dental offices should be aware of the differences between the different tests and also the need to obtain a Clinical Laboratory Improvement Amendment (CLIA) waiver before implementing point of care testing in the dental office.

+ D0604 antigen testing for public health related pathogen, including coronavirus

+ D0605 antibody testing for public health related pathogen, including coronavirus

Currently, these new coronavirus related tests are non-covered services in HDS dental plans. If a dental office decided to conduct point of care testing in the office and has received the appropriate regulatory CLIA waiver, it may be advantageous for them to consider submitting to the patient's medical plan.

Diagnostic Image Capture

Due to increase in the use of teledentistry during the current coronavirus pandemic, the CMC developed new procedure codes that are based solely on taking a specific dental x-ray or photographic image (image capture).

In the author's opinion, this can be quite confusing and administratively challenging to most dental offices. Delta Dental Plans and HDS will not provide reimbursement or pay a fee for simply capturing an image with the codes below. As such, I recommend that HDS dental offices that are not employing teledentistry to continue to submit for diagnostic imaging as they have done in the past simply indicating the type of x-ray image taken (Periapical D0220/D0230, Bitewing D0272.D0274, Panoramic D0330, FMX D0210) on the claim form.

*** D0701 panoramic radiographic image-image capture only**

*** D0702 2-D cephalometric radiographic image-image capture only**

*** D0703 2-D oral/facial photographic image obtained intra-orally or extra-orally- image capture only**

*** D0704 3-D photographic image-image capture only**

*** D0705 extra-oral posterior dental radiographic image-image capture only**
*** D0706 intraoral-occlusal radiographic image-image capture only**

*** D0707 intraoral-periapical radiographic image-image capture only**

*** D0707 intraoral-bitewing radiographic image-image capture only**

*** D0709 intraoral-complete series radiographic image-image capture only**

Preventive

+ D1321 counseling for the control and prevention of adverse oral, behavioral, and systemic health effects associated with high-risk substance abuse
The descriptor states *"Counseling services may include patient education about adverse oral, behavioral, and systemic effects associated with high-risk substance use and administration routes. Substances used in a high-risk manner may include but are not limited to alcohol, opioids, nicotine, cannabis, methamphetamine and other pharmaceuticals or chemicals*."

I highly recommend that the dentist or hygienist clearly indicate in the dental record the type of counseling provided (e.g. vaping, cannabis, etc.), indicate if it was provided via oral, written, or audio means and list proposed recommendations such as referral to addiction specialist or counselor.

+ D1355 caries preventive medicament application – per tooth
The descriptor states *"For primary prevention or remineralization. Medicaments applied do not include topical fluorides."*

This code may appear confusing at first glance but as stated in the descriptor, topical fluorides including fluoride varnish are not applicable to this code. Silver diamine fluoride is typically used to "arrest" caries and can be submitted using code **D1354 interim caries arresting medicament application – per tooth**. Medicaments such as a calcium-based product/s (e.g. MI paste, etc.) appear to be eligible for this code.

Restorative

D2928 prefabricated porcelain/ceramic crown-permanent tooth

This code is specific for a preformed crown composed of ceramic or porcelain material. HDS will assign an alternate benefit of a stainless-steel crown on a permanent tooth. The office will be able to bill the difference between the assigned alternate benefit fee and the submitted office UCR fee.

Apicoectomy / Periradicular Services

 # D3471 surgical repair of root resorption - anterior

 # D3473 surgical repair of root resorption – premolar

 # D3473 surgical repair of root resorption – molar

All three codes have a similar descriptor that reads" For *surgery on root of either a molar, premolar, or anterior tooth. Does not include placement of restoration."* These codes are submitted when endodontic surgery is performed specifically to repair a resorptive defect found on a root surface. When a restoration is required (in addition to the endodontic surgical procedure), it may be a separate and allowable distinct charge/fee.

 # D3501 surgical exposure of root surface without apicoectomy or repair of root resorption - anterior

 # D3502 surgical exposure of root surface without apicoectomy or repair of root resorption - premolar

 # D3503 surgical exposure of root surface without apicoectomy or repair of root resorption – molar

These codes are reserved for those clinical situations when an endodontic surgery is performed to evaluate a root surface for the presence of a possible vertical fracture or other pathology.

Carriers

+ D5995 periodontal medicament carrier with peripheral seal – laboratory processed – maxillary

+ D5996 periodontal medicament carrier with peripheral seal – laboratory processed – mandibular

Other Implant Services

+ D6191 semi-precision abutment –placement
+ D6192 semi-precision attachment – placement

Oral and Maxillofacial Surgery

 # D7961 buccal / labial frenectomy (frenulectomy)

Code **D7961** is specific to removal of the labial or buccal frenum that may contribute to gingival recession, mucogingival defects, periodontal disease, etc.

 # D7962 lingual frenectomy (frenulectomy)

Code **D7962** is reserved for frenectomies to alleviate/remove ankloglossia or "tongue tie". When these codes are submitted for infants with difficulties breast-feeding, it may be advantageous for the dental office to submit to the medical plan for possible coverage.

Disclaimer

Dental offices are cautioned and advised to consult the CDT 2021 for complete details and a full listing of the procedure codes, revisions, editorial changes, nomenclature, and descriptors mentioned in this paper. Copies of the CDT 2021 may be obtained through the American Dental Association (ADA) and are available online via the ADA web site www.ada.org. The views expressed in this paper represent the sole views of the author and may not necessarily reflect the views or position of the American Dental Association.

References

1) Figure 1: adapted from CDT 2021, American Dental Association, 2021, pg 3

2) CDT 2021 Dental Procedure Codes, American Dental Association, 2012, pgs 1-100

3) Insurance Solutions Newsletter, American Dental Support, LLC SEPT/OCT 2020, pgs1-7

Consultant's Corner: *How to make your life easier and get paid on time*

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Dental offices may occasionally encounter a denied claim that will result in a delay in receipt of final payment to the office. There are various clinical and administrative reasons why a claim could be denied.

The purpose of this article is to:

- Discuss common administrative reasons for claim denial
- Discuss common clinical reasons for claim denial
- Offer useful tips to reduce unnecessary administrative time for the dental office
- Provide advice designed to reduce denials and speed up payments to the dental office

Administrative Reasons for Claim Denial:

1. Poorly written narrative - The narrative should always contain a proper clinical diagnosis using accepted dental terminology. When indicated, the narrative should also describe patient symptoms if present (location, nature of pain), dental materials used, and chair time if applicable. Uniformity of terminology is critical; particularly when describing an enamel craze line or an asymptomatic crack on a marginal ridge that is so commonly seen in dental practice. Refer to the section below titled "Some General Tips for Narratives" for additional information to assist and improve narrative submissions.

The photograph (left) of a molar tooth shows asymptomatic mesial and distal cracks on the marginal ridges that have been clinically followed for over 30 years without problems. This should not be reported as a "fractured" tooth" or described as "there is a fracture present".

Some General Tips for Narratives:

- Be concise, specific, and legible with your narrative.
- Don't embellish or misrepresent the actual clinical condition.
- Offices frequently submit x-ray images that are not current, dated, and do not represent the current status of the tooth. If/when a cusp or cusps have been lost due to decay or fracture, specifically indicate that the cusps have "fractured off" or indicate "cusps are missing" in your narrative.
- When an existing crown has recurrent decay/caries and is only planned for a restoration to repair the caries, the proper CDT code is not a crown repair code (D2980/D6980). In this case, the proper code is either the D2999 unspecified restorative procedure code or the corresponding and applicable basic restorative amalgam/composite restoration codes. If the decay is not obvious on an x-ray image, an accompanying narrative indicating the location of the recurrent decay is extremely helpful and will definitely speed up the adjudication process.
- When describing an "open or defective crown margin", it is important to state if recurrent decay is present and also note the specific location of decay for each tooth in the narrative.
- The submitted narrative, x-ray image, and procedure codes must always correlate with each other. If a narrative states that "significant decay is present encompassing greater than 50 percent of the tooth" and the corresponding x-ray image shows minimal decay or simply a shallow restoration without recurrent decay, a claim denial is likely to occur.
- Avoid cut and paste narratives. When every chart entry and narrative reads exactly the same, an independent auditor or dental consultant will have difficulty determining what actually was done.

- Avoid submitting a wasteful and useless narrative. Do not submit a narrative/s that states "x-ray image submitted", "see enclosed x-ray image/narrative", "please call our dental office if there are questions", "please process claim for payment" or something similar to that effect. This is a completely and totally ineffective use of valuable administrative time for the office and should be avoided as it does not provide any additional clinical information to support the claim request and will actually slow the claims adjudication process.

- Avoid unprofessional, bellicose, derogatory, or antagonistic comments in the narrative. These comments do not speed up claims processing nor increase the likelihood of reimbursement. This does reflect negatively on the dental office.

2. Avoid Non Standard Abbreviations - The use of non-standard abbreviations in narratives, chart notes, and communications should be avoided as it will slow the claim adjudication process until the meaning and clarity of the abbreviation is established. This will certainly result in delayed reimbursement. Download the American Dental Association's file titled *"Dental Abbreviations, Symbols, Acronyms"* at www/ada.org to have a complete listing of accepted, appropriate abbreviations, acronyms, etc.

3. Incorrect Submission of CDT Procedure Codes – The CDT manual undergoes annual review by the ADA's Code Maintenance Committee. Each year there are new codes that are put in place in January along with deletions and revisions to prior existing procedure codes. It is imperative that dental offices remain current and up to date with the annual changes. Submission of old non-existent codes or incorrect codes will result in delayed adjudication and claim payment. Each dentist is responsible for the accuracy of codes submitted on a claim form to any third party carriers. When doubt exists regarding proper coding for a procedure, it is highly recommended that the CDT be consulted and the procedure code's nomenclature and descriptor reviewed for accuracy and applicability rather than simply submitting an incorrect code on the claim form.

4. Incorrect Tooth Numbers – Always attempt to provide a correct tooth number on a claim form. It is recognized that it is sometimes difficult to provide an accurate tooth number for a patient with multiple missing teeth, mutilated dentition, and multiple tooth roots/fragments. HDS has an extensive clinical database that contains patient claim histories going

back almost 20 years. An incorrect tooth number on a claim form will automatically suspend the claim resulting in a delay in payment until the correct tooth number is submitted or the prior tooth history is adjusted.

5. X-ray Image Selection – Proper image selection (see Ideal X-ray Image Selection chart below) is critical to ensure timely payment of a claim. The submitted image should be current (ideally w/in 18 months), dated, labeled with the correct tooth number and should represent the current status of the tooth. When completing a claim for a single crown or two-three contiguous teeth, do not submit an entire full mouth x-ray series, panoramic image or a random collection of assorted images. Send a diagnostic x-ray image of only the involved tooth or teeth. Submitting unnecessary x-ray images wastes valuable time for the dental office and makes it more difficult and time consuming for a dental consultant to adjudicate the claim. This will only cause a delay in payment to the dental office.

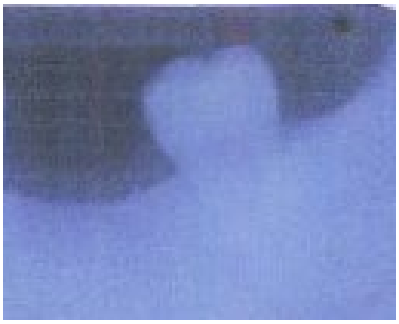
Ideal X-ray Image Selection:

Clinical Procedures	Optimal Images
Impacted third molar extractions	*Panoramic*
Single tooth extraction	*Periapical (PA) or panoramic*
Crowns/veneers (anterior teeth)	*PA*
Crowns (posterior teeth)	*BWX / PA*
Inlays/onlays	*BWX / PA*
Pulp Caps (posterior teeth)	*BWX*
Pulp Caps (anterior teeth)	*PA*
Restoration/s for Caries	*BWX / PA*
Scaling / Root planing	BWX / PA
Periodontal Disease (mod-advanced)	*Vertical BWX / PA*

Note: a panoramic image is never the desired, ideal image when submitting a claim for crowns, partial coverage restorations and most restorative procedures

Clinical Reasons for Claim Denial:

1. Poor Quality X-ray Images – Diagnostic x-ray imaging is essential to the formulation of a clinical diagnosis and to support the planned course of dental treatment. A non-diagnostic image with poor resolution and contrast will only result in a delay in the payment and processing of the claim. HDS dental consultants often receive non-diagnostic, grainy x-ray images with little to no resolution or contrast that usually results in the suspension of the claim, delay in payment, and a request back to the office for a diagnostic image. If the original x-ray image obtained by the dental office is either too dark with artifacts or too light, has poor contrast/resolution and is of questionable diagnostic quality, it is quite likely that a denial and a subsequent delay in payment will occur. For an office with digital x-ray capability, it is a best practice to just submit the original electronic x-ray image file that will ensure a high quality diagnostic image for review by a dental consultant. This also reduces the need to then scan and print the image saving significant administrative time. Conventional film based practices should electronically scan the images at the highest possible resolution and print the image at the highest resolution to ensure optimal diagnostic quality. Another conventional film based option is to use a two-film x-ray packet when exposing the x-ray image and then submit the additional second film image for claim review.



This submitted x-ray image is non-diagnostic for a crown on tooth # 18. Note the obvious lack of contrast and resolution. This will result in a delay of final approval and payment for the crown procedure.

2. Scant or Poor Clinical Chart Notes - General dentists frequently maintain poor quality or inadequate clinical chart notes which is often seen during the course of office audits. Chart notes must match and correspond to the procedure codes listed on a claim form. On occasion, when coding questions exist or there is uncertainty regarding a claim or a proposed treatment plan, an HDS dental consultant may request a copy of the original clinical chart notes via Processing Policy Statement

973. This statement on the Remittance Advice (RA) is a request for a copy of the original chart notes and not a narrative request. Chart notes that are incomplete, not specific, or do not adequately describe the procedure code in question may result in a claim denial and delay in reimbursement. Chart notes should always contain a valid clinical diagnosis and "in a nut shell" clearly describe "what you did and why you did it". When submitting for D7210, commonly referred to as a "surgical extraction", the chart notes must indicate if the tooth was sectioned and/or if bone was removed to facilitate extraction. The notes should clearly describe the location of where bone was removed such as "completed a buccal trough" and describe the sectioning of tooth roots (e.g. "sectioned mesial/distal roots"). A chart note that simply states "surgical extraction" or "tooth removed successfully" will result in a denial or a recoding to a D7140 extraction of erupted tooth.

3. Failure to Read/Understand the Clinical Rules of the Dental Plan- Each dentist should read and understand the participating dentist agreement documents prior to signing a provider agreement contract with HDS or any other dental benefits program. The dentist should receive an advanced copy of the HDS Rules and Regulations as well as a Clinical Policy Manual (HDS Procedure Code Guidelines) which details those dental procedures that are covered by the various employer group plans as well as those procedures that may be denied. Since many employer group contracts vary in benefits, and exclusions, it is critical for the dentist to know what procedures are covered and what procedures are not. HDS dental plans do not benefit the placement of restorations and crowns for patients exhibiting wear, abrasion, and abfractions or to change/restore the vertical dimension of occlusion (VDO). In these particular cases, the denial is not a matter of clinical necessity for the patient but essentially a benefit decision that was rendered by the patient's employer group often for financial and utilization reasons. The dentist must also be aware that some employer group plans may have waiting periods where the patient must be an employee for a specified period of time determined by the employer prior to qualifying for select major high cost procedures such as crowns, bridges, implants, etc. Some plans may have certain exclusions for preexisting dental conditions such as prior missing teeth, congenital conditions (e.g. peg laterals, diastemas), and cosmetic procedures such as bleaching, veneers, and cosmetic crowns.

4. Insufficient Tooth Structure Loss- HDS and most other dental insurance plans provide a restorative crown benefit for significant loss of tooth structure generally exceeding fifty (50) percent of the tooth crown due to caries or trauma. They typically do not provide a benefit for teeth exhibiting craze lines, asymptomatic cracks, wear, abrasion, attrition, abfractions, or when restoring vertical dimension of occlusion unless there are exceptional and extenuating circumstances. There is significant variation among dentists regarding what constitutes a large "filling" or the amount and how deep the decay is on a tooth. It may behoove the dental office to request a claim preauthorization prior to treating questionable or borderline teeth to reduce any misunderstandings and minimize claim denials. A preoperative clinical photograph is often helpful to support a claim request along with a photograph showing the amount of decay in the tooth. Submitting only a post operative photograph of a completed crown or onlay/inlay preparation is of little value as a dental consultant needs to determine the size and location of the prior existing restoration and the presence and extent of decay or fractured/missing tooth structure.

Conclusion:

When a claim is denied, it is important to read and review the accompanying processing policy statement/s found on the remittance advice. There is an established process for any dental office to request readjudication and reconsideration online. DO NOT SUBMIT A NEW CLAIM or submit a narrative that states "please reconsider or reprocess the claim" when a denial has ocurred. This is a complete waste of valuable administrative time for both the dental office and HDS when duplicate claims are repeatedly submitted. If the dental office does not provide additonal or new information or continues to submit non-diagnostic x-ray images, it is unlikely that the original benefit denial will be reversed.

Having an office employee contact HDS Customer Service and state that Dr. Suchandsuch would like a consultant to call them is not very informative nor helpful. If a coding question exists or a subsequent request for reconsideration and/or readjudication is unsuccessful, a dentist can call HDS Customer Service at 808-529- xxxx and request that a dental consultant contact them. The dentist should at that initial phone call include the claim number and provide a very brief, concise description of the question or problem. This gives the dental consultant

an opportunity to research the claim or the question/s in advance of the follow-up call to the treating dentist which will expedite and ultimately save time for all.

It is hopefull that the information provided in this article will help dental offices save valuable administrative time, provide insight into common causes of claim denials and provide an avenue for the dental office to follow resulting in the speedy adjudication of claims and timely reimbursements.

Consultant's Corner:
"How to Improve Your Endodontic Claims Submissions"

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Dr. Robert G. Sherman, Diplomate ABOM, Dental Director, HDS

HDS dental consultants frequently evaluate endodontic treatment claims submitted by endodontists and general practitioners. On occasion, HDS consultants have noted endodontic claims that fall short of the accepted standards of care. The current HDS Rules and Regulations clearly state that "All dental services provided by the member dentist to any HDS Patient shall be in compliance at all times with all HDS Contract Documents and Professional Standards of Care."

The purpose of this Consultant's Corner is to:

a) Review the clinical/administrative criteria used in determining if the endodontic treatment has fulfilled the required parameters for final payment.
b) Improve the quality of endodontic treatment delivered to HDS patients.
c) Facilitate quick and accurate payment to the dental offices.

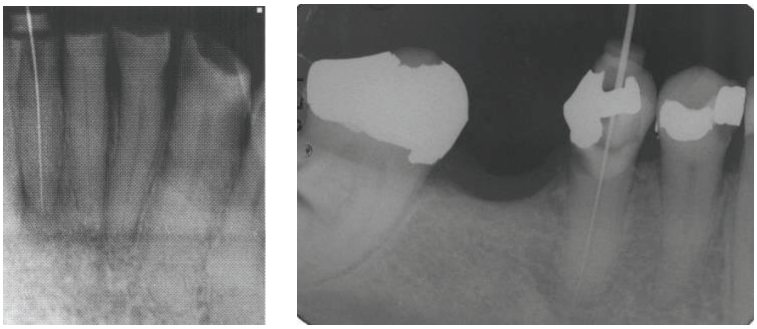
Administrative Criteria:

1. Always submit a labeled and dated x-ray image that is diagnostic. The image should clearly demonstrate the entire root canal system and the periapical area. The x-ray image should be free of positional errors and artifacts.

2. In the case of endodontic retreatment or treatment of obstructions, clearly label or indicate if the image is a pre-operative or post-operative image.

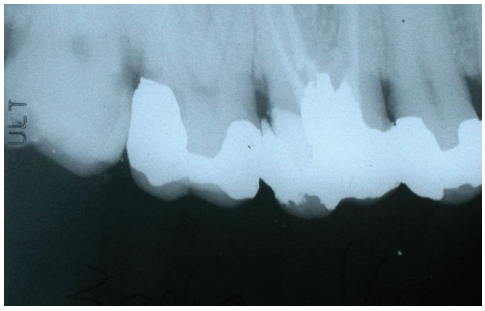
3. When submitting a narrative to support a claim, ensure that a valid clinical diagnosis using proper dental terminology is submitted in addition to a clear, concise description of the procedure, patient symptoms, and any other pertinent information related to the claim.

4. Interim working films should not be submitted for payment (see below).



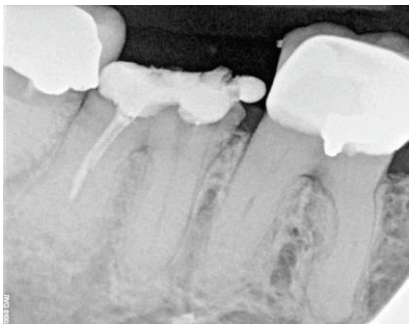
Interim working films with file in place were improperly submitted for final payment for endodontic treatment. This will result in rejection of payment until the proper documentation is provided.

5. The x-ray image should be diagnostic and clearly demonstrate the periapical region 2-3 millimeters beyond the radiographic apex.



Review of the submitted x-ray image clearly demonstrates that a positional error has resulted in the periapical region being cut off and the final obturation is unable to be visualized. This will result in rejection of payment until the proper documentation is provided.

6. A final obturation that is greater than 2.5 millimeters short of the apex or overextended more than 1.5 millimeters past the apex should have an accompanying narrative that details the clinical circumstances as well as the current and long-term prognosis.

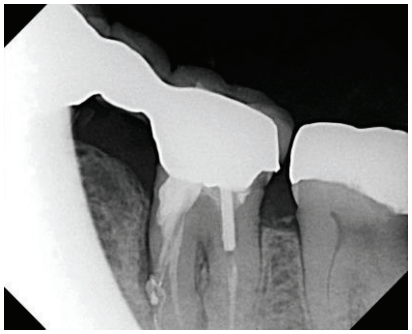


Review of the submitted x-ray shows the distal root obturation well short of the apex. Obturation of the mesial canal is absent despite a patent canal system noted on the image. HDS does not make payment for incomplete treatment.

Clinical Criteria:

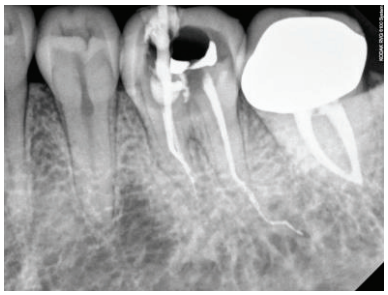
The clinical criteria listed below are utilized by HDS dental consultants when reviewing endodontic treatment claims.

1. The tooth should not be perforated.



Two claims for endodontic treatment submitted for final payment. Review of submitted x-ray images clearly demonstrate that a perforation has occurred. Note that the image of tooth # 19 is cone cut and the periapical area is cut off and not visible.

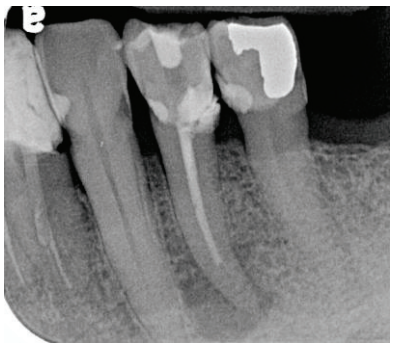
2. The tooth should be restorable.

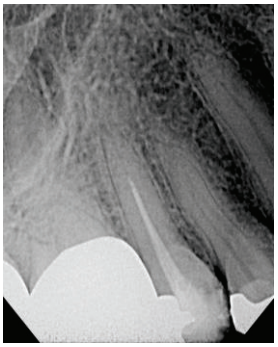


The submitted x-ray image demonstrates significant caries involving the occlusal table, furca, mesial and distal roots and extends at or below the level of the alveolar crest. This calls into question the restorability and long term successful prognosis/outcome. Note the significant extrusion of sealer/gutta percha past the distal root apex.

The x-ray image submitted for final payment clearly demonstrates failure to obturate the mesial buccal canal. A perforation involving the distal aspect of the MB canal is noted along with significant decay extending into the furca. This obviously calls into question the restorability and long term viability of the tooth.

3. The final obturation should be complete, within the confines of the root canal system and ideally positioned ½ to 1.5 millimeters from the radiographic apex. *(See Pathways of the Pulp 10th edition)*



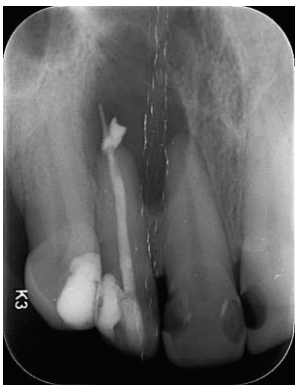


Review of x-ray images submitted for final payment clearly demonstrates a final obturation that is well short of the desired working length and the radiographic apex.

4. The gutta percha obturation should be solid and free of significant voids.

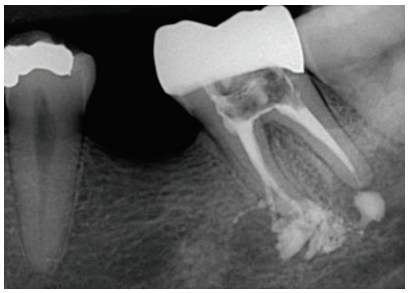
The x-ray image submitted for final payment demonstrates final obturation well short of the radiographic apex and significant voids in the root canal system.

5. The final obturation should not be significantly over-extended (> 1.5 millimeters).



Over extended final obturation is evident upon review of the x-ray images submitted for final payment.

6. Extrusion of sealer may be unavoidable but it should not be excessive.



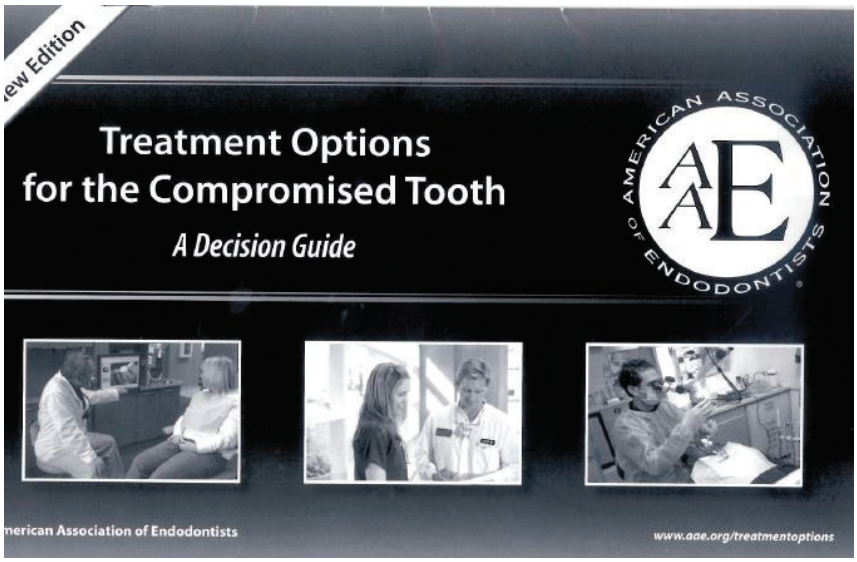
The x-ray image (above) clearly shows a significant excess of extruded sealer. "Regardless of the sealer selected, all exhibit toxicity until they have set. For this reason, extrusion of sealers into the periradicular tissues should be avoided." *(Pathways of the Pulp 10th ed, page 359)*

Additional Information:

The American Association of Endodontists (AAE) has published a new edition of the **Treatment Options for the Compromised Tooth A Decision Guide** that can be downloaded (for free) from the AAE website at www.aae.org/treatmentoptions. The publication lists a variety of clinical endodontic scenarios and conditions that may be frequently encountered in dental practice. It discusses treatment considerations and prognosis for these conditions and further classifies them as Favorable, Questionable or Unfavorable. Since most HDS dental benefit plans include a consultation and treatment by a dental specialist as a benefit, a referral to an endodontist, may be appropriate if a patient's condition or prognosis is not considered to be Favorable.

Additionally, the AAE's revised *Glossary of Endodontic Terms* and *Guide to Clinical Endodontics* are now available in downloadable, searchable E-book format to all HDS participating dentists. Because the AAE places great importance on general dentists as the endodontists' partners in patient care, the AAE has made both documents available free of charge.

Glossary Link: http://www.nxtbook.com/nxtbooks/aae/endodonticglossary/index.php
Guide Link: http://www.nxtbook.com/nxtbooks/aae/guidetoclinicalendodontics5/



Consultant's Corner:
Part 1: Processing Policy Code Primer

Robert G. Sherman, DMD, HDS Dental Director

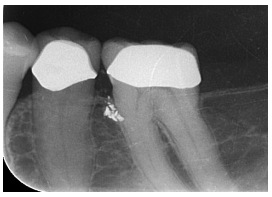
In this three-part series, I will be addressing common processing policy codes used by HDS to respond to submitted dental claims. In an effort to expedite the processing of dental claims and to help you better understand the meaning of the codes, below are a few examples which include the explanation of the code and X-ray illustrations.

Policy 207: "Restorations for teeth with insufficient structure loss are not payable by HDS. Patient responsible for approved amount."

Tooth #30 and #31 submitted for crowns with no accompanying narrative. No decay or obvious cusp fractures noted on submitted image.

This processing policy is applied when the submitted X-ray for crowns, inlays, or onlays does not show decay, fractured or missing tooth structure encompassing over 50% of the remaining tooth. When this policy is applied, the dental office should submit a concise narrative in appropriate dental terminology, additional X-rays or clinical photos to support the need for a crown. The narrative should include the specific diagnosis, patient symptoms, size and extent of existing restorations and decay. "Tooth fractures" should be specifically addressed in a concise but detailed narrative. Indicate if the fracture is a complete or incomplete enamel or dentinal fracture/crack, the specific fracture location, patient symptoms, and state whether the cusp has fractured off or is entirely missing.

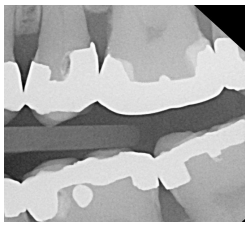
Policy 209: "X-ray submitted does not support replacement of a crown. Patient responsible for approved amount."



Tooth #19 and #20 submitted for build-ups D2950 and crowns D2750 with no accompanying narrative. No obvious recurrent decay or tooth fractures noted on submitted image.

This processing policy is applied when the submitted X-ray for replacement crowns, inlays, or onlays does not show decay, fractured or missing tooth structure, or an obvious reason for replacement. When this policy is applied, the dental office does not need to submit another X-ray image but should submit a concise narrative in appropriate dental terminology to support the need for a replacement crown. An open margin or fractured porcelain on molar teeth may not always be criteria for payment unless there is accompanying recurrent decay.

Policy 127: "X-ray received is not of diagnostic quality. Payment by HDS and patient copayment pending receipt and review."



Tooth #15 submitted for crown D2790. A review of image shows the crown cut off and not entirely visible. This is non-diagnostic to determine a crown benefit.

This processing policy is applied when the submitted X-ray image to support a specific procedure code contains artifacts, processing (i.e. light leaks, weak developer, and fixer) and positional errors (i.e. cone cuts, airway space). The X-ray image may be too dark or too light to confirm a diagnosis and adjudicate the claim. When this policy is applied, the dental office should determine the nature and cause of the non-diagnostic image and supply a supporting diagnostic image. A careful review of X-ray clinical and dark room procedures, proper printer and scanning machine settings may be beneficial in this endeavor. Keep in mind that dark or very light original images will lose diagnostic quality during the scanning process.

Ask HDS

If you would like to submit a question, please e-mail askhds@hdsonline.org.

Q: How does the Health Care Reform Law dependent age extension to age 26 impact HDS dental plans?

A: The Health Care Reform Law dependent age extension is mandatory for medical insurance, but not for dental. Therefore, HDS will address the age extension individually per group contract. If you receive questions from your HDS patients, please direct them to their employer's Human Resources department.

Q: Can I charge my HDS patients for Infection Control?

A: No. As stated in the HDS Rules and Regulations, infection control or sterilization charges are considered overhead and are not separately reimbursed by HDS and not chargeable to the patient.

General Dentist

P. Christopher Bays, DDS
Kealakekua, Big Island

Pediatric Dentists

Cherie C. Uchida, DDS
Honolulu & Aiea, Oahu

Renee C. Uchida, DDS
Honolulu & Aiea, Oahu

New Group

Windward Honda
#2906

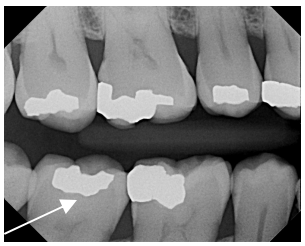
Terminated Group

First Hawaii Title Corporation
#2572

Consultant's Corner: Processing Policy Code Primer: Part II
Robert G. Sherman, DMD, HDS Dental Director

This is the second review of a three part series on common HDS processing policies that may be noted by the dental office on receipt of the patient EOB. This series is intended to improve communication and expedite the timely processing of dental claims.

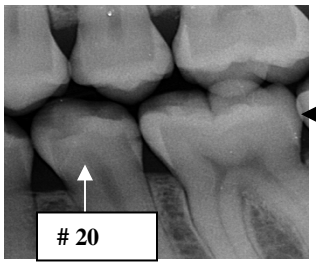
Processing Policy 212: "Buildup is not payable when sufficient tooth structure remains to support a crown. Not payable by HDS or patient."



 # 31 submitted for D2950 core buildup with no narrative. No obvious interproximal decay or cuspal fractures are noted. Retention for a crown does not appear to be compromised

CDT 2009 description of a core buildup (D2950) states *"refers to building up of anatomical crown when a restorative crown will be placed. A material is placed in the tooth preparation for a crown when there is insufficient tooth strength and retention for the crown procedure. This should not be reported when the procedure only involves a filler to eliminate undercut, box, form or concave irregularity in the preparation."* HDS Processing Guidelines require more than 50 % of the remaining tooth structure to be missing or damaged due to caries or fractures such that the strength and retention of the crown is compromised. This policy is applied when the submitted x-ray image and/ or supporting documentation are not suggestive of structure loss exceeding 50% or the retention for a crown appears adequate. When requesting reconsideration, the office should submit a current, dated radiographic image with a concise narrative that details the size and extent of the existing restoration and recurrent decay if present, missing or fractured off cusps or other pertinent information to support the need for a core buildup.

Processing Policy 302: "Pulp cap benefit allowed only for exposure or near exposure of pulp, limited to once per tooth. Not payable by HDS or patient."



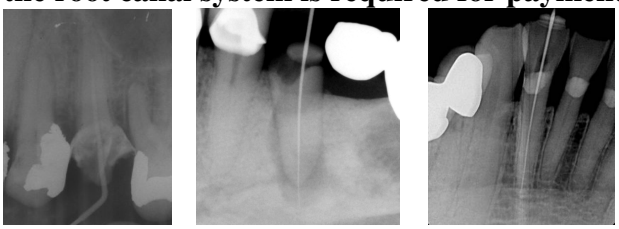
 # 20 submitted for direct pulp cap D3110 with no narrative. Submitted image does not show deep decay suggestive of a pulpal exposure.

This policy is applied when the submitted x-ray image does not appear to show decay in close proximity to the pulp (indirect pulp cap D3120) or is not suggestive of a pulp exposure (direct pulp cap D3110). Keep in mind that CDT 2009 states that an indirect pulp cap (D3120) code *"is not to be used for bases and liners when all caries has been removed"*. For more information on pulp cap procedures, please refer to the May 2010 HDS Quick Bites issue or the current HDS Procedure Code Guidelines. When requesting reconsideration, the office should ensure that a current, dated x-ray image has been submitted along with a narrative that indicates if a pulpal exposure (direct pulp cap) has occurred or states the size and extent of decay or fracture, the proximity to the pulp, as well as the materials (i.e. calcium hydroxide, MTA, glass ionomer) used for the pulp capping procedure.

Consultant's Corner: Processing Policy Code Primer: Part III
Robert G. Sherman, DMD, HDS Dental Director

This is the final article of a three-part series on common HDS processing policies. This series is intended to improve communication and expedite the timely processing of dental claims.

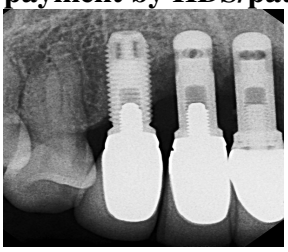
Processing Policy 304: "A post-op X-ray demonstrating complete/final obturation of the root canal system is required for payment.



Submitted X-ray images do not show complete obturation of the root canal system. These images appear to be working or intra-operative images.

This policy is applied when the submitted X-ray images shows incomplete endodontic treatment. For payment purposes, HDS Procedure Code Guidelines require a post-operative X-ray image for endodontic procedures D3310 *endodontic therapy, anterior tooth*, D3320 *endodontic therapy, bicuspid tooth*, and D3330 *endodontic therapy, molar tooth*. The post-operative X-ray should show the final and complete obturation of the root canal system. Working length or other intra-operative images are not acceptable for payment.

Processing Policy 954: "Verify procedure code submitted and/or treatment plan; payment by HDS/patient pending appropriate coding.



Claim submitted for surgical extraction of # 7, 8. The X-ray image shows implants with implant supported crowns and obvious bone loss suggestive of peri-implantitis. The correct CDT procedure code is D6100 implant removal, by report

This policy is applied when a claim contains an incorrect CDT procedure code. Incorrect coding is commonly seen with periodontal splinting, gingivectomy, laser procedures, closure of endo access, and by report codes such as D2999, D7999, and D9999. The office is requested to resubmit using a current acceptable CDT procedure code. The 2009 CDT manual contains a CD that allows the office to insert a procedure or word into the search menu option and a list of potential codes will be identified. In January 2011, the new CDT 2011-2012 manual will be utilized for all dental claims. It is available for pre-order on the ADA Web site and will be mailed in October 1, 2010.

Processing Policy 1115: "Narrative does not indicate diagnosis and/or treatment to relieve pain. Payment by HDS pending receipt and review.

This policy is applied to D9110 palliative treatment claims when the required narrative does not contain a valid diagnosis or does not indicate the treatment performed to relieve the patient of pain. The current CDT nomenclature for procedure code **D9110 palliative (emergency) treatment of dental pain-minor procedure** indicates that a minor procedure to alleviate pain must be completed by the dental office. HDS Procedure Code Guidelines require that a narrative attachment accompany all palliative claims that must include the diagnosis and all treatment performed to relieve pain. For further information and guidance, please refer to the 2010 HDS Procedure Code Guidelines and the February/March issue of Quick Bites.

Consultant's Corner: Tips for Proper Documentation

Robert G. Sherman, D.M.D. , Certified Dental Consultant
Diplomate of the American Board of Oral Medicine
Dental Director, Hawaii Dental Service (HDS)

Creating and maintaining complete and accurate dental records are important for several reasons. Charting and other documentation assist the dentist in ongoing dental treatment and other health care providers who may contribute to a patient's care, protect the dentist in the event of patient litigation, support details of claims submissions, and are important in the event of an audit by insurance companies and governmental agencies.

When an office receives notice of an audit or litigation, it may already be too late if the office has a poor history of documentation in the dental record. Copies of the dental treatment records, radiographic images, periodontal and other charts, ledgers, schedules (day sheets), lab prescriptions, invoices and other relevant documentation are usually requested during an audit. Documentation is the ultimate key to a positive audit outcome and/or successful litigation. Failure to maintain complete and accurate documentation may result in significant additional administrative time for the dentist and office staff and financial liability to the dentist if an audit or litigation occurs..

The following problem areas may adversely affect a dentist during an audit or litigation:

- Poor or scant clinical notes
- Missing clinical notes and radiographs
- No periodontal charts or periodontal diagnosis listed in the charts
- Health history not documented or updated
- No informed consent
- Illegible chart entries

Suggestions for Improving Documentation

To avert these problems, I would suggest offices adhere to the ADA recommendations [1,2] (below) regarding what should be documented and included in the dental record. The list below includes some examples.

- Name, address, birth date, and contact information of parent or guardian if patient is a minor
- Medical/dental history should completed by the patient or guardian before treatment and also reviewed and updated at each appointment
- Treatment or progress notes should contain the patient's chief complaint, clinical hard and soft tissue findings (abnormal and normal), periodontal, TMJ, and caries diagnoses
- Risks and benefits of any proposed treatment should be included as well as alternatives and the risk of no treatment
- Diagnostic records, charts, study models
- Medication prescriptions including date medication was prescribed, the dose, amount, specific directions for use, number of refills
- Radiographs, radiographic images, clinical photos if taken
- Laboratory prescriptions/work order forms

- Referral letters and consultations with both referral and referring dentists or physicians
- Post-operative or home instructions
- Discussion about informed consent and any related forms
- Waivers/authorizations
- Documentation regarding phone calls and personal conversations with the patient
- Any written correspondence to and from the patient
- Treatment plan notes including dates of patient visit, actual procedure performed and clinical indications for the procedure, type and amount of local anesthesia administered
- Description of radiographs taken (i.e. PA # 3, 9, 31 instead of 3 PAs)
- All cancellations or failures

Using "SOAP" Format Documentation

On a personal note, I have always found the SOAP format to be a very effective means for documentation of my clinical notes. The "S" is the subjective (reason why patient came to see you and should be in their own words when possible), "O" is objective (list your objective clinical findings, health history review, oral cancer screening, periodontal findings/probing results, caries, radiographs taken), "A" is your assessment or diagnosis, "P" is the plan (proposed treatment plan and sequencing). Please see example below.

S - Emergency exam. "My tooth is killing me," patient points to tooth #14,
BP: 128/76 Pt. reports spontaneous, throbbing pain rated 9/10 since last night, unable to sleep last evening

O - HQR (dated today) – patient taking Motrin 800 mgs 3 times per day for last 3 days
OCSE: WNL
PA #14: periapical radiolucency noted on mesial root
Clinical exam: cracked MODB amalgam restoration with obvious deep decay
PA #14 reveals deep decay in close proximity to pulp
+ hot/cold, + percussion, + chewing/biting pain, + palpation on buccal #14

A- Symptomatic irreversible pulpitis / Symptomatic apical periodontitis #14

P - 1) Xylocaine 1:100 x 2 carpules, pulpectomy completed today
2) Referred to endodontist Dr. _____ on _____.
3) RTC prn if pain/symptoms persist

Dental offices are encouraged to reexamine their documentation practices, look for areas needing improvement and if necessary incorporate these standards into their daily work pattern. If so, they are more likely to be fully prepared and ready when and if an audit is performed or when facing potential litigation.

References:

1) Council on Dental Practice Division of Legal Affairs, *American* Dental Association. *Dental Records, 2007publication*. www.ada.org
2) Gardiner, M. *The Complete Dental Record*, ADA Annual Meeting. October 2012 Las Vegas, Nevada

Consultant's Corner: *Narratives: What you need to know*

Robert G. Sherman, DMD

Certified Dental Consultant, Diplomate ABOM

Dental Director, HDS

Dental offices are frequently required to submit a narrative for select dental clinical procedure codes and to support a specific claim request. Unfortunately, many narrative submissions are poorly constructed and worded resulting in delayed payment to the dental office.

The purpose of this article is to:

- Describe features of a well-written narrative.
- Show examples of poorly constructed and written narratives.
- List specific dental procedure codes that require a narrative.

Introduction:

When requested, a narrative should be designed to be a short, concise description of the clinical indication or reason/s why a specific dental procedure was necessary or to provide a brief description of the clinical procedure that was completed. Since the narrative is often submitted after the fact, it is not a substitute for the original dental chart notes which are considered legal documents in a court of law.

The narrative should always contain a proper clinical diagnosis using accepted dental terminology. Uniformity of terminology is critical; particularly when describing an enamel craze line versus a true fracture of a cusp or a fracture on the pulpal floor (see photo on next page).

The clinical photograph (left) clearly shows an obvious mesial – distal fracture on the pulpal floor. This is considered a true fracture of this tooth. A vertical craze line, or small enamel crack should not be reported as a "fractured" tooth" or described as "there is a fracture present".

The use of non-standard abbreviations should be avoided as it will slow the adjudication process and result in delayed reimbursement. When indicated, the narrative should also describe patient symptoms if present (location, nature of pain), dental materials used, and chair time if applicable.

When are Narratives Requested by HDS*?

- D7210 - Extraction of erupted tooth requiring removal of bone and or sectioning of tooth, and including elevation of mucoperiosteal flap if indicated:
  A narrative is advantageous when the x-ray image does not show significant breakdown, caries or fractured/missing tooth structure. The narrative should indicate that bone was removed and/or the tooth was sectioned.

- Incision & drainage of abscess – intraoral soft tissue

- D7960 - Frenulectomy/Frenectomy

- Dx999 Unspecified procedures, by report
  These codes require a narrative or OP Report to describe the completed procedure.

- Crown, inlay, onlay, veneer repair, fixed partial denture repair: (D2980, D2981, D2982, D2983, D6980)
  The narrative should list the clinical diagnosis and include dental materials used to repair the restoration.

- Periodontal soft tissue grafts

* Note: *This is not an all-inclusive listing of those dental procedures requiring a narrative. Offices are encouraged to refer to the 2019 HDS Procedure Code Guidelines Manual for a full listing of procedure codes requiring a narrative submission*

Some General Tips for Narratives:

- Be concise, specific, and legible with your narrative.
- The submitted narrative, x-ray image, and procedure codes must correlate with each other.
- Don't embellish or misrepresent the actual clinical condition.
- Offices frequently submit x-ray images that are not dated and do not represent the current status of the tooth. If/when a cusp or cusps have been lost due to decay or fracture, specifically indicate that the cusps have "fractured off" or indicate "cusps are missing" in your narrative.
- When an existing crown is planned for replacement due to marginal decay/caries that is not obvious on an x-ray image, a narrative indicating the location of the recurrent decay is extremely helpful and will definitely speed up the adjudication process.
- When describing an "open or defective crown margin", it is crucial to indicate if recurrent decay is present and the location in the narrative.
- Avoid cut and paste narratives. When every chart entry and narrative reads exactly the same, an independent auditor will call into question what actually was done?
- Do not submit a narrative/s that states "x-ray image submitted", "see enclosed x-ray image/narrative", "please call our dental office if there are questions", "please process claim for payment" or something similar to that effect. This is a totally ineffective use of valuable administrative time for the office and should be avoided as it does nothing to speed up the claims adjudication process.
- Avoid unprofessional, bellicose, derogatory or antagonistic comments in the narrative. These comments do not speed up claims processing or increase the likelihood of reimbursement and they do reflect poorly on the dental office.
- Download the American Dental Association's file titled *"Dental Abbreviations, Symbols, Acronyms*" at www/ada.org to have a complete listing of accepted, appropriate abbreviations, acronyms, etc.

The author has received many narratives over the last decade that were of little to no value in adjudication of the specific claim and actually resulted in a delay of payment. Examples include:

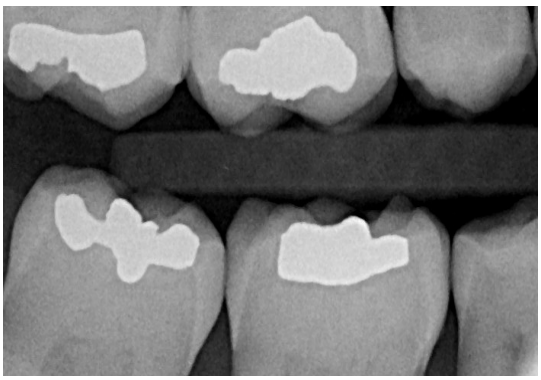
1) *"Puka in gum"*. Clearly this is a prime example of using improper dental terminology. The narrative is unclear as to what the actual clinical condition is. A valid diagnosis such as gingival dehiscence, mucogingival defect, active gingival recession may better describe the clinical condition. <u>As dental professionals, it is imperative that we communicate in clear, concise, proper diagnostic terms to avoid miscommunication and to ensure proper clinical outcomes.</u>

2) *"Facial palatal cleanout"*. A dental consultant would justifiably question what exactly was done? A better narrative choice might be *"a periodontal abscess is present on the palatal of # 14. Scaling and debridement of the abscess was completed on the palatal and facial surfaces using a periodontal scaling instrument".*

3) *"X-ray attached: Porc crown done due to CEREC crown".* This narrative does not indicate why the tooth required a new or replacement crown and resulted in initial claim denial because of a lack of narrative specificity.

4) *"Patient having sensitivity for a while, recommend crowning tooth".* This narrative lacks specificity such as caries, fractured or missing tooth structure? There is no description of what the actual patient signs and symptoms are.

5) *"Please pay for tooth #16 with procedure code D7210 (TE Surgical) because this is wisdom tooth. Thank you."* This is a poorly constructed narrative as TE is a non-standard abbreviation but more importantly, it does not describe whether this tooth # 16 required the prerequisite bone removal <u>and/or</u> tooth sectioning.



In this case, tooth # 30 was submitted for a crown buildup (D2950) and PFM crown (D2750) with an accompanying narrative stating "patient w/ sensitivity # 30". Review of the x-ray image does not show obvious decay, fracture and the claim was properly denied. A specific narrative was later received stating "The whole MB cusp fractured off" and the claim was then easily approved.

Conclusion:

When required or applicable circumstances exist, dental offices are encouraged to submit narratives using the tips and hints provided in this article. The bottom line when composing a narrative is that an independent auditor or dental consultant should be able to understand "what you did and why you did it". A narrative that is truthful, non-embellished, concise, specific, using proper dental terminology and diagnostic terms is guaranteed to speed up the dental claim reimbursement process.

Consultant's Corner: Periodontal Charting Requirements and Procedure Code Criteria

Robert G. Sherman, DMD
Diplomate ABOM
Dental Director, HDS

In the January 2017 issue of *Quick Bites*, I described a new HDS policy change for scaling and root planing procedures (D4341 / D4342). The concept of clinical attachment loss (CAL), pseudopockets, and new claim attachment requirements for scaling and root planing procedures were covered.

The purpose of this article is to:

- Review the recent HDS policy changes that will be in effect April 1, 2017.
- Introduce a standardized periodontal chart (enclosure 1) which dental offices may find beneficial when submitting scaling and root planing (SRP) claims.
- Discuss what actually constitutes a "surgical extraction" (D7210) and the criteria for a direct (D3110) and indirect pulp cap (D3120) procedure.

Policy Change: Effective April 1, 2017, all claims submitted for scaling and root planing **(D4341** / **D4342)** must contain a current (within 6 months) and complete periodontal chart with six point probing depths (PD), the gingival margin measurement (GM) and the documentation of clinical attachment loss (CAL) for the qualifying teeth in the quadrant. The CAL is the distance from the cemento-enamel junction (CEJ) to the tip of a periodontal probe during periodontal diagnostic probing

When an office submits for 1 -2 quadrants of D4341 / D4342 (SRP) on the same date of service, only a periodontal chart is required. If the chart is incomplete or missing, the SRP will be DISALLOWED. The dental office will then be asked to provide the missing periodontal chart documentation and diagnostic radiographic images of the involved quadrant.

When submitting for 3-4 quadrants of scaling and root planing **(D4341**/ **D4342)** on the same date of service, radiographic images will now be required to support the claim request together with a current and complete periodontal chart with the appropriate measurements listed above. If the radiographic image/s and other documentation do not demonstrate alveolar bone and/ or attachment loss, the alternate benefit of **D4346 scaling in presence of generalized moderate or severe inflammation – full mouth** will be applied.

Periodontal Chart Measurements

The **Probing Depth (PD)** is a critical measurement when completing the periodontal chart and is the distance from the gingival margin to the base of the gingival crevice. It is a measurement from the gingival soft tissue margin (gingiva or alveolar mucosa) to the tip of the periodontal probe.

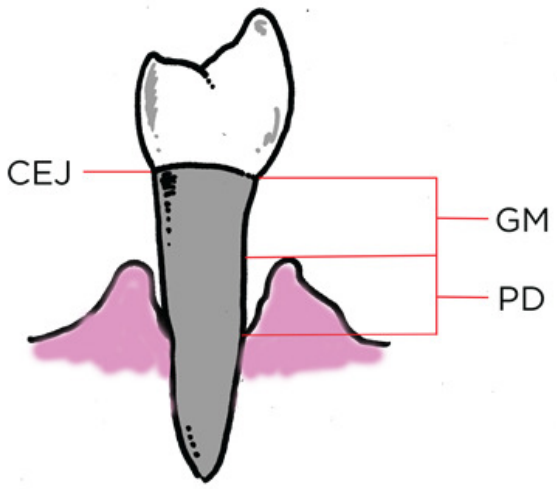
Other critical measurements include the **Gingival Margin (GM)** which is calculated by the distance from the free gingival margin to the cemento-enamel junction (CEJ). Be sure to record all measurements, including zeros.

The determination of clinical attachment loss (CAL) is based on probing depths (PD) together with the gingival margin measurement (GM).

For instance:

a. When recession and/or periodontal disease has produced exposed roots or when the GM is located apical to the CEJ (see illustration below), the CAL can be calculated as:

CAL = PD + GM

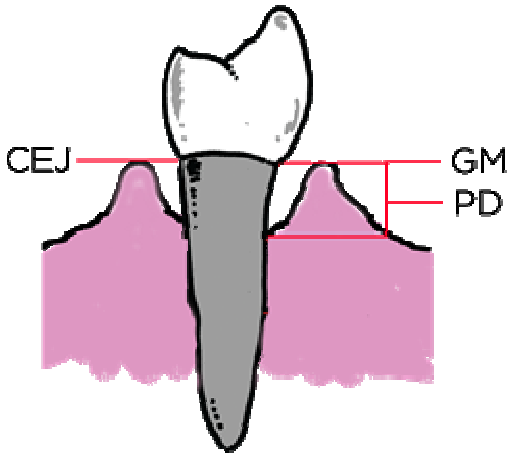


In this illustration, gingival recession and/or periodontitis are obvious. The gingival margin (GM) is apical to the CEJ. If the GM = 4 mms and PD = 3mms then CAL is 7 mms. Therefore:

CAL = GM + PG

b. When the gingival margin (GM) is located at the cemento-enamel junction (CEJ), the GM measurement is 0 mms. The probing depth and clinical attachment loss are then the same (see illustration below). In this case, the CAL is calculated as:

CAL = PD

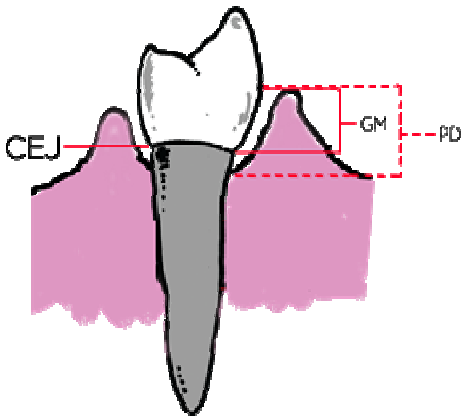


This illustration shows the gingival margin (GM) is located at the level of the CEJ. The GM measurement is 0 mms. Therefore:

CAL = PD

c. When the gingival margin (GM) is located <u>above</u> (coronal) the cemento-enamel junction (CEJ) as seen in pseudopockets, moderate to severe gingivitis, and gingival hyperplasia, the GM measurement is subtracted from the PD. The CAL can be calculated as:

CAL = PD – GM



This illustration shows a pseudopocket where the gingival margin (GM) is coronal to the CEJ. The GM measurement should be subtracted from the PD to calculate the CAL. If the GM is +5 mms and the PD = 8 mm then the CAL is 3 mms. Therefore:

CAL = PD - GM

When completing a periodontal chart such as the enclosed HDS chart, the office must include the <u>GM and PD</u> measurements. When a pseudopocket or enlarged gingival papilla is 5 mms above the CEJ level, it should be notated on the periodontal chart as **+5** mms. Bleeding on probing points may indicate inflammation and ongoing periodontal disease and can be noted by placing **B** in the appropriate section of the periodontal chart. The dental office can also indicate the diagnosis by checking the appropriate periodontal case type box on the left side of the chart.

Extraction Codes

Additionally, a review is in order for the clinical criteria of several commonly misunderstood and miscoded CDT procedure codes. They are discussed below.

Procedure code **D7210** is commonly referred to as a "surgical extraction" and code **D7140** is often erroneously referred to as a "simple extraction".

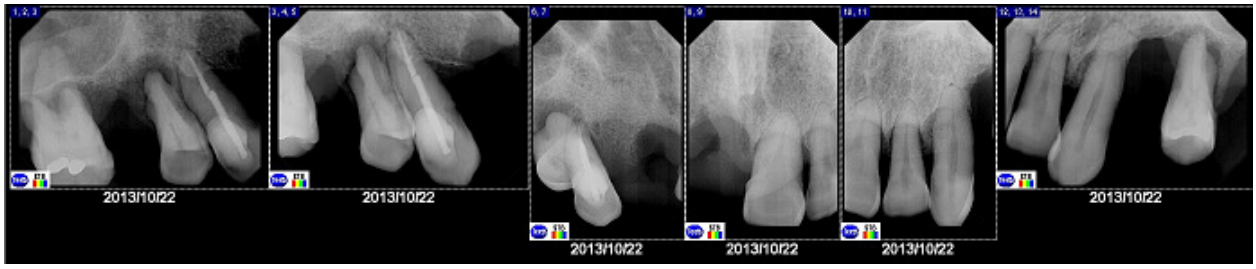
- The nomenclature (bold font below) for **D7210** clearly states the clinical requirements to Removal of bone to facilitate extraction of the tooth

and / or

- Sectioning of the tooth to facilitate extraction of the tooth
- Elevation of a mucoperiosteal flap is now considered to be optional depending on the clinical circumstance

D7210 surgical removal of erupted tooth requiring removal of bone and/or sectioning of tooth, and including elevation of mucoperiosteal flap if indicated
Includes related cutting of gingiva and bone, removal of tooth structure, minor smoothing of socket bone and closure.

Adapted from CDT 2017



In the actual case above, teeth # 5, 6, 9, 10, 11, 13 were submitted as **D7210 surgical removal of extracted tooth**. A review of the x-ray images shows obvious bone loss. It appears highly unlikely that the treating dentist was required to remove bone or section any of the teeth to facilitate extraction. Therefore these teeth should be submitted and appropriately paid as **D7140**.

Important Note: A common misperception still remains that if a dentist lays a mucoperiosteal flap and then succesfully elevates and delivers the tooth via forceps that it fulfills the requirements for code **D7210**. The nomenclature (above) clearly indicates that if bone removal and/or sectioning the tooth did not occur, then it does not fulfill the clinical **D7210** requirements and the extraction should be submitted as **D7140** whose nomenclature (bold font) and descriptor (non-bolded font) are noted directly below.

D7140 extraction, erupted tooth or exposed root (elevation and/or forceps removal)
Includes routine removal of tooth structure, minor smoothing of socket bone, and closure, as necessary.

Adapted from CDT 2017

Bottom Line: If the dentist did not remove bone via a handpiece, chisel, osteotome, or other instrument and did not section the tooth, then the extraction is appropriately submitted as **D7140 extraction, erupted tooth or exposed root** and not a D7210.

Pulp Caps Several years ago, the differences between an indirect pulp cap and a direct pulp cap were addressed in an issue of *Quick Bites*. Unfortunately, many offices still persist in submitting an incorrect code (see nomenclature below) .

D3110 pulp cap – direct (excluding final restoration)
Procedure in which the exposed pulp is covered with a dressing or cement that protects the pulp and promotes healing and repair.

D3120 pulp cap – indirect (excluding final restoration)
Procedure in which the nearly exposed pulp is covered with a protective dressing to protect the pulp from additional injury and to promote healing and repair via formation of secondary dentin. This code is not to be used for bases and liners when all caries has been removed.

Adapted from CDT 2017

A **direct pulp cap (D3110)** is correctly submitted **only** when an actual pulpal exposure has occurred. It is not appropriate to submit this code when you simply have a deep "cavity" preparation or a preparation that may be in close proximity to the pulp.

An **indirect pulp cap (D3120)** is appropriately submitted when the "cavity" preparation is very deep or is in close approximation to a pulp horn and the further removal of carious (infected/affected) dentin would result in a pulp exposre.

An indirect pulp cap requires the application of a CaOH based material or MTA to stimulate secondary dentin formation. This may then be followed by placing a liner or a base over the CaOH material. Placing a glass ionomer (*Vitrebond*) alone in a cavity preparation **does not** constitute an indirect pulp cap.

Important Note: A review of the CDT decriptor clearly indicates that code **D3120 indirect pulp cap** *is "not to be used for bases and liners when all caries has been removed".* If all caries has been removed from the "cavity" preparation and a liner such as CaOH and/or glass ionomer has been placed, it does not constitute an indirect pulp cap and it should **not** be submitted as a pulp cap to HDS.

There are many dental offices who routinely submit a **D3120** when a restoration is placed. This code should not be submitted routinely for revenue enhancement purposes since all liner/bases are clearly considered part of the restorative procedure.

Additionally, it seems commonplace for some dental office to submit a stand-alone pulp cap code **(D3120/D3110)** on an entirely new claim that is separate from the actual restorative procedure. This practice is discouraged as it is critical for the dental consultant to know what procedure was completed and surfaces of the teeth that are involved. This may actually result in a denial if no caries are noted on the submitted x-ray image and there is no accompanying history of a restoration.

Tooth # 4 was submitted for a D2150 DO restoration along with a direct pulp cap D3110. Review of the x-ray image does not show deep decay which might result in a pulp exposure. There was no narrative. In this case, the D3110 was disallowed.

Special Note: All tooth illustrations in this article are courtesy of M. Orozco.

DELTA DENTAL

HDS
Hawaii Dental Service

700 Bishop Street, Suite 700, Honolulu, Hawaii 96813-4196

Periodontal Examination Record

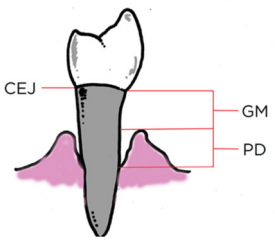
Patient name: **Date of examination:**

Provider:

Periodontal Diagnosis:

- ☐ Type I – Gingivitis
- ☐ Type II – Early Periodontitis
- ☐ Type III – Mod Periodontitis
- ☐ Type IV – Adv Periodontitis

Additional notes:



Abbreviations:
B – Bleeding upon probing (B)
CAL – Clinical Attachment Loss
GM – Gingival Margin
PD – Probing Depth

Maxillary

Buccal/Facial	B															
	PD															
	GM															
	CAL															
	Tooth	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Lingual	B															
	PD															
	GM															
	CAL															

R **Mandibular** **L**

Lingual	B															
	PD															
	GM															
	CAL															
	Tooth	**32**	**31**	**30**	**29**	**28**	**27**	**26**	**25**	**24**	**23**	**22**	**21**	**20**	**19**	**18**	**17**
Buccal/Facial	B															
	PD															
	GM															
	CAL															

Periodontal Charting: "it's more than just probing depths!"

Robert G. Sherman, DMD

Diplomate ABOM, Certified Dental Consultant

Dental Director, HDS

Scaling and root planing (D4341 / D4342) is a therapeutic procedure (see CDT 2017 nomenclature/descriptor below) performed for patients with periodontitis.

D4341 periodontal scaling and root planing – four or more teeth per quadrant

D4342 periodontal scaling and root planing – one to three teeth per quadrant

> *This procedure involves instrumentation of the crown and root surfaces of the teeth to remove plaque and calculus from these surfaces. It is indicated for patients with periodontal disease and is therapeutic, not prophylactic, in nature. Root planing is the definitive procedure designed for the removal of cementum and dentin that is rough, and/or permeated by calculus or contaminated with toxins or microorganisms. Some soft tissue removal occurs. This procedure may be used as a definitive treatment in some stages of periodontal disease and/or as a part of presurgical procedures in others.*

Adapted from CDT 2017

It is a non-surgical treatment usually reserved for patients with bone loss and/or clinical attachment loss. If a patient does not exhibit bone loss or clinical attachment loss, it is not possible to properly perform root planing as the root surface is not accessible. When supporting a diagnosis of periodontitis, a periodontal chart is required together with a valid periodontal diagnosis and x-ray images that document bone loss and the presence of root calculus. Each periodontal chart should document 6-point probing depth measurements for each tooth, attachment levels, gingival recession, mobility, furcation status, as well as probing sites that exhibit bleeding and suppuration.

When gathering data for a periodontal chart, many dentists only obtain probing depth measurements for each tooth. Unfortunately, this may not reflect the actual periodontal damage/bone loss that has occurred on the patient. Let's review some basic concepts and definitions when documenting the patient's periodontal status on periodontal chart.

- Probing Depth (PD) is defined as the distance from the gingival margin to the base of the gingival crevice. It is a measurement from the soft tissue margin (gingiva or alveolar mucosa) to the tip of the periodontal probe.

- Clinical Attachment Loss (CAL) is the distance from the cemento-enamel junction to the tip of a periodontal probe during periodontal diagnostic probing. The health of the attachment apparatus can affect the measurement.

- A periodontal pocket occurs with destruction of the supporting periodontal tissues. Progressive pocket deepening leads to destruction of the supporting periodontal tissues and loosening and exfoliation of the teeth.

- Pseudopocket is a deepening of the gingival crevice resulting primarily from an increase in bulk of the gingiva without apical migration of the junctional epithelium or destruction of the periodontal ligament and alveolar bone.

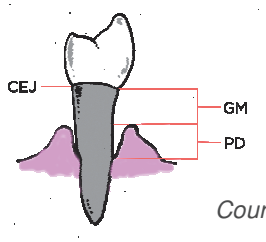
A pseudopocket is formed when there is gingival enlargement such as *Dilantin* hyperplasia or moderate to severe gingivitis with no alveolar bone or attachment loss.

Photo courtesy of the author

Clinical Attachment Loss (CAL) can be calculated in 3 different ways by measuring the location of the Gingival Margin (GM) in relationship to the cemento-enamel junction (CEJ).

1. When the Gingival Margin (GM) is located apical (below) to the cemento-enamel junction (CEJ), the total distance (millimeters) between the CEJ and GM is added together with the measured probing depth (PD). In the periodontal chart example below, the facial PD for tooth # 11 is 3 mms and the GM measurements are 3 mms. This results in an overall clinical attachment loss (CAL) of actually 6 mms. See illustration below.

CAL = GM + PD



Courtesy of M. Orozco

2. When the Gingival Margin (GM) is located at the cemento-enamel junction (CEJ), probing depths (PD) and clinical attachment loss (CAL) are the same. In the periodontal chart example below, tooth # 3 has facial probing depths listed as 3 mms. Since the GM is at the level of the CEJ, both the probing depth (PD) and clinical attachment loss (CAL) are the same 3mms.

CAL = PD

3. When the Gingival Margin (GM) is located above the cemento-enamel junction as seen in gingival hyperplasia and in pseudo-pocketing, the total distance (millimeters) between the CEJ and GM is subtracted from the measured probing depth (PD). In the periodontal chart example below, tooth # 8, the GM measurement is +3 mms above the cemento-enamel junction (CEJ) and the probing depth (PD) is 6 mms, therefore the total CAL is 3 mms.

PD – GM = CAL

Periodontal Chart Example:

Facial/Buccal

Tooth#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Probing Depth (PD)	X	333	434	123	344	222	534	666	423	223	333	212	334	545	645	X
Gingival Margin (GM)	X	222	000	111	000	444	000	+3+3+3	212	222	333	111	111	333	222	X
Clinical Attachment Loss (CAL)	X	555	434	234	344	666	534	333	635	445	666	323	445	878	867	X

HDS Guidelines have long stated that the periodontal chart submitted to support a claim request for scaling and root planing must include the following:

- *Patient name*
- *Date of periodontal probing examination*
- *6-point pocket depth measurements on all teeth*
- *Areas of clinical attachment loss*
- *Probing sites that exhibit bleeding*

HDS Policy Change

Effective on April 1, 2017, HDS will implement a policy change for all claims submitted for scaling and root planing (D4341 / D4342). Each periodontal chart submitted for a scaling and root planing claim will require six point probing depths (PD) and the documentation of clinical attachment loss (CAL).

When an office submits for 1 -2 quadrants of D4341 / D4342 (SRP) on the same date of service, only a periodontal chart is required. If the chart is incomplete and/or there is no alveolar bone loss or attachment loss indicated, the SRP will be denied. The dental office may then request reconsideration by supplying the missing required information and radiographic images as needed.

When submitting for 3-4 quadrants of scaling and root planing **(D4341/ D4342)** on the same date of service, x-ray images will now be required to support the claim request together with a complete periodontal chart listing probing depths and clinical attachment loss. If the x-ray image/s and other documentation do not demonstrate alveolar bone loss and/ or attachment loss, the alternate benefit of **D4346 scaling in presence of generalized moderate or severe inflammation – full mouth** will be applied.

References:

Comprehensive Periodontal Therapy: A Statement by the American Academy of Periodontology. *J Periodontol* July 2011; 943

Diagnosis of Periodontal Diseases Position Paper: American Academy of Periodontology. *J Periodontol August* 2003; 1237-1239: 943

American Dental Association: *CDT 2017 Dental Procedure Codes*, 2016, pg. 39

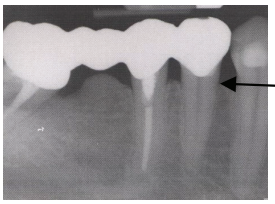
Glossary of Periodontal Terms: American Academy of Periodontology, www.perio.org

Clinical Periodontology 10th edition; St. Louis, Saunders Elsevier, 2006

Consultant's Corner: Miscoded or Misunderstood Procedure Codes
Robert G. Sherman, DMD, HDS Dental Director

This month I'd like to share some insight into some common procedures codes that are frequently miscoded or sometimes misunderstood, and provide information to assist in selecting a more appropriate coding choice.

D9120: Fixed Partial Denture Sectioning

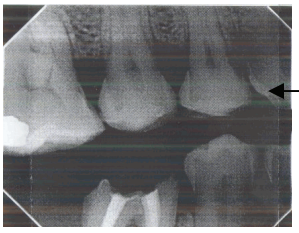


Example:
Failed distal retainer/abutment # 31 on a 4-unit FPD requires extraction and necessitating the sectioning of the distal aspect of retainer/abutment # 29. Crowns on teeth # 28, 29 will remain intact. Procedure code D9999 was erroneously submitted.

Procedure code **D9120** should be submitted with a narrative when it is necessary to remove a section of a bridge to enable the extraction of a non-restorable abutment/retainer and when other retainer components will be maintained. The CDT 2011 descriptor for **D9120** states "*Separation of one or more connections between abutments and or pontics when some portion of a fixed prosthesis is to remain intact and serviceable following sectioning and extraction or other treatment. Includes all recontouring and polishing of retained portions.*"

Codes D9999 (unspecified adjunctive procedure, by report) and D6999 (unspecified fixed prosthodontic procedure, by report) are not the appropriate coding options in this circumstance and should be submitted only when a completed procedure does not have a specific CDT code.

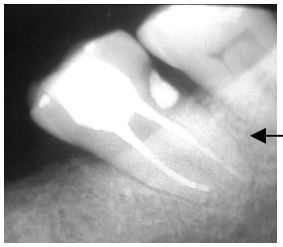
D7953: Bone Replacement Graft for Ridge Preservation-Per Site



Example:
Tooth # 30 submitted for D7210 surgical extraction and D4263 bone replacement graft-first site in quadrant with the following narrative "bone graft for future implant placement." The proper code for the bone graft in this situation is D7953 bone replacement graft for ridge preservation –per site

Procedure code **D7953 bone replacement graft for ridge preservation –per site** is the appropriate coding choice when the dentist has placed a bone graft in an extraction or implant removal site (at the time of the extraction or implant removal) in an effort to preserve the alveolar ridge or in preparation for a future implant. Procedure code **D4263 bone replacement graft-first site in quadrant** is properly coded when bone or a non-osseous graft is placed in conjunction with periodontal osseous surgery (**D4260/4261**). It is very important for the dental office to understand that **D4263** is a covered benefit when submitted concurrently with periodontal osseous surgery **D4260/4261**, but when submitted concurrently with an extraction or implant removal, it will be DENIED due to contract limitations. As a non-covered service, the fee for **D7953 bone replacement graft for ridge preservation-per site** is billable to the patient. Understanding the proper circumstances and coding for bone grafts will allow the office to clearly and accurately describe the benefits available to patients and the amount of the patient share.

D4249: Clinical Crown Lengthening-Hard Tissue



Example:
Tooth #18 submitted for D4249 clinical crown lengthening-hard tissue. Review of X-ray image demonstrates recurrent decay at/below the alveolar crest requiring clinical crown lengthening with reflection of a mucoperiosteal flap. Procedure code D4249 is the correct coding option in this circumstance.

The CDT descriptor for **D4249 clinical crown lengthening-hard tissue** states: *"This procedure is employed to allow restorative procedure or crown with little or no tooth structure exposed to the oral cavity.* ***Crown lengthening requires reflection of a flap and is performed in a healthy periodontal environment****, as opposed to osseous surgery, which is performed in the presence of periodontal disease. Where there are adjacent teeth, the flap design may involve a larger surgical area."*

When indicated, the crown lengthening procedure is performed to expose sound tooth structure by the removal of bone which also produces an alteration of the tooth's crown to root ratio. The **D4249** code is an inappropriate coding choice when the office has simply removed gingival soft tissue to enable access to a crown margin or to a carious lesion via a laser or electrosurgery unit. When only soft tissue has been removed, **D4999 unspecified periodontal procedure** may be a more appropriate coding option.

D9430: Office Visit for Observation (During Regularly Scheduled Hours)-No Other Services Performed

Example Narrative

"This is the final follow-up to injury to jaw. Patient was hit in the jaw with surfboard. We followed-up up on pain and function, performing range-of-motion and TMJ examination."

This procedure, while not a benefit in most dental plans, remains a benefit in HDS plans and is eligible for payment only when the following criteria are met.

1) It is not an evaluation procedure (as per CDT nomenclature above) and **is payable only when the visit is for observing a prior injury**. A narrative is required and should include the diagnosis and the nature of the injury. (See the example narrative in the box above.)

2) This procedure will be DISALLOWED (non-payable by HDS or patient) when related to a prior service that has a post-operative period (i.e. dry socket after tooth extraction). Office visits for reasons other than observing a prior injury will be DENIED and the patient will be responsible up to the allowed amount. Additionally, an office visit performed in conjunction with a procedure (other than X-rays), is DISALLOWED as included in the allowance for the procedure.

Consultant Corner – Misunderstood Periodontal Procedures

Norma Luke, D.M.D, Dental Consultant

Introduction

The non-surgical periodontal procedures of scaling and root planing (SRP) and full mouth debridement (FMD) are frequently misunderstood and miscoded by general dentists and their office personnel. The purpose of this article is to:

1. Review the *Current Dental Terminology (CDT)* nomenclature and descriptor of these procedures.
2. Clarify the appropriate clinical indications and coding for these procedures.
3. Discuss the documentation required to support payment for these procedures.
4. Provide clinical scenarios to enhance the understanding of these procedures.

Documentation:

Accurate and comprehensive clinical records including a periodontal chart with a valid periodontal diagnosis must be maintained by the dentist to facilitate the prompt and accurate payment of dental claims and support the necessity of services when an office is undergoing an audit. The *Introduction* section of the *2014 HDS Procedure Code Guidelines* highlights the requirements for a periodontal chart. The periodontal chart must indicate:

- Patient's name
- Date of the periodontal probing examination
- 6-point probing depth (PD) measurements on all teeth
- Areas of attachment loss (CAL)
- Probing sites that exhibit bleeding (BOP)

When submitting an HDS claim for SRP, a current periodontal chart recorded within the previous 6 months prior to the date of service (DOS) must be included for payment.[1] Other documentation should include, but is not limited to: clinical observation and findings, review of pertinent dental and medical histories, radiographic evidence of bone loss, subgingival root calculus and any mucogingival defects.[2]

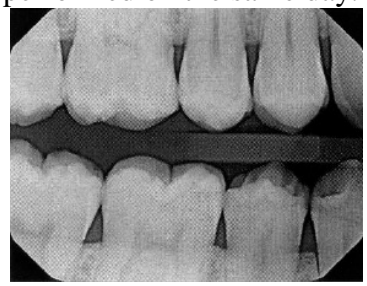
I. D4341 periodontal scaling and root planing - 4 or more teeth per quadrant
D4342 periodontal scaling and root planing - one to three teeth per quadrant

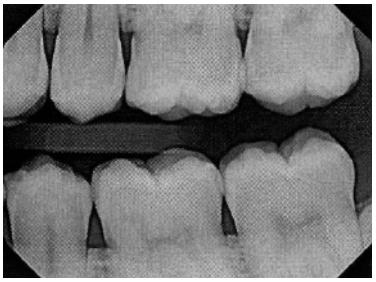
The *CDT 2014: Dental Procedure Codes* manual contains the following descriptor for SRP:

"This procedure involves instrumentation of the crown and root surfaces of the teeth to remove plaque and calculus from these surfaces. It is indicated for patients with periodontal disease and is therapeutic, not prophylactic, in nature. Root planing is the definitive procedure designed for the removal of cementum and dentin that is rough, and/or permeated by calculus or contaminated with toxins or microorganisms. Some soft tissue removal occurs. This procedure may be used as a definitive treatment in some stages of periodontal disease and/or as a part of pre-surgical procedures in others." [3]

SRP is the definitive non-surgical therapeutic procedure for the treatment of active periodontal disease where there has been clinical loss of the periodontal attachment. Bleeding upon probing, gingival suppuration (pus) and increased pocket depths are common clinical signs of active periodontal disease. Additionally, alveolar bone loss may be noted in bitewing and periapical radiographic images.[4,5]

Scenario 1: A general dentist submitted a claim for four quadrants of SRP **(D4341)** performed on the same day.



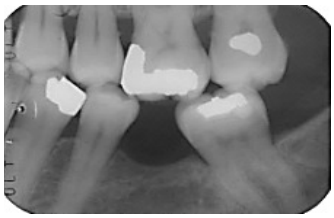


Bitewing images show no radiographic evidence of bone loss or subgingival calculus. The periodontal chart had indicated 2-4 mm PD but did not list a periodontal diagnosis or any documentation of CAL.

Although the submitted periodontal chart listed four quadrants of 2-4 mm PD, there is no evidence of alveolar bone loss and no documentation of CAL. This is consistent with a diagnosis of generalized gingivitis[6] and pseudopocket formation. A pseudopocket is formed when there is swelling of the coronal gingiva without any attachment (bone) loss. This differs from the periodontal pocket[4] which features attachment (bone) loss.

The periodontal attachment migrates apically when periodontitis progresses and alveolar bone loss occurs.[4,5,7] The documentation in this case failed to record evidence of any clinical attachment loss and therefore did not meet the criteria necessary to support four quadrants of SRP **(D4341)** performed on the same day. The code **D1110 Prophylaxis – adult** is the appropriate code for the procedure performed in this case.

Scenario 2: An adult diabetic patient was diagnosed with moderate periodontitis. The clinical record and periodontal chart documented multiple sites of 4-5 mm PD and bleeding upon probing.



Root calculus and alveolar bone loss are clearly evident in the bitewing images.

In this scenario, the 4-5 mm PD and BOP together with clear radiographic evidence of alveolar bone loss and subgingival calculus are consistent with the diagnosis of moderate periodontitis and fully support a periodontal treatment plan that included SRP.

II. D4355 full mouth debridement to enable comprehensive evaluation and diagnosis

FMD is a preliminary procedure that removes material alba, plaque and calculus prior to completion of a comprehensive examination/evaluation and the formulation of a clinical diagnosis. The *CDT 2014* descriptor for FMD states as follows:

"The gross removal of plaque and calculus that interfere with the ability of the dentist to perform a comprehensive oral evaluation. This preliminary procedure does not preclude the need for additional procedures."[8]

The FMD procedure code **D4355** is often submitted incorrectly by general dentists' offices when **routinely** removing plaque and calculus during the course of a new patient initial visit. This procedure code should only be submitted when the collection of material alba, plaque and heavy calculus compromise the ability of the dentist to complete a comprehensive oral evaluation which should include an evaluation for caries and periodontal disease.[9] While the CDT descriptor for **D4355** does not preclude performing an examination on the same day as the FMD, it is prudent to evaluate the patient ten to fourteen days after completion of the FMD to allow for reasonable resolution of the gingival inflammation which will then permit better access and visualization and ensure a more accurate clinical diagnosis.[10]

HDS Procedure Code Guidelines specify that FMD benefits are allowed for patients 14 years or older who have not had a prophylaxis (D1110) or debridement for at least the previous 24 months or have not received periodontal treatment in the previous 36 months.[11] The clinical record should include documentation consistent with the *CDT 2014* descriptor to support the necessity of FMD.

Example 3:

Courtesy of E. Cassella, D.M.D.

The intra-oral image clearly depicts heavy plaque and calculus. A comprehensive evaluation is not possible until the plaque and calculus have been removed and inflammation resolved. Ten to fourteen days is usually considered an acceptable healing period after the gross removal of plaque and calculus.[9,12]

In this case, it is quite apparent that FMD **(D4355)** would be an appropriate CDT code to submit for an initial patient visit as the significant calculus and plaque together with the

obvious gingival inflammation preclude the dentist's ability to formulate an accurate clinical diagnosis.

Accurate coding and a thorough understanding of the clinical criteria for periodontal procedures can be challenging for general dentists and their office personnel. The clinical scenarios presented above are intended to provide clarification and increase the understanding of the scaling and root planing **(D4341, D4342)** and full mouth debridement (**D4355)** procedure codes.

References

[1]Introduction*, HDS Procedure Code Guidelines*, 2014, p. 2.

[2]Parameter on Comprehensive Periodontal Examination, *Parameters of Care Supplement, Journal of Periodontology*, May 2000, p. 847.

[3]*CDT 2014: Dental Procedure Codes*, American Dental Association, Chicago, 2013, p. 36.

[4] Carranza, Fermin A. and Carmargo, Paulo M.: The Periodontal Pocket, *Clinical Periodontology*, Saunders, St. Louis, 2006, pp. 434-36.

[5]Parameter on Chronic Periodontitis with Slight to Moderate Loss of Periodontal Support, *Parameters of Care Supplement, Journal of Periodontology,* May 2000, p. 853.

[6]Parameter of Plaque-Induced Gingivitis, *Parameters of Care Supplement, Journal of Periodontology,* May 2000, p. 851.

[7] Carranza, Fermin A. and Carmargo, Paulo M.: The Periodontal Pocket, *Clinical Periodontology*, Saunders, St. Louis, 2006, pp. 444-6.

[8]*CDT 2014: Dental Procedure Codes,* American Dental Association, Chicago, 2013, p. 37.

[9] *Insurance Solutions Newsletter,* American Dental Support, LLC, May/June 2012, pp. 9-10.

[10]Takei, Henry H. and Carranza, Fermin A.: Gingival Surgical Techniques, *Clinical Periodontology,* Saunders, St. Louis, 2006, pp. 912.

[11]Periodontics, *HDS Procedure Code Guidelines*, 2014, p. 14.

[12]Blair, Charles*, Coding with Confidence: the "Go To" Guide for CDT 2011/2012*, Dr. Charles Blair & Associates, Inc., Belmont, 2010, p. 123.

Note: Position papers and publications regarding periodontal parameters of care are available on the American Academy of Periodontology's website. http://www.perio.org/publication.

Consultant's Corner: ***Full Mouth Debridement D4355***
Dr. Norma Luke, HDS Dental Consultant

Introduction

Full mouth debridement (FMD) is a non-surgical periodontal procedure that is frequently miscoded by general dentists and their office personnel. In 2018, the ADA Code Maintenance Committee revised the nomenclature and descriptor for code **D4355 full mouth debridement to enable a comprehensive evaluation and diagnosis**. The nomenclature was amended to include the additional verbiage **"on a subsequent visit."** The nomenclature and descriptor now clearly indicate that the FMD procedure (D4355) must be performed on a day distinct and separate from when the evaluation and diagnosis are completed.

Purpose

The purpose of this article is to:

1. Review the *2019 Current Dental Terminology (CDT)* nomenclature and descriptor of D4355
2. Clarify the appropriate clinical criteria and coding for this procedure
3. Provide clinical cases to facilitate the understanding of this procedure

The *2019 CDT* [1] nomenclature and descriptor for FMD are:

Procedure Code ↓ Nomenclature (bold font) ↓

D4355 full mouth debridement to enable a comprehensive evaluation and diagnosis on a subsequent visit

Full mouth debridement involves the preliminary removal of plaque and calculus that interferes with the ability of the dentist to perform a comprehensive oral evaluation. Not to be completed on the same day as D0150, D0160, or D180.

↑ Descriptor (italics)

To facilitate understanding of the new changes that took effect on January 1, 2018, the ADA published the *D4355 Guide – Version 1* [2] which states:

"The need for this procedure arises when it is not possible to adequately access tooth surfaces or periodontal areas because of excessive plaque and calculus. These deposits prevent a thorough evaluation of the patient's teeth and supporting gingival structures.

Upon completion of the procedure the patient would be expected to display generalized moderate to severe gingival inflammation, bleeding and edematous gingival tissue. Healing must occur in order to perform an accurate evaluation and diagnosis, which is why a comprehensive evaluation cannot be performed at the same appointment."

With this current revision, the D4355 code is clinically applicable when a patient initially presents with excessive plaque, inflammation and calculus deposits, and the dentist is unable to perform an accurate evaluation on the initial visit.

The dentist must have clear written documentation in the dental chart that is consistent with the *CDT 2019* descriptor to support the clinical necessity of FMD. Acceptable clinical criteria include generalized moderate to severe inflammation, bleeding when probing occurs, and also supragingival and/or subgingival calculus deposits significant enough to interfere with obtaining an accurate clinical diagnosis of caries, completion of periodontal screening, and appropriate charting. Although not currently required, intraoral photographs that show generalized moderate to severe inflammation and excessive calculus are beneficial to support the clinical necessity of FMD.

Example 1:

Courtesy of E. Cassella, D.M.D.

The intra-oral image clearly demonstrates heavy plaque and calculus. A comprehensive evaluation is not clinically reasonable until the plaque and calculus have been removed and inflammation resolved. A minimal healing period of 10-14 days is suggested after the gross removal of plaque and calculus has been completed [3].

In this case, it is apparent that FMD (D4355) would be an appropriate CDT code to submit for the initial patient visit. Significant calculus and plaque together with the obvious severe gingival inflammation definitely preclude the dentist's ability to complete an accurate evaluation and formulate a clinical diagnosis.

Example 2:

Slight amounts of calculus on only the lingual aspect of the lower anterior teeth are evident in the intraoral photographic image. In this case, the amounts of calculus and inflammation are not expected to interfere with the dentist's ability to perform a comprehensive evaluation in this case and a D4355 would be an inappropriate code selection.

In this example, the dentist is able to perform an evaluation, formulate a diagnosis and treatment plan on the same day as the prophylaxis. As such, **D1110 prophylaxis - adult** is the more appropriate procedure code.

The CDT 2019 [4] descriptor for **D1110 prophylaxis – adult** states:

"Removal of plaque, calculus and stains from the tooth structures in the permanent and transitional dentition. It is intended to control local irritational factors."

Of note, this CDT descriptor does not distinguish between supra and subgingival calculus nor does it describe the amounts of calculus present.

Accurate coding and understanding of the clinical criteria and differences between periodontal and preventive dental procedures such as D4355 and D1110 can be confusing for dentists and their office personnel. For further clarification, dental offices should consult with the CDT 2019 and/or the ADA's "*D4355 ADA Guide – Version 1*" which can be accessed at:

https://www.ada.org/~/media/ADA/Publications/Files/D4355_ADAGuidetoReportingFullMouthDebridement_v1_2018Jan.pdf?la=en.

References

1. *CDT 2019: Dental Procedure Codes,* American Dental Association, Chicago, 2019, p. 39.

2. *D4355 – ADA Guide to Reporting Full Mouth Debridement,* D4355 ADA Guide – Version 1, American Dental Association, Chicago, January 2018.

3. Blair, Charles, *Coding with Confidence: the "Go To" Guide for CDT 2017*, Dr. Charles Blair & Associates, Inc., Belmont, 2016, p. 175.

4. *CDT 2019: Dental Procedure Codes,* American Dental Association, Chicago, 2019, p. 15.

Consultant's Corner:

Understanding D4346 – Scaling in Presence of Generalized Moderate or Severe Gingival Inflammation
Dr. Karen Hu, DDS
HDS Dental Consultant

Introduction:

On January 1, 2017, the ADA's Council on Dental Benefits Programs added CDT Code D4346 for full mouth scaling in the presence of generalized moderate or severe gingivitis but no periodontitis. This code filled the treatment gap, after evaluation and diagnosis, between a preventive prophylaxis for a generally healthy periodontium and therapeutic scaling and root planing for periodontitis. D4346 addressed treatment for patients according to three periodontal diagnosis: those with a healthy periodontium, those with moderate to severe gingivitis and those with periodontitis.

The purpose of this article is to:

- Review the 2021 Current Dental Terminology (CDT) nomenclature and descriptor of D4346.
- Clarify the clinical criteria and coding for this procedure.
- Provide clinical cases to facilitate understanding of this procedure.

The 2021 CDT nomenclature and descriptor for scaling in the presence of generalized moderate or severe gingival inflammation is:

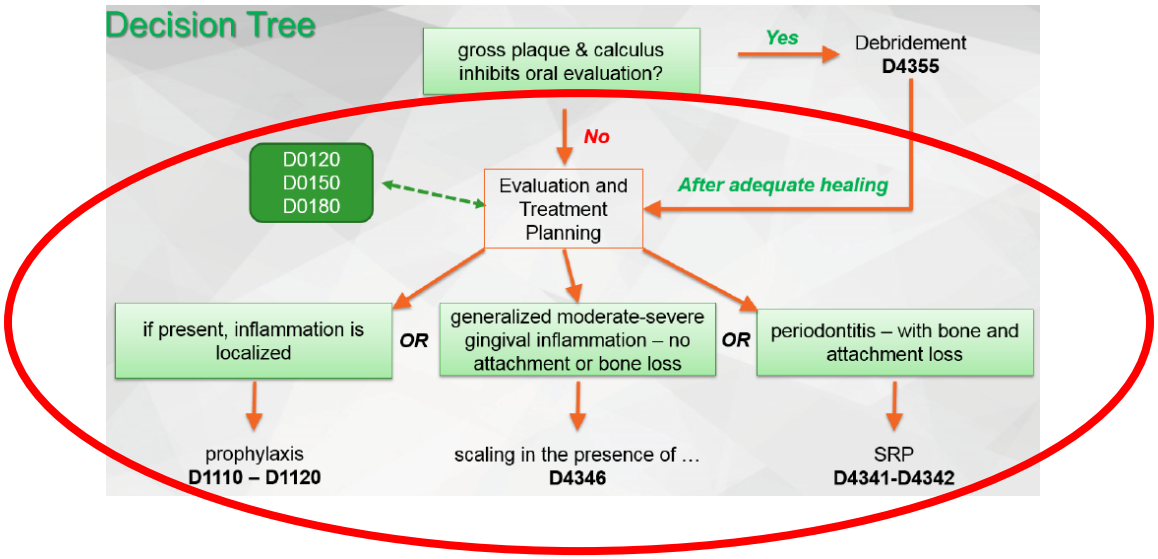
Procedure code Nomenclature

D4346 **Scaling in presence of generalized moderate or severe gingival inflammation—full mouth, after oral evaluation**
The removal of plaque, calculus and stains from supra- and sub-gingival tooth surfaces when there is generalized moderate or severe gingival inflammation in the absence of periodontitis. It is indicated for patients who have swollen, inflamed gingival, generalized suprabony pockets, and moderate to severe bleeding on probing. Should not be reported in conjunction with prophylaxis, scaling and root planing, or debridement procedures.

Descriptor in italics

The American Dental Association published the ADA Guide to Reporting D4346—Version 4—July 11, 2018 to facilitate offices with their treatment plan decision-making. A flow chart such as the one below was included in the guide so that offices could visualize the decision tree and compare treatment procedure codes such as D1110, D4346, D4341 (and D4342) after an evaluation (D0120, D0150, D0180).

From ADA Guide to Reporting D4346-Version 4-July 11, 2018



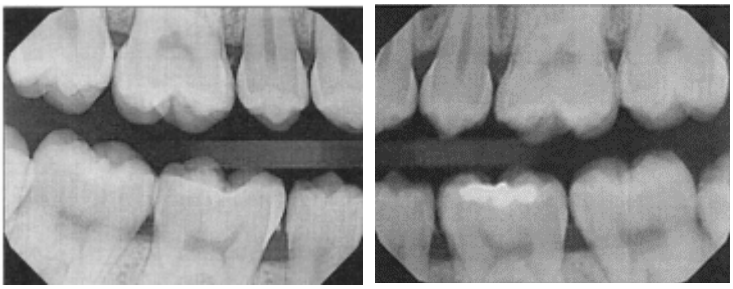
D4346 is a therapeutic treatment that involves full mouth scaling *after* an oral evaluation. This procedure is indicated for patients who do not have periodontitis but exhibit swollen inflamed gingiva, generalized suprabony pockets, and moderate to severe bleeding on probing. Moderate-severe gingivitis is diagnosed when thirty percent or more of the patient's natural teeth, involving one or more sites, is present. Since there is no bone or clinical attachment loss, a diagnosis of periodontitis is not made. Treatment entails scaling to remove plaque, calculus and stains on supra- and sub-gingival tooth surfaces to allow for tissue healing.

By contrast, D1110 prophylaxis-adult or D1120 prophylaxis-children are preventive, full mouth treatment for individuals with a healthy periodontium and localized inflammation. It is intended to remove plaque, calculus and strain from tooth structure and implants and to control local irritational factors.

D4341 periodontal scaling and root planing—four or more teeth per quadrant or D4342 periodontal scaling and root planing—one to three teeth per quadrant are theraupeutic (as opposed to preventive procedure) codes that involves scaling and root planing by quadrants and are indicated for patients diagnosed with periodontitis. Unlike D4346 that involves only scaling and polishing, D4341 and D4342 entails root planing to remove cementum or dentin that is rough and/or permeated by calculus or contaminated with toxins or microorganisms.

D4346 is not reported in conjunction with prophylaxis or scaling and root planing procedures and is not an age-based procedure. As a full mouth procedure generally taking one appointment, it does not take into consideration the intensity of scaling if there is copious calculus or the length of time or need for multiple appointments to complete treatment.

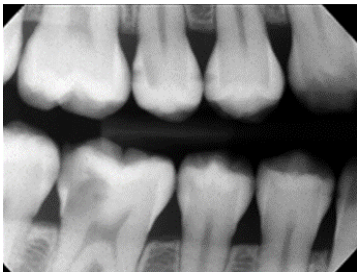
Example 1:



The bitewing x-rays of this 20-year-old exhibit generalized supra-and subgingival calculus. Pocket depths were measured at 4-5 mm with generalized gingival bleeding on probing. Moderate to severe gingivitis was diagnosed.

In this case, the dental office requested pre-authorization for four quadrants D4341 scaling and root planing. Although calculus was present and the gingiva was inflamed with bleeding on probing, no clinical attachment or bone loss was present. D4346 would be the appropriate CDT code to submit.

Example 2:



In this right bitewing x-ray image, no supra or subgingival calculus is visible. The patient presented with posterior 4-5 mm pockets in the molar and premolar areas, bleeding-on-probing, and generalized moderate gingival inflammation. No bone or clinical attachment loss was found.

In this example, the dental office billed for 4 quadrants D4342—3 teeth per quadrant. Since neither bone loss nor attachment loss was found, payment was denied. D4346 would have been the appropriate CDT code to submit since more than 30% of the teeth displayed moderate gingivitis. If inflammation had been localized and involved fewer than 30% of the teeth, a preventive prophylaxis D1110 or D1120 would be the appropriate code.

Hawaii Dental Service, in its Procedure Code Guidelines effective 01/01/21, indicates D4346 is applied to the patient's annual prophylaxis benefit and is benefited at the preventive co-pay percentage. Benefits for D4346 are included with D1110, D1120, D4341, D4342, D4355 or D4910 and are not billable to the patient when submitted by the same dentist/dental office on the same day. Age limitations are not indicated. While there are no submission requirements for D4346, supporting documentation of patient's periodontal status are recommended. A periodontal chart, x-ray images and/or intraoral images should be stored in the patient's chart.

Currently, D4346 is not a benefit for HDS-Medicaid recipients.

For additional information, dentists and their office staff are encouraged to review the American Dental Association's CDT 2021: Dental Procedure Codes, Hawaii Dental Service's Procedure Code Guidelines Revised 01/01/2021 and the American Dental Association Guide to Reporting D4346 which can be accessed at https://www.ada.org/~/media/ADA/Publications/Files/D4346EducationGuidelines_V4_2018Jul06.pdf?la=en

References

1. CDT 2021: Dental Procedure Codes, American Dental Association p. 33
2. ADA Guide to Reporting D4346—Version 4, July 11, 2018
3. Hawaii Dental Service Procedure Code Guidelines Revised 01/01/21 Effective 01/01/21 Periodontics p. 14

Consultant's Corner: Dental Sealants

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HDS proprietary claims data[1] show that the utilization and placement of dental sealants in our HDS population is low, compared to other mainland Delta Dental organizations and the national average. The data also clearly demonstrated a reduction in future restorative costs for those patients who have received at least one dental sealant. The purpose of this issue of Consultant's Corner is to discuss sealant statistics, the indications for placement of dental sealants and to clarify the current sealant benefit in HDS benefit plans.

Background Information[2]: Pit and fissure decay accounts for 80-90 percent of carious lesions in permanent molars. Published studies have shown that placement of sealants in permanent teeth may reduce the incidence of decay by up to 86 percent in the first year and 58 percent after four years. The retention of sealants is initially high but it may be adversely affected by poor moisture control and inadequate preparation of the tooth prior to placement. With appropriate tooth selection, placement and follow-up care, the success rate of sealants may be upwards of 80-90 percent after 10 years.

Indications for sealants[2]: The American Academy of Pediatric Dentistry (AAPD) recommends that teeth be evaluated periodically for developmental defects and deep pits and fissures that increase the risk for caries/decay. Sealants should be placed in high risk teeth and subsequently evaluated for repair or replacement at each dental examination. High risk teeth should ideally receive sealants as soon as possible upon eruption of the permanent molars while those teeth with low risk pits and fissures may not need sealants. Caries risk may vary over time as a result of a sudden change in dietary habits, nutrition, oral bacteria, physical condition, etc. and should be evaluated/monitored at each examination.

HDS Data on sealants[3]: Sealants do provide cost savings by delaying or avoiding the cycle of dental decay and /or invasive treatment such as fillings. HDS data has shown a 31 percent reduction in restorative costs when comparing HDS patients who have received at least one sealant with those HDS patients who have not received a sealant over a 5 year period.

HDS claims data revealed that 48.5 percent of all HDS members ages 6-18 are considered at high risk for caries by having received one or more restorations in the previous three year time period. The nationwide average for high caries risk individuals in this age category is 34 percent. Of Hawaii children ages 6-9, who are considered at high risk, only 28.9 percent received a sealant on their first molars compared to the national average of 40.4 percent. For Hawaii children ages 11-15, only 14.2 percent received sealants on second molars compared to the national average of 18.7 percent.

Hawaii Dental Service: Most HDS dental plans include sealant coverage for permanent molars and premolars. The age limitation is based on group contract but is typically limited to members below 18 years of age. For HDS plans with sealant coverage, molar and premolar teeth with no prior history of occlusal restorations are eligible for the sealant benefit. Coverage may range from 70-100 percent based upon group contract.

In Hawaii, the lack of public fluoridated water coupled with dietary factors (high carbohydrate) would be expected to produce a greater smooth surface decay (interproximal) rate on younger children negating the indication for sealant placement. These factors underscore the need and importance of establishing a "dental home" for all of Hawaii's keiki where they can receive comprehensive, patient centered care from childhood to adulthood by a licensed dentist. The American Academy of Pediatric Dentistry website www.aapd.org contains valuable information for parents, guardians, and dental practitioners via the Dental Home Online Resource Center. Additionally, the AAPD has a valuable, clinically relevant listing of various clinical guidelines, policies, and recommendations on topics such as early childhood caries, fluoride, sealants, restorative considerations, dental trauma and other pertinent topics that may be accessed and downloaded.

Information about the HDS sealant benefit is on page 3 in the Preventive section of the 2012 HDS Procedure Code Guidelines.

References:

1: HDS and Delta Dental of America Claims Database Information

2: Clinical Affairs Committee- *Guideline on Pediatric Restorative Dentistry*, American Academy of Pediatric Dentistry
http://www.aapd.org/media/Policies_Guidelines/G_Restorative.pdf

3: HDS Proprietary Claims Database Information

Consultant's Corner: Did you know?

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Purpose: The purpose of this Consultant's Corner is to:

- Inform dentists of issues affecting the dental profession at the national and local level.

- Discuss current HDS corporate oral health initiatives.

Did you know?

1. The American Dental Association (ADA) and the American Academy of Pediatric Dentistry (AAPD) recommend that all children see a dentist for the first time within 6 months of the eruption of their first tooth or prior to their first birthday. To align with this recommendation, HDS has initiated a community-wide oral health initiative titled, *"Dentist by One."* HDS proprietary data have shown that 25 percent of children enrolled in HDS commercial dental plans have seen a dentist by age one. Unfortunately, when compared to Medicaid data, it appears that only about 1.5 percent of Medicaid eligible children have seen a dentist by age one. This initiative is critical in Hawaii as HDS data show that one-third (33%) of children have developed caries/decay by the age of three. Each year in Hawaii, hundreds of young children, as early as age two, undergo treatment in a hospital-based operating room under general anesthesia due to the scourge of early childhood caries. Please help spread the word on the importance of seeing a dentist by age one and establishing a dental home for all of Hawaii's keiki.

   Informational flyers and posters are now available for distribution. Additional information is available on the HDS website: www.HawaiiDentalService.com and the AAPD website www.aapd.org. HDS also anticipates a future marketing campaign featuring print and television coverage.

2. HDS has established another oral health initiative that will attempt to increase the number of school-based sealant programs in high-need schools in Hawaii. A high-need school is identified as a school where 50 percent or more of the enrolled students are receiving free or government subsidized school meals. The HDS Foundation has approved a grant to the Hawaii Department of Health to conduct a pilot sealant program involving six high-need schools. Data collection is expected to be completed in March 2016.

3. In 2011, the CDT eliminated the absolute requirement of laying a mucoperiosteal flap when submitting for payment of **D7210** *surgical removal of erupted tooth*. The CDT nomenclature was changed to indicate that the mucoperiosteal flap component is optional and can be performed if indicated. The CDT still clearly states that bone must be removed and/or the tooth must be sectioned to fulfill the criteria for D7210. Simply laying a flap and then removing the tooth via elevator/forceps does not constitute a D7210 and should be submitted as **D7140** *extraction of erupted tooth*. Please refer to CDT 2015 for more information. **Bottom line:** if you are not removing bone or sectioning the tooth with a hand piece, chisel, or other instrument, the appropriate code is **D7140** *extraction, erupted tooth or exposed root.*

4. HDS commercial utilization data show that 40 percent of root canal treatments paid by HDS do not receive a follow-up restoration or crown within 12 months after completion. This has contributed to a 13.4 percent failure (extraction) rate at five years post operatively. Current evidence clearly demonstrates that endodontically treated molar teeth should at a minimum have a cuspal coverage restoration placed after endodontic treatment is completed to ensure success. HDS is committed to improving the quality and longevity of endodontic treatment in Hawaii and recommends that all dentists access the American Association of Endodontists (AAE) website at www.aae.org and down load significant no-cost resources such as endodontic case difficulty assessment and guidelines, treatment planning guidelines, and an entire section devoted to cone beam CT in endodontics. Remember the adage "when in doubt about the prognosis or the degree of difficulty, perhaps it is best to refer."

5. Marko Vujicic, PhD, Chief Economist and Vice President, Health Policy Institute at the ADA, has authored numerous high quality papers in the February, March, June, July, August and November 2015 issues of *JADA* on the current economic state and future of dentistry that are well worth reading. Additionally, his topics have been condensed into 2-3-minute You Tube video clips on topics such as *What the ADA Can Learn from the NBA? a*nd *The Booming Medicaid Market*. It will be well worth the time.

6. The Dental Quality Alliance (DQA) was developed by the ADA in an effort to develop oral health care measures in dentistry. It is an organization with 29 member entities including all the dental specialty organizations and other professional stakeholders who have developed the first set of pediatric dental measurements. The DQA's mission is "to advance performance measurement as a means to improve oral health, patient care, and safety through a consensus-building process." Information, reports, and videos about quality and performance measures in dentistry can be accessed by visiting the DQA site at www.ada.org.

HDS together with Delta Dental Plans Association (DDPA) have developed oral health measures that are similar to the pediatric dental measurements put forth by the DQA. They include but are not limited to measurements such as:

	HDS Average	*DDPA Nationwide*
Percent of higher caries risk children age 6-9	*53.05 %*	*24.29%*
Percent of higher caries risk children 6-9 receiving sealants on their first molars	*30.24%*	*32.77%*
Percent of higher caries risk children age 10-14	*45.95%*	*34.40%*
Percent of higher caries risk children age 10-14 receiving sealants on their second molars	*11.51%*	*14.94%*

7. In a 2001 report titled, *"Crossing the Quality Chasm,"* The Institute of Medicine's (IOM) Committee on the Quality of Healthcare in America has defined six goals for quality improvement in healthcare.

The IOM advocates that healthcare (including dentistry) should be:

Safe: avoiding injuries from the care that is provided.

Effective: is the care/services provided based on sound scientific principles (evidence based) and necessary?

Patient-centered: is the care truly what the patient needs, desires, and values or is the care determined by the available technology in the office or other financial considerations of benefit to the dentist?

Timely: is the care provided in a timely manner and are patients unduly harmed due to delays in providing treatment?

Efficient: does the care/service avoid waste of supplies, energies, time?

Equitable: is the care/service provided of consistent high quality regardless of patient's socioeconomic status, insurance status, gender, ethnicity, geographic location, etc.?

8. With the Hawaii Legislature mandates that all dentists complete three hours of CE on Dental Ethics each year over and above the already prescribed 16 hours, perhaps it is a good time to revisit and review the American Dental Association's Principles of Ethics and Code of Professional Conduct.

The Five basic Principles of Ethics are:

- Patient Autonomy (self-governance)
- Nonmaleficence (do no harm)
- Beneficence (do good)
- Justice (fairness)
- Veracity (truthfulness)

The ADA has published the Principles of Ethics together with the Code of Professional Conduct and Advisory Opinions in a single document which can be accessed at:

http://www.ada.org/en/about-the-ada/principles-of-ethics-code-of-professional-conduct/

Consultant's Corner: HDS Performance Measurements

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In a previous article, I addressed the concept of Performance Measurements in Dentistry as well as the Dental Quality Alliance's role in the development of performance measurements for the dental profession. The article titled *Appropriate Use of Dental Quality Measurement in Dentistry* in this edition of *Quick Bites* has been reprinted with permission from both the author and the Georgia Dental Association.

The purpose of this article is to:

1) Reintroduce the concept of performance measurements and the Dental Quality Alliance (DQA)
2) Identify and introduce the performance measurements that have been adopted by HDS to track and monitor
3) Provide initial data on select HDS performance measurements

As noted in the enclosed article, the mission of the Dental Quality Alliance is to "advance the field of performance measures through a consensus building process with a goal of improving oral health, patient care, and safety." Currently, the DQA has published and advanced twelve (12) pediatric performance measurements (listed in the article) and two (2) adult performance measurements related to periodontitis.

The Quality Committee of the HDS Board of Directors consists of five dentist board members, one public board member, and one pediatric dentist. It recently adopted four pediatric performance measures related to sealants, fluoride, continuity of care, and utilization of care, two additional DQA adult periodontitis measures, and the HDS Dentist by One performance measurement.

Pediatric Dental Measurements:

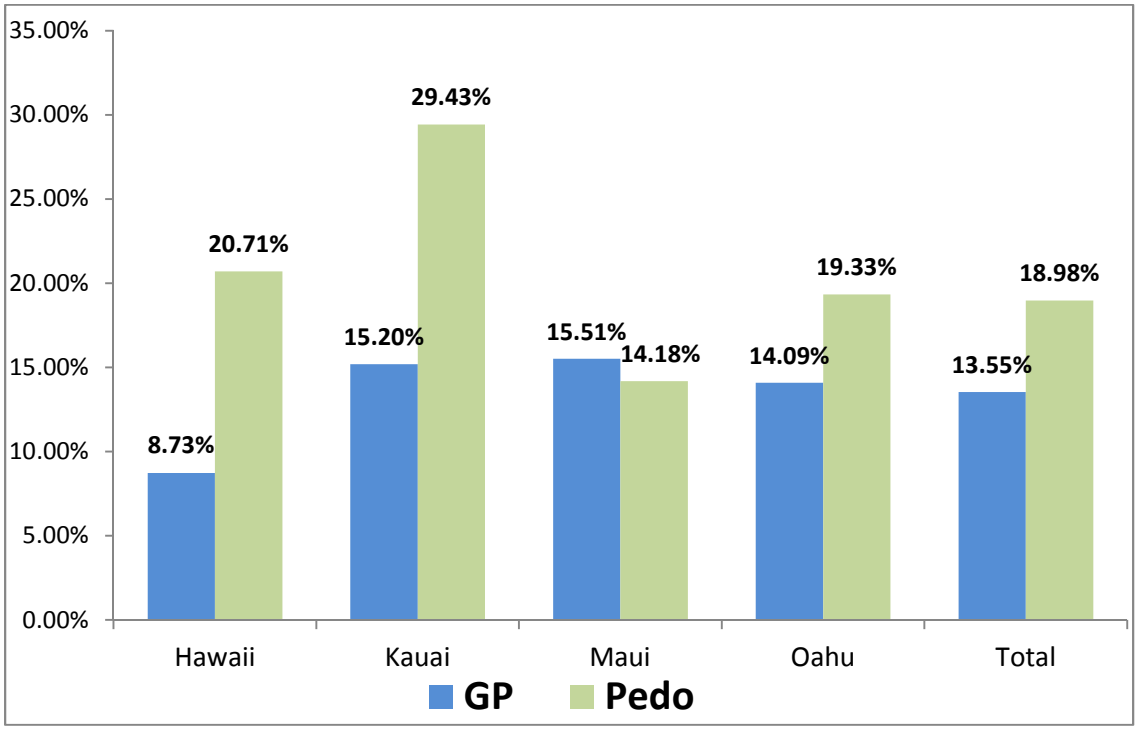
I) The **Dentist by One** measurement tracks the percentage of children in both Medicaid and commercial dental plans who have seen a dentist prior to their first birthday. The recommendation to have a child see a dentist before age

one has been well established for decades by the ADA, the American Academy of Pediatric Dentistry (AAPD), and other professional organizations. As noted below, the data appears to show that less than ten (10) percent of children in Hawaii have seen a dentist before reaching their first birthday.

Measure	**Medicaid Children**	**Commercial**
Dentist by One	**9.0 %**	**6.4 %**

II) The DQA **sealant measurement** evaluates the percentage of children ages 6-9 years at elevated (moderate – high) risk for caries who have received one or more sealants on the permanent first molar in the reporting year.

Figure 1: Percentage of children at elevated caries risk receiving at least one dental sealant on a permanent first molar

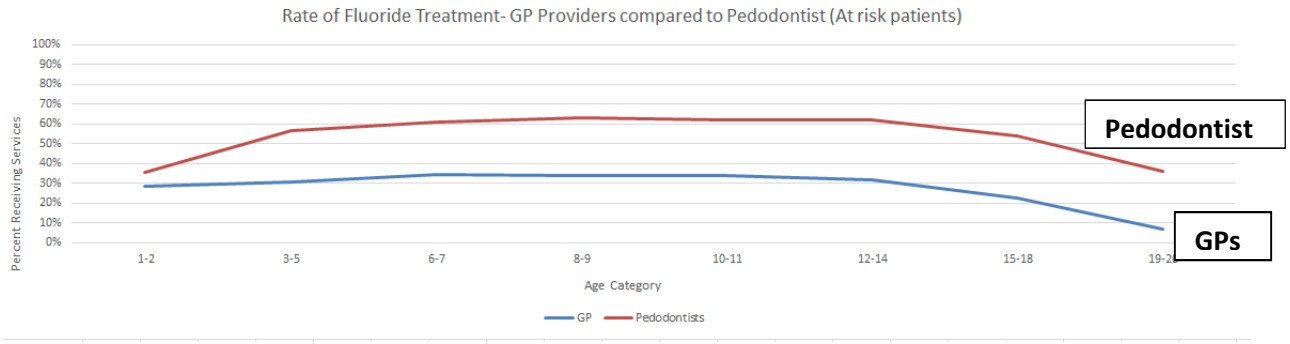


In Figure 1 above, the horizontal axis shows the specific island and the type of treating dentist (GP or pedodontist) while the vertical axis shows the percentage of children receiving a sealant. This data clearly indicates that children at elevated risk for caries (1 or more carious lesions in the last 3 years) are more likely to receive sealant services from a pediatric dentist than a general dentist. Sealants have long been demonstrated

to be effective in reducing decay in numerous clinical studies and are recommended by the AAPD for children at elevated caries risk.

III) The DQA **fluoride measurement** evaluates the percentage of children age 1-21 years at elevated (moderate or high) risk for caries who received at least two (2) fluoride applications in the reporting year.

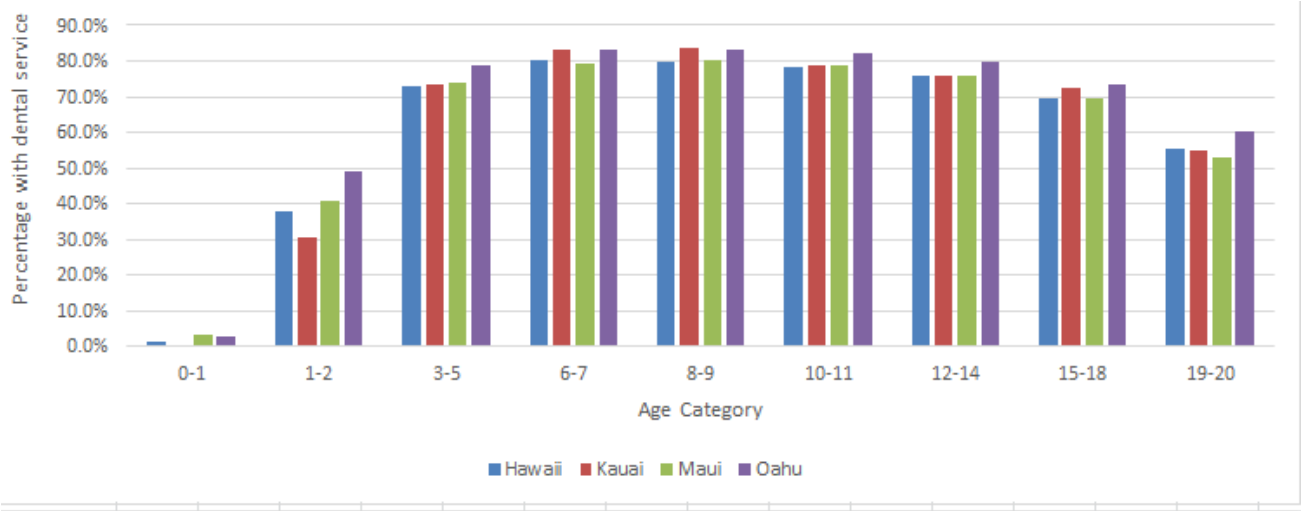
Figure 2: Percentage of children at elevated caries risk receiving at least two fluoride treatments



In Figure 2 above, the horizontal axis lists various age bands for children while the vertical axis shows the percentage of children receiving at least two fluoride treatments in the reporting year. This data clearly shows that children at elevated risk for dental caries are virtually twice as likely to receive the two fluoride treatments if they visit a pediatric dental office than a general practice office. The ADA and AAPD have recommended that children at high risk for caries receive up to four (4) fluoride applications per year.

IV) The DQA **utilization of care measurement** evaluates the percentage of children age 1-21 years who received at least one dental service within the reporting year.

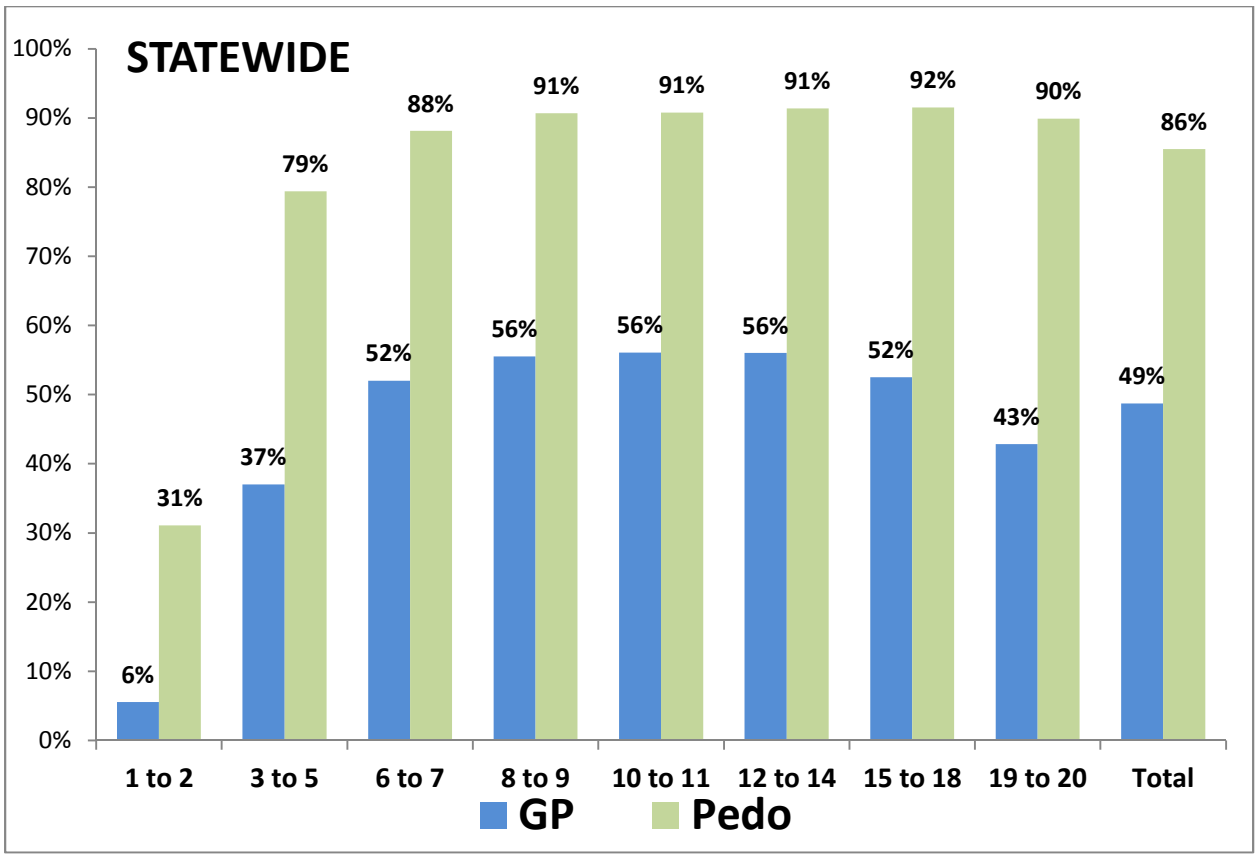
Figure 3: Percentage of children receiving a dental service



In Figure 3, the horizontal axis contains various age bands for children while the vertical axis demonstrates the percentage of children by respective island receiving dental services in the reporting year. This data clearly shows a gap in dental services provided to children 0- 3 years of age in Hawaii. Current ADA and AAPD recommendations are that each child should visit a dentist by the first birthday and HDS data has shown that 30-35 percent of children in Hawaii already have decay and/or restorations by age 3. The percentage of children between ages 3 -18 does show an improvement in utilization rates that hovers between 70 – 80 percent.

V) The DQA **continuity of care measurement** evaluates the percentage of children enrolled for two (2) consecutive years who visited the same practice or clinical entity in both years.

Figure 4: Percentage of children visiting the same dental office for two consecutive years



The horizontal axis data in Figure 4 contains various age bands for children while the vertical axis shows the percentage of children visiting the same dental practice for two (2) consecutive years and is broken down by general practitioner or a pedodontist. This data suggests that children are more likely to establish a dental home within a pediatric dental practice than a general practice as there appears to be a notable data discrepancy between GPs and pediatric dentists.

Periodontal Measurements:

The two (2) DQA periodontal measurements center on in adult patients over the age of 30 with a history of periodontitis who receive an evaluation and those who receive ongoing care.

The **periodontal evaluation** measurement evaluates the percentage of adults with periodontitis over the age of 30 who have received either a comprehensive examination,

periodic examination, or a comprehensive periodontal evaluation within the reporting year.

Figure 5: Percentage of periodontitis patients receiving two or more periodontal treatments

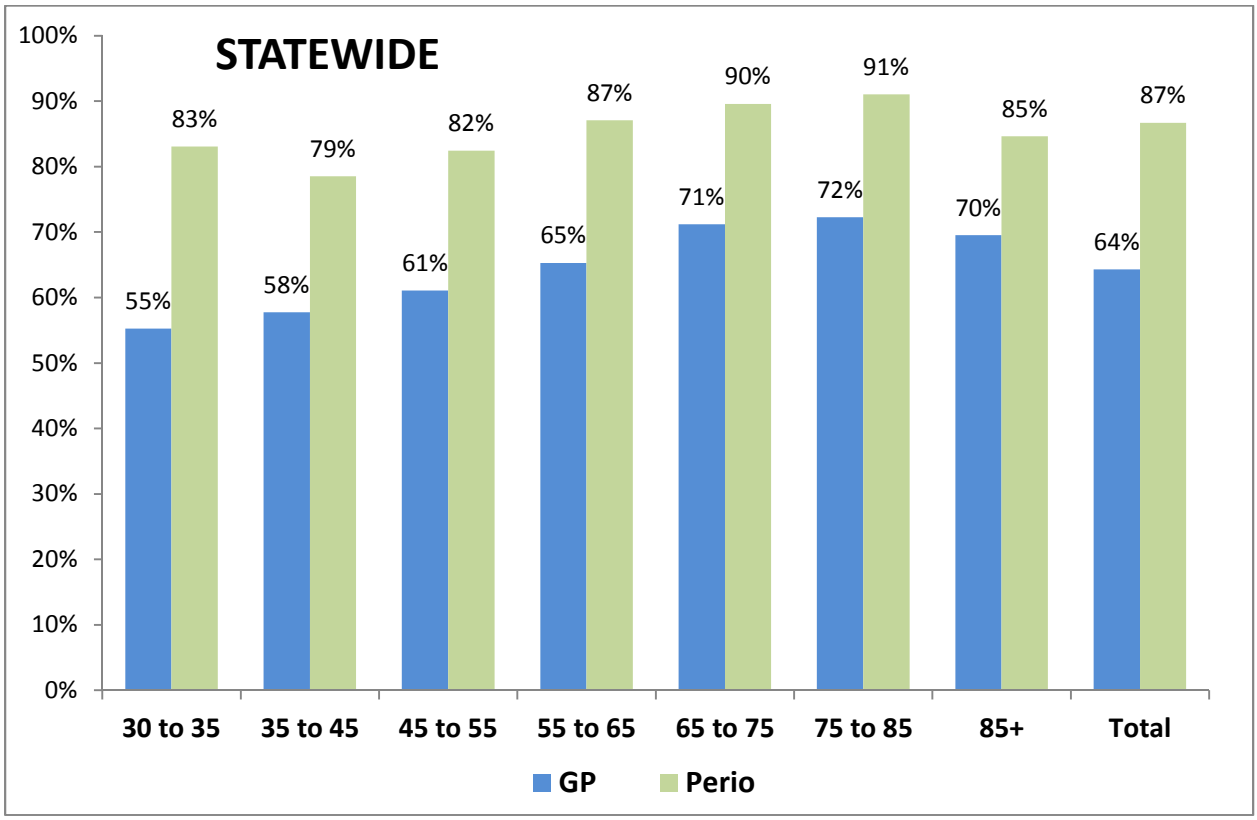


Figure 5 shows the percentage of periodontitis patients who have received two or more periodontal treatments such as prophylaxis, SRP, and/or a PMV during the reporting year. Age bands are listed on the horizontal axis and percentages are listed on the vertical axis along with practice type (GP or periodontist). This data suggests that a high percentage of periodontitis patients are receiving appropriate periodontal treatments.

The second DQA periodontal measurement evaluates the percentage of adult periodontitis patients over the age of 30 who have received **ongoing care** such as an oral prophylaxis or scaling/root planning (SRP) or a periodontal maintenance visit (PMV) at least twice during the reporting year

Figure 6: Percentage of periodontitis patients receiving an evaluation

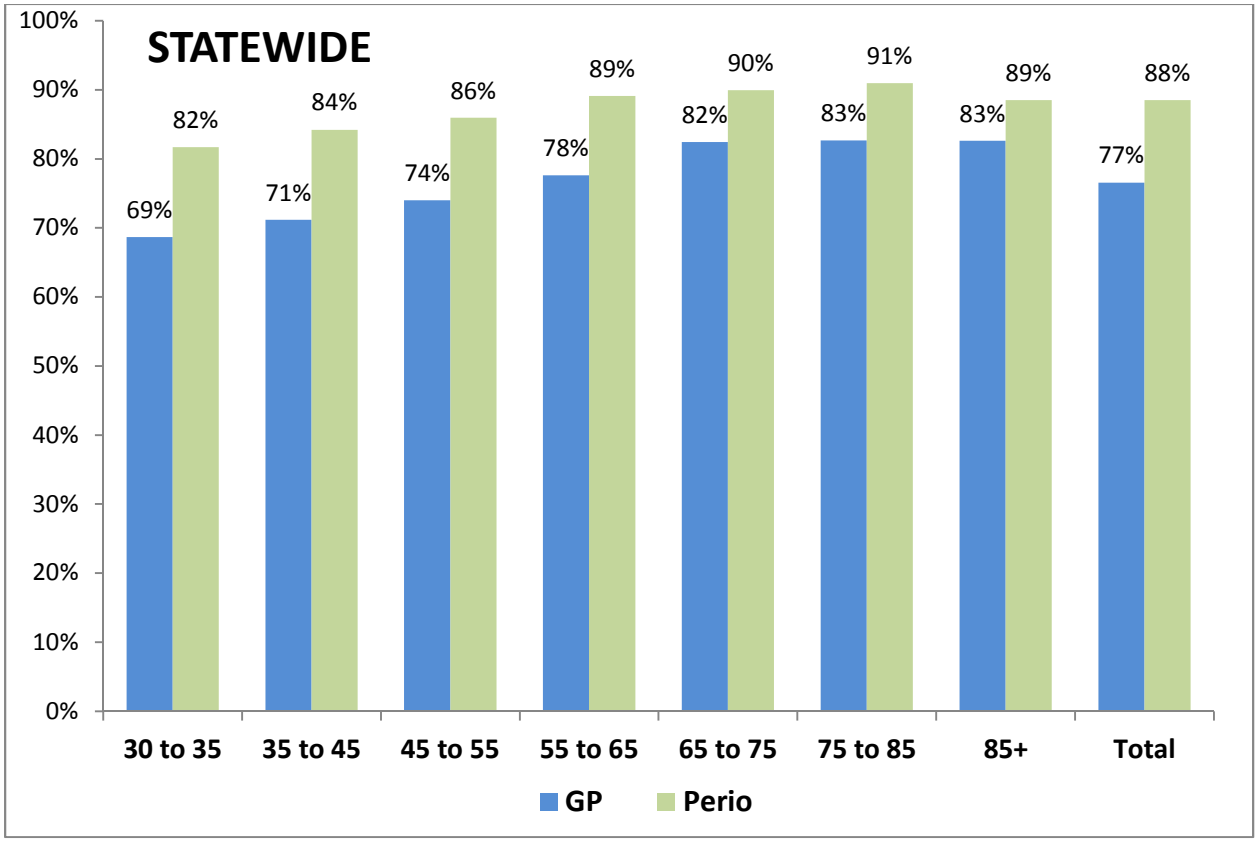


Figure 6 clearly demonstrates that most periodontitis patients visit a periodontist for an evaluation at least once per year and a high percentage of periodontitis patients visit a general practitioner for an evaluation at least once a year as well. Age bands are listed on the horizontal axis and percentages are listed on the vertical axis.

Conclusion: Performance measurements in dentistry may be a relatively new concept to many dental offices despite the formation of the Dental Quality Alliance back in 2008. It is quite evident that there is significant interest from the federal government, dental benefit carriers, employers, communities of interest, and the general public in obtaining value, reducing unnecessary expenditures, and improving clinical outcomes regarding dental costs and expenditures in the dental healthcare system.

With the new ongoing pursuit of what is currently referred to as “The Value Agenda”, dental offices should be familiar with the Dental Quality Alliance’s various performance measurements, the impact of performance measurements in dentistry, and the strong likelihood for change in the future.

GDA
Georgia Dental Association

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June 2016

Journal of the Georgia Dental Association

Exploring the Appropriate Use of Quality Measurement in Dentistry

Appropriate Use of Dental Quality Measurement in Dentistry

by Marie Schweinebraten, DMD

"Our dilemma is that we hate change and love it at the same time. What we really want is for things to remain the same but get better."

Sydney J. Harris (1917-1986), journalist, Chicago Daily News/Chicago Sun Times.

Many of us have asked ourselves in the practice environment, "How many of my new patients really accept treatment?" or "What percentage of my patients return for recall after completion of treatment?" These are questions we ask in order for our practices to run effectively and efficiently, and allow us to provide optimal care for our patients. In our practices, and in dentistry in general, "quality measurement" may seem like a foreign term, but our profession has used quality measurement for decades. Practice management consultants encourage practices to utilize quality measurement and it is utilized within Medicaid patient care systems, health care exchanges, and insurance plans.

The idea of quality management as a foreign concept to dentists may be changing.[1] As technology advances, so too does the criteria for evaluating patient care. Historically the dental profession has enjoyed respect and trust from patients, and provided a comfortable standard of living for practitioners. The challenge facing dentists is to maintain these characteristics in an ever-changing practice environment. The days of the isolated practitioner who provides care one-on-one for patients with no outside influences are largely gone. Modern dentistry not only involves the dentist providing care in a practice location but extends into a much more complex world of patients who have access to reams of health care information, employers, insurance carriers, the influence of print and social media, and government regulations. To help us understand the increasing role of quality

measurement in this new world of dentistry, let's review the work of the Dental Quality Alliance.

Formation of the Dental Quality Alliance

The Dental Quality Alliance (DQA) was formed by the American Dental Association (ADA) Board of Trustees in 2008 at the request of the Center for Medicare & Medicaid Services (CMS).[2] The DQA was created to bring together numerous stakeholders to develop oral health measures that would improve the delivery of health care services and increase desired health outcomes, while ultimately enhancing the reporting capabilities of Medicaid and Children's Health Insurance Programs (CHIPs). At the time, there was no standardized measure to evaluate the effectiveness of different states' Medicaid programs. A reliable method of measuring quality was needed to compare a Medicaid program in Texas with one in Florida, for example.

The DQA held its first meeting in 2010. There were members from key ADA councils, all of the dental specialty organizations, the Academy of General Dentistry, the American Dental Education Association, the American Dental Hygienists' Association, CMS, the Medicaid-CHIP State Dental Association, and payer groups such as America's Health Insurance Plans (an association representing nearly 1,300 health insurance companies), Delta Dental, and the National Association of Dental Plans. The group established a mission "to advance the field of performance measures through a consensus building process with the goal of improving oral health, patient care, and safety."

Initially, the DQA sought to establish pediatric measures in three areas:

· Evaluating utilization of dental services,
· Quality of care, and
· Cost of care.

Evaluating utilization simply means, "Are the services being used?" For example, what percentage of children eligible for Medicaid in Georgia are actually seen for a dental examination? Cost effectiveness might include how much a plan costs per member per month.

How Dental Measures Are Developed

At first glance, the process of determining which dental measures will provide the information that providers, plans, or government agencies need may seem very straight-forward. The first discussion step is the easiest, but a multi-stage process is necessary to validate a quality measure. Let's use an example of a quality measure the DQA has taken through the validation process.

The profession knows through evidence-based dentistry that sealants reduce caries risk, but how many children receive sealants on their first molars? That question is the beginning of your first quality measurement. Quality measures are typically expressed as percentages and defined using a numerator and a denominator. Our example would look like this:

How many children received sealants on first molars?

_____

How many children of record are in the practice?

Once we determine that this measure provides information valuable to the practice, plan, or government agency, then the measure must be validated. The validation process establishes the measure's validity, importance, usability, and feasibility. The general concept is then refined with input from the dental community and environmental scans, and we determine proposed measure specifications. In this instance, we add that the children studied should be limited to those between the ages of six and nine. A time frame is also added: over the course of a year. Finally, we focused on those children at high risk for caries, as defined by the ADA's caries risk assessment parameters. A fully specified measure now focuses on a more specific population:

How many received sealants on their first molars during the year?

_____

How many children 6-9 years of age who are of record in the practice in the measurement year were at elevated risk (needed sealants on their first molars)?

The quality measure then goes through a process of validation testing to verify that the resulting data is clear and concise. Additionally, the method is assessed for its replicability—the ability to uniformly generate meaningful data with various data sets. At each step in the process, comment from the dental community plays a vital role in moving the measure forward. After testing, the final measure is brought to the DQA for approval.

This specific measure, one of the first approved by the DQA, is currently being used by 14 state Medicaid programs and in California's plan exchange. The measure can be applied to the plan level or practice level, meaning, for example, that payers that participate in an exchange must have this data available to meet criteria set by the exchange in California. Medicaid uses the quality measure at the practice level, meaning that a Federally Qualified Health Center, for example, would use the measure to ensure that the number of children receiving care is consistent with established goals and metrics.

DQA-Approved Measures

The DQA has approved 12 pediatric measures to this point. These measures include sealant use in 6-9 year olds, and also in 10-14 year olds. Care continuity, fluoride use, emergency room visits for caries-related problems for children, and follow-up care after emergency room visits have been addressed.

Over the next few years, the DQA will look into adult quality measures, beginning with periodontal care. For example, the number of patients with a history of chronic periodontitis who have had an oral evaluation in the last year, or those who have had active periodontal therapy and return for periodontal maintenance would be determined through a validated measure. Eventually, metrics could be developed based on the perio-systemic link. For example, how many patients with diabetes have had a periodontal evaluation?

Measure Implementation and Maintenance

There are many facets of maintenance to consider once quality measures are validated. The DQA's work is not completed once its measures are available to the profession. Implementation is important because how a measure is used is driven by a group's needs and the information the group wants. As

QUALITY ALLIANCE
Continued on page 26

Continued from page 19

mentioned previously, some measures can be applied at a program level, a plan level, or a practice level. In some cases, the DQA oversees implementation so that the correct data required for the measure is obtained and the information received is valid. This oversight is important to ensure the validity of the quality measure.

The DQA is also responsible for maintaining the measure. As needs, data collection, and other changes occur, a measure must be reviewed to ensure its continued validity and relevance, similar to maintenance of the dental treatment procedure codes.

Currently the DQA has a committee dedicated to educating the profession and the public regarding measures and their appropriate use. A *DQA User's Guide* is available, along with webinars for member groups of the DQA to use to educate their constituents and answer questions about quality measurement.

Conclusion

Quality measurement is here to stay, but the process and maintenance of measures must be controlled by the profession and not outside organizations. Dental Quality Alliance goals include assisting and protecting the dentist at all levels of practice so that dentists may continue to provide quality care and maintain a high level of respect and trust of patients through quality measurement.

References

1. Hunt RJ. Aravamudhan K. The quality movement in oral healthcare: Who will lead? J Am Dent Assoc 2014;145(5):421-423.

2. Ojha D, Aravamudhan K. Leading the dental quality movement: A Dental Quality Alliance perspective. Calif Dental Assoc J 2016;44:239-244.

Dr. Marie Schweinebraten, a GDA member periodontist in Norcross and past GDA president, is the insurance consultant for the American Academy of Periodontology. In that role, she acts as a liaison for members on such matters as reimbursements and code revisions. After a number of years serving on the AAP Patient Benefits and Advocacy Committee, Dr. Schweinebraten was appointed to the ADA Council on Dental Benefits Programs. After four years on the council, having eventually ascended to its vice chair position, she spent seven years on the ADA's Code Revision Committee and later became an ADA Trustee.

The ADA established the Dental Quality Alliance to develop performance measures for oral health care. The DQA is an organization of major stakeholders in oral health care delivery that uses a collaborative approach to develop oral health care measures. The mission of the Dental Quality Alliance is to advance performance measurement as a means to improve oral health, patient care, and safety through a consensus-building process.

The objectives of the DQA are to identify and develop evidence-based oral health care performance measures and measurement resources; advance the effectiveness and scientific basis of clinical performance measurement and improvement; and foster and support professional accountability, transparency, and value in oral health care through the development, implementation, and evaluation of performance measurement. Please read more about the DQA and quality measures on the ADA.org website.

Figure 2: DQA Measure Development Process

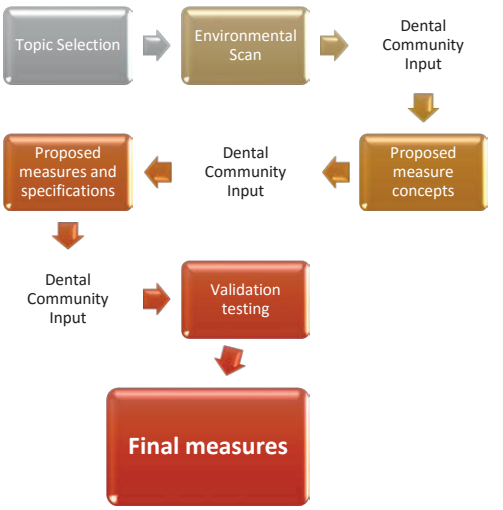
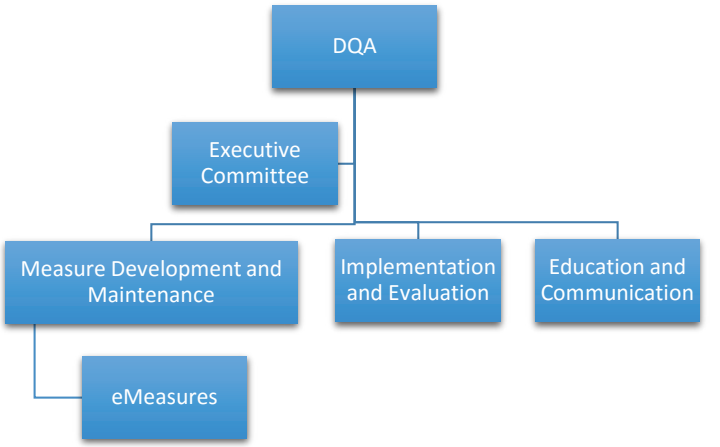


Figure 1: DQA Structure



Top: The structure of the DQA and DQA Measure Development Process. Right: DQA Quality Measures. Figures and tables provided courtesy of the American Dental Association Office of Quality Assessment & Improvement.

Table 2: DQA Quality Measures

Evaluating Utilization

Measure Name	Description	NQF #	Data Source	Measure Domains	Level(s) of Measurement
Utilization of Services	Percentage of all enrolled children under age 21 who received at least one dental service within the reporting year.	2511	Administrative enrollment and claims	Access/ Process	Program, Plan
Preventive Services for Children at Elevated Caries Risk	Percentage of all enrolled children who are at "elevated" risk (i.e., "moderate" or "high") who received a topical fluoride application and/or sealants within the reporting year.	N/A	Administrative enrollment and claims	Related Health Care Delivery: Use of Services	Program, Plan
Treatment Services	Percentage of all enrolled children who received a treatment service within the reporting year.	N/A	Administrative enrollment and claims	Related Health Care Delivery: Use of Services	Program, Plan

Evaluating Quality of Care

Measure Name	Description	NQF #	Data Source	Measure Domains	Level of Measurement
Oral Evaluation	Percentage of enrolled children under age 21 who received a comprehensive or periodic oral evaluation within the reporting year.	2517	Administrative enrollment and claims	Process	Program, Plan
Topical Fluoride for Children at Elevated Caries Risk	Percentage of enrolled children aged 1–21 years who are at "elevated" risk (i.e., "moderate" or "high") who received at least 2 topical fluoride applications within the reporting year.	2528	Administrative enrollment and claims	Process	Program, Plan
Sealants for 6–9 Year-Old Children at Elevated Caries Risk	Percentage of enrolled children in the age category of 6–9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth within the reporting year.	2508	Administrative enrollment and claims	Process	Program, Plan
Sealants for 6–9 Year-Old Children at Elevated Caries Risk	Percentage of enrolled children in the age category of 6–9 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent first molar tooth within the reporting year.		Electronic Health Records	Process	Practice
Sealants for 10–14 Year-Old Children at Elevated Caries Risk	Percentage of enrolled children in the age category of 10–14 years at "elevated" risk (i.e., "moderate" or "high") who received a sealant on a permanent second molar tooth within the reporting year.	2509	Administrative enrollment and claims	Process	Program, Plan
Care Continuity	Percentage of all children enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years.	N/A	Administrative enrollment and claims	Process	Program, Plan
Care Continuity	Percentage of all children enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years.	N/A	Electronic Health Records	Process	Practice
Usual Source of Services	Percentage of all children enrolled in two consecutive years who visited the same practice or clinical entity in both years.	N/A	Administrative enrollment and claims	Access/ Process	Program, Plan
Ambulatory Care Sensitive Emergency Department Visits for Dental Caries in Children	Number of emergency department visits for caries-related reasons per 100,000 member months for all enrolled children	2689	Administrative enrollment and claims	Outcome	Program
Follow-Up after Emergency Department Visit by Children for Dental Caries	Percentage of ambulatory care sensitive Emergency Department (ED) visits for dental caries among children 0–20 years in the reporting period for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit.	2695	Administrative enrollment and claims	Process	Program

Evaluating Efficiency and Cost

Measure Name	Description	NQF #	Data Source	Measure Domain	Level of Measurement
Per Member Per Month Cost of Clinical Services	Total amount that is paid on direct provision of care (reimbursed for clinical services) per member per month for all enrolled children during the reporting year.	N/A	Administrative enrollment and claims	Related Health Care Delivery: Efficiency and Cost	Program, Plan

Consultant's Corner: Implant Benefits

By: Norma Luke, DMD, HDS Dental Consultant

HDS frequently receives questions regarding implant benefit coverage which can vary from one plan to another. As employer groups renew their contracts with HDS, they often opt to change their implant benefit coverage. This poses challenges for dental offices to remain current with their patients' implant benefits. The purpose of this article is to:

- Review the HDS implant benefit options.
- Provide a clinical case to compare different implant benefit options.
- Demonstrate how various versions of the implant benefits are described in the HDS Eligibility Verification Report.
- Discuss the HDS tools that are available in determining a patient's implant benefits.

There are three implant options under the Implant Services section of the HDS Procedure Code Guidelines.

1. The **"Implant-Limited"** option allows an alternate benefit for the surgical placement of an implant body or mini implant **only** if the implant is replacing one missing permanent tooth between two natural teeth.

2. The **"Implant-Alternate Benefit"** option allows an alternate benefit for all clinically acceptable implant treatment plans.

3. The **"Implant"** option allows a benefit for all clinically acceptable implant treatment plans and has an established fee for most implant procedures. A copy of the 2016 Implant Benefit Fee Schedule for General Practitioners can be found under the Group Information section on HDS Online. Specialists can obtain their Implant Benefit Fee Schedule by calling HDS Professional Relations at 529-9222 or 1-844-379-4324.

The next two pages provide information on the three different Implant benefit options.

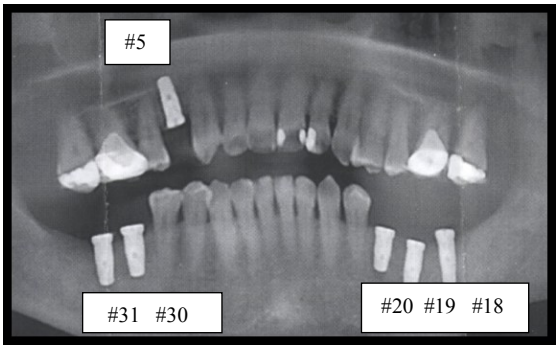
Every implant treatment plan includes the following phases:

1) The surgical placement of the dental implant - D6010 **surgical placement of implant body:** endosteal implant and D6013 **surgical placement of mini implant**

2) The Implant Supported Prosthetics

Option 1: Implant-Limited Benefit

*For the "**Implant-Limited**" option, implant benefits will depend upon the clinical scenario.*



Surgical Placement of Implant Body
Example at left: The Implant-Limited benefit allows an alternate benefit for the implant body - D6010 and D6013 for tooth #5. The patient is responsible up to the submitted amount.

The surgical placement of the Implant body D6010 would be denied for teeth #18-20, 30 and 31. The patient is responsible up to the submitted amount.

Implant Related Prosthetics
An alternate benefit of a pontic is allowed for #5 implant crown. The patient is responsible up to the submitted amount.

HDS would process the alternate benefit equivalent of D5214 mandibular partial denture for the five implant crowns that restore the bilateral distal extension regions in the lower arch. The patient is responsible up to the submitted amount.

Understanding the "Implant –Limited" benefit on the Eligibility Verification Report

Surgical Placement of Implant Body
Example at right: This plan does not benefit the implant body, D6010 and D6013. However, Implant Related Prosthetics is a benefit at 50%.

As shown on the Eligibility Verification Report

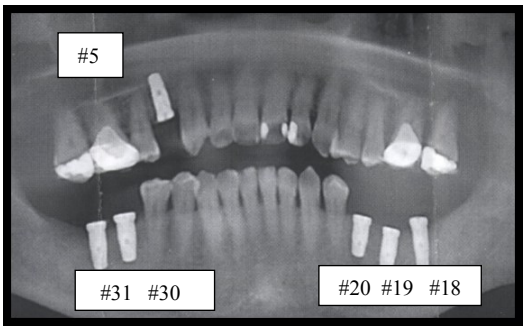
PROSTHODONTICS	50%
Implant - Limited	0%

As shown in the Procedure Code Guidelines

Clinical Scenario	Implant-Limited
Anterior Teeth: Replacing 1 to 4 missing teeth with an implant supported prosthesis.	Benefited as the alternate benefit up to 4 pontics in the anterior segment, **only when there are teeth present anterior and posterior to the implants.**
Posterior Teeth: Replacing 1 to 3 missing teeth with an implant supported prosthesis.	Benefited as the alternate benefit up to 3 pontics in the posterior segment, **only when there are teeth present anterior and posterior to the implants.**
Anterior fixed partial denture spanning more than 4 pontics or posterior fixed partial denture spanning more than 3 pontics	Processed as the alternate benefit of a removable partial denture. Special consideration/exception may be made by submission of a narrative report.

Implant Related Prosthetics
Implant supported prosthetics would be allowed as alternate benefits according to the **"Implant Limited"** benefit chart as shown here.

Option 2: Implant-Alternate Benefit



Surgical Placement of Implant Body
Example at left: For teeth #5, 18-20, 30 and 31. An alternate benefit is allowed for the implant body - D6010 and D6013 for all teeth. The patient is responsible up to the submitted amount.

Implant Related Prosthetics
For teeth #5, 18-20, 30 and 31. Benefited as the alternate benefit of the appropriate pontic procedure code(s). The patient is responsible up to the submitted amount.

Understanding the "Implant – Alternate" Benefit on the Eligibility Verification Report

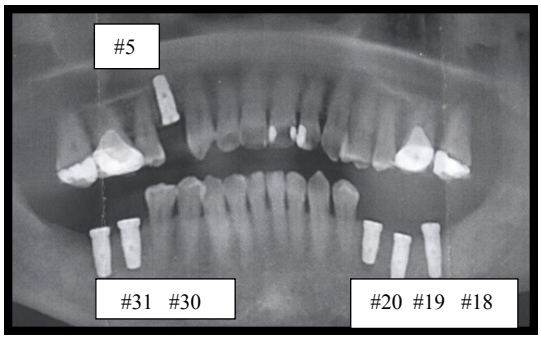
As shown on the Eligibility Verification Report

PROSTHODONTICS	80%	1x/7-years per tooth
IMPLANT - ALT BEN	80%	$3500 maximum

Surgical Placement of Implant body
Example at left: This plan has an 80% HDS benefit copayment and a $3,500 plan maximum for D6010 and D6013.

Implant Related Prosthetics
Implant Related Prosthetics will be benefited at 80% and the alternate benefit of the appropriate pontic procedure code(s) will be applied.

Option 3: Implant Benefit



Surgical Placement of Implant Body
Example at left: The Implant body - D6010 and D6013 is a covered benefit for teeth #5, 18-20, 30 and 31.

Implant Related Prosthetics
Covered benefit for teeth #5, 18-20, 30 and 31.

Understanding the "Implant" Benefit on the Eligibility Verification Report

Surgical Placement of Implant Body
Example at right: Implant body D6010 and D6013 are benefited at 60%. The Implant body is a covered benefit that is available for all clinically acceptable treatment plans.

As shown on the Eligibility Verification Report

PROSTHODONTICS	60%
Implant	60%

Implant Related Prosthetics
Implant related prosthetics are covered benefits and will be benefited at 60%. Subject to the current group benefit and time limitations of previous prosthodontic/restorative services performed.

Use the Benefit Estimator and/or Submit a Preauthorization!

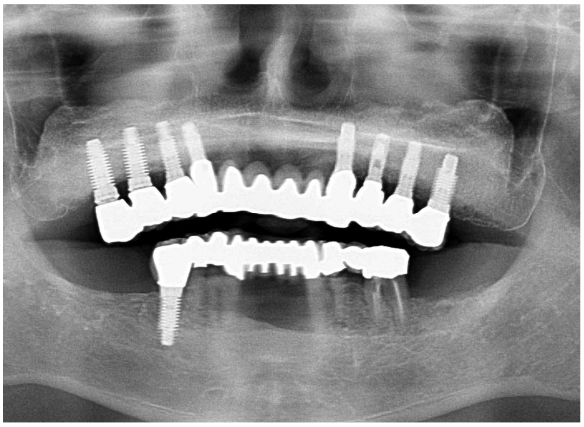
- Use the Benefit Estimator or submit a preauthorization as time limitations and benefit frequencies apply.
- Groups with an unlimited plan maximum may have specific limitations for the implant body.
- A tentative preauthorization approval can be made by attaching the most current X-ray image and treatment plan.
- A copy of the preauthorization will be provided to the dentist and patient. This will clarify the patients' benefit coverage and their cost responsibility for the proposed treatment, eliminating any possible misunderstanding of the patients' benefit status.

Consultants Corner: Implant Maintenance and Apexification Procedures
Norma Luke, D.M.D. Consultant, Hawaii Dental Service

Accurate coding for implant maintenance and apexification procedures is challenging. These procedures are often misunderstood and miscoded on dental claims submitted to HDS. The purpose of this Consultant Corner is to increase awareness and clarify the proper coding for these procedures.

Implant Maintenance Procedures

D6080: implant maintenance procedures, including removal of prosthesis, cleansing of prosthesis and abutments and reinsertion of prosthesis
The descriptor for the CDT code D6080 implant maintenance procedures states that "*this procedure includes a prophylaxis to provide active debriding of the implant and examination of all aspects of the implant system, including the occlusion and stability of the superstructure*."[1]



Multiple claims had been submitted for maxillary right (UR) and left (UL) quadrants D4341. Periodontal scaling and root planing – four or more teeth per quadrant. Review of the panoramic radiographic image indicated that all natural teeth in the maxilla are missing and an implant-supported prosthesis is present.

D4341: periodontal scaling and root planing – four or more teeth per quadrant
The descriptor for the CDT code D4341 periodontal scaling and root planing includes *"this procedure involves instrumentation of the crown and root surfaces of the teeth to remove plaque and calculus from these surfaces. . . . Root planing is the definitive procedure designed for the removal of cementum and dentin that is rough, and/or permeated by calculus or contaminated with toxins or microorganisms."*[1]

Scaling and root planing is considered a therapeutic and often definitive procedure to treat periodontal disease for those natural teeth exhibiting calculus, alveolar bone loss, and attachment loss.

In this case, procedure code D4341 periodontal scaling and root planing was erroneously submitted. Based on the CDT nomenclature and descriptor noted above, the correct code is D6080 implant maintenance procedures. This is a non-covered service in HDS benefit plans, and the patient is responsible for the dentist's fee for the procedure.

Apexification/Recalcification and Pulpal Regeneration Procedures

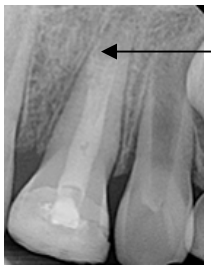
Apexification is defined in the 2011-2012 CDT Glossary[2] as: "The process of induced root development to encourage the formation of a calcified barrier in a tooth with immature root formation or an open apex. May involve the placement of an artificial apical barrier prior to nonsurgical endodontic obturation." Apexification is a regenerative endodontic procedure that usually involves multiple visits. The applicable procedure codes for apexification are:

D3351: apexification/recalcification/pulpal regeneration – initial visit (apical closure/calcific repair of perforations, root resorption, pulp space disinfection, etc.)
This code with the descriptor stating "*includes opening tooth, preparation of canal spaces, first placement of medication and necessary radiographs*"[1] is the appropriate code to use for the first step or initial phase of apexification.

D3352: apexification/recalcification/pulpal regeneration – interim medication replacement (apical closure/calcific repair of perforations, root resorption, pulp space disinfection, etc.)
This procedure code is appropriate for interim treatment visits as the descriptor states *"visits in which the intra-canal medication is replaced with new medication and necessary radiographs."*[1]

D3353: apexification/recalcification – final visit (includes completed root canal therapy – apical closure/calcific repair of perforations, root resorption, etc.)

The descriptor for code D3353 states "*includes removal of intra-canal medication and procedures necessary to place final root canal filling material including necessary radiographs. (This procedure includes last phase of complete root canal therapy*.)"[1] This is the correct coding choice for the last step in apexification which includes final obturation of the root canal system.

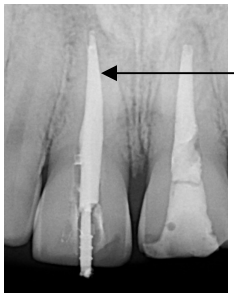


D3351 apexification/recalcification/pulpal regeneration – initial visit was submitted for #9. The diagnosis was tooth #9 "partially necrotic, symptomatic apical periodontitis."

The dentist's treatment notes included: "apexification in progress #9, isolation, access and excavate, shaping and cleaning completed, irrigation with NaOCl, EDTA and CaOH placed in canal." **This initial apexification visit was correctly submitted as procedure code D3351.**

In April 2012, a final apexification visit (D3353) for tooth #8 was incorrectly submitted to HDS for payment. The x-ray image clearly shows that final obturation for tooth #8 was not completed. Review of HDS patient history indicated an initial apexification visit (D3351) had occurred in 2005. This visit is consistent with an interim apexification visit and should have been coded as D3352.

Interim apexification visits involve the replacement of intra-canal medication and any necessary radiographs. These interim visits should be coded as **D3352 apexification/recalcification/pulpal regeneration – interim medication replacement (apical closure/calcific repair of perforations, root resorption, pulp space disinfection, etc).** Medicaments such as calcium hydroxide and mineral trioxide aggregate are used in necrotic immature teeth to ultimately develop an apical barrier and increase the success of the final apical seal.



In July 2012, tooth #8 (same patient above) was submitted for D3353 apexification/recalcification/pulpal regeneration – final visit. The submitted image demonstrates the final obturation for tooth # 8. This was accurately coded for the final endodontic treatment.

As indicated in the CDT nomenclature and descriptor, the complete obturation of the root canal system is required and included as a component of the final apexification visit (D3353). HDS dental plans benefit all three phases of apexification discussed above.

Nonvital immature teeth present many challenges. Endodontic regenerative procedures provide increasing options that may enable these teeth to be successfully retained and restored. The examples above were provided to eliminate confusion and clarify the requirements for the apexification codes.

References:

1) Adapted from: *Code on Dental Procedures and Nomenclature, 2011-2012 CDT Current Dental Terminology: The ADA Practical Guide to Dental Procedure Codes*, American Dental Association, 2010.

2) *Glossary of Dental Terms, 2011-2012 CDT Current Dental Terminology: The ADA Practical Guide to Dental Procedure Codes,* American Dental Association, 2010, p.195

Consultant Corner: Post Placement in Endodontically Treated Teeth

Norma Luke, D.M.D.
Dental Consultant, Hawaii Dental Service

Introduction:

HDS dental consultants frequently review claims for the placement of a post and core where the submitted documentation does not clearly demonstrate the clinical need for a post. The rationale for the placement of a post (also known as a dowel) in endodontically treated teeth (ETT) has evolved considerably over the past decade. Teeth that had received endodontic treatment were once considered brittle and more likely to fracture which often led to the routine placement of posts with the intent of increasing tooth strength. Recent data from clinical and laboratory studies no longer support this rationale and now indicate that posts actually weaken endodontically treated teeth rather than enhance their clinical strength and longevity.[1] These studies also state that the purpose of a post should only be to retain a core that is needed due to extensive loss of coronal tooth structure.[2]

The purpose of this article is to:

- Review the American Association of Endodontists (AAE) and other evidence based recommendations regarding the placement of posts in ETT.

- Review the CDT nomenclature and descriptor for **D2954 prefabricated post and core** and **D2952 post and core, indirectly fabricated.**

- Provide clinical examples that demonstrate indications and contraindications for post placement in ETT.

Background:

The *Glossary of Prosthodontic Terms* defines a dowel as a "*post that is fitted into a prepared root canal of a natural tooth. When a post/dowel is combined with an artificial crown or core, it provides retention and resistance for the restoration*."[3]

The AAE has published evidence-based principles for the restoration of ETT that include the preservation of coronal and radicular dentin, immediate restoration of the tooth after root canal therapy if possible, and the use of posts only when necessary to retain a core buildup.[2] The AAE has further published other clinical recommendations on the issue of post placement in ETT and has concluded that "in all cases where sufficient tooth structure remains, restoring the tooth without a post is still the best option."[4]

The American Association of Dental Consultants (AADC) has also published a Position Statement on post placement in ETT. After conducting a review of the literature, the AADC concluded that "*the consensus of this review suggests that posts of any material should be used only when there is insufficient tooth structure remaining due to caries or trauma for core retention and placement of a crown*."[5]

D2954 prefabricated post and core in addition to crown

The *CDT 2014* descriptor for **D2954 prefabricated post and core in addition to crown** states that the "*core is built around a prefabricated post. This procedure includes the core material.*"[6] Prefabricated posts may be composed of metal alloys, ceramic, glass, zirconium or carbon/quartz fiber.

D2952 post and core in addition to crown, indirectly fabricated

The *CDT 2014* descriptor for **D2952 post and core in addition to crown, indirectly fabricated** states: "*Post and core are custom fabricated as a single unit.*"[6] This indirect restorative procedure involves multiple steps including the impression of the root canal post space and the fabrication of a cast metal or milled post and core as a single unit. This procedure is usually more complex and time consuming when compared to the placement of a prefabricated post.

Example 1:

The radiographic image for tooth #7 was submitted to support a claim for a prefabricated post and core (D2954). Review of the radiographic image shows a properly obturated root canal system along with a significant portion of the anatomic crown missing. Placement of a post and core (D2954) is most appropriate in this clinical scenario.

Example 2:

A pre-authorization for tooth #9 was submitted for a prefabricated post and core (D2954). The radiographic image for tooth #9 suggests an intact anatomical crown without evidence of obvious fracture or extensive caries/ loss of tooth structure other than the endodontic access. Since the purpose of a post should be to retain a core, a post does not appear to be clinically necessary to properly restore tooth #9.

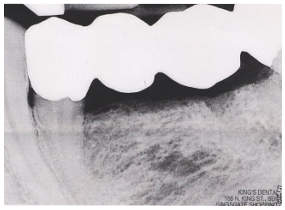
Some dental offices may miscode a prefabricated post and core (D2954) as an indirectly fabricated post and core (D2952).[7] The example below is a case of such miscoding.

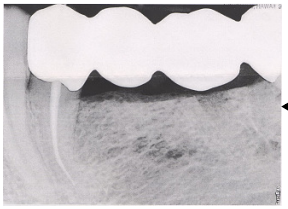
Example 3:

The pre-operative radiographic image of tooth #8 was submitted to support a surgical extraction. The image clearly shows the prior placement of a prefabricated post (D2954). Unfortunately in this case, the prefabricated post had been incorrectly coded and the patient was improperly charged for an indirectly fabricated post and core

The closure of the endodontic access through a prior existing crown or retainer can often be accomplished simply using only restorative material. When compared to restorative material alone, the placement of a post through an endodontic access opening or through an existing crown adds little additional support and retention and is rarely indicated.[8]

Example 4:





A four unit fixed partial denture was fabricated for teeth #18-21. Two months after the insertion of the fixed prosthesis, tooth #21 required endodontic treatment through the retainer crown. The final restoration after the completion of endodontic therapy was an occlusal composite (D2391).

Practitioners should avoid using posts when other anatomic features of the tooth are available to retain the core. Molars may not always require a post since a core can often be retained by the pulp chamber and canals.[2]

Example 5:

Tooth #19 was submitted for a core buildup (D2950). Review of the submitted radiographic image for tooth #19 shows complete obturation of the root canal system. In this case, the restorative treatment plan for ETT #19 did not include the placement of a post.

Treatment decisions regarding the restoration of ETT are often complex. Providers should always apply evidence based principles and best practices to develop a restorative treatment plans designed to increase the longevity of the ETT.

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Consultant's Corner: *Total Health Plus (THP)*

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In January 2019, HDS will introduce a new series of benefits for patients with specific diseases or medical conditions that may increase their risk for dental disease. These additional benefits will now be covered at 100 percent with no additional co-pays for these select patients.

The purpose of this article is to:

- Introduce dental offices to the *Total Health Plus* benefits that take effect January 1, 2019.
- Identify and discuss the specific diseases/medical conditions that qualify a patient for *THP*.
- Identify and discuss the additional *THP* benefits for specific categories of disease/s or medical conditions.

Qualifying Diseases/Medical Conditions:

1. **Diabetes mellitus** is an endocrine disease that features excess blood sugar (hyperglycemia). Type 1 diabetes results from a complete inability (type 1) of the pancreatic *beta* cells to produce insulin. Type 2 diabetes features hyperglycemia and reduced insulin levels due to the decreased ability of *beta* cells to produce insulin and/or it may be secondary to resistance of the insulin receptors. Poorly controlled diabetes may accelerate periodontal disease, cardiovascular disease (Atherosclerosis, MI and Stroke), kidney disease, and is the leading cause of blindness, peripheral neuropathy, and non-traumatic limb amputations in the United States. Additionally, hyperglycemia may lead to xerostomia (dry mouth) which will increase the risk for dental caries,

Candida infections and other oral infections. *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually.

2. **Cancer** patients may receive radiation and/or chemotherapy which can predispose them to significant life threatening infections, immune suppression, xerostomia, mucositis mouth pain, and caries. *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually. Two additional fluoride treatments (D1206/D1208) are also available and should not exceed a combination of four annual fluoride treatments.

3. **Oral Cancer** patients may undergo surgery, chemotherapy, and also radiation therapy to the head neck including salivary glands which may predispose a patient to mucositis and significant xerostomia secondary to destruction of the salivary glands with resultant caries. *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually. Four additional fluoride treatments (D1206/D1208) are also available and should not exceed a combination of four fluoride treatments per year for adults. *(Note: In rare situations, children under age 19 may be eligible for up to six fluoride treatments per year.)*

4. **Sjogren's syndrome** is an autoimmune disease affecting over 4 million Americans with a 9:1 predilection for females. It features an autoimmune destruction of the salivary glands which leads to a progressive loss of saliva over time. As expected with a loss of salivary function, these patients are high risk for xerostomia and significant dental decay (caries). *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually. Four additional fluoride treatments (D1206/D1208) are also available and should not exceed a combination of four annual fluoride treatments for adults. *(Note: In rare situations, children under age 19 may be eligible for up to six fluoride treatments per year.)*

5. **Pregnancy** produces hormonal changes in gravid women which may predispose to gingival hyperplasia (pregnancy gingivitis), pyogenic granuloma (pregnancy tumor). Previous research studies have suggested untreated periodontal disease and poor oral health may contribute to preterm delivery and low birth weight. Current studies, however, do not support this possible association. Nevertheless, it is imperative that pregnant women maintain good oral health throughout pregnancy to safeguard fetal health. *THP* will provide one additional dental prophylaxis D1110/D4346 **or** periodontal maintenance (D4910) visit during the course of pregnancy.

6. **Organ Transplants** usually require a patient to be placed on a lifetime of immunosuppressive drugs which can predispose them to a wide array of infections. The achievement and maintenance of excellent oral health is essential in these patients to ensure good systemic health. To assist in achieving this, *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not exceed a total of four annually.

7. Patients with a history of **Stroke, Transient Ischemic Attack (TIA), and Cardiovascular Disease (MI, Congestive Heart Failure)** are at an increased risk for a future stroke, TIA, or an adverse cardiovascular event. Untreated periodontal disease and poor oral health may accelerate atherosclerosis, increase systemic inflammation (as measured by levels of C-reactive protein) which plausibly can increase risk for embolus, thrombus and contribute to a future stroke, TIA, MI, and adverse cardiovascular events . To assist in this, *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually.

8. Patients with **Kidney Failure** require renal dialysis or a renal transplant to survive. They are at increased risk for anemia, infection, and usually undergo anticoagulation during the course of dialysis therapy. To assist these patients in maintaining good oral health, *THP* will provide a combination of two additional dental prophylaxes D1110/D1120/D4346 **or** periodontal maintenance (D4910) visits not to exceed a total of four annually.

9. The **Medical Risk for Cavities** is a benefit reserved for an individual that has a documented medical risk factor or medical condition that predisposes them to an increased risk for dental caries. There are a wide variety of medical conditions or diseases that can increase risk for dental caries. A complete listing of all of these qualifying diseases and medical conditions is too numerous to enumerate. **Of significant note, this supplemental fluoride benefit (D1206/D1208) is not intended for patients who simply have poor oral hygiene and/or consume excess dietary sugar/carbohydrates. They must have a documented medical condition or medical risk factor to be eligible. These specific medical conditions/diseases must be clearly documented in the patient's record**. *THP* will allow a combination of up to three additional fluoride treatments (D1206/D1208) annually for patients with a bona fide medical risk factor or disease and will not exceed an annual total of three to five fluoride treatments depending on the patient age and employer group plan design.

Conclusion:

To determine if a patient is currently eligible for *THP* benefits, dental offices are strongly recommended to verify the *THP* status by viewing their patient's Summary of Benefits document which is located on the HDS dentist portal at www.hdsdentistportal.com. Please keep in mind that the patient eligibility date for *THP* will vary based on the actual renewal date of the individual's employer group with HDS. For example, all EUTF Active group patients will be eligible for *THP* benefits on 1 July 2019.

DELTA DENTAL

HDS
Hawaii Dental Service

Total Health Plus Benefits

supplemental benefits designed for employees in need of extra care

Medical Condition or Diagnosis	Benefit	Frequency
Diabetes* *(or history of diabetes)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
Cancer *(or history of cancer or undergoing treatment such as chemotherapy or radiation; not including oral cancer)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
	Fluoride Treatments: D1206/D1208	Two additional per year**
Oral Cancer *(or history of oral cancer or undergoing treatment for oral cancer)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
	Fluoride Treatments: D1206/D1208	Four additional per year**
Sjögren's Syndrome *(or history of Sjögren's Syndrome)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
	Fluoride Treatments: D1206/D1208	Four additional per year**
Heart Attack, Congestive Heart Failure	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
Kidney Failure *(Stage 5 Chronic Kidney Disease, history of renal failure or dialysis)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
Organ Transplants *(or history of organ transplants)*	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	Two additional per year**
Expectant mothers	Cleanings: D1110/D1120/D4346 Perio Maintenance: D4910	One additional per pregnancy term
Medical Risk for Cavities	Fluoride Treatments: D1206/D1208	Three additional per year***

* A diagnosis of prediabetes does not qualify for THP benefits.
** Not to exceed an annual combination total of four per benefit year.
*** Not to exceed an annual combination total of three-five fluoride treatments based on patient age and plan design.

Consultant's Corner: Dental X-ray Recommendations

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Background: The Food and Drug Administration (FDA) originally published dental x-ray guidelines to provide recommendations to minimize x-ray exposure in the U.S. as early as 1987. In 2004, these guidelines were later revised in conjunction with the American Dental Association (ADA) and other dental specialty organizations and most recently were updated in December 2012. The prescription patterns of dental x-rays by dentists in the United States (U.S.) have come under recent scrutiny with articles and a recent study that received adverse publicity both in the media and in the general public. A November 2010 New York Times [1] article/expose' was highly critical of dentists and the injudicious use of dental x-ray particularly Cone Beam CT imaging in children which results in increased radiation dose which may be cumulative over time. An April 2012 study published in Cancer [2] concluded that dental x-rays doubled the risk of meningioma, a benign brain tumor in humans. Despite the fact that this study had apparent design flaws; it did receive significant press coverage and exposure on the World Wide Web.

Introduction: The purpose of this Consultant's Corner is to inform dental offices about the recent (December 2012) *Dental Radiographic Examinations: Recommendations for Patient Selection and Limiting Radiation Exposure* [3] from the ADA, the U.S. Department of Health and Human Services, and the Food and Drug Administration (FDA) and reduce the taking of unnecessary dental radiographic images in the HDS patient population. The guidelines can be accessed via the ADA website www.ada.org.

The recommendations are categorized into two basic components:

a) Patient Selection Criteria
b) Limiting Radiation Exposure

Patient Selection Criteria: The new ADA/FDA recommendations serve as an excellent guide for dentists to incorporate into their dental radiology practice patterns. A recent review [4] conducted by the author of x-ray claim patterns across the HDS dentist network demonstrated a trend where the dentists' x-ray prescribing habits are based on an administrative time table rather than on disease risk. It is evident that many dental offices routinely take annual bitewings together with two or more periapical images (mandibular/maxillary anterior teeth) even when the patient is at low risk for dental disease. The data show no apparent difference in dentists' x-ray prescription pattern among patients of low, moderate, or high risk of dental disease.

These new ADA/FDA recommendations together with the 2003 National Council on Radiation Protection and Measurements (NCRP) Report No. 145 [5] clearly state that a dentist must first perform a clinical examination of their patients prior to the prescription/taking of x-ray images. The selection criteria for dental imaging should then be based on the results/findings of the clinical examination, individual patient risk factors, prior dental history and should not be based on a predetermined routine or administrative schedule.

The Patient Selection Criteria section states that both conventional or digital imaging are adequate in establishing a diagnosis or monitoring disease process however digital imaging offers an advantage of decreased radiation dose to the patient and also allows image processing and further analysis.

The revised patient selection criteria are based on patient age, the developmental stage of the dentition and the type of encounter (new or established recall patient). Additional clinical factors taken into consideration for these recommendations include the presence/absence of caries or periodontitis, current and past oral disease risk, the need for monitoring and evaluating skeletal growth/development or other noted clinical conditions (e.g. implants, restorative/endodontic needs/pathology, remineralization, etc).

The attached chart, titled Reccomendations for Prescribing Dental Radiographs, is adapted from the revised 2012 recommendations [3]. Of note, on recall visits for adult patients with no caries or for those who are not considered at increased risk for caries; a 24 – 36 month interval is recommended for new bitewings to be taken. For those recall visits involving adolescents and children with either primary or transitional dentition and who remain caries free or at low caries risk, the posterior bitewing interval may be extended anywhere from 18-36 months if the proximal surfaces can not be examined either visually or with a probe.

The recommendations also include a listing of historical findings, clinical signs or symptoms which may precipitate a need for obtaining an x-ray image. They also contain a thorough explanation of the rationale used in determining the frequency and type of imaging that is based on the literature and best available evidence.

Limiting Radiation Exposure

Although dental x-ray are considered to be of much lower dose when compared to medical x-rays, the basic principles of ALARA (as low as reasonably achievable) must still be adhered to when contemplating a decision to order a dental x-ray image. Questions to consider include: Will I obtain additional clinical or diagnostic information that will change the outcome of the treatment plan? Do the benefits of taking the x-ray image outweigh the risks for the patient?

Every effort should be made to minimize any unnecessary radiation exposure to the patient. This may include but is not limited to:

1) use of a long cone with rectangular collimation
2) use of thyroid collars in children
3) use of the fastest (F) speed conventional film
4) digital imaging
5) ensuring proper patient positioning, exposure and processing techniques to minimize retakes
6) establishing a radiation safety/quality assurance program in the dental office
7) proper training of all dental x-ray personnel

Film based dental offices should routinely conduct a periodic assessment of all x-ray equipment which should also include the following procedures:

- Inspection of the x-ray darkroom to check for possible light leaks which may contribute to fogging and darkening of the x-ray image
- Calibration and inspections of the x-ray machines by qualified individuals to ensure their proper operation and functioning
- Maintenance and cleaning of the x-ray film processing equipment to ensure and enhance optimal image quality
- Monitoring of the x-ray processing solutions (fixer/developer) for proper solution levels and temperature to determine if they should be replenished or replaced
- Inspection of the safe light, film cassettes/intensifying screen, thyroid and abdominal shields for cracks or defects which may affect the quality of the radiographic image or increase possible radiation dose to the patient

In addition, dental offices are encouraged to reference the textbook Oral Radiology, Principles and Interpretation, 6th edition for additional information on establishing and maintaining an effective dental radiation safety and quality assurance program.

RECOMMENDATIONS FOR PRESCRIBING DENTAL RADIOGRAPHS

These recommendations are subject to clinical judgment and may not apply to every patient. They are to be used by dentists only after reviewing the patient's health history and completing a clinical examination. Even though radiation exposure from dental radiographs is low, once a decision to obtain radiographs is made it is the dentist's responsibility to follow the ALARA Principle (As Low as Reasonably Achievable) to minimize the patient's exposure.

Table 1**

<table>
<tr><th rowspan="2">TYPE OF ENCOUNTER</th><th colspan="5">PATIENT AGE AND DENTAL DEVELOPMENTAL STAGE</th></tr>
<tr><th>Child with Primary Dentition (prior to eruption of first permanent tooth)</th><th>Child with Transitional Dentition (after eruption of first permanent tooth)</th><th>Adolescent with Permanent Dentition (prior to eruption of third molars)</th><th>Adult, Dentate or Partially Edentulous</th><th>Adult, Edentulous</th></tr>
<tr><td>New Patient*
being evaluated for oral diseases</td><td>Individualized radiographic exam consisting of selected periapical/occlusal views and/or posterior bitewings if proximal surfaces cannot be visualized or probed. Patients without evidence of disease and with open proximal contacts may not require a radiographic exam at this time.</td><td>Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images.</td><td colspan="2">Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images. A full mouth intraoral radiographic exam is preferred when the patient has clinical evidence of generalized oral disease or a history of extensive dental treatment.</td><td>Individualized radiographic exam, based on clinical signs and symptoms.</td></tr>
<tr><td>Recall Patient* with clinical caries or at increased risk for caries**</td><td colspan="3">Posterior bitewing exam at 6-12 month intervals if proximal surfaces cannot be examined visually or with a probe</td><td>Posterior bitewing exam at 6-18 month intervals</td><td>Not applicable</td></tr>
<tr><td>Recall Patient* with no clinical caries and not at increased risk for caries**</td><td colspan="2">Posterior bitewing exam at 12-24 month intervals if proximal surfaces cannot be examined visually or with a probe</td><td>Posterior bitewing exam at 18-36 month intervals</td><td>Posterior bitewing exam at 24-36 month intervals</td><td>Not applicable</td></tr>
</table>

**Adapted from American Dental Association and Food and Drug Administration. *Dental Radiographic Examination: Recommendations for Patient Selection and Limiting Radiation Exposure*, 2012

TYPE OF ENCOUNTER (continued)	**Child with Primary Dentition** (prior to eruption of first permanent tooth)	**Child with Transitional Dentition** (after eruption of first permanent tooth)	**Adolescent with Permanent Dentition** (prior to eruption of third molars)	**Adult, Dentate and Partially Edentulous**	**Adult, Edentulous**
Recall Patient* with periodontal disease	Clinical judgment as to the need for and type of radiographic images for the evaluation of periodontal disease. Imaging may consist of, but is not limited to, selected bitewing and/or periapical images of areas where periodontal disease (other than nonspecific gingivitis) can be demonstrated clinically.				Not applicable
Patient (New and Recall) for monitoring of dentofacial growth and development, and/or assessment of dental/skeletal relationships	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development or assessment of dental and skeletal relationships		Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development, or assessment of dental and skeletal relationships. Panoramic or periapical exam to assess developing third molars	Usually not indicated for monitoring of growth and development. Clinical judgment as to the need for and type of radiographic image for evaluation of dental and skeletal relationships.	
Patient with other circumstances including, but not limited to, proposed or existing implants, other dental and craniofacial pathoses, restorative/endodontic needs, treated periodontal disease and caries remineralization	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of these conditions				

**Adapted from American Dental Association and Food and Drug Administration. *Dental Radiographic Examination: Recommendations for Patient Selection and Limiting Radiation Exposure*, 2012

***Clinical situations for which radiographs may be indicated include, but are not limited to:**

A. Positive Historical Findings

1. Previous periodontal or endodontic treatment
2. History of pain or trauma
3. Familial history of dental anomalies
4. Postoperative evaluation of healing
5. Remineralization monitoring
6. Presence of implants, previous implant-related pathosis or evaluation for implant placement

B. Positive Clinical Signs/Symptoms

1. Clinical evidence of periodontal disease
2. Large or deep restorations
3. Deep carious lesions
4. Malposed or clinically impacted teeth
5. Swelling
6. Evidence of dental/facial trauma
7. Mobility of teeth
8. Sinus tract ("fistula")
9. Clinically suspected sinus pathosis
10. Growth abnormalities
11. Oral involvement in known or suspected systemic disease
12. Positive neurologic findings in the head and neck
13. Evidence of foreign objects
14. Pain and/or dysfunction of the temporomandibular joint
15. Facial asymmetry
16. Abutment teeth for fixed or removable partial prosthesis
17. Unexplained bleeding
18. Unexplained sensitivity of teeth
19. Unusual eruption, spacing or migration of teeth
20. Unusual tooth morphology, calcification or color
21. Unexplained absence of teeth
22. Clinical tooth erosion
23. Peri-implantitis

****Factors increasing risk for caries may be assessed using the ADA Caries Risk Assessment forms (0 – 6 years of age and over 6 years of age).**

**Adapted from American Dental Association and Food and Drug Administration. *Dental Radiographic Examination: Recommendations for Patient Selection and Limiting Radiation Exposure*, 2012

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Consultant's Corner: Image Gently Campaign and ALARA
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Purpose: The purpose of this Consultant's Corner is to:

1. Provide dental offices with current information on the newly established *Image Gently Campaign* in dentistry.

2. Discuss the general principles of ALARA (as low as reasonably achievable) and ALADA (as low as diagnostically achievable) designed to reduce unnecessary exposure to dental x-rays.

Background: HDS recently sponsored a continuing education seminar titled *Current Concepts in Oral and Maxillofacial Radiology* on Oahu and the neighbor islands. The seminar featured Dr. Juan F. Yepes a pediatric dentist and oral and maxillofacial radiologist who is board certified in oral medicine, pediatric dentistry, and dental public health and a current Associate Professor at the University of Indiana School of Dentistry.

During the seminar, Dr. Yepes discussed the 2012 controversial study published in *Cancer* that links dental x-rays to brain meningioma together with indications for cone beam imaging in dental practice, advantages/disadvantages of digital x-ray imaging, radiology quality assurance, and radiation biology/physics. He also discussed the essential principles of radiation safety and the importance of understanding the basic components of ALARA / ALADA and taking appropriate steps to reduce unnecessary exposure to dental x-rays. He stated that thyroid cancer is the fastest growing cancer in the United States among adults and that the thyroid and salivary glands are routinely exposed in dental imaging and are both highly sensitive to radiation exposure in children. Thyroid collars should always be mandatory in children and used together with digital oral imaging or the use of E or F speed conventional film. The application of a thyroid collar only blocks fifty percent of the radiation exposure to the thyroid due mainly to the scatter phenomenon of x-ray beams. However, by incorporating a rectangular collimator (instead of the standard circular collimator), the x-ray beam is reduced to the size of the dental film or image receptor and will produce less scatter radiation while producing a higher quality dental image.

Additionally, he reiterated that the 2003 *National Council on Radiation Protection and Measurements (NCRP) report No. 145 report* and the 2012 update to the *ADA and FDA Guidelines for X-ray Selection* both mandate that dentists initially perform a clinical examination of each patient prior to the prescription and taking of x-ray images. The routine practice of dental patients undergoing x-ray imaging prior to receiving a clinical examination often results in patients being needlessly exposed to radiation and should be ceased. Image selection criteria must always be based on the clinical examination findings, individual patient risk factors, and

dental history and not on a predetermined routine or administrative schedule set in the dental practice. A recent review conducted by the author of claims history for HDS dentists across the HDS Hawaii network clearly demonstrated that the x-ray prescription pattern is not based on disease risk but more likely on an administrative time table set by the dental office. It is quite evident that many dental offices routinely take bitewings (2-4 images) together with two or more periapical images usually mandibular/maxillary anterior teeth as part of their x-ray routine and without regard for patient's dental disease risk. This review also showed no apparent difference in dentist's x-ray prescription pattern whether the patient was of low, moderate, or high risk of dental disease.

Dr. Yepes also discussed the need for establishing a radiation safety and quality assurance program in all dental offices. He discussed the importance of periodic darkroom inspections, calibration of x-ray tube heads, film processor maintenance and the need for dental offices to maintain a daily x-ray retake logbook. This logbook should list the x-ray operator, type of x-rays taken, the number of retakes and the reason for the retake. According to Dr. Yepes, the typical x-ray office should average less than 10 percent retakes of dental x-ray images. By maintaining this log book, the dentist can determine if his/her office has an excessive retake rate, help identify those staff members who may have high retake rates and determine the need for additional radiology training and enable the office to focus on reducing the number of unnecessary x-ray retakes.

A copy of Dr. Yepes presentation is available for HDS participating dental offices by accessing HDS Online and downloading the Current Concepts in Oral and Maxillofacial Radiology presentation found in the Training and Education section.

Image Gently

Image Gently in Dentistry is a campaign that began on September 24, 2014 and has been reviewed in publications such as the *ADA News, JADA, Journal of Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology* and various dental web sites. It is an education and awareness campaign designed to focus and encourage the safe use of oral and maxillofacial radiology in pediatric dental care.

The campaign has a very informative website (www.imagegently.org) that contains educational material for medical/dental professionals, parents, caregivers and the general public. The web site contains important information for dental professionals such as the *FDA/ADA Guidelines for Dental Radiographic Examinations*, the *American Academy of Pediatric Dentistry (AAPD) Guidelines on Prescribing Dental Radiographs for Infants, Children, and Persons with Special Healthcare Needs* and various American and European position statements and guidelines on dental imaging for implants, endodontics and orthodontics.

The campaign has received overwhelming support from the U.S. Food and Drug Administration (FDA), National Council on Radiation Protection and Measurements (NCRP), various medical organizations, and numerous dental professional Alliance Organizations such as the American Dental Association (ADA), American Association of Oral and Maxillofacial Radiology (AAOMR), American Association of Oral and Maxillofacial Surgery (AAOMS), American Academy of Periodontology, American Academy of Pediatric Dentistry (AAPD), American Academy of Endodontists (AAE), American Association of Dental Consultants (AADC), American Dental Education Association (ADEA) and other international dental organizations.

The *Image Gently* website lists six specific guidelines for dental offices to consider when treating pediatric patients. When it has been determined that x-rays are necessary (after a clinical examination), dental offices are encouraged to consider the guidelines listed below.

1. **Child-size the exposure time and dose.** Be sure to reduce/adjust the tube head setting for dose and exposure time on pediatric patients otherwise children will be exposed to excessive radiation. Exposure time/dose is always lower in children when compared to adults.

2. **Select x-rays for individual need, not merely as a routine.** After the initial review of patient history and **prior** to ordering/ taking any x-ray images, perform a thorough clinical oral examination to determine only the types of x-ray images necessary to arrive at a proper clinical diagnosis and to provide proper treatment.

3. **Use the fastest image receptor feasible**. For conventional dental film offices, use E or ideally F speed film. Digital x-ray imaging can lower the exposure dose to the pediatric patient but care must be taken to reduce the number of retakes that often occur with digital sensors and titrate the exposure settings as low as diagnostically possible.

4. **Use rectangular collimation**. Collimate the size of the x-ray beam to the specific area of interest. A rectangular collimator can decrease radiation exposure by limiting the exposure area to the size of the image receptor while also reducing unnecessary scatter radiation.

5. **Cone-Beam CT imaging** should not routinely be used in children (i.e. orthodontics) unless absolutely necessary for diagnosis and treatment. The beam should always be restricted to the appropriate volume necessary to obtain the proper cone beam image and the diagnosis.

6. **Thyroid Collars.** Always use a thyroid collar on pediatric patients to reduce x-ray exposure by 50 percent to the radiosensitive thyroid gland.

HDS supports the *Image Gently Campaign* and will undergo a review of current dental radiology policies to better align them with the mission of this campaign. For instance, effective January 1, 2015, HDS will only provide a benefit for two bitewing images in children under age 10 as most children in this age group do not have erupted second molars. The practice of taking extra bitewings in this population often exposes the child to excessive and unnecessary radiation and very likely does not contribute any additional diagnostic information. This unnecessary practice was most apparent in a recent review of the HDS network database which clearly showed that in children under age 10, pediatric dentists ordered 3-4 bitewing images less than one percent of the time while general dentists ordered 3-4 bitewing images 18 percent of the time. HDS will not reimburse for x-ray retakes or when an image is non-diagnostic.

HDS encourages all participating dental offices to visit the *Image Gently* website for additional information and to take the pledge (see page 5) to *Image Gently* and reduce unnecessary exposure to dental x-rays in children.

References:

1. Farman, AG: Image Gently: enhancing radiation protection during pediatric imaging. Oral Surg Oral Med Oral Path Oral Radiol, 2014; 117:657

2. JADA 145(9): Image Gently Campaign Centers on Safety. http://jada.ada.org/content/145/9/922.1 September 2014 pg 922

3. Farman, AG: Image Gently in Dentistry: Child-size x-ray dose for kids. http://www.drbicuspid.com July 28, 2014

4. Image Gently website: www.imagegently.org

Image Gently Pledge

Yes, I want to image gently.

Recognizing that every member of the healthcare team plays a vital role in caring for the patient and wants to provide the best care, I pledge:

- to make the image gently message a priority in staff communications this year
- to review the protocol recommendations and, where necessary, implement adjustments to our processes
- to respect and listen to suggestions from every member of the imaging team on ways to ensure changes are made
- to communicate openly with parents Thank you for committing to the goal to image gently when you image or treat children.

Spread the word in your department, practice, hospital or clinic

Name *

First Last

Email *

Profession/Role *

- ☐ General Radiologist
- ☐ Pediatric Radiologist
- ☐ Dental Hygienist
- ☐ Pediatrician
- ☐ Physicist
- ☐ Parent
- ☐ Internist
- ☐ General Interventional Radiologist
- ☐ Dental Student
- ☐ Neuroradiologist or Interventional Neuroradiologist
- ☐ Technologist
- ☐ Dentist
- ☐ Dental Assistant
- ☐ Nurse
- ☐ Hospital/Dept. Administrator
- ☐ Family Practitioner
- ☐ Physician Assistant
- ☐ Medical Student
- ☐ Pediatric Interventional Radiologist
- ☐ Other

DELTA DENTAL

HDS
Hawaii Dental Service

How Many Dental X-Rays Do Your Kids Need?

February is National Children's Dental Health Month, the perfect time to take your kids to the dentist for one of their regular visits.

But before you do, Delta Dental encourages you to be well-informed about how often your child should have dental X-rays. Those X-rays are a valuable tool for finding problems in teeth and the bones surrounding teeth. However, all X-rays use ionizing radiation that can potentially cause damage. Though it is spread out in tiny doses, the effect of radiation from years of X-rays is cumulative. The risks associated with this radiation are greater for children than for adults.

"X-rays are an important tool for dentists to diagnose dental diseases. However, they do not need to be part of every exam," said Dr. Bill Kohn, DDS, Delta Dental Plans Association's vice president of dental science and policy. "They should be ordered only after the dentist has examined the mouth and has determined that X-rays are needed to make a proper diagnosis. In general, children and adults at low risk for tooth decay and gum disease need X-rays less frequently."

Many people believe that if their dental plan pays for a certain number of X-rays, they should take advantage of that benefit. For most patients, however, this yearly X-ray exposure is excessive and unnecessary. Don't let your insurance coverage dictate your decision. Dental X-rays should only be ordered after your dentist has personally checked your child's teeth and determined that they need additional information to make a correct diagnosis. What is apparent through one type of X-ray often is not visible on another and your dentist's clinical judgment will determine what is necessary. If you have questions or concerns related to dental X-rays, discuss them with your dentist.

Ideally, your dentist should adhere to the guidelines established by the U.S. Food and Drug Administration and the American Dental Association. The chart on the back of this page, adapted from those guidelines, gives a basic timeline for recommended frequency of X-rays by age group. Keep in mind that multiple factors such as the child's current oral health, future risk for disease, and developmental stage determine need, and some children will require more X-rays, and some fewer.

See chart on back.

Ages	First visit	Routine recall visit	Routine recall visit
		Active tooth decay or history of cavities (Increased Risk)	***No active tooth decay or history of cavities (Low Risk)***
Young children (ages 1 – 5), with no permanent teeth	Personalized exam which may consist of bitewing* X-rays of back teeth (if no gaps exist between teeth that allow the dentist to examine the sides of teeth) and select individual (periapical)** X-rays, usually of front teeth.	Bitewing X-rays every six to 12 months	Bitewing X-rays every 12 to 24 months
Older children (ages 6 – 12), with some or all permanent teeth	Personalized exam consisting of bitewing X-rays of back teeth and select periapical X-rays, usually of front teeth; or a panoramic X-ray.***	Bitewing X-rays every six to 18 months	Bitewing X-rays every 12 to 36 months
Adolescent, with permanent teeth but no wisdom teeth[#]	Personalized exam consisting of bitewing X-rays of back teeth and select periapical X-rays; or a panoramic X-ray; or a full mouth survey of X-rays (FMX) if evidence of widespread oral disease.	Bitewing X-rays every six to 18 months	Bitewing X-rays every 12 to 36 months

Source: http://www.fda.gov/downloads/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/ MedicalImaging/MedicalX-Rays/UCM329746.pdf *(Accessed February 11, 2014).*

***Bitewing X-rays** show upper and lower teeth in one film; each molar tooth is seen from its crown to about the level of the bone that supports the teeth. Bitewing X-rays are used to detect decay between teeth and changes in bone caused by gum disease.*
***Periapical X-rays** show the whole tooth, from the crown to beyond the end of the root to where the tooth is anchored in the jaw. Each periapical includes all the teeth in one portion of either the upper or lower jaw. These films can find problems below the gums, including impacted teeth, abscesses, cysts or other problems.*
****Panoramic X-rays** capture all teeth on a single-X-ray. Usually used to detect positions of unerupted teeth, abscesses, evaluate growth and development. Approximately once every five years, but depends on situation and individual needs.*

[#]Monitoring of third molar (wisdom tooth) development in late adolescence (ages 16-19) is recommended using selected periapical X-rays or a single panoramic X-ray.

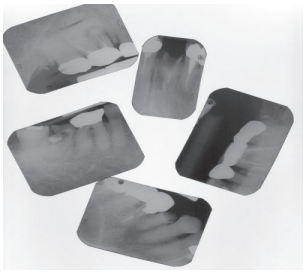
Consultant's Corner - Robert G. Sherman, DMD
Certified Dental Consultant, Diplomate, American Board of Oral Medicine
Dental Director, Hawaii Dental Service

This article will provide the dental office with advice concerning submission of X-ray images and discuss making appropriate X-ray choices to minimize patients' exposure to ionizing radiation.

Submission of X-rays

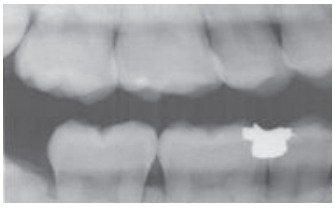
Please remember the following when submitting X-rays:

- X-rays should be of diagnostic quality.
- Properly orient X-rays (right vs. left side) and include the date the image was taken.
- Label teeth numbers particularly when there are root tip remnants or broken down teeth.
- When scanning film X-rays, the "film dimple" should always be facing down on the flat-bed scanner.
- When submitting a digital image, submit the image electronically using HDS online.



At left is an example of X-ray images received from a dental office on a recent claim. There is no proper orientation of the images. To ensure timely claims processing, proper care and attention to detail must be taken to ensure correct placement and orientation on a flat-bed scanner to ensure quality images are received by HDS.

Tips for Selecting the Optimal X-ray Image

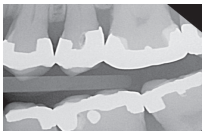


At left is an example from a dental office that submitted tooth #1 as a D7210 surgical extraction of #1. The submitted Bitewing X-ray (BWX) does not show the entire crown, associated root structure and adjacent bone level. Consultants are unable to adjudicate this claim because the image fails to show the entire crown and root complex.

Third molar extractions: A panoramic image is the preferred image. Bitewing X-rays do not provide adequate diagnostic coverage of the entire crown, roots, and adjacent bone. Periapical X-ray's (PA's) are not optimal; however, if they are submitted, PA's should provide entire coverage of the crown, roots, and adjacent bone.

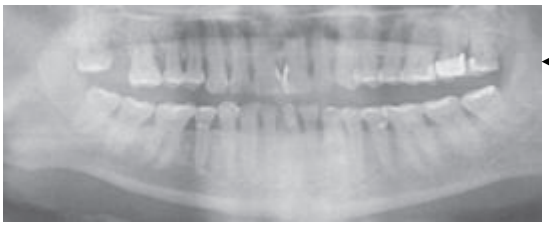
Single tooth extraction (other than 3rd molar): A panoramic or periapical film that shows the entire tooth (crown/roots/adjacent bone) is appropriate.

Posterior crowns/inlays/onlays: A BWX or PA image with the tooth to be restored clearly visualized and the entire crown present is appropriate. **See example below.**



Tooth #15 was submitted for D2790 full metal crown. The submitted BWX is not diagnostic as the crown for #15 is not entirely visible. Consultants are unable to process this claim.

Anterior crowns/veneers: A PA image showing the entire crown should be submitted. A panoramic image should not be submitted because the teeth are often blurred, overlapped, narrowed or foreshortened due to positional and technique errors.



Teeth #23, 24, 25 submitted for PFMs.
PA images of these teeth (if available) are desirable for the reasons listed above.

X-ray Quality Assurance

A dental office may receive a remittance advice with Processing Policy 127 which states ***"X-ray received is of non-diagnostic quality. Payment by HDS and patient co-payment pending receipt and review."*** It is incumbent for the dental office to determine the nature and cause of the non-diagnostic image and supply a supporting diagnostic image. A careful look for possible positional or technique errors and a review of X-ray clinical and dark room procedures may be appropriate. When scanning or printing an image to paper, please check proper printer and scanning settings. Always print using the highest printer resolution as this may eliminate the graininess and pixilation that is often noted in these scans.

Radiation Safety: There has been recent adverse publicity about dentists performing unnecessary X-rays (*see NY Times November 22, 2010*). Every effort should be made to reduce the unnecessary exposure of our patients to ionizing radiation and practice the principles of ALARA (as low as reasonably achievable). Proper use of thyroid and apron shields as well as rectangular collimation, use of digital X-rays or E-speed or F-speed film will help reduce unnecessary exposure to radiation.

The ***Guidelines for Prescribing Dental Radiographs*** were authored by a panel of experts and endorsed by the ADA and the U.S. Food and Drug Administration (FDA) in 2004. These Guidelines state that X-rays should be taken **only after a complete examination** by the dentist. The decision to take radiographs should be based on the specific needs of the patient only after the clinical examination and not by an administrative time table or dental benefit plan.

Additionally, excellent lighting from the dental unit, magnification loupes, dental microscopes as well as the new dental headlights mounted on loupes make it much easier to detect dental disease. More importantly, in an effort to minimize unnecessary radiation to the patient, the dentist should always determine if the X-ray exposure will result in any additional diagnostic information. Each dental office should periodically conduct a thorough review of X-ray processes specific to their office and make any necessary changes to their X-ray protocols.

From: American Dental Association, U.S. Food & Drug Administration. The Selection of Patients For Dental Radiograph Examinations. Available on www.ada.org

GUIDELINES FOR PRESCRIBING DENTAL RADIOGRAPHS

The recommendations in this chart are subject to clinical judgment and may not apply to every patient. They are to be used by dentists only after reviewing the patient's health history and completing a clinical examination. Because every precaution should be taken to minimize radiation exposure, protective thyroid collars and aprons should be used whenever possible. This practice is strongly recommended for children, women of childbearing age and pregnant women.

<table>
<tr><th rowspan="2">TYPE OF ENCOUNTER</th><th colspan="5">PATIENT AGE AND DENTAL DEVELOPMENTAL STAGE</th></tr>
<tr><th>Child with Primary Dentition (prior to eruption of first permanent tooth)</th><th>Child with Transitional Dentition (after eruption of first permanent tooth)</th><th>Adolescent with Permanent Dentition (prior to eruption of third molars)</th><th>Adult, Dentate or Partially Edentulous</th><th>Adult, Edentulous</th></tr>
<tr><td>New patient* being evaluated for dental diseases and dental development</td><td>Individualized radiographic exam consisting of selected periapical/occlusal views and/or posterior bitewings if proximal surfaces cannot be visualized or probed. Patients without evidence of disease and with open proximal contacts may not require a radiographic exam at this time.</td><td>Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images.</td><td colspan="2">Individualized radiographic exam consisting of posterior bitewings with panoramic exam or posterior bitewings and selected periapical images. A full mouth intraoral radiographic exam is preferred when the patient has clinical evidence of generalized dental disease or a history of extensive dental treatment.</td><td>Individualized radiographic exam, based on clinical signs and symptoms.</td></tr>
<tr><td>Recall patient* with clinical caries or at increased risk for caries**</td><td colspan="3">Posterior bitewing exam at 6-12 month intervals if proximal surfaces cannot be examined visually or with a probe</td><td>Posterior bitewing exam at 6-18 month intervals</td><td>Not applicable</td></tr>
<tr><td>Recall patient* with no clinical caries and not at increased risk for caries**</td><td colspan="2">Posterior bitewing exam at 12-24 month intervals if proximal surfaces cannot be examined visually or with a probe</td><td>Posterior bitewing exam at 18-36 month intervals</td><td>Posterior bitewing exam at 24-36 month intervals</td><td>Not applicable</td></tr>
</table>

Document created: November 2004

GUIDELINES FOR PRESCRIBING DENTAL RADIOGRAPHS, cont'd.

TYPE OF ENCOUNTER	PATIENT AGE AND DENTAL DEVELOPMENTAL STAGE				
	Child with Primary Dentition (prior to eruption of first permanent tooth)	**Child with Transitional Dentition** (after eruption of first permanent tooth)	**Adolescent with Permanent Dentition** (prior to eruption of third molars)	**Adult Dentate and Partially Edentulous**	**Adult Edentulous**
Recall patient* with periodontal disease	Clinical judgment as to the need for and type of radiographic images for the evaluation of periodontal disease. Imaging may consist of, but is not limited to, selected bitewing and/or periapical images of areas where periodontal disease (other than nonspecific gingivitis) can be identified clinically.				Not applicable
Patient for monitoring of growth and development	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development		Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development. Panoramic or periapical exam to assess developing third molars	Usually not indicated	
Patient with other circumstances including, but not limited to, proposed or existing implants, pathology, restorative/endodontic needs, treated periodontal disease and caries remineralization	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring in these circumstances.				

***Clinical situations for which radiographs may be indicated include but are not limited to:**

A. Positive Historical Findings

1. Previous periodontal or endodontic treatment
2. History of pain or trauma
3. Familial history of dental anomalies
4. Postoperative evaluation of healing

5. Remineralization monitoring
6. Presence of implants or evaluation for implant placement

B. Positive Clinical Signs/Symptoms

1. Clinical evidence of periodontal disease
2. Large or deep restorations
3. Deep carious lesions
4. Malposed or clinically impacted teeth
5. Swelling
6. Evidence of dental/facial trauma
7. Mobility of teeth
8. Sinus tract ("fistula")
9. Clinically suspected sinus pathology
10. Growth abnormalities
11. Oral involvement in known or suspected systemic disease
12. Positive neurologic findings in the head and neck
13. Evidence of foreign objects
14. Pain and/or dysfunction of the temporomandibular joint
15. Facial asymmetry
16. Abutment teeth for fixed or removable partial prosthesis
17. Unexplained bleeding
18. Unexplained sensitivity of teeth
19. Unusual eruption, spacing or migration of teeth
20. Unusual tooth morphology, calcification or color
21. Unexplained absence of teeth
22. Clinical erosion

****Factors increasing risk for caries may include but are not limited to:**

1. High level of caries experience or demineralization
2. History of recurrent caries
3. High titers of cariogenic bacteria
4. Existing restoration(s) of poor quality
5. Poor oral hygiene
6. Inadequate fluoride exposure
7. Prolonged nursing (bottle or breast)
8. Frequent high sucrose content in diet
9. Poor family dental health
10. Developmental or acquired enamel defects

From: American Dental Association, U.S. Food & Drug Administration. The Selection of Patients For Dental Radiograph Examinations. Available on www.ada.org

11. Developmental or acquired disability
12. Xerostomia
13. Genetic abnormality of teeth
14. Many multisurface restorations
15. Chemo/radiation therapy
16. Eating disorders
17. Drug/alcohol abuse
18. Irregular dental care