



National Association of Dental Plans' Annual Conference  
**SEPTEMBER 12-15, 2011**  
Marriott Marquis • Atlanta, Georgia

# Update from the ADA

Presented by: Jean Narcisi; Director, Dental Informatics; ADA  
September 13, 2011

# About the ADA

## Vision

*To be the recognized leader on oral health.*

## Mission

*The ADA is the professional association of dentists that fosters the success of a diverse membership and advances the oral health of the public.*

# About the ADA

- Nearly 157,000 U.S. dentists are members of the ADA
  - 68.2% of all active, licensed dentists
  - 65.4% of general practitioners
  - 79.3% of specialists
  - 84.3% of U.S. dental students

# Promoting EDI to ADA Members

- Standards Activities
- Working Groups
- Member Publications
- Web site

# ADA Standards Activities

- **X12/5010 Updates**
- **WEDI**
- **SCDI**
- **SCDP**
- **ISO TC 215**
- **ISO TC 106**
- **IHE**
- **IHTSDO**

# ADA Working Groups

- **EHR:**
  - **Vocabulary – SNODENT**
  - **Member – Education/Communications**
  - **Advocacy**
  - **Standards/Liaison**
  - **Certification**
- **Dental Quality Alliance**

# ADA Member Publications

## Print

- JADA
- ADA News



## Electronic

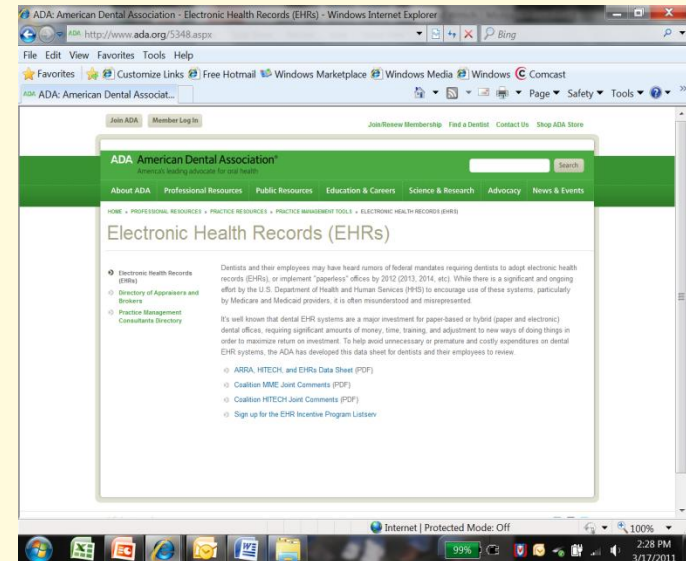
- JADA Online
- ADA e-Publications
  - Practice & Thrive
  - Advocacy Update



# ADA Website



[www.ada.org](http://www.ada.org)



[www.ada.org/paperless](http://www.ada.org/paperless)

# Opportunities for Collaboration

- **Co-signing legislative and regulatory comments**
- **Partner with dentists/office on development**
- **Help dentists understand system changes**
- **Streamline and simplify the standards process**

# Why Standardize Electronic Health Information

- The EHR along with seamless exchange of health information is the fundamental reason for interchange and interoperability
- The absence of standards for electronic health information was a major obstacle in the past

# Seamless Electronic Patient Records (1996:694)

- ADA maintains a vision:
  - Patient health data is confidential
  - Patient authorization of data available at time and place of care
  - EHR architecture should be open and compatible
  - patient health data unencumbered by boundaries
  - contributes toward improved quality of health outcomes and patient safety
- EHR should be a collection of data in automated form, rather than an automated version of paper record

# ANSI/ADA Specification 1039

- Standard patient-focused conceptual model developed and adopted in 2006.
- Designed around the patient, the treatment plan, and the services provided to the patient.
- Describes how the clinician needs information to make decisions to achieve best health care outcomes.

# ANSI/ADA Specification 1039

Diagnostic-Therapeutic Cycle is a clinical process consisting of:

- Data Acquisition
- Diagnosis
- Treatment Planning
- Treatment

# Vocabulary Needs

- EHRs require uniform HIT standards, including common medical language
- Data must be collected in a standardized format, with uniform definitions
- Standard clinical terminologies and classifications represent a common medical language.

# Clinical Terminology and Classifications

- Standardized method to structure EHR data in the software database tables
- Important for ensuring that information exchanged has persistent meaning and context – “semantic interoperability”
- Codes may be selected “behind the scenes” automatically using text descriptors or chosen directly by the provider

# Classification Taxonomies – Output Codes

Classifications group together similar diseases or procedures and organize related entities for easy retrieval. “Output” code sets:

- ICD-9-CM
- ICD-10-CM
- ICD-10-PCS
- CPT
- CDT

# ICD Codes – Diagnostic Codes

- International Classification of Diseases - Use can be traced back over 100 years. Originally designed to report mortality statistics.
- Now used for administrative functions, epidemiologic studies, research, protocols, decision support

# Reference Terminologies – Input Codes

- SNOMED CT ® – input method to codify clinical information captured in and EHR during patient care.
- Immense size
  - Granular
  - Complex hierarchies
- SNOMED CT ® Subsets - a set of SNOMED CT ® Concepts, Descriptions, or Relationships that is appropriate for deployment by a particular specialty organization. They are designed to help implementers by acting as a database view.

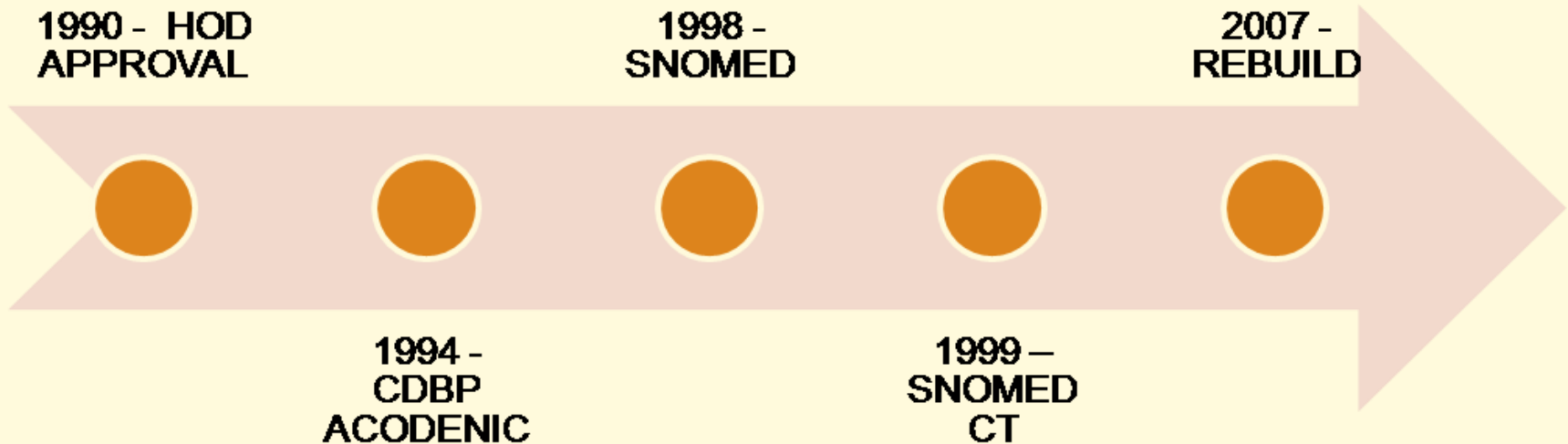
SNOMED CT® was originally created by The College of American Pathologists. “SNOMED” and “SNOMED CT” are registered trademarks of the IHTSDO.

# Systematized Nomenclature of Dentistry (SNODENT)

- **Subset of SNOMED CT ® including:**
  - Relevant anatomic sites
  - Morphologic concepts
  - Normal/abnormal functions
  - Conditions and diseases of interest to dentistry
- **Purpose:**
  - Provide standardized terms for describing dental disease
  - Capture clinical detail
  - Capture patient characteristics
  - Permit analysis of patient care services and outcomes

# SNODENT History

- SNODENT Timeline



# 2011 - SNODENT Pilot Testers

- Several Beta Tester License Agreements in process including:
  - Dental Schools
  - Government Agencies
  - Providers
  - Vendors
  - Health Systems

# 2011 - Interest in SNODENT

United Kingdom

Denmark

Sweden

New Zealand

# SNODENT Structure

- **Body Structure –**
  - Head Structure (includes morphology – neoplasms and cysts, etc.)
- **Clinical Findings –**
  - Findings of the Mouth Region (e.g., diagnosis, diseases, disorders, etc.)
- **Observable entity –**
  - Oral Cavity Function, Dental/Salivary Observations (e.g., appearance of tongue, appearance of gingiva, tooth color, etc.)
- **Physical Objects –**
  - Devices (e.g., intraoral devices, precision attachments, splints, orthodontic appliances, dentures, etc.)
- **Substances –**
  - Dental Materials (e.g., fluoride gel, filling materials, root canal materials, waxes, pastes, implant materials, etc.)

# SNODENT Update

- Original SNODENT included 2600 concepts – updated version nearly 6000
- Eliminated concepts that were “Not otherwise specified” (NOS)
- Identified “frequently used terms”
- Added terms from the ADA health history form
- Developed a new numbering system
- Assigned concepts to hierarchies
- Reviewed descriptions that were assigned to the concepts
- Reviewed synonyms for the concepts
- Developed a cross-walk from SNODENT-to-ICD-9

# What data needs will SNODENT address?

SNODENT will help get answers for questions:

- Decision Support/Patient Safety – Is the patient allergic to penicillin?
- Statistical/population data – How many patients have root caries?
- Financial Data – Mapping to ICD to identify patients requiring additional oral treatment for related systemic conditions.

# Secondary Uses of SNODENT

- Administrative reporting – ICD-9/10
- Development of decision support systems
- Development of evidence-based practice research

# What makes up a clinical record?

- Generally made up of a series of statements, which are sometimes:
  - Structured Data;
  - Fields in a form with answers;
  - Free-form sentences

# Difference Between Codes and Statements

- Code for Dental Caries:
  - SNODENT Id: 118065D
- Statements:
  - The patient has dental caries
  - The patient had early childhood caries

To make a record computer-understandable  
requires more than a list of codes

# Representing Dental Caries without coding

- Dental Caries; Dental Decay; Dental Cavity; Tooth Decay
- To a computer these word strings are all different yet mean the same thing
- SNODENT captures identical clinical expressions with one concept:
  - Standardizes information storage
  - Aides information usage and retrieval

# ADA Caries Classification System (CCS)- Code Stages

Sound Tooth / No Disease -- Sound tooth surface

Initial/Enamel Caries -- Distinct, Visual change in Enamel - with or without air drying, non-cavitated or cavitated, but limited to enamel region

Moderate/Dentinal lesion -- Loss of Surface Integrity: Enamel Breakdown *or* Loss of Root Cementum - with dentinal involvement

Extensive lesion – Extensive Surface Cavity with Visible exposed Dentin

# ADA CCS Code Stages

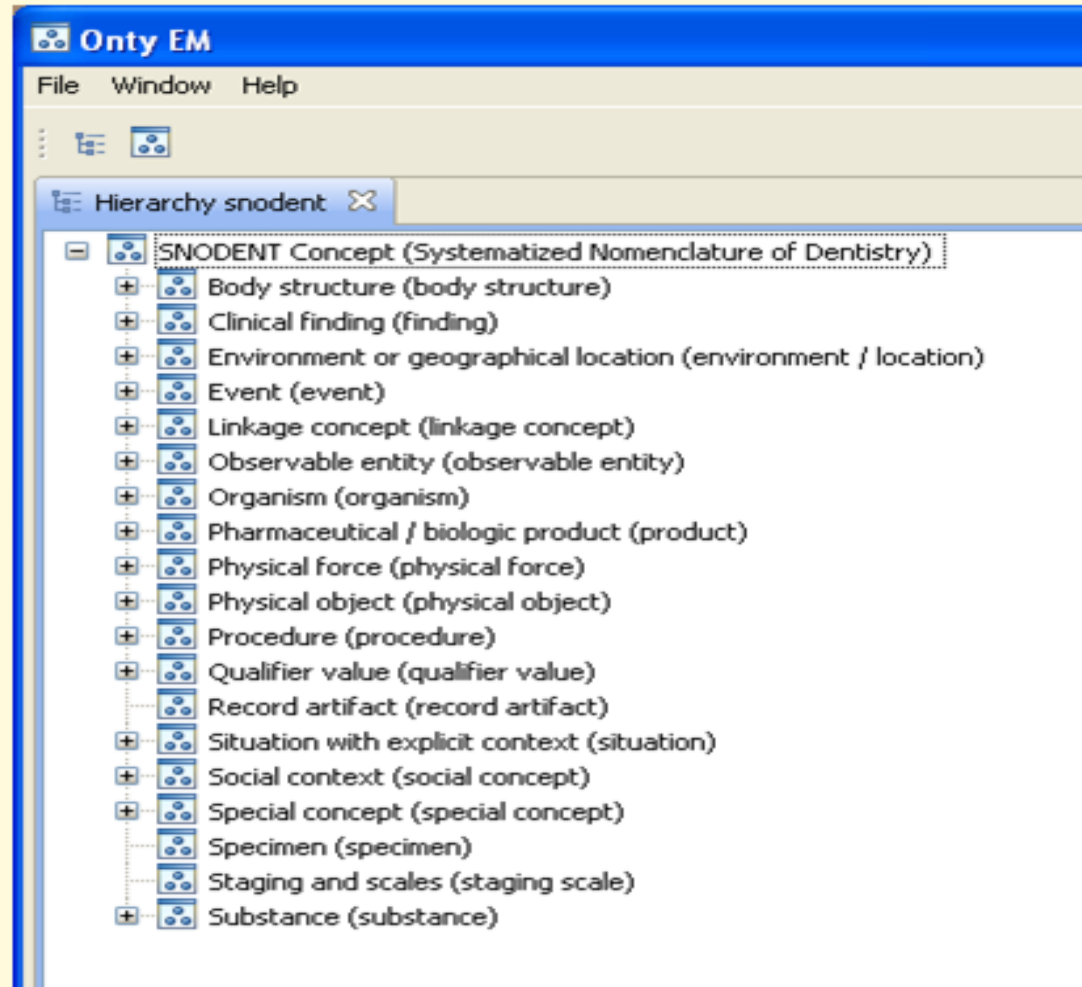
	<b>SITE DEFINITIONS</b>
<b>PITS &amp; FISSURES</b>	<b>Lesion arising in the anatomic pits or fissures of teeth, e.g., occlusal surface of posterior teeth, palatal surface of upper lateral incisors.</b>
<b>APPROXIMAL</b>	<b>Lesion arising in the immediate proximity to the contact area of an adjacent tooth surface (can exist on any surface of the tooth).</b>
<b>CERVICAL &amp; SMOOTH SURFACE</b>	<b>Lesion arising in the cervical area <i>or</i> any other smooth enamel surface adjacent to an edentulous space of the anatomic crown (around the full circumference) of the tooth</b>
<b>ROOT</b>	<b>Lesion arising on the root surface apical to the anatomic crown</b>

# Basic Elements of SNODENT

- Hierarchies
- Concepts
- Descriptions
- Attributes

Various elements combine to create the  
“computer readable concept definition”

# SNODENT Hierarchies



# A concept is a container that holds...

## Concept ID 118065D

- Descriptions:
  - Fully Specified Name
  - Preferred Term
  - Synonyms
- Relationships
  - “Is a” – dental caries is a bacterial oral infection
  - “Is a” – dental caries is a disorder of hard tissue of teeth
  - Finding Site – structure of hard tissue of tooth

# SNODENT Concept

SNODENT Concept snodent

## Dental caries (disorder)

Id: 11806000001102 | SNODENT Id: 118065D | SNOMED Id: 80967001

Current

▼ **Descriptions**

- Dental caries - Preferred
- Dental caries (disorder) - Fully Specified
- Dental cavity
- Dental decay
- Saprodontia
- Teeth decayed
- Tooth caries
- Tooth decay
- Tooth decayed

Primitive

▼ **Is a**

- [Bacterial oral infection](#)
- [Disorder of hard tissues of teeth](#)

▼ **Roles**

- Associated morphology -> [Caries](#)
- Causative agent -> [Superkingdom Bacteria](#)
- Finding site -> [Structure of hard tissue of tooth](#)
- Pathological process -> [Infectious process](#)

▼ **Maps**

▼ **SNODENT ICD9**

- Advice Code
- Exact [521.00 - Dental caries, unspecified](#)

▼ **Qualifiers**

▼ **Historical Relationships**

▼ **Additional Relationships**

# How does SNODENT work?

- Concept – a single clinical meaning identified by a unique numeric identifier and a unique human readable name:
  - Dental Caries (disorder) – Fully Specified Name
- Each concept has a set of descriptions:
  - Dental Caries – Preferred Term
  - Dental Decay; Dental Cavity; Tooth Decay – are all Synonyms

# How does SNODENT work?

- Each Concept has a set of relationships to other concepts:
  - Dental Caries “is a” Bacterial Oral Infection (SNODENT Id: 101050D). Bacterial Oral Infection “is a” Oral Infection (SNODENT Id: 102693D)
  - Causative agent – Superkingdom Bacteria
  - Finding Site – Oral Cavity Structure
  - Pathological Process – Infectious Process
- Maps to ICD-9CM - 042.9 Bacterial Infection Unspecified; 528.9 Other unspecified disease of the oral soft tissues

# How does SNODENT work?

- Dental Caries is also a Disorder of Hard Tissue of Teeth (SNODENT Id: 111975D)
- Descriptions:
  - Disorder of hard tissues of teeth – Preferred Term
  - Disorder of hard tissues of teeth (disorder) – FSN
- Dental Caries “is a” Tooth Disorder
- Finding Site – Structure of Hard Tissue of Tooth
- Maps to ICD-9-CM – 521.9 – unspecified disease of hard tissues of teeth

# Dental Caries “is a”

- SNODENT Concept
  - Clinical Finding
    - Disease
      - Disorder of Mouth
        - Oral Infection
          - Bacterial Oral Infection
            - Dental Caries

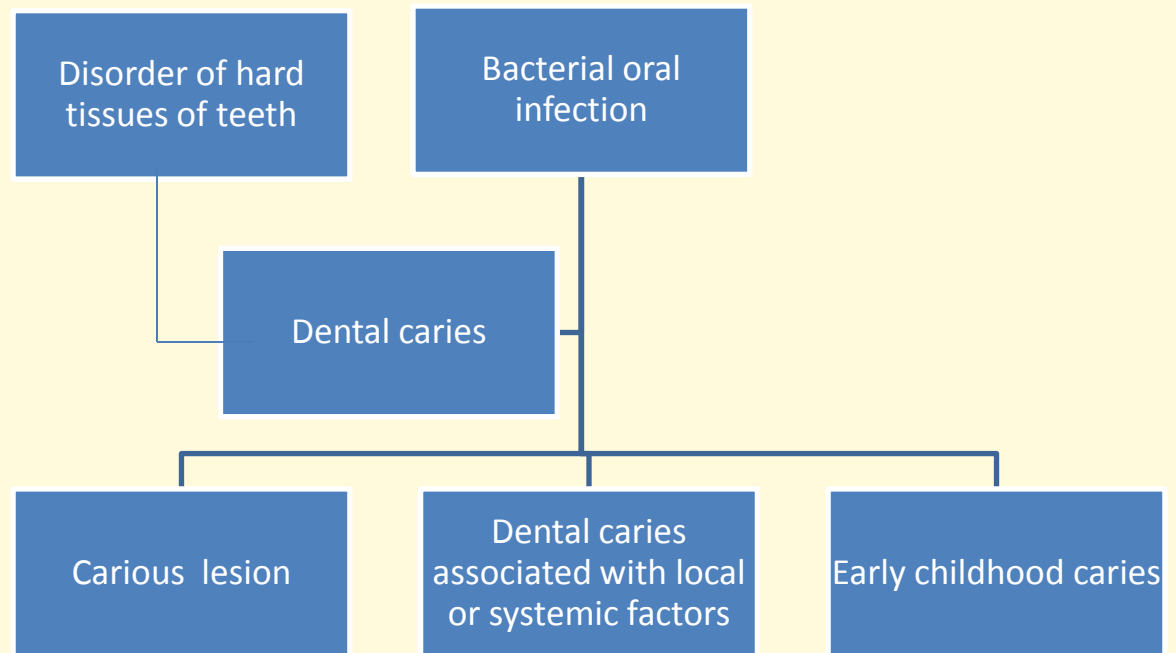
# Dental Caries “is a”

- SNODENT Concept
  - Clinical Finding
    - Disease
      - Disorder of Face
        - Disorder of Jaw
          - Disorder of teeth and supporting structures
            - Tooth Disorder
              - Disorder of hard tissues of teeth
                - Dental Caries

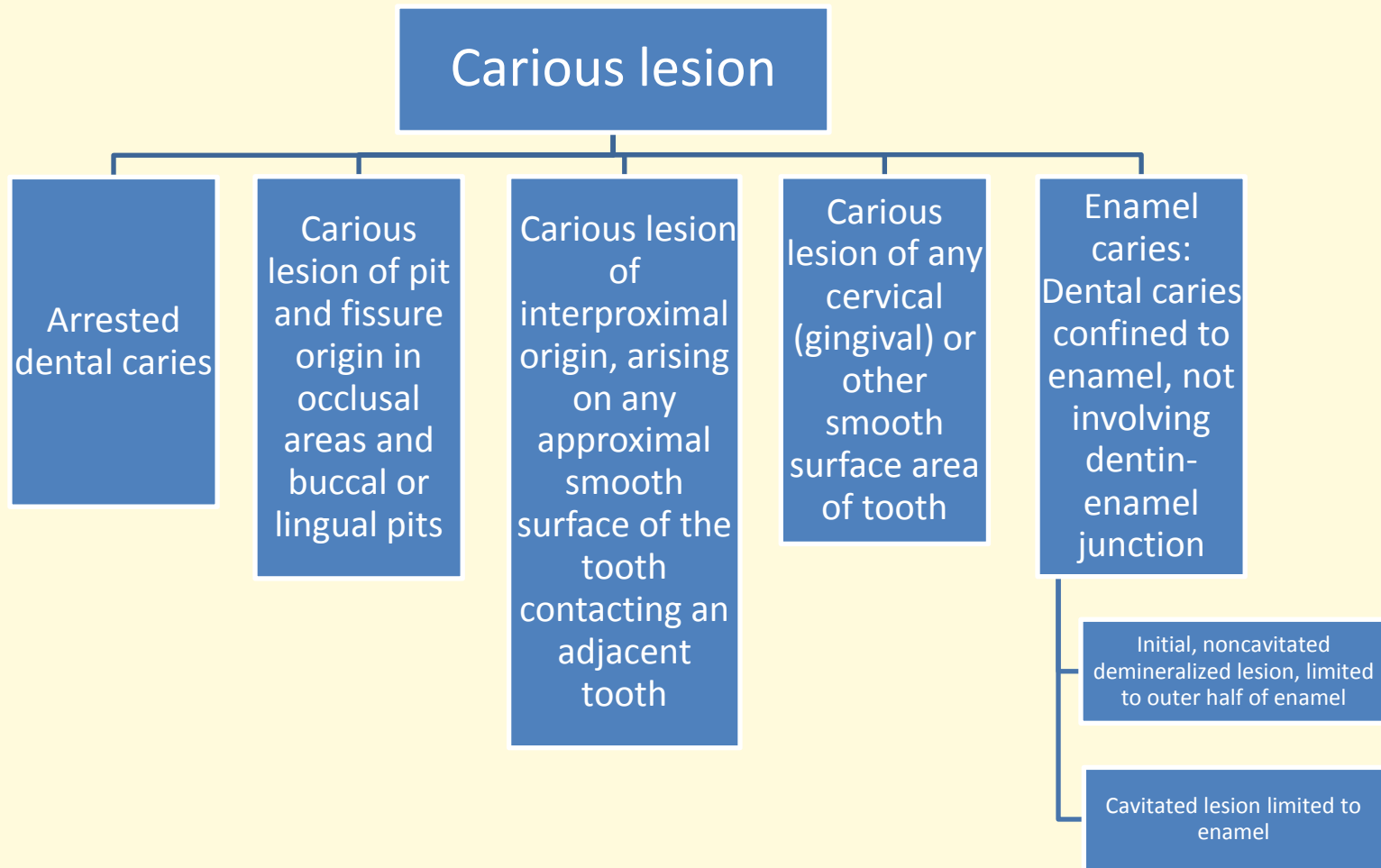
# Dental Caries

## Synonyms:

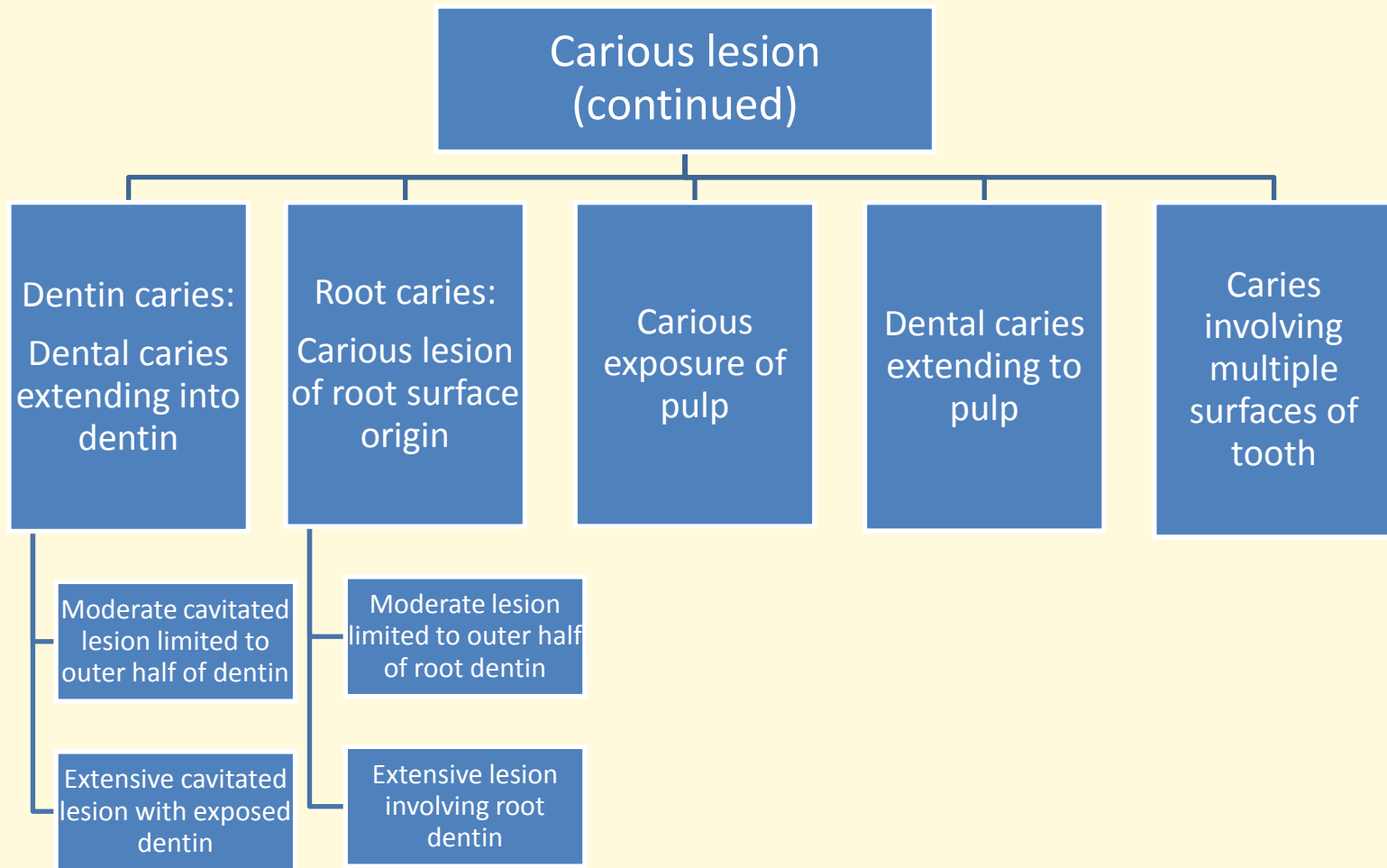
- Tooth decayed
- Tooth decay
- Teeth decayed
- Tooth caries
- Dental decay
- Dental cavity



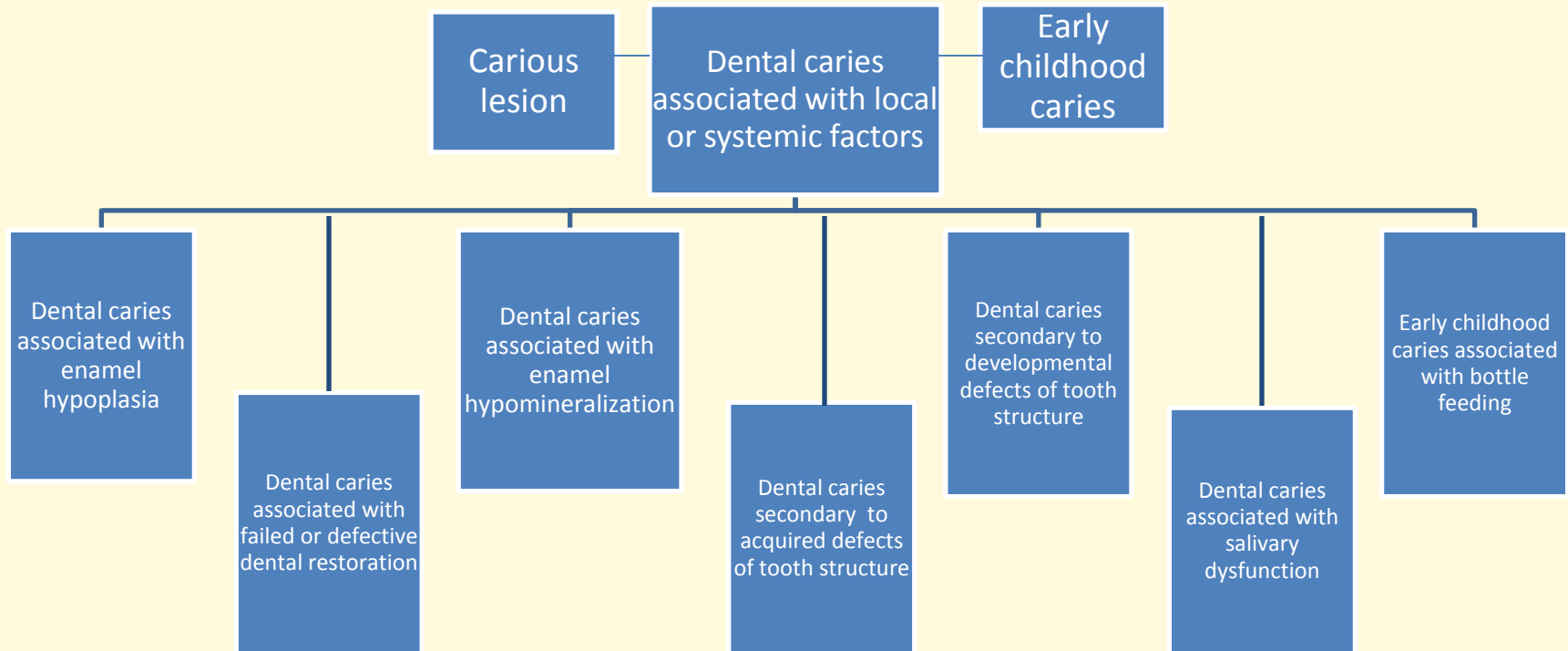
# Dental Caries (continued)



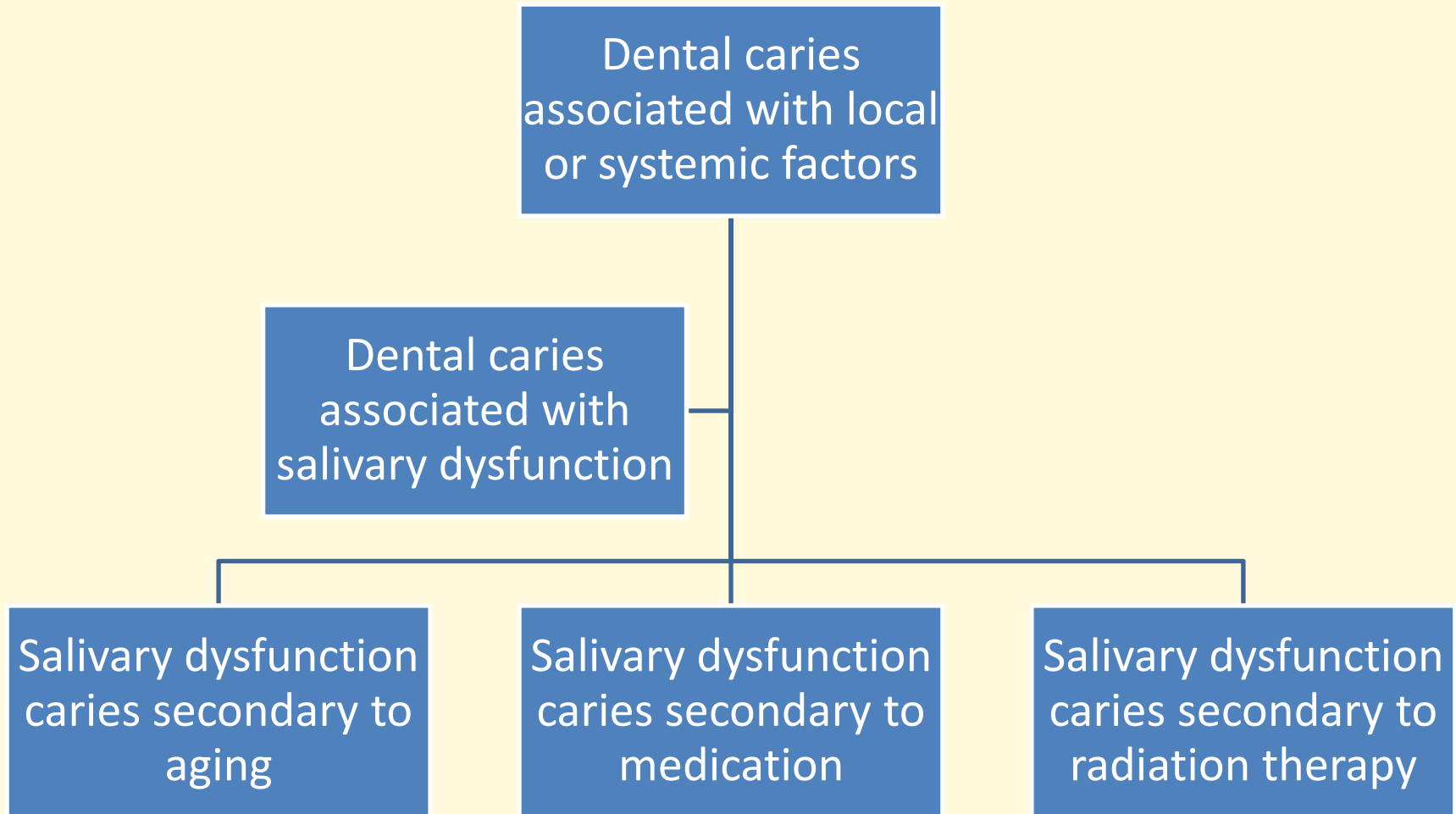
# Dental Caries (continued)



# Dental Caries (continued)



# Dental Caries (continued)



# Uses of SNODENT

- From a data standpoint, the basic uses include:
  1. Entering data about a patient into a record
  2. Retrieving stored data on a single patient or a group of patients
  3. Sharing detailed data about a patient with a third-party
    - Dental caries associated with salivary dysfunction
      - Salivary dysfunction caries secondary to medication
      - Salivary dysfunction caries secondary to radiation therapy

# Users of SNODENT

- End-users – clinicians
  - Tasks include – documenting clinical observations, specifying plan of care and orders, arranging referrals.
  - Computers will facilitate the clinician's use of SNODENT. Clinicians will probably not even be aware that they are using SNODENT

# Users of SNODENT

- Software Designers
  - Tasks include designing software that takes full advantage of SNODENT's advanced features
- Implementers of software applications
  - Tasks include developing software configuration tables and other structures to run the applications.

# Users of SNODENT

- Policymakers, the professions, and governments
  - Tasks include selection, evaluation, coordination, and support of standards; specification of criteria for quality measures, reimbursement, etc.
- Clinical researchers
  - Tasks include – selection of clinical trial candidates based on diagnoses and other criteria: aggregation and analysis based on patient characteristics

# Draft ADA Dental Claim Form

**ADA. Dental Claim Form**

**HEADER INFORMATION**

1. Type of Transaction (Mark all applicable boxes)  
 Statement of Actual Services       Request for Predetermination/Preadjustment  
 EPSDT / Title XIX

2. Predetermination/Preadjustment Number

**INSURANCE COMPANY/DENTAL BENEFIT PLAN INFORMATION**

3. Company/Plan Name, Address, City, State, Zip Code

**OTHER COVERAGE** (Mark applicable box and complete items 5-11. If none, leave blank.)  
 Dental?       Medical?      (If both, complete 5-11 for dental only.)

4. Name of Policyholder/Subscriber in #4 (Last, First, Middle Initial, Suffix)  
 5. Date of Birth (MM/DD/CCYY)      7. Gender  M  F      8. Policyholder/Subscriber ID (SSN or ID#)

9. Plan/Group Number      10. Patient's Relationship to Person named in #5  
 Self     Spouse     Dependent     Other

11. Other Insurance Company/Dental Benefit Plan Name, Address, City, State, Zip Code

**POLICYHOLDER/SUBSCRIBER INFORMATION** (For Insurance Company Named in #3)

12. Policyholder/Subscriber Name (Last, First, Middle Initial, Suffix), Address, City, State, Zip Code

13. Date of Birth (MM/DD/CCYY)      14. Gender  M  F      15. Policyholder/Subscriber ID (SSN or ID#)

16. Plan/Group Number      17. Employer Name

**PATIENT INFORMATION**

18. Relationship to Policyholder/Subscriber in #12 Above  
 Self     Spouse     Dependent Child     Other      **19. Reserved For Future Use**

20. Name (Last, First, Middle Initial, Suffix), Address, City, State, Zip Code

21. Date of Birth (MM/DD/CCYY)      22. Gender  M  F      23. Patient ID/Account # (Assigned by Dentist)

**RECORD OF SERVICES PROVIDED**

	24. Procedure Date (MM/DD/CCYY)	25. Area of Oral Cavity	26. Tooth System	27. Tooth Number(s) or Letter(s)	28. Tooth Surface	29. Procedure Code	29a. Diag Codes	29b. Sfx	30. Description	31. Fee
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

33. Missing Teeth Information (Place an X on each missing tooth)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
X															

34. Diagnosis Code List Qualifier  (ICD-9 = B; ICD-10 = AB)

34a. Diagnosis Code(s)      A      C      E  
 34b. Primary diagnosis in 'A'      B      D      F

31a. Other Fee(s)

32. Total Fee

35. Remarks

**AUTHORIZATIONS**

36. I have been informed of the treatment plan and associated fees. I agree to be responsible for all charges for dental services and materials not paid by my dental benefit plan, unless prohibited by law, or the treating dentist or dental practice has a contractual agreement with my plan prohibiting all or a portion of such charges. To the extent permitted by law, I consent to your use and disclosure of my protected health information to carry out payment activities in connection with this claim.

X Patient/Guardian signature      Date

37. I hereby authorize and direct payment of the dental benefits otherwise payable to me, directly to the below named dentist or dental entity.

X Subscriber signature      Date

**ANCILLARY CLAIM/TREATMENT INFORMATION**

38. Place of Treatment  (e.g. in office, 24-hour hospital)      39. Enclosures: (Y or N)

40. Is Treatment for Orthodontics?  
 No (Skip 41-42)       Yes (Complete 41-42)

41. Date Appliance Placed (MM/DD/CCYY)

42. Months of Treatment Remaining      43. Replacement of Prosthesis  No     Yes (Complete 44)

44. Date of Prior Placement (MM/DD/CCYY)

45. Treatment Resulting from  
 Occupational illness/injury     Auto accident     Other accident

46. Date of Accident (MM/DD/CCYY)      47. Auto Accident State

**BILLING DENTIST OR DENTAL ENTITY** (Leave blank if dentist or dental entity is not submitting claim on behalf of the patient or insured/subscriber)

48. Name, Address, City, State, Zip Code

49. NPI      50. License Number      51. SSN or TIN

52. Phone Number ( ) - -      52a. Additional Provider ID

**TREATING DENTIST AND TREATMENT LOCATION INFORMATION**

53. I hereby certify that the procedures as indicated by date are in progress (for procedures that require multiple visits) or have been completed.

X Signed (Treating Dentist)      Date

54. NPI      55. License Number

56. Address, City, State, Zip Code      56a. Provider Specialty Code

57. Phone Number ( ) - -      58. Additional Provider ID

# Proposed Dental Claim Form Changes

<b>Current Item # – Caption</b>	<b>Action</b>	<b>Explanation</b>
Item 4 – Other Coverage	Revise	Now able to discriminate between types of other coverage – Dental or Medical – or if both are available.
Item 19 – Student Status	Delete	This data is not on the HIPAA standard transaction and a dentist is not the primary source for such information.

# Proposed Dental Claim Form Changes

<b>Item 29a – Diagnosis Code Pointer</b>	<b>Add</b>	<b>Space to identify the diagnosis code(s) listed in 34a that apply to the procedure.</b>
Item 29b – Procedure Quantity	Add	Space to note the number of times a procedure (e.g. anesthesia) is provided on the date of service.
Item 30 – Description	Revise	Field length reduced by 8 characters to provide space for added Items 29a and 29b.

# Proposed Dental Claim Form Changes

32 – Other Fees	Renumber	Become <b>31a</b> to enable addition of added Items 34 and 34a so that remaining Item #s are not affected.
33 – Total Fee	Renumber	Become <b>32</b> to enable addition of added Items 34 and 34a so that remaining Item #s are not affected.
Item 34 – Missing Teeth Information	Renumber and Revise	Become <b>33</b> to enable addition of added Items 34 and 34a so that remaining Item #s are not affected.  Rename and shorten to indicate that reporting of missing teeth now limited to Permanent Dentition

# Proposed Dental Claim Form Changes

Item 34 – Diagnosis Code List Qualifier	Add	Space to identify the version of diagnosis code set used for the claim – ICD-9-CM from January 1, 2012 through September 20, 2013; ICD-10-CM thereafter.
Item 34a – Diagnosis Code(s)	Add	Space to report up to four diagnosis codes applicable to one or more of the listed procedures. The letters “A” through “D” are used to identify each code, with “A” considered the primary diagnosis.
Item 38 – Place of Treatment	Revise	Enable more accurate location identification using the HIPAA standard code set for place of service.
Item 39 – Enclosures	Revise	Change information reported to Yes/No instead of types and quantities of enclosures.

# Contact Information

Jean Narcisi ([narcisij@ada.org](mailto:narcisij@ada.org))

Director, Dental Informatics

American Dental Association

211 East Chicago Avenue

Chicago, Illinois 60611-2637

312-440-2750