Denti AI

AI IN DENTISTRY: Building Capacity and Confidence

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In this Workshop We Will :

- Define AI
- Answer 'Why and Where to use AI?'
- Discuss the benefits of AI in Dentistry
- Review the Expectations and Realities of AI
- Show How to use AI in Dentistry
- Provide a hands on AI experience

Denti AI

Quick start
guide

denti.ai

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What is AI?

- AI is the mathematical science of training machines to imitate or reproduce human tasks.
- At its simplest form, artificial intelligence is a field, which combines computer science and robust datasets, to enable problem-solving.

WHY USE AI in DENTISTRY?

- Call Management

- Treatment Planning

- Automated Dental Diagnostics

- Autocharting

- Clinical Chart Notes

- Periodontal Charting
- Orthodontics
- Dental Instruments/Dental Robotics
- Tele-Dentistry

Questions I have so far...


Expectations & Realities of AI

- **AI pulls the data from the existing PMS software**
- **It is not meant to replace the current system**
- **AI is not intended to replace a Clinician's review or clinical judgment**
- **It is intended to be used as a second opinion May produce false positives or negatives (7 % or less)**
- **Perception of decreased personalization of the patient experience**
- **IT infrastructure and support must have bandwidth for integration**

**Organization and clinicians must be open to CHANGE!**

https://www.drbicuspid.com/digital-dentistry/treatment-software/ai/article/15448022/implementing-ai-in-dentistry-change-management-tips-for-dental-practices-and-dsos

How can AI Help me?

- **Expands** capacity by increasing time to educate and treat patients
- **Aids** to assist the clinician
- **Supports** the clinician's diagnosis
- **Elevates** the standard of care for the detection of caries and apical radiolucencies
- **Increases** patient confidence in treatment plan
- **Confirms** existing mesial and distal bone levels
- **Calibrates** multiple clinicians
- **Improves** case acceptance
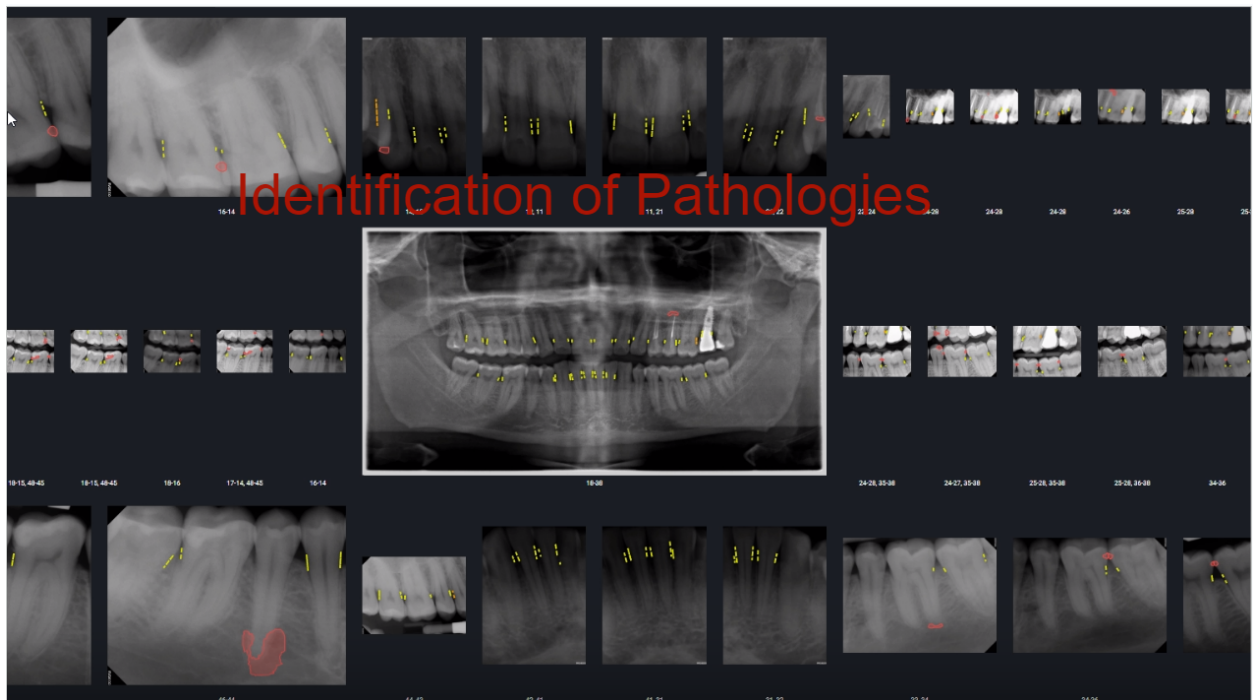
According to our FDA study, a DDS's **clinical judgment plus AI will yield 15-30%** more accurate findings.

Voice Activated Periodontal Charting
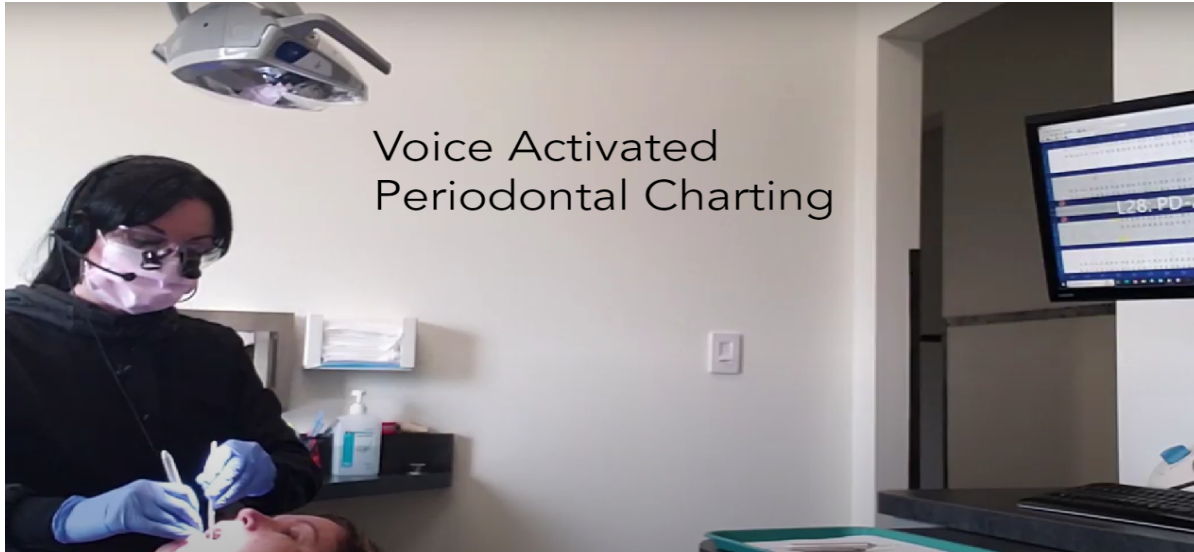
Standard of Care for a Complete Perio Chart

- Full-mouth periodontal charting, including the following data points reported by location, severity, quality, written description, or numerically: probing depths, bleeding points, suppuration, mucogingival relationships/defects, recession, attachment level/attachment loss

- Presence, degree, and distribution of plaque and calculus

- Gingival health/disease

- Bone height/bone loss

- Mobility and fremitus

- Presence, location, and extent of furcation involvement

RDH mag December 4, 2019
Diane Glasscoe Watterson, MDA, RDH

Remember, in the eyes of the law, if it's not recorded in the chart, IT NEVER HAPPENED!

Beyond Efficiency: Denti.AI Voice can significantly impact production

2.2 more perio charts per day on Average by providers who use Voice at least 70% of the time

"I usually have to decide if I do an FMX or a perio chart. Now I don't need to make choices like that." -RDH, 42N

- >50% increase in number of perio charts per day on average

- High users do about 70% more perio charts than Non users

- 15-20% increase in Hygiene code related production (and revenue)

Bar chart values:
- Non Users (0%): 3.1
- Low users (1-31%): 3.9
- Medium users (32-70%): 4.8
- High users (70-100% of the time): 5.2

Significant correlation between using Voice and completing more perio charts each day!

Denti AI

Denti.AI Quick Start guide

1. Initiation of session: click the AI button
   To pause listening while charting say:
   `Pause`; to continue say `Resume`

2. To chart **Pocket depths** (or Gingival margin)
   just say numbers e.g.: `3 3 3`, `2 2 2`, `4 2 3`

3. To chart **Gingival Margin** move the cursor to the GM row
   by saying: `Jump gingival margin`
4. To go back to charting pocket depths say: `Jump Pocket Depths`

5. To chart **Bleeding** or **Suppuration** say
   `Bleeding / Suppuration + location 1-32 + site` (mesial,distal, middle,
   interproximal) or surface (lingual, facial/buccal)
   Example sentences:
   - `Bleeding (on) 5` or just say `Bleeding 5`
   - `Bleeding on 5 buccal` (can specify lingual,mesial/distal/interproximal)
   - `Suppuration/Bleeeding 2 through 6` : This will add suppuration to all positions in the
   range specified
   - `Bleeding on sextant 2` or `Bleeding on quadrant 1 interproximal`
   - `Generalized interproximal Bleeding`

6. To chart **Mobility** (teeth 1-32, class 1-4) say e.g
   `Mobility 4 class 1`
7. To chart **Furcation** say: `Furcation tooth number 1 grade 2 (or just say`
   `Furcation 1 grade 2)`

8. Navigation commands:
   - Jump (add tooth number and surface): `Jump 2`/ `Jump 5 facial/lingual`
   - `Undo` — remove the last entry / cancel the previous command
   - `Repeat` — repeat triplet once, (quadruple or quintuple if chart
     allows) - Repeat X times — e.g `Repeat 3` , `Repeat 10`

9.**Save chart** Command: Save Chart (Not available in all systems)

For support call: +1-865-551-9304
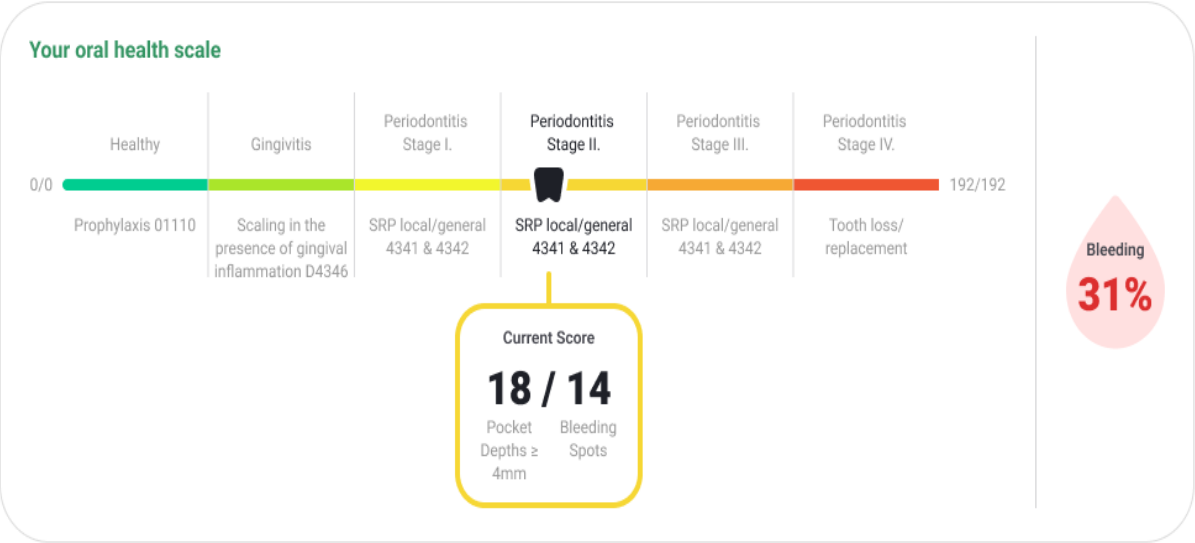
AI Builds Tools to educate patients

Oral Health Status - PHI   Denti[AI]   ✕

The Periodontal Health Index equals the number of deep pockets over the number of bleeding points.
The maximum on a full dentition with no missing teeth is 192/192.

Your oral health scale

| Healthy | Gingivitis | Periodontitis Stage I. | Periodontitis Stage II. | Periodontitis Stage III. | Periodontitis Stage IV. |

0/0 —— 192/192

| Prophylaxis 01110 | Scaling in the presence of gingival inflammation D4346 | SRP local/general 4341 & 4342 | SRP local/general 4341 & 4342 | SRP local/general 4341 & 4342 | Tooth loss/ replacement |

Current Score

18 / 14

Pocket Depths ≥ 4mm   Bleeding Spots

Bleeding
31%

Suggested Treatment

Adjunctive therapies: Start typing...

AI Generated Clinical Notes

**Generalised SRP:**   Start typing...

Notes

Dear Tom,

During your recent dental examination, we have found that your periodontal health has changed since your last visit six months ago. Your Periodontal Health Index (PHI) score is now 18/24, with four sites measuring above 5mm. This indicates that you have experienced some degree of bone loss under your gums.

If you do not address the problem areas with regular brushing and flossing, the disease will progress and the bacteria will eat more of your gum tissue and further reduce your bone levels. This will eventually cause your teeth to loosen and move, affecting your ability to eat and live pain free. Periodontal disease cannot be reversed but it can be stopped. In order to treat this condition and stop the disease from progressing a 4month recall is strongly advised as well as strict adherence to the home care instructions provided.

📋 Copy notes

Where are the problem areas located?
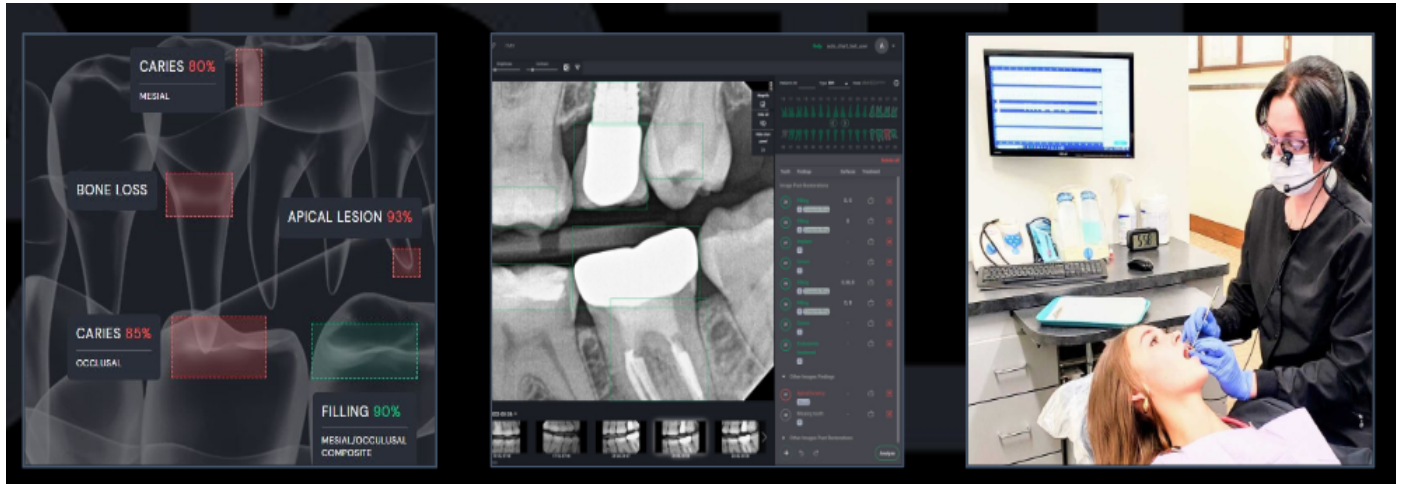
| UL 3/4 | UR 2/3 |
| LL 3/4 | LR 4/3 |
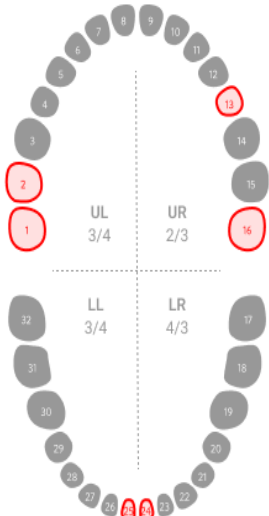
📄 Download PDF   @ Send as email

Reminder: The AI pulls unbiased data from the Perio Chart. To have an accurate Oral Health Status with correct Stage, all 6 points of PD and GM must be probed to have accurate CAL levels. ALL bleeding must be entered to have accurate bleeding percentages.

Staging and Grading Periodontitis

The 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions resulted in a new classification of periodontitis characterized by a multidimensional staging and grading system. The charts below provide an overview. Please visit **perio.org/2017wwdc** for the complete suite of reviews, case definition papers, and consensus reports.

PERIODONTITIS: STAGING

Staging intends to classify the severity and extent of a patient's disease based on the measurable amount of destroyed and/or damaged tissue as a result of periodontitis and to assess the specific factors that may attribute to the complexity of long-term case management.

Initial stage should be determined using clinical attachment loss (CAL). If CAL is not available, radiographic bone loss (RBL) should be used. Tooth loss due to periodontitis may modify stage definition. One or more complexity factors may shift the stage to a higher level. See **perio.org/2017wwdc** for additional information.

	Periodontitis	Stage I	Stage II	Stage III	Stage IV
Severity	**Interdental CAL** (at site of greatest loss)	1 – 2 mm	3 – 4 mm	≥5 mm	≥5 mm
	RBL	Coronal third (<15%)	Coronal third (15% - 33%)	Extending to middle third of root and beyond	Extending to middle third of root and beyond
	Tooth loss (due to periodontitis)	No tooth loss		≤4 teeth	≥5 teeth

Complexity	**Local**	• Max. probing depth ≤4 mm
		• Mostly horizontal bone loss
			• Max. probing depth ≤5 mm
			• Mostly horizontal bone loss
				In addition to Stage II complexity:
				• Probing depths ≥6 mm
				• Vertical bone loss ≥3 mm
				• Furcation involvement Class II or III
				• Moderate ridge defects
					In addition to Stage III complexity:
					• Need for complex rehabilitation due to:
					  – Masticatory dysfunction
					  – Secondary occlusal trauma (tooth mobility degree ≥2)
					  – Severe ridge defects
					  – Bite collapse, drifting, flaring
					  – <20 remaining teeth (10 opposing pairs)

Extent and distribution	**Add to stage as descriptor**	For each stage, describe extent as: • Localized (<30% of teeth involved); • Generalized; or • Molar/incisor pattern			

As AI continues to advance, we can expect further innovations and applications in dentistry, ultimately benefiting both dental professionals and patients alike. The future of dentistry is undoubtedly intertwined with the capabilities of AI, and it holds tremendous potential to revolutionize the way we approach oral health care.

AI CHANGES THINGS for the BETTER!

Denti AI
Voice

43% increase in number of periocharts

- ✓ Flexible, user-friendly, and convenient
- ✓ Adaptable to anyone's unique voice
- ✓ Directly charts patient data into your PMS

Learn how Voice is helping our customers succeed!

Denti AI

Contact us:
info@denti.ai
www.denti.ai

70% cut from patient charting time

☑ Approve findings and chart to your PMS with one-click!

☑ Easy adoption throughout your organization

☑ 10/10 Dentists and Dental Hygienists find it useful and love it!

Learn how Auto-Chart is helping our customers succeed!

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