

# AI-assisted clinical documentation for a leading orthodontic practice platform

Ambient transcription, automated template population and AI-driven dental charting - embedded inside an existing practice-management suite.

HealthTech · Orthodontics

AWS Transcribe Medical

HIPAA + GDPR

EU / UK hosted

## THE CHALLENGE

- Clinicians were spending 30–45 minutes a day typing notes after chair time, reducing patient throughput.
- Manual coding of tooth conditions, procedures and medication was inconsistent between practitioners and clinics.
- Any clinical assistant had to meet strict HIPAA and GDPR obligations, with no cross-border PHI transfer.
- The client already ran a mature platform for appointments, clinical notes and reporting - the AI had to slot in, not replace it.

## WHAT WE BUILT

- Ambient clinical transcription with medical-term recognition and speaker diarisation.
- Automated template population: visit notes, tooth condition, ICD-10 / SNOMED coding, medication and imaging requests.
- AI-assisted dental charting - the FDI chart is pre-filled from the transcript, with a single-click clinician confirm-and-edit flow.
- Low-confidence review queue and full audit trail of every AI suggestion and clinician override.

## TECH STACK

- AWS Transcribe Medical for clinical ASR.
- AWS Bedrock plus fine-tuned classification models for entity extraction and template mapping.
- Python / FastAPI services; TypeScript + React modules embedded in the existing platform.
- PostgreSQL with field-level encryption, AWS KMS and CloudTrail auditing.

## COMPLIANCE & OUTCOME

- HIPAA-compliant architecture under BAA; UK / EU GDPR compliant with documented lawful basis per tenant.
- ISO 27001-aligned SDLC inherited from Blue Tea; every AI decision timestamped and attributable.
- Clinician documentation time down by ~65% on measured visits; markedly improved coding consistency.
- Rolled out across multiple clinics with no additional hardware or clinician re-training.

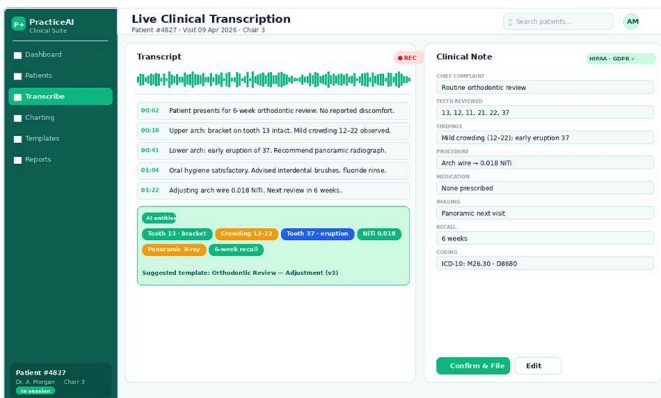


Figure 1. Live clinical transcription with AI-detected entities

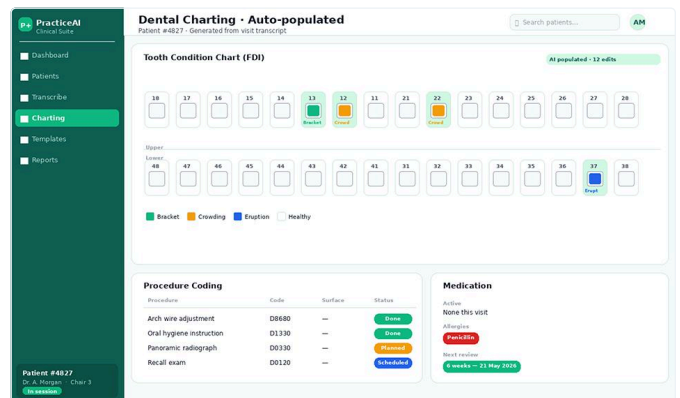


Figure 2. Auto-populated FDI dental chart and procedure coding