

TECH & AI CASE STUDY - DENTAL CLINIC NETWORK - 2026

An AI Front Desk Booking Dental Patients 24/7

Based on a delivery engagement with Maplepoint Dental Group

68% to 94% CALL ANSWER RATE	+31% NEW-PATIENT BOOKINGS	14% of total AFTER-HOURS BOOKINGS	-19% NO-SHOWS
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A fillable practice edition: the full story, 8 actions,
6 reflections and a 90-day plan - work it with your team.

Free - no email required
emersontechnology.com

MAKE THIS PRACTICE BOOK YOURS

Work it, do not just read it

This practice book turns the Maplepoint Dental Group case study into a working session for your team. Read the full story first - what happened, what was built and what it changed. Then tick the 8 actions you can commit to, write short answers to the 6 reflections, and finish with a 90-day plan. Every field in this PDF is fillable: open it in Adobe Acrobat Reader, Chrome, Edge or macOS Preview, type directly into the boxes and save.

YOUR NAME	ROLE
COMPANY	TEAM / DEPARTMENT
DATE	EMAIL (OPTIONAL)

MY GOAL FOR THIS PRACTICE SESSION

- 01 The story** - What happened at Maplepoint Dental Group - before, during and after the project.
- 02 The results** - The numbers that changed, plus industry benchmarks from public research.
- 03 The 8-action checklist** - Tick boxes as your organization completes each step. Owner and date fields included.
- 04 The 6 reflections** - Fillable questions that pressure-test your own roadmap.
- 05 My 90-day plan** - Three fillable phase cards that turn this case study into your roadmap.

RUN IT AS A 90-MINUTE TEAM SESSION

25 min READ Read the story together. Ask everyone to note the one number that surprised them most.	40 min PRACTICE Work the 8-action checklist and the 6 reflections. Assign an owner and a date to every action you commit to.	25 min COMMIT Fill in the 90-day plan. One goal per phase, one number that tells you it worked. Book a review date before you leave the room.
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THE STORY

What happened, and why it worked

01 The Company

Maplepoint Dental Group operates 22 clinics across three states, providing general dentistry, hygiene, orthodontics and pediatric care to a patient base that skews toward working families. Each clinic runs its own chair schedule, its own front desk, and its own local reputation, but the group shares one appointment system, one call center philosophy and one growth target: keep chairs full. A dental chair is perishable inventory in the most literal sense — an unfilled hour on a Tuesday morning never sells again — so the group's economics depend on two numbers above all others: how many new patients book, and how many booked patients actually show. At \$310 per new patient, acquisition was expensive enough that leadership treated every missed inquiry as a direct P&L loss. The group had priced the obvious fix — hiring evening receptionists across all 22 offices — twice, and rejected it both times on cost. What leadership had never done was measure precisely where inbound demand was dying, which is why the problem survived two budget cycles without a plan.

02 Where Things Stood

The front desks were drowning in a specific, measurable way. During peak morning hours — exactly when parents call before school and work — 32% of inbound calls went unanswered. The phones went dark after 6pm, which is precisely when working families sit down, compare practices and try to book; that after-hours demand simply vanished to whichever competitor answered. Call answer rate across the network averaged 68%, and the 32% gap was not spread evenly — it concentrated in the morning rush and the evening window, the two periods when appointment demand is hardest to reschedule into another hour.

Inside the clinics, schedulers spent most of their day repeating the same answers: which insurance plans the practice accepts, what time the office closes, where to park, whether a procedure hurts. Every one of those minutes was stolen from the highest-value work a front desk does — checking families in, managing the waiting room, rescuing the schedule when a patient runs late. No-shows ran at 16% across the network, wasting an estimated \$1.6M of chair time annually: confirmed appointments that dissolved into empty chairs because a reminder went out once, by phone, during a shift when nobody had time to make reminder calls.

Gartner has projected that conversational AI deployments within contact centers will reduce agent labor costs by \$80 billion worldwide by 2026, and Accenture estimated that AI applications could save the US healthcare economy up to \$150 billion annually by 2026, with administrative workflows a leading contributor. Maplepoint was a textbook instance of that pattern: the group did not have a demand problem or a capacity problem. It had an answering problem.

03 The Challenge

The challenge was to give 22 clinics a front desk that never sleeps, without letting a machine loose on clinical conversations. Patients calling about pain, swelling or a knocked-out tooth need a human immediately, and any system that traps them in a menu creates both a safety risk and a reputational one. The scope had to be deliberately narrow: hours, insurance questions, directions, booking, rescheduling and cancellation — administrative work a well-informed agent handles confidently — with pain calls and clinical questions routed to staff within seconds. Juniper Research has estimated that chatbot deployments would save businesses \$8 billion annually in support costs, led by healthcare, banking and retail; the savings in healthcare deployments come precisely from keeping the scope administrative.

The second constraint was regulatory. Patient conversations involve protected health information, so the deployment required HIPAA-eligible infrastructure, a signed BAA, disciplined transcript handling and an audit posture that would survive a compliance review. The third constraint was operational: the agent had to write directly into the practice-management system. An agent that could only take messages would recreate the very workload it was hired to remove — someone would still have to call every patient back, only now with a transcript instead of a conversation.

04 Discovery and Diagnosis

Emerson Technology began with a four-week discovery across the call logs, schedules and front-desk workflows of six representative clinics. Thirty days of call data produced the numbers leadership had never assembled: answer rate by hour, abandonment curves, and the shape of after-hours demand recovered from voicemail and web forms. The after-hours gap was larger than any estimate on file — the group had never been able to measure demand that arrived when nobody was listening, and the voicemail box told only the story of callers patient enough to leave one. The audit also catalogued the front desk's most frequent questions and found the same ten topics — insurance, hours, parking, directions, new-patient paperwork, procedure basics — consuming the majority of interrupted time.

The scheduling audit examined how appointments actually flowed through the practice-management system: which slots filled first, which went begging, and what happened after a confirmation call. The team found reminders going out in a single daily batch with no reschedule path, which meant a patient whose plans changed had to call during office hours — and often simply did not, converting a recoverable cancellation into a silent no-show. The diagnosis shaped the build order: answering and booking were the visible problem, but the reminder-and-reschedule loop was the fastest measurable return, and it needed to ship alongside the agent rather than after it.

05 The Solution

Emerson Technology deployed a conversational AI agent across phone and web, built to handle the administrative front desk end to end and to hand off everything clinical to humans. The architecture has three layers.

The voice and chat agent

Twilio routes calls to a voice agent built on a fine-tuned large language model with a curated knowledge base covering insurance plans, hours, parking and procedure FAQs. The agent was tuned for real callers — tested at natural speaking speed, tuned to handle interruptions, accents and background noise — because voice AI succeeds or fails in its first ten seconds of conversation. A Next.js chat widget on the group's website handles the same flows in text, so a patient who prefers typing at 9pm gets the same booking experience as a caller. The agent's scope is deliberately administrative: it answers what it knows, books what it can, and says so plainly when it cannot.

Scheduling integration and handoffs

The agent checks live schedule availability and books, reschedules and cancels appointments directly in the practice-management system with write access — no message-taking, no callback queue. Handoffs were designed before launch: pain calls, emergencies and billing disputes route instantly to human staff within seconds, because patients forgive limits but do not forgive feeling trapped inside a phone menu. Automated SMS confirmations with one-tap rescheduling links run from the same platform, giving patients a self-serve path the moment plans change. That loop — instant confirmation, easy reschedule — is what converts cancellations into moved appointments instead of empty chairs.

Privacy and oversight

The deployment runs on HIPAA-eligible AWS infrastructure under a signed BAA, with access logged and clinical detail kept out of transcripts by design. Transcripts are reviewed weekly: sampled conversations are checked for wrong answers and dead ends, and the knowledge base is updated the same day a gap is found. The agent generates no clinical advice, ever — a boundary stated in its scripts, enforced in its routing and verified in the weekly review. Compliance architecture was built in from the start rather than bolted on, which kept the review process with the group's counsel short and uneventful.

06 The First 90 Days

Weeks one and two built the knowledge base from the discovery audit and configured the practice-management integration against six pilot clinics. Weeks three through six ran the voice agent live at those clinics alongside normal staffing, with daily transcript reviews and a standing rule: any conversation a clinic manager flagged was corrected in the knowledge base within a day. The handoff paths were drilled with front-desk staff so transfers felt seamless — the pilot's most common early complaint, a half-second of dead air at transfer, was tuned out before anyone outside the pilot noticed.

Weeks seven through ten extended the agent to all 22 clinics and switched on the SMS confirmation loop with one-tap rescheduling. Clinic managers received a 45-minute briefing, a one-page playbook for the exception workflow, and a named contact for the first month. Weeks eleven and twelve were spent tuning: reminder timing adjusted by appointment type, evening voice prompts re-recorded after real callers misheard one phrase, and the chat widget's opening message rewritten after transcripts showed patients asking whether a human was listening. By the end of the quarter the group had a front desk that answered every call, and the network had its first-ever measurement of after-hours demand — demand it had previously never seen, let alone served.

07 The Results

Within four months the network's front door had changed. Call answer rate rose from 68% to 94%, eliminating the morning-rush and evening windows where demand used to die. New-patient bookings climbed 31%, and acquisition cost per new patient fell from \$310 to \$224 as booked demand rose without a dollar of additional ad spend. No-shows fell 19% as automated reminders and instant rescheduling replaced the single daily reminder batch, and 14% of all appointments now book outside office hours — a revenue window the group had never been open for.

METRIC	BEFORE	AFTER
Call answer rate	68%	94%
New-patient bookings	-	+31%
After-hours bookings	-	14% of total
No-shows	16%	-19%

The qualitative changes compounded the quantitative ones. Front desks report far fewer interrupted check-ins during morning rushes, and schedulers spend their minutes on the waiting room instead of insurance FAQs. Clinic managers rank the reminder loop as the most visible operational win — patients reschedule instead of disappearing, and the schedule self-heals. The evening window, once a total blind spot, is now a named line in the group's monthly review, and nobody has proposed hiring evening receptionists since, because the need those hires were meant to fill is gone.

08 What Your Business Should Do

The pattern behind Maplepoint's result is repeatable in any appointment-driven business. Count your missed calls first: pull 30 days of call logs and measure answer rate, hold time and abandonment by hour, because the after-hours gap is almost always larger than leadership assumes. Scope the agent to admin — hours, insurance, directions and booking, never clinical advice or diagnosis — because a narrow, confident scope builds patient trust and keeps regulators comfortable from day one. Integrate scheduling directly with write access to your practice-management or booking system, since agents that only take messages recreate the workload they were meant to remove.

Design handoffs before launch, defining which calls route instantly to humans — pain, emergencies and billing disputes — because patients forgive limits but do not forgive feeling trapped inside a phone menu. Tune the voice for real callers at real speaking speed, accounting for interruptions, accents and background noise, and automate reminders and rescheduling from day one, because no-show reduction is usually the fastest, most measurable return in any appointment-based business. Protect PHI by design with HIPAA-eligible infrastructure, signed BAAs, logged access and no clinical detail stored in transcripts, and review transcripts weekly, sampling conversations for wrong answers and dead ends and updating the knowledge base the same day — a weekly review catches drift long before patients complain.

Ask the questions Maplepoint's leadership now reviews quarterly: what percentage of calls to your business go unanswered, and at which hours; how many appointment requests arrive after your phones close, and where do they go; what a 19% no-show reduction would be worth across your schedule in a typical month; which ten questions consume most of your front-desk time and whether a machine could answer them accurately; whether your systems would even allow a patient to book at 9pm from their phone today; and who reviews patient-facing conversations for accuracy and tone right now. Work through the eight actions in this practice book with your team, and revisit those reflection questions each quarter to keep the front desk honest.

REAL-WORLD PROOF & BENCHMARKS

Gartner has projected that conversational AI deployments within contact centers will reduce agent labor costs by \$80 billion worldwide by 2026. - Gartner, 2022

Accenture research estimated that AI applications could save the US healthcare economy up to \$150 billion annually by 2026, with administrative workflows a leading contributor. - Accenture, 2017

Juniper Research estimated chatbot deployments would save businesses \$8 billion annually in support costs, led by healthcare, banking and retail. - Juniper Research, 2019

THE PRACTICE PAGES

The 8-action checklist

Work through the list with your team. Tick each box as your organization completes the step, and fill in an owner and a target date so every action has a name and a deadline.

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1. Count your missed calls

Pull 30 days of call logs and measure answer rate, hold time and abandonment by hour. The after-hours gap is almost always larger than leadership assumes.

OWNER

TARGET DATE

STATUS

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☐

2. Scope the agent to admin

Let AI handle hours, insurance questions, directions and booking — never clinical advice or diagnosis. A narrow, confident scope builds patient trust and keeps regulators comfortable from day one.

OWNER

TARGET DATE

STATUS

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☐

3. Integrate scheduling directly

Connect the agent to your practice-management or booking system with write access. Agents that only take messages recreate the workload they were meant to remove.

OWNER

TARGET DATE

STATUS

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☐

4. Design handoffs before launch

Define which calls route instantly to humans: pain, emergencies and billing disputes. Patients forgive limits; they do not forgive feeling trapped inside a phone menu.

OWNER

TARGET DATE

STATUS

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☐

5. Tune voice for real callers

Test scripts at real speaking speed and tune for interruptions, accents and background noise. Voice AI succeeds or fails in its first ten seconds of conversation.

OWNER

TARGET DATE

STATUS

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☐

6. Automate reminders and rescheduling

Pair the agent with SMS confirmations and one-tap rescheduling links. No-show reduction is usually the fastest, most measurable return in any appointment-based business, so launch it first.

OWNER

TARGET DATE

STATUS

☐

7. Protect PHI by design

Use HIPAA-eligible infrastructure, sign BAAs, log access and avoid storing clinical detail in transcripts. Compliance architecture is cheaper to build in than to bolt on.

OWNER

TARGET DATE

STATUS

☐

8. Review transcripts weekly

Sample conversations for wrong answers and dead ends, then update the knowledge base the same day. A weekly transcript review catches drift long before patients complain.

OWNER

TARGET DATE

STATUS

AFTER THE CHECKLIST: OUR TOP 3 PRIORITIES

From the eight actions above, write down the three you will start first - and the single number you expect each one to move. Three priorities with owners beat eight without any.

PRIORITY 1 NUMBER IT SHOULD MOVE	PRIORITY 2 NUMBER IT SHOULD MOVE	PRIORITY 3 NUMBER IT SHOULD MOVE
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THE PRACTICE PAGES

Reflections for your team

Use these questions in your next planning session and type short answers into the boxes. The gaps you find are usually the fastest wins.

Q1. What percentage of calls to your business go unanswered, and at which hours does it happen most?

Q2. How many appointment requests arrive after your phones close, and where do they currently go?

Q3. What would a 19% no-show reduction be worth across your schedule in a typical month?

Q4. Which ten questions consume most of your front-desk time, and could a machine answer them accurately?

Q5. If patients could book at 9pm from their phones, would your systems even allow it today?

Q6. Who reviews patient-facing conversations for accuracy and tone at your organization right now?

THE PRACTICE PAGES

My 90-day plan

Finish the session by committing to a plan. Three phases, one goal each, one number that tells you it worked. Bring this page to your next leadership review - or to a free consultation with Emerson Technology, and we will pressure-test it with you.

Days 1-30 Focus: audit and alignment

PRIMARY GOAL

KEY ACTIONS

HOW WE MEASURE SUCCESS

OWNER

Days 31-60 Focus: build and prove

PRIMARY GOAL

KEY ACTIONS

HOW WE MEASURE SUCCESS

OWNER

Days 61-90 Focus: scale and measure

PRIMARY GOAL

KEY ACTIONS

HOW WE MEASURE SUCCESS

OWNER

Tip: save a copy per team so each group keeps its own answers. Revisit the reflections every quarter - the questions stay the same even as the numbers move.

BOOK THE REVIEW BEFORE YOU CLOSE THE BOOK

Plans without a review date drift. Before you close this practice book, agree on when you will come back to these pages, who will run that session, and when you will check the numbers again. If you want an outside pair of eyes, bring this page to a free consultation with Emerson Technology and we will pressure-test the plan with you.

REVIEW DATE	REVIEWED BY	NEXT CHECK-IN
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Ready for a transformation like Maplepoint Dental Group's?

Emerson Technology designs and builds the data, AI, cloud and automation systems behind results like these. On a free consultation call we will map this exact playbook to your business - your data, your constraints, your numbers.

Book a free consultation

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or start online: emersontechnology.com/contact