MARKETING AND SALES

Patients Are Sending Digital Signals. Are Companies Listening?

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As pharma and medtech brands expand their efforts to attract prospective patients, they are losing a substantial number of them. Not because they underinvest in media planning or creative design but because they miss the signals patients send through web visits, survey responses, hub activity, and call center interactions. Those messages and usage metrics land in separate systems that are never collected and tailored into actionable next steps. The result is outreach that is run on fixed calendars rather than adapted to real patient behavior: it is broad, mistimed,

and increasingly expensive as privacy rules erode the third-party data that traditional patient acquisition has depended on.

The organizations that are pulling ahead are using agentic AI to connect those fragmented signals into a single patient view and build a decisioning layer that determines, in real time, the right next step for each patient. The economics of getting there are more accessible than most teams assume.

Why Legacy Programs Keep Losing Prospective Patients

The majority of patients now begin their health care journey online, including many who are ultimately referred to a specialist. Direct-to-patient (DTP) programs are the front door, yet most of those programs are outdated. Three structural shifts explain why those legacy models continue to underperform even when underlying demand is strong.

- **Patients expect accessible, easy-to-use digital tools.** Digital-native health brands have normalized experiences that feel personal and responsive. Patients now judge health care brands against the best digital interactions they have had anywhere, not against category peers.
- **Static programs miss the moment.** Many DTP models still run on predetermined sequences and broad segments whose cadence never changes based on what the patient is actually doing. When web visits, survey responses, hub touchpoints, and call history remain disconnected, teams cannot answer the questions that matter most: Is this patient stuck or progressing? Do they need education, reassurance, or a live conversation? What should happen next—today, not next week?
- **Privacy concerns are reshaping acquisition economics.** As data regulations tighten, the tools that depend on broad tracking signals become harder and more expensive to scale. First-party, consent-based data—built directly from patient engagement—is now the most defensible conversion asset a health care brand can develop, because it compounds over time rather than depreciating.

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The organizational dimension makes coordination harder. DTP programs typically span digital, marketing, and data & analytics—and without clear ownership, patient progress stalls. Industrywide, only about 2% of brands have reached a level of data-driven marketing where decisions are made at the individual customer level across channels. Technology investment consistently outpaces activation. The bottleneck is rarely the platform; it is the absence of a shared patient data model and a journey roadmap that connects capability to measurable outcomes. (See the sidebar, "To Convert Patients, Adopt the Right AI Tools.)

– To Convert Patients, Adopt the Right AI Tools

AI in patient marketing is not a single tool. Three capabilities work together, and the distinction matters for understanding where the real value lies:

- **Predictive AI** scores each patient's likelihood of converting, dropping out, or needing a direct conversation, and updates that likelihood continuously as new signals arrive. It tells the system who needs attention and when.
- **Generative AI** produces content variants at scale (email copy, SMS prompts, hub materials, discussion guides) within the boundaries of the medical, legal, and regulatory (MLR) review process. It eliminates the bottleneck where personalization breaks down because the content pipeline cannot keep up with the journey.
- **Agentic AI** is the execution layer. It observes real-time signals, decides the next best action for each patient (channel, timing, content variant, or escalation to a human) and acts. Critically, it feeds every outcome back into the patient profile, so the system improves with each interaction rather than running the same sequences indefinitely.

Most health care organizations today have predictive or generative AI somewhere in production. The conversion gains come when agentic AI ties them together into a system that continuously improves.

This explains why DTP programs cannot be designed in isolation. For procedure-driven and prescription-led categories, patient demand and provider readiness are both necessary for a therapy to advance. The agentic infrastructure that improves patient conversion shares the same underlying signals that improve health care provider engagement—and they reinforce each other when they are built together.

The Case for Investing in Personalization Now

The upside is visible in the results. A BCG analysis in health care provider systems benchmarked AI-driven personalized digital marketing at roughly six times return on marketing spend and a 20% incremental revenue lift when the underlying data and decisioning are in place.

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Recent client engagements confirm the pattern. At a major medtech company, an effort to convert leads into loyal customers using AI delivered in the first year a 10% reduction in cost per lead and a six-point lift in lead conversion rate. In a separate engagement focused on cardiac monitoring-device adherence, an AI-powered activation program produced an 85% lift in patient-

reported activation and reversed a multiyear decline in 120-day device return rates. This translated directly to diagnostic yield and program economics.

These results reflect a different operating model, not a different budget. The organizations achieving them unified their signals, made real-time decisions about next steps, and reserved human capacity for the moments where a live conversation changes the outcome, such as when a patient is deciding, hesitating, or at risk of dropping out.

Outperforming health care and life sciences companies are already allocating more of their digital transformation budgets to these AI and data capabilities than their peers: the gap is widest precisely in the AI-adjacent capabilities that make agentic decisioning possible.

A Practical Path: Diagnose, Unify, Then Deploy

The fastest route to better patient conversion is not rebuilding everything. It is identifying precisely where value is being lost today, then building only what is needed to activate the highest-impact patient journeys. The sequence is straightforward.

1. Conduct a focused diagnostic of current patient journeys.

Commercial and digital leaders do not need a month-long strategy exercise to get traction. A focused four-to-six-week diagnostic should do five things:

- Quantify where patients drop out of the funnel and identify the behaviors that predict who will progress. This turns intuition into a prioritized backlog.
- Map the patient journey across email, SMS, call center, and website. The gaps where patients disengage—–because the next touchpoint does not match their intent—–become obvious only when the full sequence is visible end-to-end.
- Compare existing marketing technology with what the priority journeys actually require. The question is not what tools the organization owns, but what it can reliably trigger, personalize, and measure today.
- Establish baseline funnel metrics and cross-channel visibility. Without these, automation will struggle to earn internal trust.
- Align on two or three priority journeys, scored by impact versus effort. This forces discipline: the build follows value, not organizational politics.

> The practical starting point is to bring together the signals that most consistently drive conversion decisions: hub activity, paid media engagement, survey responses and consent opt-ins, and call center interactions.

Once leaders agree on the priority journeys, unify first-party data signals into a single patient profile. At this point, the constraint shifts from ideas to data readiness. The practical starting point is to bring together the signals that most consistently drive conversion decisions: hub activity, paid media engagement, survey responses and consent opt-ins, and call center interactions. Selective enrichment with third-party data—claims data is usually the most valuable—improves decisioning where it can be clearly shown to do so.

The goal is one shared patient profile that every team can activate from, rather than each function maintaining its own version of the data. Perfection is not the standard; activation readiness is.

2. Deploy an agentic engine as the decisioning layer.

Unified data is necessary but does not execute the journey on its own. The agentic engine observes real-time patient signals (hub visits, device activation, survey completions, call center interactions, paid media engagement) and determines the next best action for each patient: which channel, what timing, which MLR-approved content variant, or whether to route to a human or agentic AI support. Every outcome feeds back into the patient profile, so the propensity scores and routing logic sharpen over time.

In practice, the three AI capabilities each carry a specific function:

- **Predictive AI for Patient Routing.** Propensity models score patients continuously and reserve scarce hub resources (nurse educators, navigators, live representatives) for the patients and moments where human outreach changes the outcome.
- **Generative AI for Content Production.** MLR-approved content variants (email copy, SMS prompts, hub explainers, discussion guides) are produced at the pace the journey requires, rather than becoming the review-cycle bottleneck that forces teams back to one-size-fits-all messaging.
- **Agentic AI for Orchestration.** The decisioning and agentic engagement layer selects channel, timing, and content for each patient based on current behavior—not on a fixed calendar or the segment they were assigned at enrollment. It also surfaces patient context

to live representatives in real time, so conversations are higher quality without requiring agents to search across systems.

3. Build in measurement from the start.

Agentic journeys scale only when teams can prove they work. A central analytics view that brings together funnel metrics, cohort performance, and journey outcomes is not optional infrastructure; it is what turns an AI pilot into a repeatable performance improvement. Structured testing that compares results across control and test groups isolates what is actually driving lift, and iterates on the components, timing rules, channel switches, and escalation thresholds that determine it. When stakeholders can see the test design and the control group, the decisioning layer stops feeling like a black box and starts earning the trust needed to scale.

Building a Unified Patient Conversion Engine: Where to Start

For chief medical officers who are deciding whether to begin the process now, the minimum viable foundation consists of five elements:

- A consented identity spine (typically email or phone) with current consent status for most in-funnel leads;
- Unified signals across more than one touchpoint so the journey can respond to real behavior;
- At least one live activation surface such as email, SMS, or a triggerable call center workflow;
- A small MLR-approved content library with multiple variants for key journey stages; and
- Baseline funnel metrics with the discipline to hold out a control group.

Having three of those five elements in place is enough to begin with a focused pilot built around a single patient journey and a clearly defined patient cohort. A diagnostic typically identifies leakage and produces a prioritized build roadmap in four weeks. The first AI-led direct-to-patient journey is generally measurable within eight to twelve weeks of build kickoff—allowing the team

to realize measurable progress inside a single quarter rather than at the end of a multiyear transformation.

If a leader can check only one or two elements, the right first move is the diagnostic itself: it sequences the data, content, and measurement work needed to make a pilot meaningful rather than premature.

The strategic implication is straightforward. Creativity and media spend still matter, but they no longer determine the ceiling on patient conversion. Fragmented signals do. Unifying those signals turns scattered interactions into conversion leverage. Once that foundation exists, an agentic decisioning layer can route each patient through the right channels at the right time, without requiring heroic manual effort from hub teams. And because this work surfaces the same signals that matter for health care provider engagement, the two actions become mutually reinforcing rather than sequential.

That is how a DTP program stops being a set of disconnected campaigns and becomes a conversion engine that improves as every patient interacts with it.

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