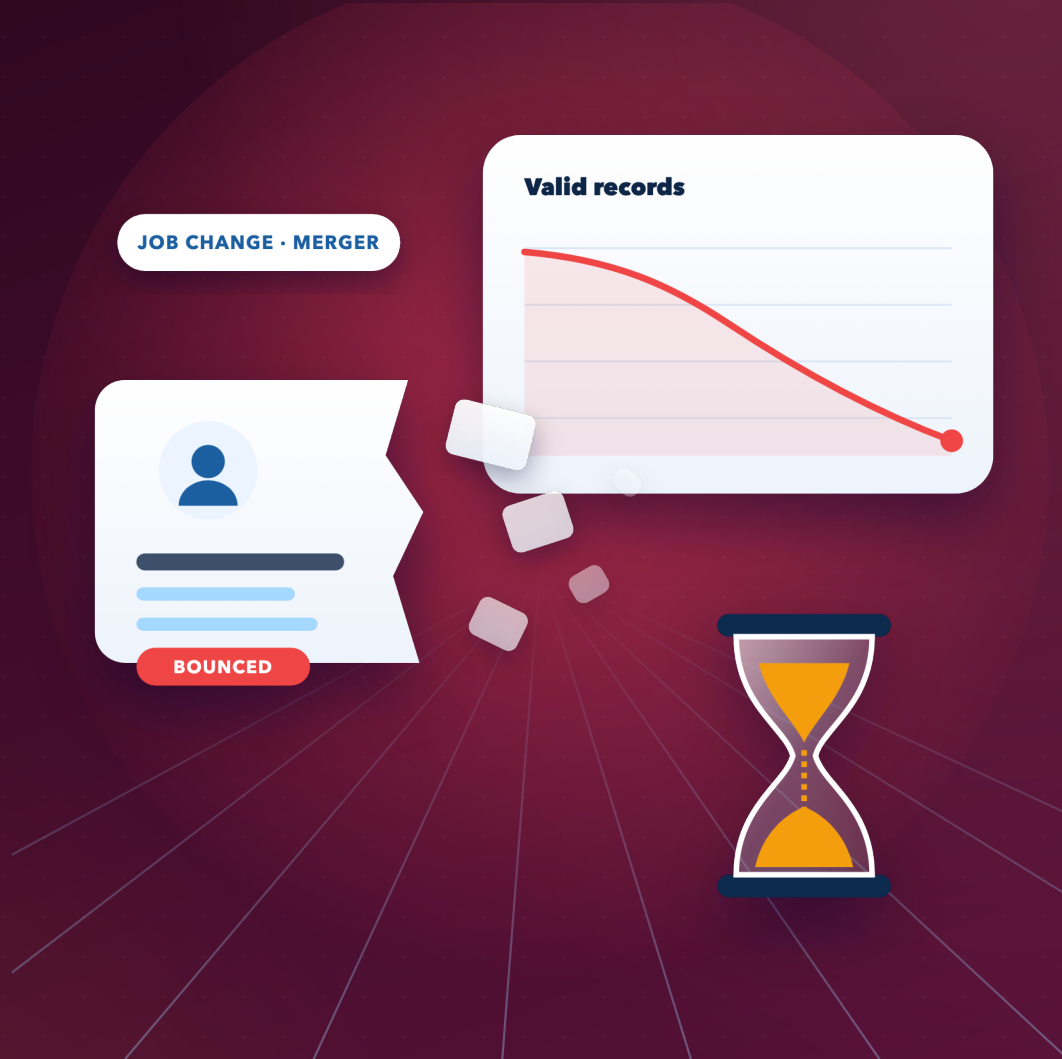




FREE WHITEPAPER

The Hidden Cost of Healthcare Data Decay

How Outdated Contacts Drain Pipeline
and Budget, and How to Stop It

WRITTEN BY
John Britton
VP of Marketing, MedicalProspects

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The Hidden Cost of Healthcare Data Decay

How Outdated Contacts Drain Pipeline and Budget, and How to Stop It

ABOUT THIS WHITEPAPER

This MedicalProspects whitepaper explains why healthcare contact data decays faster than other B2B data and what it really costs. A simple cost model shows that the money wasted on bad records is small next to the pipeline those records never create, and five practices show how to keep data fresh.



John Britton

VP of Marketing, MedicalProspects

John works with healthcare sales and marketing teams on precision targeting, campaign strategy, and audience intelligence solutions at MedicalProspects.

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MedicalProspects · 7901 4th St N, Ste 300, St. Petersburg, FL 33702 · sales@medicalprospects.com · medicalprospects.com

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AT A GLANCE

The short version

This MedicalProspects whitepaper explains why healthcare contact data decays faster than other B2B data and what it really costs. A simple cost model shows that the money wasted on bad records is small next to the pipeline those records never create, and five practices show how to keep data fresh.

KEY TAKEAWAYS

- **Six drivers** make healthcare data decay fast, from provider mobility to consolidation and self-reported registries.
- **Most fields fail silently:** only email and phone failures announce themselves.
- **One outdated record leaks value three ways:** bounces, wrong-person delivery and dead lines.
- **A cost model you can run** shows pipeline not created dwarfs wasted data spend.
- **Five practices stop decay:** scheduled re-verification, cross-source matching, an NPI anchor, bounce feedback and pre-delivery validation.

EXECUTIVE SUMMARY



Executive Summary

Outdated contact data is one of the largest costs in healthcare marketing that no one reports. It never shows up as a budget line. It shows up as lower inbox placement, reps chasing people who have left, campaigns that underperform for no clear reason, and pipeline that never forms.

Healthcare data goes stale faster than most B2B data. Clinicians change practices, health systems merge, executives move on and providers retire. A list that was accurate when it was bought starts losing accuracy the next day, and most teams have no way to measure how fast.

This paper sets out:

- **Why healthcare data decays**, and which record fields go stale first
- **How decay turns into cost**, from a single bounced email to lost pipeline
- **A cost model** you can run on your own numbers
- **How to stop decay**: refresh cadence, multi-source verification, bounce feedback and CRM hygiene

77.6%

of physicians are employed by hospitals or corporate entities

PAI & Avalere¹

340,360

deactivated records in the federal NPI registry, out of 9.49 million

NPPES, April 2026²

30 days

the window providers have to report changes to their NPI record

45 CFR 162.410³

0.3%

the spam-complaint ceiling Google sets for senders

Google guidelines⁴

The central argument is simple. Treat data freshness as protection for revenue, not as a data-management chore. The cheapest contact is not the one with the lowest price. It is the one that still reaches the right person.

SECTION 1

01

The Evidence: What the Public Numbers Show

Public data cannot tell you how fast your list is decaying. It does show that the market is moving, and that the sources most vendors rely on lag behind.

What we can verify	Figure	Why it matters for decay
Physicians employed by hospitals or corporate entities	77.6% ¹	Employment changes email domains, addresses and buying authority
Practices owned by hospitals or corporate entities	58.5% ¹	Acquisitions change affiliation and who signs
Active U.S. physicians	1,032,365 in 2024 ⁵	A large, mobile workforce to keep current
NPI registry records	9.49 million total; 340,360 deactivated ²	Retired and deactivated providers stay on lists that are never re-checked
Update rule for providers	Report changes within 30 days ³	Self-reporting depends on providers following the rule

I WHAT THIS PAPER DOES NOT CLAIM

We do not quote a single industry-wide "decay rate". Rates vary by source, role and segment, and published figures are rarely tied to healthcare. The cost model later in this paper uses your own inputs for that reason.

Why Healthcare Data Decays Faster

Healthcare data decays faster because the healthcare workforce and its organizations change constantly, and few of those changes are reported anywhere a marketer would see them.

IN THIS CHAPTER

■ The six drivers

■ Why it stays hidden

The six drivers

- 1. Provider mobility.** Physicians move from private practice to employment by health systems, between groups and between states. Each move changes the email, the address and often the specialty focus.
- 2. Consolidation.** Hospital mergers, practice acquisitions and private equity roll-ups change email domains, reporting lines and buying authority for thousands of people at once.
- 3. Executive turnover.** C-suite, IT and department leaders change roles more often than clinicians. A CIO contact can be wrong within a year.
- 4. Retirement and deactivation.** Providers retire, lose licences or deactivate their NPIs. Their records stay on lists that are never re-checked.
- 5. Care moving to new settings.** Procedures moving from inpatient hospitals to ambulatory surgery centers, and new clinic types such as GLP-1 and longevity clinics, create new roles and empty old ones.
- 6. Self-reported registries.** Public registries depend on providers updating their own records. Many update only when billing or credentialing forces them to.

KEY TAKEAWAYS

- Six forces drive decay: mobility, consolidation, executive turnover, retirement, new care settings and self-reported registries.
- Employment and ownership shifts change email domains and buying authority at scale.
- Public registries lag because they depend on providers updating their own records.

Why it stays hidden

Decay is invisible at the moment of purchase. A list looks complete on the day it is delivered. The damage appears weeks later as weaker campaign results, and it is usually blamed on the message, the offer or the channel, rarely on the data.

SECTION 3

03

Where Decay Hides: Field by Field

A record does not go out of date all at once. Some fields break loudly, others fail quietly, and the quiet failures cost the most because no one notices them.

Field	How it decays	How you notice	Damage
Email address	Domain changes after a merger; mailbox closed when someone leaves	Hard bounce	Sender reputation, inbox placement
Email (still delivering)	Mailbox forwarded or taken over by a colleague	Nothing; no bounce	Message reaches the wrong person; skewed results
Direct dial	Number reassigned or disconnected	Wrong person or dead line	Rep time
Practice address	Provider moves practice or state	Returned mail	Direct mail spend; territory errors
Title and role	Promotion, new role, new employer	Usually nothing	Wrong message; wrong buying committee
Specialty	Records labeled from job titles rather than taxonomy codes	Usually nothing	Wrong audience; weak segment results
Affiliation	Practice acquired or joins a health system	Usually nothing	Missed accounts in account-based campaigns
Status	Retired, deceased or deactivated NPI	Usually nothing	Wasted outreach; brand risk

KEY TAKEAWAYS

- Only email and phone failures announce themselves.
- A wrong person at a deliverable address still counts as "delivered".
- Title, specialty and affiliation errors do the most hidden damage.

The silent majority. Only email and phone failures announce themselves. Most other fields fail without a signal. A deliverable email at the wrong person, an outdated title or a wrong specialty still counts as "delivered" in your campaign report.

How Decay Turns Into Cost

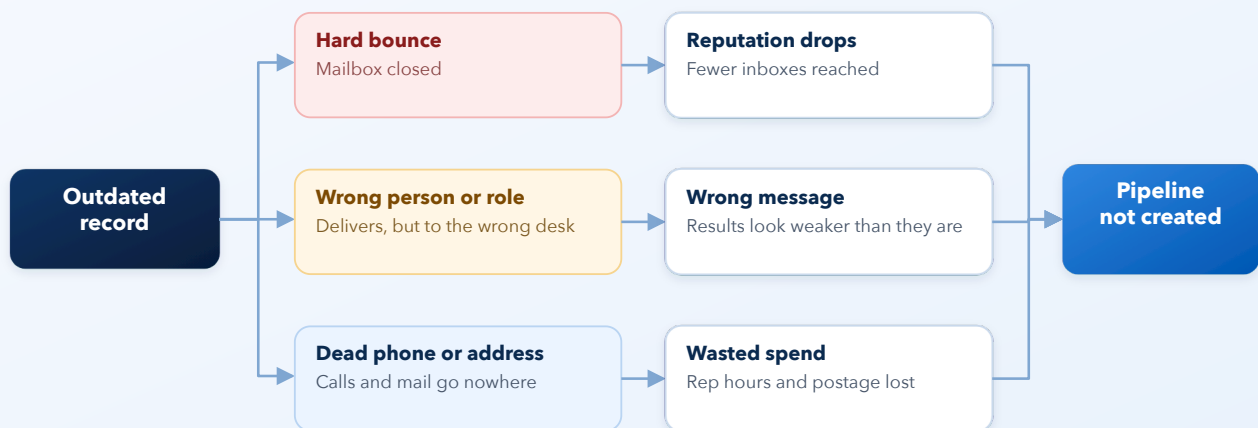
Every outdated record fails in one of three ways, and all three end in the same place: pipeline that never forms.

IN THIS CHAPTER

- Deliverability: the shared cost

One outdated record leaks value three ways

All three end in lost pipeline, and only the first is visible in reports



How one outdated record leaks value three ways

- **The bounce path** is the only one you can see, and it does the widest damage. Mailbox providers watch bounce rates. A sender with many bounces sees more of its *good* emails filtered to spam, so one bad segment weakens every campaign that follows.

- **The wrong-person path** is the most expensive because no one notices it. The email is delivered, so it counts as a success, but it reaches someone who left the role or never held it. Results look weak and teams blame the message.
- **The dead-line path** wastes your most expensive resource: rep time spent researching, dialing and mailing contacts who are no longer there.

Deliverability: the shared cost

Mailbox providers set limits on spam complaints and expect authentication and easy unsubscribes. Google asks senders to keep spam rates below 0.3%, ideally below 0.10%, and applies stricter rules above 5,000 messages a day to Gmail accounts.⁴ A segment with many bounces and complaints does not only fail itself; it lowers placement for later campaigns to good contacts.

A Cost Model You Can Run on Your Own Numbers

In most healthcare campaigns, the money wasted on bad records is small next to the pipeline those records never create. This simple model puts both on the same page.

IN THIS CHAPTER

- The formula
- A worked example
- Sensitivity: how the outdated share changes the answer

The formula

$$\text{Cost of decay} = (N \times d \times p) + (C \times d \times t \times w) + (N \times d \times m \times o \times V)$$

The three terms are wasted data spend, wasted rep time and pipeline not created.

Input	Meaning
N	Contacts in the campaign
d	Share of records that are outdated
p	Price paid per contact
C	Contacts your reps call or research by hand
t	Hours spent per contact attempt
w	Loaded cost of an hour of rep time

Input	Meaning
m	Meeting rate from accurate contacts
o	Share of meetings that become opportunities
V	Average opportunity value

The model leaves out the deliverability damage that bounces cause to your sending domain. That damage lowers results for your *good* contacts too, so the real cost is higher.

A worked example

I NOTE

Every input below is hypothetical. Replace them with your own figures.

Input	Example value
Contacts (N)	20,000
Outdated share (d)	20%
Price per contact (p)	\$0.40
Contacts worked by hand (C)	3,000
Time per attempt (t)	10 minutes
Rep hourly cost (w)	\$60
Meeting rate (m)	1%
Meeting-to-opportunity rate (o)	25%
Average opportunity value (V)	\$50,000

Cost component	Calculation	Result
Wasted data spend	$20,000 \times 20\% \times \$0.40$	\$1,600
Wasted rep time	$3,000 \times 20\% \times 1/6 \text{ hour} \times \$60$	\$6,000
Pipeline not created	$20,000 \times 20\% \times 1\% \times 25\% \times \$50,000$	\$500,000

Sensitivity: how the outdated share changes the answer

Outdated share (d)	Wasted data spend	Wasted rep time	Pipeline not created
10%	\$800	\$3,000	\$250,000
20%	\$1,600	\$6,000	\$500,000
30%	\$2,400	\$9,000	\$750,000

The terms scale in a straight line, so every five points of decay in this example costs another \$125,000 of pipeline, although only \$400 in data spend.

The \$1,600 of wasted data spend is what most teams notice. The \$500,000 of pipeline that never forms is what matters. Under these assumptions, 4,000 outdated records cost 10 opportunities. That is why a cheaper, less accurate list is rarely cheaper.

WORKSHEET • RUN THE MODEL ON YOUR OWN NUMBERS

Use data from your last campaign.

1. Contacts (N), outdated share (d) and price per contact (p):

2. Contacts worked by hand (C), time per attempt (t) and loaded hourly cost (w):

3. Meeting rate (m), meeting-to-opportunity rate (o) and average opportunity value (V):

4. Result: wasted data spend, wasted rep time and pipeline not created:

How Much of Your Data Is Outdated? A Sampling Method

You do not need to audit every record to estimate decay. A simple sample gives a usable number.

1. **Pull a random sample** of 200 to 300 records from the list or CRM segment, across roles and sources.
2. **Check email deliverability** with an independent verification tool.
3. **Check identity** for clinicians against the public NPI registry: is the NPI active, and do specialty and location match?
4. **Spot-check 30 records by hand** on the practice or hospital website. Is the person still there, in that role?
5. **Count a record as outdated** if any key field fails: email, role, specialty or status.
6. **Divide failures by the sample size** to estimate d , and repeat quarterly to see the trend.

★ SEGMENT THE SAMPLE

Report decay separately for clinicians, executives and IT leaders. High-turnover roles often decay faster, and the split tells you where to refresh first.

How to Stop Decay

No dataset can be kept 100% accurate. Decay can be cut sharply, though, by checking records against independent sources on a fixed schedule and feeding every failure back into that process.

IN THIS CHAPTER

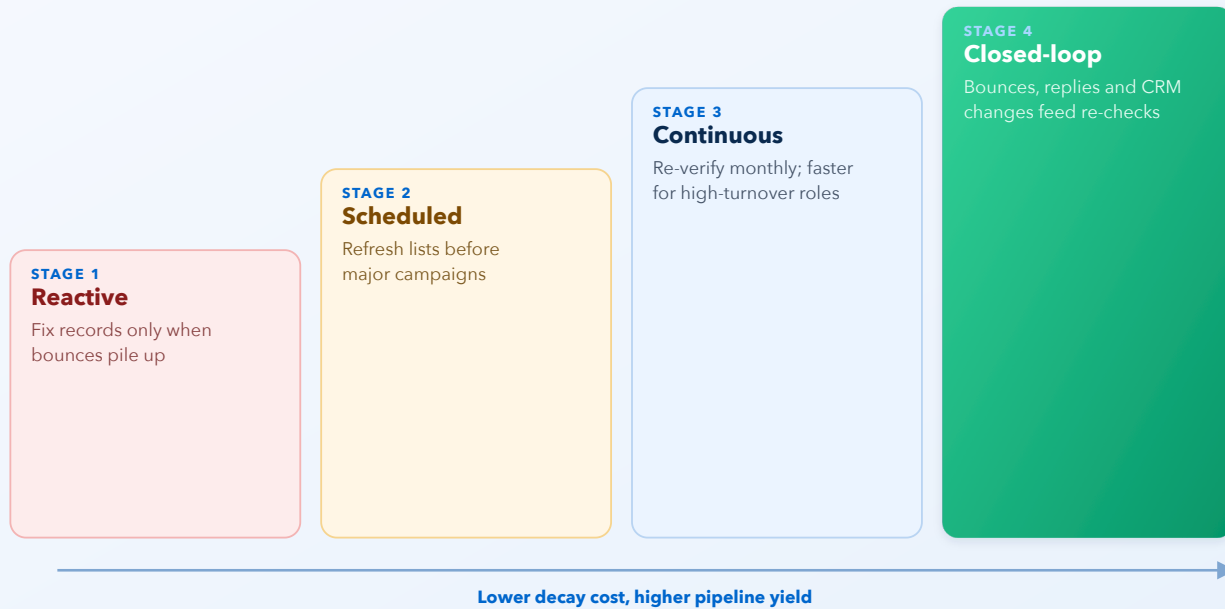
- Five practices that work
- What your team can do in the CRM
- The MedicalProspects refresh standard

Five practices that work

- 1. Re-verify on a schedule, not on demand.** Re-check every record monthly against primary sources. Re-check high-turnover roles more often.
- 2. Match across independent sources.** A record confirmed by the NPI registry, a state licensing board and a credentialing or affiliation source is far less likely to be wrong than one taken from a single directory.
- 3. Anchor identity on the NPI.** The NPI stays with a provider for life. It lets you follow a clinician through practice moves instead of losing them.
- 4. Feed bounces back.** Every hard bounce should trigger a re-check of the source record, not just a deletion from one campaign.
- 5. Validate before every delivery.** Check deliverability on the file being sent, not as an average across the database.

Data-quality maturity

Where most teams are, and where decay costs stop compounding



Data-quality maturity: reactive, scheduled, continuous and closed-loop

Most teams start at stage one and move up as the cost becomes visible. Stages three and four need a data provider that refreshes on a schedule and a process that feeds failures back.

The MedicalProspects refresh standard

Practice	Standard
Full database re-verification	Monthly, against primary sources
High-turnover roles (executives, IT leaders, pharma field teams)	Every 60 days
Source matching	NPI registry, state licensing boards, CMS PECOS and credentialing sources
Automatic removals	NPPES deactivations and state board retirement filings
Pre-delivery check	Deliverability, deduplication and completeness pass on every file
Bounce feedback	Each reported hard bounce re-checked at source and replaced 1:1
Delivered deliverability	99%, guaranteed on the file you receive

What your team can do in the CRM

- ☐ Stamp each record with a last-verified date and suppress anything older than your threshold
- ☐ Deduplicate on NPI for clinicians, not on name
- ☐ Re-enrich records with NPIs on a schedule to catch moves and new affiliations
- ☐ Route hard bounces and "no longer here" replies to a re-verification queue
- ☐ Track bounce rate by list source, so you know which sources decay fastest

SECTION 8

08

A 90-Day Plan to Reduce Decay

Days	Focus	Actions
1-30	Measure	Run the sampling method; estimate d by segment; calculate the cost model
31-60	Fix the flow	Stamp last-verified dates; deduplicate on NPI; route bounces to a re-verification queue
61-90	Prevent	Set a refresh cadence; ask your vendor for last-verified dates and unique counts; track bounce rate by source

KEY TAKEAWAYS

- Measure decay with a simple sample before you buy anything.
- Re-verify monthly against independent sources and anchor identity on the NPI.
- Feed every bounce and "no longer here" reply back into the refresh process.

Questions to Ask Before You Buy

- ☐ **When was each record last verified?** Ask for a last-verified date per record.
- ☐ **How often is the whole database re-checked?** Monthly is the standard to expect, with faster cycles for executives and IT.
- ☐ **Against which sources?** Look for named primary sources, not "proprietary data".
- ☐ **How are retired and deactivated providers removed?**
- ☐ **Is deliverability guaranteed on my file, or quoted as a database average?**
- ☐ **What happens to a bounce?** Is it replaced, and is the source record re-checked?
- ☐ **Do you report unique contacts separately from total records?**

Making the Case Internally

Finance and sales leaders respond to numbers they can check. Use this structure when you ask for budget:

1. **Show the cost model** with your own inputs and the sensitivity table.
2. **Show the sample result:** the share of records that failed and which fields failed.
3. **Show the comparison:** price per usable contact, not price per contact.
4. **Propose the process:** the refresh cadence, the bounce feedback loop and the vendor questions above.
5. **Define success:** lower bounce rate, fewer wrong-person replies and more meetings per 1,000 contacts.

CONCLUSION



Freshness Protects Revenue

Data decay is the cost that never appears on an invoice. It shows up as lost inbox placement, wasted rep hours and pipeline that never forms, and it compounds every month a list goes unchecked. The cost model shows the pattern: the money spent on bad records is small, and the opportunities they cost are large.

The fix is a process, not a one-time purchase: independent sources, an NPI anchor, a monthly refresh, bounce feedback and validation before every delivery. Teams that buy on freshness rather than on price per contact get more meetings from the same budget.

See how fresh your audience can be. Request 20 free custom sample contacts from MedicalProspects. Check them with your own verification tools and compare them with your current data. Visit medicalprospects.com or email sales@medicalprospects.com.

Appendix: Glossary

Term	Meaning
Data decay	The loss of accuracy in contact data as people change roles, employers and settings
NPI	National Provider Identifier: the unique 10-digit identifier for U.S. health care providers
NPPES	National Plan and Provider Enumeration System, which issues NPIs
Hard bounce	A permanent delivery failure, such as an address that does not exist
Wrong-person reply	A reply showing the message reached someone who is not the intended contact
Last-verified date	The date a record was last checked against a primary source
Deduplication	Removing repeated records for the same person
Unique count	The number of distinct people after removing duplicates

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ABOUT THE AUTHOR



John Britton

VP of Marketing, MedicalProspects

John works with healthcare sales and marketing teams on precision targeting, campaign strategy, and audience intelligence solutions at MedicalProspects.

ABOUT MEDICALPROSPECTS

MedicalProspects provides verified healthcare contact data for B2B marketing and sales teams: 425+ specialty, role and facility lists anchored to NPI and NUCC taxonomy data, re-verified monthly, with technology and buying-intent intelligence available on every audience. Teams use it to reach physicians, nurses, hospital executives, IT leaders, life sciences and payer decision-makers.

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