DMEC
2026 ANNUAL
CONFERENCE

PREDICTIVE ABSENCE

Using AI & Behavioral Data to Prevent Long-Term Disability Before It Starts

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DMEC 2026 Annual Conference

TODAY'S ROADMAP

01 **The Problem with Reactive**
Why waiting is costing everyone

02 **The Crystal Ball: What AI Can See**
Absence patterns, workload signals & benefits data

03 **Building the Early Warning System**
Practical framework for detection & intervention

04 **Ethics, Privacy & the 'Ick' Factor**
Compliance guardrails that let you sleep at night

05 **From Data to Action**
Care coordination without creepiness

06 **Measuring What Matters**
ROI beyond cost containment

07 **Your Playbook**
Real takeaways you can use Monday morning



THE SCALE OF THE PROBLEM

(Or: Why We Can't Keep Playing Whack-a-Mole)

$1,685	25%	68%	2–3×
Avg. cost per STD claim (SHRM)	STD episodes convert to LTD	LTD approvals were foreseeable	Cost increase after 30-day delay

The transition from STD to LTD is often NOT a medical surprise — it's an organizational failure to catch early signals.

🔑 ***"What signals did we miss 90 days earlier?"***



REACTIVE vs. PREDICTIVE: A Tale of Two Timelines

🚒 REACTIVE MODEL

- Employee calls out — HR is notified
- Claim filed on Day 1 of leave
- Medical documentation gathered
- Wait for RTW clearance
- Claim duration reviewed at 30 days
- Case manager assigned… at Day 45
- LTD claim filed at 90 days
- Now everyone is scrambling 🔥

VS

🔮 PREDICTIVE MODEL

- Data signals flagged 60–90 days earlier
- EAP outreach triggered proactively
- Manager coaching conversation initiated
- Benefits navigator assigned early
- Workload adjusted before burnout peaks
- Employee gets support BEFORE crisis
- Leave avoided or significantly shortened
- Everyone breathes. 😌



THE SIGNAL LIBRARY: What AI Is Actually Looking For

Not psychic. Just pattern recognition. Here's the data feeding the model:

🗓️ Absence Patterns

Intermittent absences, Monday/Friday spikes, shortened workweeks, increased partial-day absences

💊 Benefits Utilization

EAP calls, prescription changes (antidepressants, sleep aids, pain meds), frequent urgent care use

⚡ Workload Signals

Overtime spikes, missed project deadlines, declining performance ratings, schedule anomalies

🩺 Prior Claim History

STD recurrence patterns, claim types, duration trends, RTW complexity history

👥 Workforce Context

Recent team restructuring, manager changes, role ambiguity periods, org stress events

📋 Self-Reported Data

Wellness survey scores, health risk assessment responses, engagement survey drops



HOW THE PREDICTIVE MODEL ACTUALLY WORKS

(Demystifying the black box — no PhD required)

1. **Data Ingestion**
   Pull structured data from HRIS, benefits, EAP, WC, and scheduling systems. Anonymized & aggregated.

2. **Feature Engineering**
   Transform raw data into meaningful signals: rolling averages, trend rates, variance from individual baseline.

3. **Risk Scoring**
   ML model assigns a risk score (0–100) based on weighted signal combinations — not any single factor.

4. **Threshold Alerting**
   When score crosses defined threshold, case manager or HR partner gets a flag — not a name, an alert.

5. **Human Review**
   A person reviews context, decides appropriate outreach. AI recommends; humans decide. Always.



The AI finds the signal. A human makes the call. Always.

REAL SIGNAL SCENARIOS: Connecting the Dots

SCENARIO A: The Invisible Spiral

📡 Signals: 3 Monday absences in 6 weeks + 2 EAP calls + new prescription for anxiolytics

🔍 Likely: Anxiety/mental health condition developing | ✅ Action: EAP proactive outreach + manager coaching + wellness check-in

SCENARIO B: The Workload Cliff

📡 Signals: 15+ hrs overtime for 8 straight weeks + 2 missed deliverables + below-expectations rating

🔍 Likely: Burnout trajectory, musculoskeletal or cardiovascular risk | ✅ Action: Workload review, manager intervention, benefits navigator outreach

SCENARIO C: The Quiet Before the Storm

📡 Signals: Prior STD 18 months ago + recent ergonomic request + 4 urgent care visits in 90 days

🔍 Likely: Recurring condition with worsening trajectory | ✅ Action: Proactive case management, care coordination, early RTW planning



⚖️ THE ETHICS SECTION (Yes, We're Going There)

"The data can tell you a lot. But should it?"

✅ ETHICAL & LEGAL

- Aggregated, anonymized risk scoring
- Using existing benefits/HR data with proper policy disclosure
- Triggering outreach to EAP or wellness resources
- Manager coaching based on observable behaviors
- Voluntary wellness interventions
- De-identified pattern analysis for program design
- ADA interactive process initiation when warranted

🚫 PROBLEMATIC

- Sharing individual risk scores with managers
- Using health data to make employment decisions
- Creating a 'disability watchlist' by name
- Acting on diagnosis-specific data without consent
- Punishing employees for high-risk patterns
- Disclosing EAP use in performance reviews
- Discriminatory targeting of protected class patterns



COMPLIANCE GUARDRAILS: Your Legal Checklist

Good data governance is boring. But so is being sued. Do the boring thing.

HIPAA	⚠ Health data in benefits systems must be handled under minimum necessary standards. EAP data is especially protected.	✅ Ensure data sharing agreements include HIPAA BAAs; segregate PHI from HR data layers.
ADA	⚠ Using disability-related data patterns to disadvantage employees is discriminatory. Risk scores ≠ disability status.	✅ Ensure no employment decision is tied to absence risk scores. Use for support, not scrutiny.
GINA	⚠ Genetic information cannot be used in employment decisions. Some health risk models touch on family history.	✅ Explicitly exclude family medical history from all predictive model inputs.
FMLA	⚠ Protected absences cannot be held against employees. FMLA usage MUST be excluded from risk scoring.	✅ Audit model inputs to ensure FMLA-coded absences are excluded or neutralized in scoring.
State Privacy	⚠ CCPA, VCDPA, and others create data subject rights including access and deletion requests.	✅ Build data governance framework that can respond to employee data requests within required timelines.



THE INTERVENTION SPECTRUM: Right Support, Right Time

Not every flag = a crisis. Here's how to calibrate the response:

TIER 1

Low Risk (Score 20–40)

- Proactive wellness email campaigns
- Benefits reminder communications
- Ergonomic check-in offer
- Manager 'how are you really doing' cue

TIER 2

Moderate Risk (Score 41–65)

- Benefits navigator outreach
- EAP highlight in next communication
- Optional wellness coaching offer
- Manager coaching: normalize support conversations

TIER 3

Elevated Risk (Score 66–85)

- Proactive case manager touchpoint
- Coordinated care review
- ADA consideration flag
- HR business partner loop-in

Score 86–100: Immediate case management activation + ADA interactive process consideration



COORDINATED CARE: The Dream Team You Need

Predictive analytics only works when you have somewhere to route the insight.

Benefits Navigator

Guides employees to the right resources before they need to know what to ask for

EAP Counselor

Mental health & counseling — the most underutilized benefit in most organizations

THE EMPLOYEE

Occupational Health

Early functional assessment, ergonomic support, and RTW planning partner

Case Manager

Clinical coordinator for complex/high-risk situations; bridges medical and occupational

HR Business Partner

Connects manager coaching, accommodation conversations, and workplace factors



THE MANAGER EQUATION: Your Biggest Lever (and Risk)

Managers see signals before the data does. They also cause signals before the data does.

🌟 Managers AS Prevention

- Notice behavioral shifts early (withdrawal, fatigue, irritability)
- Have authentic check-ins without medical inquiry
- Know how to refer to EAP without stigma
- Adjust workload when capacity signals are clear
- Create psychological safety so employees disclose early
- Model self-care to normalize taking leave when needed

⛔ Managers as Risk CREATORS

- Ask about medical conditions or diagnoses
- Share risk scores or HR 'flags' with team members
- Treat accommodations as 'special treatment'
- Pile on work right before someone's scheduled leave
- Express frustration about absences instead of support
- Ignore warning signs because 'it's not my job'

REFRAMING: Disability Management as Workforce Sustainability

"Disability management shouldn't live only in leave & absence.
It belongs in the workforce strategy conversation."

💡

Cost Containment → Talent Retention

Every prevented LTD = an experienced employee who stays. Replacing a senior employee costs 50–200% of their salary.

⚖️

Claim Management → Health Equity

Predictive programs catch disparities in access to care early. Some populations face systemic barriers — your data will reveal them.

🏆

HR Compliance → Culture Signal

Organizations that invest in prevention signal a fundamentally different value: 'We care before you hit bottom.'



DATA GOVERNANCE: Building the Foundation Right

Good data governance is boring. But so is being sued. Do the boring thing.

01

Data Inventory

Map every data source feeding the model. Know where it lives, who owns it, what agreements cover its use.

02

Access Controls

Risk scores accessible only to benefits professionals and case managers — not managers, payroll, or recruiters.

03

Retention Policy

Individual risk scores should NOT be retained indefinitely. Set retention limits and auto-delete schedules.

04

Vendor Due Diligence

Conduct a full security review. Do they train on your data? Who else uses your data? Get it in writing.

05

Bias Auditing

Run model outputs through demographic analysis quarterly. Investigate disproportionate flag rates.

06

Employee Transparency

Update your HR privacy notice. Tell employees — in plain language — how data is used for wellness programs.



MEASURING WHAT MATTERS: ROI Beyond Cost Containment

33%	50%	+27pt	$2.8M
Reduction in avg STD claim duration	Decrease in STD to LTD conversion	NPS improvement for benefits satisfaction	Est. annual savings for 1,000-employee org

ILLUSTRATIVE BEFORE / AFTER METRICS (based on published industry benchmarks)

	Avg STD Duration (days)	LTD Conversion Rate (%)	RTW within 30 days (%)	Benefits NPS (score)
Before Program	42	28	55	31
After Program	**28**	**14**	**74**	**58**

💡 *Key Insight: The ROI calculus changes entirely when you count talent retention, not just claim cost.*



BUILDING YOUR BUSINESS CASE: Selling This Upstairs

CFO: 'How much?' CHRO: 'How strategic?' Legal: 'Is this safe?' Here's how to answer all three.

💰 CFO / Finance

"Our LTD conversion rate is X%. Industry best is Y%. The gap costs $Z/year."

Lead with direct cost math. Include replacement cost modeling. Show 3-year ROI projection.

👥 CHRO / People

"This is how we become an employer people don't leave when they're sick."

Frame as retention, engagement, and culture. Use eNPS and engagement correlations.

⚖️ Legal / Compliance

"We've designed this to operate within HIPAA, ADA, and GINA parameters."

Lead with governance framework. Show data access controls. Come prepared with peer benchmarks.

⚙️ Operations / Managers

"This protects your team's capacity and helps you have better conversations earlier."

Frame as team performance support. Give them scripts for supportive check-ins.



CHOOSING YOUR TECH PARTNER: Separating Hype from Reality

There are a lot of AI vendors. Most demo slides look amazing. Here's what to actually ask:

Q1	**What data sources does your model require, and what existing systems do you integrate with?** ⚠ *Red flag: 'We can work with anything.' Translation: their model is generic.*
Q2	**How do you handle protected absence data (FMLA, ADA) in your risk scoring?** ⚠ *Red flag: Blank stare or vague answer. This is non-negotiable.*
Q3	**Have you audited your model for disparate impact across race, gender, and age?** ⚠ *Red flag: 'Our model is objective.' No AI model is inherently neutral.*
Q4	**Who sees individual risk scores vs. aggregated population data?** ⚠ *Red flag: 'That's configurable.' They need a recommended governance model.*
Q5	**Do you train your model on our data, and who owns that trained model?**
Q6	**What does a false positive look like and how do you handle employee appeals?** ⚠ *Red flag: No answer. Every model has false positives. They need a process.*

IMPLEMENTATION ROADMAP: Zero to Predictive in 12 Months

PHASE 1
Months 1–3

Foundation

- Data audit & inventory
- Stakeholder alignment (Legal, HR, Benefits)
- Governance framework design
- Employee privacy notice update
- Vendor landscape review

→

PHASE 2
Months 4–6

Design & Pilot

- Vendor selection / internal model design
- Signal library definition
- Intervention protocol development
- Manager training program creation
- Pilot population selection

→

PHASE 3
Months 7–9

Pilot Launch

- Pilot launch with strict monitoring
- Weekly calibration meetings
- Bias audit on pilot data
- Employee feedback collection
- RTW and duration tracking begins

→

PHASE 4
Months 10–12

Scale & Refine

- Pilot analysis & business case build
- Model refinement from learnings
- Phased org-wide rollout
- Leadership ROI presentation
- Continuous improvement cadence



📖 CASE STUDY: What This Looks Like in Practice

Composite example — details anonymized and illustrative.

🏢 **THE ORGANIZATION**	Mid-size nonprofit, ~800 employees. High mission-driven culture. Above-average burnout in direct services roles. HR team of 12.
🔥 **THE CHALLENGE**	LTD conversion rate of 32% — nearly double the industry benchmark. Case managers reactive. No systematic early identification process.
🛠️ **THE APPROACH**	Partnered with disability carrier to pilot risk scoring using existing HRIS + EAP + claims data. Defined three intervention tiers. Trained 42 managers.
📈 **THE RESULTS (18 months)**	LTD conversion dropped to 19%. Average STD duration fell from 38 to 26 days. Benefits satisfaction NPS increased 22 points. Est. $1.1M in savings.
🌟 **THE UNEXPECTED WIN**	Employees reported HIGHER trust in HR after launch. Transparent communication reframed the benefits team as advocates, not administrators.



THE EQUITY LENS: Who Gets Left Out of Predictive Systems?

If your model only works for employees who already have full benefits access, you've built a system that advantages the advantaged.

⚠️ Part-time & Gig Workers

Problem: Often excluded from benefits data pools; may face higher disability risk but lower detection rates.

Fix: Expand model to include scheduling irregularity data; create benefits navigator access for non-traditional workers.

📊 Employees Without EAP History

Problem: Workers who don't engage with EAP — due to stigma or access barriers — appear lower risk when they're not.

Fix: Supplement with engagement survey data and voluntary health risk assessments where available.

🔧 Frontline & Deskless Workers

Problem: Less exposure to wellness communications; may not have same signal data as office-based employees.

Fix: Create physical touchpoints (poster, QR code, text opt-in) for wellness resources in non-digital environments.

🎯 BIPOC Employees & Historic Bias

Problem: BIPOC employees faced systemic barriers to access, cultural distrust, and lack of equitable care, leading to chronic underrepresentation in disability and EAP records.

Fix: Run quarterly demographic analysis on model outputs; investigate any population with disproportionate flag rates.

😵 Low-Trust Employees

Problem: Low-trust employees self-suppress signals, presenting as 'low risk' when they're actually avoiding the system.

Fix: Focus on psychological safety first. Predictive models in low-trust cultures require culture repair before tech launch.



BUILDING EMPLOYEE TRUST: The Invisible Infrastructure

"Predictive analytics without employee trust is just a fancy way to creep people out."

🔍 Transparency

Tell employees in plain English that you analyze aggregated patterns to improve wellness resources. No jargon, no hiding.

🎛️ Control

Give employees opt-out options where legally permissible. Let them correct their data. Create a feedback mechanism.

❤️‍🩹 Demonstrated Care

Every touchpoint should feel like an offer, not a demand. 'We noticed your department uses X — here's a resource.'

📝 Accountability

Publish an annual summary on how your predictive program performed, including any disparities found and addressed.

🤝 Manager Credibility

Train managers to be consistent. A 'supportive' call after a bad Monday followed by a PIP notice destroys trust.

🔒 EAP Confidentiality

Reinforce repeatedly: EAP use is confidential and does NOT feed disciplinary processes. Employees assume it does.



QUICK WINS: What You Can Do Before You Leave This Room

Not everyone is ready for a full predictive analytics platform. But everyone can do something.

This Week

- Pull your STD-to-LTD conversion rate. Compare to ~20% industry benchmark. Calculate the cost gap.
- Review your EAP utilization rate. Under 5%? You have a trust and awareness problem first.
- Schedule a meeting with your disability carrier: 'Do you offer predictive or early intervention tools?'

This Month

- Audit your privacy notice — does it cover data use for benefits wellness purposes?
- Review FMLA coding in your HRIS. Is it clearly flagged to exclude from performance/attendance patterns?
- Run a cohort analysis: employees with 3+ intermittent absences in Q1 — what happened in Q2-Q3?

This Quarter

- Build a 'warm handoff' protocol between HR and EAP for voluntary outreach.
- Create manager training: 'How to have a supportive workload and wellness conversation.'
- Define your first 3 data signals and what 'elevated' looks like, even in a simple spreadsheet.



THE HUMAN IN THE LOOP: Why AI Can't Do This Alone

AI Provides

Risk score, data patterns, signal history, population trends

AI Cannot Know

Personal life events, managerial dynamics, team culture, individual circumstances

The Human Decision Maker

Human Adds

Organizational context, relationship history, cultural nuance, empathy

Human Decides

Whether to reach out, how to reach out, who reaches out, what to say

+ = Better Outcomes. | Alone = Liability. | Alone = Missed Signals.



WHERE THIS IS HEADING: The Next 5 Years

Spoiler: the organizations building this infrastructure today will have a massive advantage.

2025–2026	🔗 Integration Explosion EHR, wearable, and financial wellness data begin integrating with workforce analytics. Holistic employee health picture — with significant new compliance questions.
2026–2027	🤝 **Carrier-Employer Convergence** Disability carriers evolve from claims processors to care partners. Real-time data sharing drives down claim duration and creates coordinated care models.
2027–2028	📋 **Personalized RTW Planning** AI-assisted return-to-work plans tailored to individual capacity, role requirements, and home context. Accommodation recommendations auto-generated for HR review.
2028 –2030	⚖️ **Predictive Equity Auditing**
Ongoing	🌟 **The Trust Premium** Organizations with transparent, trust-centered predictive programs will see measurable differences in talent attraction and retention. Trust becomes a competitive advantage.

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THE FIRE ALARM EXISTS
SO YOU DON'T NEED THE FIRE TRUCK.

The question isn't whether you can afford a predictive disability program. It's whether you can afford not to have one.

YOUR 3 COMMITMENTS BEFORE YOU LEAVE TODAY

1. Pull your STD-to-LTD conversion rate and compare to ~20% industry benchmark.
2. Call your disability carrier: What predictive or early intervention tools do you offer?
3. Pick ONE signal to start tracking — and define what elevated looks like.

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