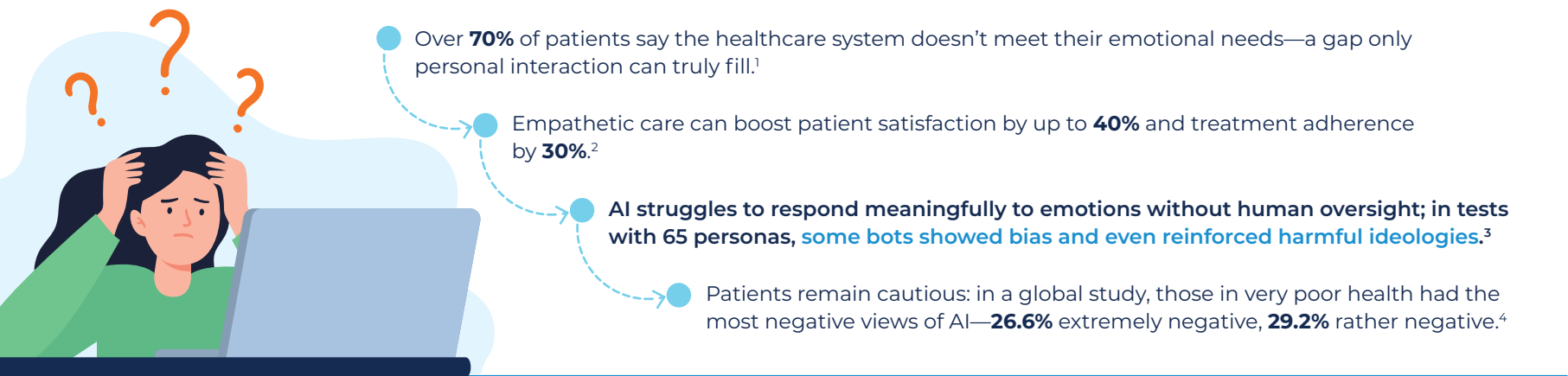**Momentum LIFE SCIENCES**
Formerly VMS BioMarketing

Where Human Expertise Meets AI: Advancing Patient Engagement

AI has advanced rapidly in understanding language and detecting emotion, but on its own, it cannot deliver the kind of empathetic support patients need. To bridge this gap, manufacturers must invest in patient-centered models that combine AI with real human connection. A hybrid approach to patient engagement leverages AI to optimize human-led engagement, not replace it.

The Human Imperative

Evidence shows that technology must stay in a supportive role to educators to be effective:

- Over **70%** of patients say the healthcare system doesn't meet their emotional needs—a gap only personal interaction can truly fill.[1]

- Empathetic care can boost patient satisfaction by up to **40%** and treatment adherence by **30%**.[2]

- AI struggles to respond meaningfully to emotions without human oversight; in tests with 65 personas, some bots showed bias and even reinforced harmful ideologies.[3]

- Patients remain cautious: in a global study, those in very poor health had the most negative views of AI—**26.6%** extremely negative, **29.2%** rather negative.[4]

NLP Enhancing Empathetic Support

AI technologies like Natural Language Processing (NLP) help capture and interpret patient experiences, enabling human-led interactions that are more timely, personal, and context-aware. Other AI tools integrate into educator workflows to create efficiencies that enable agility and enriched engagement with patients and HCPs.

Sentiment Evaluation
NLP detects tone, mood, and patterns of distress in patient-reported data—such as call transcripts, messages, and app interactions. These insights flag educators to moments when patients may need reassurance, simplified explanations, or a more supportive communication style.

Trend Identification
By analyzing large volumes of unstructured data, AI surfaces recurring issues (for example, ongoing anxiety about side effects or repeated confusion around dosing). Educators can proactively adapt conversations to address these concerns.

AI Insight Mining
Machine learning models uncover adherence risk factors and emotional triggers that would otherwise go unnoticed, enabling earlier, more targeted interventions.

Human-Centered AI in Practice

At Momentum Life Sciences, we design patient support programs that blend the human touch with technology. Our model centers on enabling nurse educators and navigators with secure, AI-enhanced tools to deliver engagement that is both deeply empathetic and scalable.

Here's how it works:

Gathering Insights: We securely integrate data from EHRs, wearable devices, and patient-reported inputs. NLP enriches these inputs by identifying emotional tone and sentiment.

Contextualizing: We create a 360° view of the patient journey, highlighting adherence risks, emotional signals, and opportunities for support.

Enhancing Human Interactions: AI-powered "next best action" prompts help educators adapt tone, pacing, or interventions in real time.

Empowering Patients: Personalized nudges, reminders, and resources are delivered via mobile apps and two-way interfaces, always rooted in the patient's individual context.

Integrating Seamlessly: Momentum programs complement HUB providers and pharma frameworks, addressing cost, scalability, and flexibility challenges.

1. Simbo
2. SMM
3. Cornell
4. New Atlas