



UNNECESSARY & AVOIDABLE:
Solutions for Emergency
Department Diversion

September 7, 2023



Today's Speakers



Aram Khodiguian
Director, Value Based Care
Solutions, mPulse Mobile



Wendy Cutting
VP, Product, mPulse Mobile



Agenda

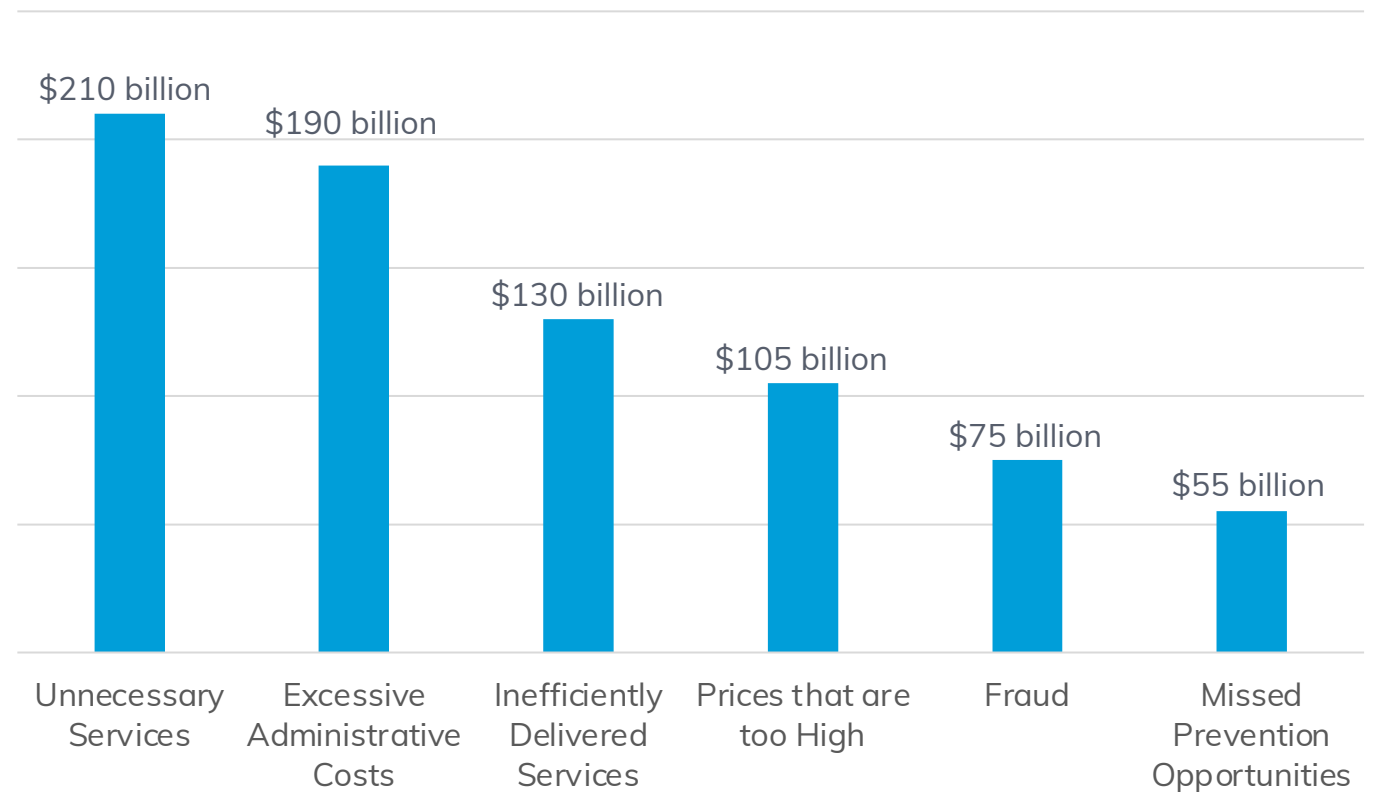
- The Current State of the Emergency Department
- Why Patients are Seeking ED
- Avoidable Vs Unnecessary
- Solutions to Emergency Department Diversion
- Cost Savings
- Questions

The Current State of Emergency Departments



- ED overuse represents the fourth largest category of waste and is responsible for up to \$38 billion in wasted spend in the U.S. each year.
- There are over 18 million avoidable ED visits in the United States each year.
- Estimates for avoidable ED use range as high as 56% of all visits.
- In ten years (05-15) ED visits in the US increased 20% from 96.5 million to 115.3 million, and that number continues to grow.
- 86% of ED visits are treat-and-release
- 28% of ED visits are primary care treatable
- 33% of ED visits are non-emergent
- 39% of ED visits are patients with one or more chronic conditions

SOURCES OF WASTED SPENDING IN US HEALTH CARE



Source: The Institute of Medicine

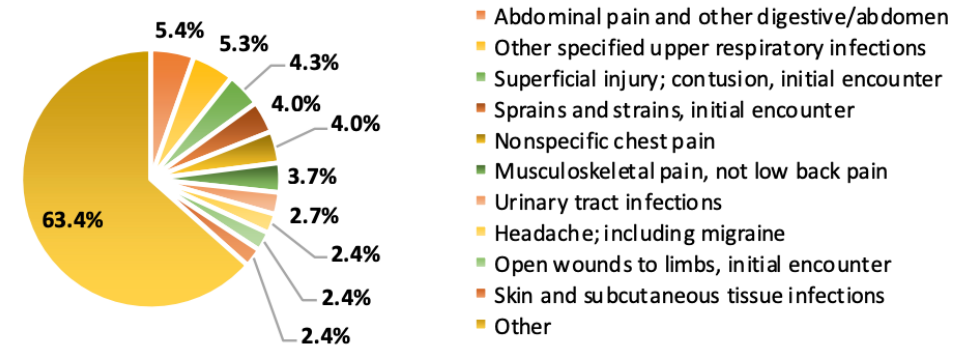


Why Patients Are Going to the ER

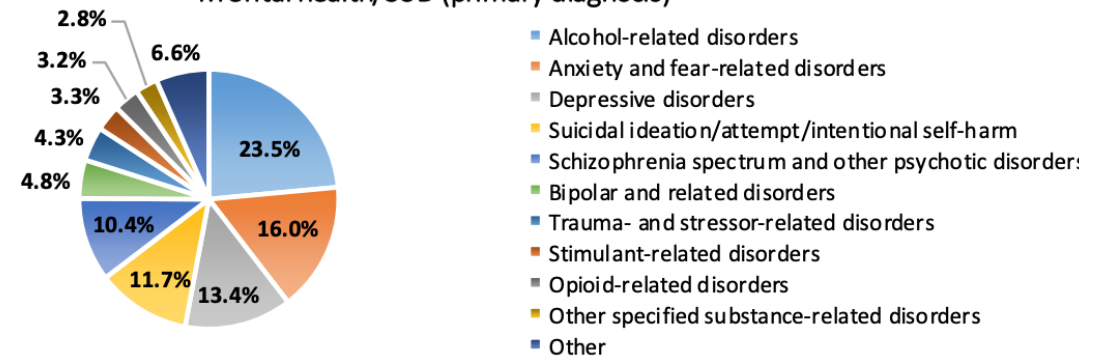
Reasons for ED overuse:

- Lack of education and knowledge around care options and availability
- Patients have limited access to primary care services
- The ED provides convenient after-hours and weekend care
- The ED offers patient immediate reassurance about their condition or ailment
- Access to full range of services at any time regardless of their ability to pay or the severity of their condition.
- Primary Care providers will often refer patients to the ED if they're unable to diagnose the severity of their condition
- Hospitals have financial and legal obligations to treat ED patients

Non-MH/SUD treat-and-release



Mental health/SUD (primary diagnosis)





Commonalities in ER Over-Utilization

- Top reasons for ED use: Abdomen/ digestive issues, upper respiratory infections, injuries, sprains/strains, chest pain
- 27.2% of ED visits patients report social isolation and loneliness
- 1 out of 8 ED visits, or 12.5% are related to Mental Health and/or Substance use disorder (MH/SUD) ¼ of ed visits for SUD are related to alcohol
- High utilizers or super users of the ED are associated with younger age (18-39 years), having Medicaid insurance, and greater comorbidity.
- Women are nearly twice as likely as men to have a non-emergent or primary care treatable ED visit.
- Risk factors for an avoidable ED visit: Lowest Income decile, unemployed, in poverty, single household, receiving SNAP benefits, Less than high school educational attainment, English speaking, aged 27-54 and aged 65+, no internet access, divorced or widowed, U.S. born, black or Hispanic, female, disabled, uninsured or has public health insurance, no vehicle, rents their home

ED Usage % within each LOB

Medicaid 52.7%
Uninsured 50.7%
Medicare 47.1%
Private/Commercial 46%

<https://aspe.hhs.gov/sites/default/files/private/pdf/265086/ED-report-to-Congress.pdf>



POLL QUESTION

What strategies have you tried or considered implementing to support ED Diversion?



Avoidable Vs Unnecessary

Avoidable Visits

Something could've been done to better manage and prevent care that was sought in the ER. Ex: better condition management and education, regular medication refill, better care coordination and understanding of care navigation

KEY CONSIDERATIONS & SOLUTIONS

Understand individual health needs and risks

Does the member need condition management?

Should they be enrolled into a med refill solution?

Do they need care coordination and support?

Is it MH-SUD related? Can we enroll them into a mental or behavioral health solution such as anxiety and depression support, social isolation support, or point them towards addiction or telehealth therapy resources?

Unnecessary Visits

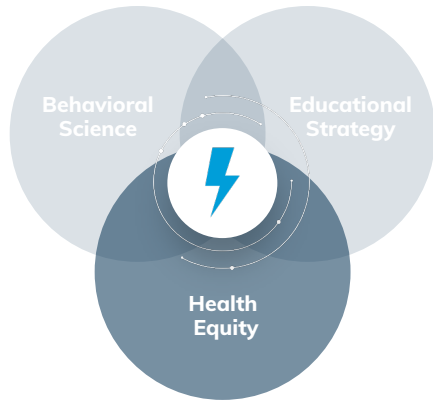
Education is the key barrier here and a closer look at health inequities is key to overcoming educational barriers. Unnecessary visits often equate to members NOT understanding where they should seek care, and not understanding that the ER is for emergencies only. We need to educate this cohort on where they should be seeking care instead, and the direct benefits correlated to them in doing so.

KEY CONSIDERATIONS & SOLUTIONS

Provide equitable tools and resources

Provide education

Make it easy for them to seek care elsewhere



HEALTH EQUITY

We are committed to helping reduce health disparities and inequities by designing programs that are relevant, relatable and address the needs of the diverse communities our partners serve.

Our ED Diversion Solution is considerate to members of diverse backgrounds and abilities. From multilingual conversations and content, to tailored resources, to care preferences and more.

HEALTH LITERACY

- Short, actionable, educational messages
- Easy-to-grasp visual content designed to build knowledge and empower members
- Unique keyword text backs
- Streaming Health Content

CULTURAL COMPETENCY

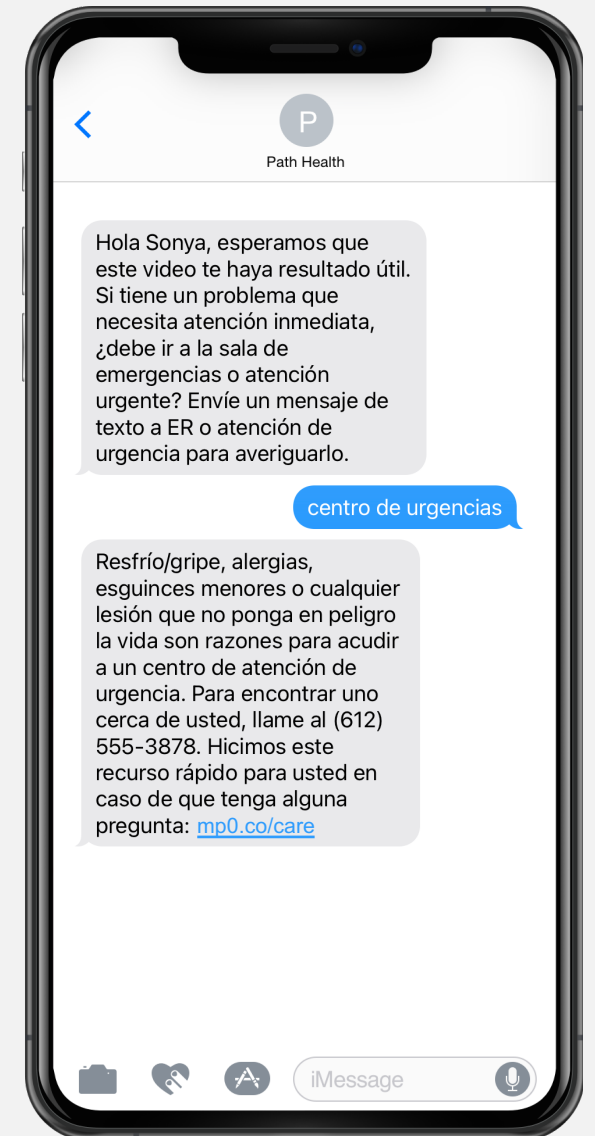
- Natural Language Understanding (NLU) in 7+ languages
- 150+ Translations
- Compassionate, inclusive tone

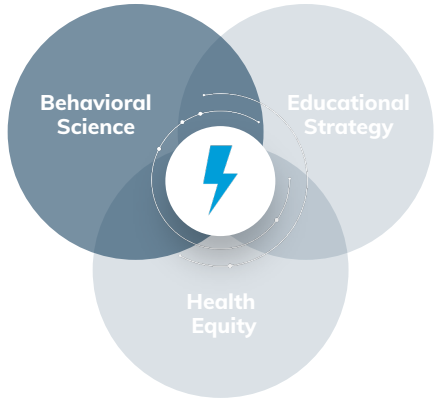
SDOH

- Dynamic resource links
- Member Services/helpline availability
- Promote alternative care options

ACCESSIBILITY

- Member-first language (custom keys for names, personal providers)
- Member service line sent in every message
- Reading level does not exceed 5.7
- Natural Language Understanding (NLU)
- Two versions of this solution, one with nurse line/telehealth.





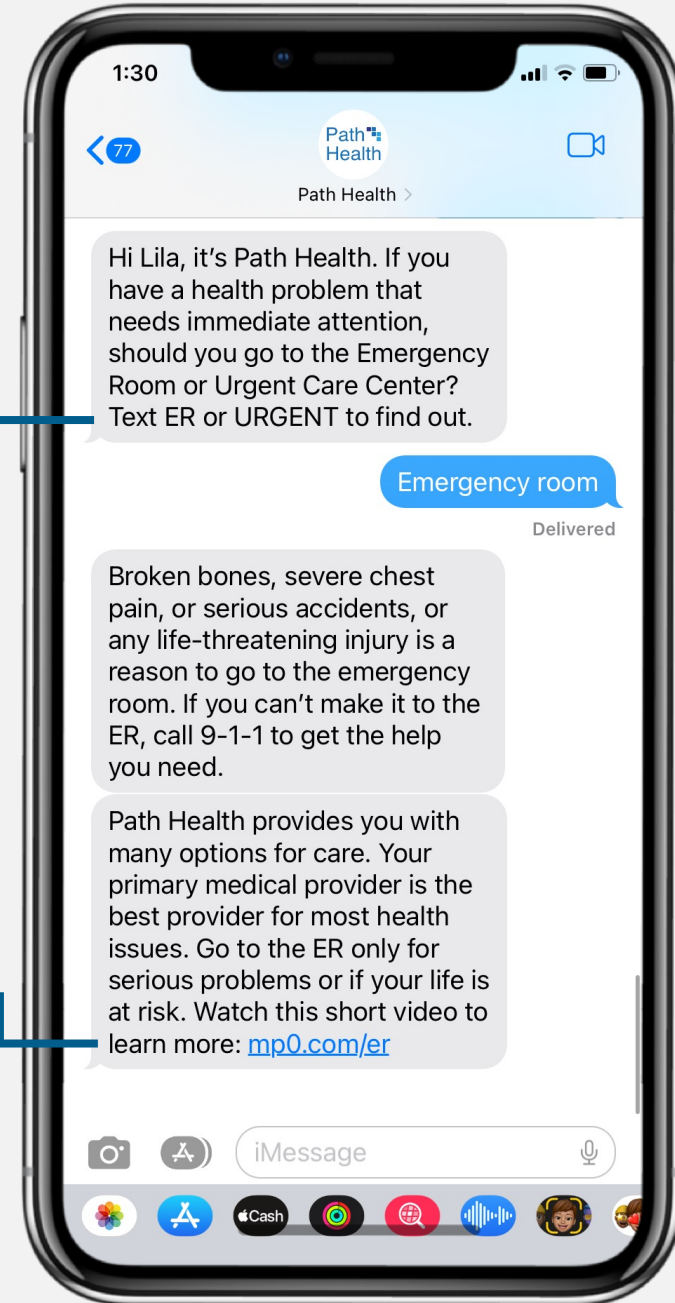
BEHAVIORAL SCIENCE

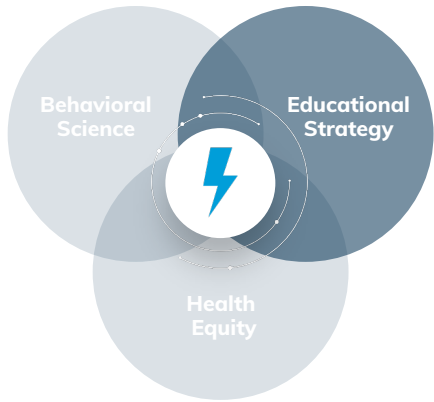
Rooted in neuroscience and psychology, behavioral science uses proven techniques to inspire action.

mPulse's ED Diversion Solution incorporates strategic behavior change principles throughout each conversation and workflow to build knowledge and motivate members to make better-informed decisions about their health.

 **Spark Effect**
Make it easy

 **Storytelling Effect**
Connect on an emotional level





EDUCATIONAL STRATEGY

Most people only retain 10% of information from written text but more than 95% from videos and interactive content.

mPulse's ED Diversion Solution incorporates cinematic streaming content designed and curated by our in-house team of producers, designers, and instructional strategists.

Content is thoughtfully sequenced and placed in messaging to build knowledge of appropriate care options and boost member self-efficacy.

Emergency Room	vs.	Urgent Care
Broken bones		Cold or flu
Trouble breathing		Sprain or strains
Head injury		X-rays
Heart attack		Rashes & allergies
High fever		Back pain
Seizure		Vomiting

Cognitive Load
Avoid Information overload

Availability Bias
Encourage informed decision-making

Loss Aversion
Show what's at stake

Storytelling Effect
Connect on an emotional level

Availability Bias
Encourage informed decision-making



Patient Journey: Avoidable



Avoidable Visit – Patient Journey

Reason for ED Visit: Social Isolation



Visits ER



New to Measure:
Sertraline*



Member flagged for
Mental Health Support



Opt-in to programs to
support your health

Identify Challenges



What are you
looking to improve?



I'm
Lonely



Member flagged for
Social Isolation



We'll send you ongoing
tips and resources to help!

Tailored Outreach & Support

Educational Streaming Content



Benefit Awareness



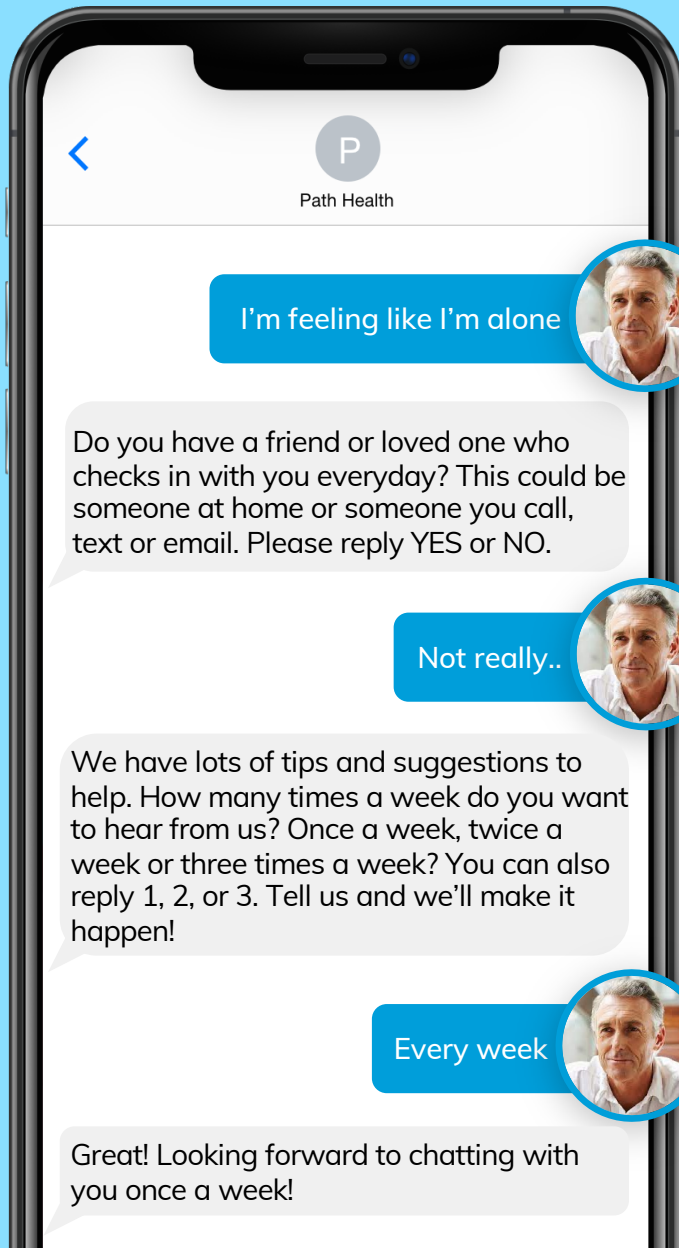
Coaching Program
Benefit CTA



Medication refill reminder

Reinforce ED
Diversion Solution

*Sertraline - Sertraline is used to treat depression, obsessive-compulsive disorder (OCD), panic disorder, premenstrual dysphoric disorder (PMDD), posttraumatic stress disorder (PTSD), and social anxiety disorder (SAD).



Two-Way SMS

Connect with and Empower consumers in the ways they prefer.

Natural Language Understanding (NLU)

Leverage NLU to interpret responses & send appropriate reply.

Dynamic Tailoring

Messages tailored to consumer preferences and needs through auto-response messages providing answers to member questions and supporting next best action.

72%

Social Isolation Program
Completion in 6 weeks

Tailored Support

We'll send you ongoing tips and resources to help!

ed for support

Opt-in to programs to support your health



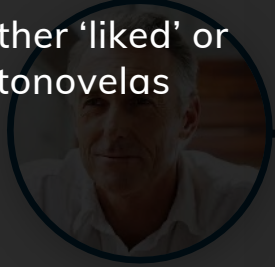
Medication refill reminder

Reinforce ED
Diversion Solution

Avoidable Visit – Reason for ED – Social Isolation

85%

Of consumers either 'liked' or 'loved' the fotonovelas



Streaming Content



A series of fotonovelas are sent to consumers to help provide tips and tools to help overcome social isolation. Configurable CTAs encourage utilization of health benefits and resources.

Our cinematic streaming content delivers educational learning modalities that improve health literacy, inspire self-efficacy and deliver better outcomes.

Cooking at home with new recipes

I'm trying to make your famous red pepper pasta sauce... how long do I cook the peppers?

Chris has a plan to impress his family with the perfect dinner.

Trying a new hobby

Honey, it's about time you picked up a new hobby.

Esmeralda seems to have something in mind.

Who would have thought I'm so good at knitting?

Connecting with Family & Friends

Happy birthday, Grandma!

I bet this is her first video call.

Thanks, Maria! But hold on a minute, I'm on a group call with my friends...

She probably doesn't know I do this all the time.

Streaming Content



Reinforce ED Diversion Solution

Client: Magellan Supports Members Through Social Isolation Program

PARTNERSHIP AT A GLANCE

Magellan Health, Inc., a Fortune 500 company, is a leader in managing the fastest growing, most complex areas of health, including special populations, complete pharmacy benefits and other specialty areas of healthcare. They partner with mPulse to deliver impactful programs to their population at scale.

GOAL

Engage members with chronic conditions during and beyond the pandemic to address possible loneliness and isolation while assessing isolation level and providing members with content and strategies to cope.

STRATEGY

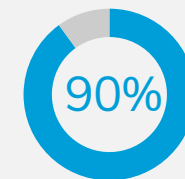
- 1. Dynamic Messaging:** Patients received weekly touchpoints via SMS messaging (and could adjust the frequency preferences) check in, assessing loneliness, and sharing content across 25 topics throughout the 6-week study, individually tailored based on member responses and data.
- 2. Streaming Content:** A range of content types, from tips, to challenges, to fotonovelas were used to deepen engagement.
- 3. Assess Impact:** After the 6-week study period, members received a text survey to assess satisfaction and impact.

RESULTS

- 39% of members engaging during the study with dialogue response rates ranging from 10% to over 50%
- 72% of members completed the 6-week program, with 13% of members self-identifying as non-isolated in week 1
- 12% of patients engaged with the fotonovela content and ~70% of engaged members responded positively when surveyed
- 90% of members surveyed responding positively (52% giving the highest scores)
- Members with a higher average SDOH impact were most likely to rate the program highly on the survey
- 165 members offered their social isolation levels via text when prompted, with 17% of them identifying as isolated

39%

Overall
Engagement rate



Patient
Satisfaction

72%

Program completion
after 6 weeks



Patient Journey: Unnecessary



The Impact of Unnecessary ED Utilization

The average cost of treating common primary care treatable conditions at a hospital ED is 12 times higher than visiting a physician office and 10 times higher than traveling to an urgent care center for help with the same issues¹

Related to Highmark, Johns Hopkins utilized the original NYU-EDA and added 2 revised algorithms that included injuries and modified the methodology. In so doing, nearly 99% of all visits could be classified, and it was discovered that 58% of the ED visits in the data set were primary care sensitive.¹

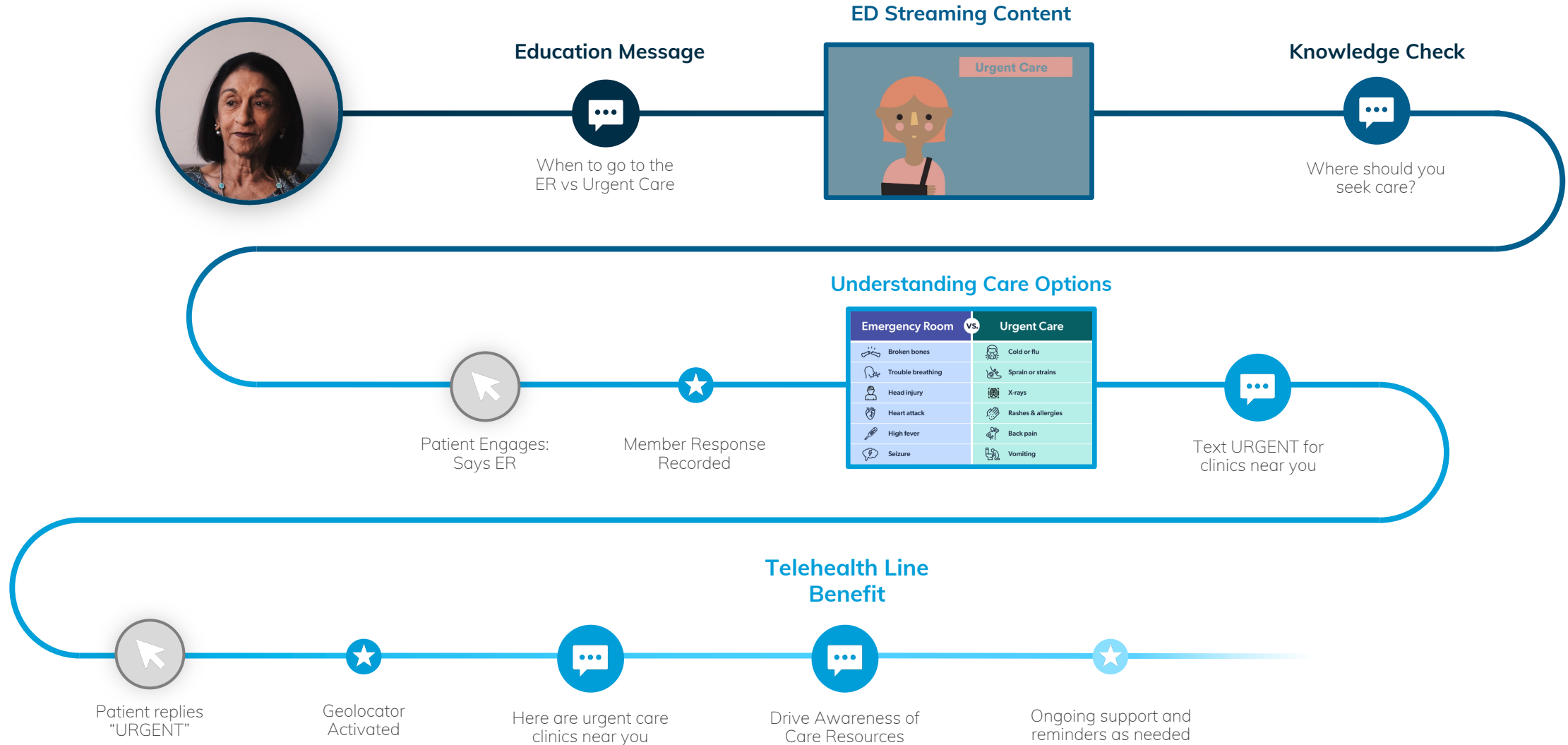
Physician Burnout: Physicians spent a mean of 1.77 (95% CI, 1.67-1.87) hours daily completing documentation outside office hours.²



Unnecessary Visit – Patient Journey

Goal: Educate high-utilizers or those that go to the ER when they don't have to where they should seek alternative care

Choose up to 3 channels: SMS, IVR, & Email



Streaming Content



In this short animated video, members discover why visiting an urgent care facility vs the ER could save them time and allow them to get treated more quickly.

Our cinematic streaming content delivers educational learning modalities that improve health literacy, inspire self-efficacy and deliver better outcomes.



Goal: Educate high-utilizers or those that go to the ER when they don't have to where they should seek alternative care

95%

More information retained from watching streaming content vs reading text

ED Streaming Content



Knowledge Check

Where should you seek care?

Understanding Care Options

Emergency Room	vs.	Urgent Care
Broken bones		Cold or flu
Trouble breathing		Sprain or strains
Head injury		X-rays
Heart attack		Rashes & allergies
High fever		Back pain
Seizure		Vomiting

Text URGENT for clinics near you

Telehealth Line Benefit

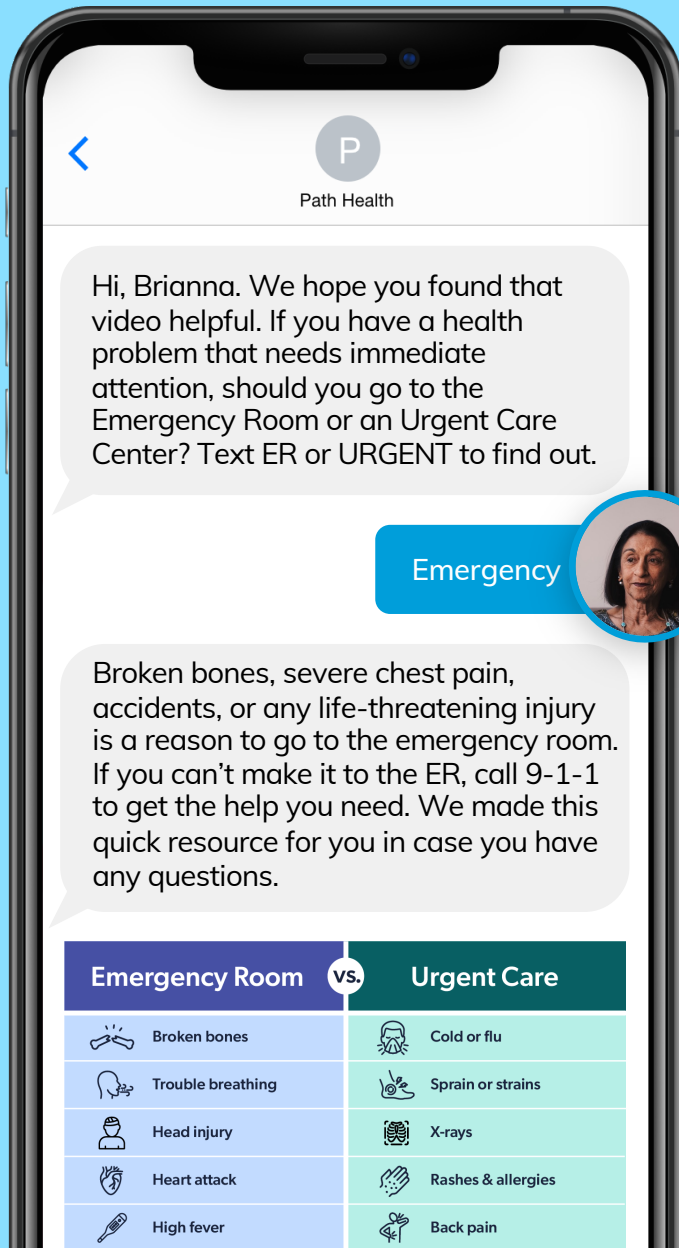
Patient replies "URGENT"

Geolocator Activated

Here are urgent care clinics near you

Drive Awareness of Care Resources

Ongoing support and reminders as needed



Two-Way SMS

Drive Awareness. Connect Members to Resources.

Natural Language Understanding (NLU)

Leverage NLU to interpret responses & send appropriate reply.

Links to Resources

Content links provide educational videos and infographics to help inform members on where to seek care.

↓ 70%

Reduction in unnecessary ER visits in high-utilizer population using mPulse ED Diversion Solution + Telehealth and Nurse Line

Knowledge Check

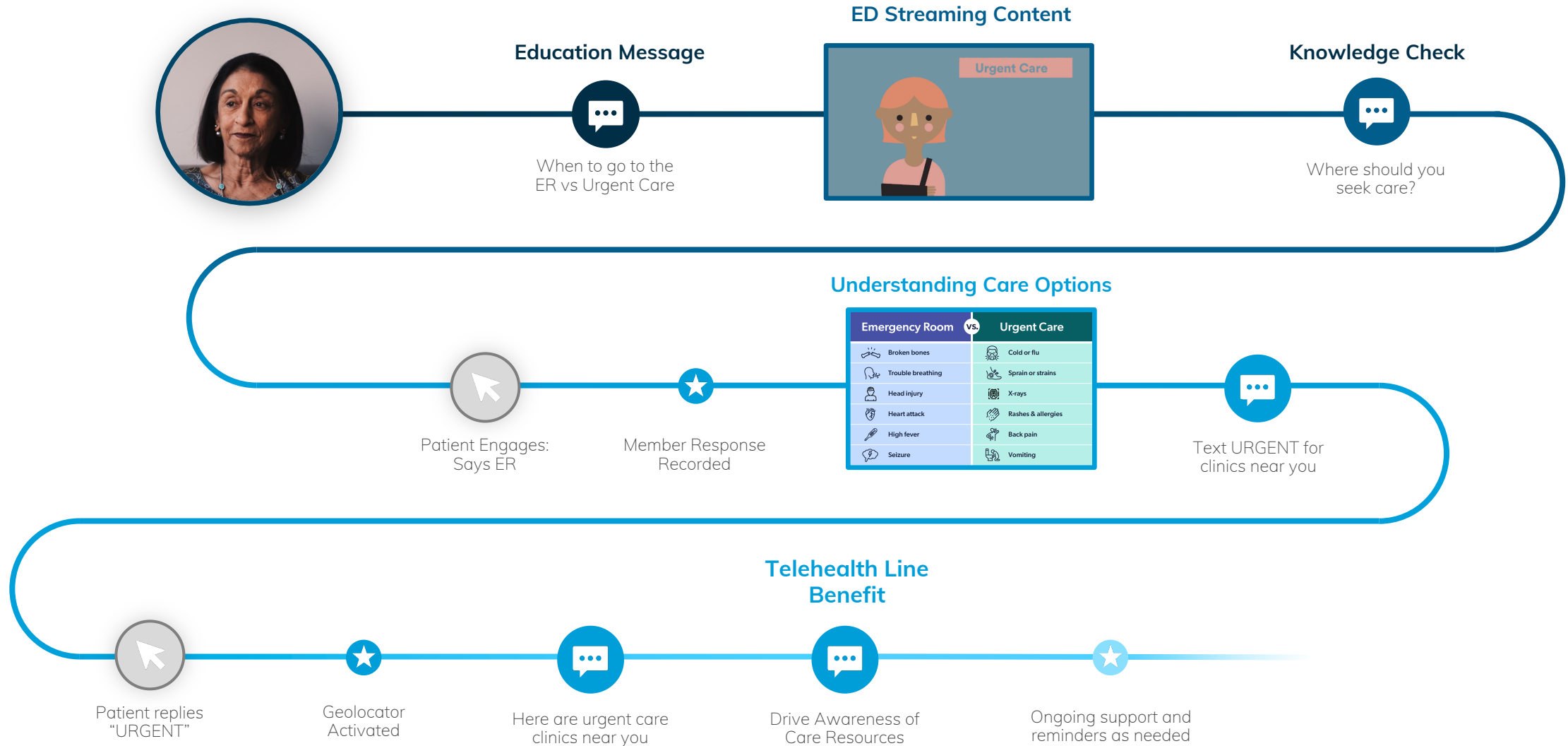
Where should you seek care?

Text URGENT for clinics near you

Unnecessary Visit – Patient Journey

Goal: Educate high-utilizers or those that go to the ER when they don't have to where they should seek alternative care

Choose up to 3 channels: SMS, IVR, & Email



ED Solution Responses

Thank you for this information I know exactly what to do now

I don't have a primary doctor anymore.

Why, you didn't check the problem I went to the ER for when I came into your office for my follow up. Wastes of over an hour and a half.

I went 3 different Urgent Cares before the ER. Each one either didn't have a doctor working that day that took his insurance or they didn't have an x-ray.

I already came into the office this week I had a appointment and I set up another appointment for next week for a follow up

I didn't realize I have a DR office. I bring my kids to ER a lot.

URGENT

Appointment already made

Yes, we understand and will call 1st next time. We thought the kids ER at hospital was an Urgent Care for Children. Thank you for letting us know.

I don't have a primary

35%

Engagement Rate within the first 3 months within a hard-to-reach Medicaid population with some of the highest utilization rates in the country

- Members text URGENT to see nearby urgent cares that are in network to avoid leakage and ensure accurate records.
- mPulse's bi-directional communication allows patients to give responses that are recorded and enable the plan to follow-up with tailored resources.
- An SDOH analysis was completed to provide both population and member-level data including gender, age bands, preferred language, and more.

Elevance Lowers Unnecessary ED Utilization for High-Utilizer Population

PARTNERSHIP AT A GLANCE

Anthem is one of the nation's largest health plans, and partners with mPulse across dozens of programs, including ED Diversion. Together, mPulse and Elevance deploy SMS messaging to lower unnecessary ED visits and redirect members to better, more affordable care options.

GOAL

Automate and optimize communications to redirect members from ED to Urgent Care facilities, while identifying high utilizers and providing messaging and education to redirect to more appropriate care options.

STRATEGY

- 1. Member Insights:** Population analysis performed to assess intervention impact for members outreached between May through August 2019.
- 2. SMS & Educational Content:** SMS text messaging with educational infographic engaged and educated members on where to seek the right level of care for their health needs.
- 3. Engaging High-Utilizers:** Group of 11,668 members were enrolled in program to decrease the number of ER visits (high utilizers identified)



RESULTS

70%

REDUCTION IN ER VISITS ACROSS TARGETED POPULATION

Before Outreach

Total ER Visits:
18,841

Mean: 1.615
Distribution: 75% of members visited the ER 2 times or less

After Outreach

Total ER Visits: 5,715

Mean: 0.4898
Distribution: 75% of members visited the ER 1 time or less

\$1,082 Average cost of an ER Visit in 2019
\$14,202,332 in Health Plan and consumer savings



Western Sky lowers ED visits and Improves Post-Discharge PCP visits

PARTNERSHIP AT A GLANCE

Western Sky Community Care leverages mPulse Mobile's technology and expertise to drive meaningful one-to-one interactions that produce outcomes and healthier action for their vastly growing member population.

GOAL

Redirect Medicaid ED high-utilizers and increase attendance in post-discharge follow-up appointments. Assess the efficacy of outreach on follow-up appointment attendance.

- 1. Leverage Data:** Claims data included several data points that allowed targeted SMS communications to be deployed.
- 2. Tailor Outreach:** SMS Outreach was sent to ED high-utilizers which included workflows for ER follow-up to see their doctor or nurse, symptom checker, and education about different care options.
- 3. Build Self-Efficacy:** Members were provided tailored resources, education, and suggestions based on their responses to enable them to seek out the right level of care for their health needs.



RESULTS



60% HAD A PCP VISIT

There were 3,261 PCP visits between June-December 2021. 1,920 of those visits were from members who had been to the ED.



62% IMPROVEMENT

Medicaid patients 18 years and older have a baseline ED attendance rate of 37%. % Improvement = (New% - Original%) / Original%

*After 90 days, 39% of members who did not attend a post-discharge follow-up are readmitted to the ED, compared to 28% readmittance for members who attended a follow-up visit. Readmission costs average \$2,130/ visit. ROI = (Net Savings - Cost of Investment) / Cost of Investment x 100
(\$166,140 - \$5,041) / \$5,041 = \$31.96/ visit ROI





POLL QUESTION

How are you addressing potential upcoming ED increases for 2024?



The ROI of ED Diversion



VALUE SUMMARY

Emergency Department Diversion

Reach, educate, and direct members to the right level of care for their health needs while reducing unnecessary Emergency Room utilization and increasing total cost of care savings.

Total Target Population	25,000
Line of Business	Medicaid
<u>Average Annual ER Visits Per Member</u>	4
Number of ED Visits (Per Year)	100,000
<u>Avoidable Visits (Annually)</u>	52.70%
Non-Emergent Visit Volume (Annually)	52,700
mPulse Impact (Decrease of Non-Emergent Visits)	50%
Total Visit Decrease/Year	26,350
<u>Average Cost of ED Visit/Patient</u>	\$1,365

\$2,997,313

Potential Total Monthly Cost of Delay without mPulse ED Diversion Solution

\$35,967,750

Potential Annual Savings due to mPulse ED Diversion Solution

The logo for mPulse mobile, featuring the text 'mPulse' in a large, white, sans-serif font above the word 'mobile' in a smaller, white, sans-serif font. The logo is centered within a dark blue circular area that is part of a larger graphic of concentric circles and dots on the left side of the slide.

mPulse
mobile

The word 'Questions' in a large, white, sans-serif font, positioned to the right of a dark blue circle. This circle is part of a larger graphic of concentric circles and dots on the left side of the slide.

Questions

Activate2023

mPulse Mobile's annual in-person industry conference for healthcare leaders to learn, network, and celebrate innovative health engagement.

[VISIT THE WEBSITE →](#)

Designing Consumer Journeys for Health Equity

This year's conference will explore the way the healthcare industry can develop more equitable digital health experiences for all populations through the use of technology, data, and innovative engagement strategies.

Improve quality, improve experience, empower your teams



KEYNOTE SPEAKER

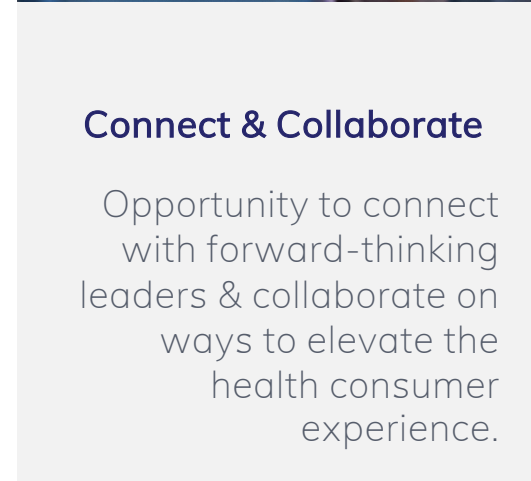
Ruha Benjamin

Equity & innovation expert at the intersection of race, justice and technology.



Subject Matter Experts

A convention of thought leaders from healthcare and beyond. Get the latest insights on digital engagement.



Connect & Collaborate

Opportunity to connect with forward-thinking leaders & collaborate on ways to elevate the health consumer experience.



Celebrate Innovation

Join together for Awards, a Happy Hour, a Dinner & Reception & an Off-Site Networking Activity.



Visit our virtual booth at VBCExhibitHall.com



Thank You



Aram Khodiguian

Director, Value Based Care Solutions
mPulse Mobile

aram.Khodiguian@mpulsemobile.com



Wendy Cutting

VP, Product
mPulse Mobile

wendy.cutting@mpulsemobile.com