

THE  
SMART HOSPITAL  
OF THE  
FUTURE

HOUSTON  
**Methodist**  
LEADING MEDICINE





WE ENVISIONED

A PLACE OF WELLNESS AND HEALING FOR ALL







# BEFORE

VISIT

# DURING

INSIDE THE HOSPITAL

# AFTER

OUTSIDE THE HOSPITAL

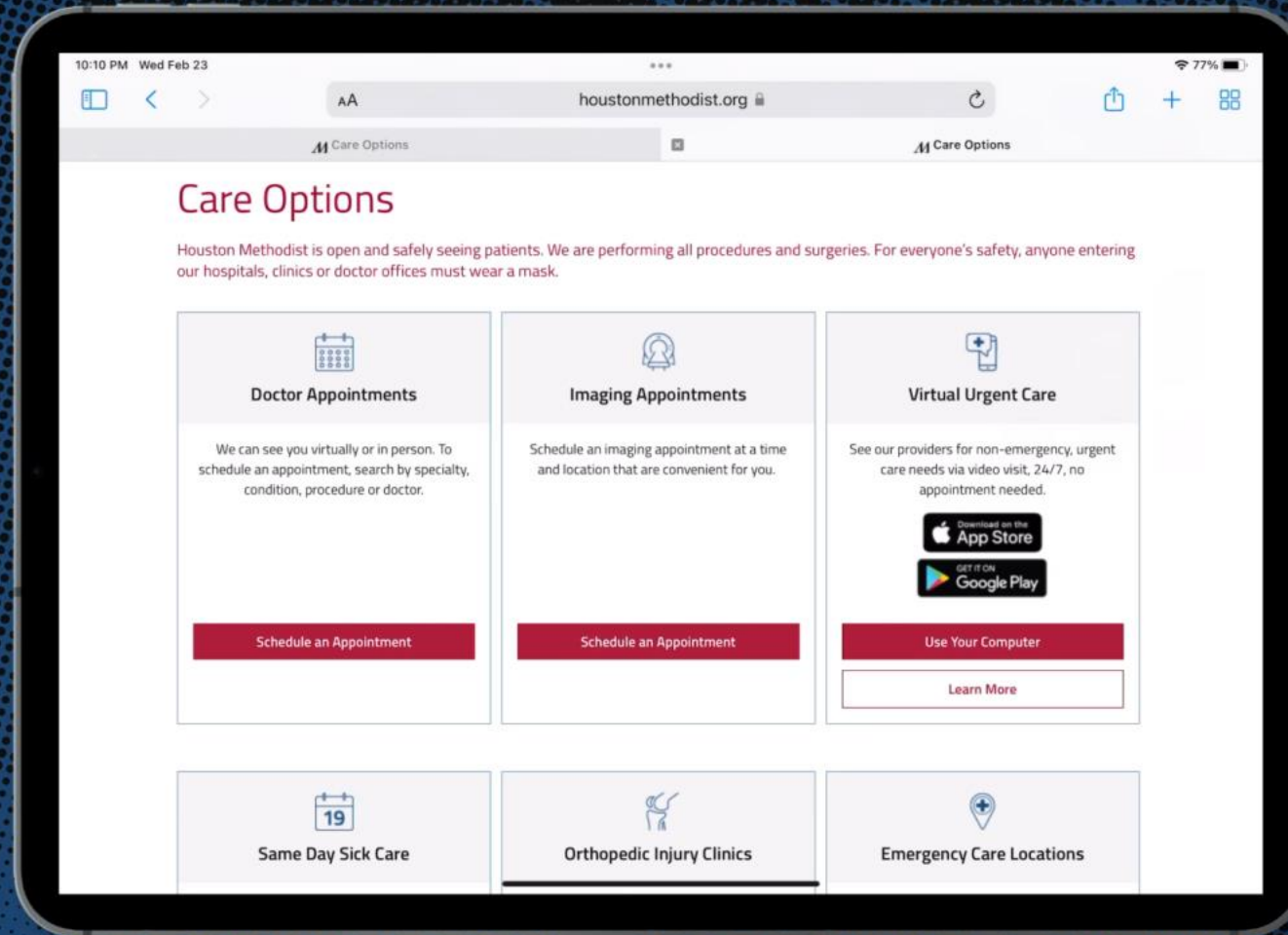
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## SELF-CONTROL CHECK-IN/REGISTRATION





SELF-CONTROL SCHEDULING





Preliminary Results for PT/OT

1.

Order is generated

No Shows  
Reduced

↓ 24%

2.

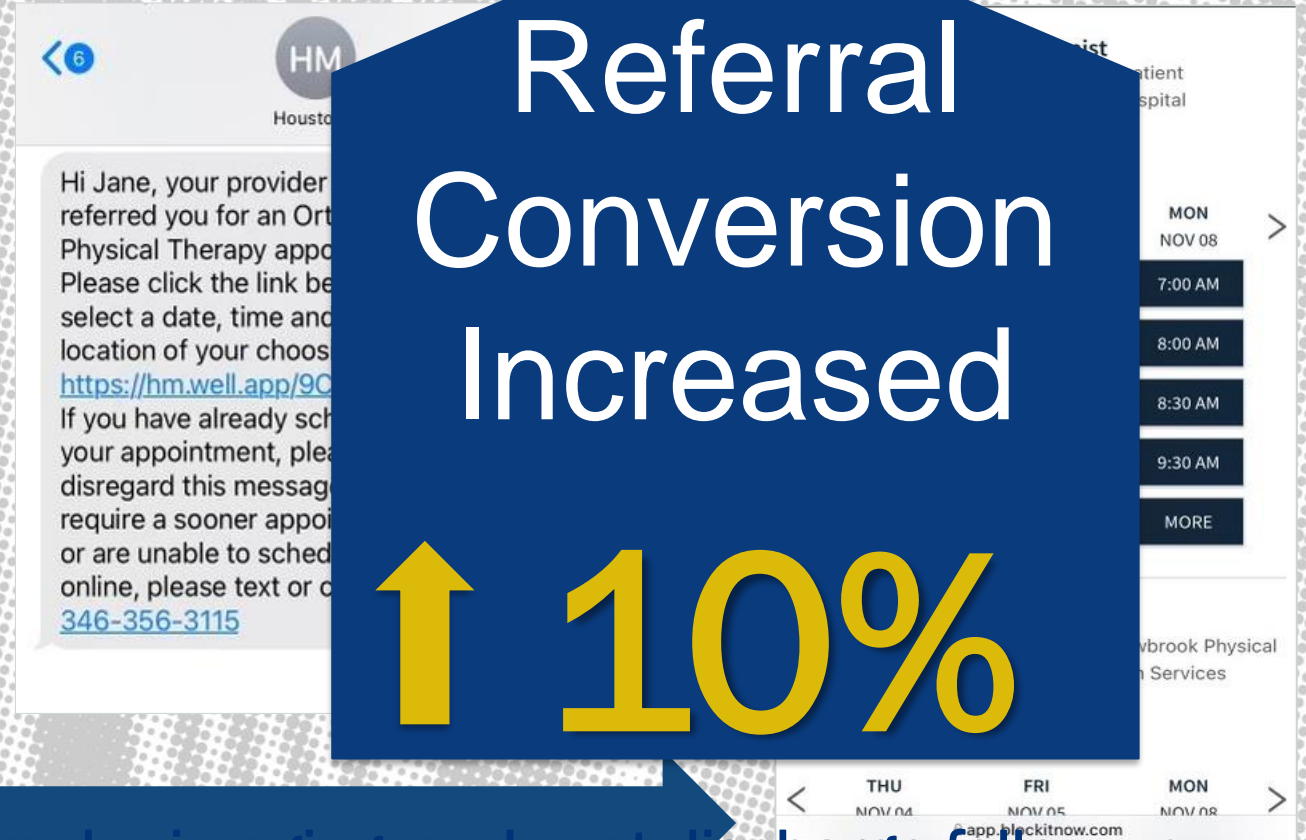
Text is sent to patient

3.

Patient schedules via  
Block-IT

Referral  
Conversion  
Increased

↑ 10%



Continuing to expand to mammography, imaging, and post discharge follow up

ACCESS TECHNOLOGY:

PHYSICAL/OCCUPATIONAL THERAPY ORDER DRIVEN TEXTING





CLINICAL AND FINANCIAL KNOWLEDGE







1.4 million  
patients



98%  
patient satisfaction



80%  
patient  
engagement



50%  
reduction in  
readmissions



40%  
average reduction  
in emails & calls



10-15%  
improvement in  
HCAHP scores

## 100+ CareSense Pathways

OBGYN

Cardiac

COVID

Neuro

Transplant

Behavioral  
Health

GI

Ortho/  
Spine

Oncology

Sepsis

Bariatric

Customize  
Pathways

# DIGITAL CARE PATHWAYS







NO CALL CENTER AGENTS





## GOAL

When people call us, get them  
to who, what, where they need  
as quickly as possible

## STATS

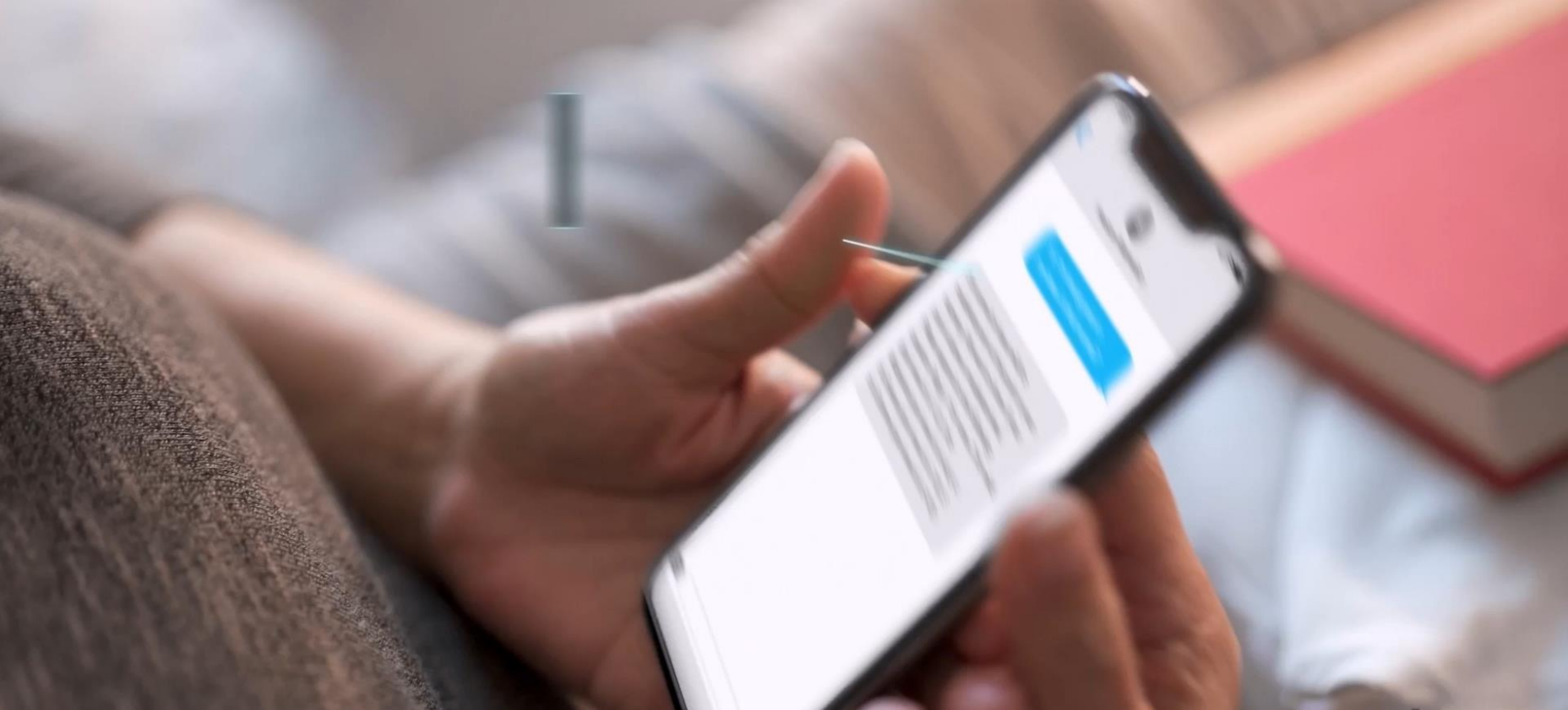
1.9+ Million

CALLS HANDLED  
BY AUTOMATION

57%

OVERALL  
AUTOMATION RATE





PHYGITAL LETS YOU CHOOSE





BEFORE

VISIT

DURING

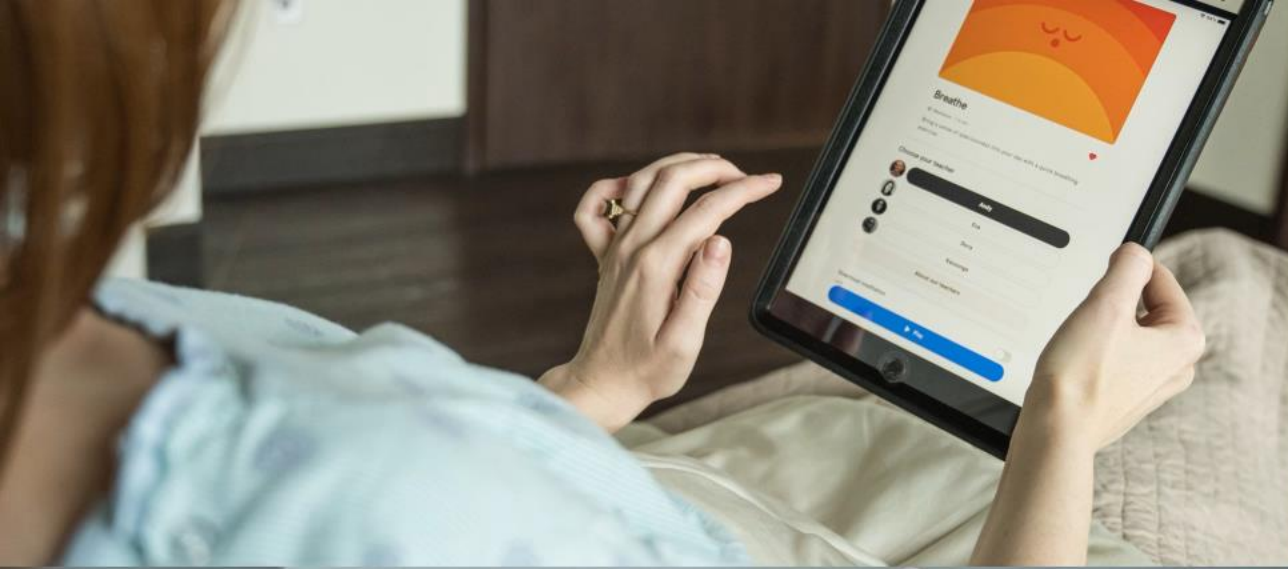
INSIDE THE HOSPITAL

AFTER

OUTSIDE THE HOSPITAL

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SMART ROOM







2,358

MYMETHODIST  
TABLETS

378

TELEROUNDING  
TABLETS

1,779

ECHO DOTS

SMART ROOM







HOUSTON  
**Methodist**  
LEADING MEDICINE

AMBIENT LISTENING

[Patient Select](#)

[Consent](#)

[Ambient Listen](#)

[Patient Recap](#)

[Summary](#)

[LOGOUT](#)

RECORD & REVIEW

Mikhail Luna  
DOB: 2/14/1964

START RECORDING

COLLAPSE ALL ^

EXPAND ALL v

Subjective ^

Chief Complaint(s)

Add a chief complaint... +

History of Present Illness

Symptoms

Add a symptom... +

Signs

Add a sign... +

VOICE OVER TEXT





I still have uncontrolled pain.  
Can you look?

Symptom: Pain

Sorry to hear that. It looks like a  
post-procedural hematoma. This one  
doesn't look bad

ICD-10: L76.32

**PATIENT SELECTION**

Monday, October 18, 2021 8:08 a.m.

Select which patient you are seeing and confirm their name. Then select room before continuing.  
If patient is not in a room configured for Ambient Listen, select 'Use Device as Microphone'.

**APPOINTMENTS**

Name	Description	Status
Test, Jennifer	NEW Patient - Fracture	Fulfilled
Notes in the first appointment with a very long test that ...		
4:00 PM - Aug 13, 2021		
Lane, Michael	Fracture	Checked in
4:30 PM - Aug 10, 2021		
Leiter, Nia	Returning Patient	Arrived
5:00 PM - New 4, 2020		
Bowers, Mibah	Checkup	Booked
5:30 PM - New 4, 2020		
Proctor, Thomas	NEW Patient - Physical	Booked
7:00 PM - New 4, 2020		
Ramsey, Lynden	Check-up	Cancelled
7:30 PM - New 4, 2020		

**ROOMS**

Use This Device As Microphone

Ready to Listen

HMSL - POD - S410 - Room 3

HMSL - POD - S410 - Room 1

HMSL - POD - S410 - Room 4

HMSL - POD - S410 - Room 2

**RECORD & REVIEW**

Jennifer Test DOB: 7/30/1986, 44F Patient Health Information

STOP RECORDING

COLLAPSE ALL

EXPAND ALL

Subject

Chief Complaint(s)

Add a chief complaint...

FRacture 100% Ro5 HPI

History of Present Illness

Symptoms

Add a symptom...

PAIN | LEFT PAIN IN LEFT FOOT | M79.672 90% (t) Ro5 CC

Medications

Add a medication...

TYLENOL | 202433 100% Pten

BACK NEXT STEP

**RECORD & REVIEW**

Jennifer Test DOB: 7/30/1986, 44F Patient Health Information

RESUME RESET

COLLAPSE ALL

EXPAND ALL

Subject

Chief Complaint(s)

Add a chief complaint...

Alternative Transcriptions

PAIN | PAIN IN LEFT LEG | M79.605 90% Ro5 HPI

PAIN | PAIN IN LEFT HAND | M79.642 75%

PAIN | PAIN IN LEFT LOWER LEG | M79.662 75%

PAIN | PAIN IN LEFT TOE(S) | M79.675 75%

PAIN | LEFT FOOT PAIN IN LEFT FOOT | M79.672 100%

(UNSENT) - PAIN | LEFT PAIN IN LEFT FOOT | M79.672 90% (t) Ro5

Medications

Add a medication...

TYLENOL | 202433 100% Pten

BACK NEXT STEP

**DRAFT PROVIDER NOTE(S)**

Jennifer Test DOB: 7/30/1986, 44F Patient Health Information

Please use the space below to add any additional notes you may have regarding the patient.

NOTE TRANSCRIPT

Subjective:

Chief Complaint(s)  
Patient presents with Fracture.

History of Present Illness  
Jennifer Test is a 44-year-old female who presents with Fracture. Patient noted the following symptoms: Pain and left pain in left foot. Patient has noted taking the following medication(s): Tylenol.

Objective:

Vitals  
No vitals discussed.

Physical Exam Results  
Upon physical exam, the following were examined: foot.

Assessment:

No diagnosis made based on findings.

Plan:

No medications recommended.  
No procedures recommended.  
No treatments recommended.  
No tests recommended.

BACK PUSH TO EPIC

SMART CLINICS USING AMBIENT LISTENING





8 physicians

1000 Records completed  
 and Analyzed for  
Improvements

VOICE OVER TEXT PILOTS





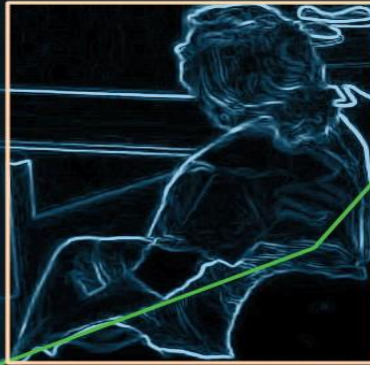


AMBIENT INTELLIGENCE: APELLA





Identify potential problems  
before they happen



Bed Exit

© 2022 care.ai



AMBIENT INTELLIGENCE: CARE.AI

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337 Admissions and Discharges completed

Average call time: 8.6 minutes

## TELENURSING- 1 MONTH RESULTS





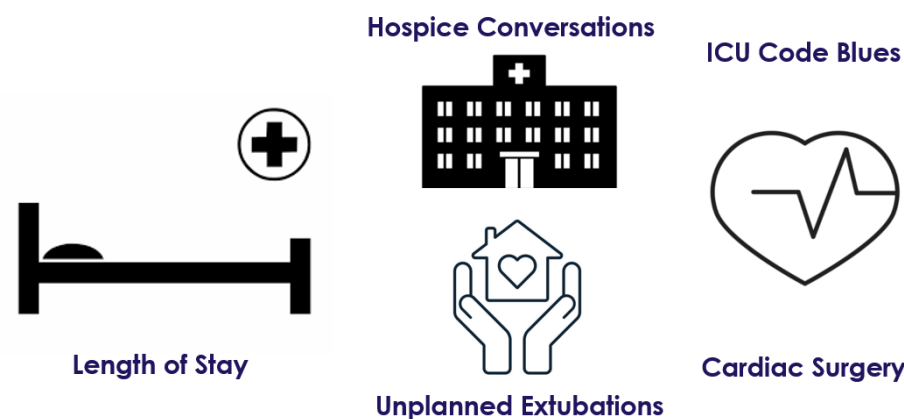


PREDICTIVE AND PROACTIVE ARTIFICIAL INTELLIGENCE

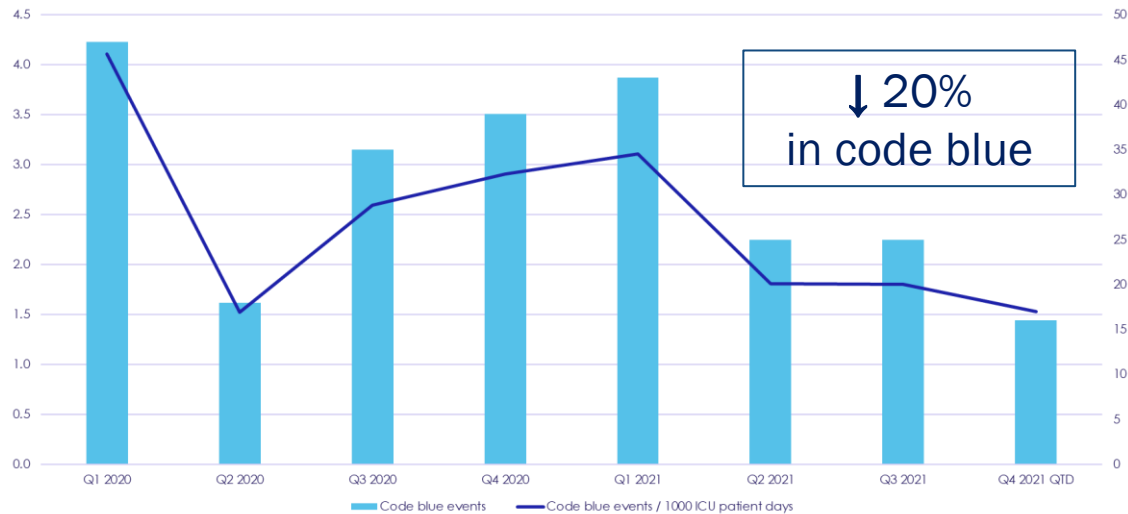




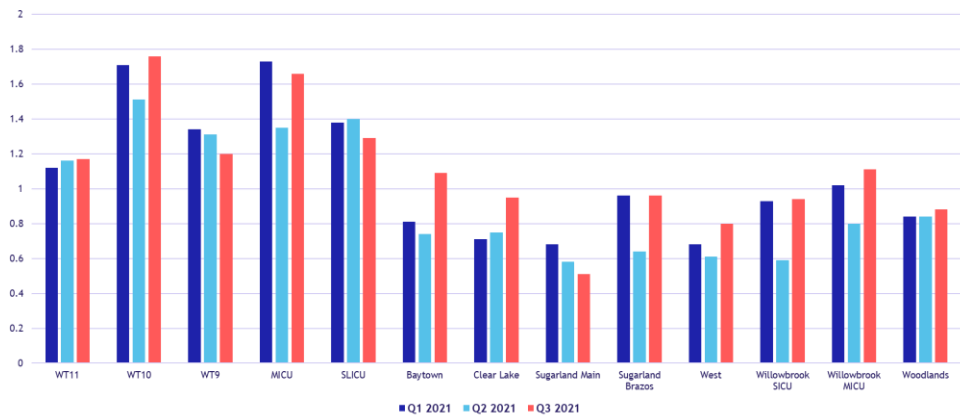
OPTIMIZATION: Top Performance Metrics



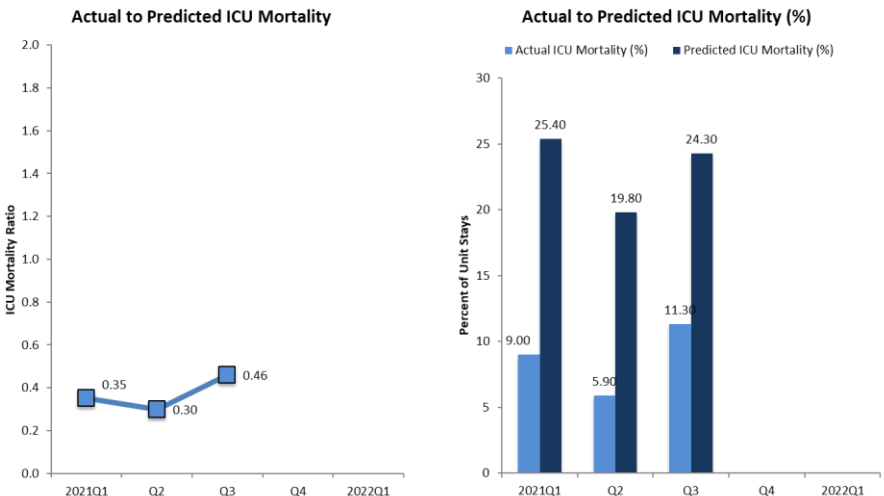
OPTIMIZATION: HMH All ICUs Nocturnal Code Blue Trending



OPTIMIZATION: APACHE IV ICU LOS Ratio Trending



OPTIMIZATION: HM System (ICU Mortality Profile)



VIRTUAL ICU ANALYTICS DRIVES OUTCOMES





# Rankings trends, in-hospital and post discharge mortality

	Years 2017-2019			Years 2018-2020			Years 2019- Q3 2021		
In-hospital mortality	Actual	Twin	Rank	Actual	Twin	Rank	Actual	Twin	Rank
All Cardiovascular Services	1.9%	2.9%	3	1.9%	2.9%	3	2.0%	3.0%	7
Medical Admissions	1.9%	2.6%	5	1.8%	2.8%	3	1.9%	2.8%	4
Interventional Admissions	1.8%	2.7%	23	1.9%	3.1%	25	2.3%	3.5%	28
Surgical Admissions	2.0%	3.3%	10	2.0%	2.9%	19	2.1%	2.9%	22
Cardiac Surgery	1.6%	3.0%	21	1.7%	2.5%	39	1.7%	2.4%	43
Vascular Surgery	2.3%	3.7%	11	2.4%	3.4%	17	2.7%	3.6%	19
Thoracic Surgery	-	-	43	-	-	46	-	-	42
Other	-	-	-	-	-	-	-	-	-
21-day post discharge mortality									
All Cardiovascular Services	2.9%	3.5%	50	3.0%	3.7%	42	2.9%	3.7%	43
Medical Admissions	3.9%	4.4%	54	3.8%	4.7%	39	3.7%	4.9%	32
Interventional Admissions	1.9%	2.4%	64	2.6%	2.6%	80	2.6%	2.8%	80
Surgical Admissions	1.7%	2.5%	29	1.8%	2.5%	29	1.7%	2.1%	53
Cardiac Surgery	-	-	8	-	-	11	-	-	8
Vascular Surgery	2.7%	3.2%	51	2.8%	3.2%	61	3.1%	3.0%	77
Thoracic Surgery	-	-	63	-	-	29	-	-	24
Other	-	-	-	-	-	-	-	-	-

Note: Rank is among AMC hospitals. Includes transfers and patients leaving against medical advice.  
 Color Coding of rank among 102 AMCs: 1-33, 34-66, 67+.

“TWINNING” METHODOLOGY DRIVES OUTCOMES







SERVICE ROBOTICS





BEFORE

VISIT

DURING

INSIDE THE HOSPITAL

AFTER

OUTSIDE THE HOSPITAL

M





REMOTE MONITORING OF PATIENTS







EDUCATION IS MULTI-MODAL







EDUCATION IS MULTI-MODAL





## TODAY'S TECH STACK





EXPERIENCES CUSTOMERS HAVE COME TO EXPECT

amazon



airbnb

instacart

NETFLIX

DOORDASH

Uber



# THE SMART HOSPITAL BECOMES THE SMART HEALTHCARE SYSTEM



THE  
SMART HOSPITAL  
OF THE  
FUTURE

HOUSTON  
**Methodist**  
LEADING MEDICINE