IS HEALTHCARE READY FOR PATIENT 2.0

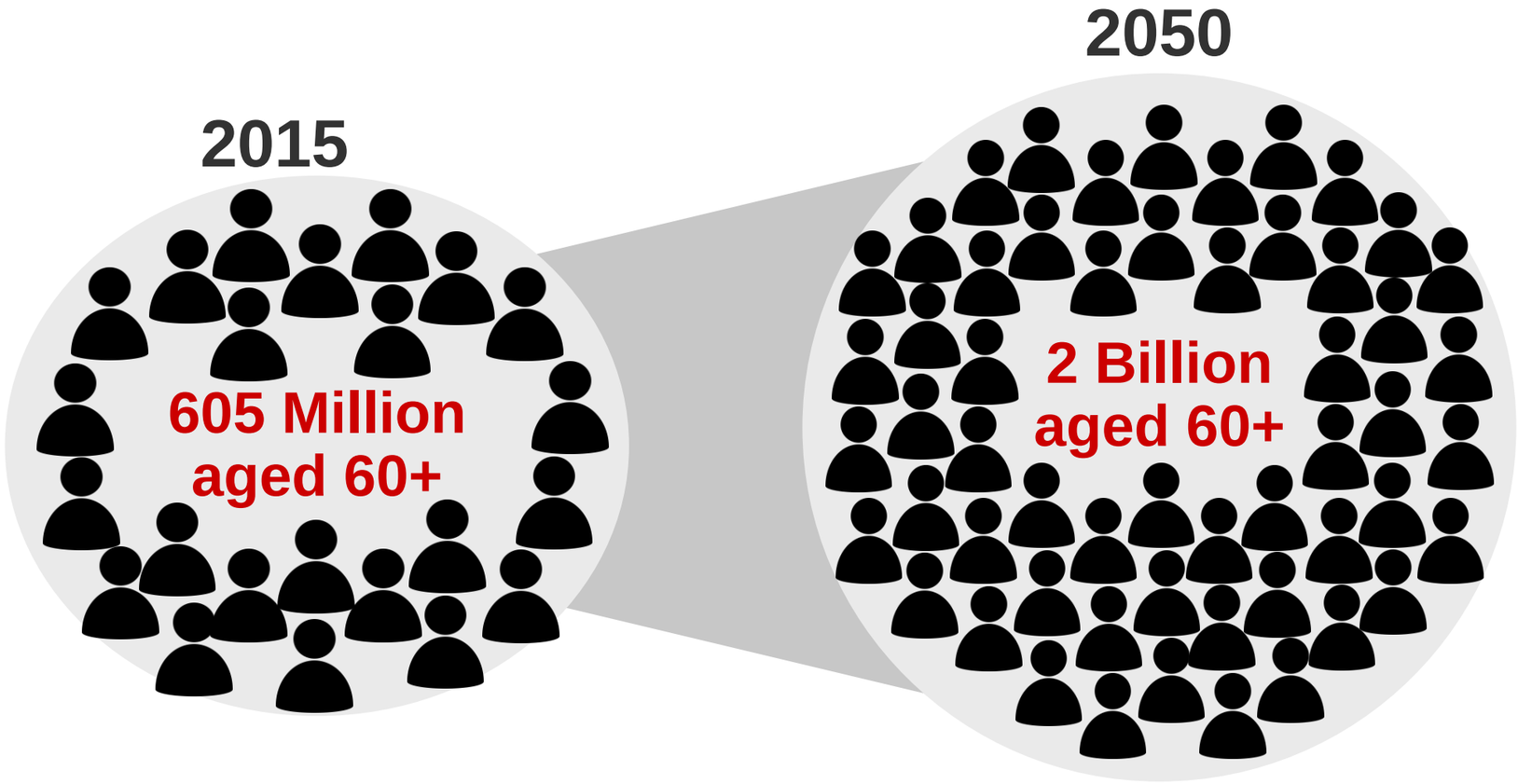
PATIENT EXPERIENCE IN THE DIGITAL HEALTH SYSTEM

Dave O'Shaughnessy @daithios
EMEA Healthcare Practice Leader

ed agreement or Avaya Policy

Patient Experience is changing

TREND 1:
HIGHER LIFE EXPECTANCY PUTS DEMANDS ON PATIENT CARE



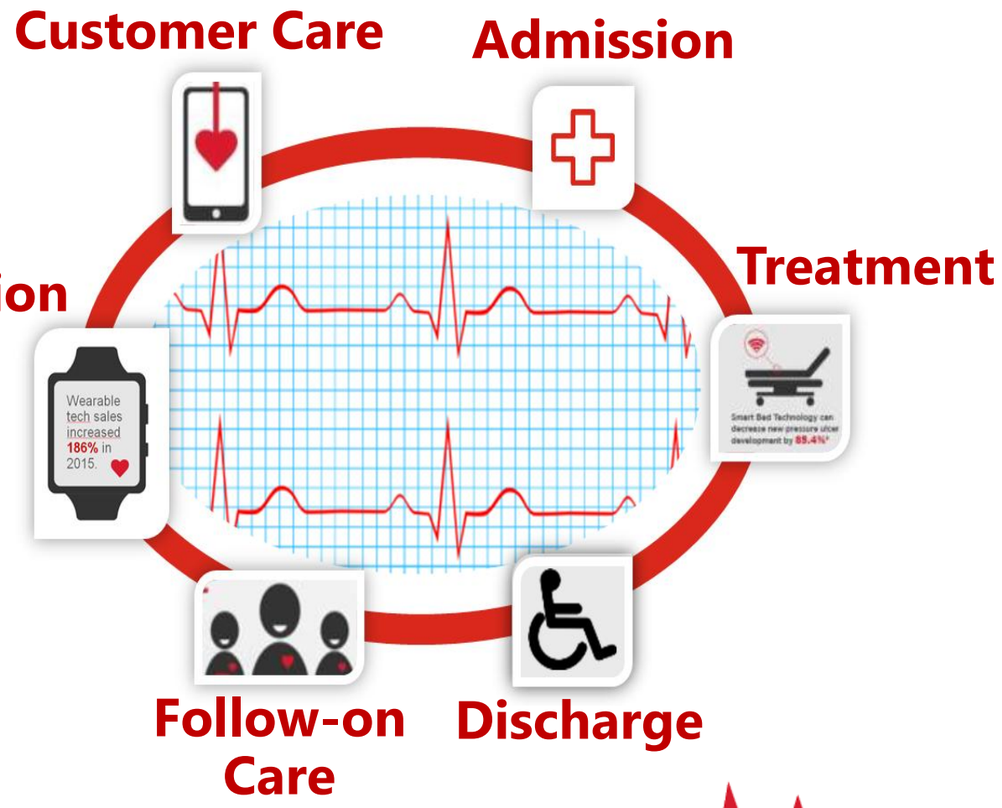
1. WHO - http://www.who.int/world-health-day/2012/toolkit/background/en/

TREND 2:
PATIENT EXPERIENCE IS ESSENTIAL

63% of providers feel they're delivering a good patient experience[1]

BUT

only 40% of patients feel providers are delivering a good patient experience[1]

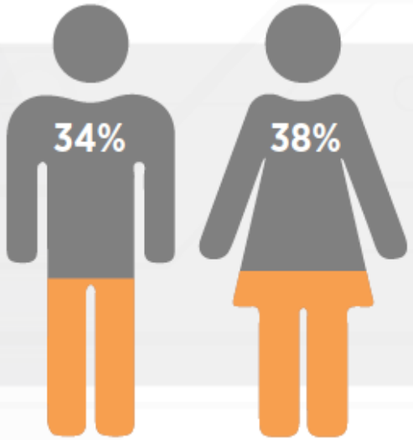


Consumer companies are transforming customer expectations, and healthcare organizations need to keep up:

- transportation
- food & beverage
- retail
- finance
- hospitality

1. The Current State of the Patient Experience, Prophet and GE Healthcare Camden Group, March 2016

TREND 3:
PATIENTS ARE MORE INFORMED AND INVOLVED



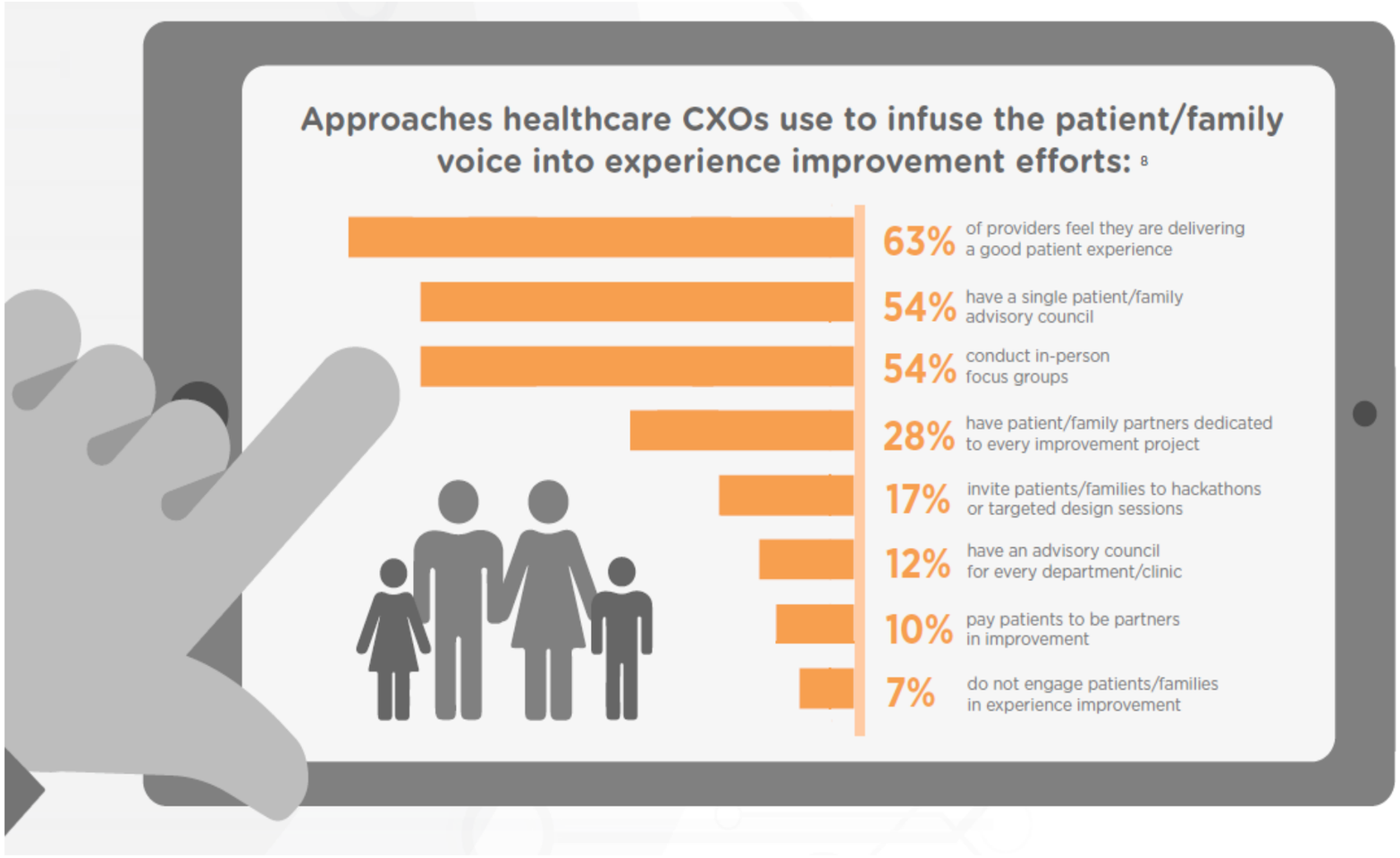
38% of women and
34% of men in the U.S.
want to know as much about their health as possible [6]

80%

of Internet users have **searched for health information online** [5]

84%

of U.S. adults prefer to track their own medical health data [7]



1. Pew Internet & American Life Project, July 2016
2. Wearable Technology U.S. 2015, Mintel
3. The Society for Participatory Medicine and Biotricity Inc., 2016
4. The Rise of the Healthcare Chief Experience Ocer: 2016 Research Report, Vocera Experience Innovation Network

TREND 4:
HEALTHCARE MOVES INTO THE HOME

Virtual video consultations in the U.S. will grow to **5.4 million consultations** in 2020 [3]

58% **of consumers** ... **62%** **of doctors ...** say virtual visits lower costs [1]

50% **of Millennials avoid seeing the doctor to save money**

74% of Millennials would prefer seeing a doctor virtually [13]

A $54 MILLION HOSPITAL WITHOUT BEDS

A virtual care center launched in 2015, Mercy Hospital, houses zero patients and is home to a variety of telemedicine programs that allow Mercy to care for patients remotely round-the-clock.

1. Accenture 2016 Consumer Survey on Patient Engagement
2. Becker's Hospital Review, 2016
3. Doctors' Virtual Consults With Patients to Double by 2020, IHS, August 2015

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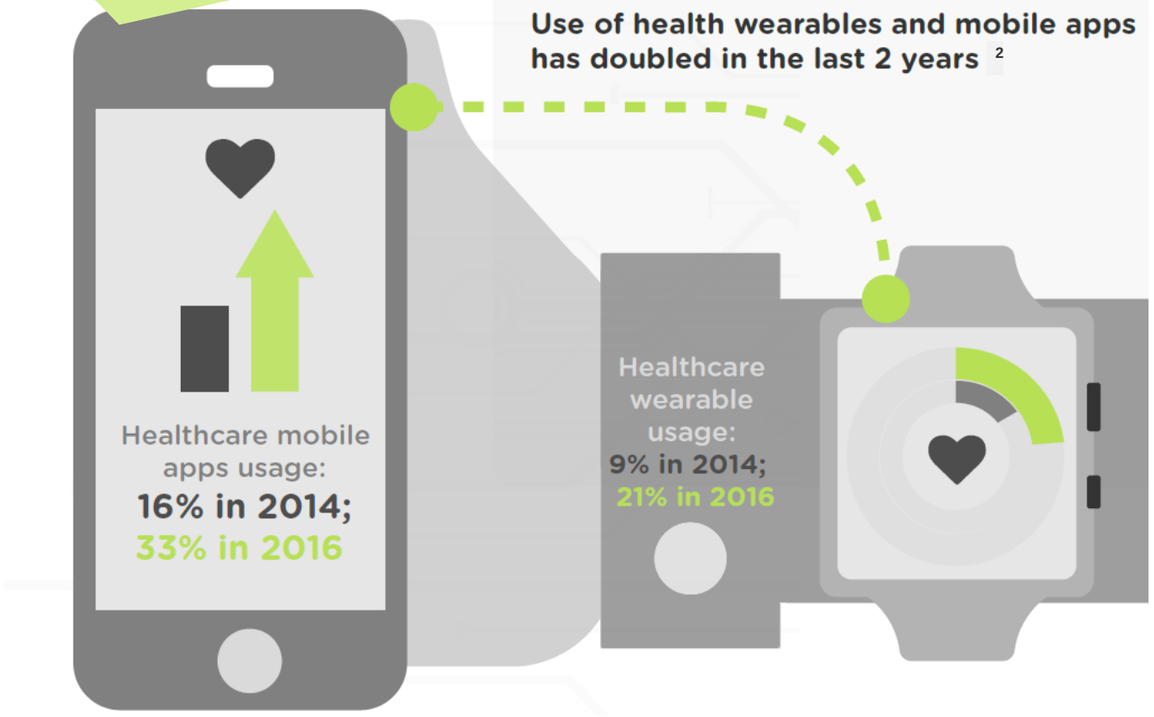
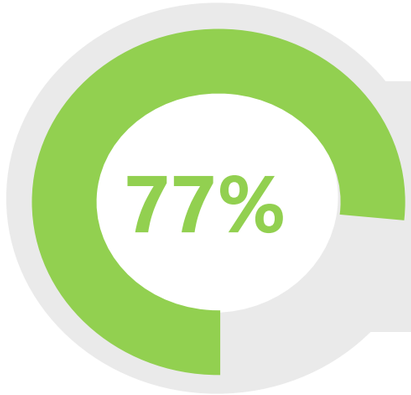
TREND 5:
MOBILE AND WEARABLE DEVICES DOMINATE

59% of all health-insured patients and 70% of Millennials would choose a primary care physician who offers a Patient App over one who does not.





of wearables users say the tech makes them feel more engaged with their health[2]

of consumers are willing to share wearable or app data with a doctor[2]

1. 2016 Connected Patient Report, Salesforce
2. Accenture 2016 Consumer Survey on Patient Engagement

PATIENT EXPERIENCE IS IMPORTANT BECAUSE…

More patients, living longer…

with higher service expectations…

who are more informed and involved in their care…

with help from mobile and wearable technologies…

often from comfort of own homes!

Technologies to help patient experience digital health

CHALLENGES IN DELIVERING THE RIGHT PATIENT EXPERIENCE

Increasingly advanced **patient expectations**

Poor, inconsistent **patient communication**

Time consuming, disjointed, **patient journey**

Inaccessible, non real-time **patient information**

Technological and digital advancements **moving faster than adoption**

PATIENT EXPERIENCE TODAY

Virtual Care

Measurable?

Patient as a Client?

Seamless Journey?

Integrated?

Multi-channel?

Scheduling

Locating

Administrative

Clinical

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1 TECHNOLOGY CAN HELP YOU…
PROVIDE ANYTIME, ANYWHERE, PATIENT ACCESS

Should I seek Treatment? …

I want an appointment for…

I need to prepare for my operation?

I just moved but need to continue care?

Patients

Physician–Clinical

Administration, Scheduling

Patient Access Center

Faster Patient Care **Integrated, Seamless** Care Journey **Higher** Patient Sat

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1

TECHNOLOGY CAN HELP YOU…
AUTOMATE TIME CONSUMING PROCESSES AND ACTIVITIES

Video

Automate…

communications, notifications, reminders, conversations, workflows, data and information

Patients, Carers, Family

- Appointment Reminder
- Patient Notification
- Patient Care Monitoring / Follow-Up
- Chronic Disease Management
- Proactive Wellness
- Flu Shot Notification
- Lab Result Alert
- Prescription Fill/Refill
- Satisfaction Survey
- Fund Raising

Healthcare Personnel

- Admission Process
- Discharge Process
- Physician Notification
- Shift Staffing
- Care Consult
- Emergency Staffing
- Event Notification
- Room Environmental
- Absence Reporting
- Clean Room Request
- Room Clean Complete

Proactive Patient Care

Improved Operations

Optimal Resource Utilization

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EXAMPLE: AUTOMATED APPOINTMENT REMINDER

Automated integration to Patient Database (EHR)

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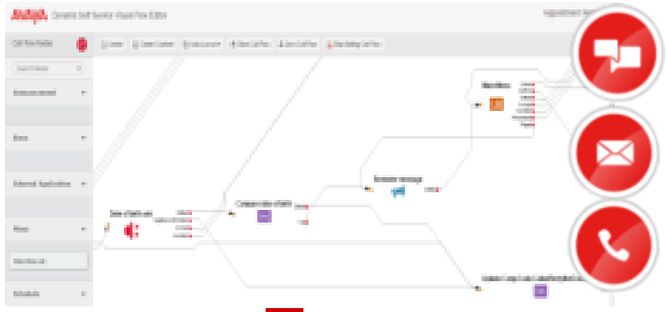
Scheduler

1 Appointment Scheduler (Doctor / Clinician) books appointment in scheduling system (e.g. EHR / Digital Patient Record) as normal

Avaya Patient Appointment Reminder App



2 Avaya Patient Appointment Reminder service automatically downloads schedules and automates the communication to patients based on preference

Patient

3 Patient can now confirm, reschedule, or cancel appointment as preferred

Scheduling App / EHR

4 The Appointment Scheduling system (EHR) is automatically updated by Avaya's Patient Appointment Reminder solution – all automated.

5 The Appointment Scheduler can reschedule or rebook a preferred time slot or it can be automated if desired.

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EXAMPLE: CHATBOT PATIENT SERVICES
Automate rudimentary tasks for patients

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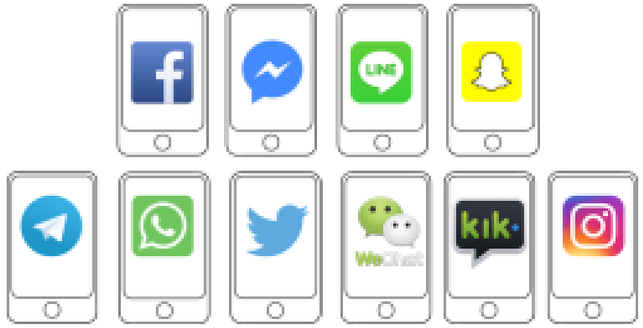
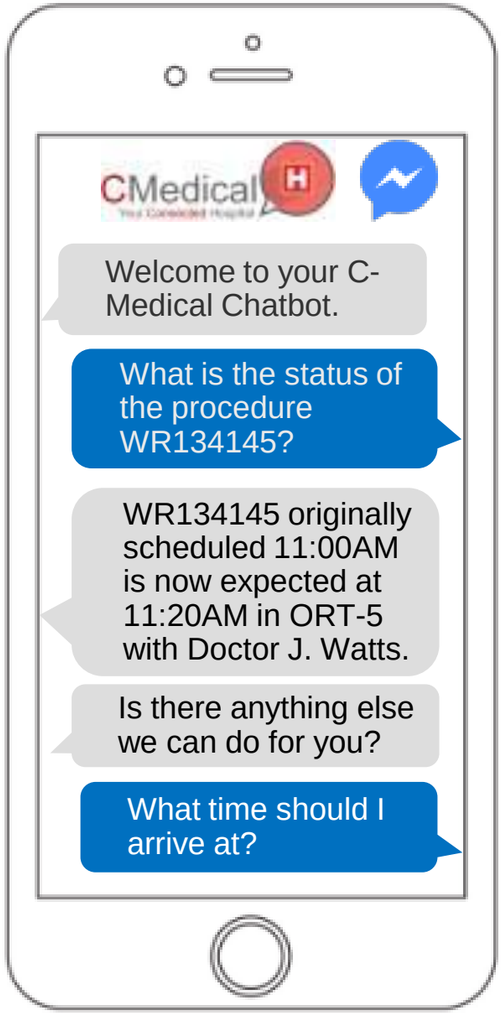
- Patient wishes to confirm status of service with her Hospital
- Her Hospital has a Social Media Messenger Chatbot service
- Patient can ‘Chat’ with Hospital
- Automated AI response to her queries
- Hand-off to Live Agent if needed
- Centrally controlled under Hospital’s Contact Centre service

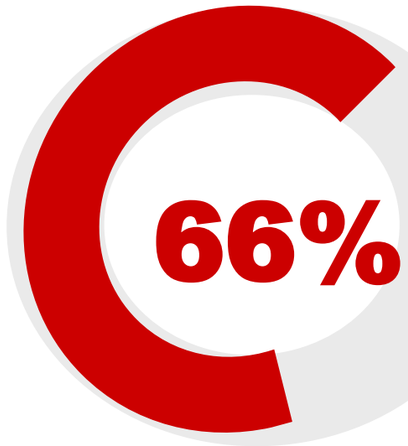
Operation Confirmation





2

TECHNOLOGY CAN HELP YOU ……
Improve Clinical Resource Communications



of reported medical errors identified ineffective communication as root cause[2]

Ineffective communication has remained among

Top 3 root causes of sentinel events[3]

Estimated

More than 25%

of hospital readmissions could be avoided with better communication among healthcare teams and between providers and patients[1]

Over 25%

of malpractice cases involving surgery were caused by a lack of thorough communication in some aspect of patient care.[4]

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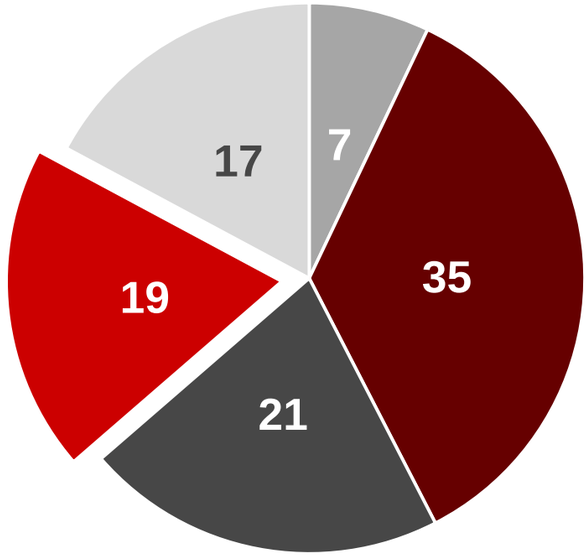
1 Preventability and Causes of Readmissions in a National Cohort of General Medicine Patients JAMA Intern Med. 2016; http://archinte.jamanetwork.com/article.aspx?articleid=2498846
2 Joint Commission Root Causes and Percentages for Sentinel Events (All Categories). January 1995-December 2005
3. Joint Commission Sentinel Event Data (Root Causes by Event Type). 2004-2012. http://www.jointcommission.org/sentinel_event.aspx
4. http://www.healthcarebusinesstech.com/communication-patient-harm/ How communication problems put patients, hospitals in jeopardy by Jess White February 17, 2016 The report, written by patient safety experts CRICO Strategies, 2015: Malpractice Risks in Communication Failures

2

INEFFICIENT CLINICAL RESOURCE UTILISATION

Poor Clinical Communications and impacts



National study shows nurses spend as little as

19%

of their day engaged in direct patient care activities[1]

And walk over

10 kilometers

A day

Estimated effects of overworked nursing:

+7% in dying per patient above ratio
2,000 lives a year for overworked nurses
Increased falls
Increased infection

of healthcare spending wasted in 2010, with more than half attributable to unnecessary and inefficiently-delivered services[2]

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Source:
1. *Hendrich A, Chow M, Skierczynski B, Lu Z. "A 36 Hospital Time and Motion Study: How Do Medical-Surgical Nurses Spend Their Time?" The Permanente Journal, Summer 12:3 (2008).* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3037121/]
2. Linda H. Aiken, University of Pennsylvania, New York Times 2013

2

EXAMPLE: UNIFYING CLINICAL COMMUNICATIONS

Device Fatigue causing communication problems

Personal Devices

Legacy Handsets

Pagers

Badges

Overhead

- Notifications and External Alerts
- Voice & Video Communications
- Multimedia Instant Messaging

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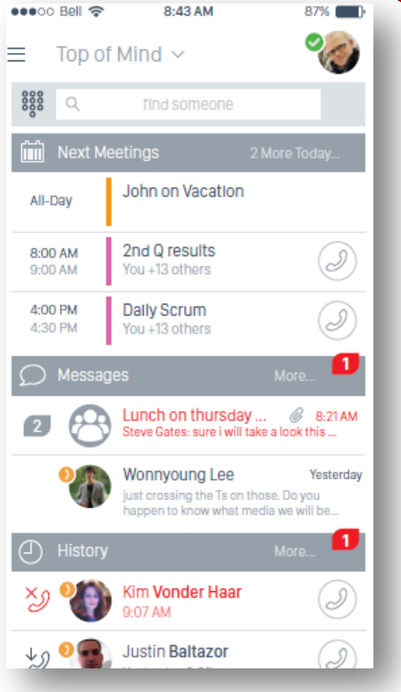

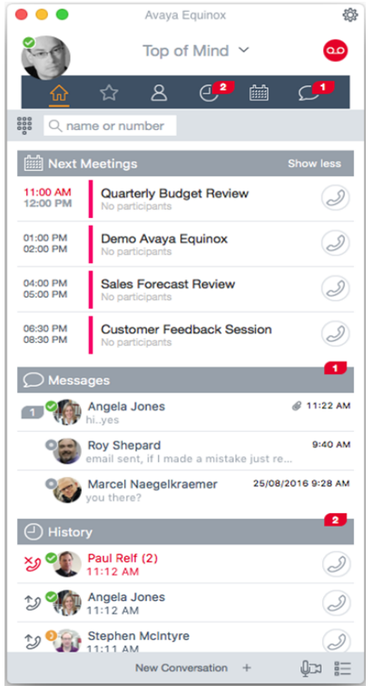

- Team Directory Search
- Patient Information and Status
- Caregiver To Do and Assignment

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A Single Experience– integrated to the healthcare processes…

2

COMPLETE ENTERPRISE COMMUNICATION

Providing full feature-set for Healthcare Staff

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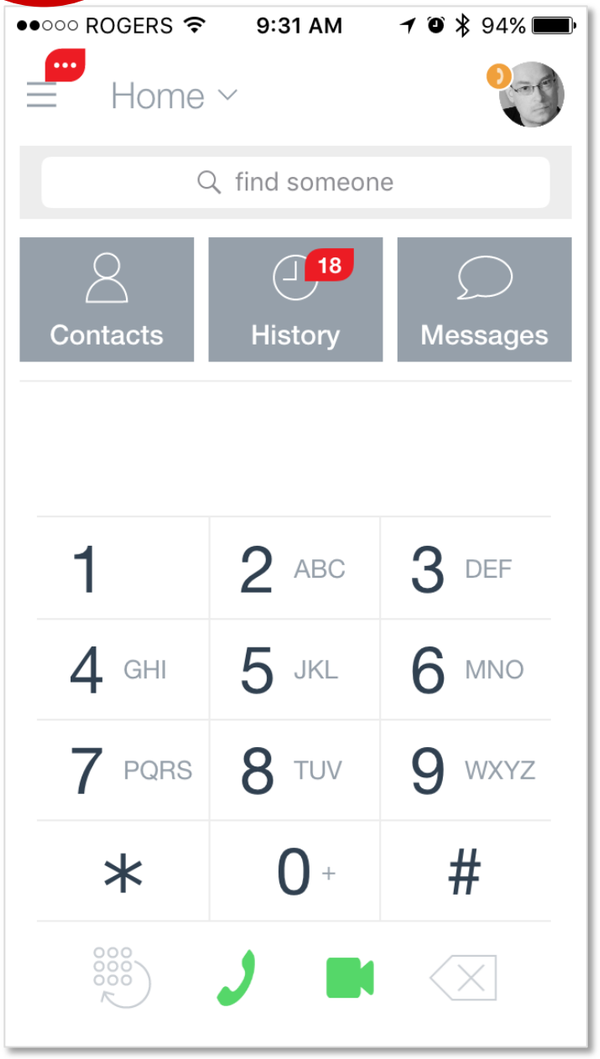


- **Avaya Equinox™** Mobile, Desktop, & Web Browser Enterprise Communications Client

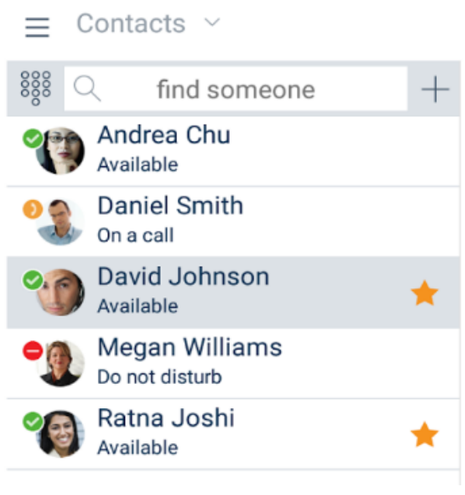
✓ Enterprise grade HF Voice & HD Video

✓ Enterprise Directory & Contact Search

✓ Multimedia Messaging (Voice, Video, IM, Photo)

✓ Call-Logs, Visual Voicemail, Meetings schedule

✓ A Single Experience in a Simple Application.



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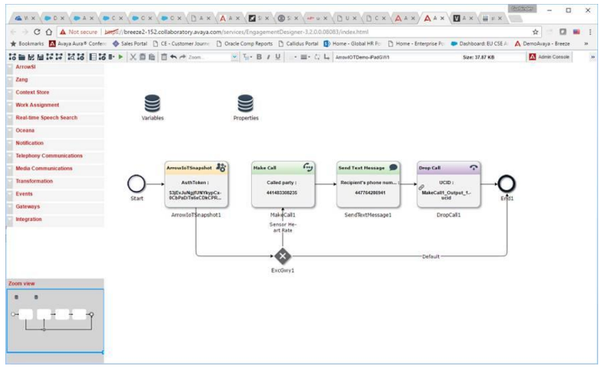
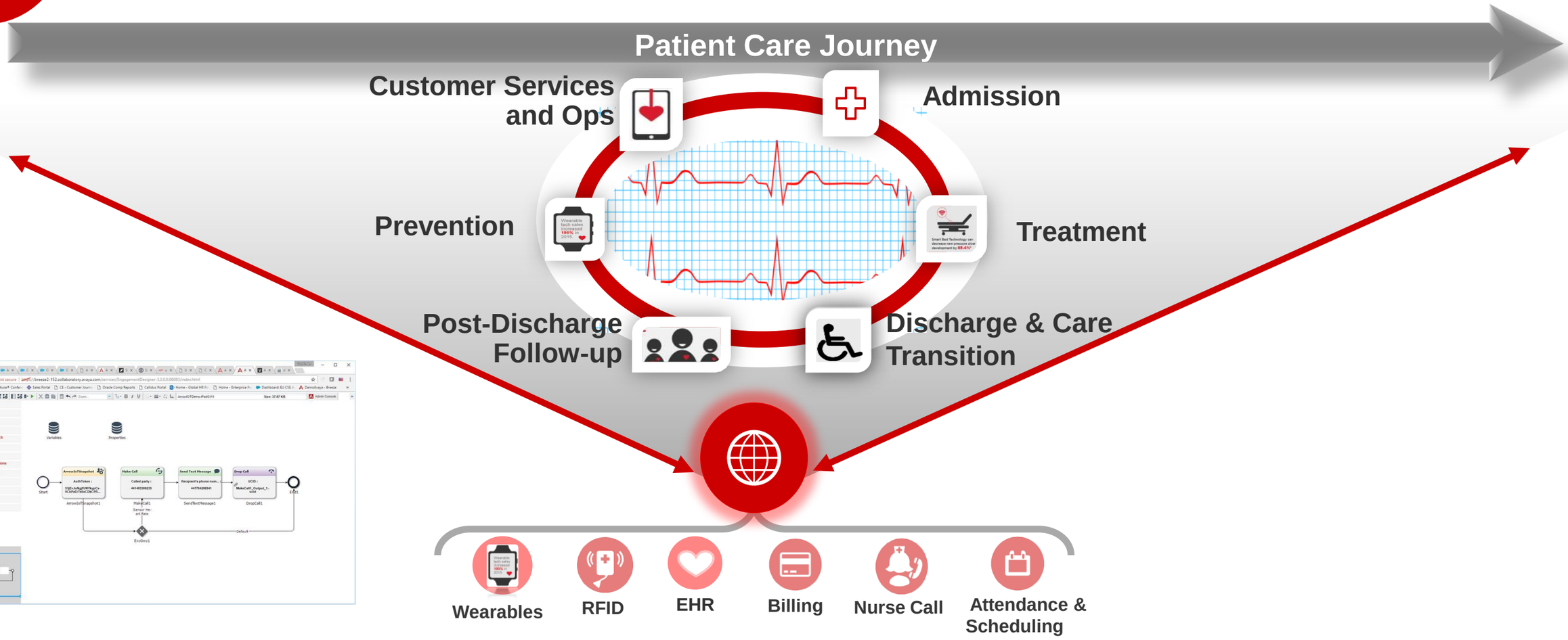
3 TECHNOLOGY CAN HELP YOU…

USE REAL-TIME INFORMATION TO MAKE BETTER DECISIONS





Relevant, Real-time Information

Better, Faster Decision Making

Better Patient Outcomes

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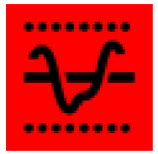
3

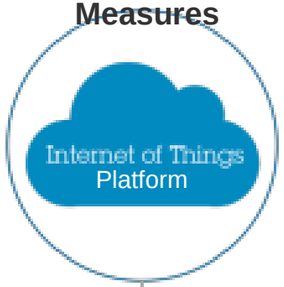
EXAMPLE IOT NOTIFICATION FOR HEALTHCARE
CLINICAL-WEARABLE MONITORING & ALERTING

IoT Clinical Wearable Monitoring Patient

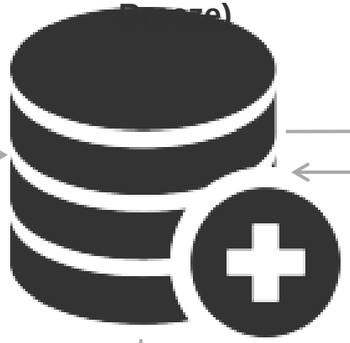


Threshold Measured Value exceeded – Alert Sent

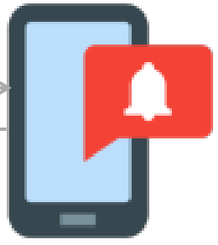
IoT Platform Initiates Process Alert with Measures



Patient Database updated and action taken (Avaya [illegible])



Monitoring Team receive Alert – Initiate Emergency Action / Task



Patient Consultancy Team subsequently invite Patient to Video Consultation (Avaya Dynamic Team Formation)

IoT Platform sends Update Notification to Patient to take suitable action

Patient takes appropriate action

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3 IOT-TRIGGERED CLINICAL NOTIFICATIONS

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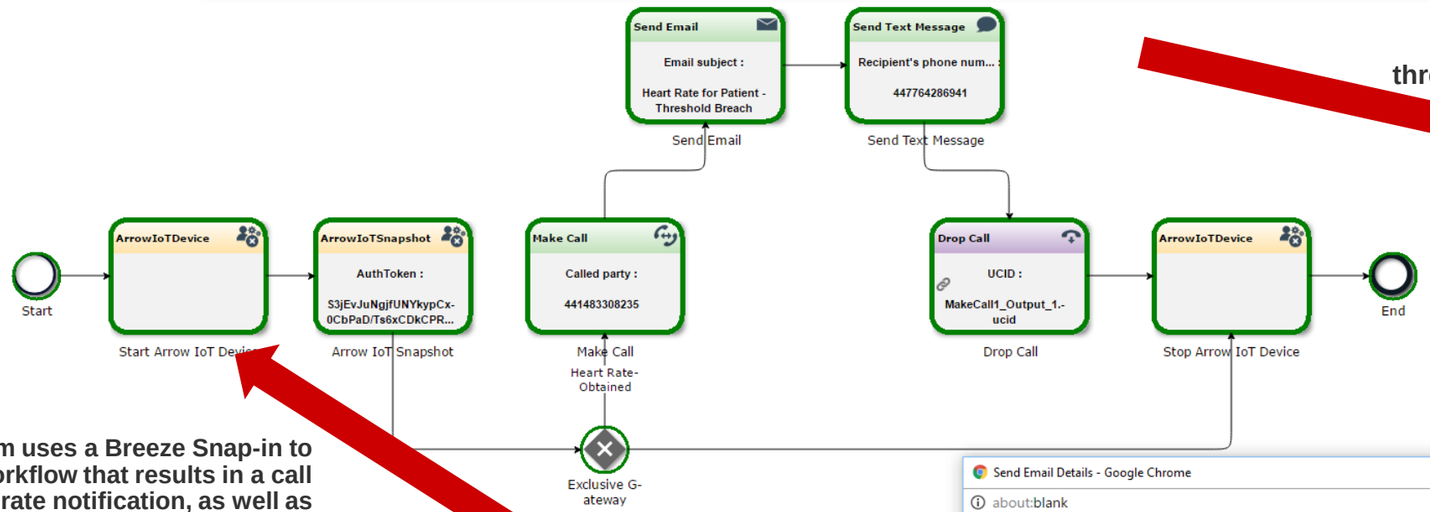
Workflows Instances Event Catalo

Refresh

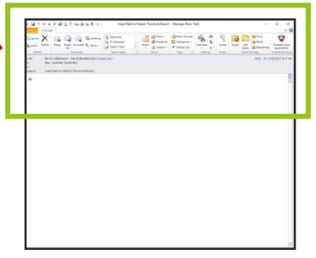
Workflow Name: ArrowIoTDemoiPadG
Version: 23
Instance ID: 883
Host IP: 10.0.0.9

Variables Properties

Input	Output	Error Message	Bundle
{'deviceHID':'5a7350fc497345e599efbe25752d7a8e22aa19f2','authToken':'47b398ef06d08e81a9e0a5ccdfe549171baf35d1fe2ed6a91d8bf848f3a257a1'}	{'result':'Success','values':{'gyrometerXYZ':'No Result','heartRate':'68','altitude':'No Result','fusionW':'No Result','skinTemperature':'No Result','gyroscopeXYZ':'No Result','airflow':'No Result','fusionZ':'No Result','fusionY':'No Result','magnetometerXYZ':'No Result','temperature':'79.16','fusionX':'No Result','gyrometerY':'No Result','gyrometerX':'No Result','leds':'No Result','orientationABG':'No Result','uvLevel':'0','longitude':'-0.41667557085459','light':'526.0','barometer':'No Result','carryPosition':'No Result','steps':'No Result','gyrometerZ':'No Result','orientationBeta':'No Result','led2status':'No Result','humidity':'40.5','dilution':'No Result','magnetometerX':'No Result','quality':'No Result','magnetometerY':'No Result','magnetometerZ':'No Result','led1status':'No Result','latitude':'51.4105726943013','memsGesture':'No Result','geoidHeight':'No Result','iotDeviceUID':'No Result','switch':'No Result','timestamp':'05-19-2017 08:16:32 GMT','brightness':'No Result','distance':'No Result','absolute_amps_system_avg':'No Result','accelerometerXYZ':'No Result','accelerometerX':'No Result','accelerationEvent':'No Result','accelerometerZ':'No Result','activity':'No Result','gyrometerXY':'No Result','accelerometerY':'No Result','surfaceTemperature':'No Result','pressure':'No Result','speed':'No Result','keys':'No Result','pedometer':'No Result','ambientTemperature':'No Result','numSatellites':'No Result','micLevel':'No Result','orientationAlpha':'No Result','orientationGamma':'No Result'}}	none	My Tasks-from-com.arrowsi.snapshot



Notifications received, through multiple channels on user device.



IoT Platform uses a Breeze Snap-in to initiate a workflow that results in a call with heart rate notification, as well as SMS to key medical staff members.

Patient finger placed onto sensor and heart rate detected (in BPM). IoT Platform obtains data in real-time.

Send Email Details - Google Chrome

about:blank

Input	Output	Error Message	Bundle
{'emailBody':'68'}	{'__sid__':'EngagementDesig-3.2.0.0.08083-6eb0f1f263c30d6e506aaa70cdd0e144c93b5ba9d0bd84c45d8c3c4347087554','status':'EMAIL_QUEUED'}	none	Communication tasks-from-com.avaya.designer

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4 AVAYA HEALTHCARE INNOVATION FRAMEWORK

Accelerating Healthcare Service Innovation

AVAYA breeze™

Inputs

Patients, Providers, Suppliers or Events

- Voice / IVR
- Web / Web RTC
- Mobile / SMS
- Social
- Video
- Email

Hospital Needs:

Effective response, team coordination, outcall notifications / patient services

Avaya Developed | 3rd Party ISV Developed | Hospital Developed

Breeze / Engagement Development Platform

Scalability | Security | Virtualization | Reliability | Serviceability | Management

Avaya Applications

AVAYA aura

Communication Manager | Call Center Elite | Session Manager | Avaya Collaboration | Media Server

Results

Higher patient and employee satisfaction

More efficient nurse and doctor communication and coordination

Accelerated response to issues

Better reimbursement capabilities

4 AVAYA HEALTHCARE INNOVATION FRAMEWORK
Accelerating Healthcare Service Innovation

AVAYA breeze™

- Patient authenticates on their dedicated Healthcare Smart App
- Agent & Patient can now conduct:
  - Live Message Chat Session
  - Live 1-to-1 Video Session
  - Co-Browsing Websites
  - Document-sharing
  - Live-interact in-App with Patient
- Agent can also identify & record the Patient's location & session

Hospital Agent hosting a real-time session with the Patient through a Web Browser

Patient connecting to Health Service on dedicated Smart App

4 EXAMPLE: CERNER INTEGRATION FOR VIDEO

Enable Patient-to-family secure video service

AVAYA breeze™

1

Patient Check in to Isolation Room

Cerner Patient Data

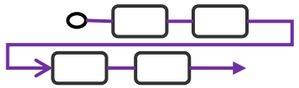
Patient Details created in EHR

2

3

Room Extension created in CM with PIN

CM | AMS | SMGR | SM



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HL7 Connector (Healthcare Snap-in)

SMS Connector | Email Connector

4

Room Extension, PIN & Mobile App download details sent to Family Members via SMS/Email

Family Members to download the App via SMS/Email link

5

SIP

Family Mobile Client
Client SDK
(Android/iOS)

6

Family Members use room extension/pin and make video call with patient

SIP

Patient Video Device
Avaya Vantage Unit

AVAYA

Value to the Patient, Care-Team, and Healthcare Organisation

VALUE TO THE PATIENT

Service and care aligned to **patient expectations**

Proactive, consistent **patient communication**

Seamless, integrated, **patient journey**

Accessible, real-time **patient information**

Technological and digital advancements **adopted at speed and with ease**

BUSINESS VALUE
Of Managing the Patient Experience

FOR THE PATIENT	FOR THE CARE TEAM	FOR THE HEALTH SYSTEM
Improved Patient Communication	Improved, accelerated Patient Care	Improved Patient Advocacy
Higher Patient engagement and Satisfaction	Improved Job Satisfaction and Efficiency	Higher productivity despite higher demand
Better, Faster Patient Care And Outcomes		Secure eHealth strategies

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