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## Building a Communications Network to Meet the Demands of the New Healthcare Landscape

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**President and CEO, Vocera**

# Communication Challenges in Hospitals

SAFETY  
Hospital communications related failures are the third highest cause of death in the U.S.<sup>(1)</sup>

WASTE  
\$12 billion is wasted annually in U.S. hospitals as a result of communication inefficiencies<sup>(2)</sup>

SATISFACTION  
Communication impacts patient experience and CMS revenue reimbursement<sup>(3)</sup>

<sup>(1)</sup> [New Evidence-Based Estimate of Patient Harms](#), Journal of Patient Safety, Sept., 2013; Centers for Disease Control, 2010 data; The Joint Commission

<sup>(2)</sup> Agarwal et. al. Univ. of Maryland, 2010

<sup>(3)</sup> Centers for Medicare and Medicaid Services

# Market Forces Driving Real-Time Communication

## Healthcare Reform

Population Health & Rise of ACOs  
Value-Based Pricing

Consumer Driven  
Shifting Care Delivery



Provider Consolidation  
Vertical Integration

**Real-Time Care Coordination**

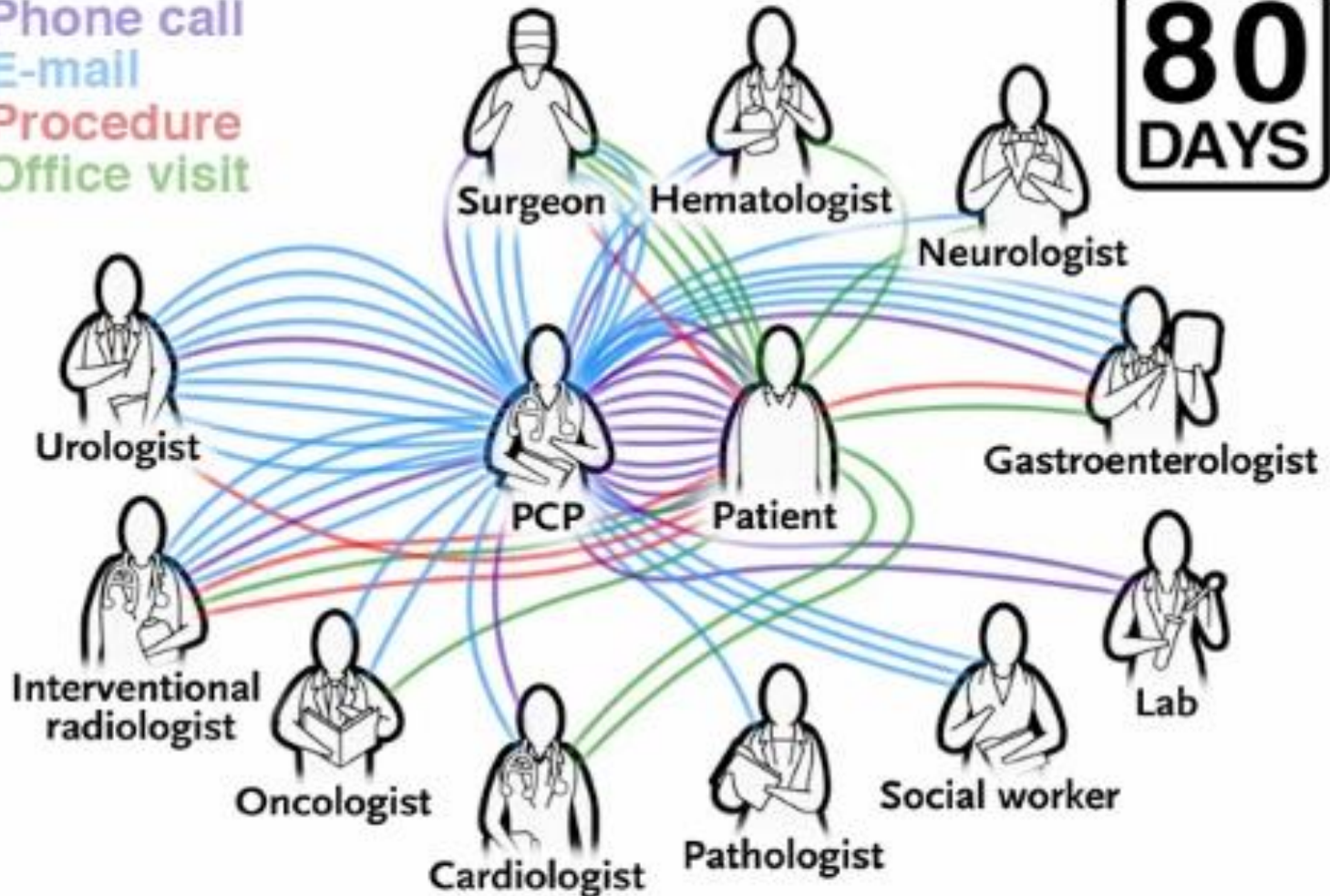
## Technology Forces

Smartphones, EHR, Cloud, Security

# The Provider-Patient Journey Today

Phone call  
E-mail  
Procedure  
Office visit

**80**  
DAYS



Patient initially diagnosed with kidney stone, turned out to be a cholangiocarcinoma. Treatment required 11 other clinicians, 5 procedures, 11 office visits, and more than 40 communications over 80 days to achieve a positive outcome. (Source: NEJM 2014)

# Current State of Healthcare Communication

Needed: Secure, Point of Care Communication for Nurses

## Market Demand for Mobile

*Of hospitals interviewed:*

- 97% report nurses lack appropriate tools to determine care team member availability and status
- Over 90% have made no or only limited departmental investment in mobile communications

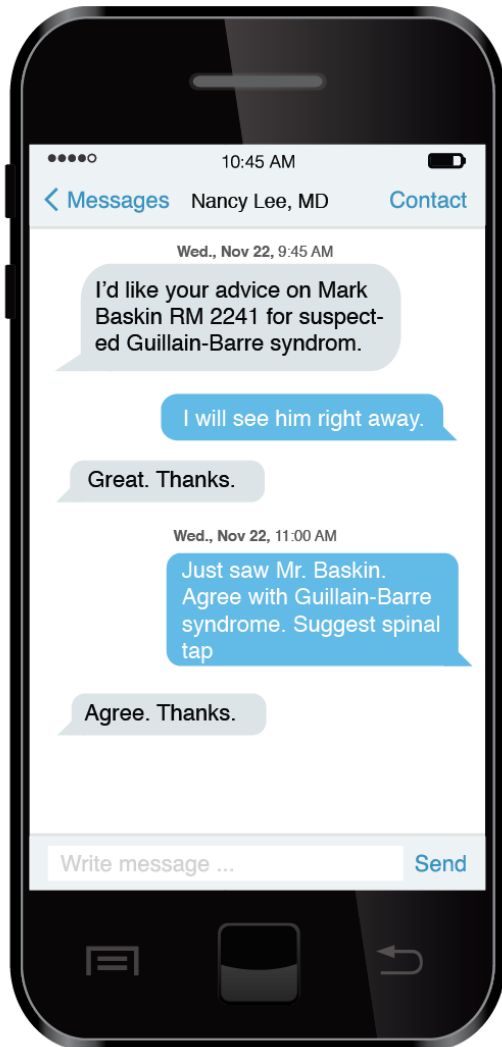
## Smartphone Use in Hospitals

*Of hospitals interviewed:*

- 89% expressed concerns that consumer-grade smartphones are not suitable: durability, sterility and usability
- 53% allow BYOD, but only 11% allow it for nurses.



# The Risk of Unsecure Smartphone Use



## Smartphone Use in Healthcare

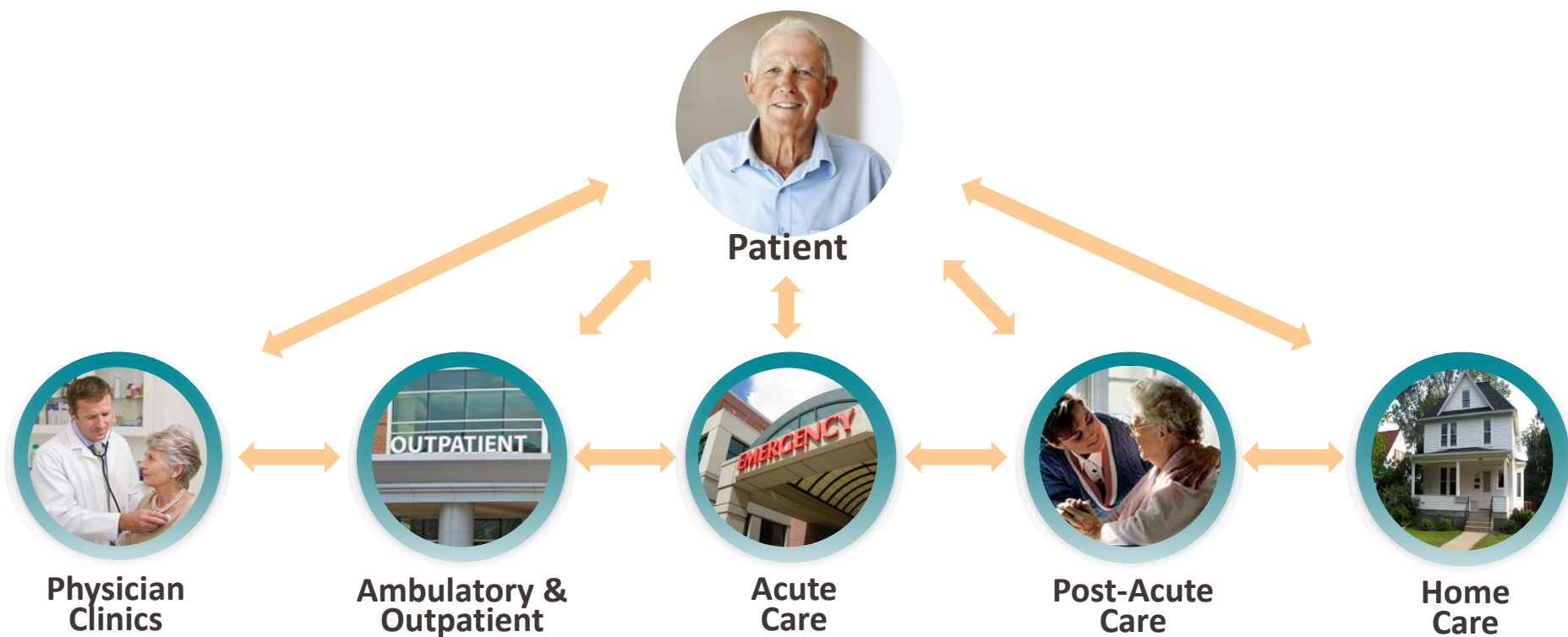
- 96% of physicians with smartphones use unsecure SMS for patient care
  - Risk HIPAA violations, data breaches, and system hacking
  - Fines up to \$1.5M per incident
- 89% of hospitals do not allow nurses to use their personal smartphones
  - 67% do so anyway



Full report available only from Spyglass Consulting Group. Studies published 3/1/14 and 11/14/14  
All data ©Spyglass Consulting Group, 2014.

# Vision for The New Provider-Patient Journey

Enterprise-grade Communications Platform seamlessly ties together locations, people and clinical systems



Communication and Collaboration Layer

Data Layer (EHR & Clinical Systems)

# Enterprise-grade Communications Platform



Voice  
Communication



Clinical  
Integration



Secure  
Text Messaging



Patient  
Engagement

Intelligent  
Communications  
Platform



# Right Devices for Real-time Communication

## Devices of Choice



# Integrated Clinical Systems



EHR



Nurse call



Patient monitoring



Bed management



RTLS / RFID

## End-to-End Clinical Workflow Engine

Enhance Patient Safety

Increase Patient Satisfaction

Improve Nurse Responsiveness

Decrease Length of Stay

Platform integration delivers critical information to the right user, at the right time and place, on the device of choice

# EHR Integration

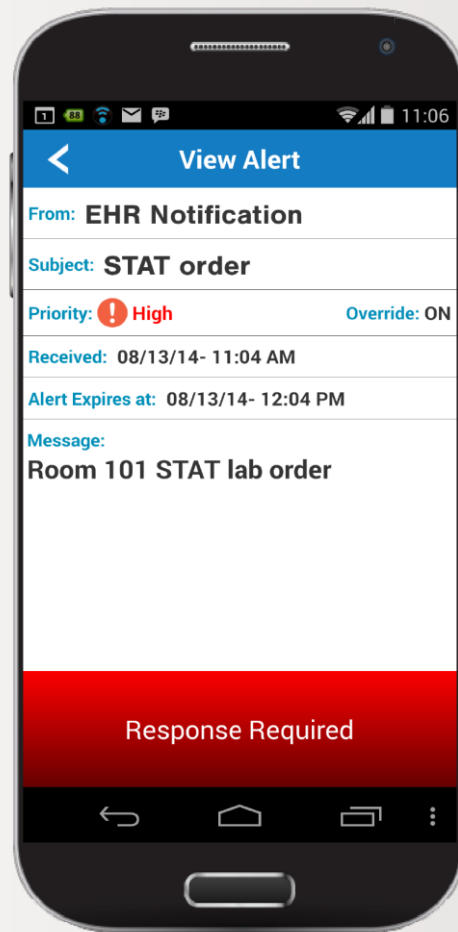
## Automate

Deliver notifications for urgent items, such as:

- Stat orders, critical test results
- High-risk admissions
- Patient discharges
- Housekeeping, dietary, and transport requests

## Improve

- Patient care and safety
- Team coordination and efficiency
- Physician and staff satisfaction

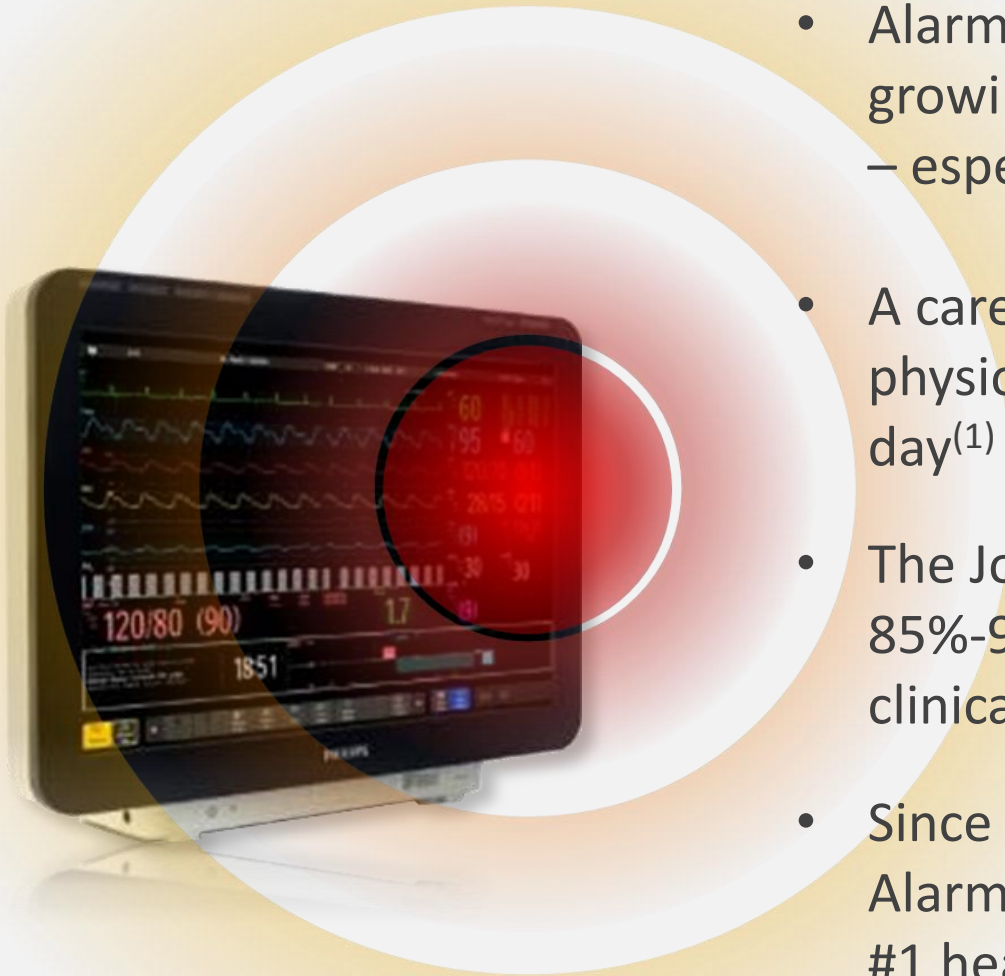


*“If I can’t rest,  
I can’t heal.”*

July 2014 WEGO patient survey

# Addressing Hospital Alarm Fatigue

- Alarm fatigue is a critical and growing issue facing hospital workers – especially nurses
- A caregiver may get as many as 700 physiological alarms per patient, per day<sup>(1)</sup>
- The Joint Commission estimates 85%-99% of alarms do not require clinical intervention<sup>(2)</sup>
- Since 2007, and again for 2014, Alarm Hazards are identified as the #1 health technology hazard<sup>(3)</sup>

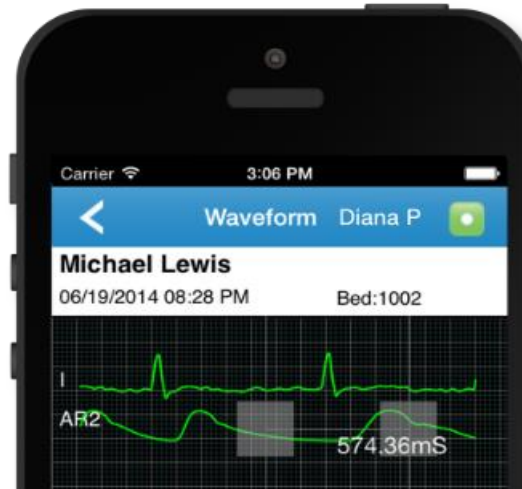
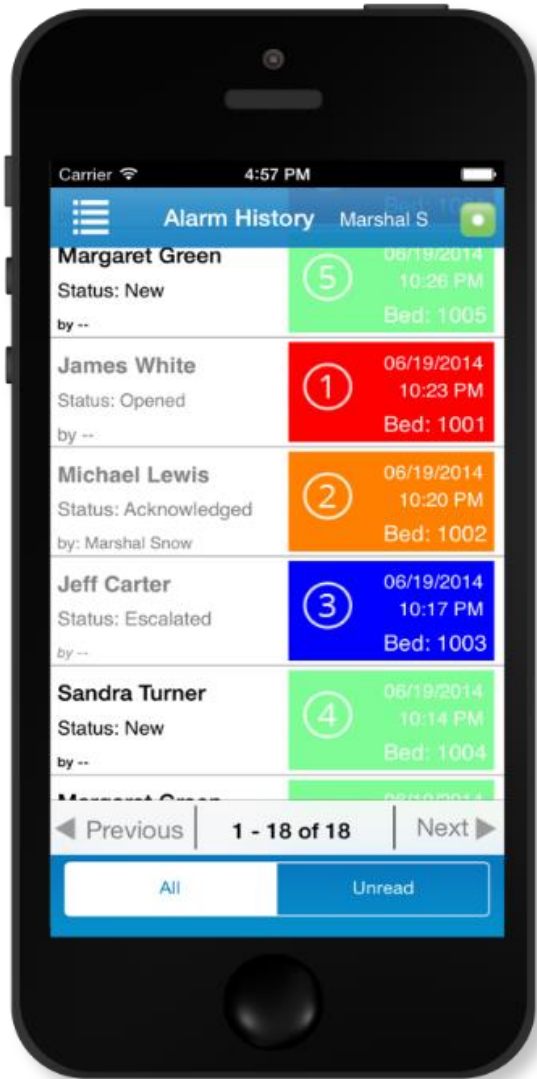


<sup>(1)</sup> Johns Hopkins Hospital Quality Improvement Alarm Data

<sup>(2)</sup> Joint Commission, Sentinel Event Alert, Medical Device Alarm Safety in Hospitals

<sup>(3)</sup> ECRI Institute Top10 Health Technology Hazards for 2014

# Alarm Management and Analytics

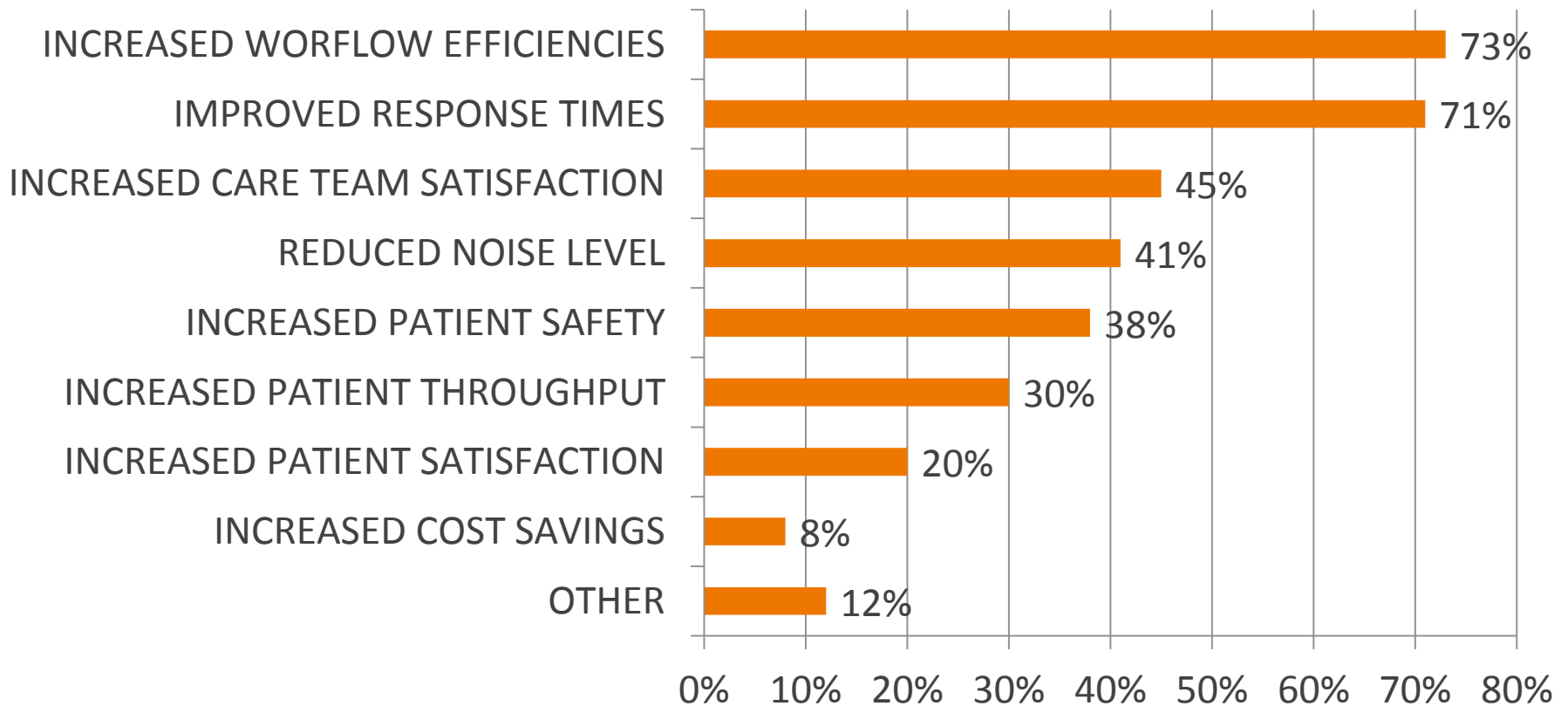


***“Enabling better communication and collaboration across the entire continuum of care is critically important in making the transition to value-based care.”***

*Bill Shickolovich, CIO of Tufts Medical Center*

# Customer and Patient Impact

What benefits did you see within the first six months after deployment?





# Quantifiable ROI

## Increase OR Throughput

### Midwest Medical Center

- 5% improvement in OR throughput
- 1 more surgery per day
- Estimated increase in revenue of more than \$2M per year
- Labor expense decreased 5.6% per case

## Prevent Patient Falls

### University Medical Center

- 11% reduction in falls, 60% reduction in fall-related injuries
- 88% improvement in ability to respond when integrated with fall alarm system
- Estimated savings in fall related injuries of \$1.27M

## Reduce Time Locating Staff

### West Coast IDN

- Locate staff faster using Vocera vs. traditional methods
- 2% increase in productivity
- \$5.4M in annual operational savings

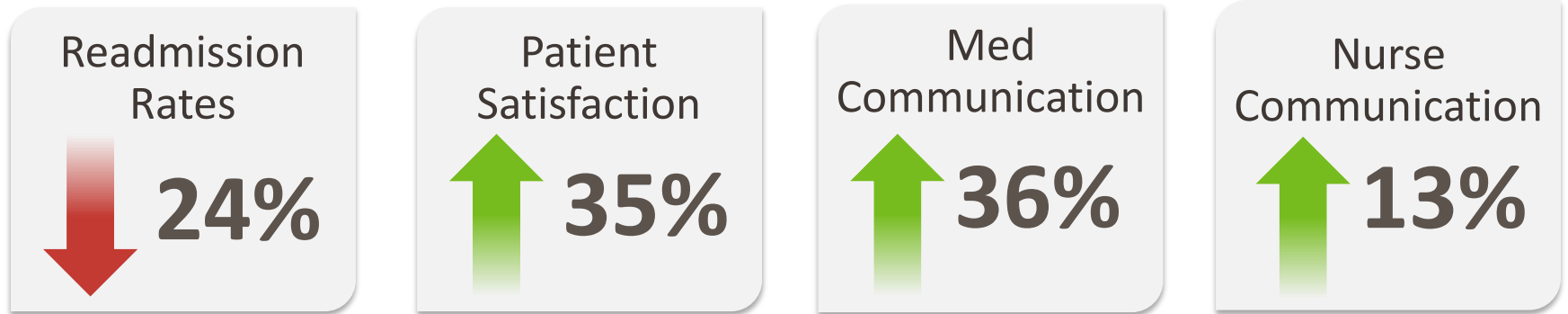
## Increase Patient Satisfaction

### Army Hospital

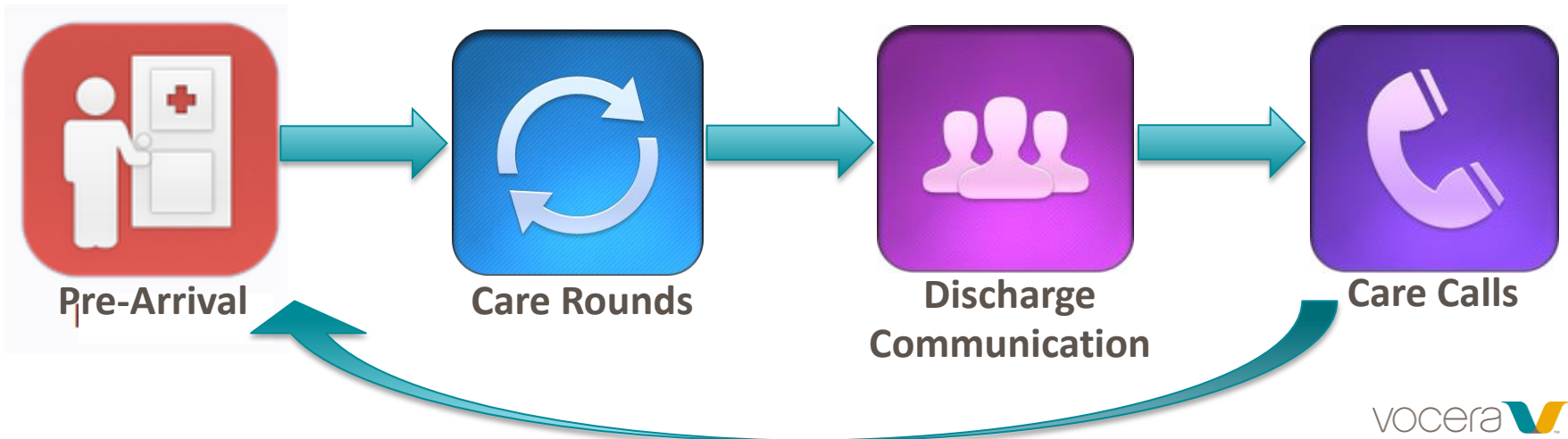
- 20% improvement of inpatient satisfaction = \$600,000/year
- Nurse response time from 4 minutes to 1
- PCPs gaining 2 appointments per day

# Patient Experience Transformed

## Published Results



## Delivering Differentiation Throughout the Patient Journey





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