Clinical Safety & Effectiveness

Cohort #15

Rolling Out a New Physician On-Call System Within Hospital Medicine at University Hospital

CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT HEALTH SCIENCE CENTER™

SAN ANTONIO

Aim Statement

- The aim of this project is to continuously improve the performance of a new physician on-call system that is being rolled out in the Hospital Medicine division at University Hospital on November 4, 2014.

- The goal is that by January 15, 2015, pages are answered on the first provider notification at a rate of ≥90%.

The Team

- Team
  - Michael Shoffeitt, MD – Assistant Professor, Hospital Medicine
  - Angela Zarnoti – Business Administrator, Hospital Medicine
  - Sandra Stough – Supervisor, Communications Department
  - Kami Stepanik – Patient Safety Officer
- Facilitator
  - Hope Nora, PhD
- Sponsor
  - Luci Leykum, MD, MBA – Division Chief, Hospital Medicine

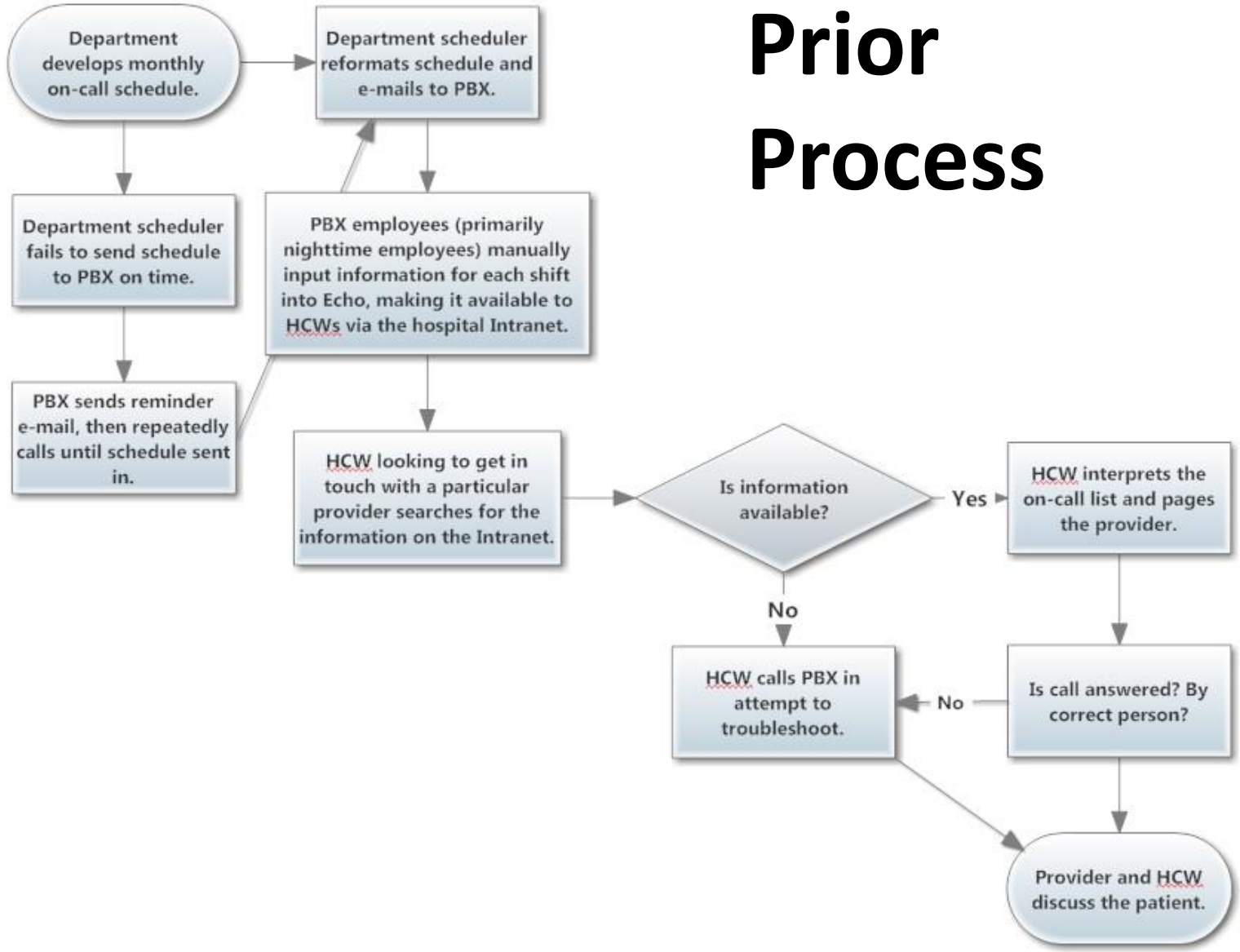
Project Milestones

• Team Created	9/2014
• AIM statement created	Finalized 11/2014
• Scheduled Team Meetings	9/2014 - 11/2014
• Background Data, Brainstorm Sessions, Workflow and Fishbone Analyses	9/2014 - 11/2014
• Interventions Implemented	11/4/2014
• Data Analysis	11/4 - 12/3/2014
• CS&E Presentation	1/23/2015

Background

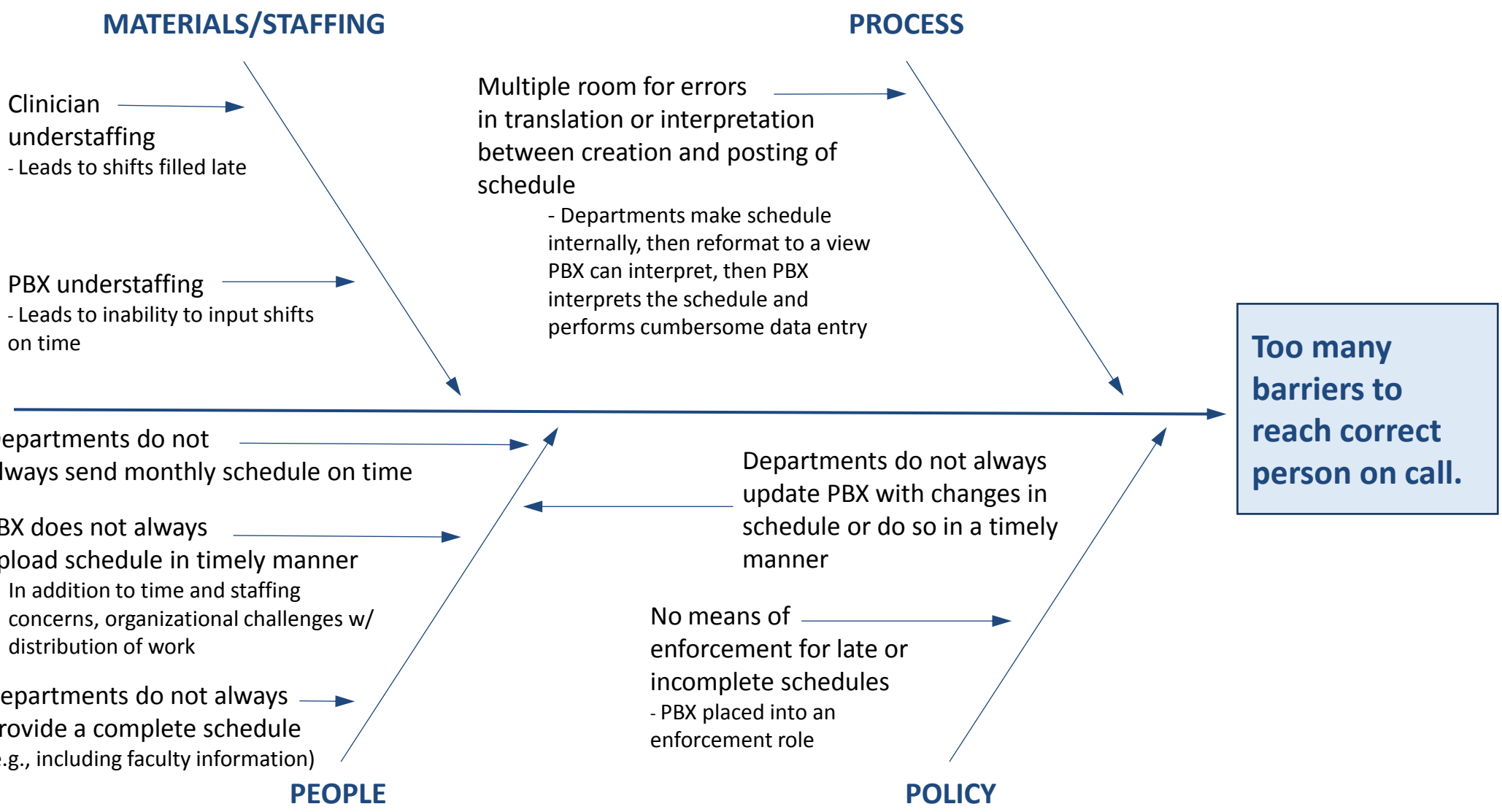
- Current physician on-call system is cumbersome to input and does not allow for timely updates
- Nobody in a leadership position has ownership to enforce that schedules are accurate, complete, and posted on time
- It is important for this information to be correct so patients receive the care they need in a timely manner

Prior Process



PBX = Private Branch Exchange (i.e., "the operators")
HCW = healthcare worker

PRIOR PROCESS



Prior Process: Scheduling Guidelines

University Health System

MONTHLY PROVIDER ON-CALL SUBMISSION GUIDELINES FOR ECHO

1. On-Call Schedules should be submitted by the 15th of the prior month.

2. Schedules are to be e-mailed to communications@uhs-sa.com and must include the following information:

Prior Process: Reminder e-mail

From: [redacted]
Sent: Wednesday, August 27, 2014 5:45 AM
To: [redacted]
Subject: SEPTEMBER PHYSICIAN ON CALL SCHEDULES

REMINDER:

If you have not already done so, please send your September Physician On Call Schedules to the Communications e-mail address: Communications@uhs-sa.com at your earliest convenience so we can make sure your department schedules are entered into the ECHO system in time for the first of month.

Thank you,

Prior Process: Errors in Transcription

19 CALL

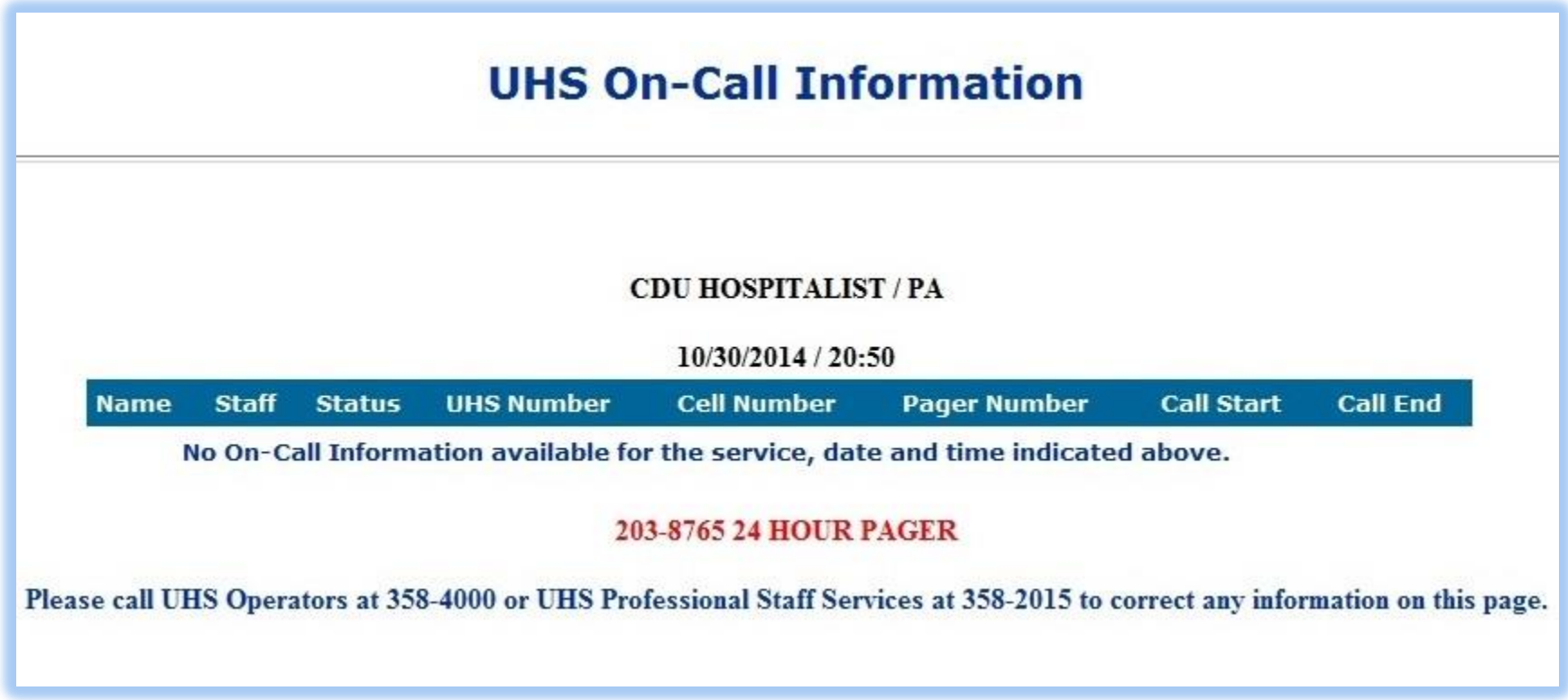
7a-5p: Dreaden, Galagan, Cueva, Corsini

5p-7p: Dreaden, Galag Cueva, Corsini

5p-7a: Cheema

Fri	Sat
5 7a-5p: Solis-Herrera, Easterling, Singh 7p-7a: Cheema	6 CALL 7a-11a: Moussa, Singh, Easterling 11a-5p: Moussa, Singh, Easterling 7p-7a: Cheema

Prior Process: Missing Provider Info



UHS On-Call Information

CDU HOSPITALIST / PA

10/30/2014 / 20:50

Name	Staff	Status	UHS Number	Cell Number	Pager Number	Call Start	Call End

No On-Call Information available for the service, date and time indicated above.

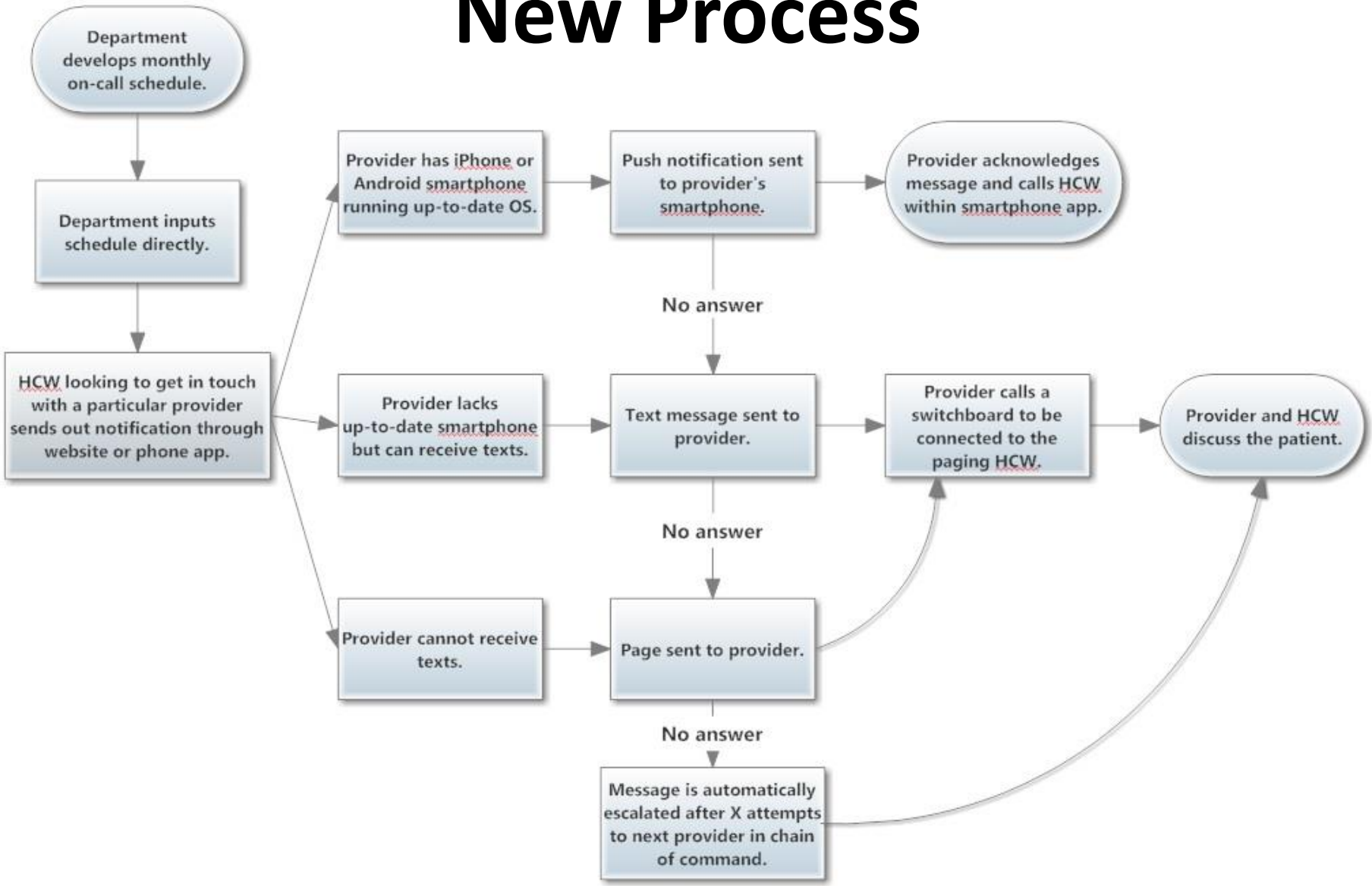
203-8765 24 HOUR PAGER

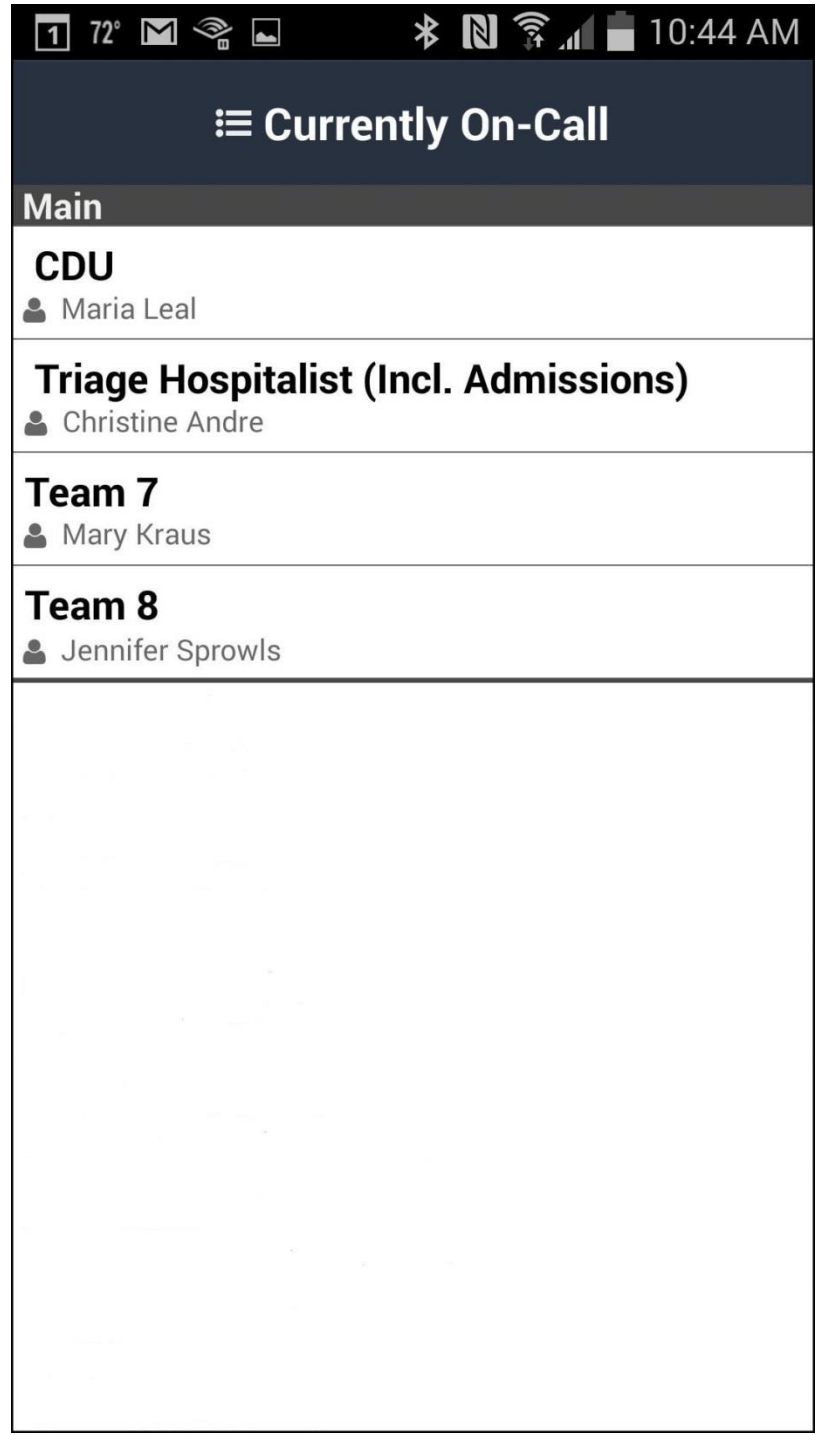
Please call UHS Operators at 358-4000 or UHS Professional Staff Services at 358-2015 to correct any information on this page.

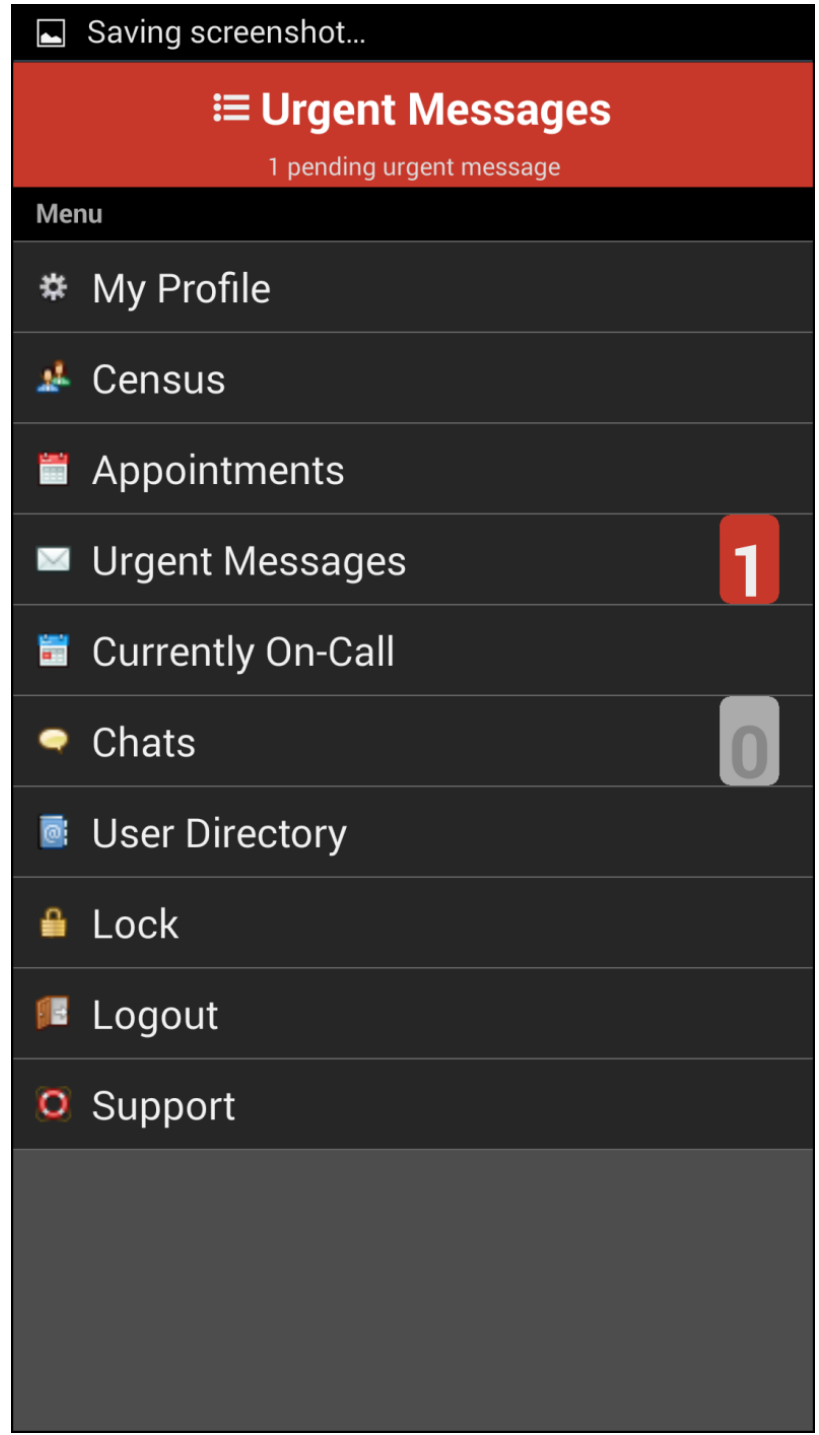
Proposed Intervention

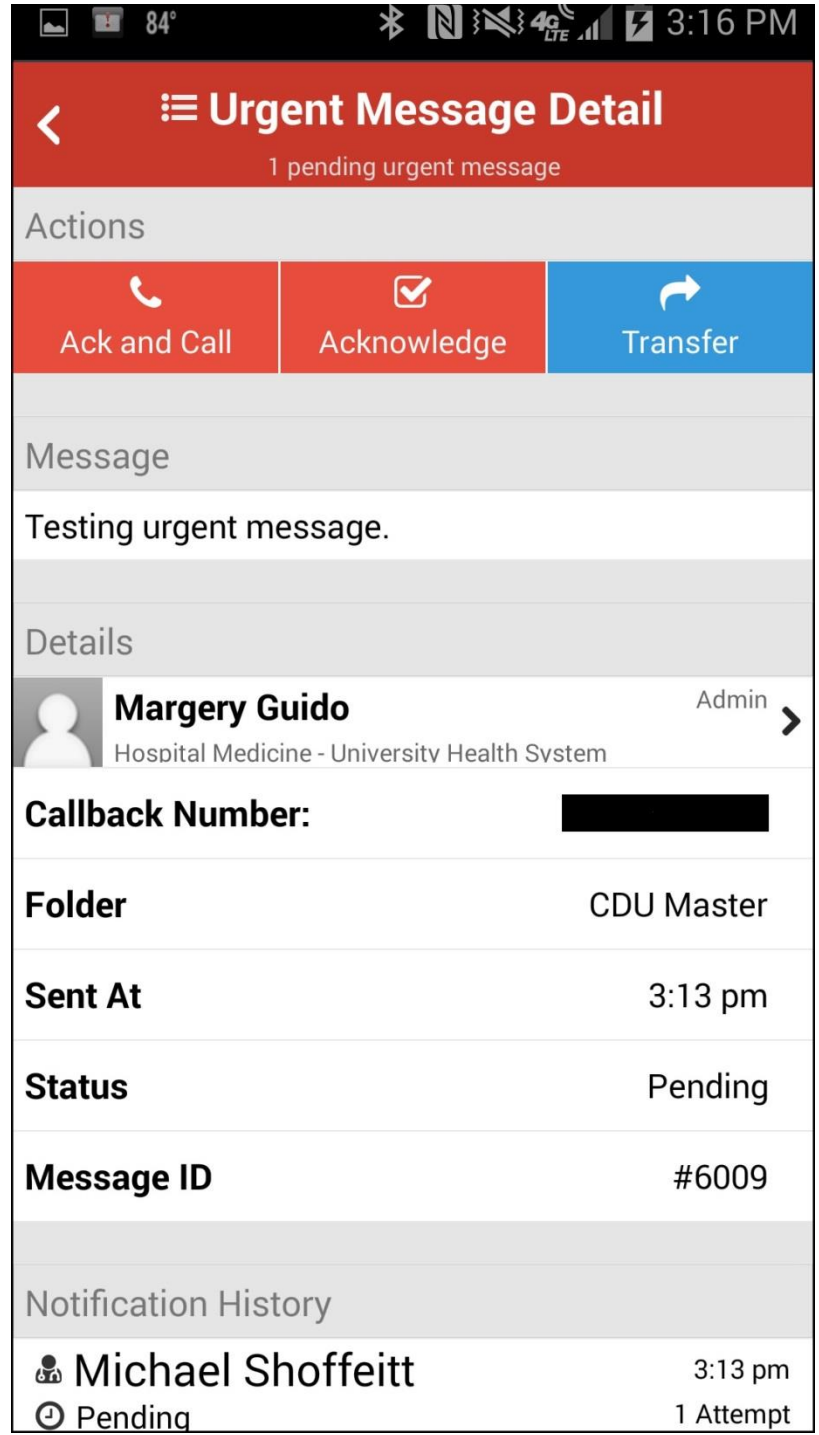
- Departments directly input their own schedules through a new product
- Central functioning of product includes automatic escalation tree (e.g., try intern X # of times -> try senior resident, etc.)
- Providers receive notifications of incoming “pages” through an app on their smartphone

New Process

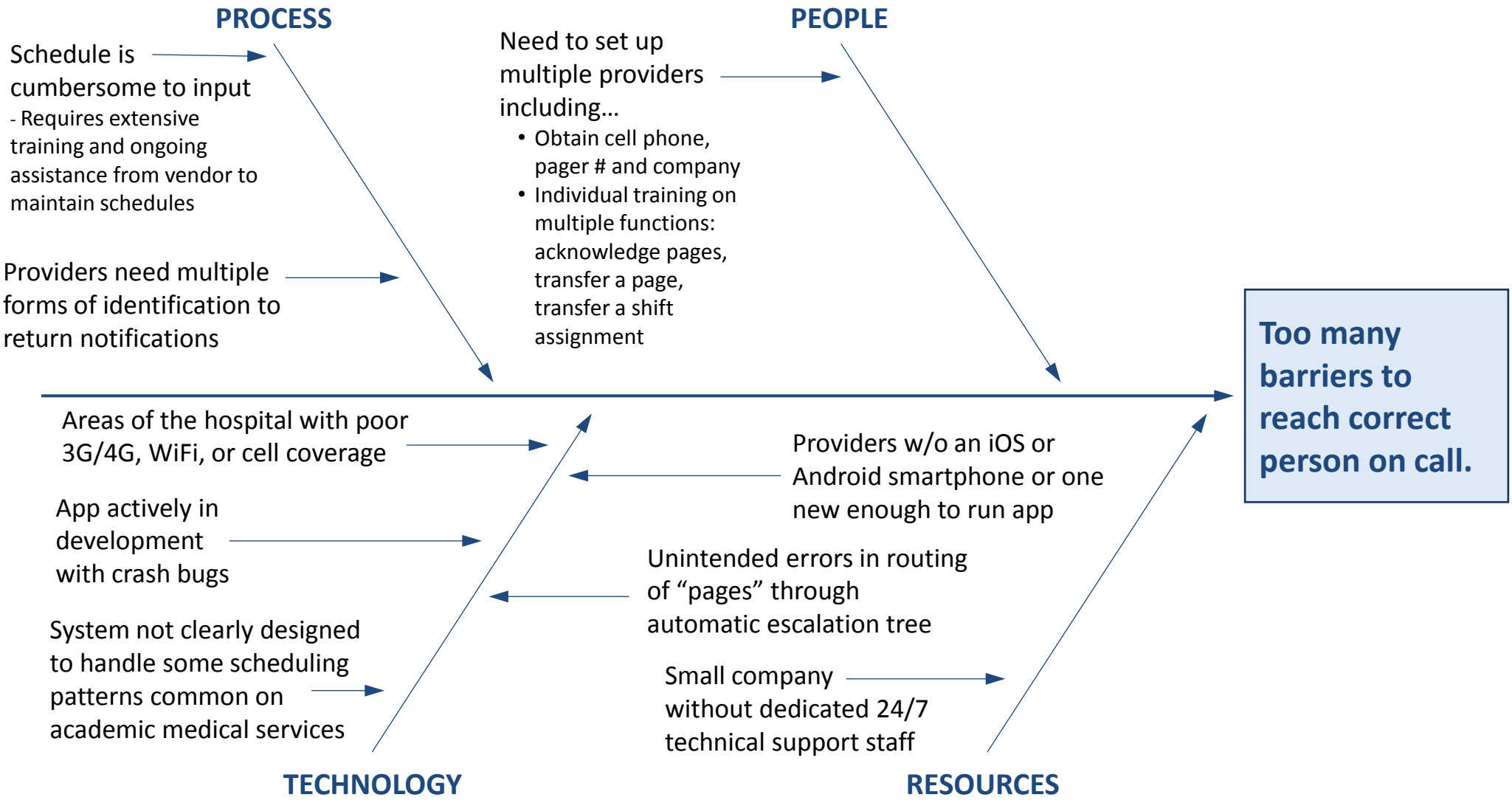

Department develops monthly on-call schedule.
Department inputs schedule directly.
HCW looking to get in touch with a particular provider sends out notification through website or phone app.
Provider has iPhone or Android smartphone running up-to-date OS.
Push notification sent to provider's smartphone.
Provider acknowledges message and calls HCW within smartphone app.
No answer
Provider lacks up-to-date smartphone but can receive texts.
Text message sent to provider.
Provider calls a switchboard to be connected to the paging HCW.
Provider and HCW discuss the patient.
No answer
Provider cannot receive texts.
Page sent to provider.
No answer
Message is automatically escalated after X attempts to next provider in chain of command.


72°
10:44 AM
Currently On-Call
Main
CDU
Maria Leal
Triage Hospitalist (Incl. Admissions)
Christine Andre
Team 7
Mary Kraus
Team 8
Jennifer Sprowls


Saving screenshot...
Urgent Messages
1 pending urgent message
Menu
My Profile
Census
Appointments
Urgent Messages
1
Currently On-Call
Chats
0
User Directory
Lock
Logout
Support


84°
3:16 PM
Urgent Message Detail
1 pending urgent message
Actions
Ack and Call
Acknowledge
Transfer
Message
Testing urgent message.
Details
Margery Guido
Admin
Hospital Medicine - University Health System
Callback Number:
[redacted]
Folder
CDU Master
Sent At
3:13 pm
Status
Pending
Message ID
#6009
Notification History
Michael Shoffeitt
3:13 pm
Pending
1 Attempt

NEW PROCESS


PROCESS
Schedule is cumbersome to input
- Requires extensive training and ongoing assistance from vendor to maintain schedules
Providers need multiple forms of identification to return notifications
PEOPLE
Need to set up multiple providers including…
• Obtain cell phone, pager # and company
• Individual training on multiple functions: acknowledge pages, transfer a page, transfer a shift assignment
Too many barriers to reach correct person on call.
Areas of the hospital with poor 3G/4G, WiFi, or cell coverage
App actively in development with crash bugs
System not clearly designed to handle some scheduling patterns common on academic medical services
TECHNOLOGY
Providers w/o an iOS or Android smartphone or one new enough to run app
Unintended errors in routing of “pages” through automatic escalation tree
Small company without dedicated 24/7 technical support staff
RESOURCES

Join “attwifi”

Internet Access for our Patients and Guests

- Fast, free, reliable access to the Internet
- Easy connection process
- 24/7/365 Customer Support

☐ I agree to the Terms of Service and Acceptable Use Policy

Click To Connect

Need Help

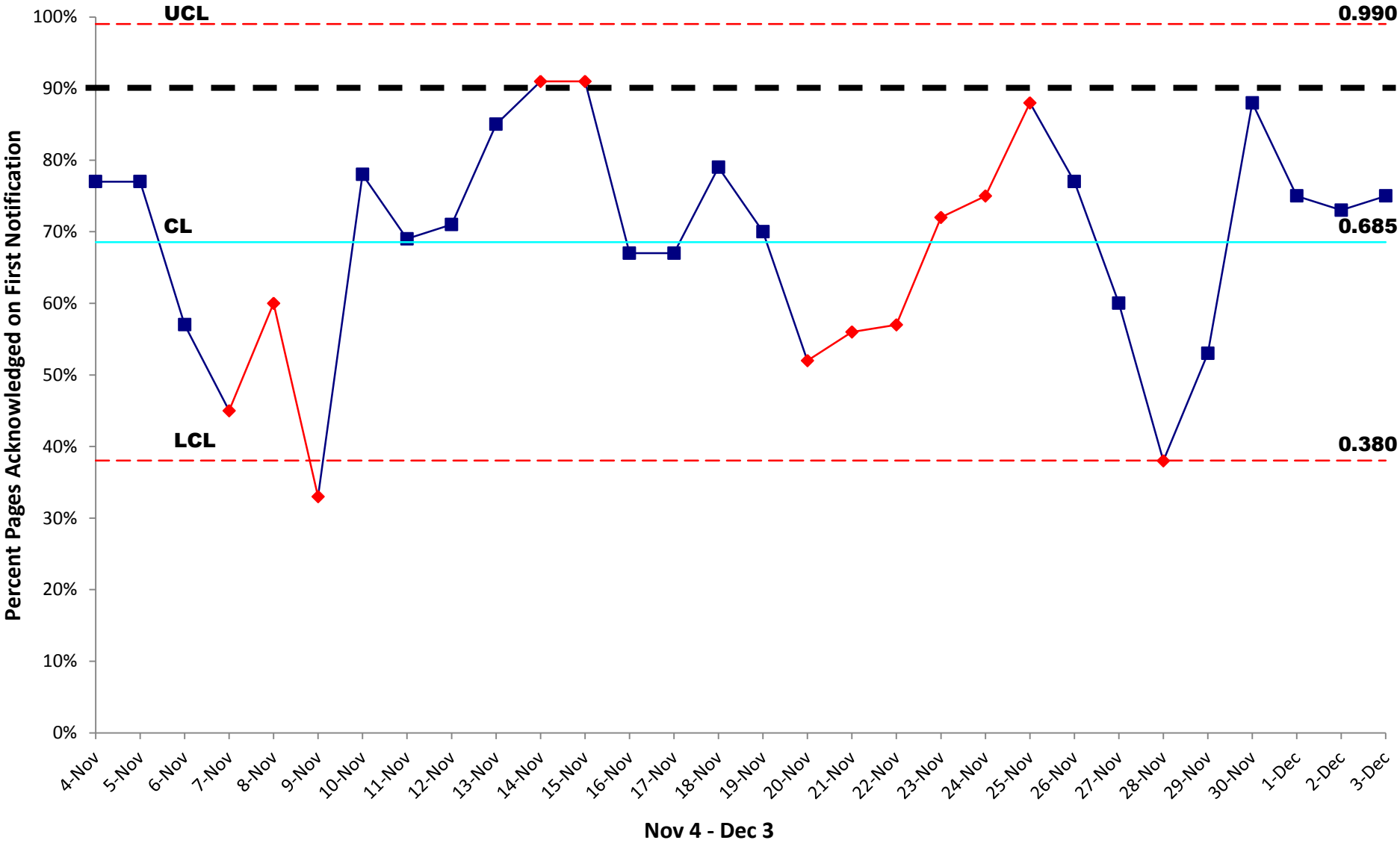
http://nmd.uhsbexar.aus.wayport.net/index.adp?MacAddr=3C%3a1...gId=121275&UserAgent=&ProxyHost=&TunnelIfId=568835&VlanId=0

Cancel

Implementing the Change

- Preparation for go-live:
  - Training of scheduler
  - Training of Hospital Medicine staff and operators
  - Procurement of provider cell and pager numbers
  - Work with IT
- November 4 go-live
- Ongoing troubleshooting with vendor and with Hospital Medicine staff

Results


UCL
0.990
CL
0.685
LCL
0.380
Percent Pages Acknowledged on First Notification
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4-Nov
5-Nov
6-Nov
7-Nov
8-Nov
9-Nov
10-Nov
11-Nov
12-Nov
13-Nov
14-Nov
15-Nov
16-Nov
17-Nov
18-Nov
19-Nov
20-Nov
21-Nov
22-Nov
23-Nov
24-Nov
25-Nov
26-Nov
27-Nov
28-Nov
29-Nov
30-Nov
1-Dec
2-Dec
3-Dec
Nov 4 - Dec 3

History of the Pilot

- On 11/18/2014, work group recommended that UH leadership discontinue pilot
- End of pilot announced on 12/3/2014
- Hospital Medicine reverted to old system 12/5/2014

Return on Investment

Per hospital CMO office:

- Cost: Purchase of trial
- Savings:
  - Revealed underlying hospital systems problems
  - Learned this product not a good fit with limited rollout
  - Learned this company not a good fit for other products they were demo'ing to hospital

Conclusion/What's Next

- Search committee now researching other products and regularly meeting
- Ongoing efforts to improve WiFi stability and 3G/4G coverage
- Ongoing efforts to improve Professional Staff Services database of provider contact info

Thank you!

Educating for Quality Improvement & Patient Safety