

The Effects of an Electronic Hourly Rounding Tool on Nurses' Steps

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CHI Health St. Francis

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Imagine better health.SM

Disclosures to Participants

Dr. Burch would like to note that there are no financial or other conflicts to disclose.

Objectives

- After completing this activity, the learner will:
 - identify key data analysis showing the relationship between an electronic hourly rounding (HR) tool and nurses' steps
 - identify the relationship between electronic HR and patient safety
 - define nursing staff identified barriers and solutions to HR implementation

Why Hourly Rounding?

- HR is used to improve:
 - patient safety
 - patient satisfaction
 - nursing staff satisfaction
- Implemented successfully, HR can decrease:
 - call lights
 - patient falls

Why Hourly Rounding?

- Little data available regarding nursing perceptions related to HR
- Investment of bedside nurses in HR is essential to successful:
 - implementation
 - sustainability

Something needed done

- CHI Health St. Francis had tried 4 times in the past
- Used:
 - Paper
 - White board
- These were not successful

Something needed done

- Staff not on board
- Current process not effective

Initial Hourly Rounding Study

- Qualitative pre- and post- design
- Interventions included:
 - Education on HR
 - Demonstration of skills
 - Implementation of electronic HR software
 - **Vigilance™** by Nobl Health

Initial Hourly Rounding Study

- Convenience sample of bedside nurses and PCAs
 - Included staff at two separate data points
 - n=159 (2014)
 - n=137 (2016)

Initial Hourly Rounding Study

- Validated survey tool
 - Dr. Donna Fabry
 - Tool included questions about:
 - barriers and solutions to HR
 - reasons for HR
 - thoughts surrounding computerized HR tool

Additional Step Intervention

- Nobl Health hypothesized that:
 - implementation of Vigilance™ would decrease call lights
 - decreasing call lights using Vigilance™ would decrease nurse staff steps

Additional Step Intervention

- Nursing staff on the medical-surgical unit documented steps taken each shift
 - 2 month baseline pre-implementation of HR system
 - 6 months post-implementation
- Call light usage, on-time rounds (OTR), and falls were tracked

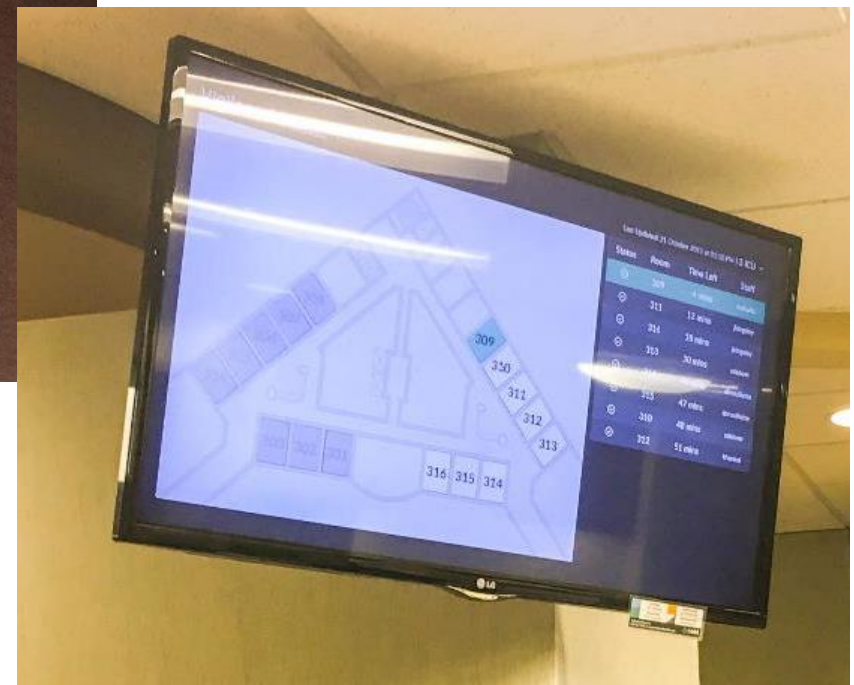
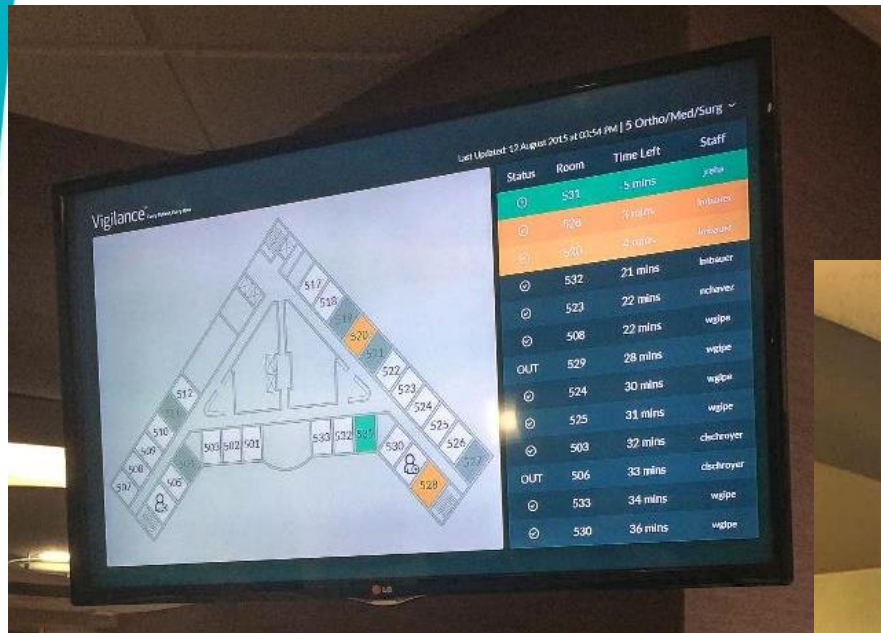
How did we do it?

- Step trackers
- Manual data aggregation
 - Nurse assignment data from EMR report
- Call light data
- Falls data from database
 - Same numbers that are entered for NDNQI
- HR data from Vigilance™

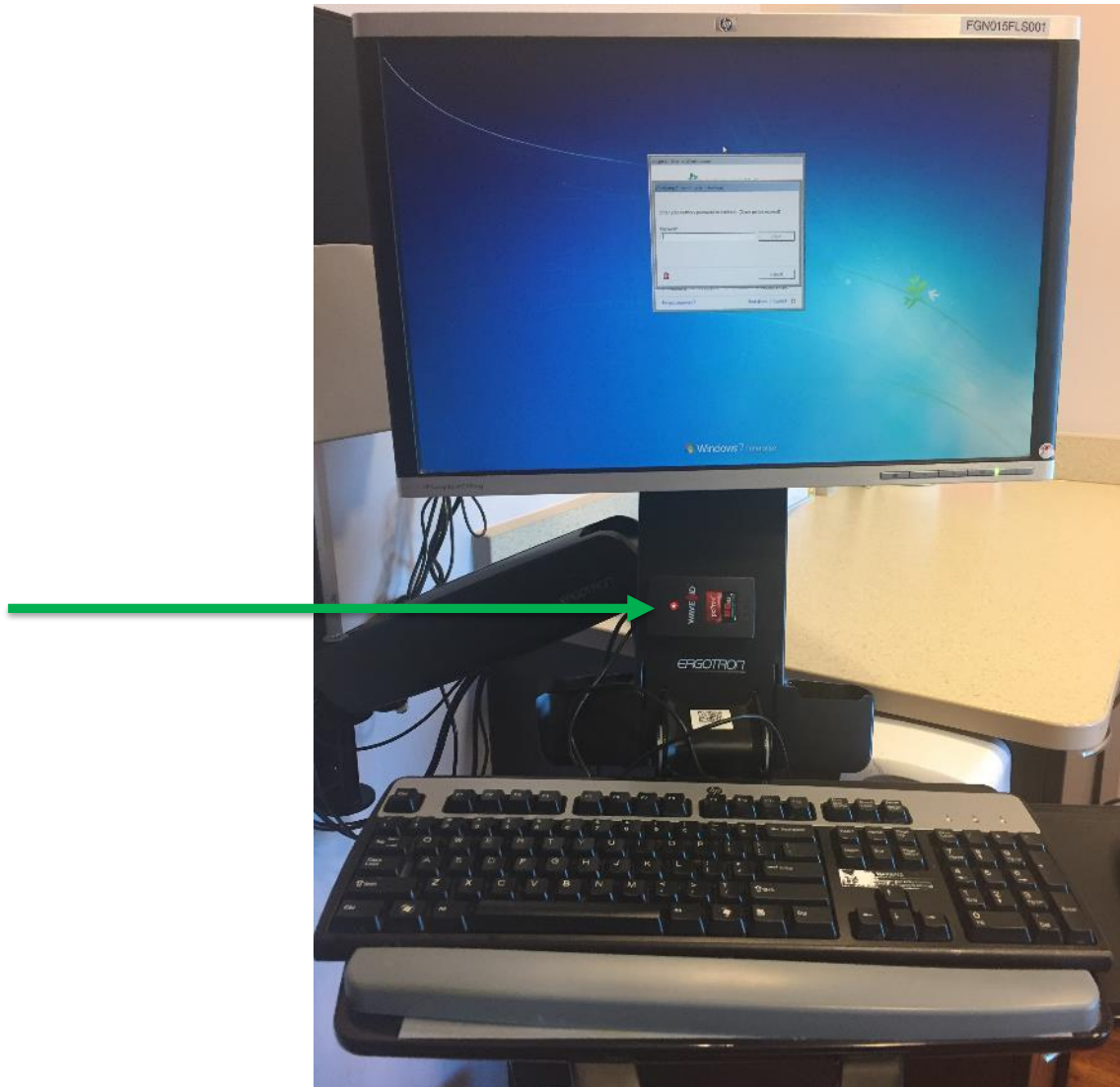
Fitbit #10 - Med/Surg Unit			If you leave the unit for tasks unrelated to patient care please take off your Fitbit.					
Date	First Name, Last Initial	Nurse Type	Time-In	Steps-In	Time-Out	Steps-Out	Patient Load	Patient Room Numbers
7/6	Becky S	RN PCA Charge	0555	0	1855	8399		
7/7	Julie	RN PCA Charge	0553	0	1843	6550		
7/7	Whitney W	RN PCA Charge	1850	1753	2359	?		
7/8	Whitney W	RN PCA Charge	0000	0	0630	3350		
7/8	Chanda S	RN PCA Charge	0635	3358	1845	11053		7695
7/8	Susie	RN PCA Charge	1845	11053	MN	110095	0630 402	9054
7/9	Leticia	RN PCA Charge	0630	4012	1830	12903		18981
7/9	Susie	RN PCA Charge	MN	0	0630	3996		3996
7/10	Myla P	RN PCA Charge	0600	0	1900	8096		8096
7/11	Stephanie S	RN PCA Charge	0600	0	1830	12109		12109
7/11	Susie	RN PCA Charge	1830	12109	MN	19027		
7/12	Susie	RN PCA Charge	MN	0	0640	5153		12071
7/12	Brandi	RN PCA Charge	0630	5153	1830	20063		14910
7/13	Julie	RN PCA Charge	0554	0				

Vigilance™ from Nobl Health

Rounding Map at Nurses' Station



Tap and Go- essential!



Home screen/Dashboard

Vigilance™ Every Patient, Every Hour

khottovy 4PCU

Hourly Rounds | Rounding Map | Friends & Family Portal | My Hourly Rounding List | Unit List

Statistics | Transfer | Discharge | 02:14:33 pm June 9 | Suggestions | Contact Nobl

Status	Room	Time	Rounder
⚠	401	-23mins	khottovy
🕒	402	-5mins	khottovy
✅	405	6mins	khottovy
✅	406	30mins	khottovy
✅	403	40mins	khottovy
✅	404	52mins	khottovy

Note from Katie 06/09: There is a mandatory staff meeting on Wednesday in conference room 4B. Thank you for attending in advance!

Note from Marilyn B 12/06: Just received our latest HCAHPS scores. We have raised our Overall Rating by 22 percent! Great work team!

Note from Janelle S 12/06: Shout out to John, Cindy, and Martha on providing excellent care! I've just received positive remarks from the family in room 715.

Note from Susan W 12/05: Our focus this month is pain management. Remember to ask about pain levels everytime you are in a patient's room. Keep up the good work!

POWERED BY nobl

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 Email Support: xxxxxx@noblhealth.com
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 Vigilance Version 3.3.0

First Round- Room Code

The screenshot shows the Vigilance mobile application interface. At the top, the logo reads "Vigilance™ Every Patient, Every Hour". The user's location is identified as "khottovy 4PCU Room 401". The status "Room not active | Hourly Rounds" is displayed with a notification bell icon showing 1 alert. The interface is divided into two main sections: "Hourly Rounding Tasks" on the left and "Patient Comments" on the right. The "Hourly Rounding Tasks" section includes a list of tasks: Pain, Personal Needs, Position, Additional Comfort Needs, Environmental Assessment, Complete All Tasks, Hand-Washing Procedure (Upon Entry, Upon Exit), and Complete All Tasks. The "Patient Comments" section includes a list of comments and a "Submit Hourly Round" button. A central pop-up window titled "New Patient Rounding Reminder" contains the following instructions:

1. Educate the patient about why we hourly round at our hospital.
2. Inform the patient and their family about the available Friends and Family Portal.

Below the instructions, the pop-up displays the "Active Room Code" as **820D** and provides the URL <http://rounding.noblhealth.com/820D>. A "Please note" section states: "The comments that you enter will be seen by the patient's friends and family. Meaningful comments will be appreciated." A "Done" button is located at the bottom right of the pop-up. The bottom of the screen features the "nobl" logo (Powered By) and contact information: Support Line: 888-592-5991, Email Support: support@noblhealth.com, and a note that the software is licensed for Nobl Inc, Version new_version.

Fall Assessment- Fall Risk Settings

Vigilance™ Every Patient, Every Hour

nobl demo 4ICU Room 411

Room not active | Hourly Rounds

Hourly Rounding Tasks

- Pain
- Personal Needs
- Position
- Additional Comfort Needs
- Environmental Assessment
- Complete All Tasks

Hand-Washing Procedure

- Upon Entry
- Upon Exit
- Complete All Tasks

Patient Comments

Add comments for friends and family using the icons below.

Icons: Person, R, Heart, Refresh, Moon, Sun

Time	Time	Rounder
01	-22mins	N Health
02	-4mins	N Health
05	7mins	N Health
06	31mins	N Health

Submit Hourly Round

Powered By nobl

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Fall Risk Settings

Is this patient a high fall risk?
Let us help you remember to set the TABS monitor or bed alarm for high fall risk patients.

No. This patient is not a high fall risk.

Yes. This patient is a high fall risk.

Back **Done**

Screen Changes

Vigilance™ Every Patient, Every Hour

nobldemo 4ICU Room 411

Room not active | Hourly Rounds

Hourly Rounding Tasks

- Pain
- Personal Needs
- Position
- Additional Comfort Needs
- Environmental Assessment

Complete All Tasks

Hand-Washing Procedures

- Upon Entry
- Upon Exit

Complete All Tasks

Patient Comments

Add comments for friends and family using the icons below...

Status	Room	Time	Rounder	
	401	-22mins	N Health	>
	402	-4mins	N Health	>
	405	7mins	N Health	>
	406	31mins	N Health	>

Submit Hourly Round

Powered By

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 Version new_version

Tabs/Bed Alarm Reminder

The screenshot displays the Vigilance software interface. The top navigation bar includes the user name 'nobidemo', location '4ICU Room 411', and status 'Room not active | Hourly Rounds'. The main content area is divided into several sections: 'Hourly Rounding Tasks' with a list of tasks (Pain, Personal Needs, Position, Additional Comfort Needs, Environmental Assessment) and a 'Complete All Tasks' button; 'Hand-Washing Procedures' with 'Upon Entry' and 'Upon Exit' tasks and a 'Complete All Tasks' button; 'Patient Comments' with a text input field and various icons; and a table of room data. A central modal alert box is overlaid on the interface, displaying a warning icon and the text: 'This patient is a high fall risk. Please ensure that either the TABS monitor or bed alarm is set.' Below the text is an 'Okay, I've got it!' button. The bottom right corner features the 'POWERED BY nobl' logo and contact information for support.

Room	Time	Rounder
401	-22mins	nobidemo
402	-4mins	nobidemo
405	7mins	nobidemo
406	31mins	nobidemo

Support Line: 888-592-5991
Email Support: xxxxxxxx@noblhealth.com
This software is licensed for Nobl Inc
Vigilance Version 3.3.0

Rounding Screen

The screenshot shows a web browser window displaying the Vigilance Rounding Screen. The interface is dark-themed with light blue accents. At the top left, the logo reads "Vigilance™ Every Patient, Every Hour". The top right shows user information: "khottovy 4PCU Room 401", a timer "Room active for 3 days 5 hours 19 minutes", and a "Hourly Rounds" button with a notification badge showing "1".

The main content area is divided into two columns. The left column contains two task lists:

- Hourly Rounding Tasks:** A list of five items, each with a radio button:
 - Pain
 - Personal Needs
 - Position
 - Additional Comfort Needs
 - Environmental AssessmentA "Complete All Tasks" button is located below the list.
- Hand-Washing Procedures:** A list of two items, each with a radio button:
 - Upon Entry
 - Upon ExitA "Complete All Tasks" button is located below the list.

The right column features a "Patient Comments" section with a text area containing: "Patient was repositioned in their bed this hour. Shift change has occurred and the patient has a new nurse." Below this is a toolbar with icons for list, star, PT, RT, OT, and a left arrow. At the bottom of the right column is a filter section with labels: "Status", "Room", "Time", and "Rounder". Below the filters is a message: "No rooms to show yet. If you are the last person that rounded on a room, that room will be displayed here." A large "Submit Hourly Round" button is positioned at the bottom of the right column.

At the bottom of the interface, there is a footer area. On the left, it says "Powered By" followed by the "nobl" logo. On the right, it provides contact information: "Support Line: 888-592-5991", "Email Support: support@noblhealth.com", "This software is licensed for Nobl Inc", and "Version new_version".

Icons Individualized to Unit

Vigilance™ Every Patient, Every Hour

khottovy 4PCU Room 401

Room active for 3 days 5 hours 19 minutes | Hourly Rounds 1

Hourly Rounding Tasks

- Pain
- Personal Needs
- Position
- Additional Comfort Needs
- Environmental Assessment

Complete All Tasks

Hand-Washing Procedures

- Upon Entry
- Upon Exit

Complete All Tasks

Patient Comments

Add comments for friends and family using the icons below...

Patient is out of bed and sitting in their chair.

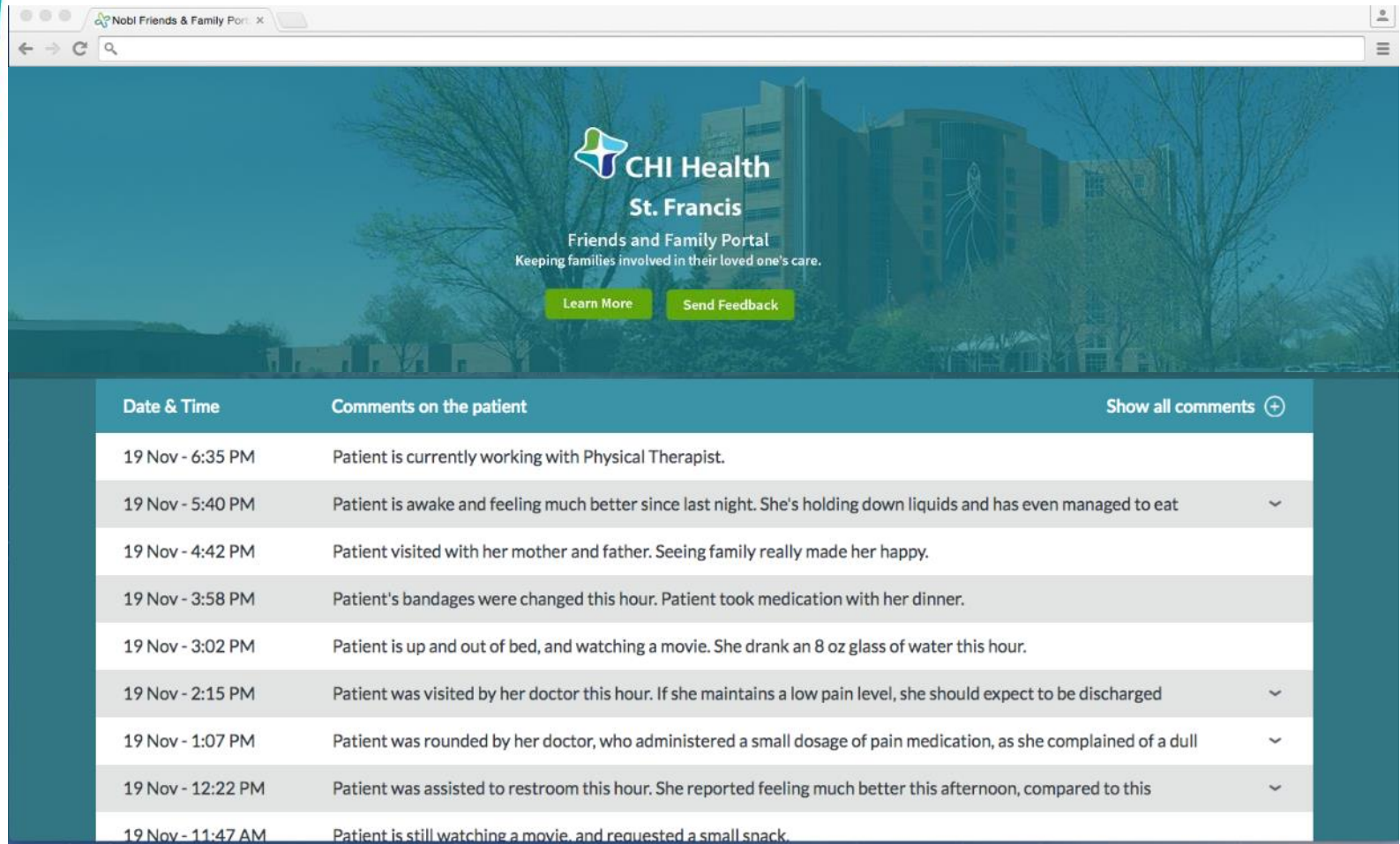
Status	Room	Time	Rounder
	401	-22mins	N Health
	402	-4mins	N Health
	405	7mins	N Health
	406	31mins	N Health

Submit Hourly Round

Powered By

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Friends and Family Portal



The screenshot shows a web browser window with the URL "Nobl Friends & Family Port...". The page features the CHI Health St. Francis logo and the text "Friends and Family Portal" with the tagline "Keeping families involved in their loved one's care." Below this are two buttons: "Learn More" and "Send Feedback".

Date & Time	Comments on the patient	Show all comments (+)
19 Nov - 6:35 PM	Patient is currently working with Physical Therapist.	
19 Nov - 5:40 PM	Patient is awake and feeling much better since last night. She's holding down liquids and has even managed to eat	▼
19 Nov - 4:42 PM	Patient visited with her mother and father. Seeing family really made her happy.	
19 Nov - 3:58 PM	Patient's bandages were changed this hour. Patient took medication with her dinner.	
19 Nov - 3:02 PM	Patient is up and out of bed, and watching a movie. She drank an 8 oz glass of water this hour.	
19 Nov - 2:15 PM	Patient was visited by her doctor this hour. If she maintains a low pain level, she should expect to be discharged	▼
19 Nov - 1:07 PM	Patient was rounded by her doctor, who administered a small dosage of pain medication, as she complained of a dull	▼
19 Nov - 12:22 PM	Patient was assisted to restroom this hour. She reported feeling much better this afternoon, compared to this	▼
19 Nov - 11:47 AM	Patient is still watching a movie, and requested a small snack.	

← → ↻ 🔍

Vigilance™ Every Patient, Every Hour nobldemo 4ICU Room 411

Room active for 0 days 0 hours 0 minutes | Hourly Rounds 🔔 ☰

Hourly Rounding Tasks

- Pain ✔
- Personal Needs ○
- Position ○
- Additional Comfort Needs
- Environmental Assessment
- Complete All Tasks

Hand-Washing Procedures

- Upon Entry
- Upon Exit
- Complete All Tasks

Patient Comments

Add comments for friends and family using the icons below...

👤
📄
🔄
🌙
☀️

Room ↕	Time ↕	Rounder ↕	
402	-6mins	N Health	>
405	5mins	N Health	>
406	29mins	N Health	>
403	39mins	N Health	>

Submit Hourly Round


🕒 Checklist submitted for 411!

**Just a head's up,
Room 402 is due now.**

Don't forget to wash your hands as you exit the room.

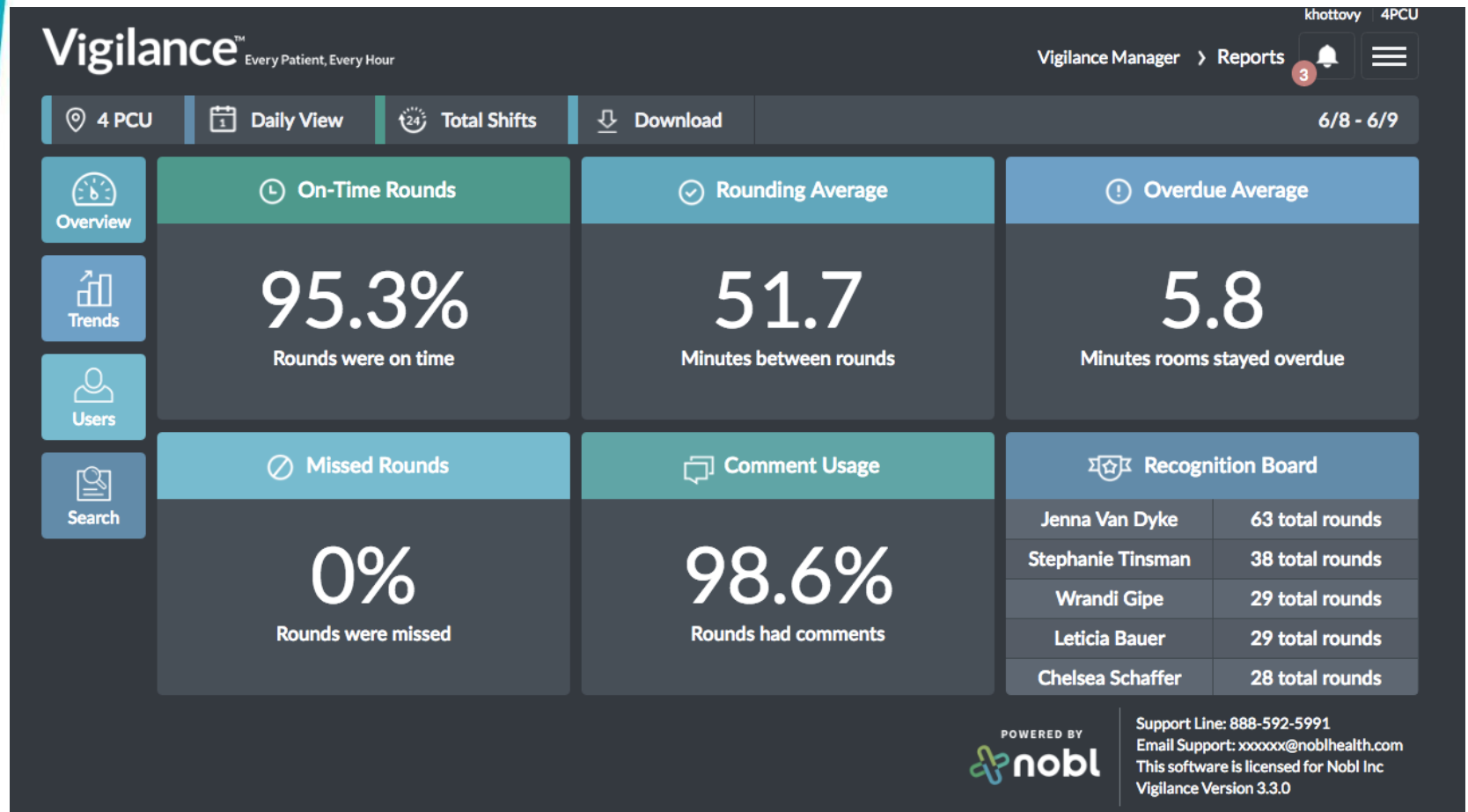
Okay, I've got it!

Powered By



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 Email Support: support@noblhealth.com
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Real-time Data

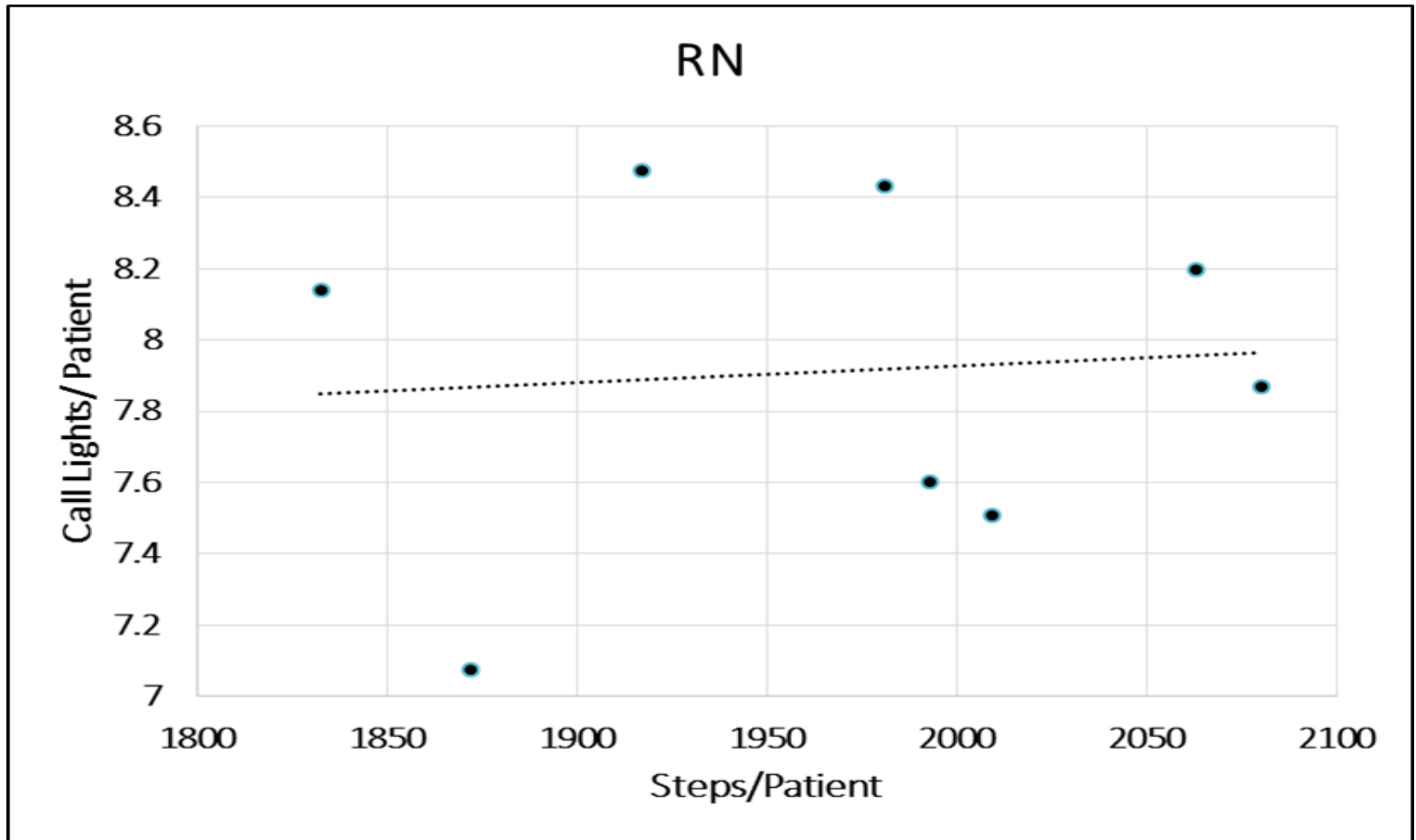


Data Analysis

Day Shift Outcomes

Data	2 Months Before	6 Months After	Percent Change
Patients per Nurse	4.32	4.345	.6% increase
Total Call Lights	8.17/patient	7.87/patient	3.7% decrease (12.5% today)
Day RN Steps	8,415 steps/shift	8,502 steps/shift	1.1% increase
Day PCA Steps	11,108 steps/shift	13,013 steps/shift	14.7% increase
Day Charge RN Steps	7,480 steps/shift	8,727 steps/shift	14.3% increase

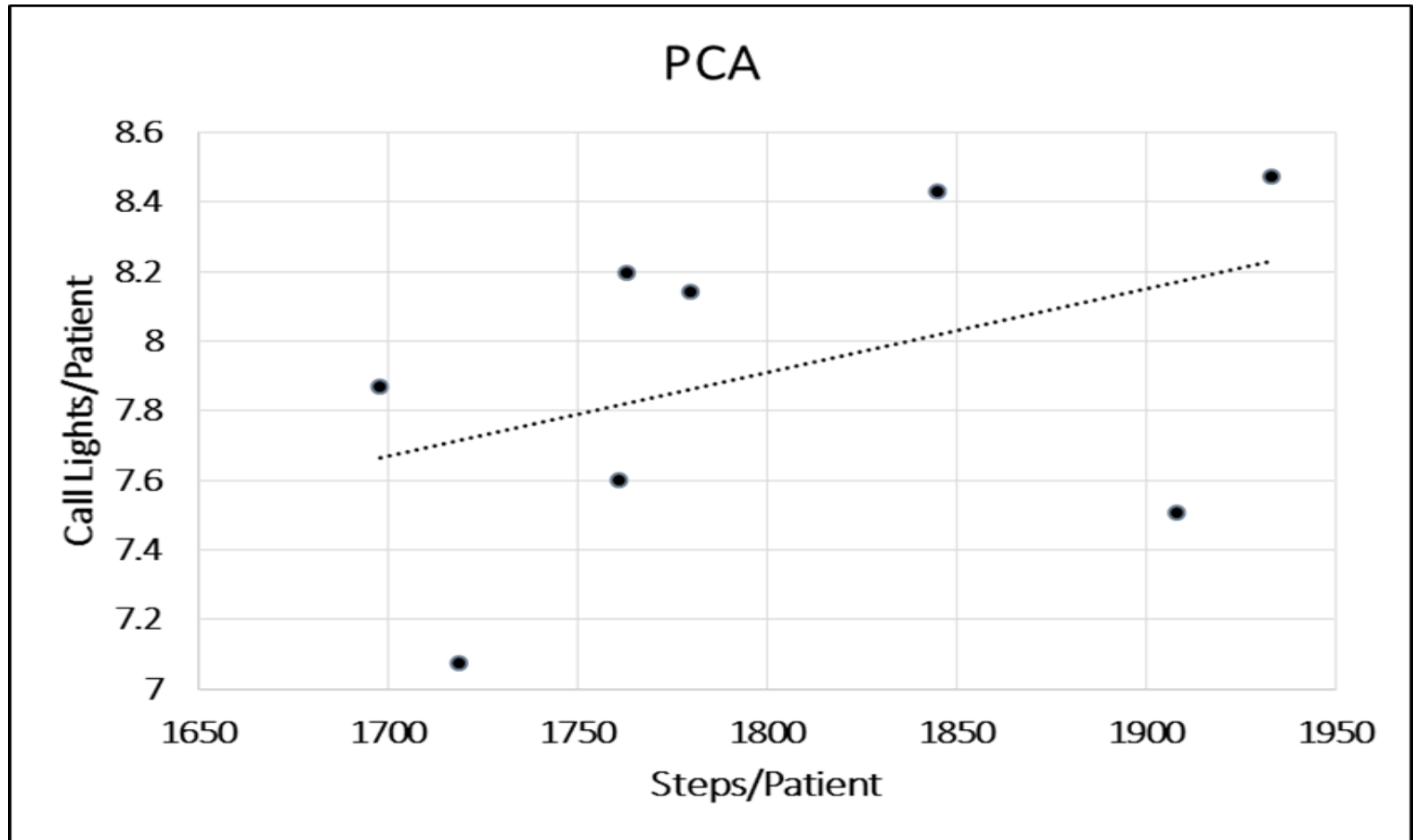
Call Lights versus RN Steps



Jun. 2015-Jan. 2016

Correlation= 0.08 (no correlation)

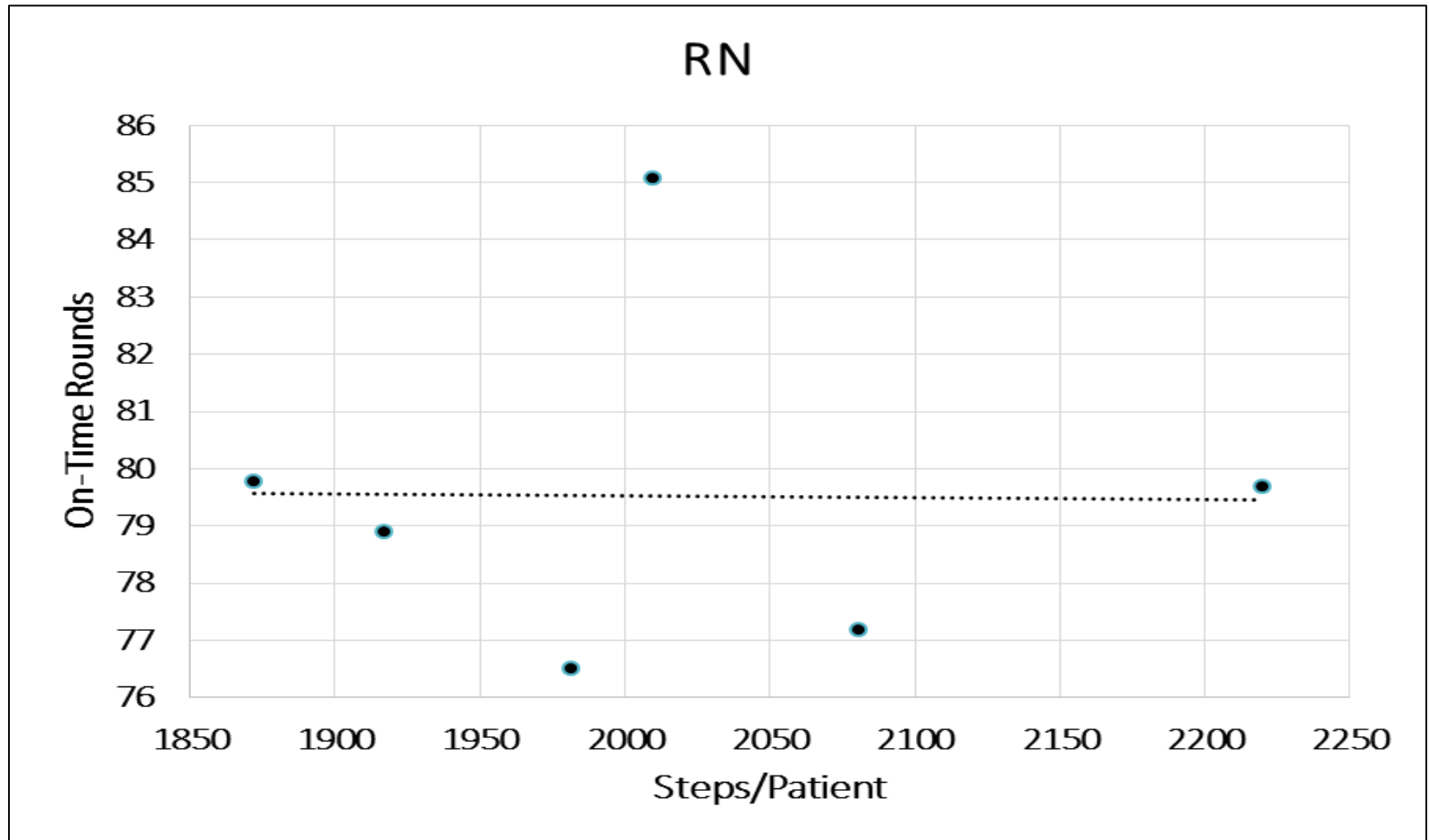
Call Lights versus PCA Steps



Jun. 2015-Jan. 2016

Correlation= 0.42 (moderate correlation)

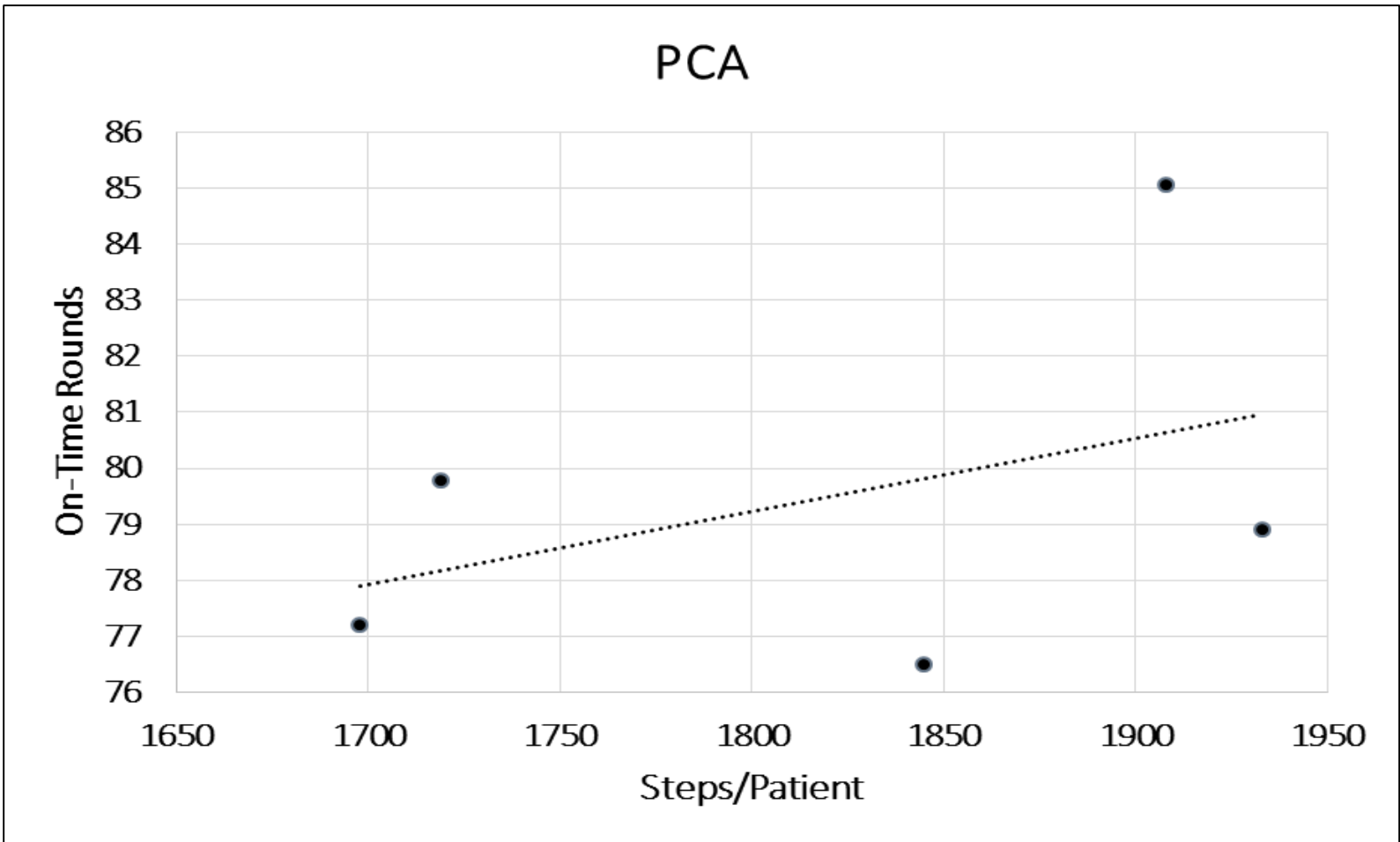
On-Time Rounds versus RN Steps



Sep. 2015-Feb. 2016

Correlation= 0.04 (no correlation)

On-Time Rounds versus PCA Steps



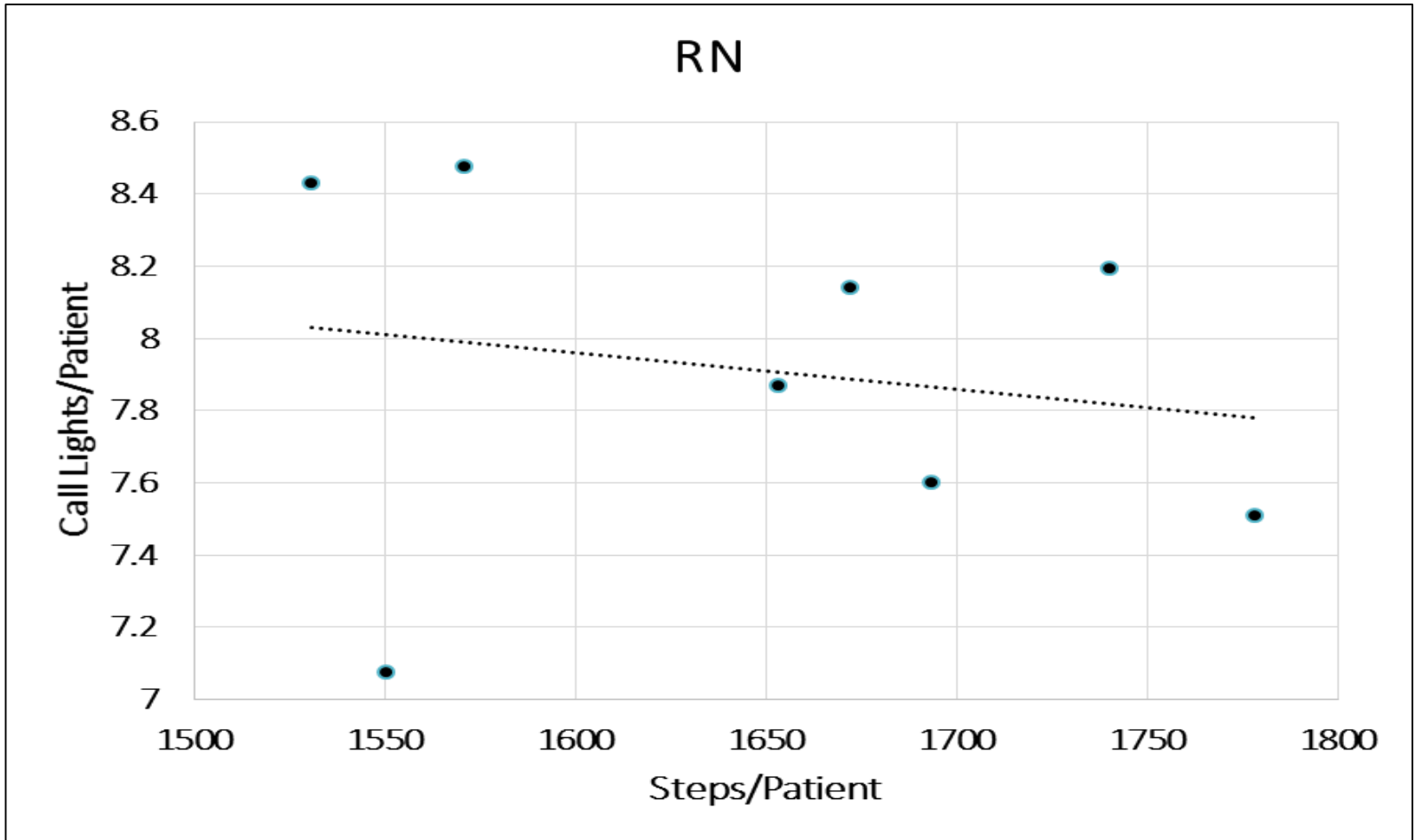
Sep. 2015-Feb. 2016

Correlation= 0.12 (no correlation)

Night Shift Outcomes

Data	2 Months Before	6 Months After	Percent Change
Patients per Nurse	4.6	4.55	1.1% decrease
Total Call Lights	8.17/patient	7.87/patient	3.7% decrease (12.5% today)
Night RN Steps	7,571 steps/shift	7,062 steps/shift	6.8% decrease
Night PCA Steps (6 hour shift)	4,640 steps/shift	4,660 steps/shift	.5% increase

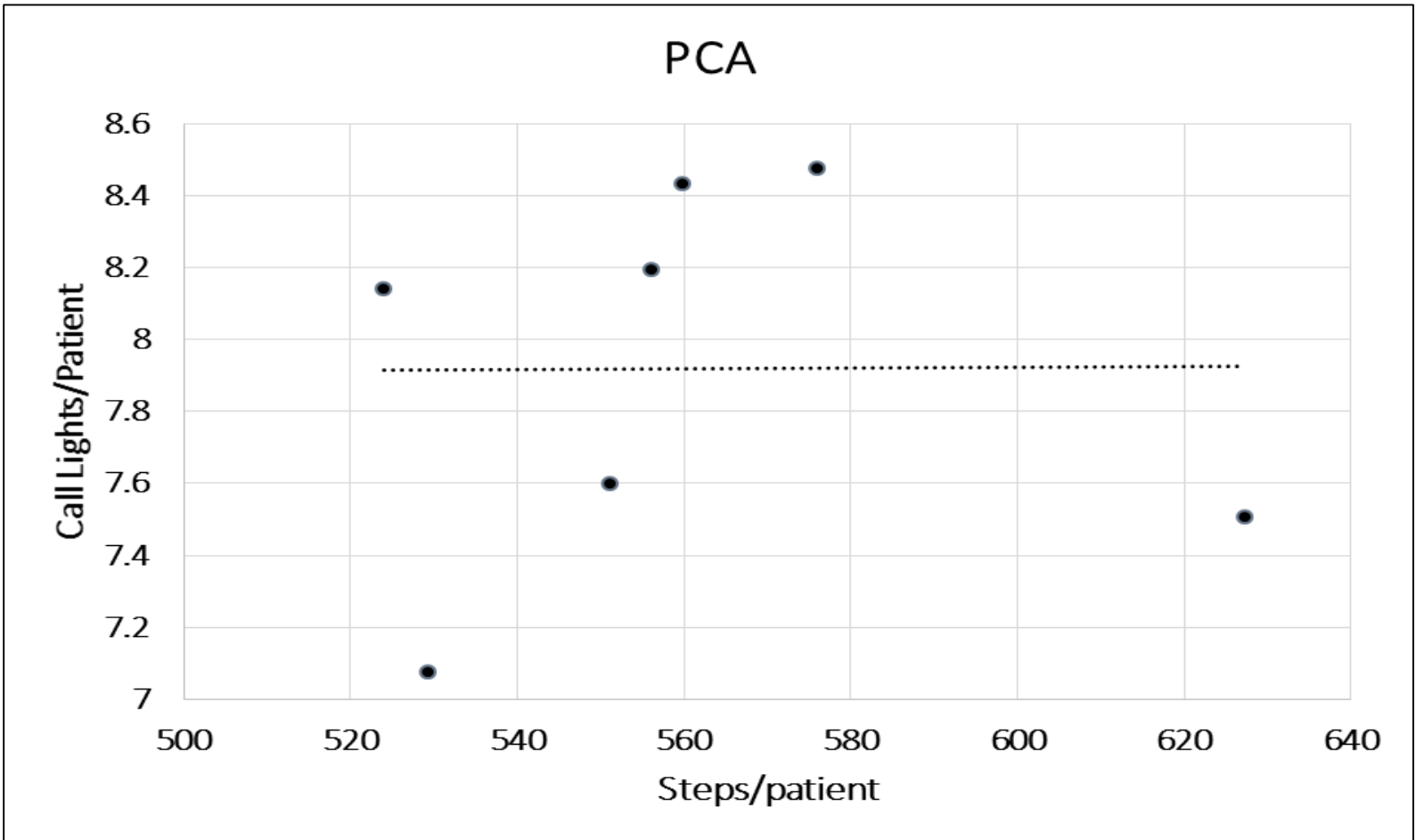
Call Lights versus RN Steps



Jun. 2015-Jan. 2016

Correlation= -0.18 (no correlation)

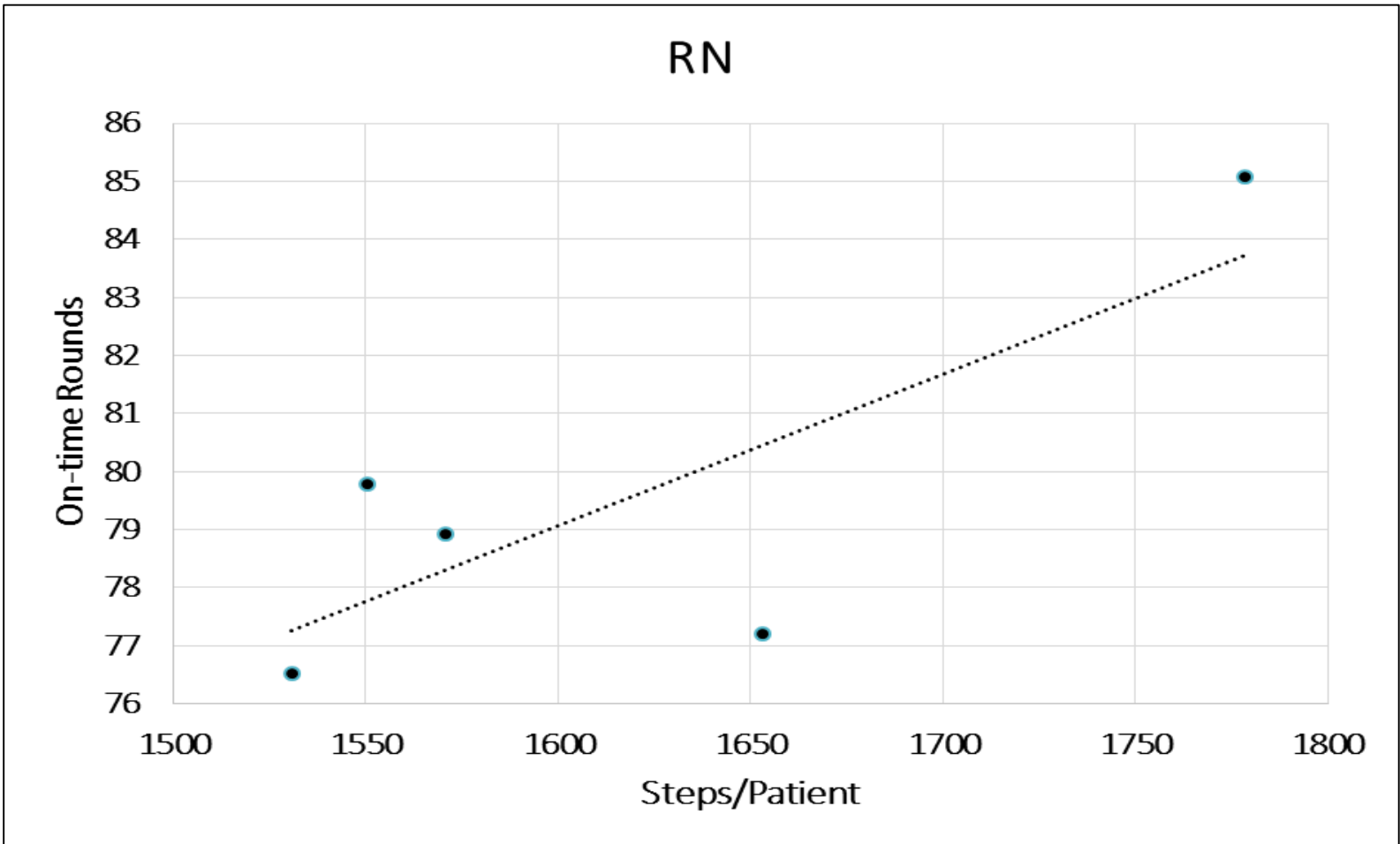
Call Lights versus PCA Steps



Jun. 2015-Jan. 2016

Correlation= 0.01 (no correlation)

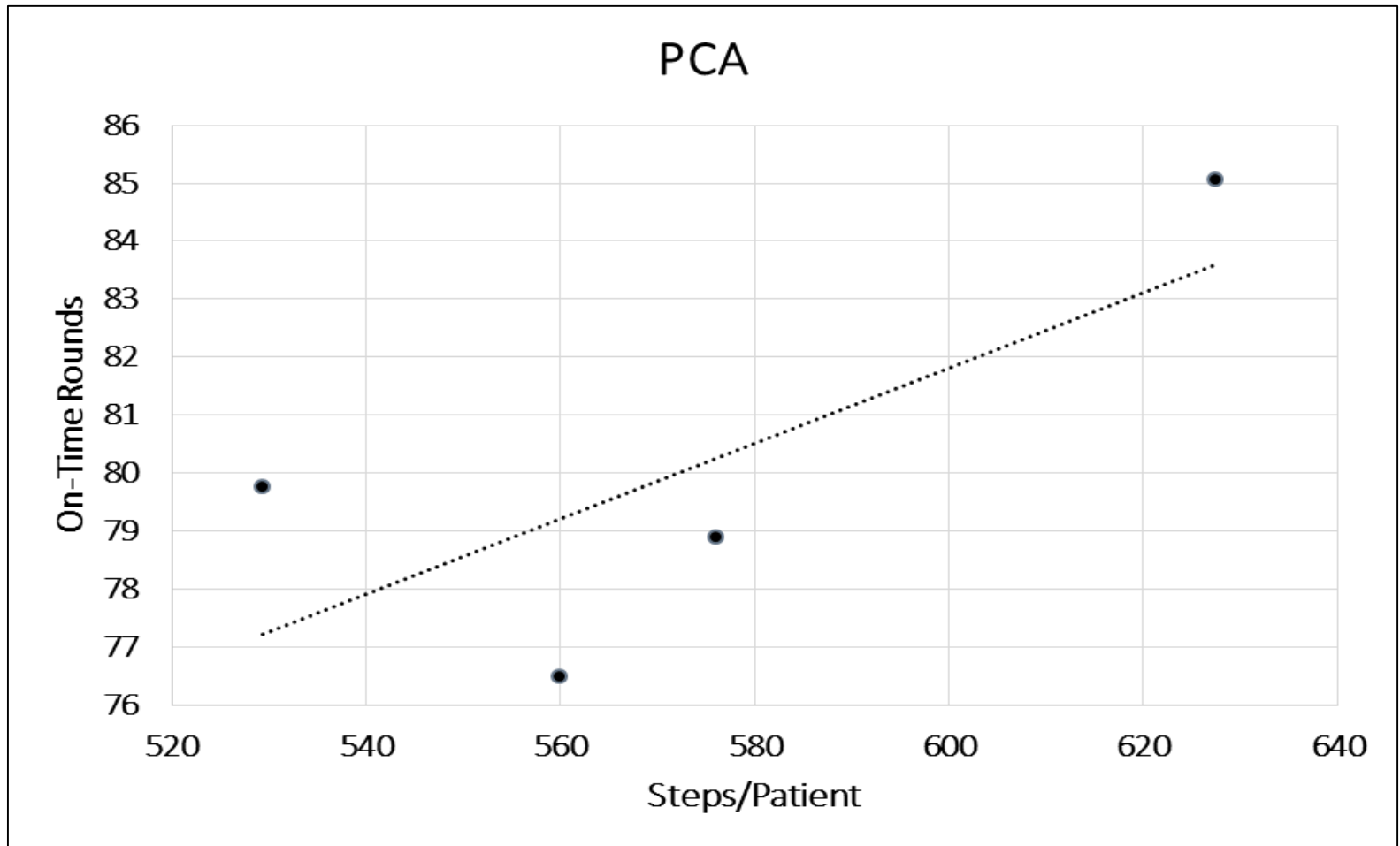
On-Time Rounds versus RN Steps



Sep. 2015-Jan. 2016

Correlation= 0.78 (strong correlation)

On-Time Rounds versus PCA Steps

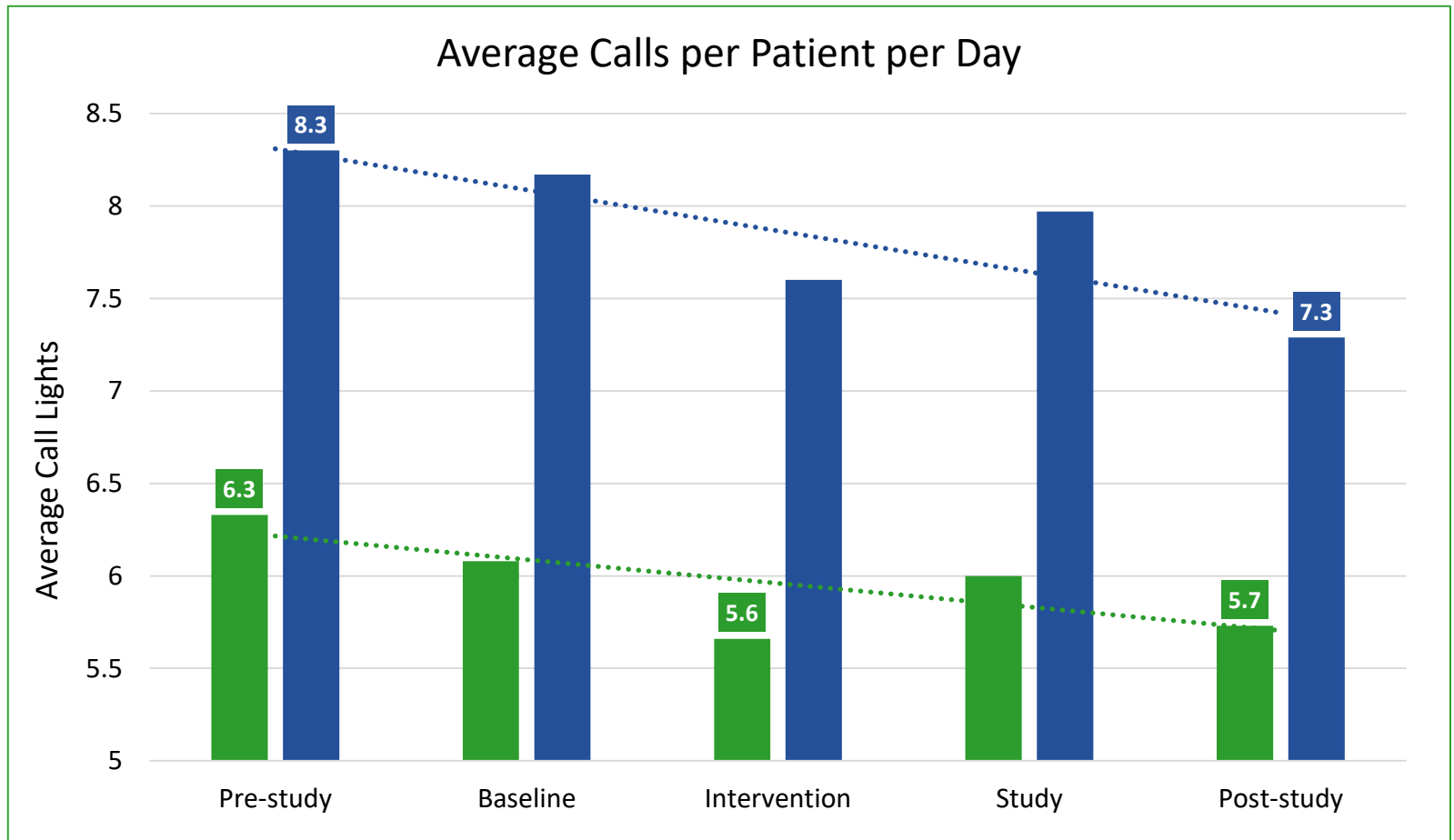


Sep. 2015-Jan. 2016

Correlation= 0.73 (strong correlation)

So- how did this affect patient safety and satisfaction?

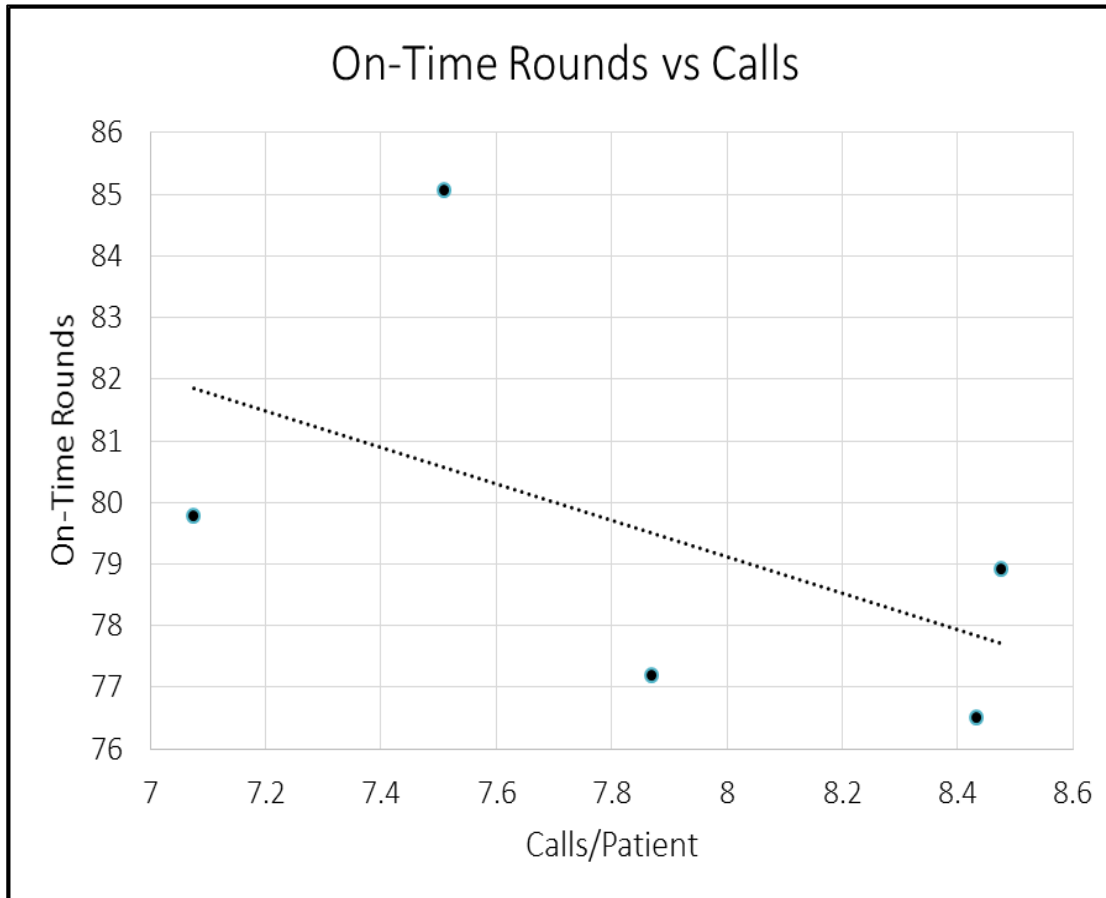
Call Light Outcomes Hospital vs. Med-Surg



Average Patient Calls

Time Frame		Average Call Lights	Percent Change
Jan.2015-May.2015 (Pre-study)	5 months prior to study	6.32	N/A
Jun.2015-Jul.2015 (Baseline)	2 months prior to intervention	6.1	3.5% decrease from pre-study
Sep.2015-Feb.2016 (Study)	6 months after intervention	5.89	6.8% decrease from pre-study
Sep.2015-Aug.2016	1 year after intervention	5.64	10.8% decrease from pre-study
Sep.2015-Jul.2017	After intervention to current	5.8	8.2% decrease from pre-study

Initial Overall OTR and Calls



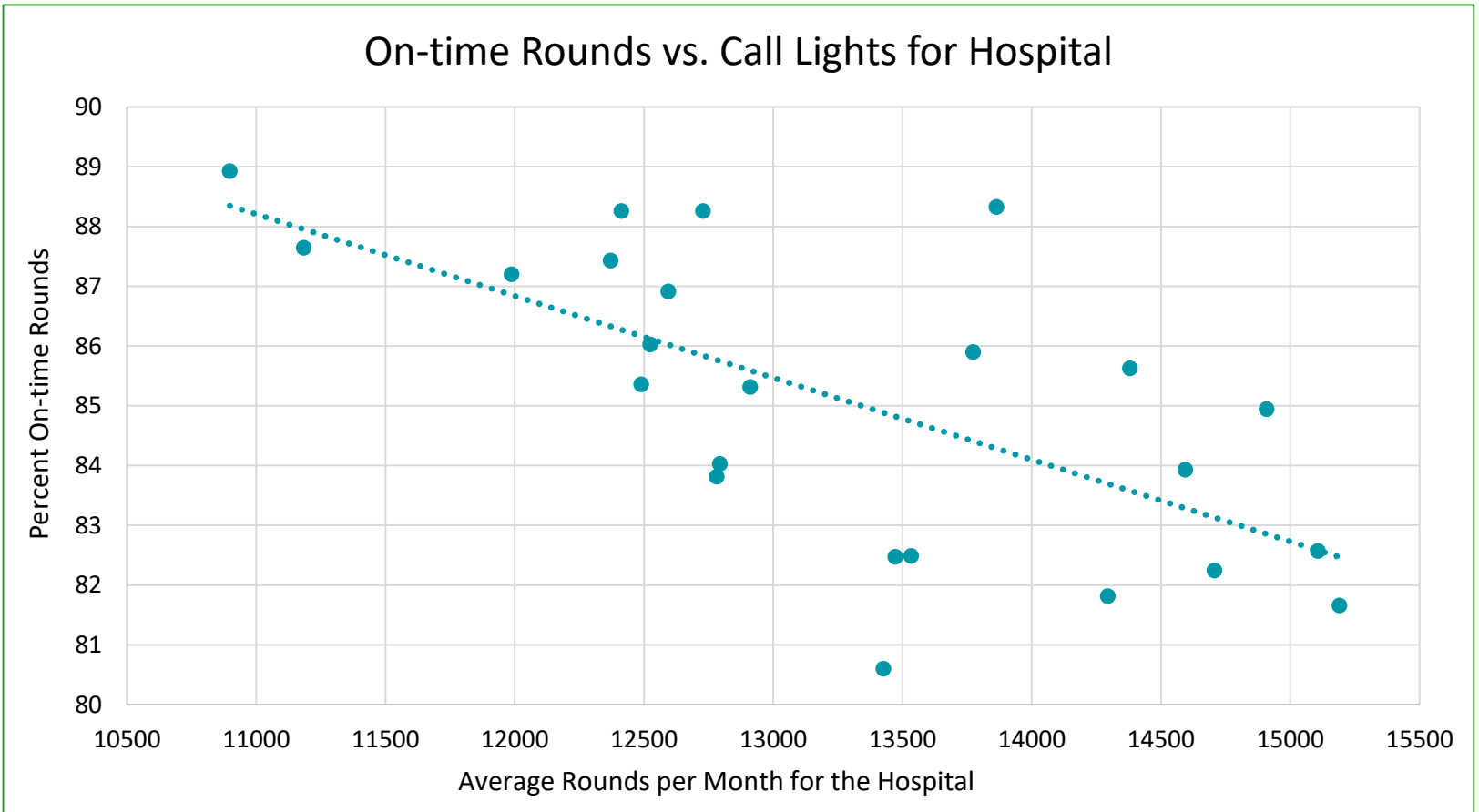
↑
As the unit's percent of On-Time
Rounds gets closer to 100%

↓
Call lights go down

Sep. 2015-Jan. 2016

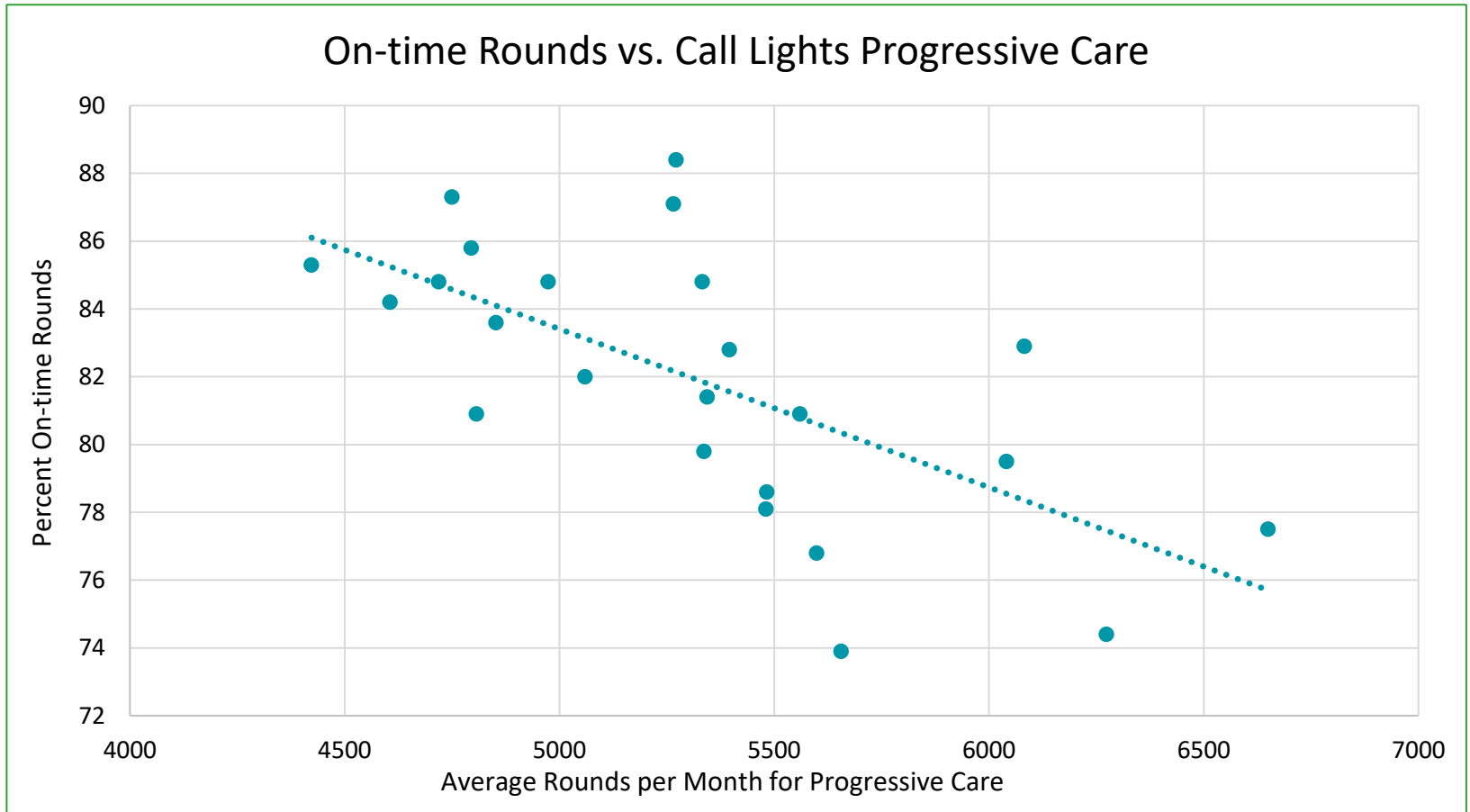
Correlation= -0.52 (moderate correlation)

Post-Intervention Overall OTR and Calls



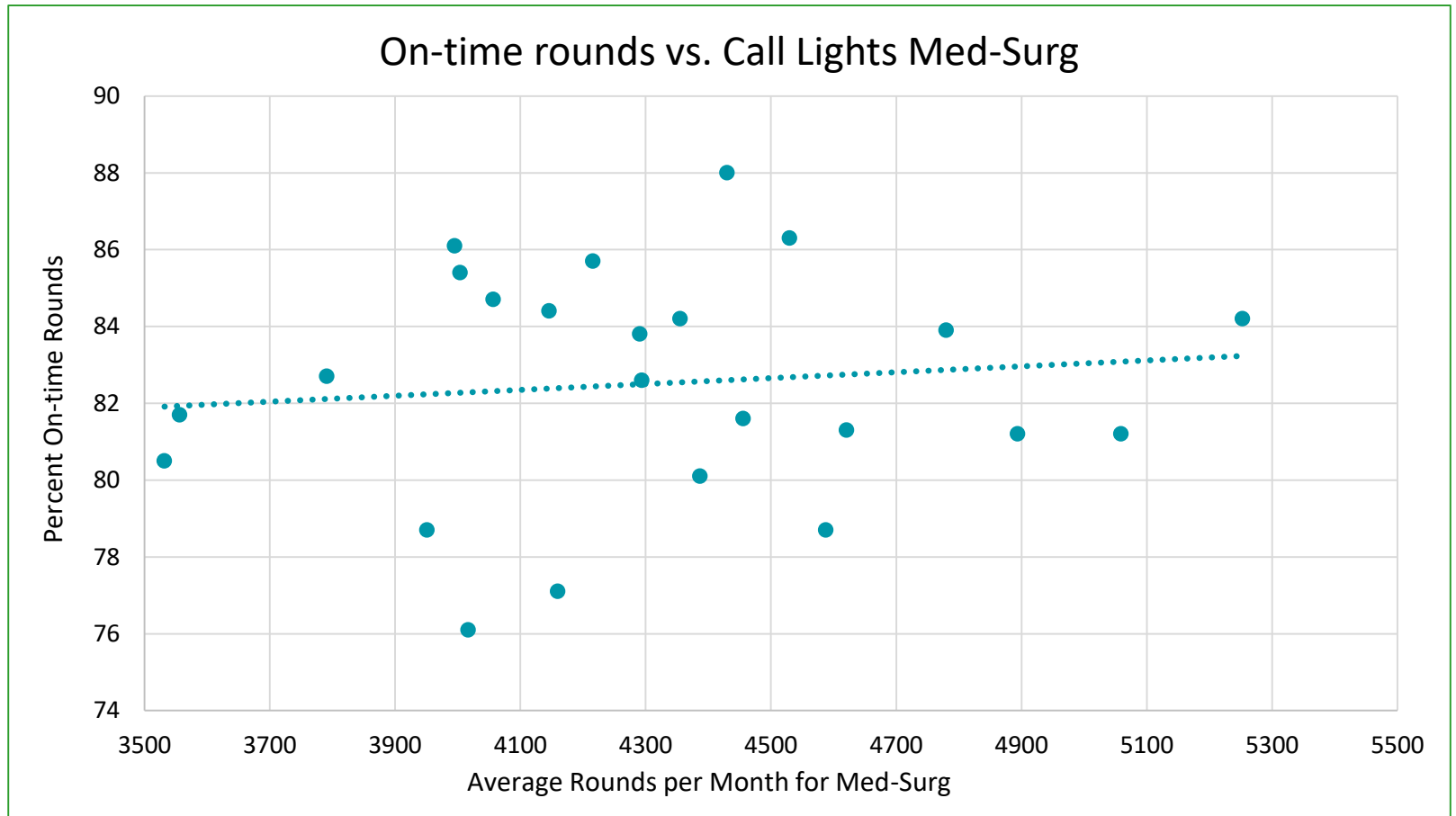
Correlation= -0.6532 (strong correlation)

Post-Intervention OTR and Calls- Progressive Care



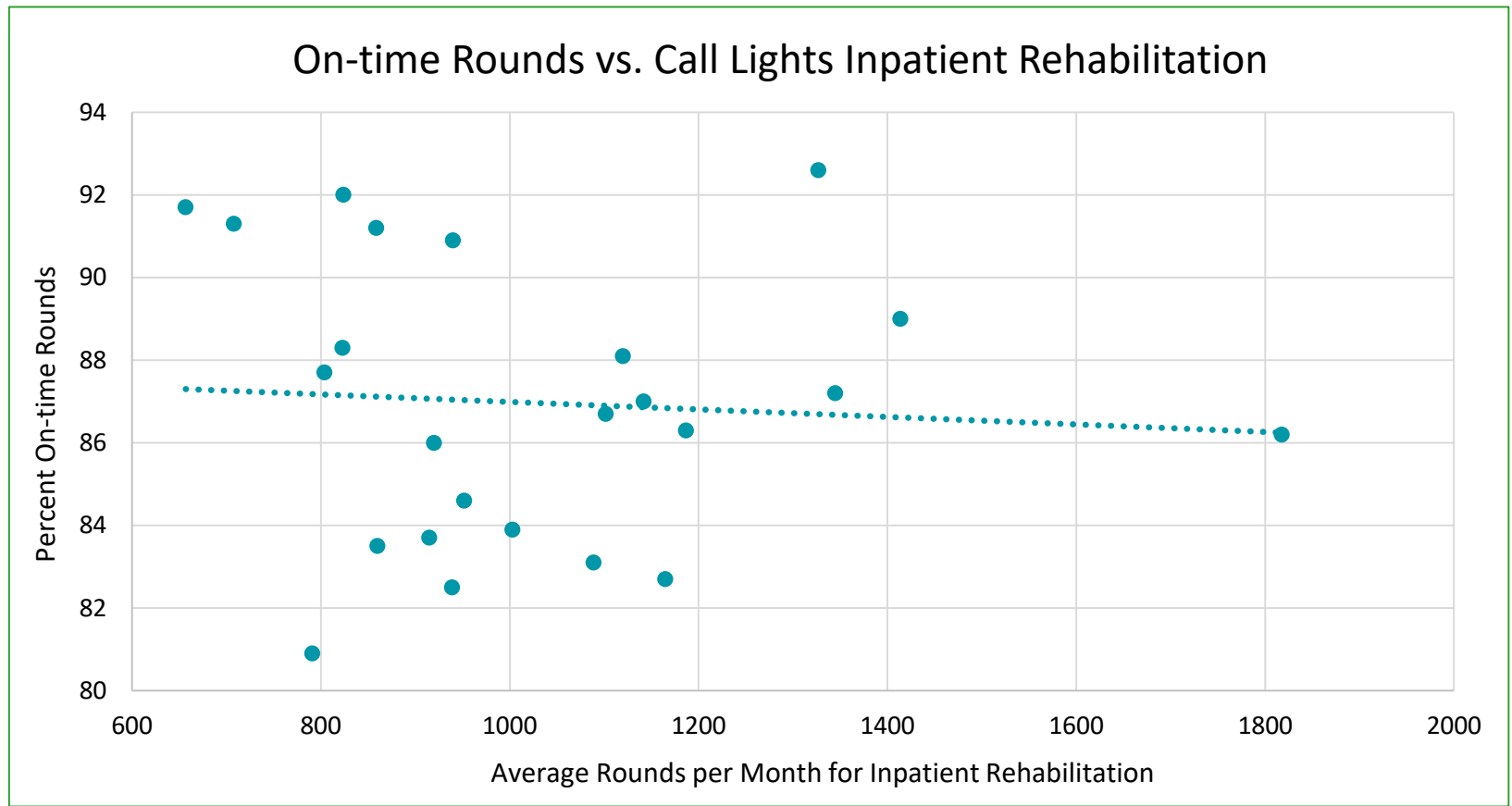
Correlation= -0.6498 (strong correlation)

Post-Intervention OTR and Calls- Med-Surg



Correlation= 0.1087 (no correlation)

Post-Intervention OTR and Calls-Inpatient Rehabilitation

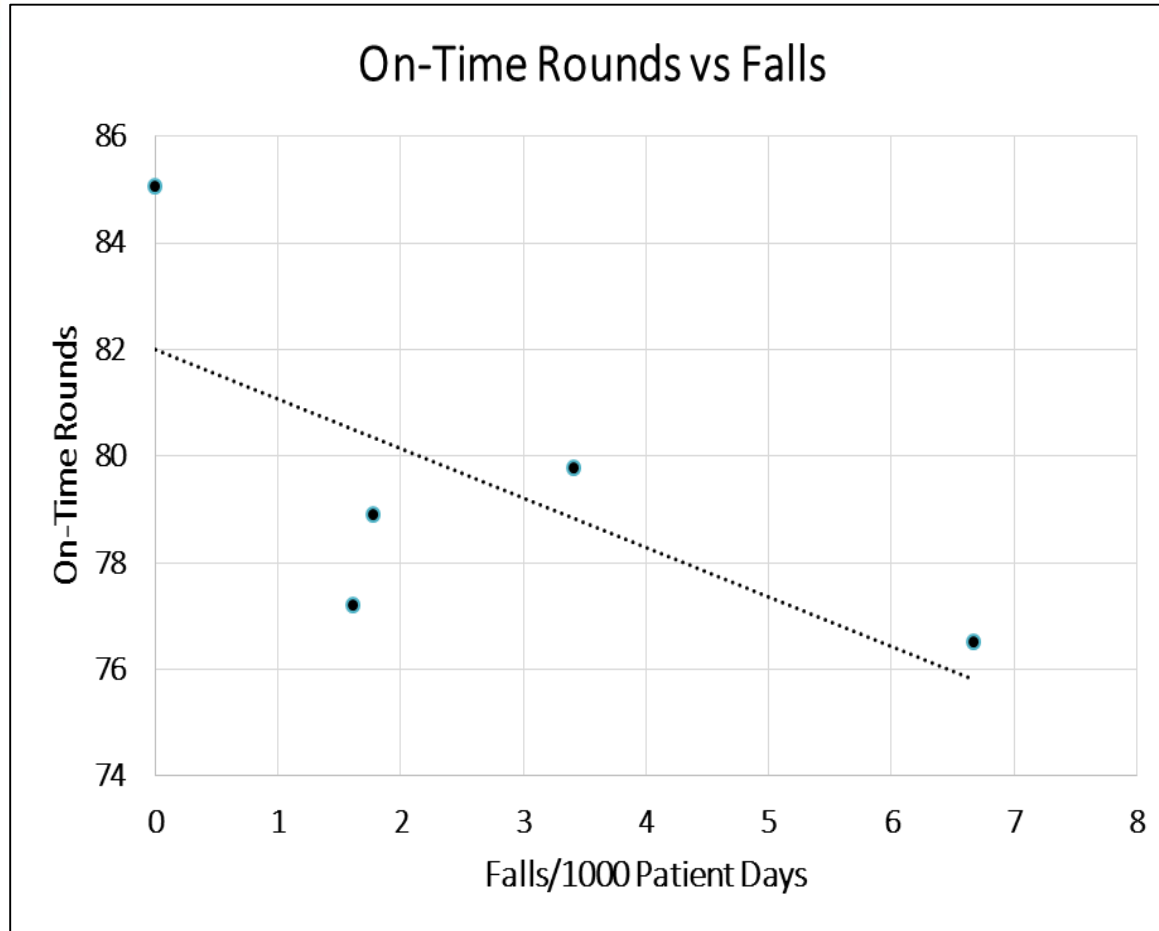



Correlation= -0.0691 (no correlation)


Patient Falls per 1000 Patient Days

Time Frame		Fall Rate	Percent Change
Jan.2015-May.2015 (Pre-study)	5 months prior to study	2.99	N/A
Jun.2015-Jul.2015 (Baseline)	2 months prior to intervention	3.98	33.11% increase from pre-study
Sep.2015-Feb.2016 (Study)	6 months after intervention	2.62	34.17% decrease from baseline
Sep.2015-Aug.2016	1 year after intervention	3.34	16.08% decrease from baseline
Sep.2015-Jul.2017	After intervention to current	3.19	19.85% decrease from baseline

Initial Overall OTR and Falls



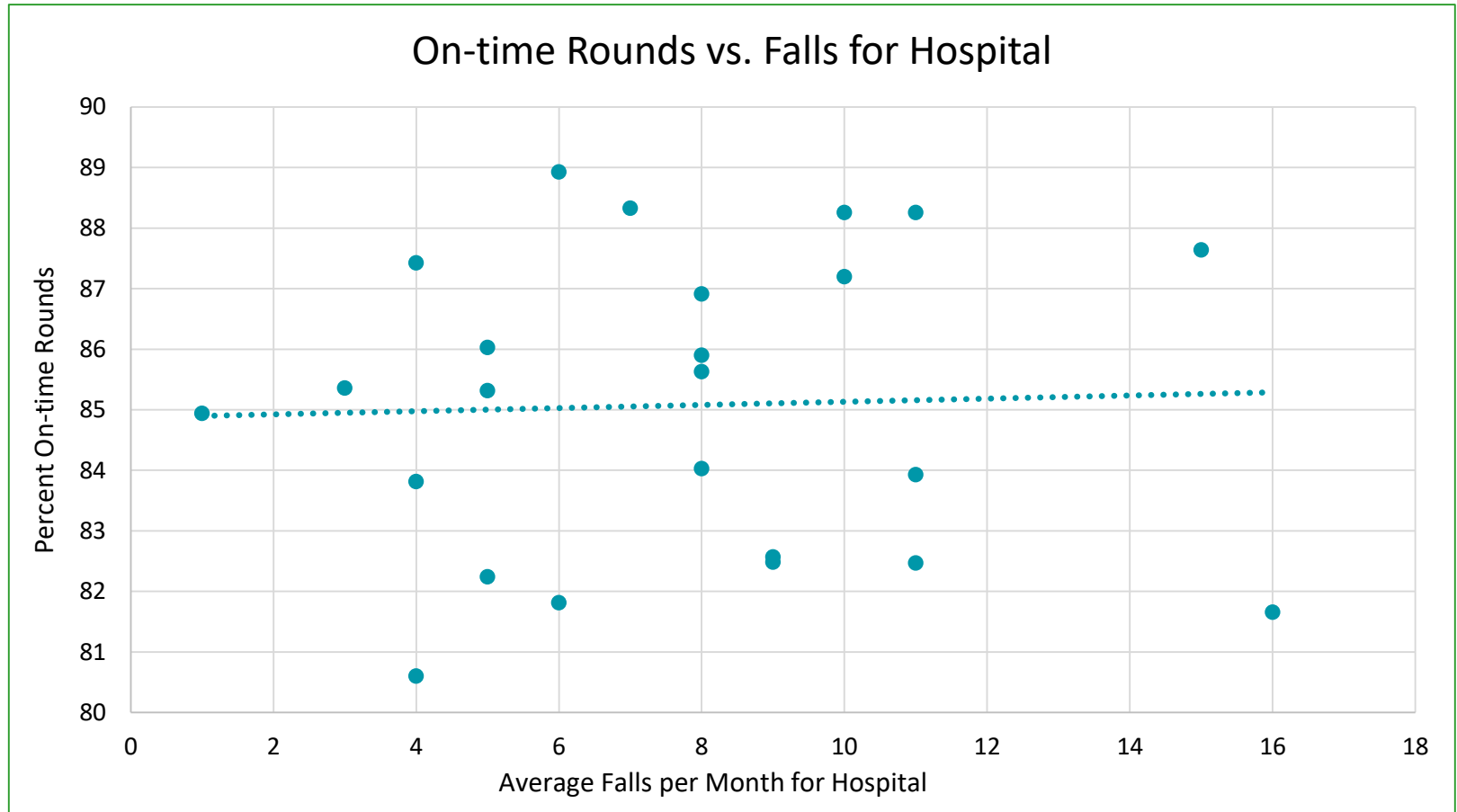

As the unit's percent of On-Time
Rounds gets closer to 100%


Falls decrease

Sep. 2015 – Jan. 2016

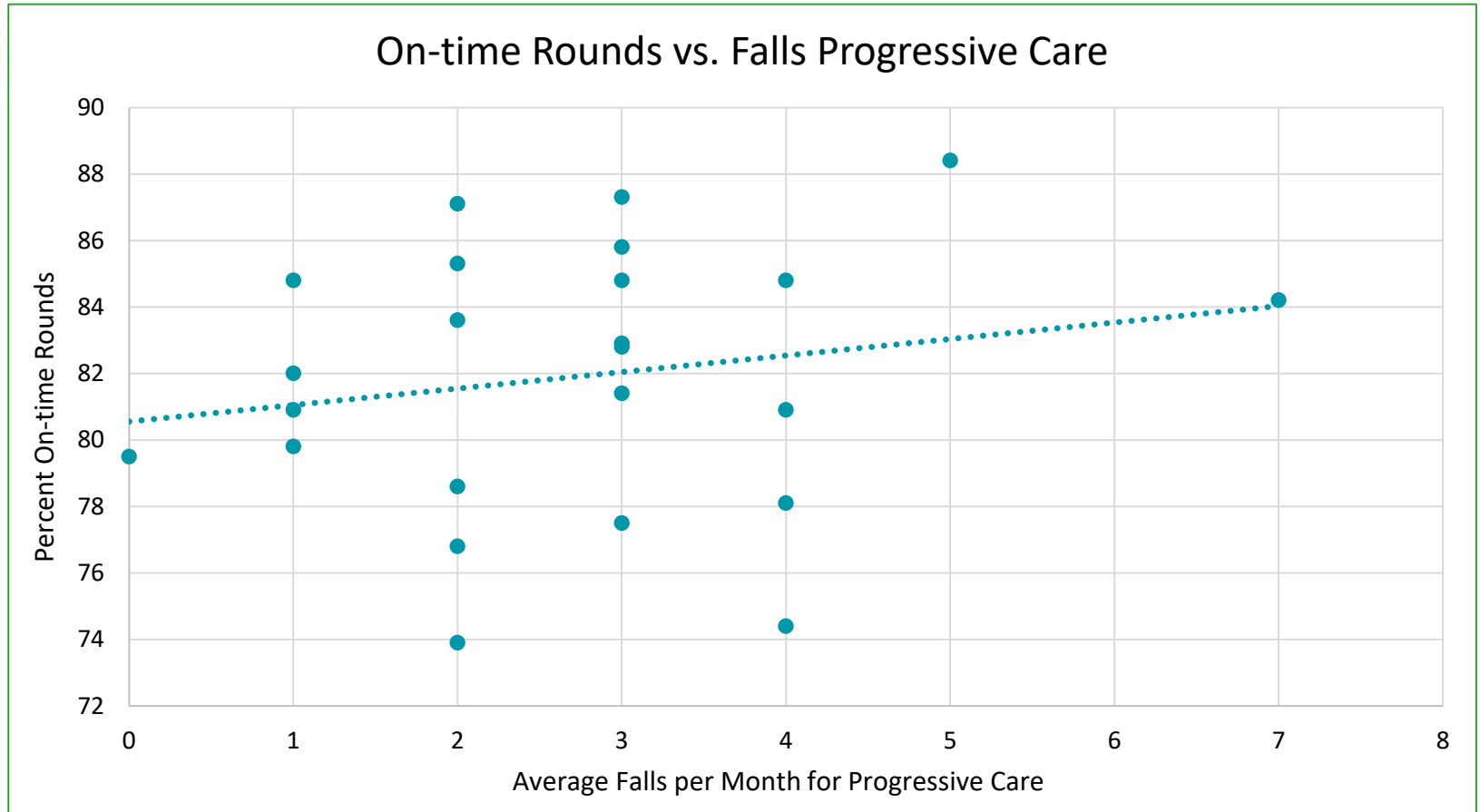
Correlation= -0.69 (strong correlation)

Post-Intervention Overall OTR and Falls



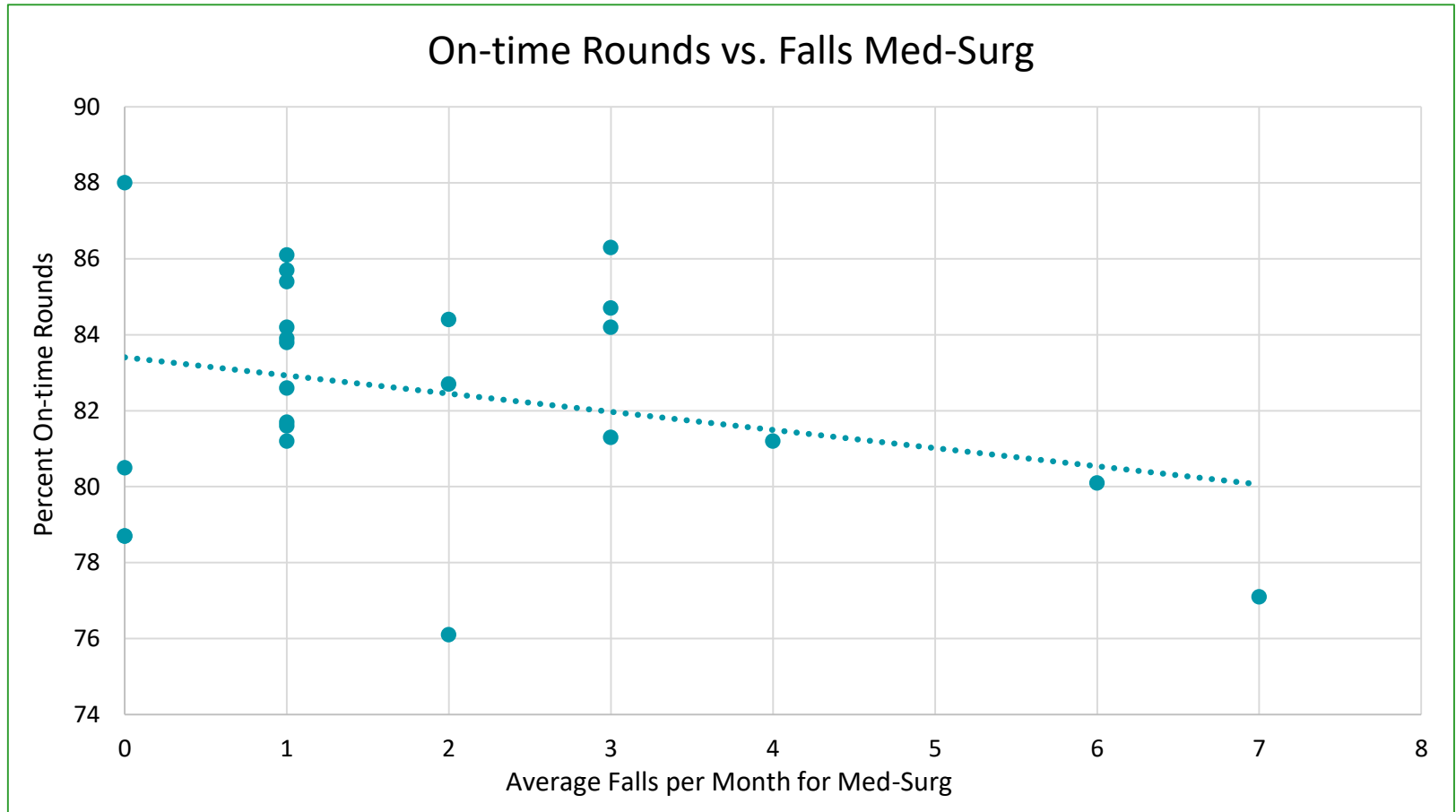
Correlation= 0.0382 (no correlation)

Post-Intervention OTR and Falls-Progressive Care



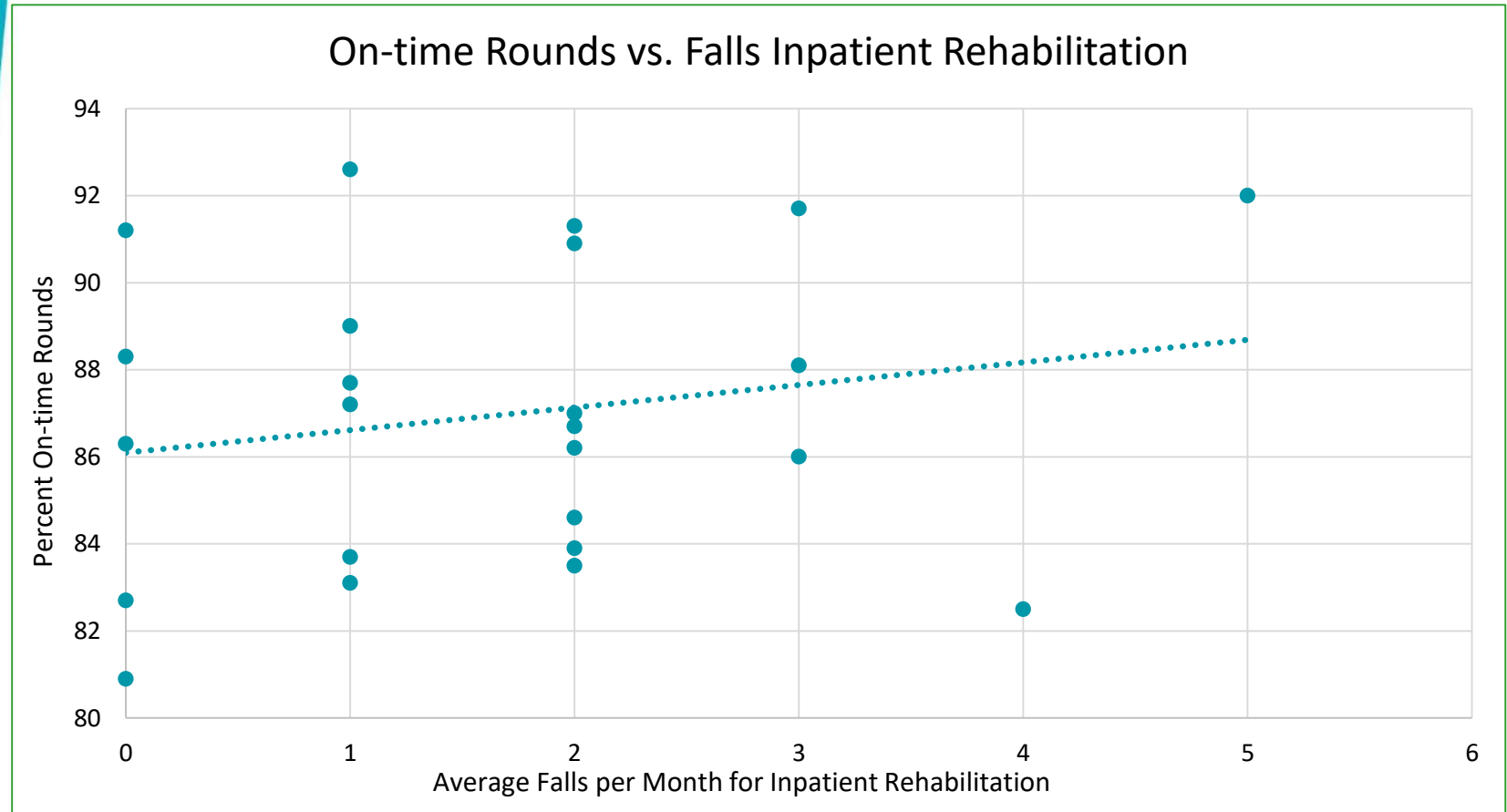
Correlation= 0.1895 (no correlation)

Post-Intervention OTR and Falls- Med-Surg



Correlation= -0.2855 (weak correlation)

Post-Intervention OTR and Falls-Inpatient Rehabilitation



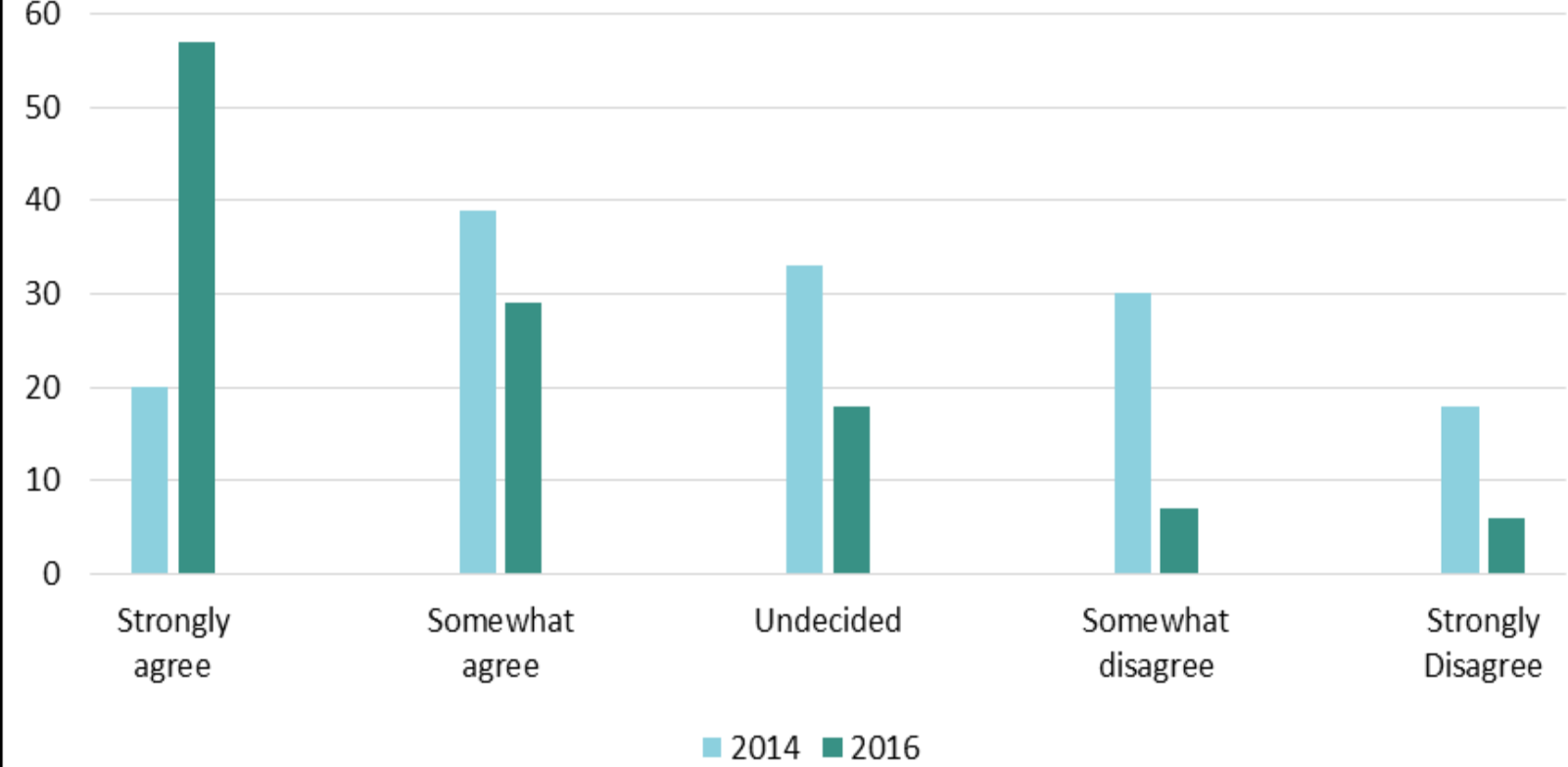
Correlation= -0.1983 (no correlation)

Hourly Rounding Perceptions, Barriers, and Solutions Survey

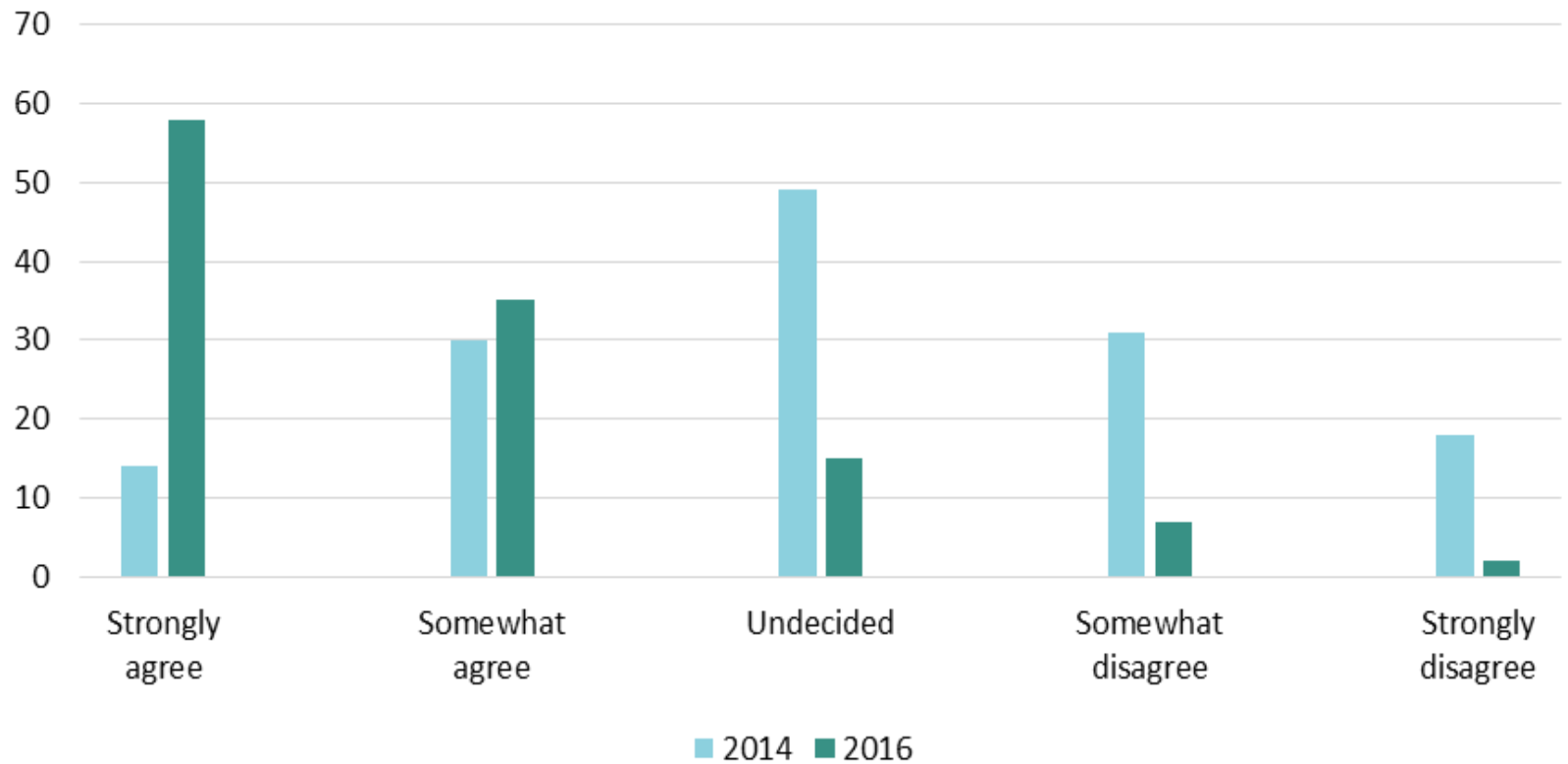
Hourly Rounding Survey

- 2 questions applicable to Vigilance™
 - Having a computerized tool would make HR more convenient to complete
 - There is a good way to determine if HR is being done
- 3 questions added for Nobl Health
 - I feel that I am more efficient with the use of HR
 - I feel that when I HR I decrease return visits to the patient room each hour
 - I feel that I walk less with proper HR

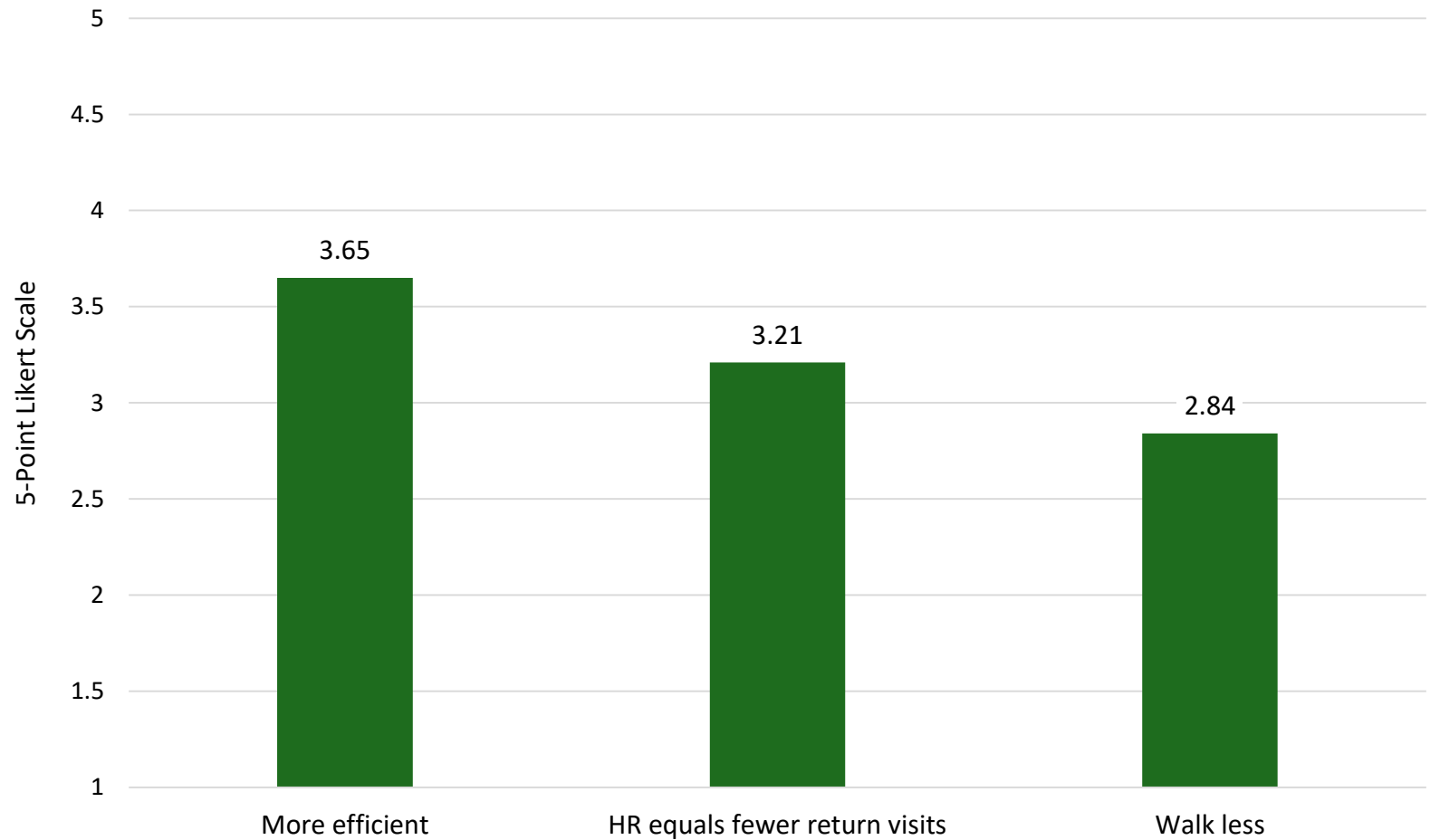
Computerized tool makes HR more convenient



Good way to determine HR done



Effects of Vigilance™



Significant Outcomes

- Higher OTR = fewer lights per patient; Hospital & Progressive Care were significant
 - Maintained an 8.2% decrease in call lights from pre-study data
- Reduced calls on Med-Surg by 1/patient; Hospital by 0.6/patient
 - Average Med-Surg census of 20, 10 fewer lights/shift
 - Average Hospital census 60-90, 15-23 fewer lights/shift
- Higher OTR = fewer patient falls on Med-Surg
 - Maintained 19.85% decrease in falls from baseline
- Reduced call lights ≠ higher or lower walking steps
- Higher or lower on-time rounding percentage ≠ higher or lower day shift steps
- Higher on-time rounding percentage = higher night shift steps
- Staff strongly agrees having an electronic documentation tool
 - ✓ = HR more convenient to complete
 - ✓ = easier to determine that HR is being completed

Special Thanks

- Beth Bartlett, MSN, RN, CENP; Vice President of Patient Care Services, CHI Health St. Francis
- Dr. Brenda Bergman-Evans, PhD, APRN-NP, APRN-CNS; CHI Health, for initial data analysis
- Natasha Quinones, BSN, RN for initial research assistance

Questions & Follow-up

- Katie Hottovy, Nobl
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