

The Future of Obstetrics: The Latest Practices Improving Maternal Outcomes



Lora Sparkman, MHA, BSN, RN PARTNER,
SOLUTIONS, VP PATIENT
SAFETY AND QUALITY, RELIAS



Jill K. Williamson, DNP, RN, NEA-BC
VP PATIENT SAFETY AND QUALITY, RELIAS



Marta DeVolt, MN, RN, NPD-BC,
RNC-OB
SR. PROGRAM MANAGER; PROVIDENCE NURSING
INSTITUTE, CLINICAL ACADEMY

Introductions

Current factors
influencing
education
models OB

Maternal Mortality and Morbidity
– Clinical, Behavioral & Social

Nurse workforce

OSF

Education Strategy and
Modalities

Value and Outcomes

Providence

Education Strategy and
Modalities

Value and Outcomes



INTRODUCTIONS

Learning Objectives

- Understand the benefit of multiple training modalities
- Tools for an effective blended learning approach
- Up-to-date practices for driving positive clinical outcomes



Lora Sparkman, MHA, RN, BSN

VP PATIENT SAFETY AND QUALITY, RELIAS

Lora Sparkman holds a Master of Health Administration from Lindenwood University, a Bachelor of Science in Nursing from the University of Missouri, and a Diploma in Nursing from Barnes Hospital School of Nursing. She has been a nurse for 37 years and leading patient safety and improvement work for over 22 years. Lora's work includes using software and technology to advance healthcare education to improve competency of clinicians that leads to improved patient outcomes. For the past 6 years, she has served as a clinical leader at Relias, one of the largest healthcare education and solutions provider in the U.S., and leading the industry in healthcare workforce readiness.

In 2022, Sparkman was recognized as the top 10 Women Leaders in Healthcare Software in 2022 by Beckers, and top 25 Women Leaders in Healthcare Software in 2022 by The Healthcare Technology Report. Additionally, she completed a mini docuseries on Maternal Mortality sponsored by the BBC Storyworks and the International Council of Nurses in 2022.

<https://www.relias.com/nurses>. Sparkman leads as a healthcare strategy thought leader and clinical expert in patient safety, risk reduction, high reliability, operations, and quality improvement in acute care.



Jill K. Williamson, DNP, RN, NEA-BC

VP PATIENT SAFETY AND QUALITY, RELIAS

Jill K. Williamson has a background inclusive of 24 years of nursing experience with a clinical background in medical, surgical, trauma nursing and a strong educational focus. Her current position is as the director of education for a large healthcare system and focuses on education across the continuum of care. In this role her emphasis is on preparing, strategizing, implementing, and evaluating business plans as well as managing change, specifically as it relates to educational and training structures within evidence-based practice affecting clinical outcomes. This includes applying principles, standards, and technology applicable to education, simulation, and research.

Jill has presented at national conferences as well as local in both podium and poster style. She holds a Doctor of Nursing Practice degree with a focus on management and leadership. She holds certification in Nurse Executive, Advanced. She is active in the American Nurses Association and Association for Nursing Professional Development.



Marta DeVolt, MN, RN, NPD-BC, RNC-OB

**SR. PROGRAM MANAGER; PROVIDENCE NURSING INSTITUTE,
CLINICAL ACADEMY**

Marta DeVolt is a Sr. Program Manager in the Providence Health Nursing Institute Clinical Academy. She currently leads the development, maintenance, and implementation of transition into practice curricula for a multi-state system in the following specialties: Obstetrics, Neonatal, Pediatrics, and Nursing Professional Development.

Before moving into nursing education, Marta spent 6 years as an obstetrics nurse and is passionate about improving nursing education with the ultimate goal of providing the foundation and support for nurses to deliver the best care for their patients.

Marta has a special interest in innovative teaching strategies, debriefing and making learning engaging and effective - for both learners and facilitators! She currently lives in Greensboro, NC with her husband and three young children and is pursuing an Educational Doctorate with Northeastern University.

Relias' Mission:

To measurably improve the lives of the most vulnerable members of society and those who care for them.

Introductions

Who are we?

→ Current factors
influencing education
models OB

OSF

Providence



IMPROVE HEALTHCARE OUTCOMES

Advance Healthcare Talent

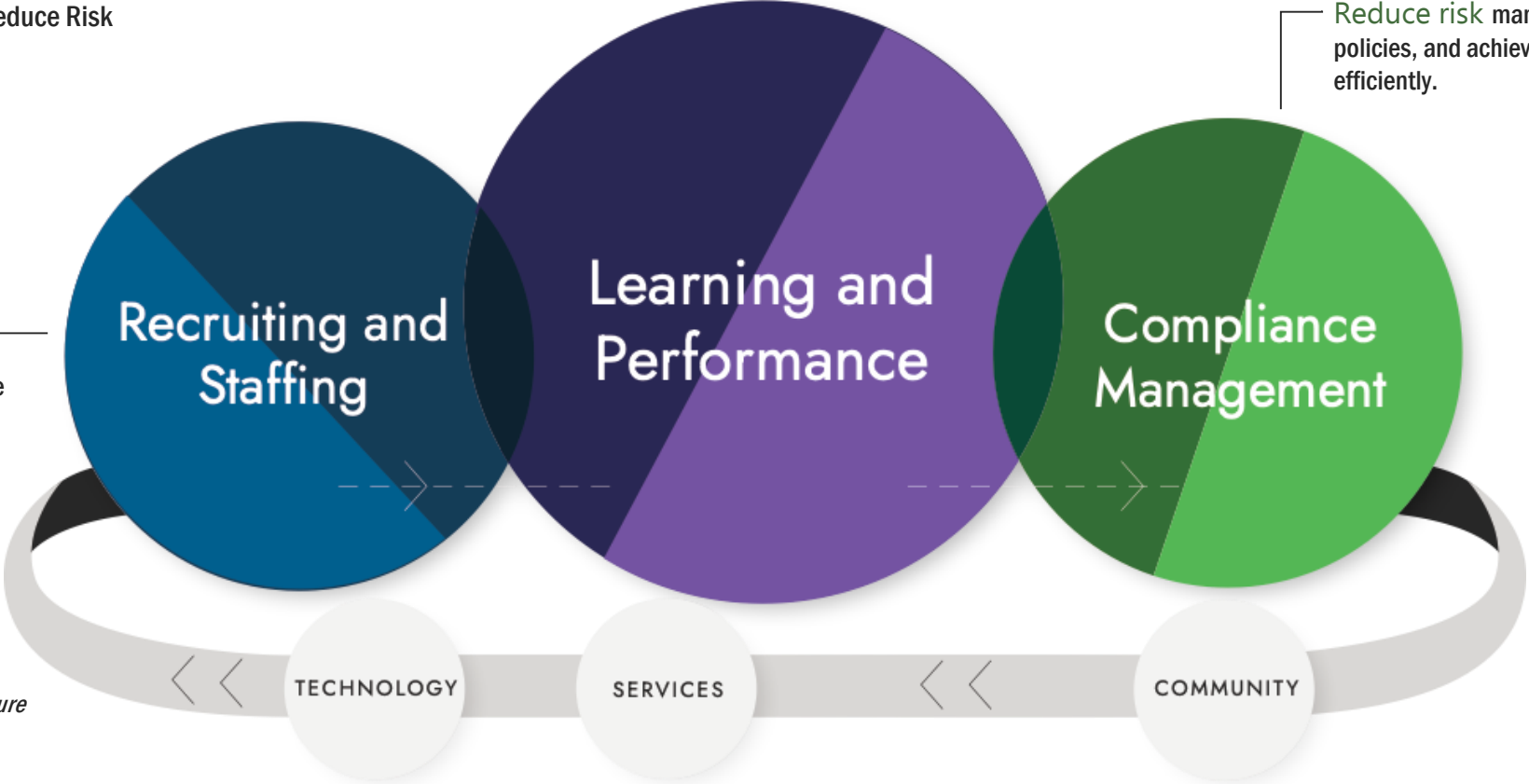
Retain staff + Elevate care quality + Reduce Risk

SOLUTIONS

Reach qualified healthcare talent easily. Advance nurses' careers.

Educate your workforce with expert content and easy-to-use performance tools.

Reduce risk manage policies, and achieve compliance efficiently.



**Compliance courses and Policy & Procedure attestation available now; full solution available in 2023*

CATALYSTS

IMPROVE HEALTHCARE OUTCOMES

Relias— Unmatched Expertise

We are a global team working with a diverse customer based on solutions to advance healthcare talent.

Our Mission: To measurably improve the lives of society's most vulnerable and of those who care for them.

CUSTOMERS



PARTNERS



AWARDS



2022 Top Best
Companies

IMPROVE HEALTHCARE OUTCOMES

Relias—Unmatched Expertise

11,000

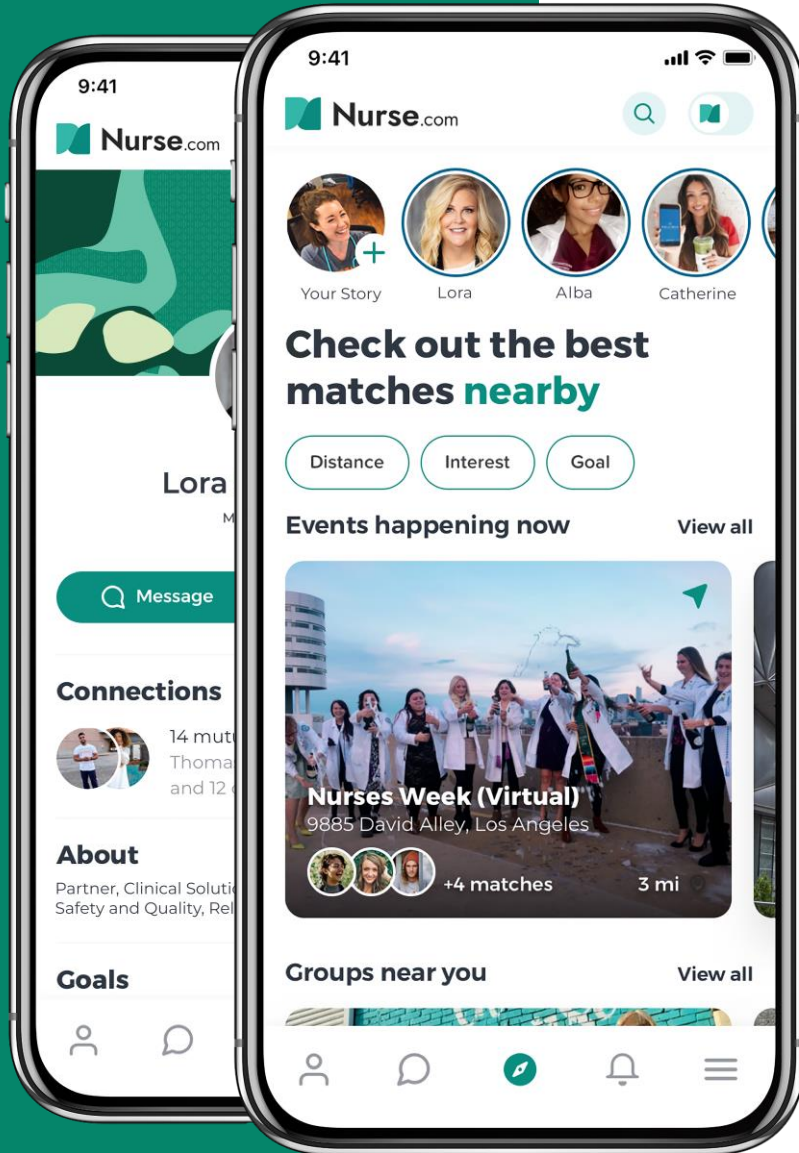
Healthcare and Human Services
Customers

9,000

Available and
Maintained Courses

1,000

Years Healthcare and Industry
Experience on Staff



(Nurse.com App)

CATALYST

A Strong Healthcare Community Yields Better Outcomes

8 Million unique visits to our sites a year

Relias community members create connection, get education, and are engaged throughout their career. From Nurses, Physicians, and Allied Health Professionals

Timeline on Reactions to Maternal Mortality

2015

Lancet Journal
Article

2016–2017

USA Today,
Boston Globe,
&
NY Times
Articles and
more

2018

Preventing
Maternal Deaths
Act

2019

MOMMA's Act
& Congressional
Inquiry

2020

Joint Commission
Maternal Safety
Standards

CDC Hear Her
Campaign

2021–2022

CDC MMRC Reports
Expanded Work on
Maternal Mental
Health
& SDOH

CMS Birthing
Friendly
Designation
originated from
CMS and to start in
01-2023

2023

Continued Focus on CMS'
Birthing Friendly

Black Maternal Outcomes
Matters HHS Panel
Discussion with Sec.
Becerra and Black/Brown
women leaders

Mom's Tour

Millions of dollars
available in HRSA Grants
to address community care
programs for Mom
— Doulas, etc.

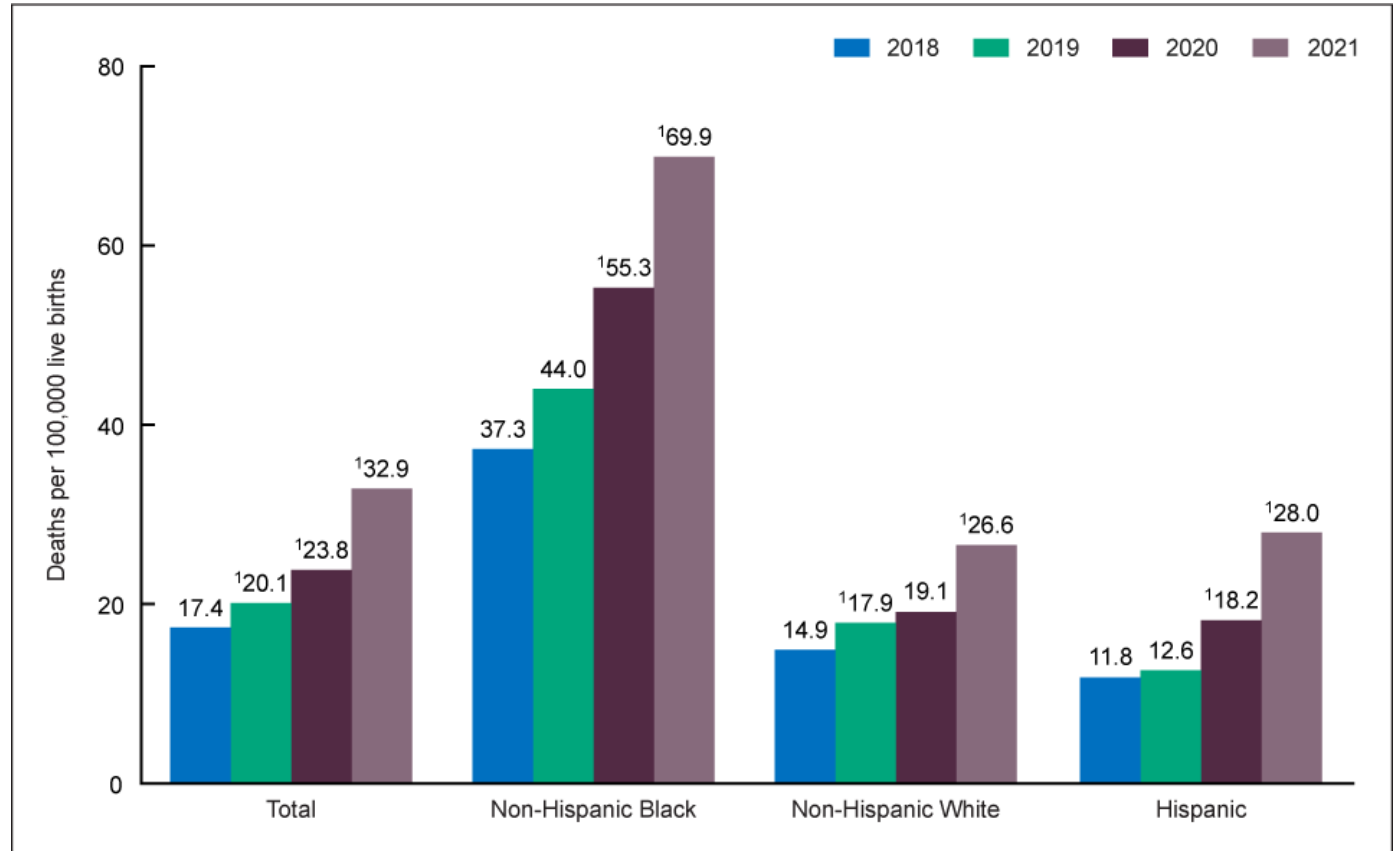
CURRENT STATE: MATERNAL MORTALITY (US)

Maternal mortality rates

by race and Hispanic origin: United States, 2018–2021

(Source: Hoyert DL. Maternal mortality rates in the United States, 2021. NCHS Health E-Stats. 2023.

DOI: <https://dx.doi.org/10.15620/cdc:124678>)



¹Statistically significant increase from previous year ($p < 0.05$).

NOTE: Race groups are single race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

IMPROVE HEALTHCARE OUTCOMES

Healthcare Workforce Challenges Are a National Emergency

How is your team addressing retention in today's landscape?

55%

Frontline Workers report Covid Burnout

66%

Of acute and critical care
nurses are considering leaving
the profession entirely

75%

Of clinicians report being overwhelmed

IMPROVE HEALTHCARE OUTCOMES

Social Determinants Are Impacting Care

What resources do your staff use to address issues impacting care quality?

Factors contributing to health status

75%



Such as income and economic means, education, physical environment, social support networks, and access to health services.

25%

Biological, behavioral, and medical factors

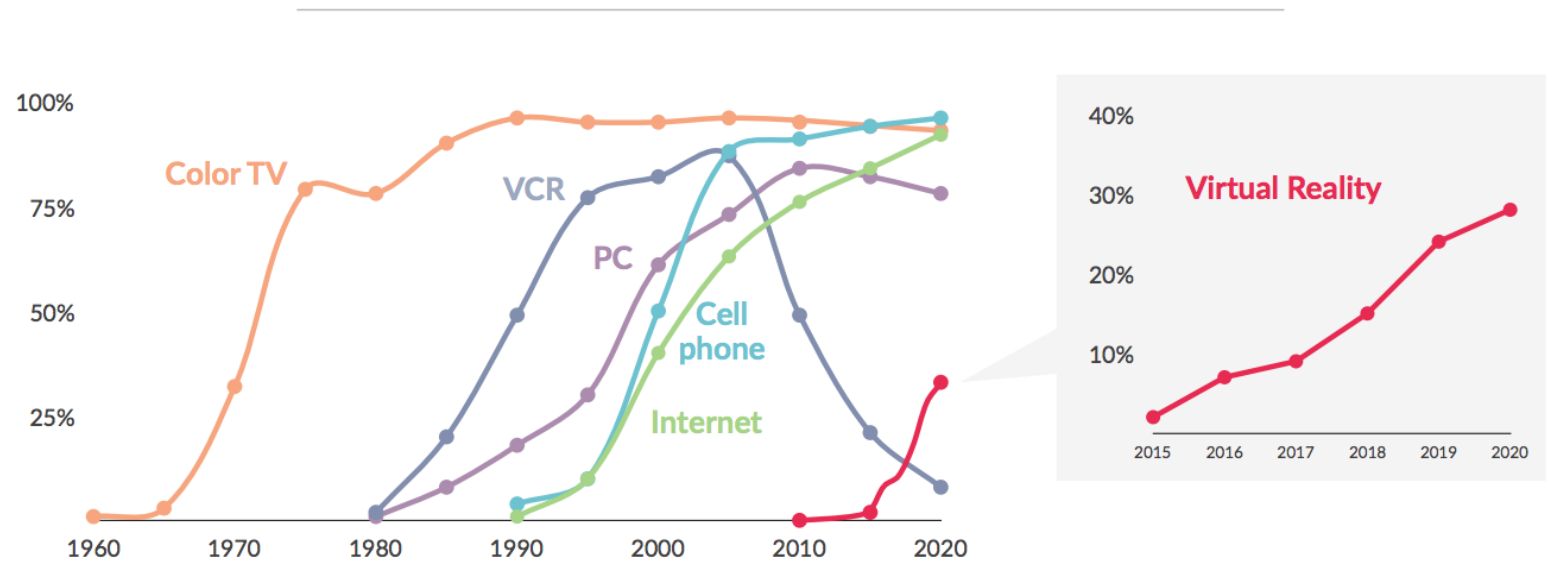
(Source: Relias Study)

Advancing Education Tech Modality Considerations

Global AR-VR in healthcare market is stood at USD2748.05 million in 2021, which may grow with a 22.50% CAGR during the forecast period, 2023-2027, to reach market value of USD9796.29 million by 2027

- BUSINESSWIRE 07/22

Technology adoption rates
Share of U.S. households, 1960-2020



Sources: Michael Felton, The New York Times; Pew Research Center; Gallup; U.S. Census
Opportunities in XR, VRX USA December © 2017 SuperData Research Holdings, Inc. All rights reserved.

Introductions

Who are we?

Current factors
influencing education
models OB

→ OSF

Providence



OSF

OSF Healthcare

Catholic HealthCare System

Spanning the state of Illinois and one hospital in the Upper Peninsula, MI.

- Employs nearly 23,000 in 157 locations
- Ministry Services – Corporate Management
- 15 hospitals & One Children’s Hospital
- 45 Acute Care Locations
- Two Colleges
- Home Care & Hospice Home
- Jump Trading Innovation Simulation Center
- Aviation

Pointcore, Inc.

HealthCare Related Businesses

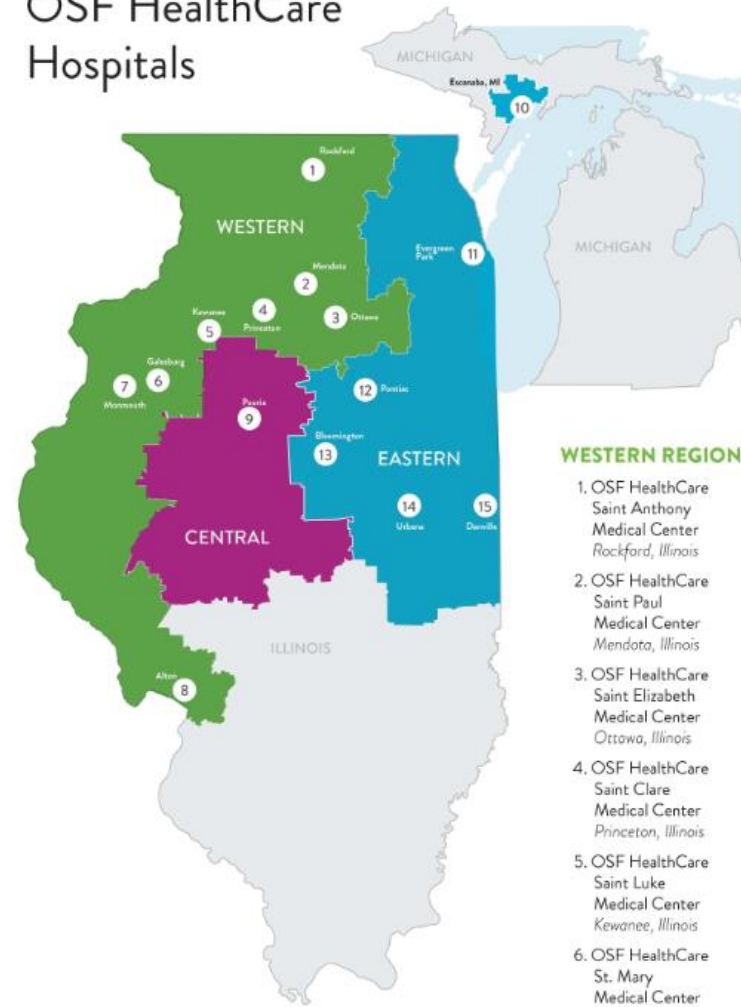
OSF HealthCare Foundations

The Philanthropic Arm

OSF Ventures

Providing Investment Capital for Promising HealthCare Innovation Startups

OSF HealthCare Hospitals



WESTERN REGION

1. OSF HealthCare Saint Anthony Medical Center
Rockford, Illinois
2. OSF HealthCare Saint Paul Medical Center
Mendota, Illinois
3. OSF HealthCare Saint Elizabeth Medical Center
Ottawa, Illinois
4. OSF HealthCare Saint Clare Medical Center
Princeton, Illinois
5. OSF HealthCare Saint Luke Medical Center
Kewanee, Illinois
6. OSF HealthCare St. Mary Medical Center
Galesburg, Illinois
7. OSF HealthCare Holy Family Medical Center
Manmouh, Illinois
8. OSF HealthCare Saint Anthony's Health Center
Alton, Illinois

CENTRAL REGION

9. OSF HealthCare Saint Francis Medical Center
Peoria, Illinois
- OSF HealthCare Children's Hospital of Illinois
Peoria, Illinois

EASTERN REGION

10. OSF HealthCare St. Francis Hospital & Medical Group
Escanaba, Michigan
11. OSF HealthCare Little Company of Mary Medical Center
Evergreen Park, Illinois
12. OSF HealthCare Saint James—John W. Albrecht Medical Center
Pontiac, Illinois
13. OSF HealthCare St. Joseph Medical Center
Bloomington, Illinois
14. OSF HealthCare Heart of Mary Medical Center
Urbana, Illinois
15. OSF HealthCare Sacred Heart Medical Center
Danville, Illinois



CHART

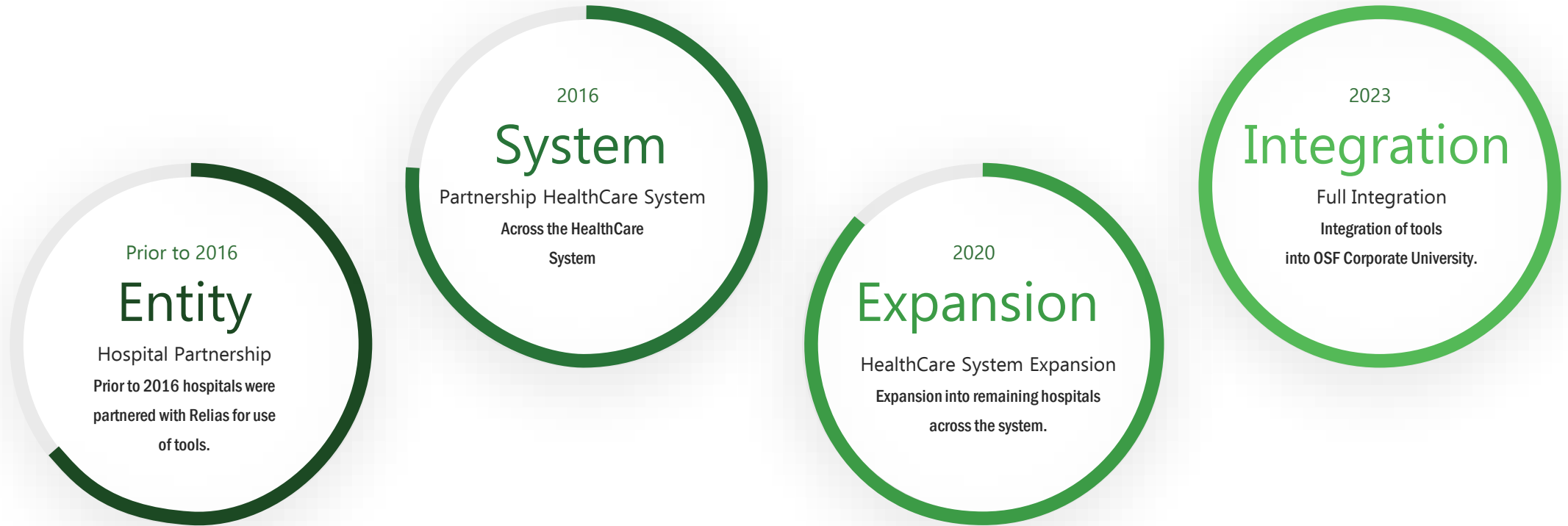
Live Births Across OSF

Entity	FY21	FY22
Heart of Mary MC	483	137
Little Company of Mary MC	979	907
Sacred Heart MC	423	367
Saint Anthony MC	322	346
Saint Elizabeth MC	463	425
Saint Francis MC	2,363	2,287
Saint James JW Albrecht MC	138	117
Saint Francis Hospital	301	279
Saint Joseph MC	780	769
Saint Mary MC	618	666
Etc.	5	1
	6,875	6,302

TIMELINE

Partnership

A growing partnership & collaboration to spread and enhance the use of the tools and optimize user experience





01

Blended Learning.

Use of blended model to support
the goals & objectives



02

Simulation.

Online, in-person, tabletop, and in situ simulation



03

Innovation.

Use of Virtual reality, augmented reality

OSF

Prioritize

- Staffing
- Financial State
- Reduction of non-productive hours
- Focus on key strategic initiatives
- Eliminate “one size fits all”
- Shift in autonomy



Structure for Relias OB

Quarterly cadence for Completion of each topic

01

Fetal Assessment
& Monitoring

02

Hypertension
in Pregnancy

03

Managing
Shoulder Dystocia

04

Obstetrical
& Postpartum
Hemorrhage





Goals

All employees to score **above the 50th percentile** for both knowledge and judgement.

Anyone with results outside of the right upper quadrant required to complete the define learning plan and re-take the assessment.

OUTCOME

Data Results

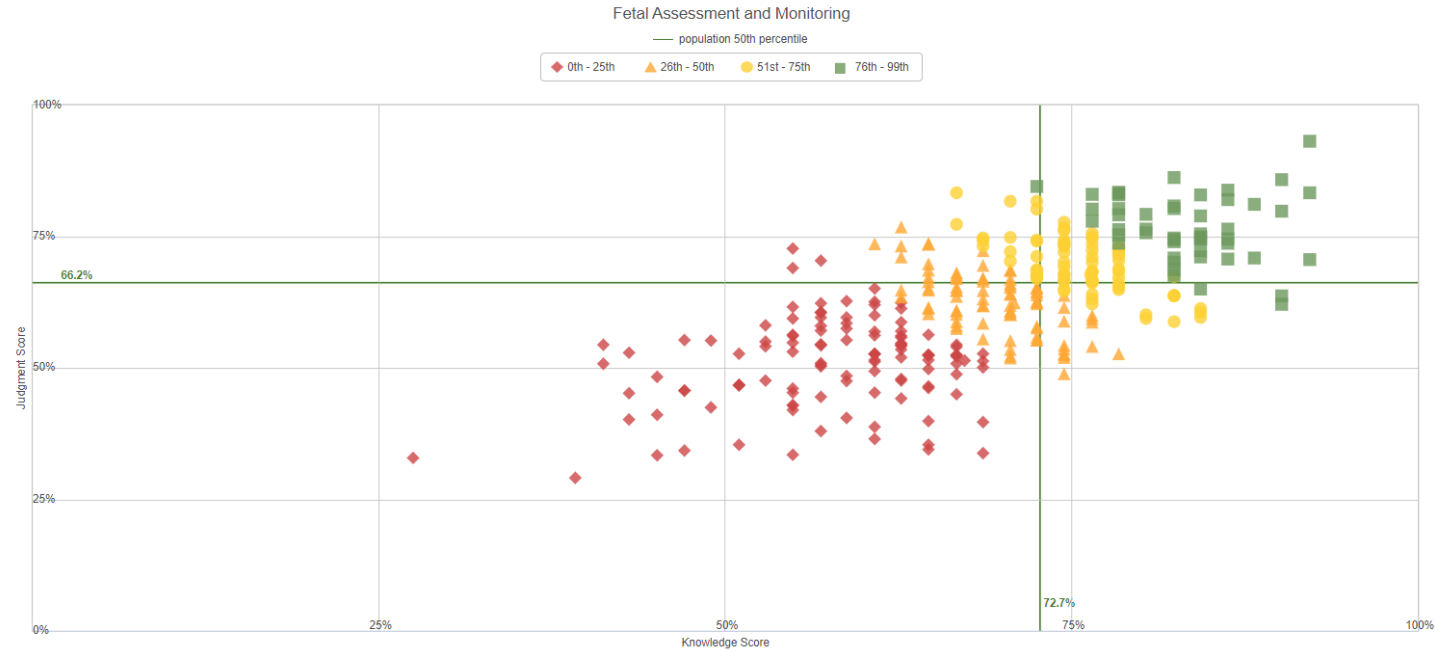


Fetal Assessment and Monitoring Nurses Round 1

(System wide)

Module: Fetal Assessment and Monitoring | Comparison Group: Nurse | Assessment Selection: Round: 1

Show Filters | Compare To | De-Identify User Data



Demographic Data last updated 01/01/2023

Sample (n) ⓘ
329 Nurses

Population (N) ⓘ
47,137 Nurses

Remediation Plan

Anyone with a score below the 50th percentile in both knowledge and judgement will:

1

LEARNING PATHWAYS

Complete all of the red and yellow learning pathways in module

3

ASSESSMENT

Re-take the Fetal Assessment and Monitoring assessment

2

CLINICAL PEARLS

Complete the four Clinical Pearls in Relias OB related to fetal monitoring

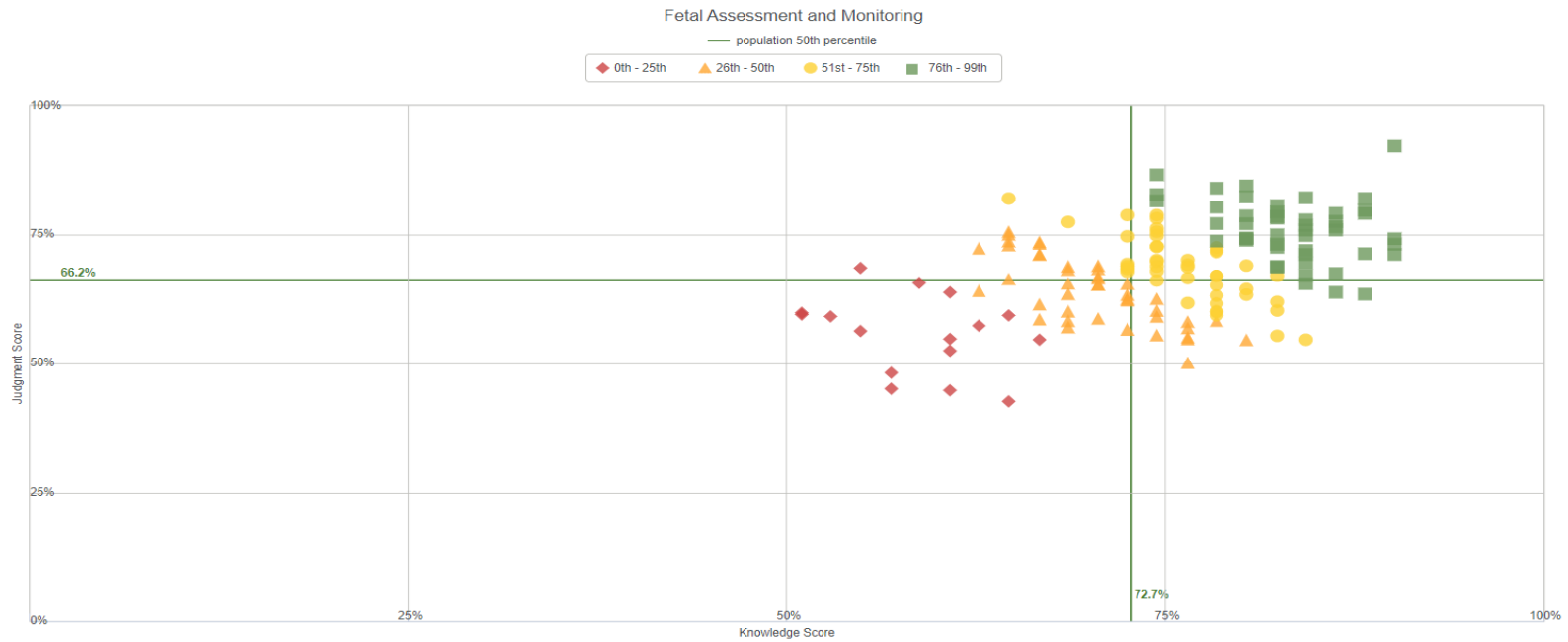
- Importance of Clinical Context in Managing the Category II Fetal Heart Tracing. 0.5 credit hours
- The NICHD Language of Fetal Heart Rate Monitoring. 0.5 credit hours
- Category III Fetal Heart Rate Tracings. 0.5 credit hours
- Intrapartum FHR Pattern Evolution. 0.5 credit hours

Fetal Assessment and Monitoring Round 2

(System wide)

Module: Fetal Assessment and Monitoring Comparison Group: Nurse Assessment Selection: Round: 2 Apply

Show Filters ▼ Compare To De-Identify User Data ⓘ



Demographic Data

last updated 01/01/2023

Sample (n) 151 Nurses ⓘ	Population (N) 47,137 Nurses ⓘ
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OSF

Fetal Assessment and Monitoring

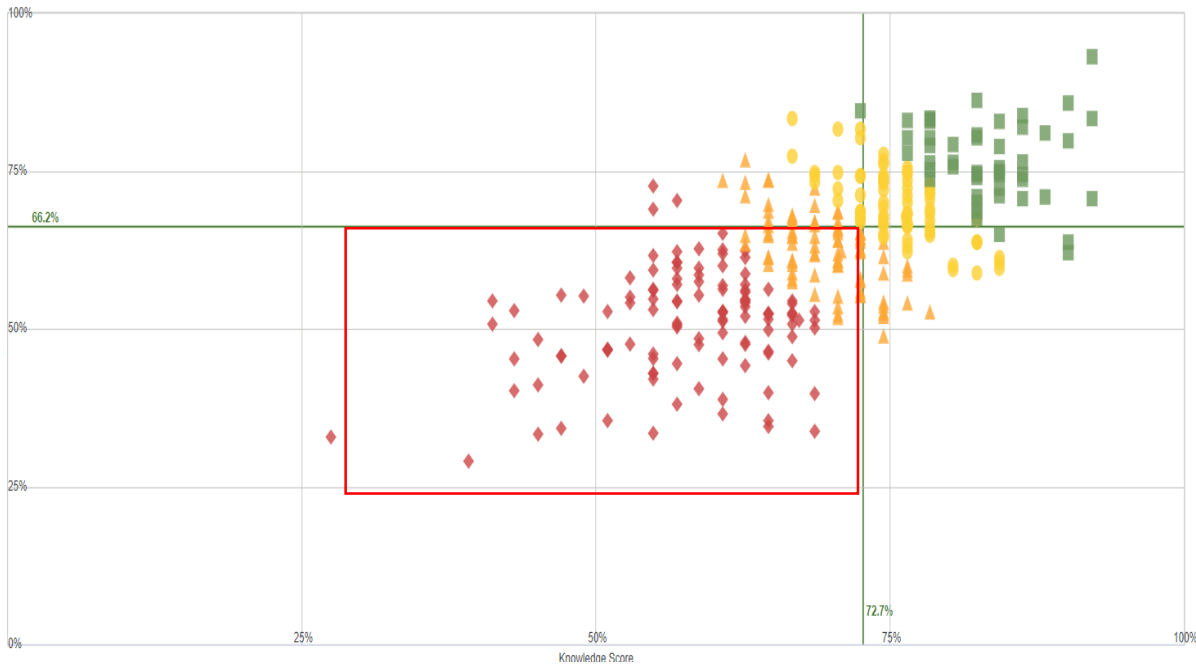
(system-wide Nurses)

Avg Score = %

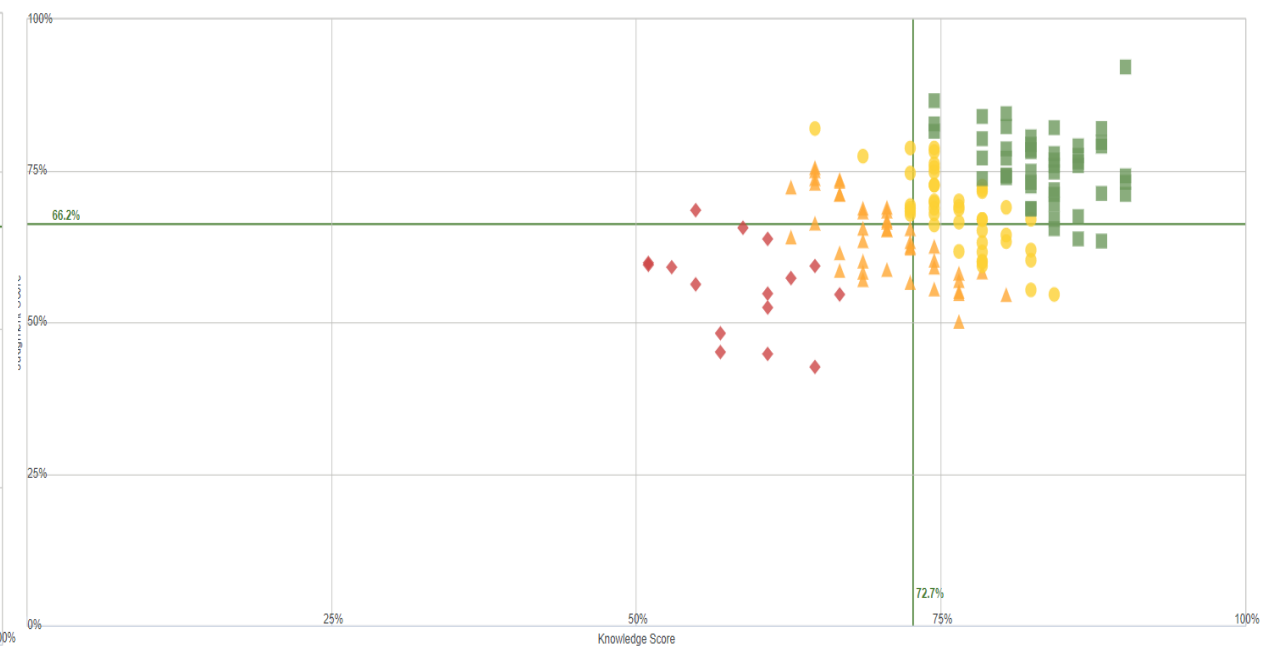
Avg Percentile Rank

**Note: Date range is 1/2017 to 1/2020 and some rounds may overlap*

Initial Assessment: 329 Nurses



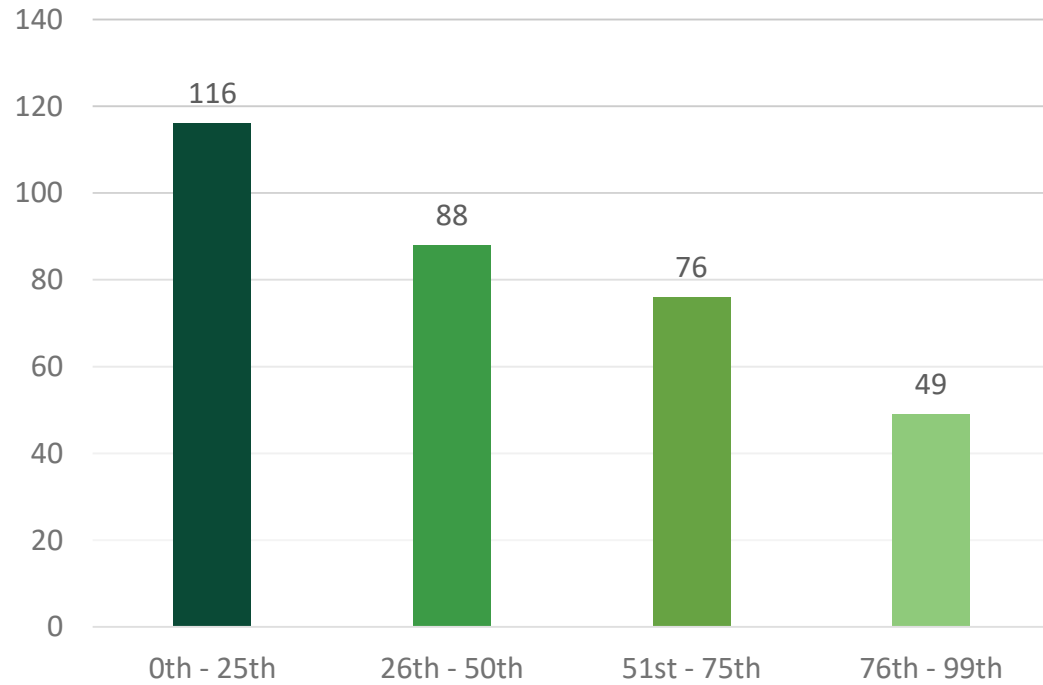
Reassessment: 329 Nurses



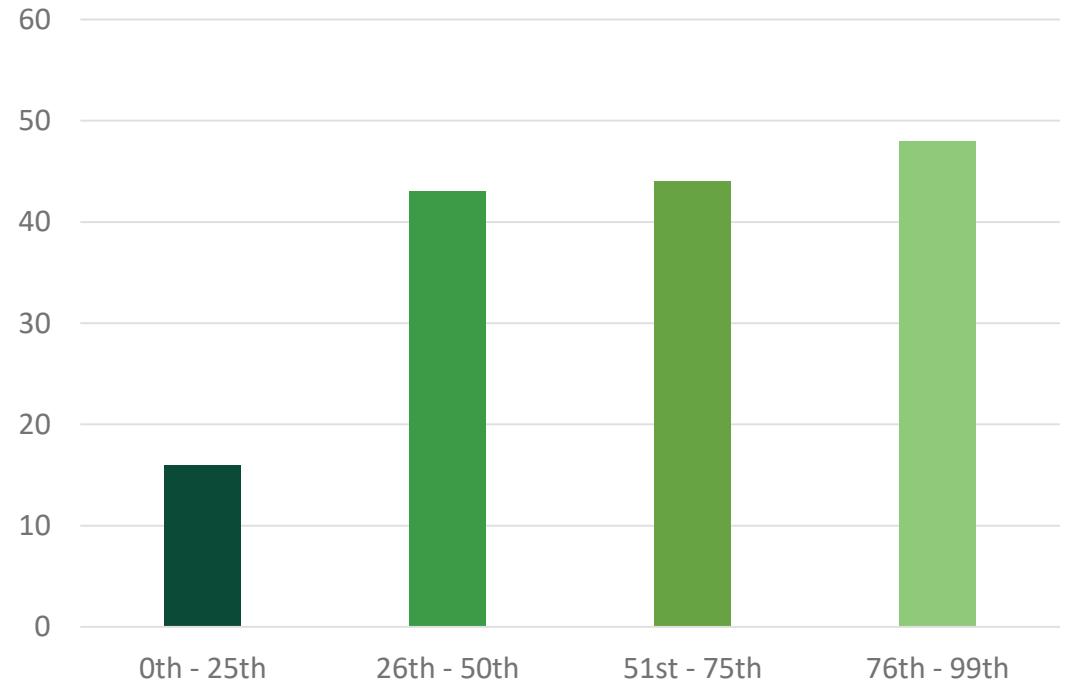
Total N = 329 Nurses ■ 49 Nurses ● 76 Nurses ▲ 88 Nurses ◆ 116 Nurses Total N Round 2 = 151 Nurses ■ 48 Nurses ● 44 Nurses ▲ 43 Nurses ◆ 16 Nurses

Fetal Assessment and Monitoring

Count of User Name

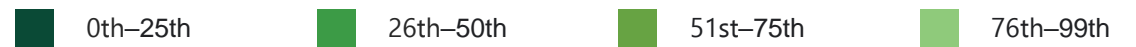


Improvement



Round 1 : 329 Nurses

Round 2 : 151 Nurses



Lessons Learned

Success

Team based approach

Champion's needed
including provider

Set and communicate expectations
clearly

Start small and
continue to spread



Value

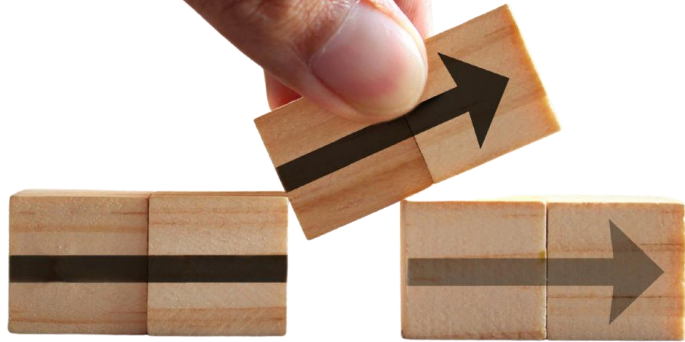
Internal Value:

- Impact to educational outcomes
- Positive impact to patient care
- Positive impact to team-based model

External Value:

- Alignment to regulatory requirements





OSF

Directional Guidance & Iterative Work

- Data from Relias OB
- Identification of Gap
- Targeted Education

Next Layer of Education

Simulations start in area of greatest need

- October 2021 Maternal Hypertension interactive online module
 - ED specific
- November 2021 Maternal Hemorrhage interactive online education modules
 - Nursing, technicians, providers
- In Situ Simulations
 - Care team focus



Patient Outcomes

Maternal Hemorrhage Driver metrics

- Risk assessment documented prior to admission
 - One OSF did not meet target
 - SJMC met target

Documentation of CBL

- One OSF did meet target (95%)

Maternal Hypertension Driver metrics

- Administration of Anti-hypertensive within 60 minutes & Administration of Magnesium sulfate
 - One OSF did not meet target
 - LCMMC, SHMC, SFMC, and SJMC met target
 - SHMC, and SJMC met target

OSF

Next Layer of Education

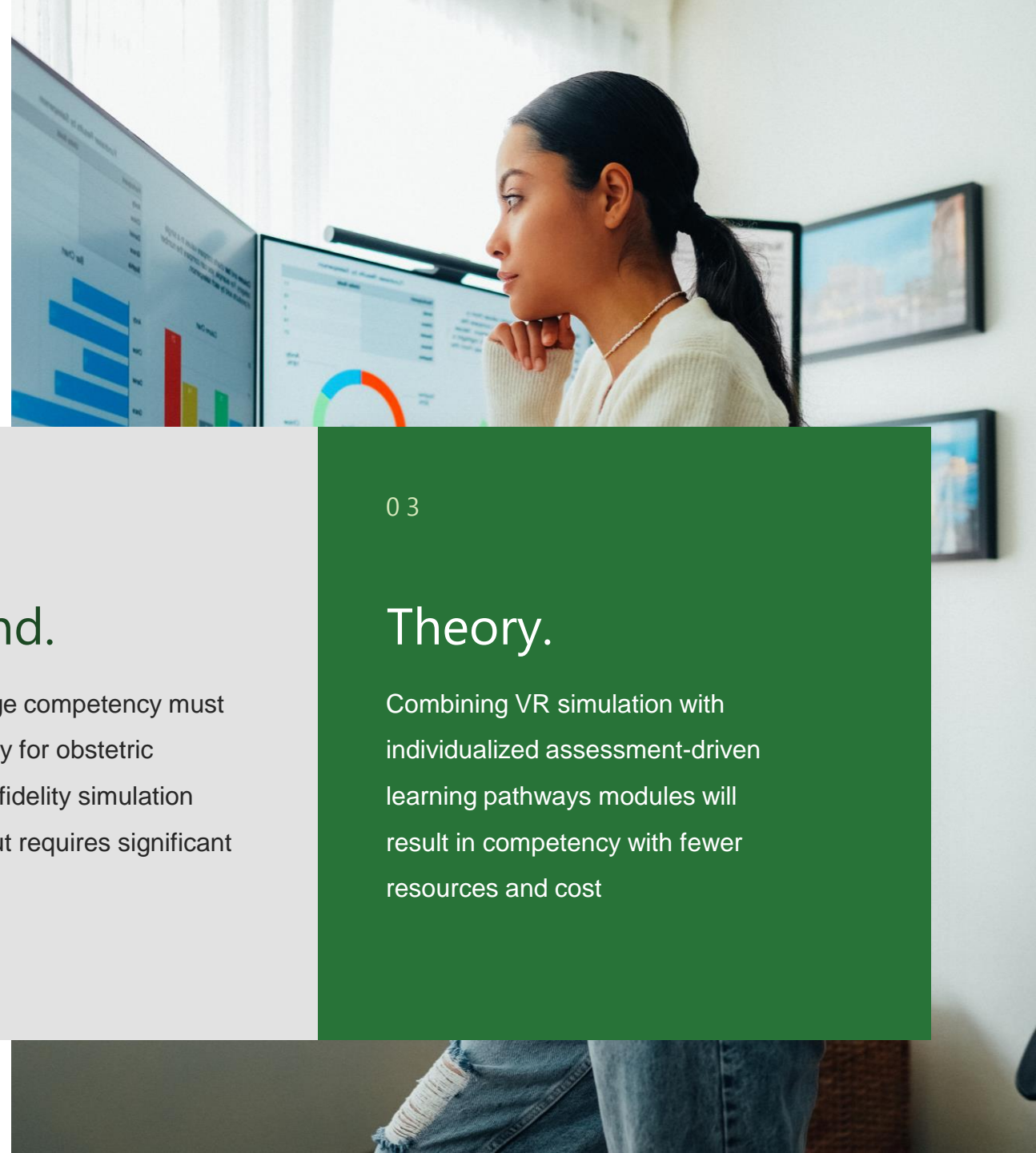
→ Updates

to the Care guideline for both maternal
Hypertension and maternal hemorrhage

→ Annual education

deployed June 2023

Next Steps



01

Control study.

A randomized control study is being conducted to: Explore the efficacy of a blended learning model using virtual reality and standard assessment including robust individualized learning pathways to improve clinical competency and confidence in maternal hemorrhage

02

Background.

Maternal hemorrhage competency must be achieved annually for obstetric nurses. Using high fidelity simulation can facilitate this, but requires significant time and resources.

03

Theory.

Combining VR simulation with individualized assessment-driven learning pathways modules will result in competency with fewer resources and cost

Introductions

Who are we?

Current factors
influencing education
models OB

OSF

→ Providence





The Nursing Institute Clinical Academy

Relias as a foundation

What Works?

- Standardized, evidence-based program
- Didactic education delivered over time
- Support
 - Dedicated preceptor time
 - Staged transition model
 - Regular meetings
 - Peer support
- Length of program > 9 months

(Source: Trepanier et al., 2023; Eckerson, 2018; Rush et al., 2019; Theisen & Sandau, 2013)



Obstetric Education



01

Hire Date.

New Employee Orientation

02

Residency / Fellowship.

Relias Onboarding

03

Ongoing Education.

Relias OB

Hire Date.

New Employee Orientation

METRIC

What About Numbers?



44

Obstetrical Units



1,845

OB Residents & Fellows

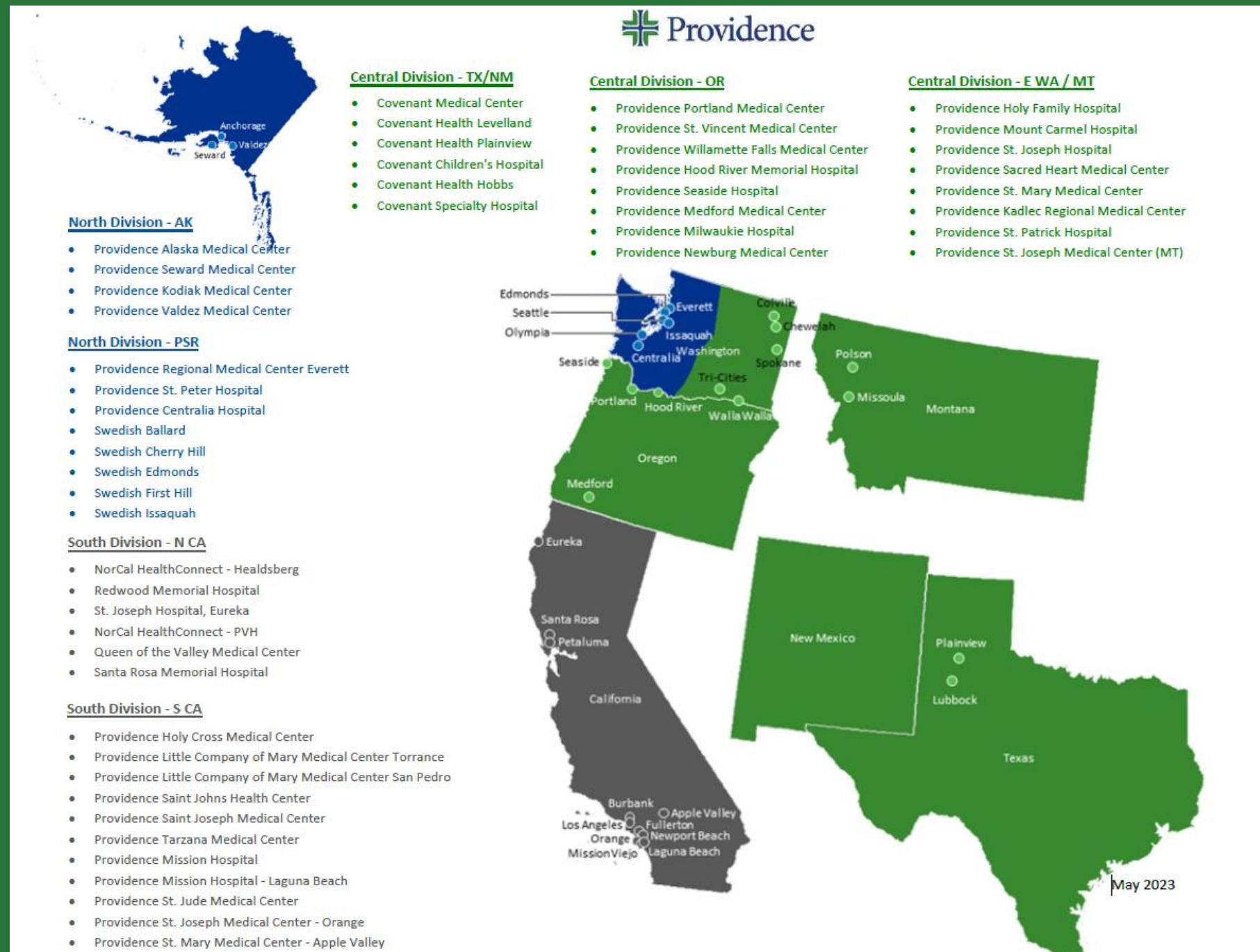


3,100

RNs in Relias

Hire Date.

New Employee Orientation

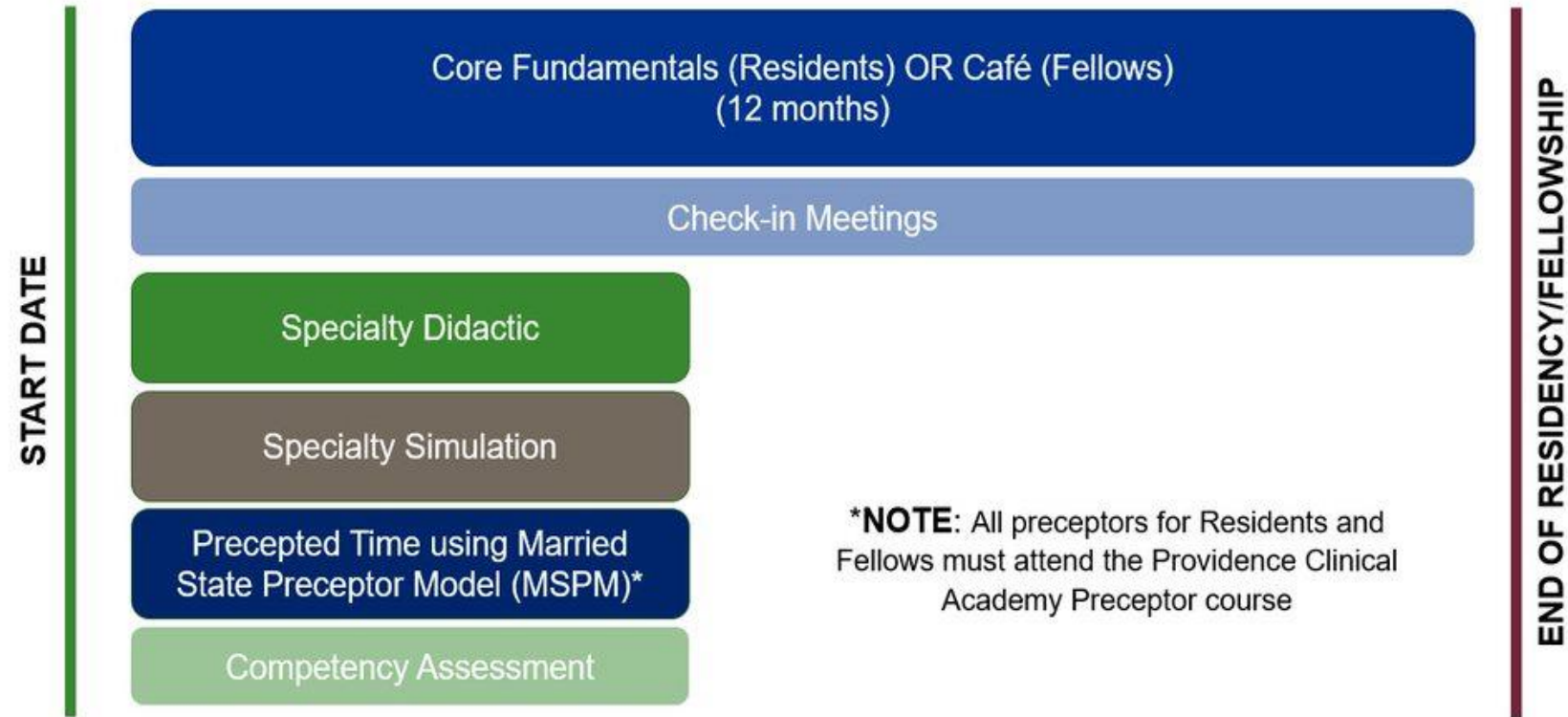


Residency / Fellowship.

Relias Onboarding

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Clinical Academy

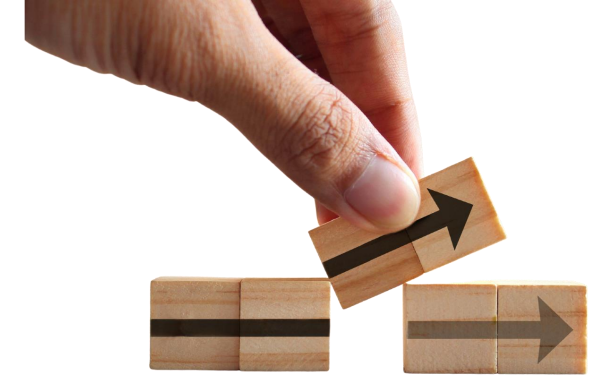


Residency / Fellowship.

Relias Onboarding

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Building Blocks



03

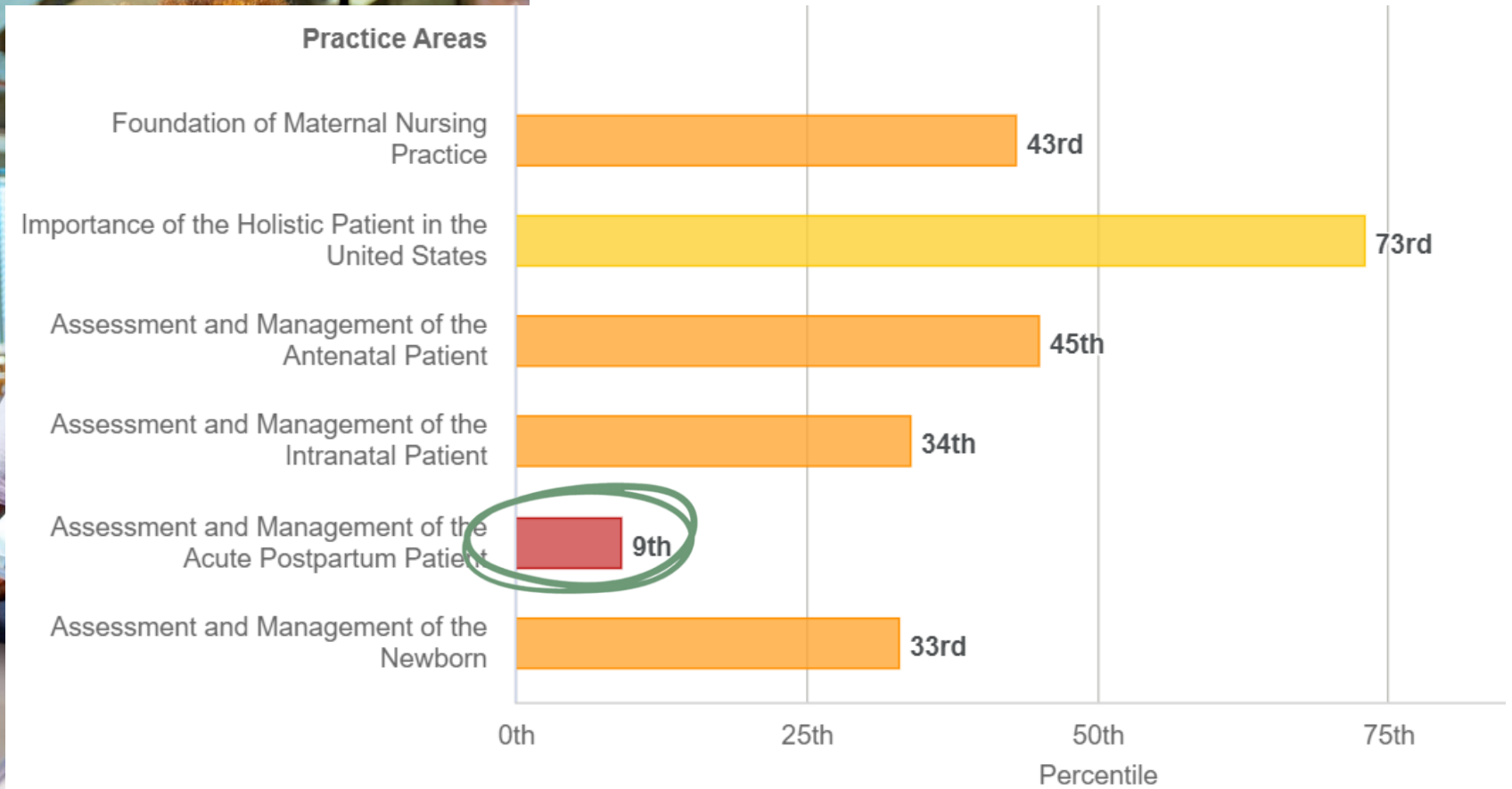
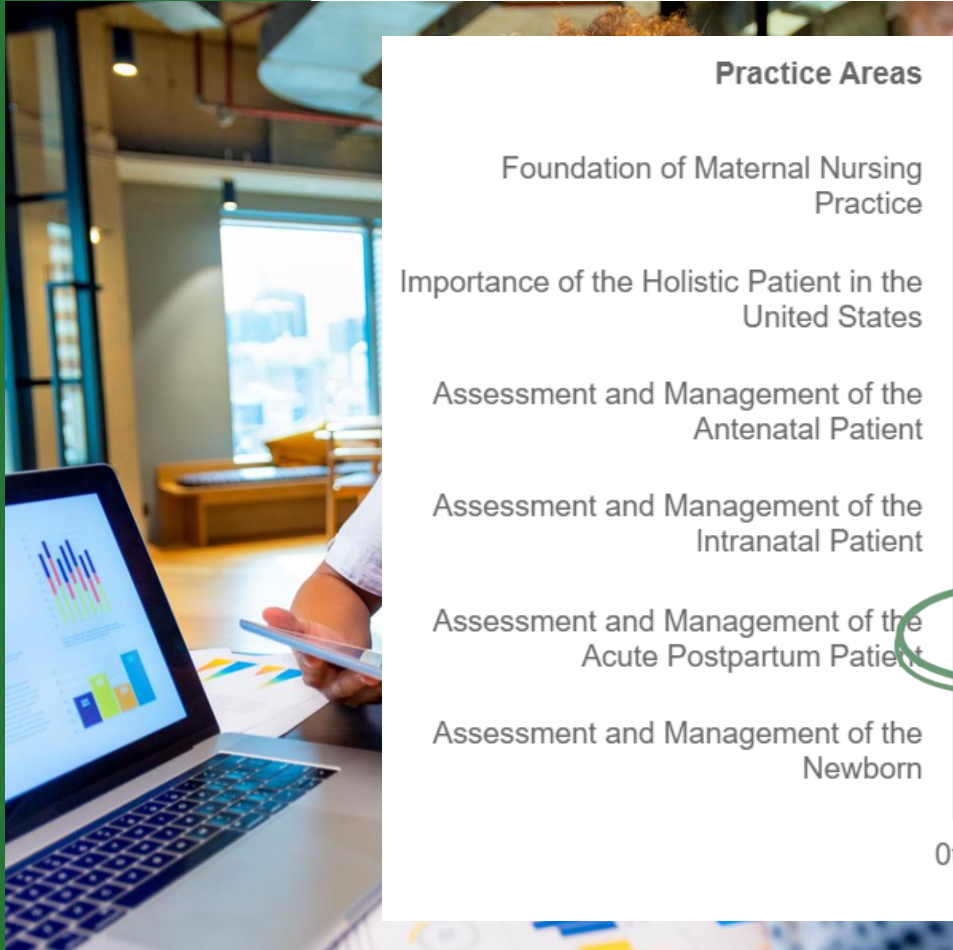
Clinical Application

02

Classroom Learning

01

Relias Onboarding Modules



Virtual & In-Person

Active Learning

Soft Skills

Competency-
Based



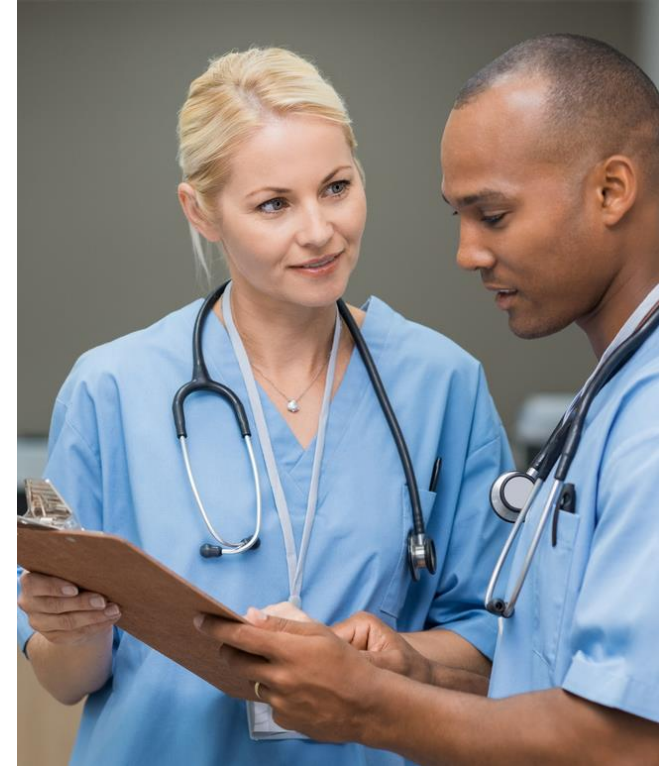
01

Simulation



02

Skills Practice



03

Precepted Shifts

Building Blocks in Action



Relias Modules

- Assessment of the Acute PP Patient
- Measurement of QBL
- Management of Uterine Atony
- Maternal Early Warning Signs



Classroom Learning

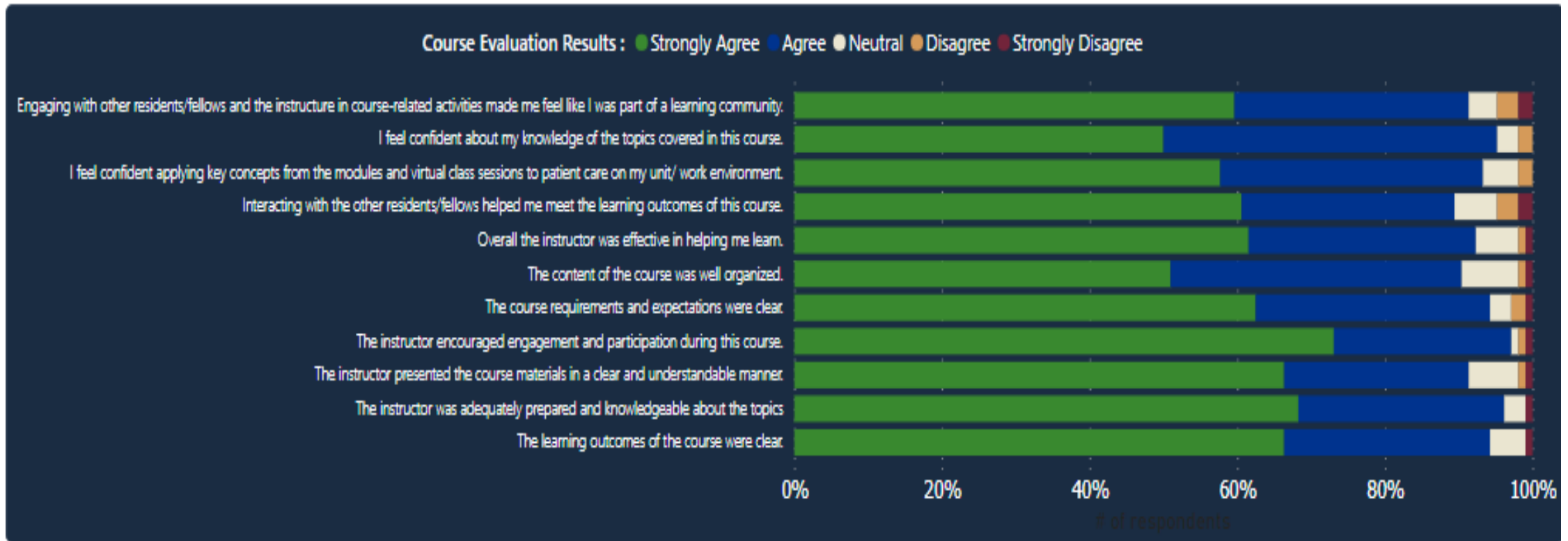
- Quantifying Blood Loss Practice
- OB Hemorrhage Scavenger Hunt
- OB Hemorrhage Case Study



Clinical Application

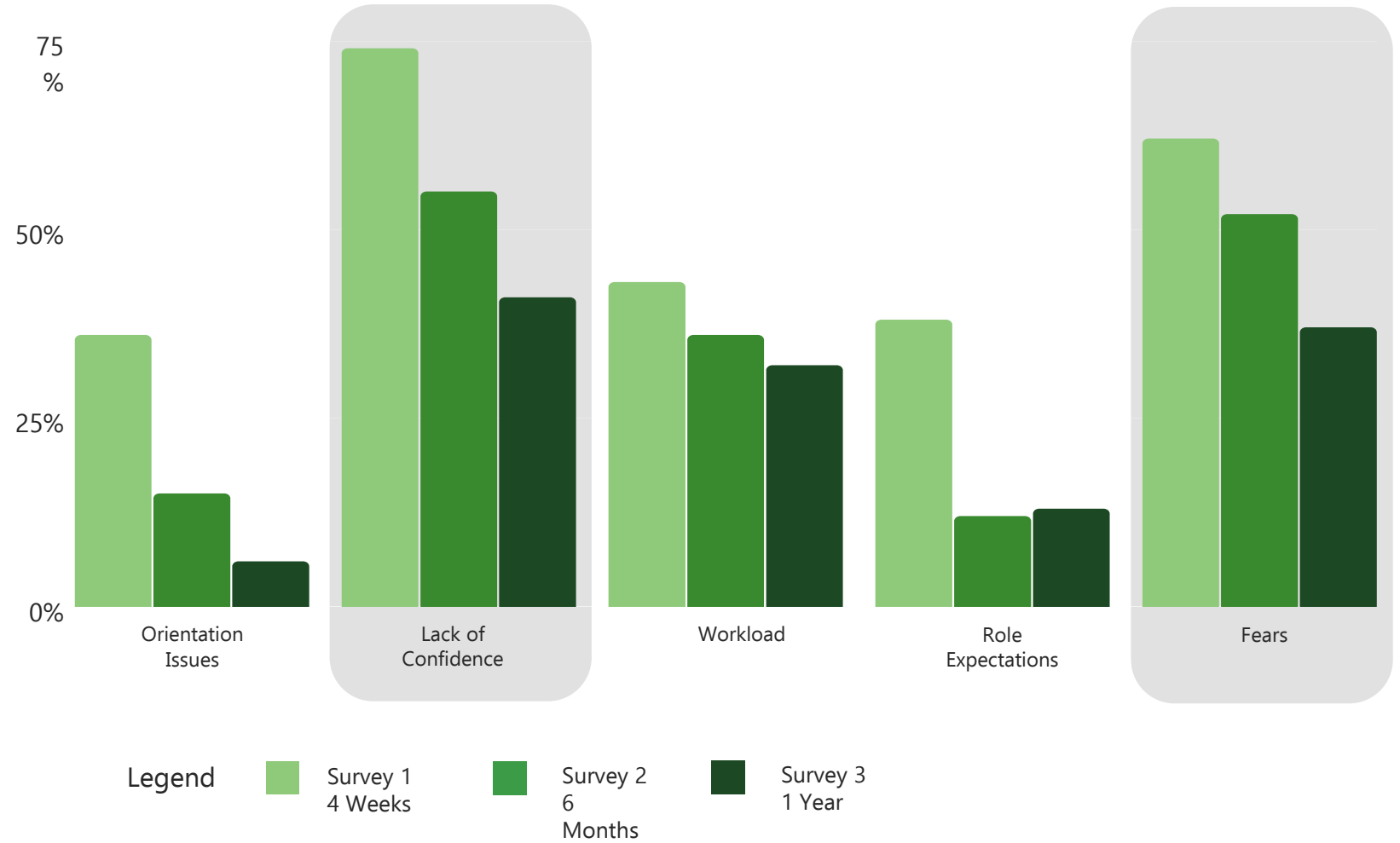
- OB Hemorrhage Simulation
- Precepted Time

Virtual Class Feedback



CASEY-FINK RESULTS

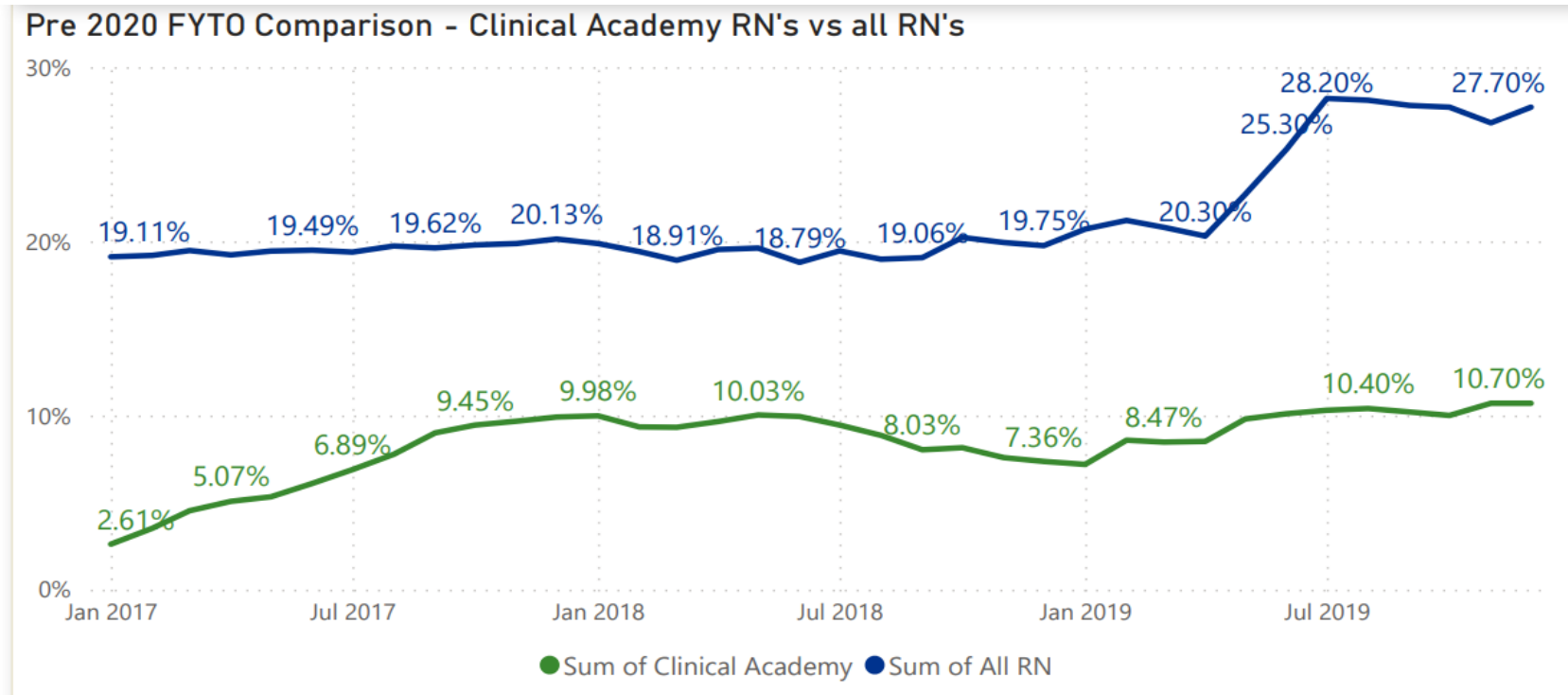
Difficulties



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First Year Turnover – 2017 to 2020

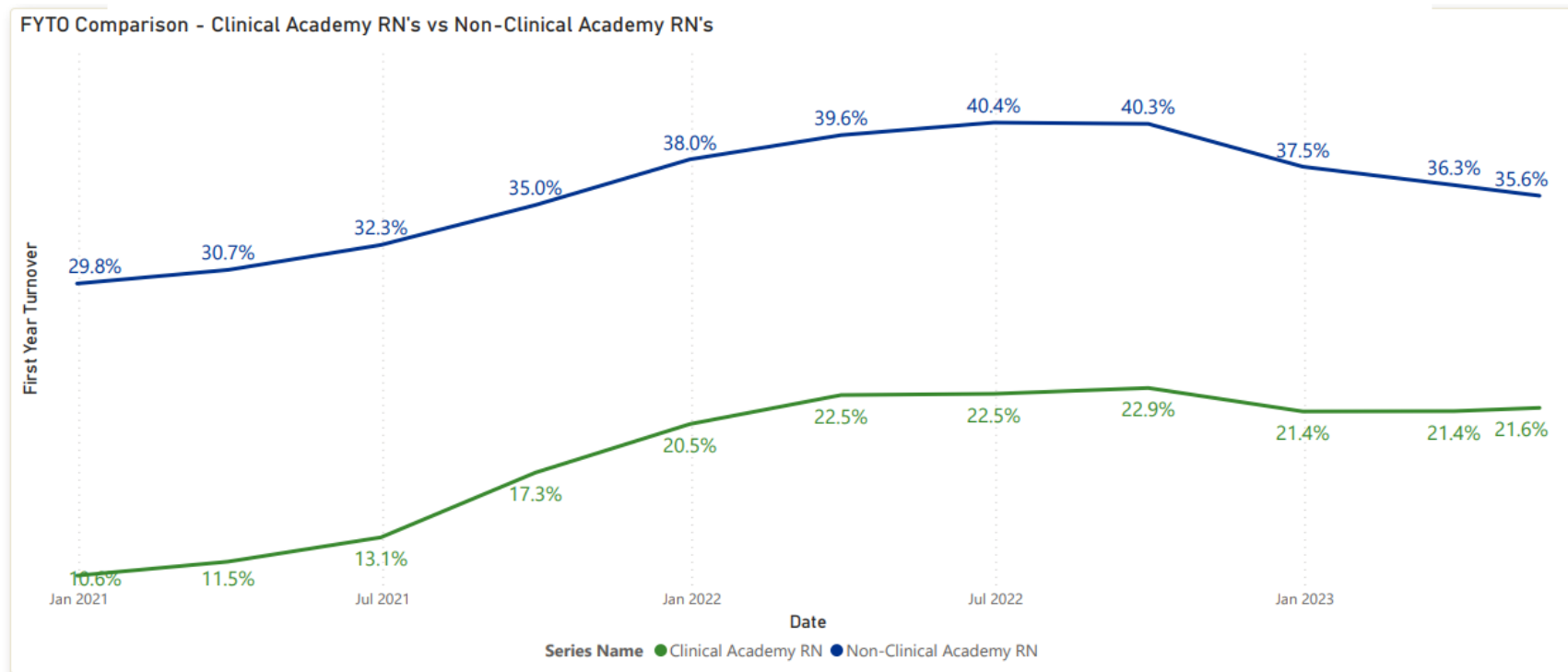
(All Specialties)



The above line chart shows the **First Year Turnover** Comparison between **All RN's in PSJH** vs **Clinical Academy RN's in PSJH** between Jan 2017 and Dec 2019

First Year Turnover – 2021 to present

(All Specialties)

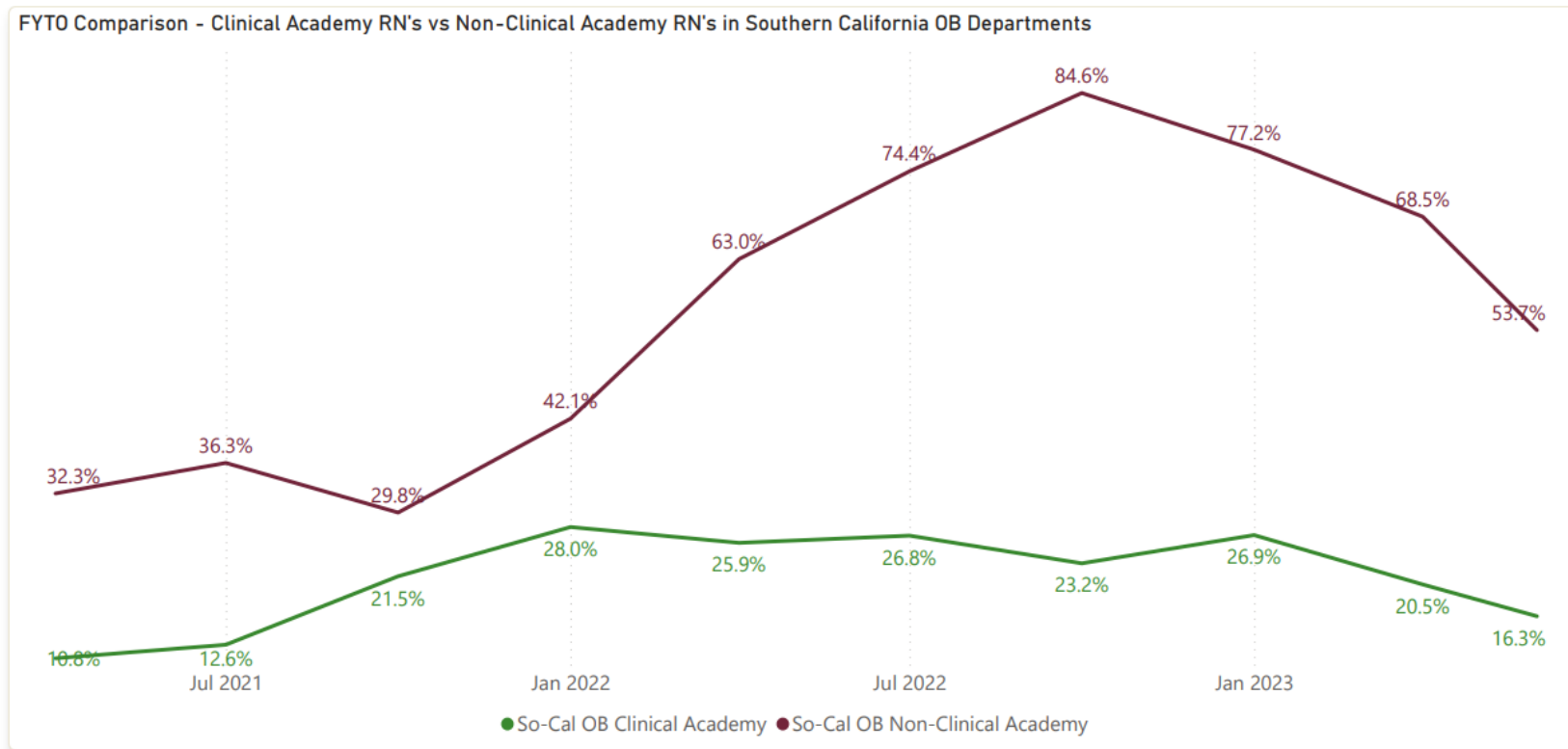


The above line chart shows the **First Year Turnover** comparison between **Non-Clinical Academy RN's** vs **Clinical Academy RN's**

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First Year Turnover – 2021 to present

(S. CA Obstetrics)



The above line chart shows the **First Year Turnover** comparison between **Non-Clinical Academy RN's** and **Clinical Academy RN's** in Southern California OB Departments

FIRST YEAR TURNOVER SAVINGS

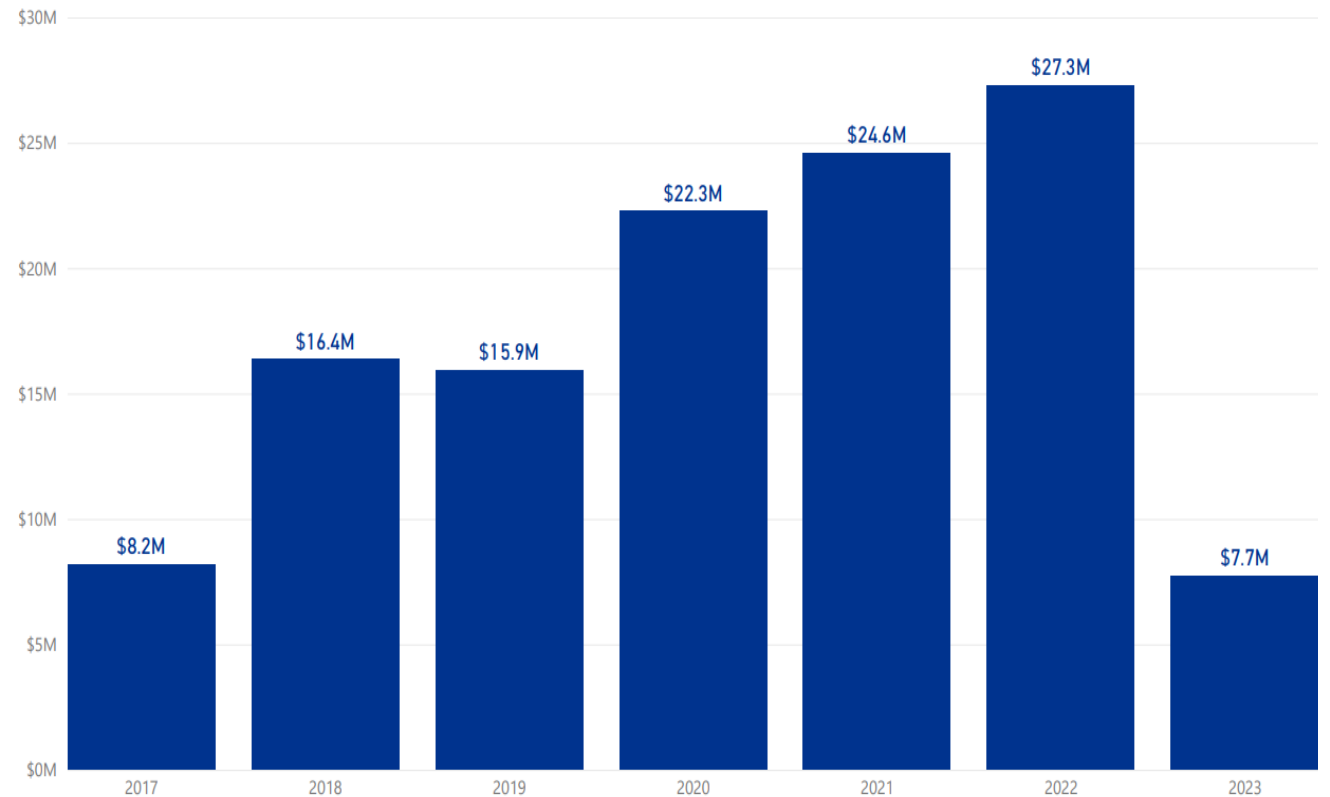
Reliable monthly data source for:

- All RN FYTO %
- Resident Avg Salary
- Resident FYTO %
- Total Residents in Program

01 | TIPs in Program x All RN FYTO %

02 | TIPs in Program x Resident FYTO %

- Subtract 2 from 1 equals Retained Residents
- Retained RNs x Avg Resident Salary = Savings



Impact on Patient Care

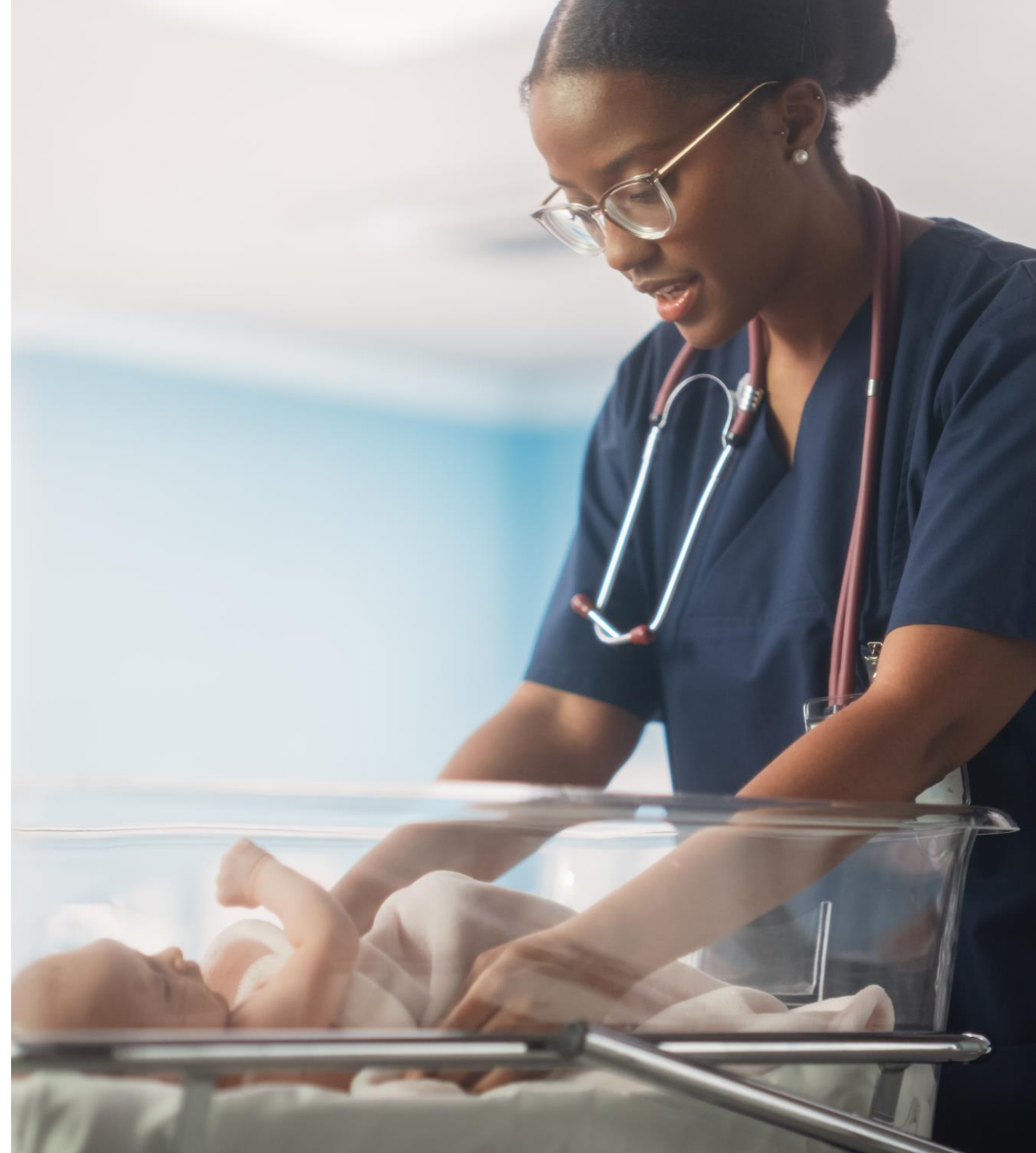
Situation:

- Poor staffing
- Lack of competence & confidence
- Low quality of relationships
- Poor peer support
- Unfamiliar work environments & situations

Leads to:

- Missed care
- Medication errors
- Failure to document
- Failure to communicate / report changes in condition
- Adverse patient events

(Source: Griffiths et al., 2018; Labogue & De los Santos, 2020; Steel et al., 2021)

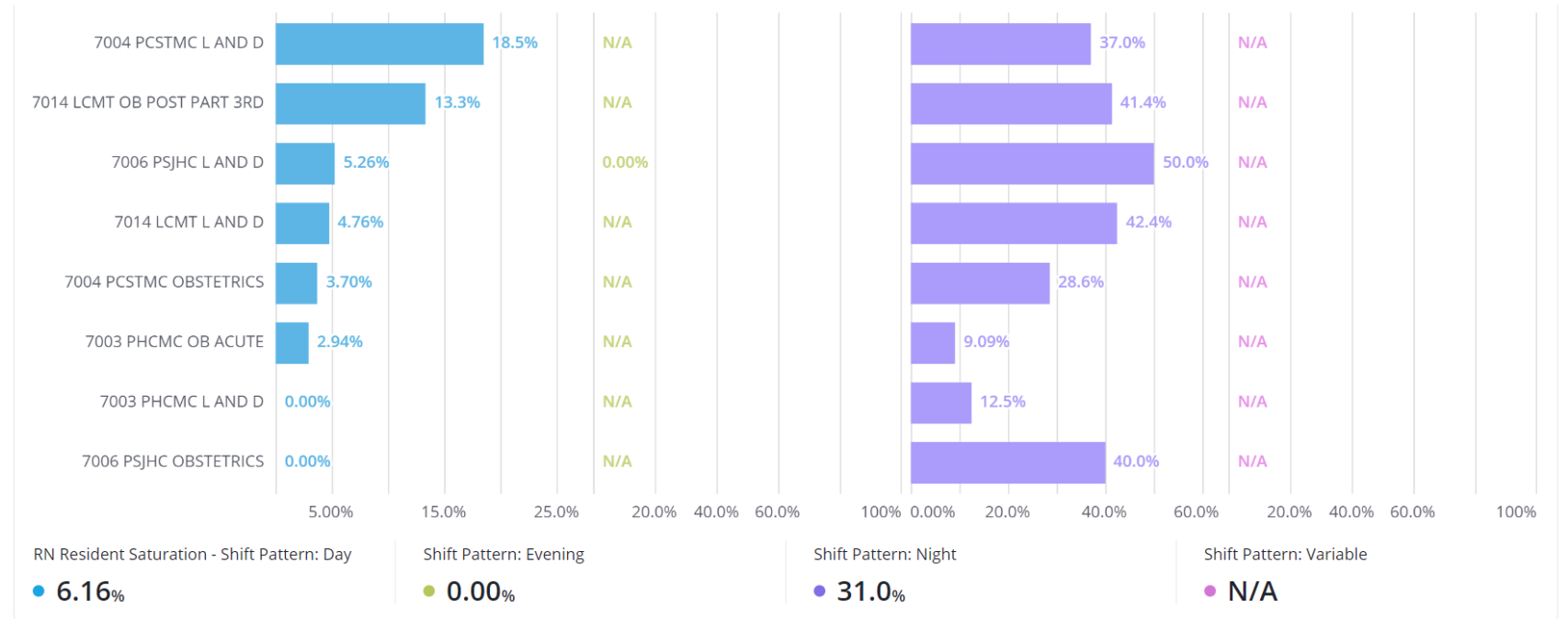


Residency / Fellowship.

Relias Onboarding

PROVIDENCE

Skill Mix on OB Units – S. California



PROVIDENCE

Hypertension & Hemorrhage Education

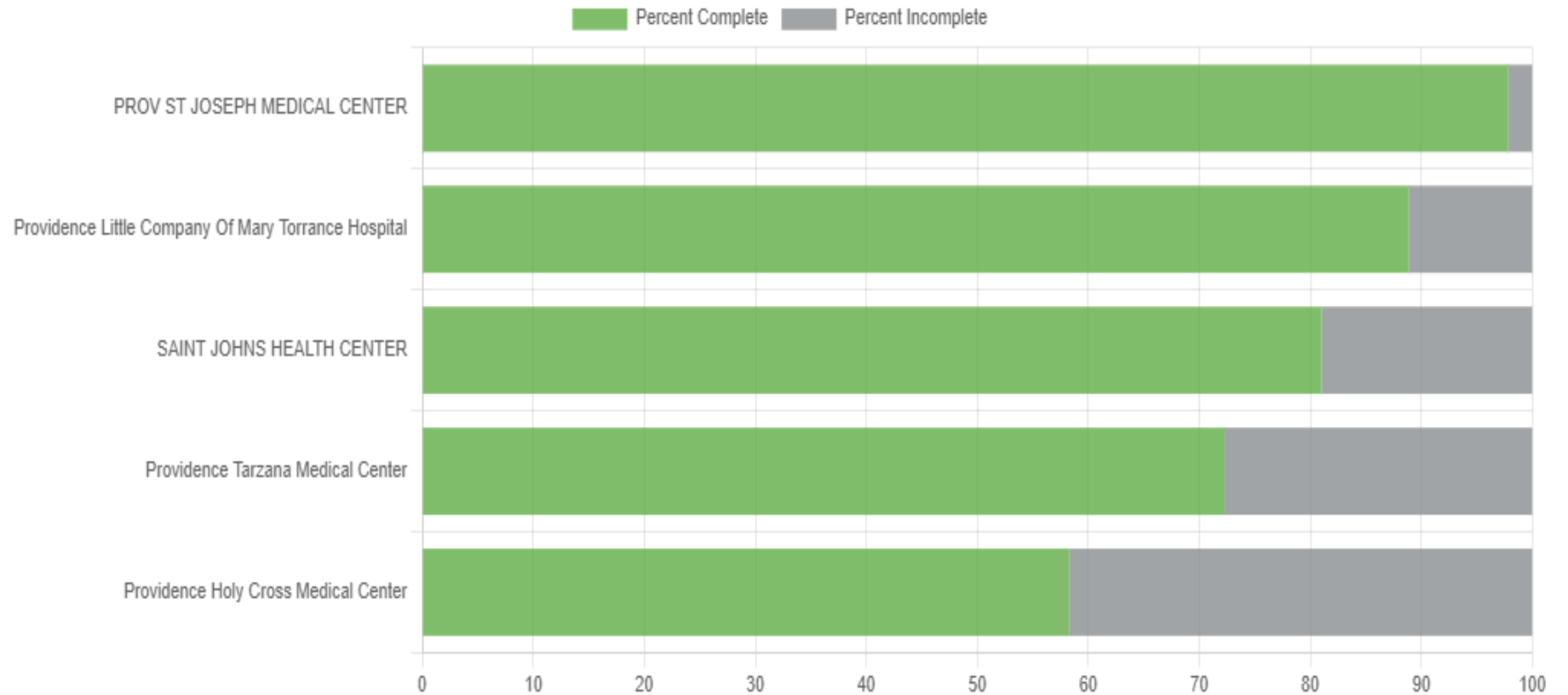
- Nurses, Physicians, Midwives
- Alternating years
- New nurses join at 6 months – 1 year

Ongoing Education.

Relias OB

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Hypertension & Hemorrhage Education

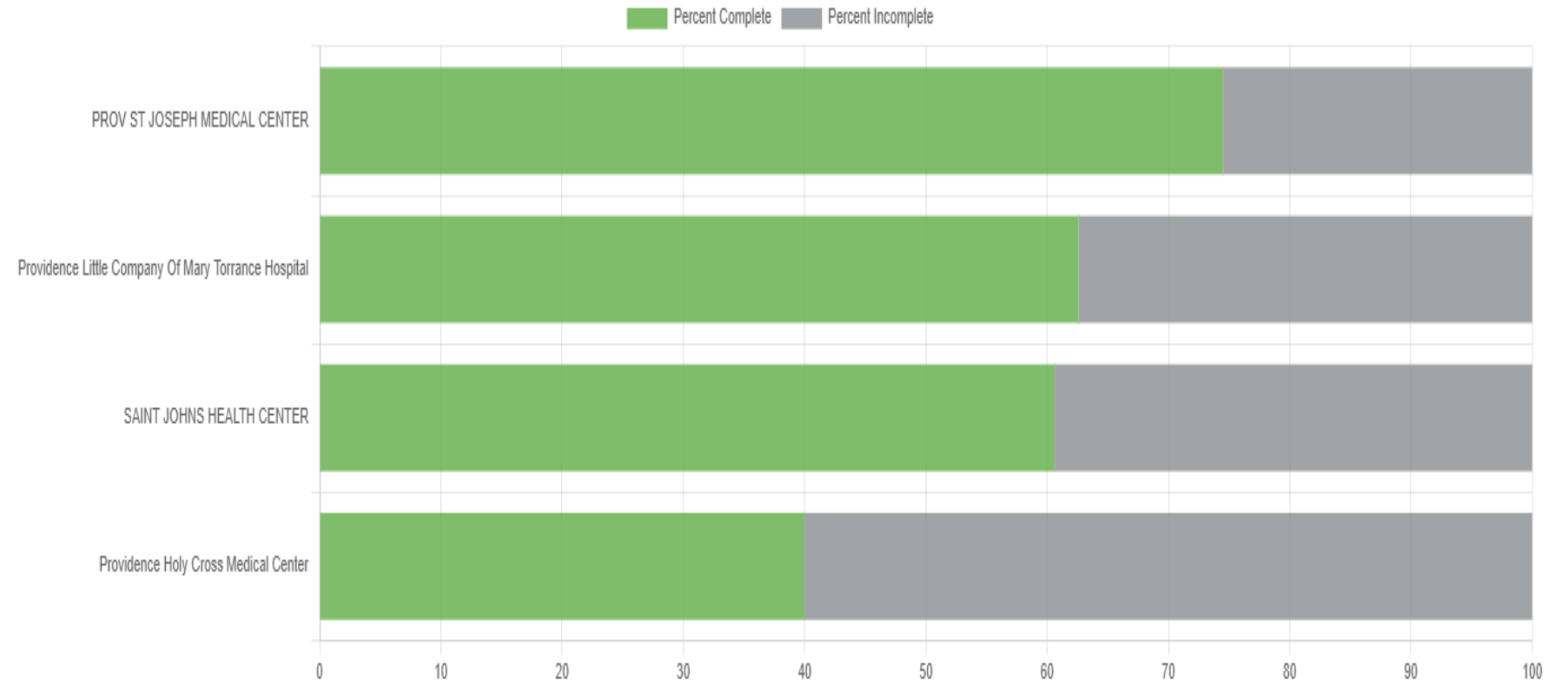


Ongoing Education.

Relias OB

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Hypertension & Hemorrhage Education

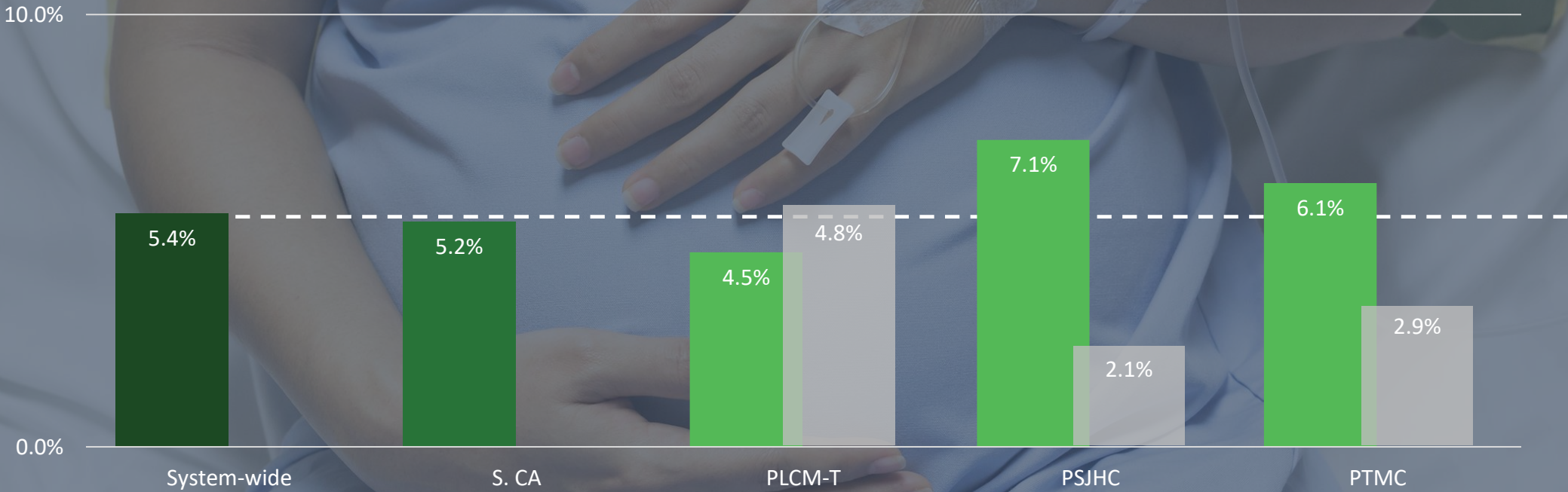


IMPACT ON PATIENT CARE:

Hypertension

Maternal Morbidity Among Patients with Severe HTN

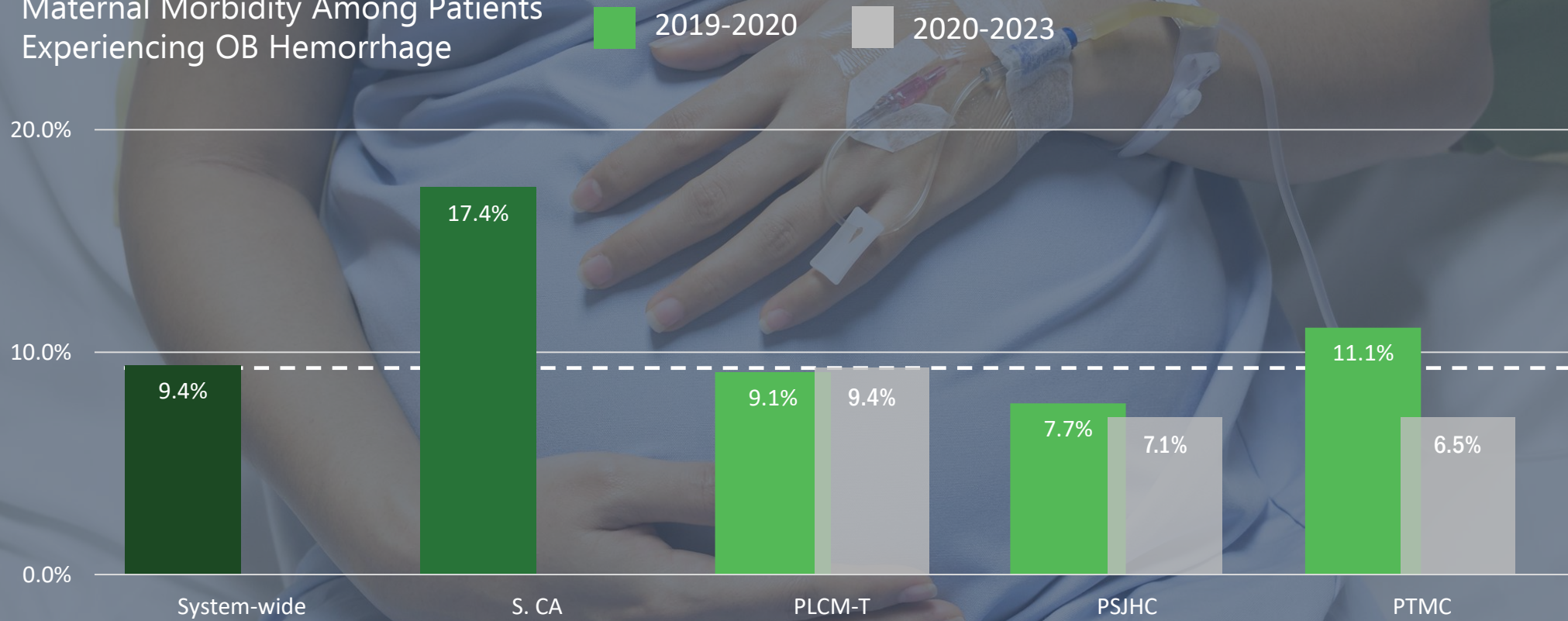
■ 2019-2020 ■ 2020-2023



IMPACT ON PATIENT CARE:

Hypertension

Maternal Morbidity Among Patients Experiencing OB Hemorrhage

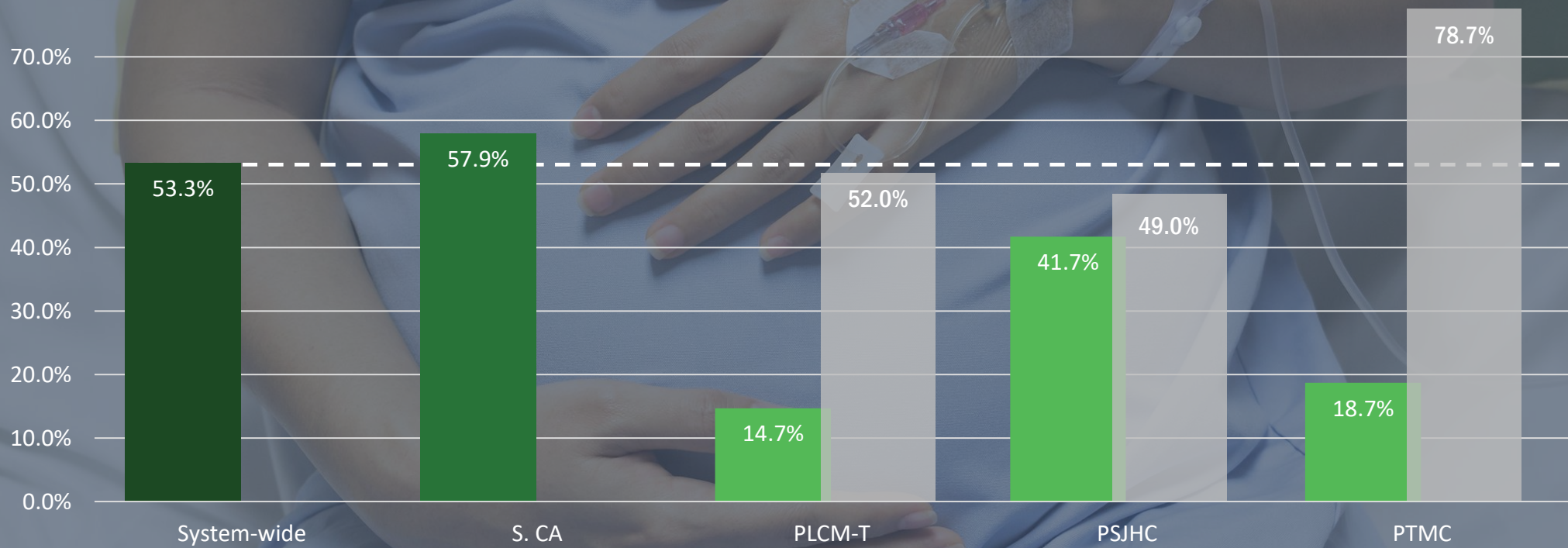


IMPACT ON PATIENT CARE:

Hypertension

Hemorrhage Risk Screening
Re-Assessment

■ 2019-2020 ■ 2020-2023





Keys to Success

Education matters.

- Onboarding
- Ongoing

Support for new nurses is critical.

- Didactic
- Peer support
- Competency- not time-based

Contact



Email

marta.devolt@providence.org

Website

www.providence.org/business/nursing-institute

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Questions?

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Thank You