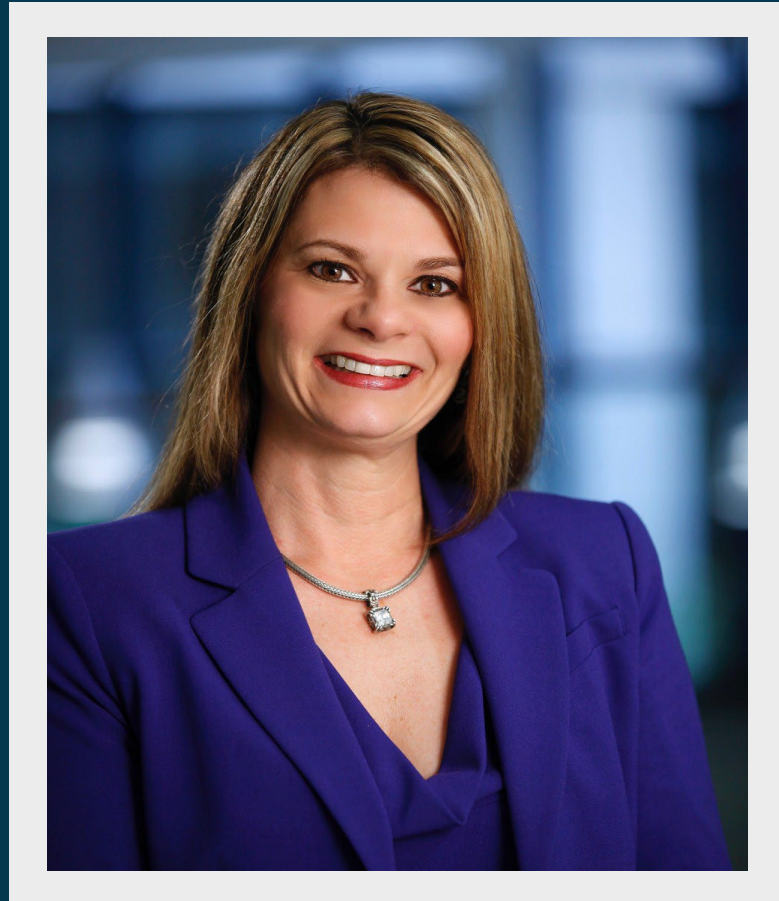# The Mercy "Bottom Line Playbook" to Decreasing Premium Labor Spend while Increasing Access to Care
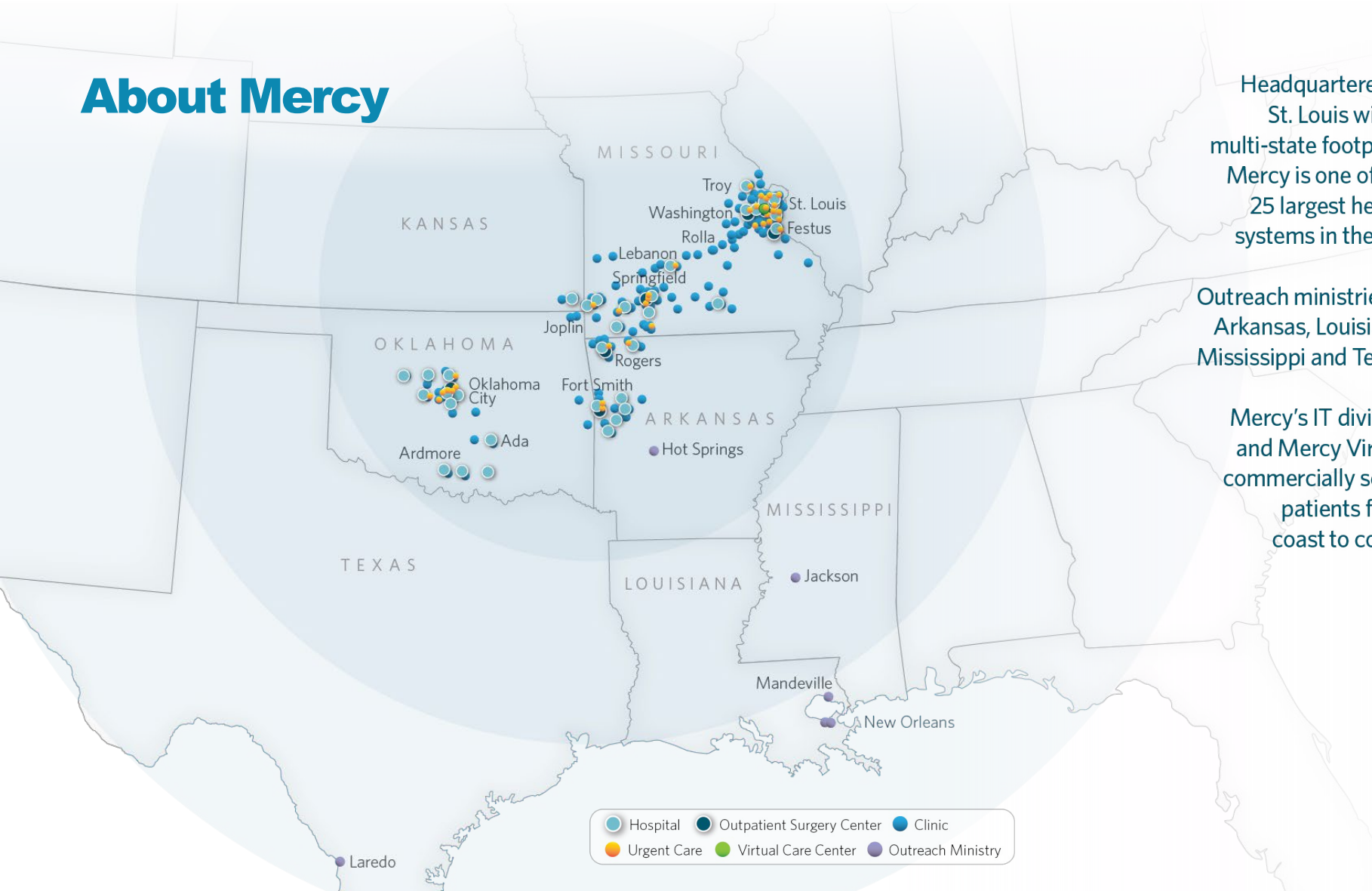
Mercy✝

Your life is our life's work

Betty Jo Rocchio,
DNP, RN, CRNA, CENP, EBP-C
Senior Vice President & Chief Nurse Executive

Bettyjo.Rocchio@mercy.net

About Mercy

About Mercy

MISSOURI

KANSAS

Troy
Washington
Rolla
Lebanon
Springfield
Joplin
Rogers
Fort Smith

St. Louis
Festus

OKLAHOMA

Oklahoma City

Ardmore   Ada

ARKANSAS

Hot Springs

TEXAS

MISSISSIPPI

LOUISIANA

Jackson

Mandeville

New Orleans

Laredo

Legend:
- ○ Hospital
- ● Outpatient Surgery Center
- ● Clinic
- ● Urgent Care
- ● Virtual Care Center
- ● Outreach Ministry

Headquartered in St. Louis with a multi-state footprint, Mercy is one of the 25 largest health systems in the US.

Outreach ministries in Arkansas, Louisiana, Mississippi and Texas.

Mercy's IT division and Mercy Virtual commercially serve patients from coast to coast.

1827
founded

44
hospitals

969
physician practices & outpatient facilities

4,300
integrated providers[1]

44,000
co-workers

$8 billion
revenue

2.8 million
annual lives touched

Mercy

Watson Health
15 TOP
HEALTH SYSTEMS
2016, 2017, 2018, 2019

NATIONALLY RECOGNIZED
A
LEAPFROG
HOSPITAL
SAFETY
GRADE

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES
Five-Star Quality Rated

Lower Cost of Care
Shorter ER Wait Times
Shorter Length of Stay

Reduced Readmissions
Fewer Complications
Lower Mortality Rates

Fewer Hospital-Acquired Conditions
Higher Patient Satisfaction

The Opportunity
What the Industry and Evidence is Telling Us About the Nurse Candidate Pool

Health Care 2030 & Beyond: The Coming Transformation

NEJM/McKinsey Predictions: Drivers of Change

Consumerism

- Person-centered, personalized, and transparent care
- Accessible and convenient care
- **Workforce work environment selectivity**

Shift in Cost Structures and Profit Pools

- Rise of service systems/lines for consistent care delivery models and operational efficiencies in alignment with payment models (bundles, outcomes, populations, etc.)
- Emphasis on cost optimization efforts in labor through the application of technology
- Change in payor mix: government payor segments expected to be larger than commercial segments

Workforce

- **Demand of nurses surpass the supply of nurses**
- **Increased adoption of new technologies to optimize the availability of workers**
- **Increased focus on specialized clinical roles**
- **Increased demand for job flexibility and work life balance (migration to care settings outside of the hospital)**

Evolution of Payment Structures Driving Shifts in Care Delivery Settings (care outside the hospital)

- Alternative sites of care like, home care, virtual care, ambulatory care, retail care

Technological Innovation

- Rise of Artificial Intelligence (AI) and Machine Learning (ML) for enhanced decision making for workforce, staffing, and supply chain optimization

The Nursing Workforce Landscape

Demand, Supply, Joy of Practice

Demand

Even in the decade preceding the pandemic demand for nurses faced increasing growth

McLain et al., 2021

The US Bureau of Labor Statistics projected the need for

1.05 million new nurses by 2022

Bugajski, et.al., 2017

Supply

640,000

baby boomer nurses will retire between 2020 to 2030

Resulting in systems losing

>2 million

combined years of experience **EACH YEAR**

Buerhaus et al., 2017

Joy of Practice

Two of the top reasons nurses consider leaving their roles:

1. **INSUFFICIENT STAFFING**
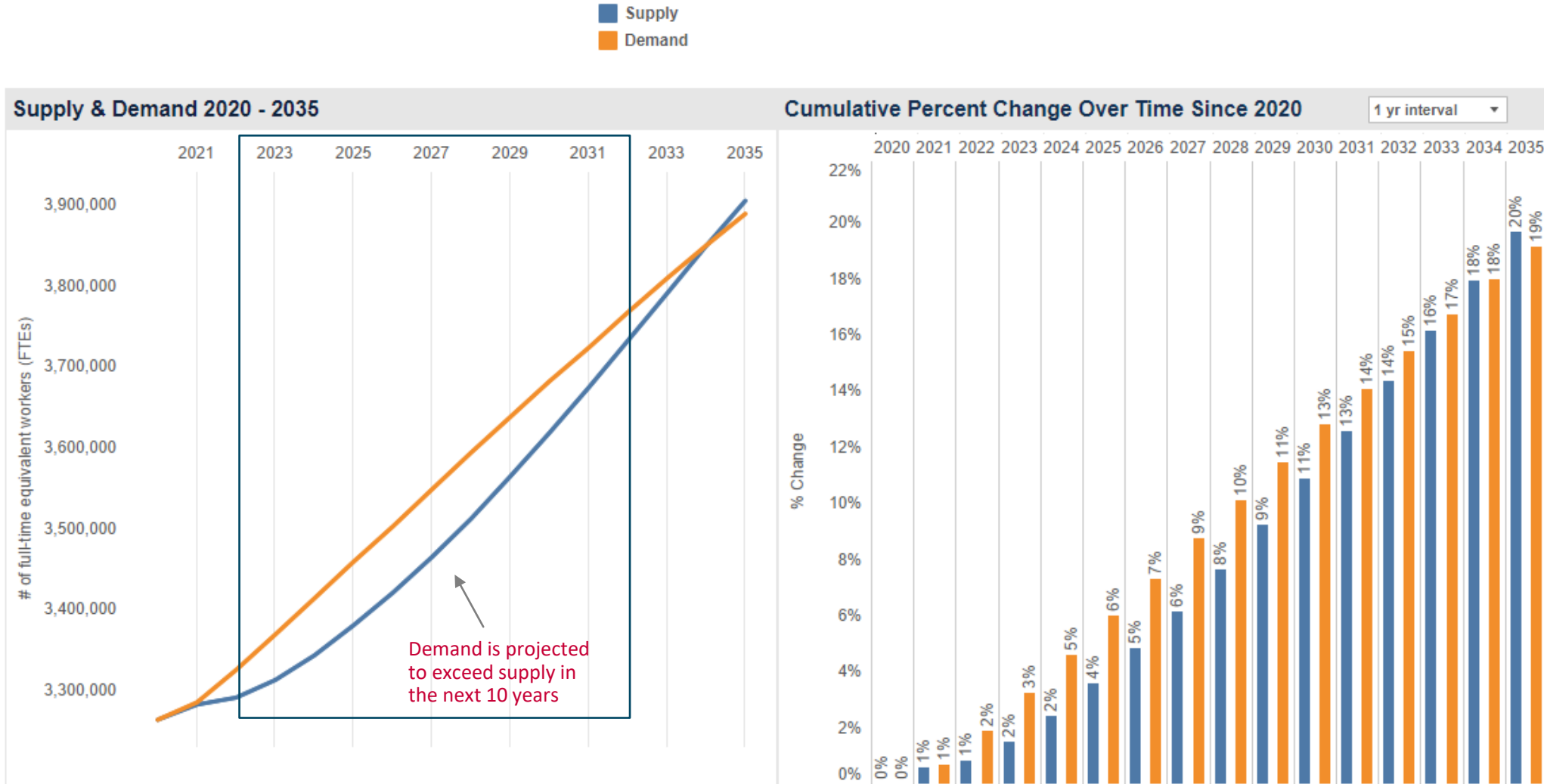2. **IMPACT TO PERSONAL HEALTH & WELLBEING**

30%

of nurses reported concerns about their emotional health in a post-pandemic study

American Nurses Foundation, 2022

Workforce Projections Through 2035
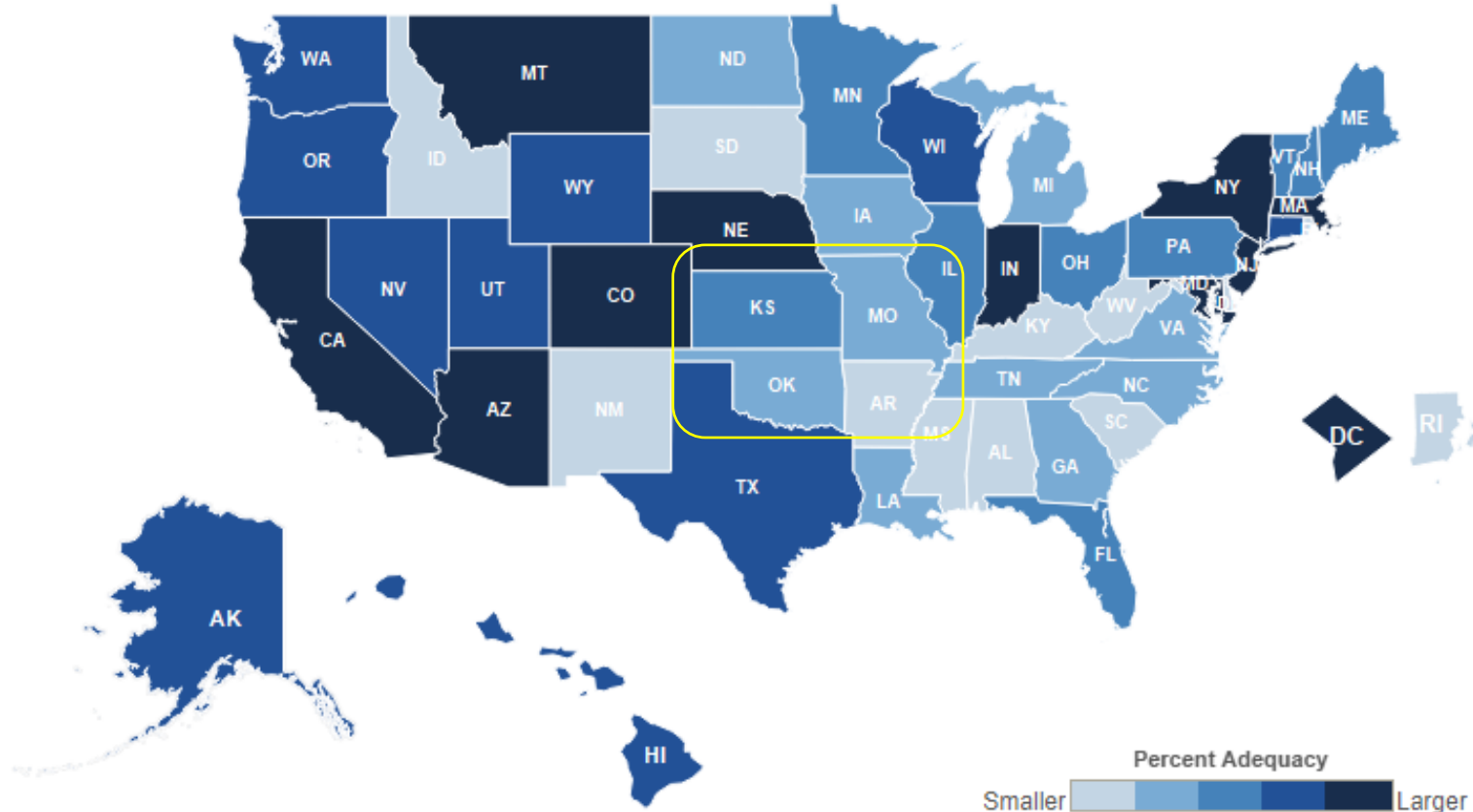## RN Supply and Demand – National View

Workforce Projections: 2024
RN Supply and Demand – Regional View: *Not favorable*

Missouri: 2024 Projections
Supply: **900**
Demand: **1,080**
Percent Adequacy: **83%**

Arkansas: 2024 Projections
Supply: **340**
Demand: **530**
Percent Adequacy: **64%**

Oklahoma: 2024 Projections
Supply: **530**
Demand: **650**
Percent Adequacy: **82%**

Kansas: 2024 Projections
Supply: **420**
Demand: **490**
Percent Adequacy: **86%**

Percent Adequacy

Smaller ▬▬▬▬▬ Larger

Percent adequacy is the relationship between the projected future supply and the projected future demand.

Date created: May 11, 2023

Workforce Projections (hrsa.gov)

Workforce Projections Through 2035
LPN Supply and Demand – National Data
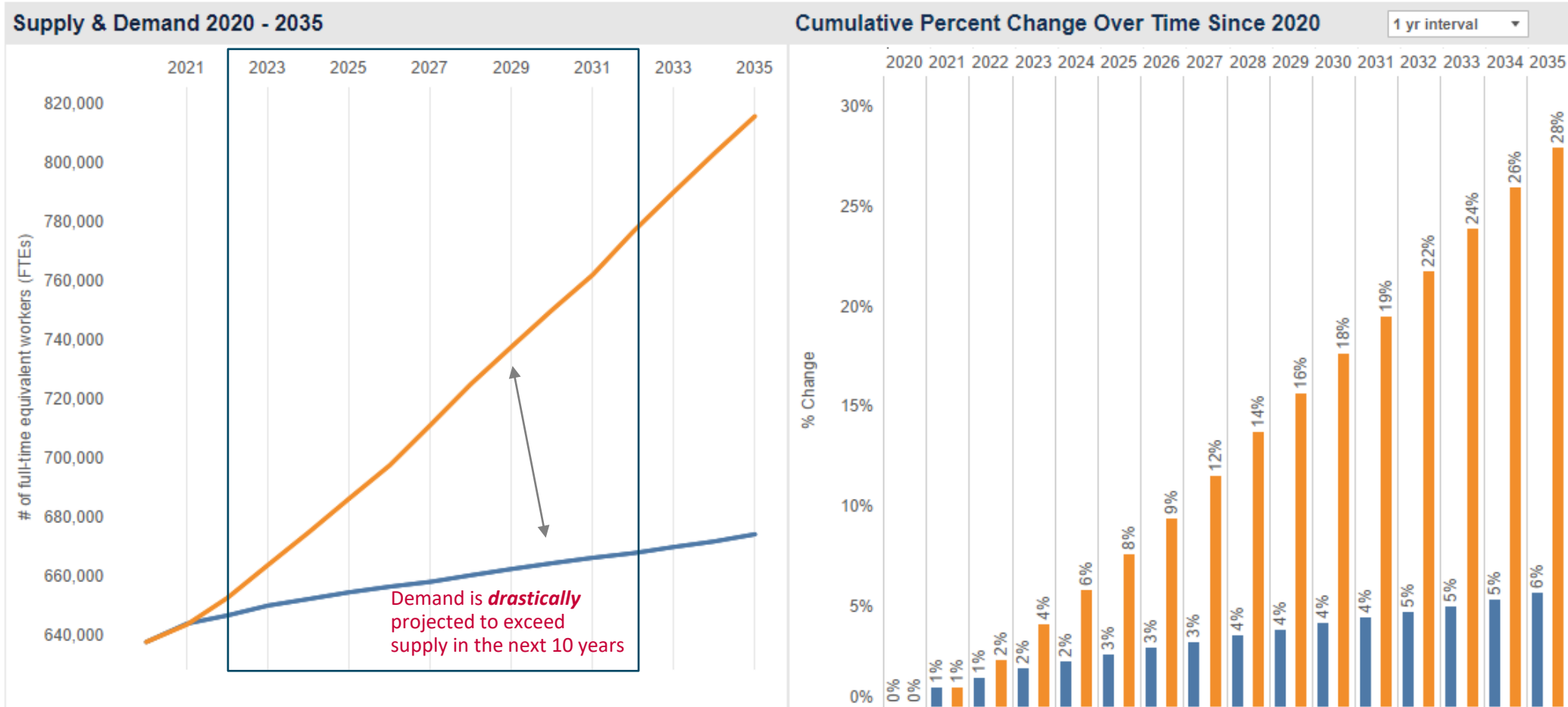
Date created: May 11, 2023

Source: Department of Health and Human Services, Health Resources and Services Administration, Health Workforce Projections. Available at https://bhw.hrsa.gov/data-research/review-health-workforce-research

Workforce Projections (hrsa.gov)

Workforce Projections: 2024

LPN Supply and Demand – Regional View: *Favorable*
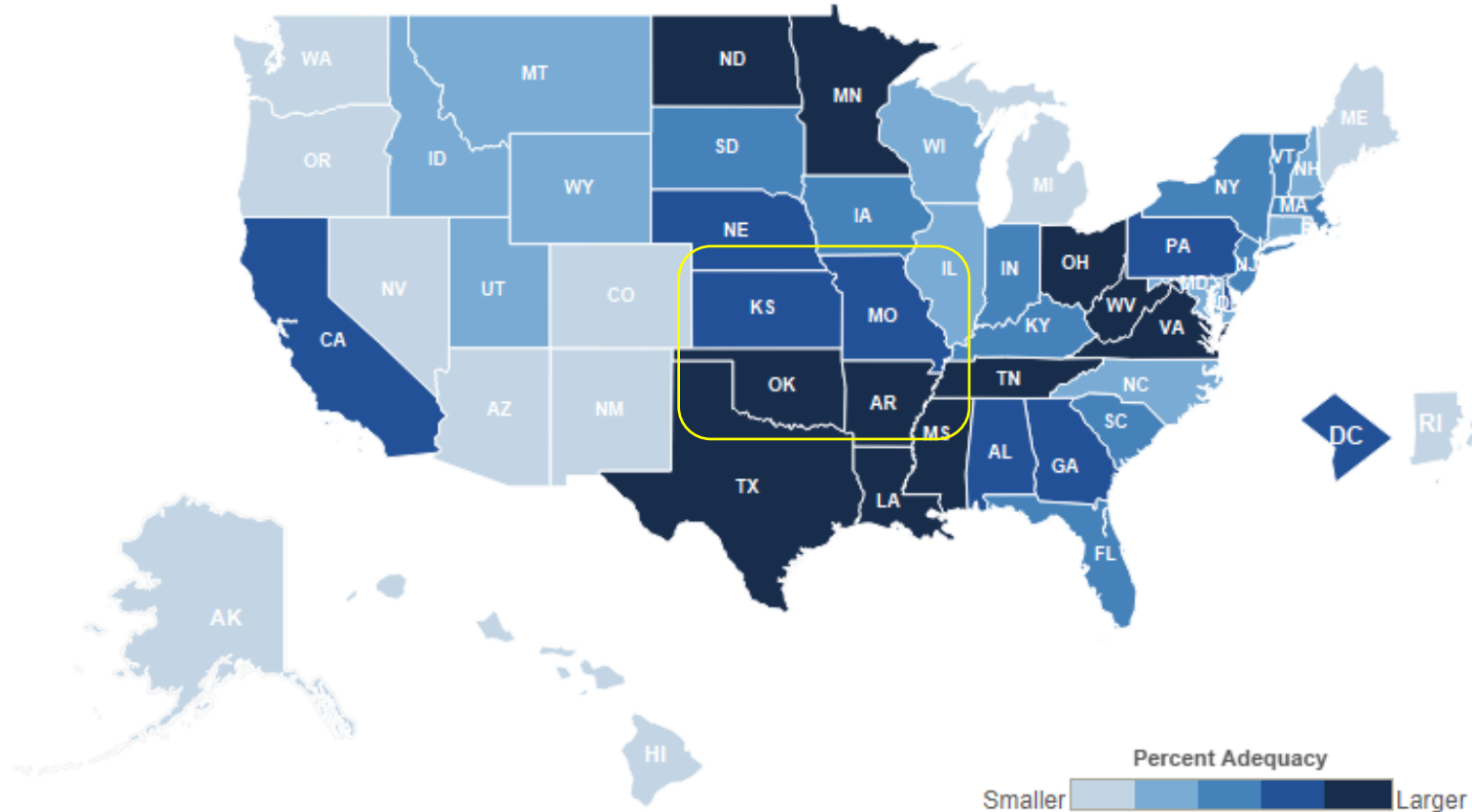
Missouri: 2024 Projections
Supply: **14,580**
Demand: **14,690**
Percent Adequacy: **99%**

Arkansas: 2024 Projections
Supply: **11,160**
Demand: **7,100**
Percent Adequacy: **157%**

Oklahoma: 2024 Projections
Supply: **13,170**
Demand: **8,530**
Percent Adequacy: **154%**

Kansas: 2024 Projections
Supply: **7,450**
Demand: **6,930**
Percent Adequacy: **108%**

Percent Adequacy

Smaller ◄ ► Larger

Percent adequacy is the relationship between the projected future supply and the projected future demand.

Date created: May 11, 2023

*Workforce Projections (hrsa.gov)*

The Approach To Mercy Strategies

Emerging Themes // Top 5 Needs by Workforce Generation

	Baby Boomers Born 1943 - 1964	Gen X Born 1965 - 1980	Gen Y "Millennials" Born 1981 - 1996	Gen Z "Zoomers" Born 1997 – 2012
Technology Integration	19, 7, 14, 15	19, 7, 15	19, 7, 14, 15	13, 19, 7, 15
New Vision For Nursing Career	10, 4, 5, 7	10, 4, 5, 7	10, 4, 5, 7, 17	10, 4, 5, 7, 17
Flexible Compensation	10, 19, 5, 11, 14, 15	10, 19, 5, 11, 15	10, 19, 5, 11, 14, 15	10, 19, 5, 11, 15
Work Life Balance	10, 11, 18	10, 11, 18	10, 11, 17, 18	10, 11, 17, 18
Control Over Schedule	10, 19, 5, 15, 17	9, 10, 19, 5, 15, 17	9, 10, 19, 5, 14, 15, 17	9, 10, 19, 5, 15

KEY: 1-Auerbach (2017). 2-Buerhaus (2021), 3-Buerhaus et al. (2022) 4-Cartwright-Stroupe (2021), 5-Gaffney (2022), 6-Gorbenko, Fraze & Lewis (2016), 7-Lovejoy et al (2021), 8-MacPhee (2020), 9-McClain, Palakas, Christian & Arnold (2022), 10-Petriglieri (2019), 11-Prestia (2019), 12-Reinhardt, Leon, Amatya (2020), 13-Schmitt (2019), 14-Schuetz & Larson (2019) 15-Scott & Kezar (2021), 16-Sherman (2021), 17-Sherman (2022), 18-Weston (2022), 19-Wong, Kost, Fieseler (2021)

Guiding Framework // Innovation Adoption

Everett Rogers Diffusion of Innovation Theory
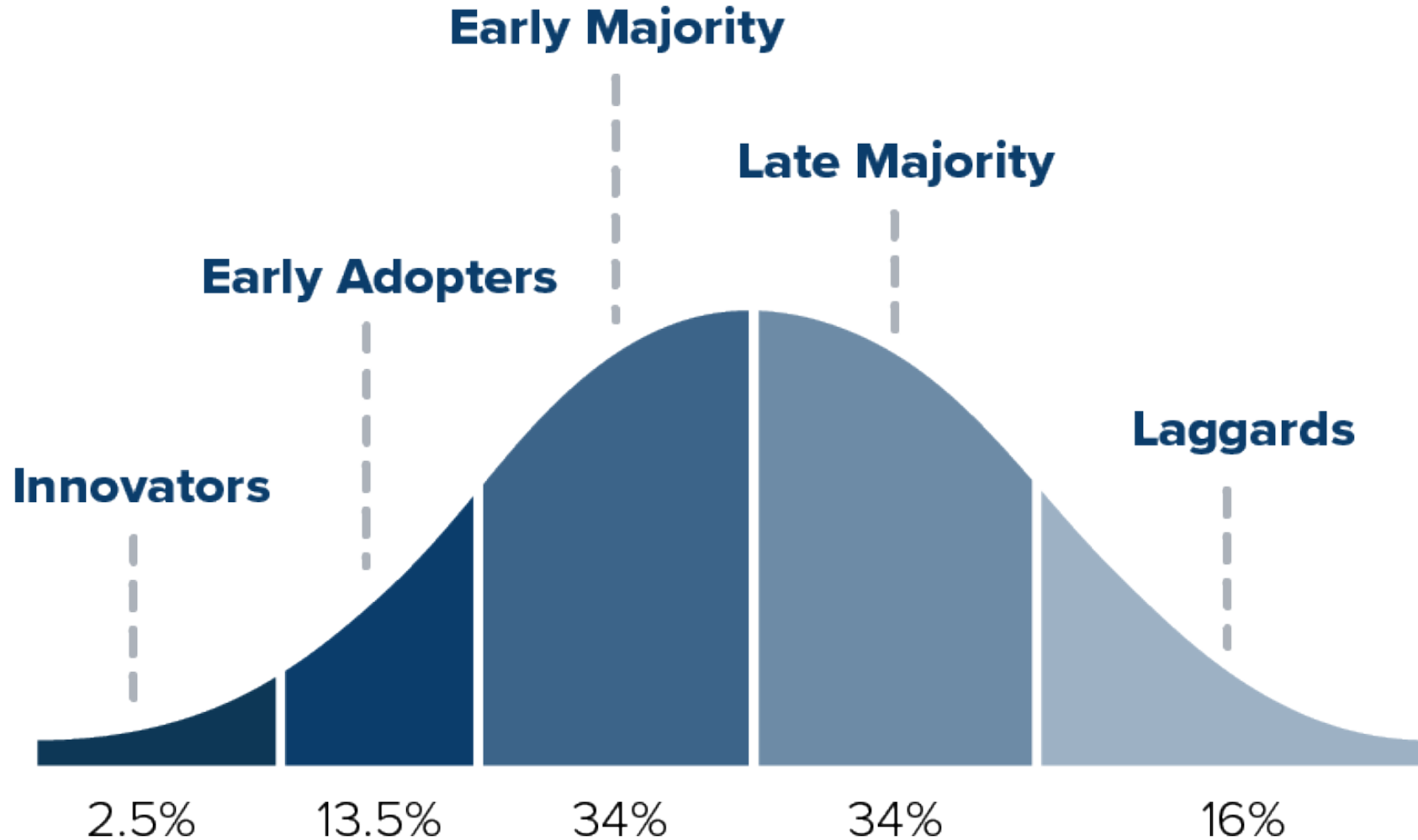
SERVE

Workforce Transformation
Workforce Culture
Patient Experience

DELIVER

Care Model
Business Model
Efficiency
Value

TRANSFORM

Enterprise Architecture
Enterprise Data & Analytics
Operating Model Infrastructure

Enabling Essentiality, Resiliency and a Transformative Experience with Health Care

Mercy

A Bold, New Vision:
Redesigning the Staffing Model

1 Maximize flexibility to improve fill rate and satisfaction

2 Choice: options and control in schedule & compensation

3 Access for multiple workforce layers and generations

4 Scalable, on demand technology integration with automation & AI
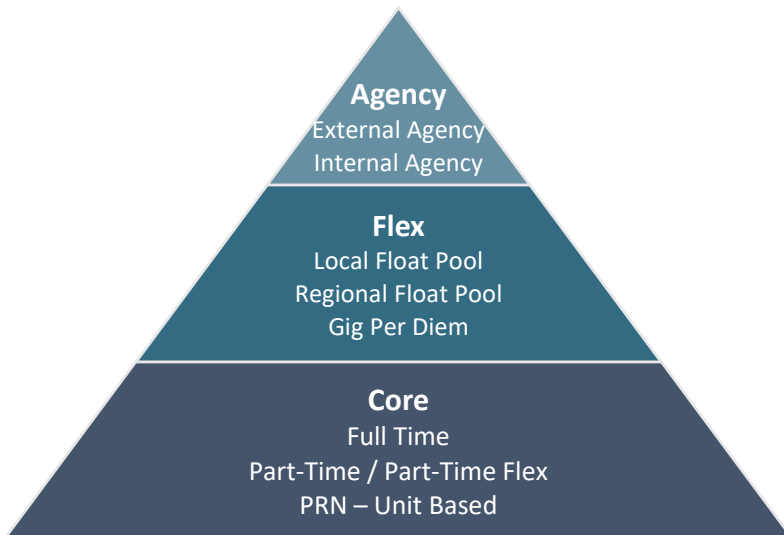
Mercy

Mercy Strategies
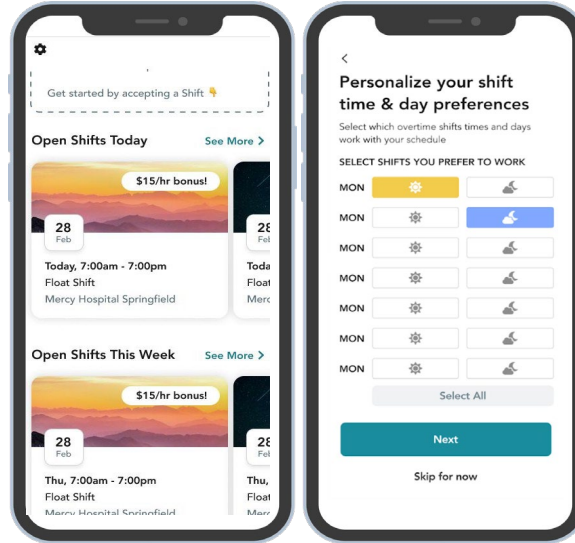## Success to Date (FY23)

⊕ **Centralized Workforce/ Operations Team**

Scope: System / Region / Hospital

⊕ **Operationalized the Workforce Strategy**

Agency
External Agency
Internal Agency

Flex
Local Float Pool
Regional Float Pool
Gig Per Diem

Core
Full Time
Part-Time / Part-Time Flex
PRN – Unit Based

⊕ **Enabling Adaptive Technologies to Improve Fill Rate and Manage Incentive Rates**

Get started by accepting a Shift

Open Shifts Today See More >

$15/hr bonus!
28 Feb
Today, 7:00am - 7:00pm
Float Shift
Mercy Hospital Springfield

Open Shifts This Week See More >

$15/hr bonus!
28 Feb
Thu, 7:00am - 7:00pm
Float Shift
Mercy Hospital Springfield

< **Personalize your shift time & day preferences**
Select which overtime shifts times and days work with your schedule
SELECT SHIFTS YOU PREFER TO WORK
MON
MON
MON
MON
MON
MON
MON
Select All
Next
Skip for now

UKG → MWOD → UKG

⊕ **Recruitment and Retention Strategies**

Robust Advertising Campaign

Reduction in Agency

Menu of Options

Transforming the Workforce

Decreased Days to Fill

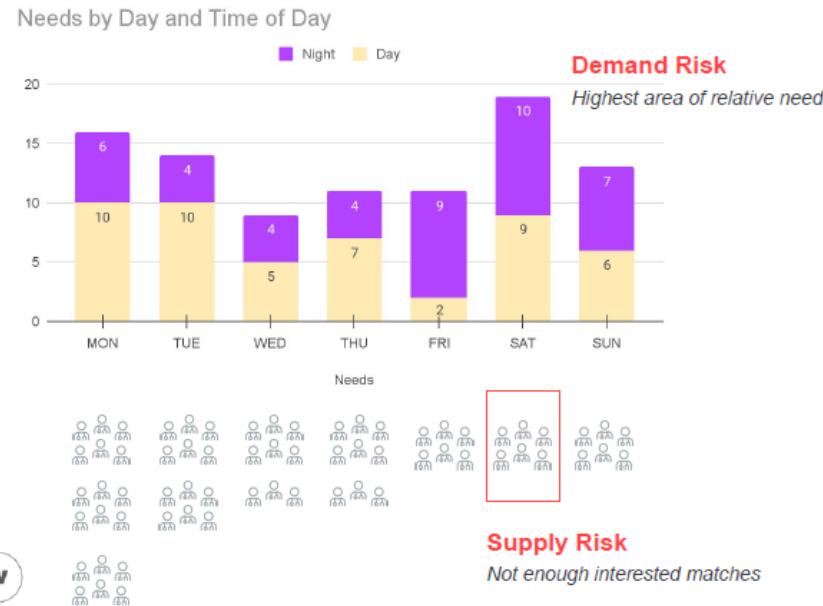Enhanced Candidate Experience

Personalized Recruitment

Using AI to set hourly shift rates based on **market demand** and **past performance**

DEMAND |	Fill Rate Needs # of Shifts	X	SUPPLY |	Matches Qualified Labor Pool	X	SUPPLY |	Propensity Likelihood to Pick Up

1 Model predicts shift pick by assessing fill rate (demand) relative to matches (supply)

2 Model assesses demand risk (areas with the greatest need) and supply risk (not enough interested matches or many interested matches)

3 When supply risk is low, but demand risk is high, the AI receives a feedback loop to adjust rate according to the demand risk (fill rate)

4 Iterative AI Learning overtime to improve predictions

Supply Risk: Adjust Interest Score
Demand Risk: Adjust Scarcity Score

Needs by Day and Time of Day

Demand Risk
Highest area of relative need

Supply Risk
Not enough interested matches

	Max		Max		Max
	$40.00		$40.00		$40.00
	$38.00		$38.00		$38.00
	$36.00		$36.00		$36.00
	$34.00		$34.00		$34.00
	$32.00		$32.00		$32.00
	$30.00		$30.00		$30.00
	Min		Min		Min

How is Dynamic Pricing Operationalized?

1) Set Algorithm Weighting

Demand % /	Supply %
(Fill rate)	(Matches)
90%	10%

2) Set Incentive Range
For Each Workforce Group

WFG	Min	Max
RN	$30	$40
LPN	$15	$25
UAP	$1	$10

CNO and VPs of Nursing + Labor Strategy Team

3) Establish Market Rate
For Each Workforce Group

Fill Rate Needs # of Shifts	X	Matches Qualified Labor Pool	X	Propensity Likelihood To Pick Up

WFG	Market Rate
RN	$35
LPN	$20
UAP	$8

Mercy Works on Demand

4) Establish Individualized Rate
(+/- X % Variability Within WFG)

Workforce Grp 1 (RN)

A	B
$38.00	$32.50

Workforce Grp 2 (LPN)

C	D
$15.25	$22.25

Workforce Grp 3 (UAP)

E	F
$9.50	$15.25

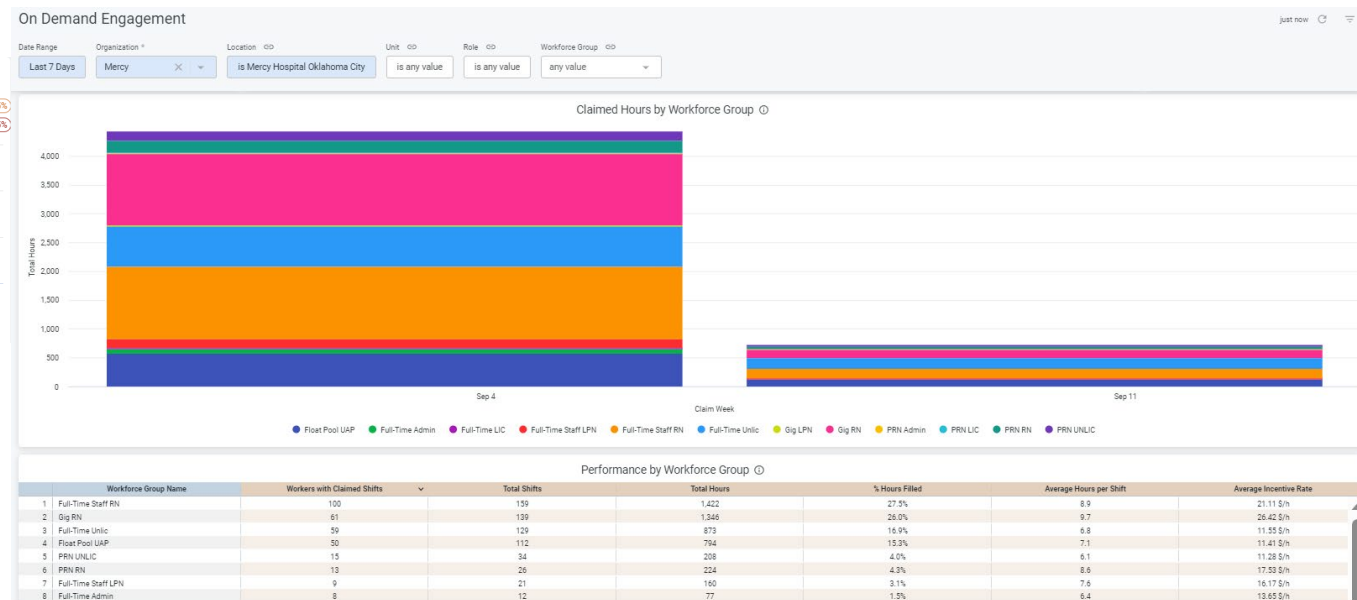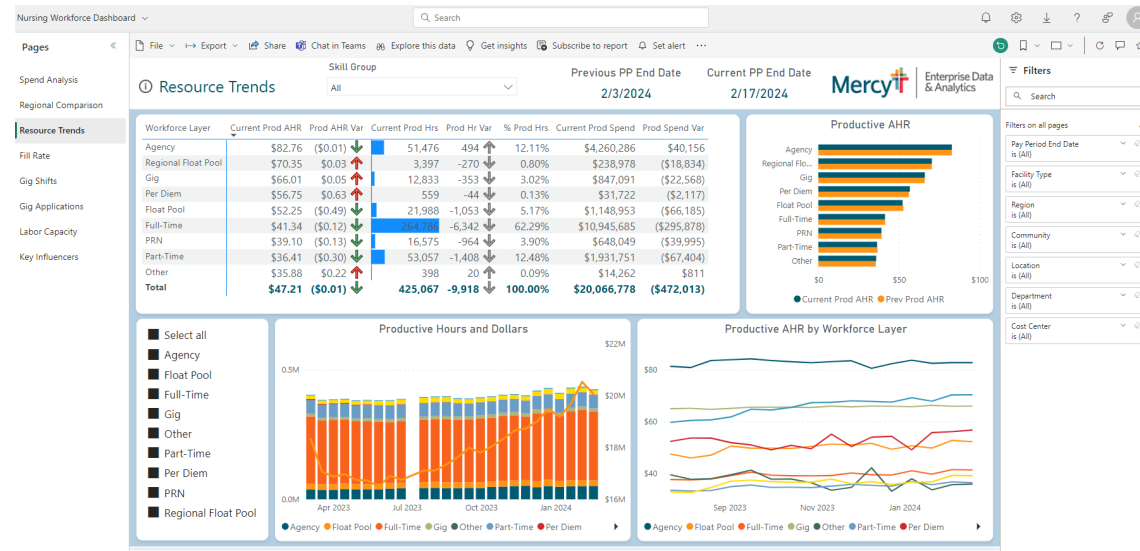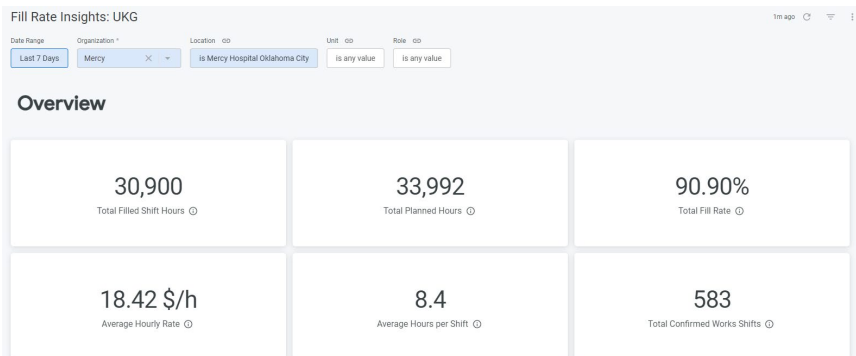# Tools to Monitor Performance
Key Operational Insights

PowerBI:
1. Stewardship
2. Nursing Workforce
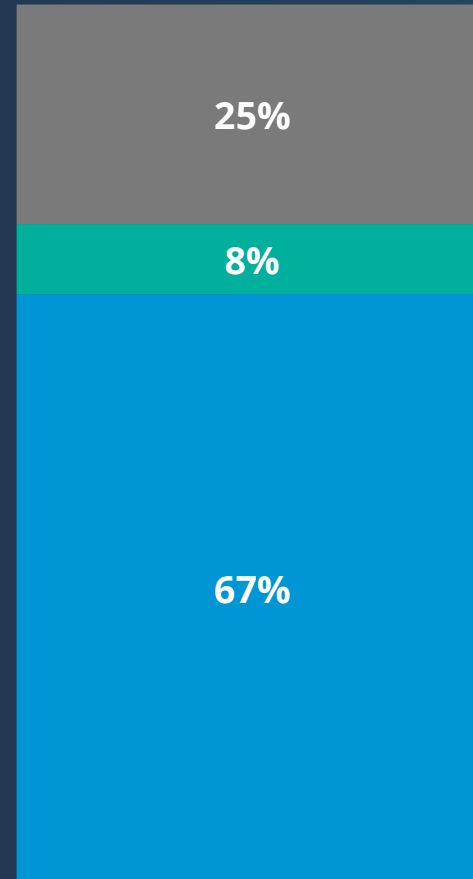3. MWOD – Fill Rate Insights
4. MWOD – Workforce Engagement
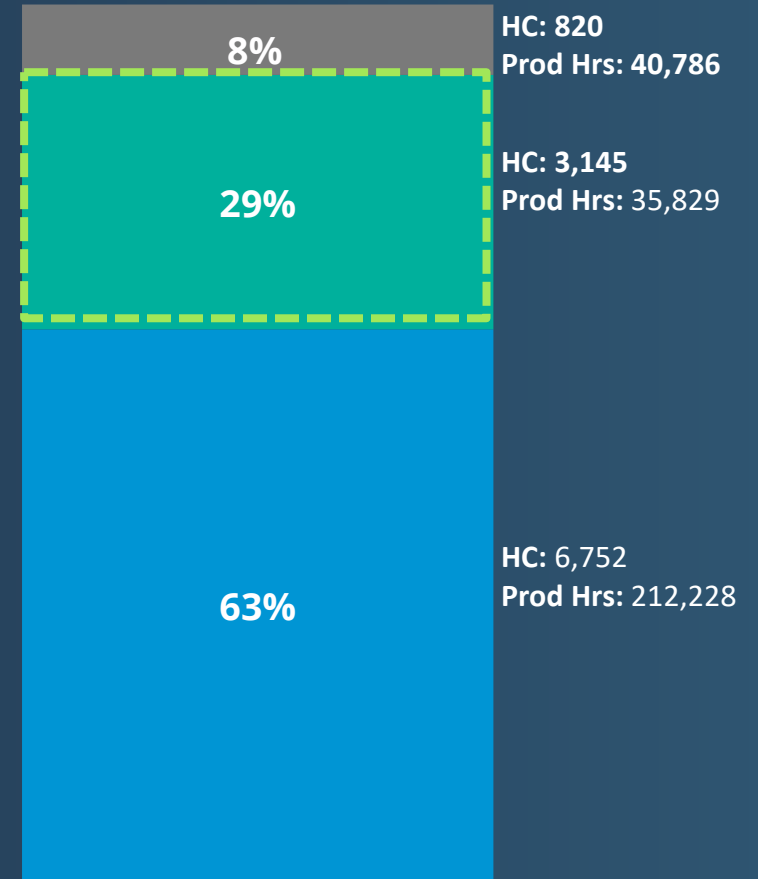
The Results of Mercy Strategies
Success to Date (FY23)

Demonstrated Outcomes FY23

WORKFORCE LAYER	SHIFT / HRS OPTIONS	LOCATION OPTIONS
Core	🕐	
Flex +Gig	🕐 +	📍

NEW PROGRAM

STAFF MIX BEFORE

- 25% (Agency)
- 8% (Flex Staff)
- 67% (Core Staff)

TODAY'S MODEL

- 8% (Agency) — HC: 820, Prod Hrs: 40,786
- 29% (Flex Staff) — HC: 3,145, Prod Hrs: 35,829
- 63% (Core Staff) — HC: 6,752, Prod Hrs: 212,228

■ Core Staff ■ Flex Staff ■ Agency

*Includes International Agency

Mercy✝

Demonstrated Outcomes FY23

- ☑ **Higher Fill Rate**
- ☑ **Greater Efficiency**
- ☑ **Capacity Gains**
- ☑ **Reduced Labor Dependency**
- ☑ **Lower Total Cost to Deliver Care**
- ☑ **Lower Turnover**

99%
Average Fill Rate

$30.7M
Lower premium labor spend
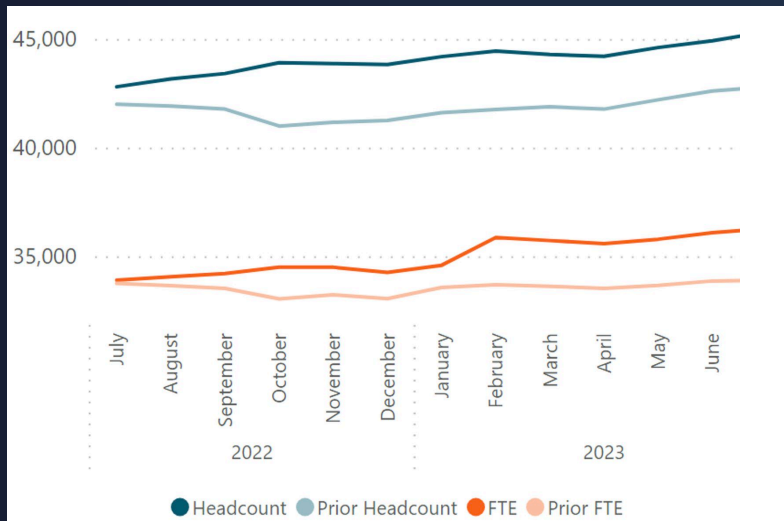
60% ⬇
Agency Spend (Highest Costs)

11% ⬇
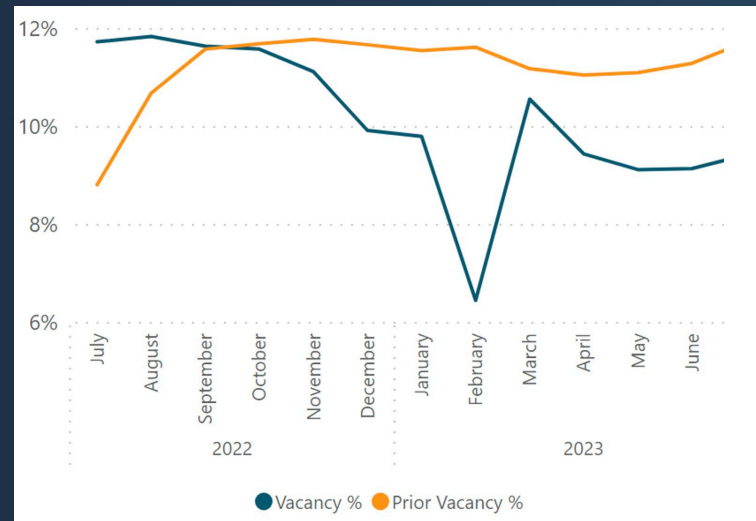Total Cost to Deliver Care

16% ⬇
Total Cost of Resource

Mercy✝

Demonstrated Outcomes FY23

Headcount	Vacancy	Voluntary Turnover
(as of June 30, 2023)	**(as of June 30, 2023)**	**(Rolling 12 month)**
⬆ **+4.95%**	⬇ **-2.59%**	⬇ **-3.43%**
over prior year end	over prior year end	over prior year end rolling 12

Headcount chart (July 2022 – June 2023): ● Headcount ● Prior Headcount ● FTE ● Prior FTE

Vacancy chart (July 2022 – June 2023): ● Vacancy % ● Prior Vacancy %

Voluntary Turnover chart (July 2022 – June 2023): Median: 18.59% — Top Quartile: 14.84% — ● Voluntary Turnover % ● Prior Voluntary Turnover %
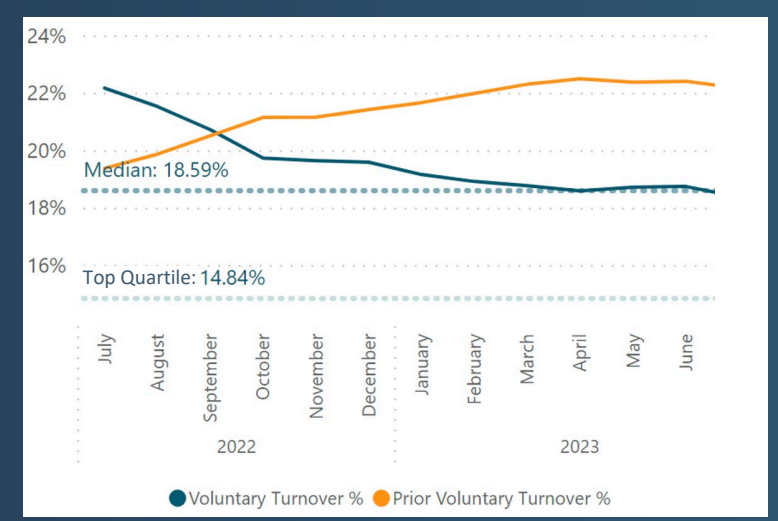
Mercy✝

Labor, Costs & Revenue Trends at Mercy

EBIDA & Labor Trend

Bar chart with line. X-axis: Q3 - FY22, Q4 - FY22, Q1 - FY23, Q2 - FY23, Q3 - FY23, Q4 - FY23

S&W decreased 5.9% as % of NPSR

Legend: S&W as % of NPSR, EBIDA %
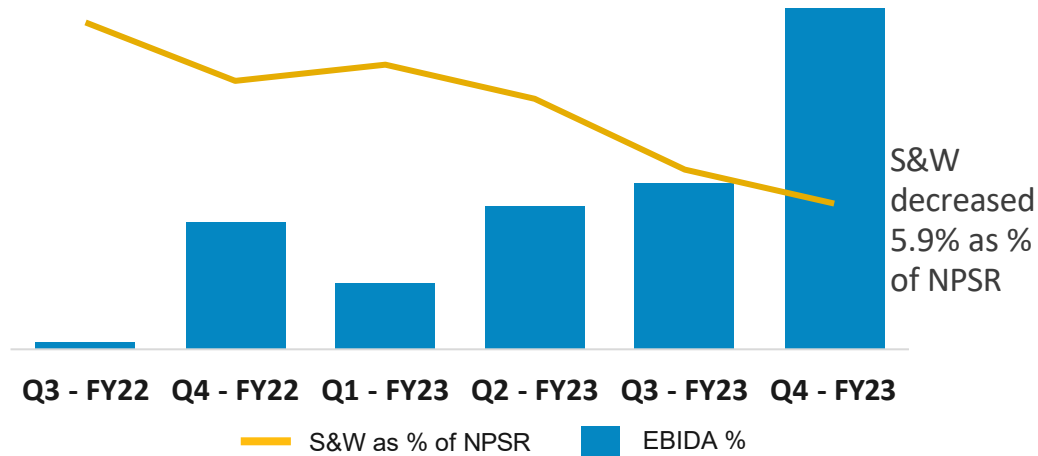
NPSR Revenue Growth Trends

Bar chart with line. X-axis: Q3 - FY22, Q4 - FY22, Q1 - FY23, Q2 - FY23, Q3 - FY23, Q4 - FY23

19% improvement In NPSR per work day

Legend: Gross Rev Per Workday, NPSR Per Workday
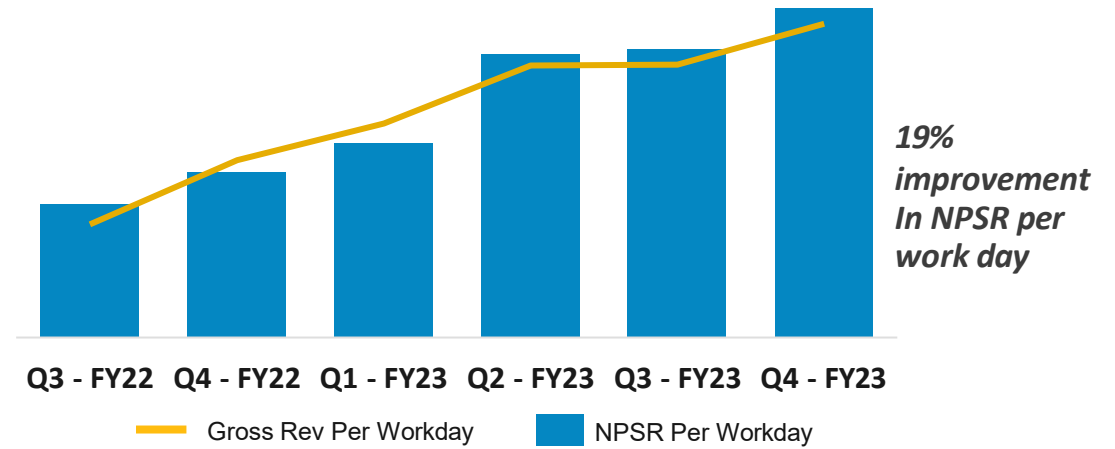
Premium Labor Spend vs Prior Year

Line chart. X-axis: PP2, PP3, PP4, PP5, PP6, PP7, PP8, PP9, PP10, PP11, PP12, PP13, PP14, PP15, PP16, PP17, PP18, PP19, PP20, PP21, PP22, PP23, PP24, PP25

$103M savings

Legend: FY23, FY22
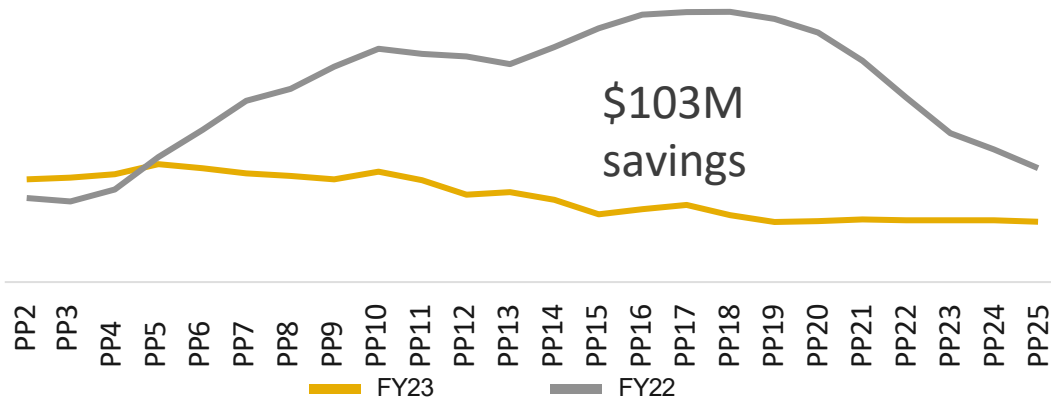
Cost Metrics per ADCMI vs Prior Year

Bar chart.

Salary and Benefits — *4.5% improvement*

Manageable Expense — *3.0% improvement*

Legend: FYTD 23, FYTD 22
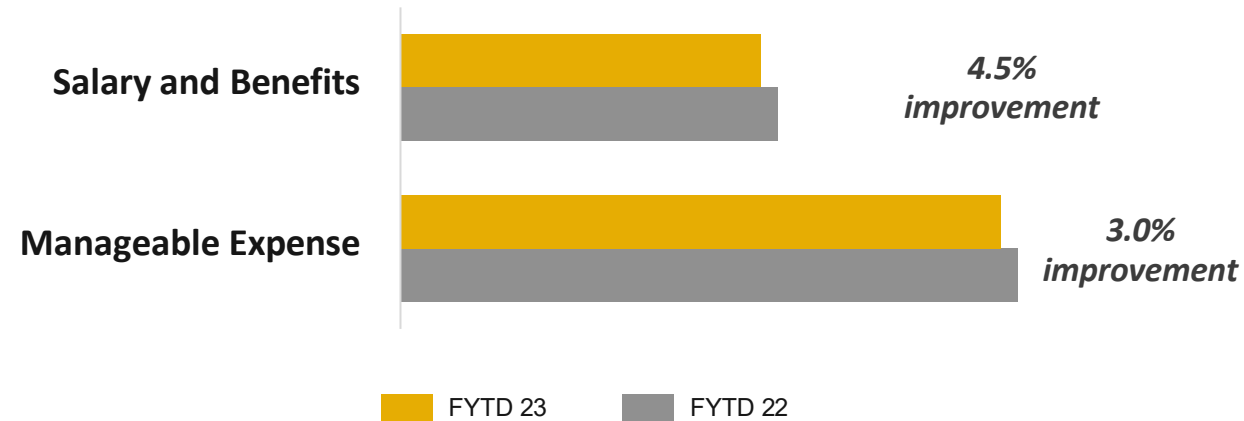
Recent Publication

ORIGINAL ARTICLES

The Postpandemic Nursing Workforce
Increasing Fill Rates and Reducing Workload Through a Generational Design of Workforce Layers

Rocchio, Betty Jo DNP, RN, CRNA, CENP, EBP-C; Seys, Jill D. DNP, RN, NEA-BC; Williams, Denise L. MHCOE, RN, CENP, CPHQ, CPPS; Vancil, Barbara J. DNP, RN, CNE, CCRN-K; McNett, Molly M. PhD, RN, CNRN, FNCS, FAAN

Author Information ⌄

BUY

⌗ Metrics

Abstract

Inequities between nursing workforce supply and demand continue to challenge nurse executives in creating the vision for a postpandemic nursing workforce. Health system's workforce redesign strategies must prioritize the changing needs of the multigenerational workforce to maximize the available supply of nurses willing to remain in the workforce. A test of a newly designed flexible workforce framework, aimed to meet the needs of the multigenerational workforce, resulted in increased fill rates and decreased costs of labor.

Mercy✝

The Future

Key Forward Thinking Industry Trends on Nurse Recruitment and Building Talent

Workforce Transformation is a journey, and there are exciting things on the horizon....

Total Workforce Platform

Dynamic Shift Pricing & Individualized Incentives

Optimization through HR Practice Standardization

Mobile Credentialing & Automated Onboarding

Enhanced Communication & Education Hub

Mercy

The Future
Key Forward Thinking Industry Trends on Nurse Recruitment and Building Talent

Mercy

Opportunities for Career Development and Mobility

- Skill based assignments are on the rise, rather than fixed positions to promote learning and growth competencies.

- Pipeline programs to support nursing students and enhance individual career pathways.

Innovative Compensation Strategies

- About half of frontline clinicians are satisfied with their compensation (44%) and benefits (51%). And when asked for one piece of advice about how healthcare administrators can best solve workforce burnout and shortages, more than one-third of clinicians advised offering better compensation and benefits.

- Customizable Benefit Packages

Flexible Work Arrangements

- To attract and retain nurses, offering flexible scheduling options, part-time positions, and remote work opportunities to provide autonomy and control over schedules.

Restoring Trust in Organizational Leadership

- Fewer than half (45%) of frontline clinicians trust their organization's leadership to do what's right for its patients. Even fewer, 23%, trust their leadership to do what's right for workers. These two types of trust—to do right by patients and to do right by workers—are highly correlated and associated with significantly lower clinician burnout (Deloitte).

Embracing Technology

- Rise of sophisticated recruitment platforms and applicant tracking to efficiently screen candidates and match them with suitable positions to improve turnaround time to hire.

- Artificial intelligence (AI) utilized to analyze candidate profiles, credentials, and experiences, helping employers identify the best fits for their organizations.

Redesigning Care Teams

- Increased focus on clinical roles that decrease the workload of nurses (e.g., patient care techs) and encourage working to top of licensure.

The Lessons Learned
Transformative Innovation is Disruption

Align
1) Structures
2) People
3) Processes

To Achieve
4) Solutions
5) Outcomes

And Establish
6) Accountability
7) Sustainability

Stay Persistent in the Mission
Adjust Approaches as Needed to Achieve the End Goal

References

American Nurses Foundation & Joslin Insight. (2022). *Pulse on the nations' nurses survey series: COVID-19 two-year impact assessment survey.*
   covid-19-two-year- impact-assessment-written-report-final.pdf (nursingworld.org)

Auerbach, D. I., Chattopadhyay, A., Zangaro, G., Staiger, D. O., Buerhaus, P. I. (2017). Improving nursing workforce forecasts: comparative analysis
   of the Cohort supply model and the health workforce simulation model. *Nursing Economics, 35*(6), 283-326.

Berlin, G., Lapointe, & M., Murphy, M. (2022) Surveyed nurses consider leaving direct patient care at elevated rates. McKinsey & Company.
   https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/surveyed-nurses-consider-leaving-direct-patient-care-at-elevated-
   rates#:~:text=Surveyed%20nurses%20said%20staffing%2C%20pay,22%20percent%20in%20February%202021.

Buerhaus, P. I. (2021). Current nursing shortages could have long-lasting consequences: time to change our present course. *Nursing Economics, 39*(5), 247-250.

Buerhaus, P. I., Staiger, D. O., Auerbach, D. I., Yates, M. C., & Donelan, K. (2022). Nurse employment during the first fifteen months of the COVID-19 pandemic. *Health Affairs*,
   41(1), 79–85. https://doi.org/10.1377/hlthaff.2021.01289

Bugajski, A., Lengerich, A., Marchese, M., Hall, B., Yackzan, S., Davies, C., Brockopp, D. (2017). The importance of factors related to nurse retention. *Journal of Nursing
   Administration, 47*(6), 308-12. https://doi.org/10.1097/NNA.0000000000000486

Cartwright-Stroupe, L. M., & Shinners, J. (2021). Moving forward together: what hope, efficacy, optimism, and resilience tell us about generation Z. *Journal of Continuing
   Education in Nursing, 52*(4), 160-162. https://doi.org/10.3928/00220124-20210315-02

Gaffney, T. (2022). Retaining nurses to mitigate shortages. *American Nurse Journal, 17*(1), 14-16, 25-26.

Gorbenko, K. O., Fraze, T., & Lewis, V. A. (2016). Redesigning care delivery with patient support personnel: learning from accountable care organizations. *International Journal
   of Care Coordination*, *19*(3/4), 73–83. https://doi.org/10.1177/2053434516676080

Lovejoy, M., Kelly, E. L., Kubzansky, L. D., & Berkman, L. F. (2021). Work redesign for the 21st century: promising strategies for enhancing worker well-being. *American
   Journal of Public Health*, *111*(10), 1787–1795. https://doi.org/10.2105/AJPH.2021.306283

References

MacPhee, M., Fitzgerald, B., Havaei, F., Budz, B., Waller, D., Li, C., Larmet, J., Taverner, T. (2020). Nursing care delivery redesign: using the right data to make the right decision. *Nursing Leadership, 33*(2), 21-37.

McClain, A. R., Palokas, M., Christian, R., & Arnold, A. (2022). Retention strategies and barriers for millennial nurses: A scoping review. *JBI Evidence Synthesis*, *20*(1), 121– 157. https://doi.org/10.11124/JBIES-20-00577

Petriglieri, G., Ashford, S. J., & Wrzesniewski, A. (2019). Agony and ecstasy in the gig economy: cultivating holding environments for precarious and personalized work identities. *Administrative Science Quarterly, 64*(1), 124-170. https://doi.org/10.1177/0001839218759646

Prestia, A. S. (2019). Leveraging the gig economy: a novel solution to improve health care costs. *Nurse Leader*, *17*(4), 356–359. https://doi.org/10.1016/j.mnl.2018.11.003

Reinhardt, A. C., León, T. G., & Amatya, A. (2020). Why nurses stay: analysis of the registered nurse workforce and the relationship to work environments. *Applied Nursing Research*, *55*, 1-9. https://doi.org/10.1016/j.apnr.2020.151316

Rogers, E. (2010). *Diffusion of innovations* (5th ed.). Free Press.

Schmitt, C. A., & Lancaster, R. J. (2019). Readiness to practice in generation z nursing students. *Journal of Nursing Education, 58*(10), 604-606.

Schuetz, G., & Larson, J. (2019). How to grow your workforce through staff optimization. *Nurse Leader*, *17*(4), 344–346. https://doi.org/10.1016/j.mnl.2019.05.011

Scott, D. T., & Kezar, A. J. (2021). The gig academy: naming the problem and identifying solutions. *Journal of Collective Bargaining in the Academy*, *12*(1), Article 3. https://doi.org/fixed paragraph separator; final clean

Sherman, R. O. (2021). The future of nursing 2020-2030 report: next steps for nurse leaders. *Nurse Leader*, *19*(5), 438–440. https://doi.org/10.1016/j.mnl.2021.07.001

Sherman, R. O. (2022). A very different nursing workforce. *Nurse Leader*, *20*(1), 1-2. https://doi.org/10.1016/j.mnl.2021.12.019

Weston, M. J. (2022). Strategic planning for a very different nursing workforce. *Nurse Leader, 20*(1), 1-9. https://doi.org/10.1016/j.mnl.2021.12.021

Wong, S. I., Kost, D., & Fieseler, C. (2021). From crafting what you do to building resilience for career commitment in the gig economy. *Human Resource Management Journal*, *31*(4), 918–935. https://doi.org/10.1111/1748-8583.12342