Closing the Imaging Staffing Gap

Operational and Financial Strategies for Resilient Teams

National Survey Insights + Tactics to Improve Access and Efficiency

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Disclosure

Affiliation Disclosure

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I serve as Vice President, Strategic Partnerships & Clinical Education Innovation and Chief Academic Success Officer at John Patrick University of Health and Applied Sciences.

Content Integrity Statement:
The perspectives shared in this session are presented for **educational and workforce-improvement purposes**, with the goal of supporting safe, compliant imaging operations and improved patient access.

OPENING

A Patient Story We All Recognize

Scenario

A patient needs an MRI to confirm treatment response. The order is urgent—but the next available slot is weeks out.

Your team does what they can: add-on slots, double-backs, overtime. And still, delays happen—not because people do not care, but because there are not enough trained hands to safely cover the hours.

Our Goal Today

Translate national data into practical coverage strategies that protect patient access, staff wellbeing, and financial performance.

GOALS

By the end of this session, you will be able to:

- Interpret staffing survey data for CT, MRI, Sonography, and Nuclear Medicine—vacancy rates, demand trends, and practical implications.
- Connect rising volumes and persistent shortages to throughput, overtime, wait times, quality, and revenue leakage.
- Apply deployment strategies (cross-credentialing, regional float pools, remote scanning/coverage) to stabilize access.
- Evaluate regulatory and safety guardrails for flexible staffing models.
- Estimate financial recovery by converting unstaffed hours into covered hours using a simple impact model.
- Build a modality-specific action plan that improves coverage while reducing burnout and protecting quality.

The Imbalance: Demand is Rising Faster than Staffing

FRAMING

What is Changing

- Higher imaging volumes (aging population + broader indications).
- More complex exams and protocols (time per study increases).
- Faster access expectations from patients and referring providers.

What is Not Keeping Up

- Vacancy rates remain elevated—especially CT and MRI.
- New graduate pipeline does not match projected demand.
- Burnout, injuries, and turnover accelerate the gap.

Clinical reality: when coverage breaks, access breaks—and the burden lands on patients and frontline teams first.

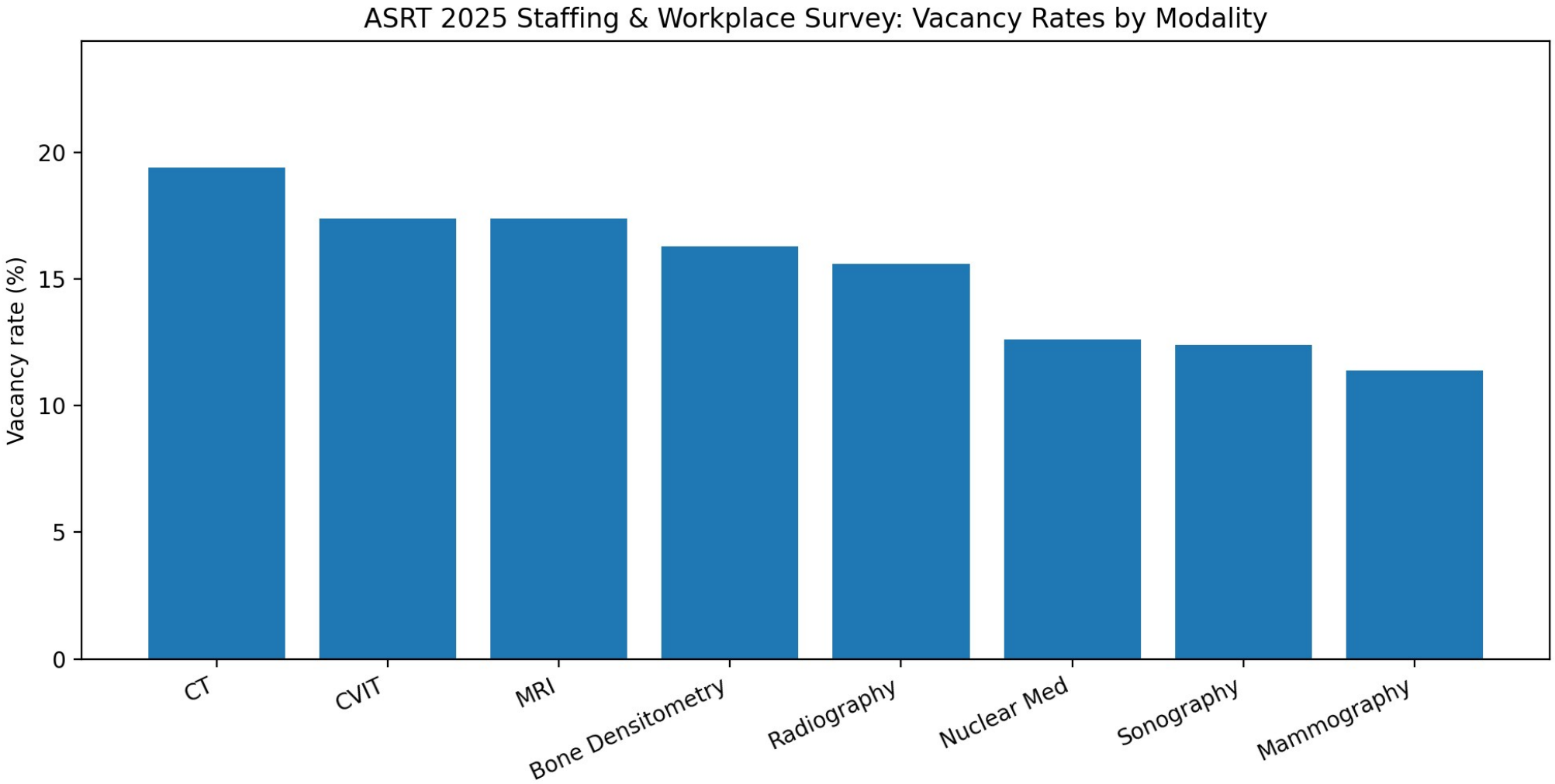
- Increasing workloads in less than fully staffed departments increases the risk for injuries.

- Predictions show that 20% of sonographers leave the field prematurely due to repetitive stress injury and it’s expected that 30% will retire within the next 5 years.

- Common causes of WRMSD in sonographers inclu
  - Poor and/or static posture
  - Repetitive movements
  - Transducer grip pressure and the use of force
  - Workload management issues

Source
TSUNAMI HEADED FOR ULTRASOUND: A Technologist Staffing Crisis is Approaching

Vacancy Rates by Modality (National Snapshot)



Source: ASRT 2025 Staffing & Workplace Survey

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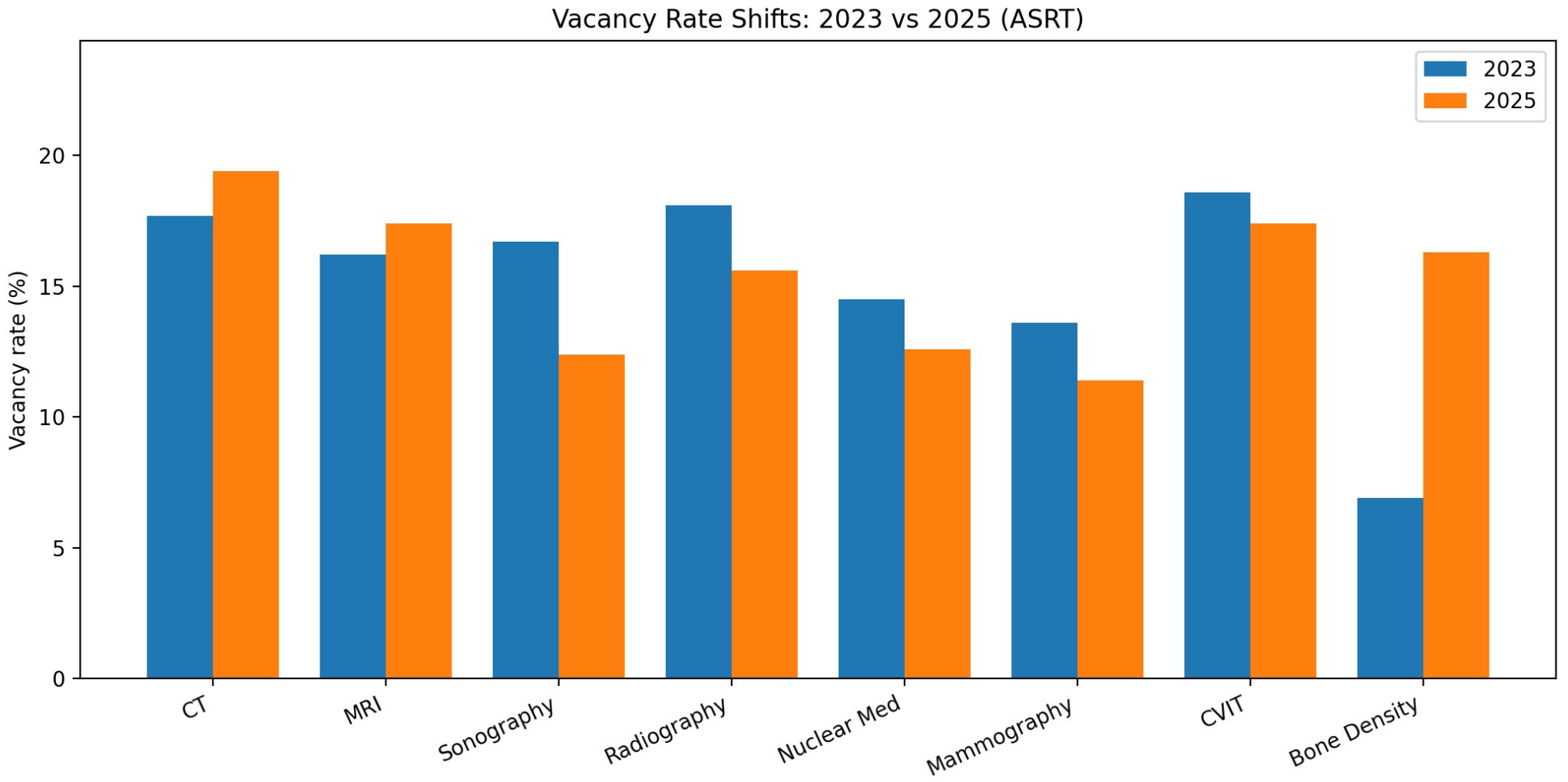
What Changed Since the Last Survey Cycle?

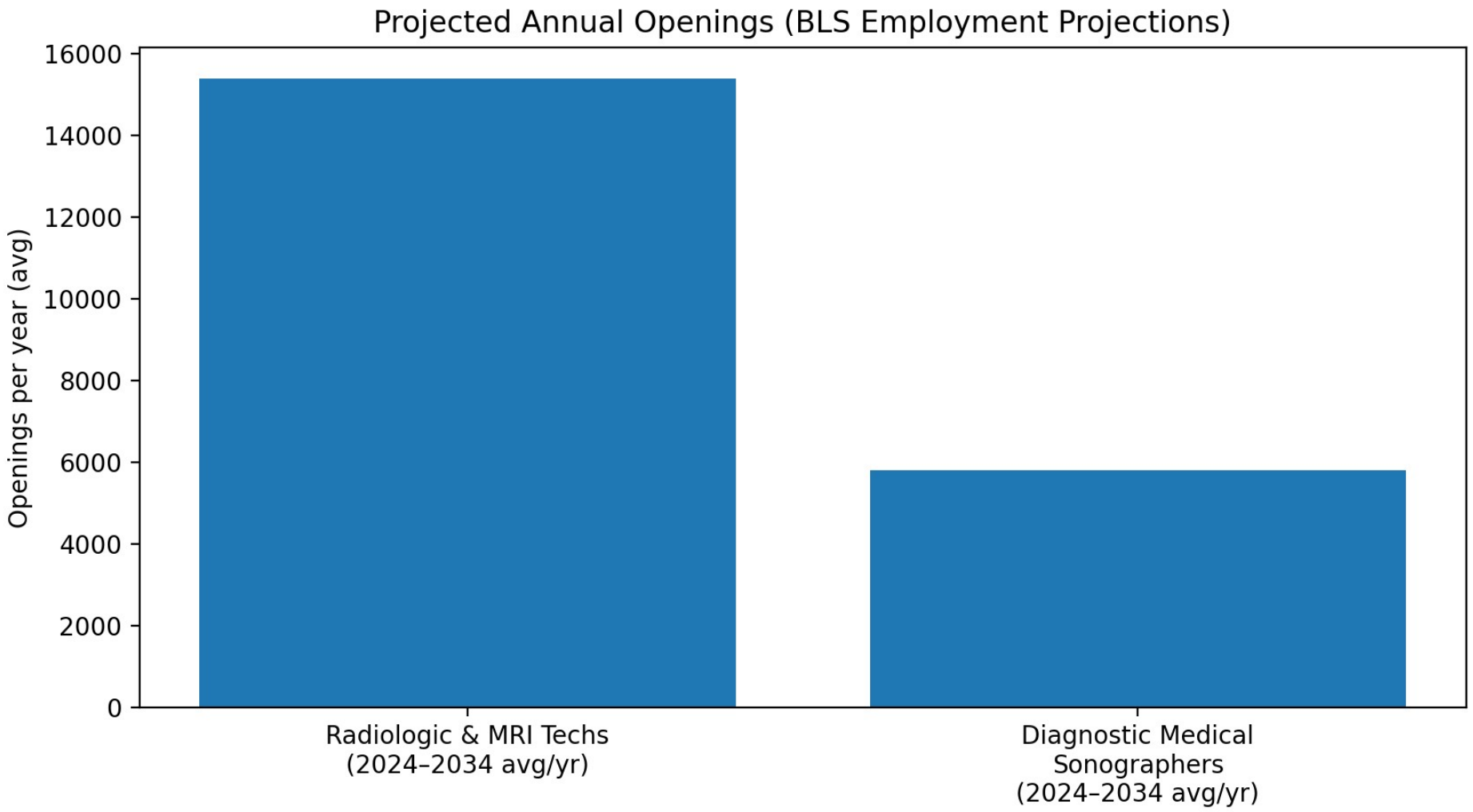
2023 → 2025 shifts



Source: ASRT 2023 & 2025 Staffing Surveys

The Pipeline: Projected Openings Remain High

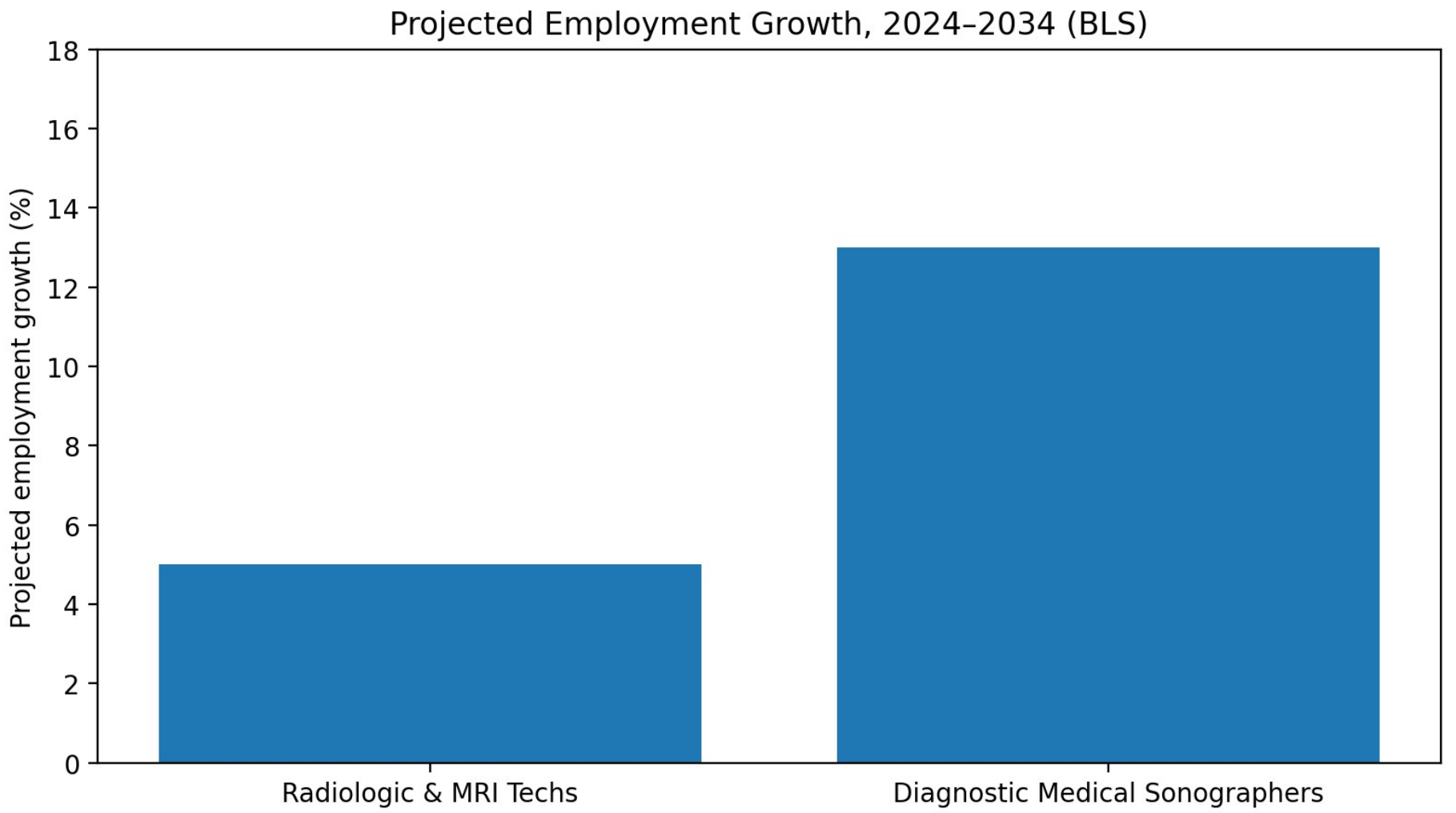
BLS Occupational Outlook (2024–2034)



Source: U.S. Bureau of Labor Statistics (OOH)

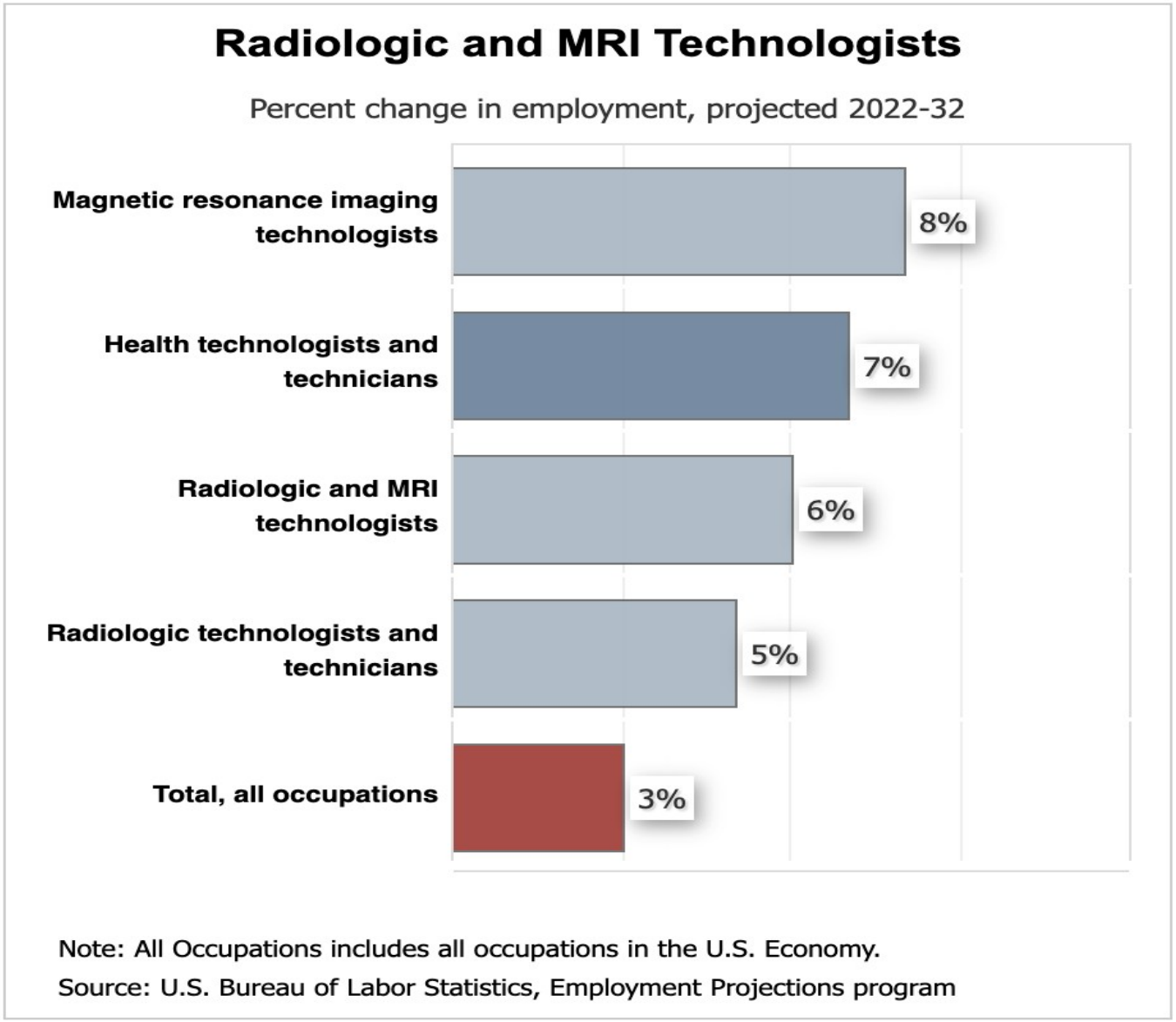
Growth is Faster than the Average

BLS projected growth (2024–2034)



Source: U.S. Bureau of Labor Statistics (OOH)

Bureau of Labor Statistics Projections 2022-2032



Bureau of Labor Statistics Projections 2022-2032 Diagnostic Medical Sonographers

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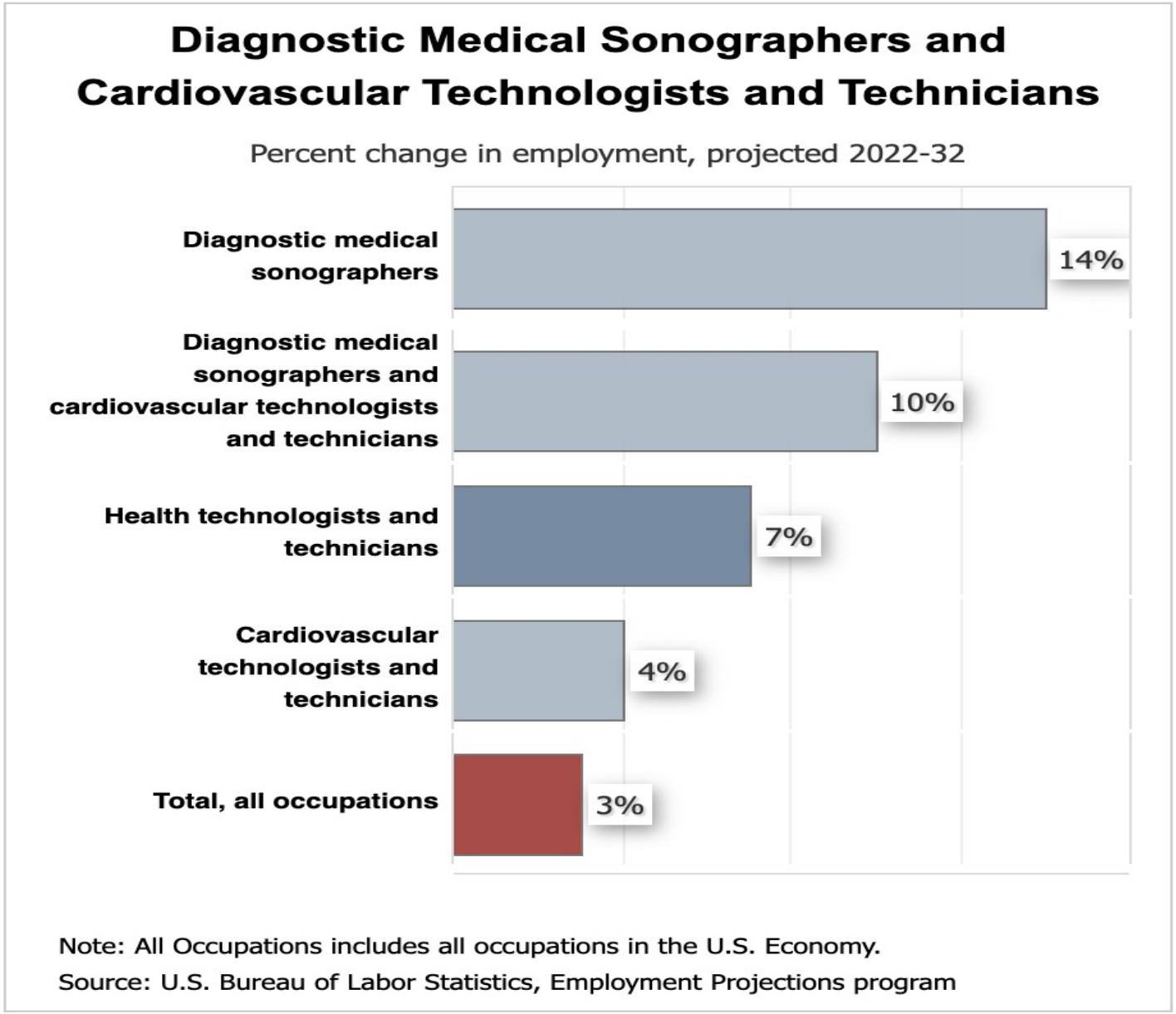

Bureau of Labor Statistics Projections 2022-2032 Diagnostic Medical Sonographers

OPERATIONS

When Staffing is Thin, the System behaves Unpredictably:

Access

Longer waits, fewer add-ons, delayed diagnosis and treatment decisions.

Throughput

Bottlenecks in CT/MRI constrain ED, inpatient flow, and outpatient growth.

Quality

More repeat sequences, rushed turnovers, and higher risk of error under fatigue.

Workforce Health

Overtime, missed breaks, injuries, and burnout increase turnover risk.

Key point for leaders: “Staffing shortage” is not only an HR problem—it is an access, quality, and margin problem.

Financial Model: Turning "Unstaffed Hours" into Recoverable Margin

FINANCE

Recovery Framework

Unstaffed Hours
vacancies + call-outs + turnover

→

Lost Exam Capacity
slots removed or never opened

→

Lost Revenue
gross charges not captured

→

Lost Margin
net contribution after variable cost

Quick calculation

Unstaffed hours × Exams/hour × Net margin/exam = Recoverable annual margin

Use this to prioritize which coverage strategies pay back first (CT/MRI typically lead).

Payer-mix adjuster (illustrative): Use your local net contribution margin per exam. Medicare-heavy sites typically fall at the low end; commercial-heavy at the high end.

Worked Example: Hospital CT Coverage Recovery

FINANCE

Adjust to your local throughput, payer mix, and contribution margin. Use this as a planning tool—not a reimbursement estimate.

Inputs and Output	
Unstaffed hours per week	24 hours
CT exams per hour (average)	1.2
Net margin per exam (contribution)	$220
Recoverable annual margin	**≈ $329,000**

Takeaway: Small coverage wins (a few shifts per week) can translate into meaningful annual recovery—without relying solely on overtime.

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Worked Example: Outpatient CT Coverage Recovery

FINANCE

Adjust to your local throughput, payer mix, and contribution margin.

Inputs and Output	
Unstaffed hours per week	12 hours
CT exams per hour (average)	1.0
Net margin per exam (contribution)	$180
Recoverable annual margin	**≈ $112,000**

Takeaway: Even modest outpatient coverage gaps add up. Stabilizing a few blocks per week improves access, reduces reschedules, and protects margin.

Quick MRI lens: 16 unstaffed hrs./wk. × 0.7 exams/hr. × $350 contribution ≈ $204k/year.

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TACTICS

Choose the Mix that Fits your Environment and Compliance Guardrails.

Cross-credentialing ladder

Build mobility: X-ray → CT → MR → IR/NM (with structured competencies).

Schedule redesign

Staggered starts, micro-shifts, weekend blocks, protected breaks, reduced overtime dependence.

Regional float pool

Shared staffing across sites with standardized protocols and escalation pathways.

Reduce rework

Positioning support, coaching, standardized prep to reduce repeats and reschedules.

Remote support models

Remote protocoling, troubleshooting, coverage augmentation (where allowed).

Retention package

Ergonomics, career pathways, preceptor support, recognition, and workload fairness.

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TACTICS

Design Principles

- Start with a defined competency map (ARRT/departmental).
- Protect patient safety: supervision levels, escalation rules, and staffing ratios.
- Use “micro-skills” modules to reduce cognitive overload (e.g., CT neuro, CTA basics).
- Incentivize preceptors and protect their time (preceptor fatigue drives turnover).
- Make the pathway visible: timeline, pay progression, and role clarity.

How this Helps Immediately

Cross-credentialing increases scheduling flexibility, reduces single-modality bottlenecks, and supports retention by creating a credible career pathway.

Strategy 2: Regional Float Pools (Shared Capacity, Shared Standards)

TACTICS

What Works

- Standardized protocols and exam workflows across sites.
- Clear scope: which modalities, which shifts, which locations.
- Defined escalation pathways (clinical + operational).
- Housing/commute support when needed (rural coverage).

Common Failure Points

- No protocol standardization → quality variability.
- Floating without onboarding → safety risk and dissatisfaction.
- "Hero staffing" expectation → burnout accelerates.
- Lack of pay transparency → retention suffers.

TACTICS

Where Remote Support is Most Useful

Operational Use Cases

- Protocoling support (radiologist + advanced technologist workflows).
- Real-time troubleshooting and coaching for newer staff.
- After-hours coverage augmentation (reduce lone-staff risk).
- Remote scheduling/coordination to protect scanner time.

Safety + Compliance Guardrails

- Confirm state licensure and facility policy requirements.
- Define supervision: who is on-site, who can intervene physically.
- Protect patient identification, privacy, and documentation integrity.
- Create a clear “stop rule” for safety concerns.

WORKFORCE

If you are losing experienced technologists, your pipeline will never catch up.

High-Yield Retention Levers

- Protected breaks and realistic daily capacity targets
- Ergonomics and injury prevention (reduce WRMSD risk)
- Predictable schedules and fair overtime distribution
- Career pathways (CT/MR/IR) with coaching and recognition

A Compassionate Operational Stance

Retention improves when teams feel seen: adequate staffing plans, clear escalation rules, and leadership that treats safety and rest as non-negotiable—not optional.

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SAFETY

Before Implementing Flexible Staffing Models, Confirm:

- State licensure requirements for each modality and role.
- Supervision policies for students/new grads and cross-training pathways.
- Radiation safety policies and documentation expectations.
- MRI safety requirements (roles, access controls, incident response).
- Credentialing/competency documentation (defensible and auditable).
- Remote workflows: identity verification, privacy/security, escalation rules.

Bottom line: flexibility is valuable only when it is compliant, documented, and safe.

PLAN

A Realistic Sequence that Respects Clinical Workload

0–30 Days

- Quantify unstaffed hours by modality and shift
- Top 2 bottlenecks (usually CT/MR)
- Standardize 3–5 high-volume protocols
- Set a staffing escalation rule (when to close slots safely)

31–60 Days

- Launch cross-training cohort (small, protected time)
- Pilot micro-shifts or weekend blocks
- Define float pool eligibility + onboarding checklist
- Start a retention "quick wins" package (breaks, ergonomics)

61–90 Days

- Scale what worked; stop what did not
- Add remote support where permissible
- Build dashboard: access, utilization, repeats, overtime
- Formalize career pathway + preceptor incentives

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ACTION

Use this to Leave with a Concrete Plan—Not Just Awareness.

CT
MRI
Sonography
Nuclear Medicine

1) Biggest bottleneck
2) Unstaffed hours/week
3) Quick-win tactic
4) 60-day tactic
5) Safety guardrail
6) KPI to watch

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METRICS

Set of measures that align clinical, operational, and financial outcomes:

Access
- Days to next available
- Add-on capacity
- ED/inpatient TAT

Workforce
- Overtime hours
- Sick calls
- Turnover + WRMSD trends

Utilization
- Utilization by hour
- Slots opened vs. filled
- No-show / reschedule

Financial
- Covered hours recovered
- Net margin recovered
- Cost per staffed hour

Quality
- Repeat sequences/exams
- Protocol variance
- Patient experience signals

Governance
- Safety events / near-misses
- Training progress
- Credential coverage map

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Case Example: Stabilizing a CT Backlog without Burnout

CASE

Scenario (outpatient + ED pressure)

Baseline

- CT vacancy + call-outs → 16 unstaffed hours/week.
- Wait times rise; ED holds increase; overtime becomes the default.
- Preceptor fatigue increases; turnover risk rises.

Intervention (60 days)

- Micro-shifts (4 hrs) + weekend block twice/month.
- Cross-training cohort: 2 techs with protected time.
- Protocol standardization for top 5 exams; reduce repeats.

Result: coverage becomes predictable, backlog declines, and overtime shifts from “mandatory” to “optional.”

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CLOSE

What I hope you take back to your teams:

- CT and MRI remain the highest-pressure bottlenecks nationally—plan coverage accordingly.
- Think in "covered hours," not only headcount—small wins compound across a year.
- The best strategies blend operations + finance + education (and protect safety).
- Retention is capacity: reduce burnout and injuries, and the pipeline becomes viable.
- Leave with one pilot: a 60-day test that improves access without exhausting staff.

Thank you for the work you do—your teams are the reason patients get answers.

CLOSE

How Today's Session Addressed the Objectives

1) Interpreted CT/MRI/US/NM vacancy data and demand trends (ASRT + BLS).

2) Linked shortages to access delays, throughput limits, overtime, and leakage.

3) Identified deployment options: cross-credentialing, float pools, remote support.

4) Reviewed regulatory and safety guardrails for flexible staffing models.

5) Applied recovery math: unstaffed hours → covered hours → margin recovered.

Thank you for the work you do—these strategies are about protecting patients and the people who care for them.

CLOSE

What You Can Implement Immediately

- Vacancy snapshot + demand framing (slides 6–12)
- Operational bottleneck checklist (slide 12)
- Recovery calculator + payer-mix adjusters (slides 13–15)
- Deployment toolkit: cross-training, float pools, remote models (slides 16–19)
- Safety/regulatory checklist + 30–60–90 roadmap (slides 21–22)
- Modality action plan + monthly KPI dashboard (slides 23–24)

If you take one next step: pick one modality, quantify the gap in hours, and pilot one coverage fix for 30 days.

Key Data Sources Used in this Session:

- American Society of Radiologic Technologists (ASRT). 2025 Radiologic Sciences Staffing and Workplace Survey (news summary with modality vacancy rates). https://www.asrt.org/main/news-publications/news/article/2025/07/24/asrt-staffing-and-workplace-survey-shows-vacancy-rate-increases-near-record-highs-aligning-with-overall-health-care-profession-trends
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- U.S. Bureau of Labor Statistics (BLS). Occupational Outlook Handbook: Diagnostic Medical Sonographers. https://www.bls.gov/ooh/healthcare/diagnostic-medical-sonographers.htm
- Dempsey B. *Tsunami Headed for Ultrasound: A Technologist Staffing Crisis Is Approaching.* PSI Recruiters; 2019. PDF.
- Healthcare Financial Management Association (HFMA). *Cost Management in Healthcare: Status Quo and Challenges* (report). HFMA; 2023.
- American Hospital Association (AHA). *The Path to Accurate Cost Accounting: A Rigorous but Critical Journey* (report; discusses cost accounting methods and references HFMA-Strata cost accounting model). AHA; 2024.
- AHA. *Medicare significantly underpays hospitals for the cost of patient care* (infographic; shows Medicare payment below cost).
- Saporito A, et al. Contribution margin per hour model (peer-reviewed article describing a reproducible per-hour contribution framework).

Questions & Discussion

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THANK YOU

Resource

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Resource Note:
If your organization would like to discuss workforce pipeline development, cross-training frameworks, or retention-support strategies, I am happy to connect after the session.