# The State of Cancer Centers in 2022

Key Findings on Staffing, Capacity
Management, and Operations

# Overview:
# State of the Union of Infusion Centers and Purpose of Survey

The last two years have been challenging – and eye-opening – for cancer centers and health systems that offer infusion services, particularly from a capacity standpoint. In mid-2022, LeanTaaS embarked on a survey to capture data and insights from cancer center nursing directors and operational leaders from across the country. The purpose of the survey was to better understand current challenges in cancer centers — and how AI-based technology can help — as the healthcare industry finishes its second year in the pandemic. The lessons learned in this survey report improve the understanding of how operations and pain points have changed, and best practices for the use of technology in cancer centers.

At the 500+ infusion centers across the US where iQueue for Infusion Centers is either deployed or in the process of being launched, LeanTaaS partners with oncology leaders, clinicians, and nursing staff to optimize capacity and increase patient and nurse satisfaction.

# About Survey Respondents

Nearly 100 cancer center leaders answered this survey. They hail from hospitals and health systems across the country, with most employed by community health centers, academic health centers, and private oncology practices. On average, respondents manage between 10-30 infusion chairs in their center and the majority hold vice president/director/administrator titles.

# Key Findings

**40%** of infusion centers have **run out of space** and would need to physically expand to accommodate any patient volume growth
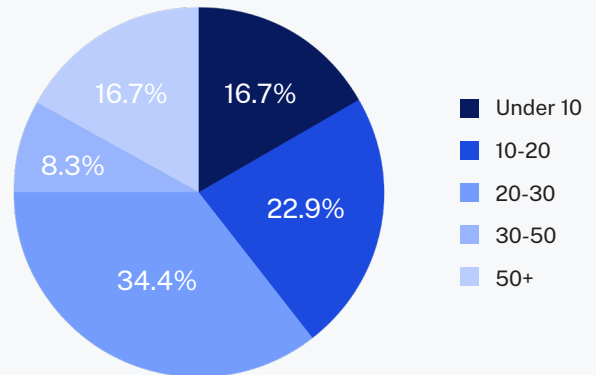
**81%** of infusion centers are using **suboptimal nurse assignment methodologies** when it comes to efficiency and nurse satisfaction

**49%** of infusion centers are tracking their operational performance **manually in spreadsheets**
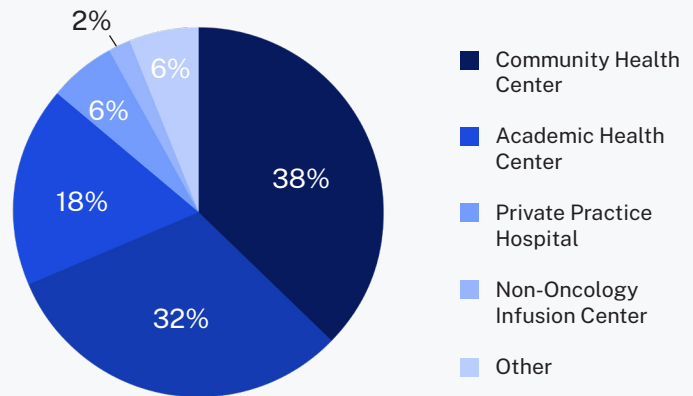
**50%** of infusion centers find it **somewhat or extremely difficult to access the data they need** from their EHR

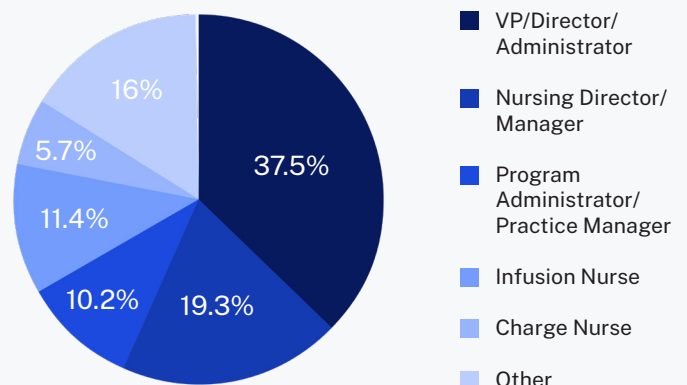**37%** of infusion centers believe that **mid-day scheduling peaks** are their most important pain point

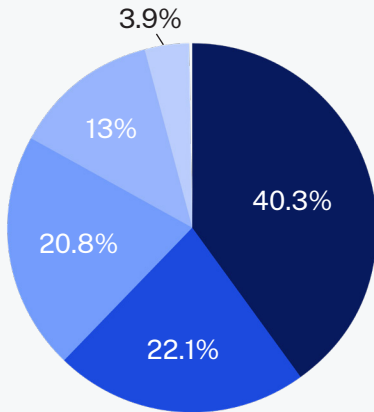## How many infusion chairs does your center have?



- 16.7% Under 10
- 22.9% 10-20
- 34.4% 20-30
- 8.3% 30-50
- 16.7% 50+

Legend:
- Under 10
- 10-20
- 20-30
- 30-50
- 50+

## Which of the following best describes your infusion center?



- 38% Community Health Center
- 32% Academic Health Center
- 18% Private Practice Hospital
- 6% Non-Oncology Infusion Center
- 6% Other
- 2%

Legend:
- Community Health Center
- Academic Health Center
- Private Practice Hospital
- Non-Oncology Infusion Center
- Other

## What is your role?



- 37.5% VP/Director/Administrator
- 19.3% Nursing Director/Manager
- 10.2% Program Administrator/Practice Manager
- 11.4% Infusion Nurse
- 5.7% Charge Nurse
- 16% Other

Legend:
- VP/Director/Administrator
- Nursing Director/Manager
- Program Administrator/Practice Manager
- Infusion Nurse
- Charge Nurse
- Other

## Does your center plan to add infusion chairs in the future?



- 40.3%
- 22.1%
- 20.8%
- 13%
- 3.9%

- ■ We have run out of space at our current center, so we need to build to accommodate additional growth
- ■ No-we are steadily maintaining current volumes; there is no need for additional chairs
- ■ Yes-our current space has the capacity to add chairs due to growing volume
- ■ No-we do not have the resources to add or build
- ■ Yes-we are only adding back the chairs we lost due to COVID-19

## What is the biggest pain point at your infusion center?



- 37%
- 20.4%
- 13%
- 13%
- 11%
- 5.6%
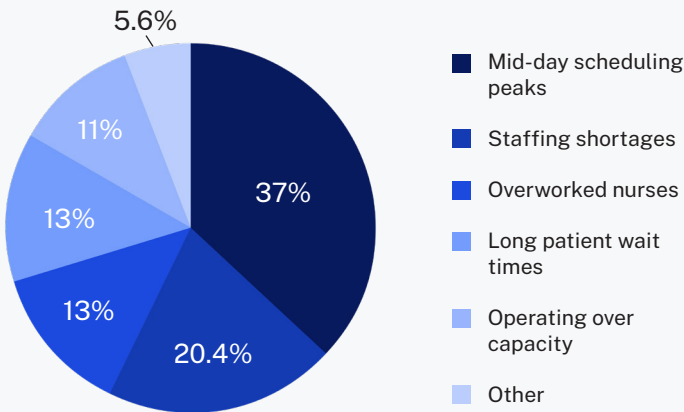
- ■ Mid-day scheduling peaks
- ■ Staffing shortages
- ■ Overworked nurses
- ■ Long patient wait times
- ■ Operating over capacity
- ■ Other

# Top Three Areas of Focus for Infusion Centers in 2022

## #1 Infusion Center Resource Constraints

The resource constraints infusion centers face include limited infusion chairs, nurse shortages, and pharmacies that are not able to keep up with drug demand. Infusion centers have always been challenged by finite physical resources, and the effects of COVID-19 only exacerbated these capacity constraints. More than 40% of respondents said they would need capital investment to build capacity in order to accommodate additional patient growth. Another 13% reported not having the resources they needed to add space or infusion chairs to help with volume growth. COVID-19 safety measures led to a backlog of patient demand that many centers are still working through, and more than half of survey respondents need major investment in order to meet their current patient demand for appointments.

When surveyed, the biggest pain point respondents cited in their infusion centers is currently mid-day scheduling peaks. Centers see an influx of patients from 10am-2pm that leads to overburdened nurses, long patient and drug wait times, and general chaos in scheduling. When this peak ends in the early afternoon, it leaves chairs unused and staffing unbalanced, leading to underutilized capacity in the infusion center.
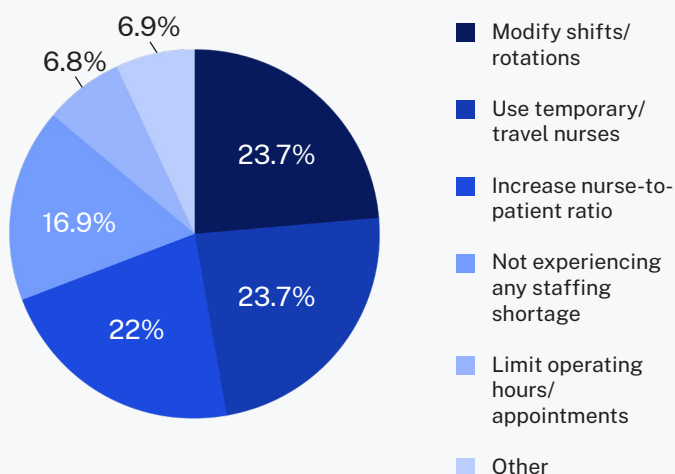
# #2 Staffing Shortages and Burnout

COVID-19 created an unprecedented strain on hospitals and infusion clinics, and nurses bore the brunt of this burden. Many nurses, after experiencing high levels of burnout or furloughs, retired early. Some infusion centers can afford to contract travel nurses or sponsor overseas nurses. Facilities that cannot afford these options struggle with recruiting and retention. Pressure on nurses and staff, who are already afraid their exhaustion may create an adverse effect on patient care, has intensified. There is now a severe nurse shortage, and it's estimated that 1.2 million RNs will be needed to cover the gap by 2030.
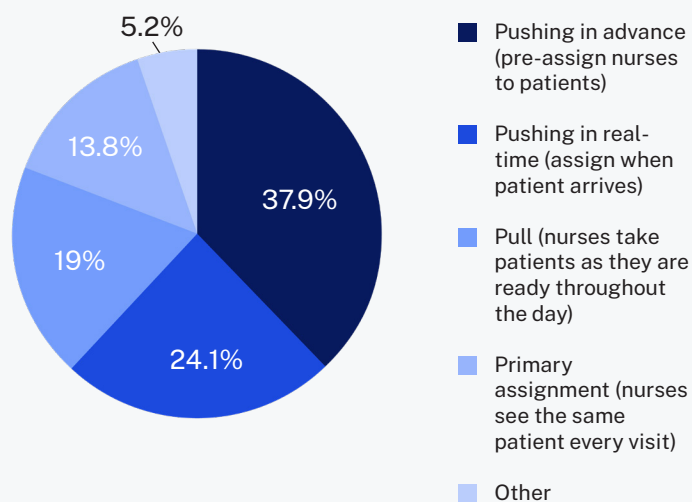
Survey respondents have tried a variety of approaches to address the widespread nursing shortage. Most commonly, infusion centers have used travel or temporary nurses, modified shifts, and increased nurse-to-patient ratios to optimize resources. These methods all require careful consideration of patient safety before implementation.

Infusion centers across the country have desperately tried to maximize nursing capacity, while preparing to cope with the unexpected. The method that centers use to assign nurses to patients greatly impacts how efficient they can be with their existing nurse resources. Pre-assigning nurses to patients (known as push methodology) is by far the most common assignment method among respondents (38%), while a quarter (25%) assign patients to nurses upon their arrival. Less than 20% of respondents are using the pull methodology, which is mathematically and operationally the most efficient way to manage nursing capacity at infusion centers.

## How are you addressing your staffing shortage?

- Modify shifts/rotations — 23.7%
- Use temporary/travel nurses — 23.7%
- Increase nurse-to-patient ratio — 22%
- Not experiencing any staffing shortage — 16.9%
- Limit operating hours/appointments — 6.8%
- Other — 6.9%

## What method are you using to match nurses to patients?

- Pushing in advance (pre-assign nurses to patients) — 37.9%
- Pushing in real-time (assign when patient arrives) — 24.1%
- Pull (nurses take patients as they are ready throughout the day) — 19%
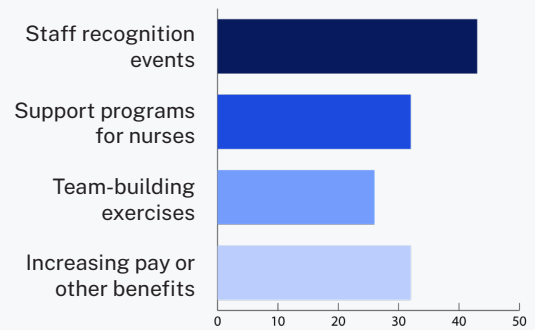- Primary assignment (nurses see the same patient every visit) — 13.8%
- Other — 5.2%

# #3 Access to EHR Data

Infusion center directors, nurse managers, and senior leaders do the best they can to navigate the daily chaos of capacity management by estimating what will happen over the course of the day. They have access to EHR data to help inform decision-making, but they know that EHRs are not built to optimize asset utilization or improve patient access. EHRs serve many important purposes, not the least of which is supplying the data needed to create reporting on past or present performance, or identify possible causes of past issues. But to use that data to predict tomorrow's capacity needs is a different task altogether. Optimizing capacity is a difficult math problem that can never be solved by an EHR by itself.

EHRs do not use probability theory or simulation algorithms to account for delays, overbooking, cancellations, and add-ons. The dashboards and reports EHRs are designed to produce can't fully address these variables as deeply, accurately, and easily as analytics software. It takes constraint-based optimization methods, machine learning, artificial intelligence, and simulation algorithms to solve the problem. This challenge is illustrated in the 50% of respondents who find it somewhat or extremely difficult to access the data they need from their EHR.

Additionally, 49% of infusion centers are tracking their operational performance manually in spreadsheets, which are inefficient, a resource drain, and prone to human error.
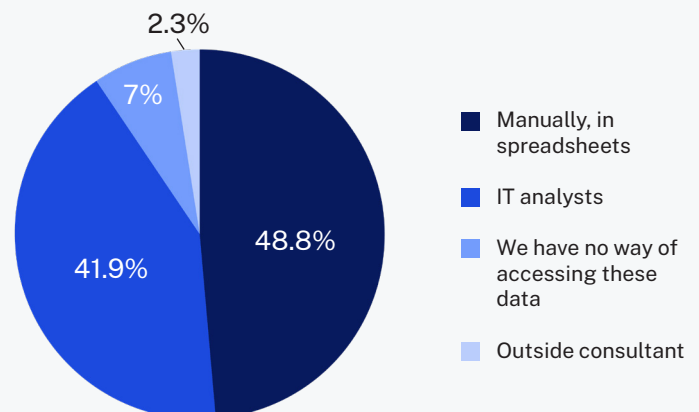
**What tools or interventions have you tried to handle staff burnout?**



**How difficult is it to pull the data you need from your EHR?**



- Somewhat difficult — 39.6%
- Somewhat easy — 33.3%
- Very easy — 16.7%
- Very difficult — 10.4%
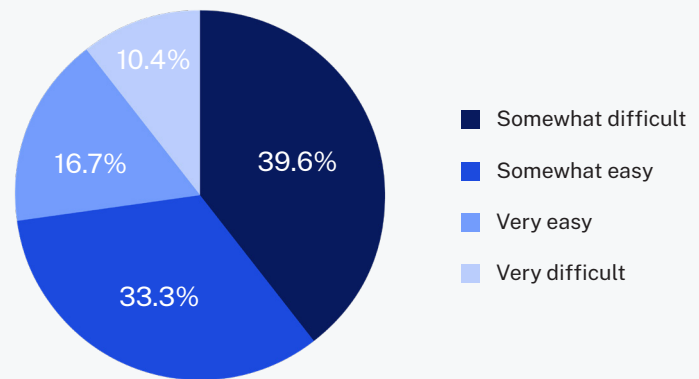
**How are you accessing/tracking data, dashboards, and metrics as it relates to infusion center performance to help you make proactive decisions?**



- Manually, in spreadsheets — 48.8%
- IT analysts — 41.9%
- We have no way of accessing these data — 7%
- Outside consultant — 2.3%

While the healthcare industry still faces new waves of COVID-19, the pandemic has undeniably exacerbated challenges in cancer center operations. Infusion center leaders will have to cope with:

- Staffing shortages due to burnout, stress, and retirement/aging of the nursing population
- Sicker patients who have delayed cancer screenings or treatment
- Doing more with fewer resources, and therefore operating more efficiently
- Innovating to accommodate patient growth without large capital investments
- Providing easier access to actionable data on health center operational performance

# How LeanTaaS Can Help

Infusion scheduling has always been a hard problem to solve. Given operational constraints, varying nurse schedules, and very sick patients it is hard to construct a flawless schedule that fits the needs of everyone involved.

iQueue for Infusion Centers leverages machine learning and predictive analytics to help centers stay operationally agile. The cloud-based solution optimizes infusion center scheduling templates, level-loading the daily schedule across the nursing staff, flagging future problem days for preventive action, and identifying which appointments should be rescheduled to improve the experience for patients and staff alike.

## Results:

- 25% improvement in nurse satisfaction
- 50% lower overtime hours
- 10% improvement in labor costs
- 30-50% reduction in patient wait times
- Annual impact of $15-20K per chair
- Significant increase in nurse satisfaction, reduction of burnout, and preservation of scarce nursing resources

Over 500 infusion centers – including more than 80% of the National Comprehensive Cancer Network and 60% of National Cancer Institute members – rely on iQueue for Infusion Centers to increase access, decrease patient wait time, and lower healthcare delivery costs.

**To learn more, visit leantaas.com**

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