The Three-Step Cancer Staffing Makeover

Simple Ways to Make the Most of Your Team

Growing demand for cancer services.

Looming shortages of oncologists.

Pressures on operating margins.

The transition to value-based payment models.

It's clear why cancer programs are
rethinking their approach to care delivery.

But it won't be enough to just create more efficient workflows. You must also fundamentally redesign your staffing model to make the most of every individual on your team.
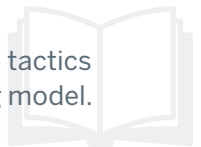
Hiring new staff won't be the answer for most programs. Instead, it's time to find creative ways to accommodate growing workloads and escalating treatment complexity—without compromising quality or adding staffing costs.

We've seen that successful programs measure their efforts against **three critical needs:**

- Have you redesigned your workflows to fix process problems that waste precious staff resources?

- Have you created roles that focus staff on the highest-value activities?

- Can your team model provide the flexibility needed in a complex care environment?

Not there just yet? Read on for simple tactics and tools to help fine-tune your staffing model.

First, Know Your Weak Spots

If your cancer program has made operational changes in recent years (whose hasn't?), then your staffing needs to follow suit. What's the best way to pinpoint your institution's biggest improvement opportunities? We recommend combining several approaches for a comprehensive assessment.

To start, **evaluate your performance on staffing metrics** to reveal red flags requiring further investigation. Get started with our metrics checklist.

Metrics Checklist for Evaluating Staffing Models

✓ Turnover rate

✓ Vacancy rate

✓ Overtime hours

✓ Percentage of staff with at least five years of experience

✓ Staff engagement

✓ Provider satisfaction with staff

✓ Patient safety errors

✓ Quality indicators

✓ Patient satisfaction

You should also **track staff productivity** over time, taking into account patient volumes and acuity. Our Acuity-Based Infusion Center Staffing Tool (see below) can help.

MORE ON ADVISORY.COM

**The Oncology Roundtable's
Acuity-Based Infusion Center Staffing Tool**

Use our Acuity-Based Infusion Center Staffing Tool to identify patterns in patient volumes, scheduling, and acuity; analyze staffing levels; and collect data to support changes in nurse staffing.

Available at advisory.com/or/staff

Finally, **benchmark against peer institutions**—but do it carefully, understanding that the complexity of cancer care makes an "apples-to-apples" comparison nearly impossible. See below for four lessons to help steer your benchmarking efforts.

Lessons for Applying Oncology Staffing Benchmarks

Choose Comparison Cohort Carefully

- Focus on "like" organizations, based on institution type, size, and services offered.
- Be mindful of trade-off between the degree of similarity and size of the cohort.

Compare Business Units

- Examine data at business unit level (e.g., radiation therapy, infusion center).
- Compare number of each FTE type, as well as larger team composition.

Account for Practice Variation

- Focus on business units with more consistent operations across organizations, rather than those with high degrees of practice variation.
- Prioritize metrics that show relationship between staff and patient variables (e.g., patients per FTE).

Consider Historic Benchmarking

- Consider benchmarking your facility across time as an alternative to benchmarking against a peer group.
- Account for changes in patient volumes, acuity, and treatment patterns.

That said, there *is* still value in understanding how other cancer programs approach staffing, which is why we conducted our 2011 Staff Benchmarking Survey.

Thanks to responses from 143 cancer facilities, we have a whole series of data analyses to support your benchmarking efforts, including the following studies:

- *Radiation Therapy Volumes, Staffing, and Operations*
- *Infusion Center Volumes, Staffing, and Operations*
- *Medical Oncology Clinic Volumes, Staffing, and Operations*
- *Multidisciplinary Clinics Volumes, Staffing, and Operations*

MORE ON ADVISORY.COM

Start benchmarking your oncology program with results from our
2011 Staff Benchmarking Survey

Available at advisory.com/or/staff

Once you understand how you're performing,
you can prioritize improvements. We've
developed a three-part framework to guide you.

A Three-Part Makeover for Your Staffing Plan

1 **Redesign workflows to make better use of precious staff resources**
- Engage your team to map patient flow and identify problems
- Envision the ideal flow—and the staff responsibilities needed to support it

2 **Focus your staff on the highest-value activities**
- Use a scope-of-practice matrix to cascade responsibilities
- Consider non-clinician roles, too
- Collect time stamps to pinpoint the cause of delays

3 **Make sure you have the right number of staff on any given day**
- Develop an acuity-based staffing plan that fits your center
- Calculate the appropriate workload for a single nurse
- Plan, adjust, and adjust again
- Collect volumes and acuity data over time to justify additional FTEs

Redesign workflows to make better use of precious staff resources

With widespread process improvement efforts, new IT systems, and changes in services and treatments, cancer programs are evolving their operations faster than ever. But when you change your processes, you're changing how staff spend their time—with an inevitable impact on roles and responsibilities.

> *Periodically review staff members' activities to understand how employees are spending their time. Identify staff members best-suited to perform specialized roles and reallocate accordingly.*

» Engage your team to map patient flow and identify problems

When **Gundersen Lutheran Medical Center**, a 313-bed hospital in La Crosse, Wisconsin, sensed that its staffing model was falling short, leaders gathered staff representatives from its medical oncology clinic, hematology clinic, and infusion center to map out patient flow in each area.

The exercise revealed several problems with the staffing model at the clinics, whose physicians were supported by a team of four physician assistants (PAs), two clinic nurses, and a group of chemo nurses—all floating among the clinics as needed.

Among the challenges:

Schedulers were having trouble keeping track of different scheduling guidelines for each clinic, resulting in scheduling errors.

Nurses were struggling to find time for phone triage.

PAs were being used to "plug holes," making it impossible for them to develop relationships with patients.

Physicians were often backfilling for other members of the team, for instance performing nursing assessments when nurses' attention was needed elsewhere.

›› Envision the ideal flow—and the staff responsibilities needed to support it
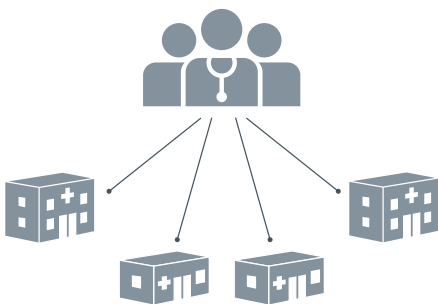
Identifying these problems allowed Gundersen to map out the ideal patient flow and reassign roles to maximize staff members' individual contributions.

The cancer program ultimately **reassembled its staff into four teams** each consisting of two or three physicians, one PA, one RN, two medical assistants, and a dedicated scheduler. Each staff member was **assigned to work in one area**, floating only if there was a special need.
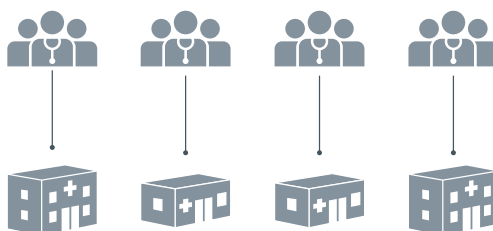
VALUE-DRIVEN CLINIC STAFFING

Before:
Staff floating among clinics

After:
Each staff member assigned to one area

To ensure a smooth transition, the cancer center instituted **weekly meetings** for each of the four teams, where staff could discuss patients in the upcoming week's schedule, work through team issues, and discuss roles and responsibilities.

MORE ON ADVISORY.COM

See our collection of sample process maps and read the Process Improvement Playbook, part of our research on *Redesigning Cancer Care Delivery for the Era of Accountability.*

Available at advisory.com/or/staff

Focus your staff on the highest-value activities

In addition to rethinking workflow, cancer programs are taking a hard look at staff members' roles and responsibilities to focus each individual on the highest-value activities.

> *Oncology staff are a precious, limited resource. Make sure that they are spending time on the activities they are uniquely able to perform.*

When **Gundersen Lutheran Medical Center** reworked the patient flow and care team configurations at its medical oncology clinic, hematology clinic, and infusion center, the hospital also made sure that clinicians were working at the top of their licenses—and sought ways to off-load low-priority tasks from higher-paid to lower-paid staff.

» Use a scope-of-practice matrix to cascade responsibilities

A critical tool in this effort was Gundersen's Scope of Practice (SOP) Matrix, which was created by the hospital's nursing department as part of an institution-wide initiative to ensure top-of-license practice.

The simple grid, shown here, outlines different clinicians' scope of practice relative to patient assessment, planning, intervention, documentation, evaluation, delegation, and leadership.
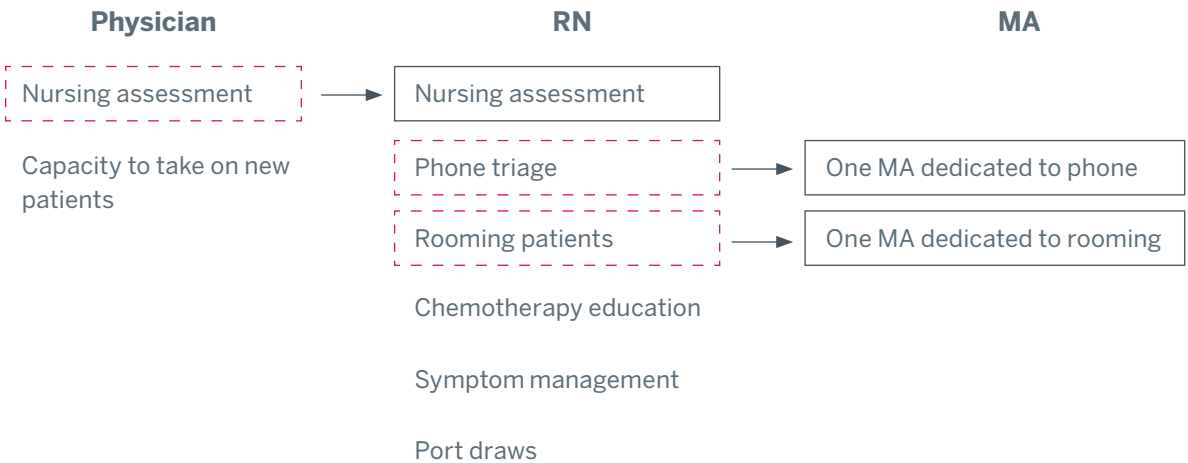
TOOL SPOTLIGHT

By summarizing key information about clinicians' scope of practice in the state of Wisconsin, the matrix makes it easy for Gundersen's cancer center team to identify opportunities to shift responsibilities to the appropriate-level staff.

A SNAPSHOT OF GUNDERSEN'S SOP MATRIX

Master's-Prepared Nurse (MSN) or Clinical Nurse Specialist (CNS)	Registered Nurse (BSN, ADN, Diploma)	Licensed Practical Nurse (LPN)	Medical Assistant (MA)	Certified Nursing Assistant (CNA)
I. ASSESSMENT: Systematic and continual collection & analysis of data.				
• Functions as a change agent serving as a link to evidence-based research, evaluating nursing practice, and assisting staff nurses to integrate research findings into practice by use of research utilization models that enhance assessment methodology • Utilizes extensive knowledge, experience and research to identify problem situations or issues in patient care and analyzes, interprets, advises, and consults with staff and other health care professionals to ensure quality patient care	• Performs an independent assessment, analyzes information, monitors patients, and takes action to facilitate wellness and healing • Assesses and evaluates health status of groups and individuals • Collects objective and subjective data • Analyzes, reports, and records data • Validates and refines data • Selects appropriate specialized assessments using critical thinking • Performs triage, including telephone and other technology triage, duties in various settings	• Collects data at the direction of the RN or provider • Contributes to assessment of health status by: collecting, reporting, and recording objective and subjective data • Observes conditions or change in condition signs and symptoms that deviate from normal or expected health status • Reports the patients' response to care • Does NOT triage	• Collects data at the direction of the RN or provider • Contributes to assessment of health status by: collecting, reporting, and recording objective and subjective data: this includes vital signs, height and weight, updating the medication list, allergy list, and performing screening (vision and hearing) changes are communicated to the provider for evaluation • Reports the patients' current health status to RN or provider • Updates disease prevention lists • Does NOT perform telephone triage • May collect the following data and perform per phone: medication refills-incoming and outgoing, allergies, medications, last physician's appointment; Communicates lab results	• Collects data at the direction of RN and under the supervision RN or LPN • Contributes to assessment of health status by: recording and reporting BASIC objective and subjective data • Reports observation of conditions or change in condition signs and symptoms that deviate from normal or expected health status • Reports the patients' current health status to RN

For instance, it was clear that physicians should no longer perform nursing assessments, but delegating that responsibility to nurses hinged on finding additional nursing time. The SOP Matrix enabled the team to see that many of nurses' responsibilities—especially phone triage and rooming patients—could be performed by a medical assistant, a role the cancer center hadn't used before.

INTEGRATING MAs BY CASCADING RESPONSIBILITIES TO APPROPRIATE STAFF

Physician	RN	MA
Nursing assessment →	Nursing assessment	
Capacity to take on new patients	Phone triage →	One MA dedicated to phone
	Rooming patients →	One MA dedicated to rooming
	Chemotherapy education	
	Symptom management	
	Port draws	

Of course, this new model required Gundersen to add staff: five MAs and two RNs. Gundersen didn't have any budget to grow its staff but calculated that just one additional patient visit per physician per day would generate enough revenue to cover the FTEs.

ADDED CAPACITY JUSTIFIES NEW FTES

Additional Staffing Costs:

| | 2 RNs | **x** | $62K average salary[1] | **=** | $124K per year |
| + | 5 MAs | **x** | $28K average salary[1] | **=** | $140K per year |

| | **Total** | **=** | **$264K per year** |
| ÷ | $110 average collection/visit[2] |

| | 2,400 extra visits/year |
| ÷ | 10 physicians |

| | 240 extra visits/year/physician |
| ÷ | 250 working days/year |

Additional Revenues Required: **1 extra visit/physician/day**

After completing the staff redesign in 2008, Gundersen saw an increase in patient, staff, and physician satisfaction, along with greater capacity. The process was such a success that the hospital was just starting to do it all over again when we spoke to them following the implementation of an EMR in the cancer center.

1) Salary data based on national average from Bureau of Labor Statistics.
2) Collection data based on Medicare reimbursement data.

⟩⟩ Consider non-clinician roles, too

This value-driven clinic staffing model doesn't just apply to clinicians; cancer centers should consider all staff when scrutinizing the interplay between process and people.

When the infusion center at the 504-bed **Overlook Hospital** in Summit, New Jersey, was experiencing significant volume growth, nurses approached administration asking for a third nurse FTE. Patients were waiting up to two hours to start their treatment, and nurses were shouldering overwhelming workloads.

Convinced that an additional nurse was the right solution, leaders decided to conduct a Six Sigma analysis to document the need. They developed a tracking sheet, featured here, to get to the bottom of the center's long and variable patient wait times.

TOOL SPOTLIGHT

For each patient, the nurse documents the start time for each component of care—when the patient is seated in the chair, when the various medications are delivered, and when the patient leaves the chair. If a delay occurs at any time during the treatment, the nurse must circle the corresponding reason.

SYSTEMATIC DATA COLLECTION SHEDS LIGHT ON DELAYS

Date: _____   Chair #: _____

Patient's Initials _____   D.O.B.: ____/____/____   Appt. time:_____

Type of Service: _____

> RN focuses on that patient

Chemo (1)   Blood Platelets (2)   Antibiotics (3)   I.V. Infusions (4)   Injections (5)

Patient "In-Chair" @ _____   Start Time: _____

Time I.V. begun: _____

> Nurses track main time points throughout patient's treatment

Chemo:

Time pre-meds begun: _____

Time chemo begun: _____

Time spent for I.V. push vescant _____

Transfusion/Infusion

Time 1st unit begun: _____

Time 2nd unit begun:_____

Time infusion begun: _____

> Patient leaves chair

Clearance Time: _____   Treatment Ends: _____   Discharged from Chair_____

Daily Codes:

1. Registration delays
2. Weather delay
3. Pt. arrives late to day room
4. Incomplete orders
5. Gamma glob mixing
6. Pre-med >30min. post clearance
7. Chemo >60min. post clearance
8. I.V. Med >45min. post clearance
9. Injections >30min. post clearance
10. Pt. medical clearance delay
11. Lab work not available
12. Blood not available
13. Poor I.V. access
14. Phone call-administrative

> Reasons for delays can be quickly identified and circled

〉 Collect time stamps to pinpoint the cause of delays

After collecting data on the causes of treatment delays for every patient across a two-week period, Overlook got a surprise.

The main reason for delays? Phone calls that pulled nurses away from patient care. Each call lasted just a few minutes, but across an eight-hour day, the calls added up to *hours* in patient wait time.

Understanding this root cause allowed Overlook leaders to develop a cost-effective solution. **Instead of hiring another nurse, Overlook hired a tech**, tasked with answering the phone, as well as managing the schedule, registering patients, checking patient charts, and performing initial patient intake.
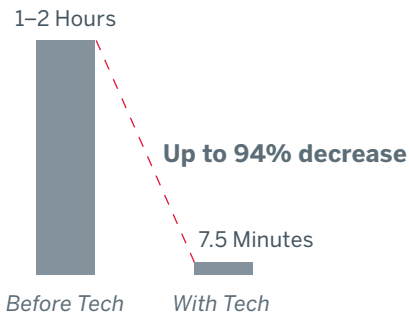
MORE ON ADVISORY.COM

For more information on deploying staff efficiently, please read our study, *Managing for Growth, Volume II.*

Available at advisory.com/or/staff

The new model worked, freeing nurses to focus on patient care, decreasing average wait times to just seven and a half minutes, and enabling the infusing center to conduct about 300 additional procedures per year—**resulting in $74,000 of incremental profit.**

UNEXPECTED SOLUTION WITH SIGNIFICANT FINANCIAL UPSIDE

Average Patient Wait Times
Time Until Treatment Initiation

1–2 Hours

Up to 94% decrease

7.5 Minutes

Before Tech   *With Tech*

Financial Impact of Secretary Tech
Annually

291 additional procedures
× $350 net per procedure

$101,850 additional revenue
— $28,080 salary plus benefits

$73,770 additional profit

Make sure you have the right number of staff on any given day

Progressive cancer programs are also rethinking their approach to the thorny day-to-day challenge of ensuring that they have the right number of staff at any given time. This is a particular concern in the infusion center, where operations are complex and patient needs are unpredictable.

> *Build a team that can to adapt to inevitable daily fluctuations in patient volume and acuity.*

It's difficult to know how many patients will come to the infusion center on a given day, let alone how much time they'll require from your nursing staff. In addition, because patients are usually assigned to nurses on a "next-available" basis, it's not unusual for one nurse to have four patients across the day and another to have 10.

The result? Tough staffing decisions that often result in wasted resources—or overworked staff, lower patient satisfaction, and potential safety risks.

» Develop an acuity-based staffing plan that fits your center

After years looking at acuity-based approaches to staffing in the infusion center, we've identified four main lessons for programs looking to make the switch.

KEY LESSONS FOR ACUITY-BASED STAFFING

Customize Acuity Scale

No one acuity scale can be applied to all infusion centers; rather, each infusion center must develop an acuity scale that reflects its patients and practice patterns.

Measure Nurse Time

Acuity scales should assign weights or points to specific procedures based on the amount of nurse time required, not the duration of the service.

Prioritize Objectivity

For the acuity scale to generate useful data, it must be applied consistently by different staff members and over time; consequently, objective criteria are key.

Train Staff

To ensure all staff use the acuity scale consistently, they should be trained in its use; managers should conduct audits periodically to ensure the scale is applied consistently.

This is easier said than done, but we've seen institutions apply these lessons with great success.

Several years ago, managers at **St. Cloud Hospital**—a 489-bed facility in Minnesota—started to hear rumblings from the infusion center nursing staff about inequitable patient assignments amid growing patient volumes. Patients were assigned to nurses on a first-come, first-served basis.

In response, the cancer director assembled a task force of nurses, LPNs, and schedulers to develop an **acuity scale** for the organization.

The tool lists all regularly administered treatments, their duration, and an "acuity level" expressed on a scale of one to five that reflects the nurse time required for the treatment.

ACUITY SCALE CLASSIFIES INFUSIONS BY NURSE TIME

Pharmacy Complexity	Abbreviation	Description	Vesicant Irritant, Vital Signs	Duration (minutes)	Acuity Level
	HALAVEN (Erubulin)	Halaven		60	1
1	HERCEP	Herceptin		120 1st 60	1
3	ICE	Ifosfamide/ Cytoxan/ Etoposide	V	30	
3	IFOS/MESNA	Ifosfamide/ MESNA		150	2
1	INTRON	Interferon-IV		60	1
4	IP	Intraperitoneal (inform pharmacy & charge)		240	4

Schedulers use chemotherapy duration list to schedule infusions

Lists variables that affect acuity points

Acuity point proportional to nursing time

The tool itself is simple, but developing it was not. Each member of the task force independently referenced evidence-based guidelines and literature to map out the duration of the individual treatments and the nurse time required. They then compared, debated, and adjusted their findings.

They also enlisted a nursing assistant to validate their research by conducting a **time study**. She worked as a "secret shopper," randomly selecting RNs and tracking time spent on specific procedures.

⟫ Calculate the appropriate workload for a single nurse

Then the team set out to calculate an appropriate workload for any one nurse. Across several months, the nurse manager collected data on the patients seen in the infusion center and their acuity using the new tool. She calculated that a reasonable workload for one day ranged from 16 to 24 acuity points per nurse.

⟫ Plan, adjust, and adjust again

St. Cloud now uses a three-stage process to balance staffing supply and demand.

Each month, St. Cloud's nurse manager runs a report on the previous month's patients and looks for acuity and volume trends, using that information to extrapolate the number of staff needed across the coming month. She communicates any changes to the center's RN scheduler.
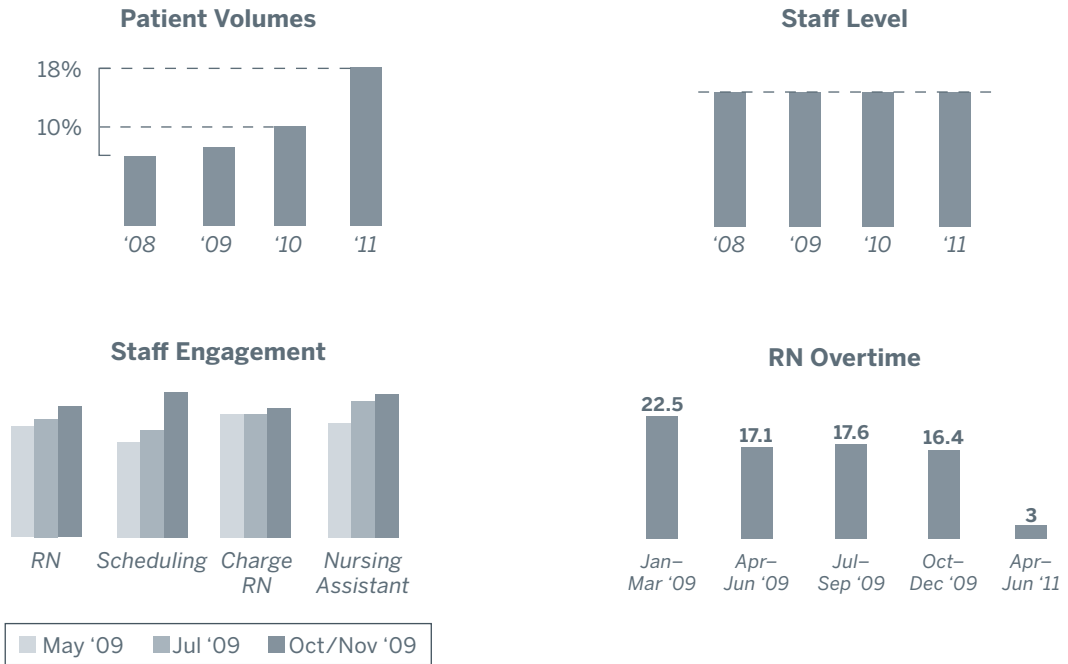
Then each day, she pulls the patient schedule for **two days out**, totals the acuity points, and divides by 16 (the minimum workload for one nurse). That gives her the total number of nurses needed on that day.

The center doesn't assign individual patients to nurses until the **day of treatment**, but schedulers do try to make consistent assignments so that nurses and patients can get to know one another. Nurses with cancellations that day are the first to receive add-on patients.

The results are encouraging. St. Cloud saw a 10% increase in patient volumes in 2010 and an additional 18% increase in the first half of 2011. The director credits the acuity tool with enabling them to manage this growth without adding staff. At the same time, staff engagement has been increasing and overtime declining.

ACCOMMODATING VOLUME GROWTH WITH FEWER WORKED HOURS

Patient Volumes

18%
10%

'08   '09   '10   '11

Staff Level

'08   '09   '10   '11

Staff Engagement

RN   Scheduling   Charge RN   Nursing Assistant

■ May '09   ■ Jul '09   ■ Oct/Nov '09

RN Overtime

22.5   17.1   17.6   16.4   3

Jan–Mar '09   Apr–Jun '09   Jul–Sep '09   Oct–Dec '09   Apr–Jun '11

» **Collect volumes and acuity data over time to justify additional FTEs**

St. Cloud also has since used the acuity scale to add staff. Because the nurse manager had been using the tool to collect data on acuity and volumes, it was easy for her to make the case to add FTEs.

MORE ON ADVISORY.COM

Start developing an acuity scale for your organization using the Acuity-Based Infusion Center Staffing Tool.

Available at advisory.com/or/staff

TOOL SPOTLIGHT

Our **Acuity-Based Infusion Center Staffing Tool** will walk you through a step-by-step process for developing an acuity scale specific to your organization.

The tool includes:

- Guidance on creating an acuity system—the theory behind it, the pros and cons of various approaches, and step-by-step instructions.

- Several preprogrammed reports for quick data analysis, including a results summary and reports focusing on nurse productivity, patient scheduling, and volumes and acuity trends.

- Metric definitions

- Sample acuity systems

- An acuity system pick list of common nursing activities and associated time estimates

- Implementation guidance

Use it to:

Identify patterns
in patient volumes,
scheduling, and acuity

Analyze staffing
levels

Collect data to
support changes in
nurse staffing

Don't stop here

We have a variety of resources to help your program turn this plan into action. Here's how to get started:

》 **Benchmark your program** using results from our 2011 Survey
- *Radiation Therapy Volumes, Staffing, and Operations*
- *Infusion Center Volumes, Staffing, and Operations*
- *Medical Oncology Volumes, Staffing, and Operations*
- *Multidisciplinary Clinics Volumes, Staffing, and Operations*

》 **Examine your patient flow**—consult our collection of sample process maps and our Process Improvement Playbook

》 **Develop a scope of practice matrix**—check out Gundersen Lutheran's

》 **Find the root cause of your delays** using Overlook's tracking sheet for inspiration

》 **Read our study** *Managing for Growth II* for nine best practices designed to help programs accommodate increased demand for cancer services

》 **Use our Acuity-Based Infusion Center Staffing Tool** to collect data and develop an acuity-based plan for your cancer program

Access these resources and more at advisory.com/or/staff

About the Oncology Roundtable

The Oncology Roundtable is The Advisory Board Company's research membership serving oncology program leaders. Our mission is to identify and assess frontier practices for elevating care quality, enhancing program management, and improving financial performance across cancer care.

advisory.com/or

Beyond the Oncology Roundtable

Physician Executive Council

Research membership focused on **supporting the CMO** and team with best demonstrated practices, insights, tools, expert consultations, and networking opportunities

advisory.com/pec

Physician Leader Development

Hands-on programs for **business and leadership skill development** of physician leaders, including on-site interactive workshops and online learning resources

advisory.com/td/ld

Project Director
Lindsay Conway

Contributing Consultants
Jane Herzeca
Vanessa Lo
Anne Taylor

Executive Director
Brian Contos

Designer
Vanessa Shkuda

Project Editor
Heidi Atlas

SOURCES

Gundersen Lutheran Medical
Center, La Crosse, WI.

Overlook Hospital, Summit, NJ.

St. Cloud Hospital, St. Cloud, MN.

Oncology Roundtable interviews
and analysis.