LEADERSHIP
INTRODUCTIONS

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Our efforts have yielded fresh and instructive insights for patient safety initiatives at Penn Medicine, especially related to reducing readmissions. These efforts across Penn Medicine have been a key driver of the overall reduction of 30-day preventable readmissions by 7 percent. Additionally, our innovative partnership with Independence Blue Cross has led to an unprecedented 30 percent reduction in this population.

At the same time, our observed-to-expected mortality index fell by more than 20 percent. New programs identify and assist at-risk patients; provide real-time dashboards to help clinicians reduce and eliminate preventable complications, readmissions, and deaths; and ensure that our patients receive the right care in the right place at the right time.

Our dedication is reflected in patients’ perception of their experiences at Penn Medicine. Over the past three fiscal years, patient satisfaction scores rose by 17 and 40 percentile points among inpatient and ambulatory care patients respectively. Physician and advanced practice care provider ratings averaged 4.8 out of 5 stars in 156,000 surveys.

These indicators come in tandem with ongoing national recognition, including continued Magnet designations for nursing excellence and the combined Hospital of the University of Pennsylvania-Penn Presbyterian Medical Center (HUP-PPMC) ranking on the “Best Hospitals” Honor Roll in U.S. News and World Report. The magazine also named HUP-PPMC the #1 hospital in the Philadelphia region and the state. The four other Penn Medicine hospitals received regional and state honors as well. We were also ranked #6 among large employers in Forbes magazine’s annual “Best Employers in America.”

In addition to our work to improve health regionally, we’re also paving a path for better health for individuals across the nation. For instance, we have been at the forefront of the effort to address the growing opioid epidemic crisis, providing clinical expertise and novel strategies at the regional and national levels. We’re proud that a series of system-wide innovations, including education on alternative analgesics and electronic health record “nudges” for clinicians, cut doses for opioids by 18 percent this year.

Our commitment to delivering a superb patient experience ensures that our patients understand their treatment options and adhere to their plans of care. It also strengthens our reputation as an engaged community member. The stories and data highlighted in this report -- and many more we didn’t have room to include -- represent the collective achievements of every staff member at Penn Medicine. We thank our staff for their commitment to providing the safest, highest-quality care to our patients.
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The Chief Medical Officers (CMOs) and Chief Nursing Officers (CNOs) from all five hospitals, homecare, hospice, rehabilitation, home infusion, and physician practices, participate in a working alliance called the CMO/CNO Alliance. The group meets monthly to integrate and drive system-wide efforts in support of the Blueprint for Quality and Patient Safety. The CMO/CNO Alliance members are listed below alphabetically.
Since 2007, the Blueprint for Quality and Patient Safety has served as the framework for Penn Medicine’s efforts to improve quality, patient safety and patient experience.

The third and current version of the Blueprint sets system-wide goals to **IMPROVE HEALTH AND ASSURE SAFE CARE** for all patients receiving care across the Penn Medicine continuum of care.

Penn Medicine has established three imperatives to help our operating units and practices implement specific strategies to achieve the goals of improving health and assuring safe care. These imperatives are Engagement, Continuity and Value.

**ENGAGEMENT**

Achieving the ambitious goals of the Blueprint requires engaged staff, patients, and families. Engagement requires motivated and involved staff working in partnership with patients and families to activate health behaviors that support health improvement and safe care. Unit Based Clinical Leadership teams (UBCLs), clinical effectiveness teams, and similar frontline clinical leadership across the continuum are integral to achieving this imperative.

**CONTINUITY**

Transitions in care and coordination of care have been important components of the Blueprint since its inception. Keeping patients out of the hospital requires the delivery of seamlessly coordinated care across all settings and service lines.

**VALUE**

Patients and families, insurers, employers, and others are placing increasing emphasis on value-based care. For Penn Medicine, this means providing high-quality and safe care, free of preventable complications and readmissions at a lower cost. At its essence, value-based care entails providing the right care at the right time in the right place.
The intent of the Blueprint is to provide the entities with a strategic and customizable roadmap to achieve our overall quality and patient safety goals.

This approach gives the entities the flexibility to develop actions which are specific to their environment and specific patient population.

The organization made significant investments over the last 10 years and the alliance of the Chief Medical Officers and Chief Nursing Officers continue to focus on building on our four foundational elements.
Setting shared team goals across Penn Medicine has been an important part of the Blue Print for Quality. The quality metrics selected every year by system and entity leadership help with establishing cascading goals which translate from department goals to the frontline staff. They are used to prioritize activities across the continuum and within the medical, clinical and support services teams.

**KEEPING PATIENTS HOME**
A number of substantive initiatives have decreased unplanned readmissions system-wide

<table>
<thead>
<tr>
<th></th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
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<tbody>
<tr>
<td><strong>CCH</strong></td>
<td>4.6%</td>
<td>587</td>
<td>6.1%</td>
<td>558</td>
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<tr>
<td><strong>PAH</strong></td>
<td>8.4%</td>
<td>715</td>
<td>16.4%</td>
<td>1,368</td>
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<tr>
<td><strong>LGH</strong></td>
<td>1.8%</td>
<td>0.76</td>
<td>1.8%</td>
<td>0.60</td>
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**REDUCING MORTALITY & SAVING LIVES**
3,228 lives saved over the most recent four years. These were patients who were not expected to live based on their acuity but were discharged alive.

The risk-adjusted mortality ratio of observed to expected decreased by 21%.

“We have established very consistent Penn Medicine Team Goals for Quality for more than a decade. That focus has enabled us to achieve and sustain great outcomes for our patients.” — PJ BRENNAN, MD, Chief Medical Officer, Senior Vice President
HOSPITAL ACQUIRED INFECTIONS

The Penn Medicine team has made good strides in reducing infections. A composite of Central Line, Urinary Catheter, Surgical Site, Clostridium difficile and Methicillin-resistant Staphylococcus aureus infections are closely monitored throughout the in-patient units. The past year brought some challenges with performance, however, the prior two years had significant decreases leading to an overall reduction of 14% over the last 3 fiscal years.

PATIENT SATISFACTION SCORES

‘Likelihood to Recommend a Practice’ and ‘Rate this Hospital’ have improved over the past 3 years.

AMBULATORY SCORES

INPATIENT SCORES

FY16 FY17 FY18
-12% -7% +5%

3 YEAR PERFORMANCE

-14%

“Patient Experience and Patient Safety are integrally linked: A positive patient experience drives better patient engagement and ultimately better outcomes.” — PATRICIA GARCIA SULLIVAN, PHD, Chief Quality Officer
Achieving the ambitious goals of the Blueprint requires engaged staff, patients, and families. Engagement requires motivated and involved staff working in partnership with patients and families to activate health behaviors that support health improvement and safe care.
ENGAGEMENT
“We envision a health system where every diverse voice is heard, where every unique perspective is considered. Promoting an inclusive culture benefits not only those that work, train, and study within our health system, but also those who seek care here. When we value each other it enhances our ability to care for our patients” — JAYA AYSOLA MD, DTMH, MPH, Executive Director, The Penn Medicine Health Equity Initiative

Despite well-intentioned providers and advancement in medicine, health care and health disparities persist today. While disparities are often viewed through the lens of race and ethnicity, they can occur across many dimensions including socioeconomic status, age, geography (neighborhood), gender identity, sexual orientation, disability status, religious affiliation, primary language, and mental health status.

At Penn, we determined that solutions would involve dedicated resources and a centralized team to foster innovation to achieve our goal of health equity. This work began with the creation of the new position of Assistant Dean for Health Equity and Inclusion within the Office of Graduate Medical Education, which led to the formation of the Health Equity Taskforce and the Blueprint for Health Equity and Inclusion.

“Charting a path toward health equity and inclusion”

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**KEY STEPS TAKEN**

- Integrate Equity into Existing Efforts
- Provide Education
- Reaffirm Institutional Commitment

- Health Equity Taskforce
- Blueprint for Health Equity and Inclusion
- 1-2-3-American Hospital Association (AHA) Health Equity Pledge

**Integrate Equity into Existing Efforts**

- Health Equity Week
- Development of Online Training Module

**Provide Education**

- Examine performance indicators for disparities
- Engage key stakeholders to address identified disparities

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“Weaving inclusive leadership into the core mission of modern health care organizations is an imperative that cannot be ignored.” — EVE J. HIGGINBOTHAM, SM, MD, Vice Dean, Office of Inclusion & Diversity
HEALTH EQUITY & INCLUSION’S BLUEPRINT

Penn Medicine will provide high-quality patient- and family-centered care to ALL patients.

<table>
<thead>
<tr>
<th>Value</th>
<th>Engagement</th>
<th>Inclusion</th>
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<tbody>
<tr>
<td>Reduce unnecessary variations in care by personal characteristics</td>
<td></td>
<td></td>
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<tr>
<td>Provide patient and family centered, culturally effective care</td>
<td></td>
<td></td>
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<tr>
<td>Ensure a diverse and inclusive clinical learning environment</td>
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HEALTH EQUITY TASKFORCE

MISSION: The Penn Medicine Health Equity Taskforce aims to ensure high quality patient- and family-centered care for all populations, promote workforce diversity, and cultivate safe and inclusive learning and clinical environments through collaboration with internal stakeholders and community partners.

SUBCOMMITTEES

- **Workforce**
  To actualize Penn Medicine’s core value of diversity in all sectors of the healthcare workforce.

- **Data and Evaluation**
  To ensure equity in value of care provided to all patient irrespective of their personal characteristics.

- **Community Engagement**
  To develop opportunities and a platform for community voice in Penn Medicine’s effort to achieve health equity.

- **Education**
  To promote high-quality care for all patient populations by ensuring trainees, staff, and faculty possess the knowledge and skills relevant to care for diverse populations in a patient-centered way.
IMPROVING DATA COLLECTION

Collecting accurate data about patient characteristics is vital to tracking variations in quality of care outcomes, eliminating health care disparities, and improving patient experience. In 2016, new and updated patient demographic fields were added to PennChart, the electronic health record system, to reflect evidence-based recommendations guiding the collection of REAL and SOG1 data.

REAL | RACE/ETHNICITY AND (ANCESTRY) LANGUAGE
Race/Ethnicity is now a combined category, followed by “Granular Ethnicity” or “Ancestry”, and assessment of both written and spoken language preference.

SOGI | SEXUAL ORIENTATION GENDER IDENTIFICATION
Sexual Orientation and Gender Identification are now discrete fields and patients are asked their preferred name and pronoun.

IDENTIFYING AND ADDRESSING DISPARITIES

Analyzing data routinely collected to measure hospital performance by race/ethnicity and gender identified the following three areas of focus:

- Emergency Department wait times
- Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) nurse communication scores
- Unplanned readmissions

TRAINING EMPLOYEES TO ENSURE CULTURALLY RESPONSIVE CARE

Collecting these new data points from patients in a culturally appropriate, patient-centered manner required marketing and education for staff and patients.

WHEN

IN JULY OF 2017, PRIOR TO THE IMPLEMENTATION OF THE DATA CHANGES IN OUR ELECTRONIC HEALTH RECORD SYSTEM, WE LAUNCHED ONLINE MODULES

WHY

COLLECTING THIS DATA IS ABOUT MORE THAN JUST TECHINICAL SKILLS, TRAINING AROUND THE “SOFT SKILLS” RELATED TO ASKING THESE QUESTIONS IS CRITICAL

WHAT

THE MODULE FOCUSED ON HOW THE COLLECTION OF THIS DATA CONTRIBUTES TO PENN MEDICINE’S GOAL OF ACHIEVING HEALTH EQUITY AND PROVIDING PATIENT CENTERED CARE TO ALL PATIENTS

WHO

THIS MODULE WAS ASSIGNED TO ALL CURRENT STAFF WHO WOULD BE COLLECTING THE DATA AND WILL ALSO BE USED TO TRAIN NEW STAFF

“Simply by asking someone what name they want to use and what pronouns they want to use at the beginning of your interaction greatly increases the chances of them opening up” — JACOB GLICKMAN, LGBTQIA Advocate, Standardized Patient Educator
**ENGAGEMENT**

Penn Medicine approaches the very important mission of engaging our students, employees, faculty, and house staff on topics related to providing culturally-responsive care with three governing principles.

- **Ensure All Curricula Reflect Up-to Date and Evidence-Based Content**
- **Leverage Local and National Expertise to Present Live Programming to all Penn Employees, Faculty, Trainees, and Students**
- **Create Online Training to be Adopted System-Wide with Key Stakeholder Input**

**RAISING AWARENESS**

Health Equity Week is a Penn Medicine annual educational event aimed to raise awareness and promote learning around health equity, health disparities and innovative solutions to addressing these issues.

The week-long activities include educational sessions highlighting national experts and research at Penn:
- Grand Rounds
- Keynote Lectures
- Invited Guest Speakers
- Health Equity Research
- Quality Improvement or Innovations in Medical Education Abstract Oral and Poster sessions

**INCLUSION**

Measuring Inclusion within our Health System:

**LAUNCHED SURVEY | CAMPAIGN FOR NARRATIVES | ANALYZE STORIES**

Key to ensuring diversity in the health care workforce is fostering inclusion. An inclusive environment promotes retention and promotion of diverse minds and voices within the health care system.

Some of our efforts to measure and evaluate inclusion at Penn Medicine include:
- Diversity Engagement Survey
- ‘Please Tell Us Your Story’: A call for and analysis of stories of inclusion or lack thereof

They have led to the following initiatives to actively promote inclusion:
- Unconscious Bias Workshops
- Advocacy campaigns to encourage bystanders of discrimination to ‘Speak Up’
- Incorporate into existing wellness and professionalism efforts
- Development of online training module
“No matter the role, all of our staff are caregivers who make an impression on every patient’s experience. Even on the busiest of days, our teams have found ways to connect with patients and their loved ones, fully embracing the human experience in a unique, personal, and in sometimes unexpected way.” — ALYSON G. COLE, MPM, Associate Executive Director System Administrator, Trauma & Rescue Services

People come to Penn Medicine for prevention, diagnosis, and cure. Better health is the ultimate outcome. Yet, our success depends on more than health outcomes. Patient experience reflects the interactions patients have during a visit or stay. These interactions affect their satisfaction and level of comfort with Penn Medicine.

As a system, we continuously explore new ways to improve the Penn Medicine patient experience. This effort is poised to have a profound impact on services across the system moving forward.

PATIENT INPUT COMBINED WITH LEADERSHIPS’ COMMITMENT MATTERS

As Penn Medicine sought to improve the patient experience, the Patient Experience Leadership Team (PELT), co-chaired by a physician and a nurse, worked with representatives from the entire health system to develop a set of guiding principles to steer these efforts.

The goals established by PELT are to:
- Coordinate and provide strategic insight into the patient experience across the system.
- Identify best practices locally that can be scaled to other entities.
- Offer a consistent, positive patient experience at all locations, no matter where the patient may visit.

PELT now includes more than 30 members from across all hospitals, ambulatory practices, and corporate groups, including representatives of Patient and Family Advisory Councils.

Improving the patient experience is an ongoing effort. PELT continues to identify ways to ensure that Penn Medicine patients walk out the door feeling respected and that their wishes are considered in treatment planning.

“We are exceptional—committed to creating the best possible experience leading to enduring connections with our colleagues, patients, and families.”

— PENN MEDICINE EXPERIENCE DOCTRINE
GATHERING INPUT
INTERNALLY AND EXTERNALLY

PELT held focus groups and talked with over 200 employees, providers, patients, and families throughout the system. The team identified key themes that could comprise a standard definition to drive behavior.

The resulting “Penn Medicine Experience” standards and patient experience definition were introduced in late 2017 and continue to be rolled out throughout the system.

ROLE OF SURVEYS

Anonymous surveys offer feedback from patients and their families, and assist in monitoring progress and trends across the system, and allow for benchmarking against other similar systems. The data is tracked internally by Penn Medicine leadership, and externally by federal government and payors. In recent years, incentive programs have also begun to utilize patient experience and satisfaction scores within their reimbursement models.

The surveys provide an overall picture of satisfaction and reveal areas in need of improvement. They help identify key system-wide metrics and better evaluate unit specific interventions. Penn uses Press Ganey to capture these responses for a number of the surveys used, including:

- Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) for in-patient locations
- Clinician/Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) for ambulatory care
- Physician Quality Reporting System (PQRS) program for CMS
- Outpatient Surgery Consumer Assessment of Healthcare Providers and Systems (OS-CAHPS)
- Home Health Hospital Consumer Assessment of Healthcare Providers and Systems (HH-CAHPS)
- Hospice Consumer Assessment of Healthcare Providers and Systems (CAHPS)
- Psychiatry Consumer Assessment of Healthcare Providers and Systems (CAHPS)

“Patient satisfaction surveys are critical to improve performance and manage in new times.” — CRAIG J. LOUNDAS, Associate VP, Penn Medicine Experience
The Penn Medicine Experience Standards reflect the characteristics that contribute to a stellar patient experience. Together, they form a unified pledge to Be Compassionate, Be Present, Be Empowered, Be Collaborative and Be Accountable. The pledge describes Penn Medicine’s commitment to ensure that our patients, families and our community feel cared for: We are exceptional, committed to creating the best possible experience, leading to enduring connections with our colleagues, patients, and families.

**ROADMAP FOR IMPROVING AND SUSTAINING THE PENN MEDICINE PATIENT EXPERIENCE**

<table>
<thead>
<tr>
<th></th>
<th>CHANGE STRATEGY</th>
<th>SPONSORSHIP &amp; PARTNERSHIP</th>
<th>STAKEHOLDER ENGAGEMENT</th>
<th>COMMUNICATION</th>
<th>CAPABILITY DEVELOPMENT</th>
<th>ORGANIZATION ALIGNMENT</th>
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<tbody>
<tr>
<td>1</td>
<td>Maintain a Penn Medicine and Local governance structure</td>
<td>Collaborate with Patient Guest Relations and the Patient/Family Advisory Council</td>
<td>Offer classroom and simulation training, physician and provider workshops, and coaching</td>
<td>Run employee engagement campaigns</td>
<td>Perform observations and assist with action planning</td>
<td>Incorporate expectations in performance reviews</td>
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<td></td>
<td>Hold executive and manager rounds</td>
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<td></td>
<td>Define service standards and role expectations</td>
<td></td>
<td>Develop service and recovery standards</td>
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“ It’s all about the human experience and how our stories intersect with each other, creating great outcomes and lasting memories.” — Cindy Morgan, MSOD, Vice President of Learning and Organizational Development
“Doctors know that the three keys to a successful clinical practice are Availability, Affability and Ability. The public reporting of our patient scores helps confirm and illustrate that this is what our patients think too.”

— M. SEAN GRADY, MD, Department Chairman, Neurosurgery

**PHYSICIAN AND ADVANCED PRACTICE PROVIDER REPORTING**

In order to better serve the community, Penn Medicine now shares patient satisfaction scores for every provider on the providers’ individual websites. The health system was the first in the Philadelphia region to make this information easily accessible to the public in this way.

Questions addressed in survey:

- Likelihood of your recommending this care provider to others
- Concern the care provider gave you about your problem or condition
- Amount of time the care provider spent with you
- Friendliness/courtesy of the care provider

![4.8 OUT OF 5 FROM 156,000 SURVEYS](image)

**RED COAT CAMPAIGN**

Navigation through the many buildings of Penn Medicine can be challenging. In order to help visitors get where they need to go more easily, all Penn hospitals have implemented a “Red Coat” campaign.

Ambassadors, who wear red coats to increase their visibility, are stationed at key locations across the health system. They greet, direct, provide information, and help coordinate transportation for patients being discharged.

**PENN MEDICINE EXPERIENCE WEEK**

All entities hold a week-long celebration focused on improving the patient experience. The week has a two-fold purpose:

- To raise awareness about the importance of service excellence.
- To recognize and reward employees for the important work that they do throughout the year to improve the patient experience.

Each entity has a dedicated Penn Medicine Experience team of volunteers that crafts a local program, consistent with the overall strategic direction of the week as set by Patient Experience Leadership Team (PELT).
EARLY RECOVERY AFTER SURGERY (ERAS)

Surgery triggers the body's stress response, which can have an impact on a patient's smooth recovery. This leaves the patient vulnerable to complications and infections. Penn Medicine is working to optimize the surgical experience so that patients recover safely and efficiently, without a readmission to the hospital.

The Pennsylvania Hospital team has been in the forefront of establishing a standard approach for surgical patient management called Enhanced Recovery After Surgery (ERAS). The lessons and best practices from this effort are being implemented across Penn Medicine.

ERAS protocols use multiple approaches to lower the body's stress response before, during, and after surgery. The protocols have been proven effective in many major surgeries including spinal and colorectal. Yet, they only work if patients and caregivers adopt the recommendations in preparing for their surgery and the subsequent recovery period.

In order to boost adherence with ERAS, Penn Medicine clinicians developed Engaged Recovery at Penn (ERAP). ERAP is a critical component of the Penn Medicine ERAS strategy. ERAP aims to improve preparation and outcomes during and after surgery by actively engaging patients and caregivers.

- Liquid carbohydrates (e.g. Gatorade”) 2 hours prior to surgery
- Skin preparation
- Smoking/alcohol cessation
- Pre-op nutrition and exercise
- Co-morbidity management (e.g., diabetes, blood pressure, anemia)
- Use of laparoscopic surgery when possible
- Maintenance of blood volume (normovolemia)
- Use of short-acting anesthetics
- Epidurals and multimodal analgesics
- Minimize use of tubes/drainage
- Maintain normothermia
- Use of opioid sparing medications
- Early oral nutrition
- Early mobilization
- Minimize use of nasogastric tubes
- Pre-emptive pain and nausea management
- Early catheter removal
- Stimulation of gut motility

ENGAGED RECOVERY AT PENN

“Transitions in care create significant challenges for patients undergoing surgery. ERAP empowers patients and helps them bridge a critical gap.” — ALLEN BAR, MD, Clinical Professor, Department of Surgery, Pennsylvania Hospital

BEGIN WITH THE END IN MIND

PATIENT PREPARATION PRIOR TO SURGERY

The time before surgery is critical. Patients are provided specific steps to follow to prepare for their surgeries. Early intervention and adherence to evidence based guidelines will increase the chance of better outcomes post-operatively.

The ERAP team worked with the Center for Innovation and the Department of Surgery to determine reasons why patients are not fully prepared for surgery. The teams also worked together to discuss specific logistics on how to generate an appropriate patient plan to improve outcomes. Their findings led to the development of the “Game Plan Bag.” The bag includes everything a patient needs to prepare for surgery along with clear step-by-step instructions.

The introduction of the bag increased patient adherence to 64 percent. The teams observed that those who did not comply were worried or distracted and forgot to follow the instructions. A second pilot added just-in-time text message reminders to accompany the bag. This resulted in 100 percent adherence during the study, and over 90 percent in ongoing use.
“ERAS is an iterative process that takes evidence-based principles from the bench to the bedside, operating room and beyond with the goal of improving patient care and outcomes.” — ZARINA S. ALI, MD, Assistant Professor of Neurosurgery, Pennsylvania Hospital

1,000 PATIENTS ENROLLED ACROSS 5 SERVICE LINES

NEXT STEP: EXPANSION

Early success led to new partnerships. The use of ERAP in Gynecology Oncology helped attain 98 percent adherence with pre-op behaviors. Seventy percent of patients cited the text reminder as the reason they remembered.

Together, ERAS and ERAP also show promise in reducing or eliminating hospital stays. Pilot use in gynecologic oncology and neurosurgery led to a 30 percent reduction in length of stay and 50 to 70 percent reduction in readmissions. To date, more than 1,000 patients from five service lines have been enrolled in ERAP.

ERAS & ERAP PARTNERSHIP

ERAP helps ensure that patients go into surgery mentally and physically prepared. Patients receive:

- Reassurance that they are doing everything right
- Clear instructions, especially at the right time when they need it
- Visual/physical reminders
- Instructions delivered in a manner that promotes accountability to the clinical team
- Space to mentally prepare
- Support from family and support buddies
- Confidence in their care team

POSITIVE RESULTS

NEUROSURGERY

85% ↓ 50%
REDUCTION IN READMISSIONS

GYNECOLOGIC ONCOLOGY

28% ↓ 30%
REDUCTION IN LENGTH OF STAY
Transitions in care and coordination of care have been important components of the Blueprint since the beginning of the process. Keeping patients out of the hospital requires the delivery of seamlessly coordinated care across all settings and service lines.
CONTINUITY
HELPING STAFF SUPPORT BETTER PATIENT OUTCOMES THROUGH WORKFLOWS

“Having a shared EMR across Penn Medicine’s various care settings has resulted in a powerful advantage for clinicians and patients. Our challenge now, is to leverage PenChart functionality, coupled with effective workflow design to support efficient, and high quality care for patients and providers.” — SCOTT SCHLEGEL, MBA, Vice President, Regional Physician Group

A single medical record system streamlines care and improves communication across inpatient, outpatient and post-acute care teams.

Penn Medicine strives to optimize use of the electronic health record (EHR) to create value and ensure that patients receive excellent care in a timely manner.

A dedicated EHR Transformation Team partners with clinicians and staff to create lasting benefits.

CRITICAL PARTNERSHIPS

* PENN CHART INFORMATION SERVICES
  * What can we do?
    * Leverage technical capabilities within systems
    * Configure systems and promote best practices

* CLINICAL TEAMS
  * What should we do?
    * Establish clinical standards
    * Process improvements
    * Process outcome measures

* EHR TRANSFORMATION TEAM
  * How do we use it best?
    * Optimize workflows
    * Advanced education
    * Promote end-user adoption

BENEFITS TO PATIENTS AND THEIR PROVIDERS

- Digital integration to improve my health
- Improved outcomes
- Leveraging technology for my health needs
- Improved communication with my practice
- Access to my records
- Using system as designed
- Getting through my day
- Getting through my day
- Getting through my day
- Getting through my day
Penn Medicine’s EHR Transformation Team takes a systematic, multi-phase approach to improving the EHR experience. Priorities include:

- Ongoing advanced education for all PennChart users,
- Collaboration with clinicians and operational leaders to optimize workflows,
- Use of technology to engage patients in their care,
- Support for patient registration and scheduling across the system.

**KEY FOCUS AREAS**

**END USER OPTIMIZATION APPROACH**
The team takes a customized and comprehensive approach to EHR optimization.

**DISCOVERY**
**ORGANIZATION, EVALUATION & ANALYSIS**
- Evaluated current state and held meetings with every department to better understand workflows
- Assessed data analytics and defined metrics to monitor

**EXECUTION**
**EXECUTION & DEPLOYMENT OF TECHNICAL RESOURCES**
- Resources assigned based on targeted priorities
- Initiated educational sessions: shoulder-to-shoulder, workshops, and rounding

**SUSTAINMENT**
**ANALYSIS OF PROGRESS & NEXT STEPS**
- Analyzed and monitored progress/outcomes
- Evaluated the need to readjust priorities and determine additional areas for optimization

**MAJOR FOCUS AREAS THIS YEAR**
1. End User Optimization
2. Access
3. Communication
4. Enterprise Scheduling

**HELPING STAFF SUPPORT BETTER PATIENT OUTCOMES THROUGH WORKFLOWS**
**END-USER OPTIMIZATION**

The EHR Transformation Team seeks to improve use of the EHR and increase knowledge of its tools and potential among providers and clinicians. A system-wide clinical education effort across ambulatory and inpatient care settings has reached:

- 2,068 providers and clinical support staff in ambulatory care practices
- Approximately 1,000 providers and clinical support staff in inpatient units, (trained in shoulder-to-shoulder sessions and/or group workshops)

Those who went through training reported:

- **46%** decrease in time spent in notes & letters
- **30%** decrease in average days result messages are reviewed
- **3X** increase in CCA office visits closed the same day

**ACCESS**

Improving patient access to Penn Medicine through the patient portal, myPennMedicine. Coming soon: electronic check-in, Fast Pass, and waitlist management tools for patients!

Related to Access:

- **2.5%** appointments scheduled via myPennMedicine
- **3.3M** records exchanged via Care Everywhere
- **10,000** external users access PhysicianLink to obtain information on their patients
“I highly recommend scheduling some time with the EMR transformation team. Even as an advanced PennChart user, I have learned new ways to optimize my inpatient and ambulatory workflows.”
— SRINATH ADUSUMALLI MD, MSC, Assistant Professor of Clinical Medicine

COMMUNICATION
Enhancing communication among patients, providers, and hospital partners through Care Everywhere and PhysicianLink’s referring provider portal.

ENTERPRISE SCHEDGISTRATION
Easy, optimal scheduling benefits everyone. The Schedgistration group is dedicated to improving scheduling and registration across the system. The group focuses on training and quality assurance, with an emphasis on monitoring, accuracy, and functionality. Participants demonstrate greater accuracy of scheduling and registration within PennChart.

ADVANCED TRAINING
Schedgistration Webinar Series
- 15 UNIQUE TOPICS
- 38 INDIVIDUAL SESSIONS
- ~1900 TOTAL PARTICIPANTS

SCHEDGISTRATION QA
- Penn Medicine
- 78% → 93%
- February 2018 → July 2018

PHASE 1
Increase Competency
- Increased awareness and utilization of PennChart tools
- Provide ongoing provider & clinical staff education

PHASE 2
Care Team Design
- Partner with the Engage to Sustain Program, leveraging the clinical care teams (Ma’s, LPN’s, RNs) to help reduce data entry burden within PennChart

PHASE 3
Leveraging the Integrated Record
- Improve technology and workflows for transitions in care between Ambulatory, Inpatient, and Post-Acute phases
- Targeted approach to improve usability of PennChart through innovative technology and advanced education
A home is a base, one place that offers stability and consistency. These words also describe characteristics people seek in a doctor or medical provider – a person or group who knows their history and has a context to understand their concerns. A medical home offers just that. It provides coordinated, comprehensive health care. Care is easy to access and, most significantly, focused on the needs of the patient and their families and care providers.

For over 10 years, the medical community has embraced the concept of a medical home as a means of offering better health care at a lower cost. Penn Medicine adopted this approach early on and has been commended by the National Center for Quality Assurance for its high quality primary care practices. There are currently 33 practices that are classified as medical homes at Penn Medicine.

**TO SUPPORT THE DELIVERY OF COMPREHENSIVE PRIMARY CARE, CPC+ INCLUDES THREE PAYMENT MODELS:**

**CARE MANAGEMENT FEE**
A non-visit-based fee paid per-beneficiary-per month. The amount is risk-adjusted to account for the intensity of services required.

**PERFORMANCE-BASED INCENTIVE**
Payments prospectively paid and retrospectively reconciled based on how well a practice performs.

**MEDICARE PHYSICIAN FEE**
Either full or adjusted fee for service payments made through the Medicare Physician Fee Program.
The past year saw a national reinvestment in the primary care medical home. As part of the Affordable Care Act, the U.S. Center for Medicare and Medicaid Services (CMS) developed Comprehensive Primary Care Plus (CPC+). The five-year program supports hospitals and health systems in instituting and improving medical home efforts. More than 2,800 practices throughout the country participate. Twenty-nine Penn Medicine primary care practices were selected to participate based on their readiness to transform the existing care delivery model.

**CPC+ CARE DELIVERY ELEMENTS**

Functions incentivise by three foundational Drivers:
- Use of Enhanced, Accountable Payment
- Continuous Improvement Driven by Data
- Optimal Use of Health Information Technology

Care Delivery Transformation:
Build, integrate and deliver the necessary elements of a high functioning patient care model:
- Excellent Access
- Care Coordination
- Care Management
- Patient and Caregivers Engagement
- Planned Care
- Population Health

**18 REGIONS ACROSS THE COUNTRY**

**PARTICIPATE IN THE COMPREHENSIVE PRIMARY CARE PLUS (CPC+) INITIATIVE**

29 PENN MEDICINE PRACTICES, selected by CMS, to participate in this national effort

= Region comprises contiguous counties
= Region spans the entire state
“Our engagement in CPC+ has helped drive collaboration across our primary care practices leading to the development of programs that bolster the ‘toolkit’ of services available to providers to more effectively manage the care of their patients and improve health outcomes.”

— MARCIE ORDOWICH, MPH, MBA, Chief Administrative Officer, Primary Care Service Line

CPC+ THE FIRST YEAR
The program has gotten off to an impressive start. Preliminary accomplishments centered on improving data and communication systems. Webinars and newsletters help practice leadership stay informed. Highlights of the past year include:

• Standardized risk scores assigned to each patient. The score reflects the patient’s assessment of chronic disease and use of health care resources. Penn was the first to allow doctors to adjust risk scores within the electronic medical record (PennChart) based on knowledge of the patient and their own clinical judgment.
• A new partnership with Healthshare Exchange of Southeastern Pennsylvania helps track patients’ use of local hospital and emergency rooms within and outside the Penn system. Primary care practices receive daily notification every time one of their patients is discharged from a hospital or emergency room.
• The practices partnered closely with Chester County Hospital to form a work group of case managers, hospitalists, and emergency room leadership to improve transitions of care.
• Behavioral health resources have been imbedded within each primary care practice. This well integrated model will help meet the many emotional and psychologic needs of patients.

PLANNED CARE
Use data and dashboards to drive improvement at practices

POPULATION HEALTH
Performance Improvement Initiatives to standardize and spread best practices
MOVING FORWARD
CPC+ gathers data related to selected screenings and outcomes. The program requires that Penn Medicine track 14 measures, nine of which are reported to Center for Medicare and Medicaid Services (CMS).

CLINICAL QUALITY METRICS

9 MEASURES SELECTED FOR REPORTING:
• High Blood Pressure Control
• Diabetes Poor Control
• Fall Risk Screening
• High-Risk Medication in the Elderly
• Diabetes Eye Exam
• Breast Cancer Screening
• Cervical Cancer Screening
• Colorectal Cancer Screening
• Tobacco Use Screening and Cessation

“CPC+ improved patient access, better care coordination, and comprehensive care management are strategies that will help us reach our goals of reducing costs and improving quality and health outcomes for all our patients. It’s hard work but it’s also a really exciting time for primary care.” — CHARLES ORELLANA, MD, Chief Medical Officer, Clinical Care Associates

IMPROVE ACCESS
UTILIZE TELEHEALTH AND TELEPHONE CALLS TO SUPPLEMENT OFFICE VISITS AND HELP PATIENTS RECEIVE CARE IN AN EFFICIENT MANNER

COORDINATE CARE
DETERMINE NEW WAYS TO INCORPORATE SPECIALISTS WITHIN THE MEDICAL HOMES FOR MORE COMPREHENSIVE TREATMENT PLANS

TAILOR OUTREACH
IMPLEMENT RISK SCORES TO CUSTOMIZE OUTREACH BASED ON PATIENT NEEDS AND CARE PLANS

ENGAGE FAMILIES
EXPAND THE PATIENT AND FAMILY ADVISORY COUNCIL’S ROLES AND SOLICIT ADVICE ON THE NEXT PHASE OF THE PROGRAM
Oncology care has become more complex in recent years, with more patients receiving their primary anti-cancer treatment in the ambulatory care setting. Oncology patients often develop complications as a result of their intense treatment which requires urgent clinical evaluation.

Most Oncology patients would rather have their symptoms managed in a more comfortable setting. Emergency room (ER) visits are often not the best option for these vulnerable patients. In addition, ER providers may lack specific expertise required for managing the adverse effects of newer anti-cancer therapies.

The purpose of the Oncology Evaluation Center (OEC) is to facilitate same-day and urgent appointments for cancer patients who develop new symptoms related to their cancer, their treatment, or other medical conditions.

Evaluating these patients in the OEC has been a major factor in reducing unplanned readmissions. Keeping patients out of the busy ER environment has improved satisfaction among patients and their families.

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**POTENTIAL CHALLENGES WITH USING THE ER**

**HIGH RISK**
- FOR IMMUNE-COMPROMISED PATIENTS

**HIGH COST**
- HIGH CO-PAYS, DUPLICATE TESTING

**LONG WAITS**
- PATIENT NOT KNOWN TO TEAM

---

The purpose of the EOC is to provide same-day, urgent evaluation for cancer patients known to Penn Medicine providers.

- Same day urgent evaluation
- Monday through Friday service
- Available during peak clinic times
ONCOLOGY EVALUATION CENTER

700+ patients seen within the first year contributed to a reduction in readmissions.

TOP 5 REERRAL REASONS AND TREATMENTS

<table>
<thead>
<tr>
<th>CHIEF COMPLAINT</th>
<th>TREATMENT AT OEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dehydration</td>
<td>Hydration</td>
</tr>
<tr>
<td>Fever</td>
<td>Fever Work-Up</td>
</tr>
<tr>
<td>Pain</td>
<td>Pain Medication</td>
</tr>
<tr>
<td>Transfusion Needs</td>
<td>Blood Products</td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>Anti-Emetics</td>
</tr>
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</table>

UTILIZATION BY VARIOUS DISEASE TEAMS

<table>
<thead>
<tr>
<th>DISEASE TEAM</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematology</td>
<td>31%</td>
</tr>
<tr>
<td>Breast</td>
<td>16%</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>19%</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>9%</td>
</tr>
<tr>
<td>Thoracic</td>
<td>19%</td>
</tr>
<tr>
<td>Head &amp; Neck</td>
<td>6%</td>
</tr>
</tbody>
</table>

“The creation of this innovative model for evaluating, managing, and treating cancer patients on a same day basis when a complication arises has improved the quality of care and helped avoid ER visits and prevent readmissions to the hospital.”

— LINDSEY ZINCK, RN, MSN, OCN, Associate Clinical Director, Infusion Services
A diagnosis of cancer can be overwhelming.
Choosing the right place to receive care shouldn’t be. The Ann B. Barshinger Cancer Institute at Lancaster General Hospital (LGH) brings together clinical experts, advanced technology, and a vast array of support services under one roof with an environment designed to support their patients and families.

Integrated into a single structure are medical, radiation and surgical oncology. They share a single support team comprised of nursing, social work, nutrition, chaplaincy, financial counseling, patient navigation, and behavioral medicine.

PATIENT ENGAGEMENT
The teams have worked hard to setup patient care models in ways that engage patients and families to have shared decision making. Nursing and physician teams educate patients on:

- Diagnosis and treatment options
- Self management of medications, side effects, and symptoms
- How to access our care system
- Shared decision making
- Advance care planning

VERTICAL GOAL ALIGNMENT
Three areas were focused on in order to better align the activities of the oncology teams.

CULTURE CHANGE
- Setting shared goals and priorities
- Facilitating use of Penn Pathways
- Normalizing early use of Palliative care
- Transparency around therapy cost

PERFORMANCE IMPROVEMENT
- Implementing daily huddles
- Performing Rapid Improvement cycles
- Providing dashboards with real-time data
- Updating management models

TEAMWORK
- Shared vision
- Teams and role definitions focus
- Communicating openly and effectively
- Extending oncology support services

INCREASE IN PALLIATIVE CARE CONSULTS
50%

INCREASE IN ADVANCE CARE PLANNING CONVERSATIONS
21%
PARTNERSHIP WITH MEDICARE

LGH began a five-year project with Medicare called the Oncology Care Model (OCM), a comprehensive practice redesign to improve quality and enhance the patient experience, while reducing costs. LGH was one of the first hospitals to adopt a practice of financial transparency for cancer patients, by including individualized price estimates to help patients and families with decision-making.

The initiatives included:
- Written plan of care for patient and referring physician
- Standardized clinic workflow
- Distress and depression screening
- Patient and Family Education
- Formalized shared decision making
- Financial estimates for therapy options
- Evidence-based chemotherapy guidelines
- Early symptom management at home

New Oncology Care Plans
- Clear diagnosis with staging
- Goals for treatment
- Prognosis
- Impact on lifestyle
- Supportive care recommendations
- Ways to contact care team

SUCCESSFUL OUTCOMES

Despite the large increase in patient volume, readmissions after a hospital stay decreased by 23% and post acute care decreased by 46%.

200% INCREASE IN NEW PATIENT CONSULT VOLUME
84% ADHERENCE WITH CARE PLAN USAGE
23% REDUCTION IN RE-HOSPITALIZATION

Recognized by Centers for Medicaid and Medicare (CMS) as a best practice in Quality Reporting and Quality Improvement
Patients and families, insurers, employers, and others are placing increasing emphasis on value-based care. For Penn Medicine, this means providing high quality and safe care, free of preventable complications and readmissions, at a lower cost. At its essence, value-based care entails providing the right care at the right time in the right place.
VALUE
VALUE FOR PATIENTS IS CRITICAL

“Clinical nurses are uniquely positioned to impact outcomes related to delirium through early recognition and application of non-pharmacological interventions, which they have the greatest potency for prevention and management.”

— JULIANE JABLONSKI, DNP, RN, CCRN, CCNS, Critical Care Nursing Systems Strategist

Each hospital unit tells a story. Critical care is no exception. The intensive care unit (ICU) houses people in medical distress who need continuous care and may require mechanical ventilation or other support. Ventilators fulfill a vital purpose but carry a risk of unintended consequences such as infection, pain, agitation, and delirium.

Patients are vulnerable to developing health problems that remain after critical illness. These problems can involve both the patient’s body and mind.

Penn Medicine looks for ways to improve care by reducing unnecessary variation, shortening stays in the ICU, and effectively managing pain, agitation and delirium (PAD). Research shows that PAD management leads to better health outcomes, and promotes value by supporting more efficient use of the ICU.

OUR APPROACH

In 2017, Penn Medicine introduced a system-wide strategy to strengthen critical care by focusing on PAD management. ICUs from all five hospitals participated.

A critical care workgroup, co-chaired by a physician, a nurse, and a pharmacist, led the efforts. The goal was to standardize protocols and care, in order to protect patients from the harmful effects of PAD. In doing so, the effort also ensures more prudent use of resources.
Clinical nurses are uniquely positioned to impact outcomes related to delirium through early recognition and application of non-pharmacological interventions, which they have the greatest potency for prevention and management.

— JULIANE JABLONSKI, DNP, RN, CCRN, CCNS, Critical Care Nursing Systems Strategist

ACCOMPLISHMENTS

Building consensus on standardizing the protocols and educating the staff on a common language was challenging. There are approximately 170 physicians, 900 nurses and 300 staff who support the ICUs. The new standardized bundle resulted in significant improvement in adherence to the new systems.

Nurses are driving value by performing routine delirium assessments (increased to 90%), standardizing sedation assessment (80% compliance), applying non-pharmacological interventions, and coordinating care with the interdisciplinary team.

LOOKING FORWARD

Communication and information sharing are key to continued progress. Going forward, the team aims to implement a new ICU dashboard to display real-time data on ventilator use and sedation. Built-in alerts in the electronic health record will ensure that clinicians have the information they need to make decisions promptly. This will facilitate more rapid liberation from ventilation equipment and better overall patient management.

I-LEAD

The I-LEAD bundle, an evidence-based approach to standardize and enhance critical care, was selected. This bundle has been shown to have a positive impact on physical recovery, cognitive function, and wakefulness. It also enhances value by lowering time spent on mechanical ventilation and reducing length of ICU stay.

Each patient’s needs are assessed using a standard set of guidelines. Information is stored electronically, on a PAD dashboard. The approach incorporates both pharmacological and non-drug-based strategies to prevent and manage PAD.

STANDARDIZING WORK

Components of the ABCDEF Bundle:

- Awake
- Spontaneous Breathing Trials
- Consideration of Analgesia and Sedation
- Delirium Recognition and Management
- Early Exercise
- Family Engagement and Empowerment

I-LEAD

ICU LIBERATION

ADHERENCE TO STANDARD CARE

90% Adherence rate of nursing delirium assessment after protocol standardization

80% Sedation and agitation assessments performed

HALF-DAY REDUCTIONS IN THE ICUS

43% Time on ventilator

50% Duration of delirium
“We’ve put together Penn Medicine’s Opioid Task Force in order to systematically address the national crisis. We are guiding a consistent approach to support our patients and our care providers, which includes right-sizing prescribing and referral resources. Our work will drive better overall quality and coordination of care, minimize unnecessary variation, and serve to engage the issue constructively.” — DAVID A. HOROWITZ, MD, Associate Chief Medical Officer Penn Medicine

Crisis. Epidemic. These words are used to describe the widespread use and abuse of opioids. Public efforts target the problem broadly and with urgency. Pain management is a significant factor in recovery. Balancing the management of a patient’s pain while minimizing their risk of addition can be a major challenge.

In 2017, Penn Medicine doctors participated in the Philadelphia’s Opioid Task Force convened by Mayor Jim Kenney. The task force was charged with developing a coordinated plan to address the opioid crisis. The final report, released in May 2017, highlighted 18 recommendations focused on education, prevention, treatment, and the role of the criminal justice system. These recommendations inform and guide Penn Medicine’s work to identify ways to mitigate opioid-related morbidity and mortality in the region.

13% of those who used prescription opioids either misused or abused them

2 out of every 5 U.S. adults used a prescription opioid in 2015
Penn Medicine’s Opioid Taskforce is committed to identifying and implementing strategies to prevent and reduce the overuse of opioids and stem opioid-related fatalities. The task force aims to address the problem in an efficient and coordinated way, in the context of the growing availability of opioids and increased regulation.

New pathways and protocols extending across multiple disciplines in Penn Medicine address:

A COMPREHENSIVE APPROACH

Penn Medicine’s task force takes a comprehensive approach. Six subcommittees steer its work. Together, their strategies span departments and channel resources where they can be most effective. Activities leverage technology, ensure compliance with laws, pilot new protocols, and coordinate intervention planning with community programs. A focus on screening and education helps prevent more people from becoming addicted.

6 SUBCOMMITTEES

- **RESOURCES**
  - Identify resources required to execute task force recommendations
  - Estimate the operating impact of deploying identified resources

- **REGULATION**
  - Identify requirements for compliance with state and federal law
  - Support Penn Medicine entities with achieving and maintaining compliance

- **INFORMATION TECHNOLOGY**
  - Select key metrics for monitoring opioid prescribing and order set usage
  - Design patient selection criteria in addition to the Opioid registry

- **EDUCATION**
  - Provide education to all nurses, pharmacists, house-staff and prescribing providers regarding safe opioid prescribing practices

- **PATHWAYS & PROTOCOLS**
  - Establish system-wide clinical pathways and protocols to guide opioid prescribing for acute and chronic non-cancer pain

- **CLINICAL SERVICES**
  - Identify a standard approach to screening for substance use disorder
  - Determine available clinical and community resources; identify future needs

“We know the risk of death is far higher than heart disease or stroke and that’s why we need to focus our resources on this problem.”

— Jeanmarie Perrone, MD, FACMT, Professor of Emergency Medicine and Medical Toxicology
Proper management of acute pain could prevent the development of chronic opioid use and opioid use disorder. Penn Medicine physicians and providers are implementing care pathways for patients identified as high risk for overuse of opioids.

**ACUTE PAIN**

Long-term opioid use often begins with the treatment of acute pain. Clinicians can help prevent long-term use by prescribing the lowest effective dose of immediate-release opioids and the minimum number of pills needed to treat severe pain. Three days of treatment or less is often sufficient; more than seven days is rarely needed.

Penn Medicine has developed new pathways for specific medical procedures to guide pain management with the minimal use of opioids. In general, a five-day supply is the maximum recommended prescription following outpatient and most inpatient surgeries. In certain cases where prolonged pain is anticipated, a supply for up to 10 days may be appropriate.

**CHRONIC PAIN**

Some patients may require long-term use of opioid medications. In these situations, a Chronic Medication Agreement is used to clarify the patient-prescriber partnership in the treatment of the pain condition and outline a specific management plan.

For all patients, opioids are part of a multimodal pain regimen. The regimen also may include non-steroidal anti-inflammatory drugs, acetaminophen, gabapentin, and non-drug therapies. Concurrent prescriptions of benzodiazepines with opioids should be avoided, especially for older adults. Lower doses of opioids after surgery may be recommended for older adults.

**MEDICATION-ASSISTED TREATMENT**

New data show that 1 in 10 patients who receive naloxone for nonfatal overdose will have a fatal overdose within one year. In response to this, Penn Medicine’s “warm handoff” program initiates addiction counseling and treatment with medication-assisted therapy (MAT) in the Emergency room. Our clinicians routinely offer buprenorphine to treat opioid withdrawal symptoms to patients being admitted to the hospital. This drug helps provide a bridge to longer-term treatment for those in need of support.

“Our task force is involving each of our hospital’s clinical leaders to outline goals and desired outcomes in an effort to support Opioid Stewardship. Our local efforts have been successful in decreasing opioid usage approximately 16% over the past year which benefits our patients and surrounding communities.”

— JOHN A. SESTITO, MS, RRT, Associate Executive Director, The Clinical Practices of the University of Pennsylvania
“The Opioid Task Force is working hard to improve patient outcomes by encouraging proper opioid stewardship, giving providers better tools to make doing the right thing easier, and advocating for improved access to addiction treatment services.” — Michael Ashburn, MD, MPH, Director, Penn Pain Medicine Center
"The creation of almost 100 pathways, across a broad array of clinical services, represents robust use of the program. To achieve our full potential, we work to integrate the pathways into clinician workflows, and measure resulting outcomes. By providing the data to back up decisions, we make it easy for providers to do the right thing."

— CRAIG UMSCHEID, MD, MSCE, Director, Center for Evidence-Based Practice Officer, Value Improvement

THE APPROACH

Evidence-based practice improves the quality and safety of care by ensuring that the health system’s practice is consistent with the best scientific thinking on a topic at a given time. Medical decisions are considered within the context of what is best for a patient and would yield results. Clinical pathways offer one means of integrating evidence-based guidelines into local practices. A systematic approach to pathway development and implementation promotes evidence-based, high-value care.

Penn Medicine’s Center for Evidence Based Practice (CEP) has developed a 10-step evidence-based framework for pathway development and dissemination:

- Identify an engaged clinical owner
- Recruit a representative stakeholder group
- Review existing guidelines and pathways
- Develop a prototype pathway
- Review the pathway prototype and evidence with stakeholders at an in-person meeting
- Conduct additional evidence reviews as needed
- Update the pathway based on feedback
- Perform quality assurance and review metadata
- Disseminate and message
- Monitor use, impact, and update as needed

A web-based platform facilitates development, dissemination, and monitoring of pathway content across the health system.
Last year the team introduced 91 clinical pathways across diverse clinical practices.

The Oncology, Heart and Vascular, and Neurosciences service lines account for 60% of the clinical pathways. Pathway development in other clinical areas has been robust as well.

1,384 VIEWS PER MONTH
917 REGISTERED USERS

IMPLEMENTING PATHWAYS AT PENN MEDICINE

CEP works closely with service lines to develop pathways. For example, the partnership between the Oncology Service Line and CEP resulted in 54 new oncology pathways last year. The pathways help facilitate evidence-based oncologic care across all of Penn Medicine’s practice sites, including new care settings such as Lancaster General Hospital.

10-STEP FRAMEWORK FOR DEVELOPING AND DISSEMINATING

- REQUEST FROM AN ENGAGED CLINICAL LEADER
- BUILD STAKEHOLDER GROUP
- REVIEW EXISTING PATHWAYS/GUIDELINES
- BUILD PROTOTYPEBASED ON RAPID REVIEW
- REVIEW ASYNCHRONOUSLY USING SOFTWARE
- PERFORM ADDITIONAL REVIEWS IF NECESSARY
- REVIEW WITH KEY STAKEHOLDERS (IN-PERSON MEETING)
- DEVELOP MESSAGING AND DISSEMINATION PLAN
- ASSESS UTILIZATION AND IMPACT
- MAINTENANCE

91 CLINICAL PATHWAYS DISSEMINATED

- Oncology, Heart & Vascular, and Neuroscience Service Lines: 60%
- Pulmonary/Critical Care: 9%
- Nursing Care: 8%
- Endocrinology: 7%
- Hematology: 5%
- Other Clinical Specialties: 11%

- Physicians: 40%
- Nurses: 19%
- Advanced Practitioners: 18%
- Pharmacists: 4%
- Medical Students: 6%
THE PRIORITY
The Mission of the Penn Value Improvement (PVI) team is to foster a multidisciplinary, collaborative approach in tackling Penn Medicine’s largest clinical quality problems by effectively spreading and enhancing solutions in relevant locations. The PVI Team spearheads targeted efforts designed to disseminate proven interventions to address these problems.

ORGANIZATION AND STRUCTURE
The team includes a director, project manager, two master improvement advisors, a human factors scientist, a data scientist, and a member of the finance team. The efforts are overseen by executive leadership of Penn Medicine and the Penn Value Steering committee. This was the first time a collaborative model at this scale was used to spread evidence-based practice across all hospitals.
Aspiration pneumonia is a leading hospital complication resulting in increased morbidity and mortality. It occurs when patients accidentally inhale foreign matter — such as liquid, vomit, or food — into their lungs and subsequently develop an infection. The impact on the patient’s health is serious, and can be fatal. It is also associated with increased length of stay in the hospital and higher costs.

**PREVALENCE AND RANKINGS**

Penn Medicine’s downtown hospitals reported 468 cases of aspiration pneumonia in 2015. This translated into rates of 7 to 10 cases per 1000 discharges. These rates are in the 75th percentile when compared to similar hospitals, according to Vizient, a national healthcare network. Nationally, rates at the 50th percentile are reported to be between 4.2 and 6.7 per 1000 discharges.

**NEW MODEL – NEW APPROACH**

Various performance improvement tools are in use at Penn Medicine; however, this was the first time a collaborative model (adopted from the IHI Breakthrough Series Model) was used to spread evidence-based practice across the system.

**OVERALL AIM**

The goal was to reduce the incidence of Aspiration Pneumonia in participating entities to below their respective benchmark (Vizient) 50th percentile by December 2017. For most entities, that translated into an approximately 33% reduction from the baseline.
Past efforts to reduce aspiration pneumonia had limited success due to the complexity of the problem and lack of a coordinated sustained effort. It was critical that the new plan implement evidence-based practices in the most effective way. The approach leveraged expertise from across the health system.

The Center for Evidence-Based Practice provided research support, and helped the team in selecting strategies with a proven record of success. The effort also drew on best practices in quality improvement by adapting a collaborative model developed by the Institute for Healthcare Improvement.

Further analysis of the aspiration pneumonia data from the three hospitals estimated that one case results in an increase in the length of hospital stay by 11.4 days. This generates approximately $10,800 in additional direct costs. Success in lowering the rate of aspiration pneumonia saves lives and adds value. For these reasons, it was a priority this past year.

The Penn Value Improvement (PVI) team engaged 11 local teams from all five Penn Medicine hospitals. This included over 75 physicians, nurses, therapists, and other providers. Each team was responsible for implementing the strategies locally and evaluating their impact.

**IMPROVEMENT DRIVERS:**
- Dysphagia Screening
- Oral Care
- Head of Bed Elevation
- Patient Mobility
- Improved Documentation
- Change Management

Hospitals saw a reduction in the median number of cases per month of aspiration pneumonia.

Across the system, this resulted in a rate decrease from 6.9 → 4.3 cases per 1,000 discharges.
MEASURABLE RESULTS

“I was amazed to see how our local efforts to reduce aspiration pneumonia were transformed by the PVI team into a health system initiative. They brought together experts and a multidisciplinary team at each entity to develop a formal systematic and sustainable approach that successfully reduced rates of this dangerous complication.”

— VIVEK N. AHYA, MD, MBA, Vice Chief, Pulmonary, Allergy & Critical Care

The financial impact of this effort was substantial. The estimated annual savings was over $2.8 million.

Ultimately, three factors drove the success:
- Strong, consistent support of senior and clinical leadership
- A collaborative approach that fostered teamwork across entities, service lines, and specialties
- Integration with data systems to help monitor activities

LOOKING FORWARD
Each team has developed a plan to sustain the initiative beyond the project period. Sustainability requires the right tools. Teams invested time developing new data collection and reporting tools.

Going forward, it will be easier to monitor and track cases, treatment, and interventions to reduce cases as we developed reports to come directly from PennChart (Electronic Health Record). A new tool kit was developed and will be made available to other departments within the system that would like to work on this problem in the future.

$2.8 MILLION
38%
DECREASE TRANSLATED TO
SAVED IN HOSPITAL COSTS

47
The Innovation Accelerator Program is designed to support faculty and staff from across Penn Medicine in their efforts to develop, test, and implement new approaches to improve health care delivery and patient outcomes. Working closely with mentors from the Center, teams move through three phases of work with the ultimate goal of bringing successful innovations to scale.

Since the inception of the program, 30 projects tackling some of health care’s toughest challenges have been funded. All Penn Medicine and University employees are welcome to submit an idea.

The program takes a three phase approach. The first two phases are structured over an eight-month timeline. Phase three varies in length depending on the needs of the project.

The 2017 Innovation Accelerator class was co-sponsored by United Healthcare, supporting their priority of enabling high-value care delivery models.

THREE PHASE APPROACH

IT MIGHT WORK
• Teams work to better understand the problem, rapidly test potential solutions, and define how to measure success.
• Present to leadership for approval and funding.
• Take their ideas to scale.

IT DOES WORK
• Move to larger scale testing.
• Demonstrate sustained impact and secure stakeholder support to move their solution towards implementation.

HOW IT WORKS
• Teams work with stakeholders to secure the permanent infrastructure necessary.
• Teams “graduate” when achieve sustainable implementation at full scale solution.
Four teams were chosen to participate in the Innovation Accelerator Program this past year:

**SUPPORTING OLDER ADULTS AT RISK (SOAR)**
Traditionally, older hospitalized adults are discharged when medically stable and once post-discharge care is organized. This approach causes patients to stay in the hospital beyond what is medically necessary, waiting for services to be arranged. This delay compromises patient safety and overall health status and leads to increased hospital cost. The SOAR project aims to test a transitional care model with strong prior evidence of improved outcomes that “flips” assessment of post-discharge needs to the home setting, moving patients to home sooner with care and support that keeps them safe upon earlier discharge.

**Team lead:** Rebecca Trotta, PhD, RN  
*Director of Nursing Research and Science, Hospital of the University of Pennsylvania*

**PENN MEDICINE VIRTUAL CARE**
Studies have shown that telemedicine video visits can increase provider capacity, improve patient satisfaction and reduce costs. However, the state of Pennsylvania does not have telemedicine parity reimbursement law. The Penn Medicine Virtual Care project aims to test a self-pay concierge service model for telemedicine video visits in partnership with Independence Blue Cross. The goal is to prove that evaluation and management services can be completed through video visits for the right clinical use cases while enhancing access and establishing a solid business model.

**Team lead:** Janice Hillman, MD, FACP, CCA  
*Adolescent and Young Adult Medicine, Penn Medicine at Radnor, Clinical Care Associates*

**HEART CARE CONTINUUM**
Heart failure (HF) is projected to affect more than 8 million people from 2012 to 2030. The costs associated with HF are approximately $30.7 billion annually, a large proportion of which is accumulated as patients approach the end of life. The care of HF patients during end of life is suboptimal in comparison to other populations, and there are high rates of hospitalization. Inadequate and lack of timely symptom management results in emergency department visits and readmissions. The Heart Care Continuum team is developing a heart failure program to improve symptom management for advanced heart failure patients, facilitate teamwork among palliative care and cardiology providers, and increase more timely referrals to hospice.

**Team leads:** Nina O’Connor, MD  
*Chief, Hospice and Palliative Care, Chief Medical Officer, Penn Wissahickon Hospice*  
Esther Pak, MD  
*Fellow in Cardiovascular Medicine*

**BREATHE BETTER TOGETHER**
Chronic Obstructive Pulmonary Disease (COPD) is the 3rd leading cause of death in the U.S. and hospitalizations for COPD exacerbations are associated with high morbidity and significant short-term mortality. Nationally, inpatient treatment for COPD exacerbations accounts for approximately $13 billion dollars in direct costs. Approximately 20% of patients admitted to the hospital with COPD are readmitted within 30 days, and it’s estimated that 10-50% of readmissions may be preventable. The Breathe Better Together team is working to develop a multidisciplinary cost-effective transitional care program for COPD patients. The program will include evidence-based interventions targeting high-risk hospitalized patients who are discharged to home.

**Team lead:** Vivek Ahya, MD  
*Vice Chief, Clinical Affairs, Pulmonary, Allergy & Critical Care Division; Associate Professor of Medicine*
AWARDS & ACHIEVEMENT

Quality and Patient Safety Awards
Hospital Acquired Infection Days Free Award
Innovation Accelerator Program
Patient Safety Advocate Awards
100+ National Awards
EXTERNAL AWARDS

ACCREDITATION FOR CARDIOVASCULAR EXCELLENCE (ACE)
Chester County Hospital
Cath/PCI Accreditation

AMERICAN COLLEGE OF CARDIOLOGY (ACC) ACCREDITATION SERVICES
Chester County Hospital
Chest Pain Center Accreditation with Primary PCI & Resuscitation

AMERICAN HEART ASSOCIATION/AMERICAN STROKE ASSOCIATION
The award recognizes these Penn Medicine hospitals’ commitment and success in implementing a higher standard of stroke care by ensuring that stroke patients receive treatment according to nationally accepted standards and recommendations. The American Heart Association has provided the following achievement awards to Penn Medicine:

Chester County Hospital
Get With The Guidelines® – Stroke Silver Plus, Target: Stroke Honor Roll
Mission Lifeline – Silver Award

Hospital of the University of Pennsylvania
Get With The Guidelines® – Stroke Gold Plus Target: Stroke Honor Roll Elite Plus
Get With The Guidelines® – Heart Failure Gold Plus Target: Heart Failure Honor Roll

Lancaster General Health
Get With The Guidelines® – Stroke Gold Plus Target: Stroke Honor Roll Elite Plus

Pennsylvania Hospital
Get With The Guidelines® – Stroke Gold Plus Target: Stroke Honor Roll Elite Plus
Get With The Guidelines® – Heart Failure Silver Plus

Penn Presbyterian Medical Center
Get With The Guidelines® – Stroke Gold Plus Target: Stroke Honor Roll Elite Plus
Get With The Guidelines® – Heart Failure Bronze Target: Heart Failure Honor Roll

NATIONAL 100+
### AWARDS

#### BEACON AWARD FOR EXCELLENCE
The American Association of Critical-Care Nurses awards the Beacon Award for Excellence to critical-care units nationally.

**Hospital of the University of Pennsylvania**
- Critical Care Unit: Silver Award
- Critical Intermediate Care Unit: Silver Award
- Founders 12: Silver Award
- Heart and Vascular ICU: Silver Award
- Intensive Care Nursery: Silver Award
- Medical Intensive Care Unit: Silver Award
- Post-Anesthesia Care Unit: Silver Award
- Rhoades 7: Silver Award
- Rhoads 1: Gold Award
- Rhoades 5 SICU: Silver Award

**Pennsylvania Hospital**
- Critical Care Unit: Silver Award
- Intensive Care Nursery: Silver Award

**Penn Presbyterian Medical Center**
- Medical Intensive Care Unit: Silver Award

**BECKER’S HOSPITAL REVIEW**
Becker’s Hospital Review provides hospital and health system news, best practices and legal guidance specifically for healthcare leaders. According to the review, each of these winners puts patients’ needs first, driven a variety of innovations and set the bar for high-quality care higher.

**Hospital of the University of Pennsylvania**
- Penn Presbyterian
- 100 Great Hospitals in America

**Lancaster General Hospital**
- 100 Great Hospitals and Health Systems with great Orthopedic, Neurosurgery & Spine programs

**Penn Medicine**
- 100 Great Hospitals and Health Systems with Innovation Programs

### U.S. NEWS & WORLD REPORT RANKINGS

Penn Medicine hospitals are ranked among the top hospitals in the country by U.S. News & World Report. The Hospitals of the University of Pennsylvania-Penn Presbyterian (HUP/PPMC) were ranked among the nation’s top hospitals in 2017. **HUP/PPMC is ranked #10** in the nation, in the publication’s prestigious annual “Honor Roll” recognition for excellence in multiple specialties.

Penn Medicine’s hospitals are all recognized as among the best regionally. In the Philadelphia metro area, **HUP/PPMC is ranked #1**, Pennsylvania Hospital (PAH) is ranked **#7** and **Chester County Hospital (CCH) is ranked #5**.

Across the state of Pennsylvania, **HUP/PPMC is ranked #1** with Lancaster General Hospital (LGH) at **#6**, **PAH at #14**, and **CCH at #9**.

#### RANKINGS BY SPECIALTY:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>HUP/PPMC</th>
<th>LGH</th>
<th>PAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology &amp; Heart Surgery</td>
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<td>Diabetes &amp; Endocrinology</td>
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<tr>
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<tr>
<td>Neurology &amp; Neurosurgery</td>
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<td>Pulmonology</td>
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<tr>
<td>Urology</td>
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#### RANKINGS BY COMMON CARE CONDITIONS:

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<th>Condition</th>
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<th>LGH</th>
<th>PAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Aortic Aneurysm Repair</td>
<td></td>
<td>LGH</td>
<td>PAH</td>
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<tr>
<td>Aortic Valve Surgery</td>
<td></td>
<td>LGH</td>
<td></td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease (COPD)</td>
<td>CCH</td>
<td>HUP/PPMC</td>
<td>LGH</td>
</tr>
<tr>
<td>Colon Cancer Surgery</td>
<td></td>
<td></td>
<td>PAH</td>
</tr>
<tr>
<td>Heart Failure</td>
<td></td>
<td>LGH</td>
<td>PAH</td>
</tr>
<tr>
<td>Hip and Knee Replacement</td>
<td></td>
<td>CCH</td>
<td></td>
</tr>
<tr>
<td>Lung Cancer Surgery</td>
<td></td>
<td>HUP/PPMC</td>
<td>LGH</td>
</tr>
</tbody>
</table>
Facilities designated as Blue Distinction Centers® offer “comprehensive care programs for adults, delivered by multidisciplinary teams with subspecialty training, and distinguished clinical expertise in treating these conditions.” Penn Medicine has received designation as a Blue Distinction Center® for the following services:

- **Chester County Hospital**
  - Cardiac Care +
  - Maternity Care +
  - Knee and Hip Replacement +

- **Hospital of the University of Pennsylvania**
  - Bariatric Surgery
  - Complex and Rare Cancers
  - Maternity Care
  - Transplant
  - Spine Surgery +

- **Lancaster General Health**
  - Cardiac Care
  - Maternity Care
  - Knee and Hip Replacement +

- **Pennsylvania Hospital**
  - Bariatric Surgery
  - Maternity Care
  - Spine Surgery +

- **Penn Presbyterian Medical Center**
  - Bariatric Surgery
  - Knee and Hip Replacement +

**CMS**
The Centers for Medicare & Medicaid Services (CMS), is part of the Department of Health and Human Services. CMS created the Five-Star Quality Rating System to help consumers, their families, and caregivers compare hospitals.

- **CCH**: 5 Star
- **HUP**: 4 Star
- **LGH**: 5 Star
- **PAH**: 2 Star
- **PPMC**: 5 Star

**ENA LANTERN AWARD**
**EMERGENCY DEPARTMENT**
The Lantern Award is a recognition award given to emergency departments that exemplify exceptional practice and innovative performance in the core areas of leadership, practice, education, advocacy and research. The award is a visible symbol of an emergency department’s commitment to quality, presence of a healthy work environment, and accomplishment in incorporating evidence-based practice and innovation into emergency care.

**Pennsylvania Hospital**

**HEALTHGRADES**
Healthgrades provides comprehensive online information about physicians and hospitals.

**Chester County Hospital**
- 20 Healthgrades 5-star Ratings
- 6 Healthgrades Quality Awards
- America’s 100 Best Hospital Award
- Distinguished Hospital award for Clinical Excellence

**Hospital of the University of Pennsylvania**
- 2 Healthgrades 5-star Ratings
- 2 Healthgrades Quality Awards
- Outstanding Patient Experience Award

**Lancaster General Health**
- 23 Healthgrades 5-star Ratings
- 11 Healthgrades Quality Awards
- America’s 50 Best Hospital Award
- Distinguished Hospital Award for Clinical Excellence

**Pennsylvania Hospital**
- 7 Healthgrades 5-star Ratings
- 1 Healthgrades Quality Awards

**Penn Presbyterian Medical Center**
- 12 Healthgrades 5-star Ratings
- 4 Healthgrades Quality Awards

**IBM WATSON HEALTH**
100 TOP HOSPITALS FOR 2017
The annual Watson Health 100 Top Hospitals study, formerly the Truven Health Analytics, incorporates independent public data, risk-adjusted and peer-reviewed methodologies, and key performance metrics to arrive at an objective analysis of the best hospitals in the nation. The report divides the group of 100 top hospitals into five subcategories based on size and type.

**Chester County Hospital**
Listed in the Top 20 for midsize community hospitals

**Lancaster General Health**
This is the 11th time LGH has appeared on the list since 1997, an achievement shared by only a handful of hospitals across the nation.

**FORBES AMERICA’S BEST EMPLOYERS**
Each year Forbes works with research firm Statista to measure leading employers around the globe to find out which companies stand above the competition.

**Penn Medicine**
- Ranked #6 in America
INFORMATION WEEK’S ELITE 100

Penn Medicine Information Services Ranks Fourth
For the second year in a row, Penn Medicine has been ranked in the top 5 in InformationWeek Elite 100, an annual list of U.S. businesses from all industries that use innovative and leading information technologies to run their business. Penn Medicine is being recognized for the implementation of Penn Signals, a real-time, big data platform used to generate multiple predictive applications delivered to clinical teams.

THE INTERNATIONAL GERIATRIC FRACTURE SOCIETY (IGFS)

Lancaster General Health
Earned Premier Level Certification in 2017, 11th in the United States to secure the highest level of certification for Geriatric Fracture Care Programs as recognized by the IGFS CORE Certification Program; 13th globally to exceed outcome benchmarks in the management of geriatric fractures.

THE JOINT COMMISSION’S GOLD SEAL OF APPROVAL

The Joint Commission, an independent, not-for-profit organization, accredits more than 20,000 health care organizations and programs in the United States. Penn Medicine has received advanced certification in:

- **Chester County Hospital**
  - Advanced Primary Stroke Center

- **Hospital of the University of Pennsylvania**
  - Advanced Comprehensive Stroke Center
  - Advanced Ventricular Assist Device
  - Advanced Heart Failure

- **Lancaster General Hospital**
  - Advanced Ventricular Assist Device
  - Advanced Primary Stroke Center
  - Hip Fracture
  - Joint Replacement - Hip
  - Joint Replacement - Knee

- **Pennsylvania Hospital**
  - Primary Stroke Center
  - Perinatal Care Certification

- **Penn Presbyterian Medical Center**
  - Advanced Primary Stroke Center
  - Advanced Ventricular Assist Device
  - Joint Replacement - Hip
  - Joint Replacement - Knee

- **Good Shepherd Penn Partners**
  - Specialty Hospital at Rittenhouse

- **Clinical Practices of the University of Pennsylvania**

- **Penn Home Infusion Therapy**
Penn Medicine has been recognized by Hospitals and Health Networks with Most Wired Award. The “Most Wired” survey measures the level of information technology adoption in U.S. hospitals and health systems.

**NATIONAL COMMITTEE FOR QUALITY ASSURANCE**

National Committee for Quality Assurance (NCQA) recognizes practices as a patient-centered medical home. Making primary care more accessible, comprehensive, and coordinated; to improve patient outcomes; and to lower overall healthcare costs. There are 3 levels of NCQA recognition, ranging from Level 1 to Level 3, the highest.

**Clinical Care Associates**

- Level 3 PCMH Recognition
- 26 Primary Care Practices

**Clinical Practices of the University of Pennsylvania**

- Penn Internal Medicine University City
- Edward S. Cooper Internal Medicine
- Penn Center for Primary Care
- Penn Medicine at Righthouse - General Internal Medicine

**Family Medicine Practice**

- Penn Family Care (Department of Family Medicine and Community Health)

**Chester County Hospital**

- Infant Safety Bundle Project

**Lancaster General Health**

- Fall 2017, A | Spring 2018, A

**Pennsylvania Hospital**

- Fall 2017, C | Spring 2018, C

**Penn Presbyterian Medical Center**

- Fall 2017, A | Spring 2018, A

**PENNSYLVANIA PATIENT SAFETY SUMMIT AWARD**

Pennsylvania Patient Safety Authority’s first annual Pennsylvania Patient Safety Summit in State College Recognized Chester County Hospital as one of 10 facilities as a winner of the “I Am Patient Safety” contest.

**MAGNET® AWARD FOR NURSING**

All Penn Medicine Acute Care Facilities

The Chester County Hospital, Hospital of the University of Pennsylvania, Lancaster General Hospital, Penn Presbyterian Medical Center, and Pennsylvania Hospital have all achieved Magnet® status from the American Nurses Credentialing Center, the highest institutional honor awarded for nursing excellence—from the American Nurses Credentialing Center (ANCC).

**LEAPFROG**

The Leapfrog Group works with its employer members to promote easy access to health care information as well as rewards for hospitals that have a proven record of high-quality care. Its Hospital Safety Score® assigns A, B, C, D, and F grades to more than 2,500 U.S. hospitals based on their ability to prevent errors, accidents, injuries, and infections. The Hospital Safety Score is calculated by top patient safety experts, is peer-reviewed, and free to the public.

**Chester County Hospital**

- Fall 2017, A | Spring 2018, A

**Hospital of the University of Pennsylvania**

- Fall 2017, A | Spring 2018, A

**Lancaster General Health**

- Fall 2017, A | Spring 2018, A

**Pennsylvania Hospital**

- Fall 2017, C | Spring 2018, C

**Penn Presbyterian Medical Center**

- Fall 2017, A | Spring 2018, A

**MBSAQIP METABOLIC AND BARIATRIC SURGERY QUALITY IMPROVEMENT PROGRAM**

Accreditation for Center of Excellence

National accreditation for Bariatric Surgery from MBSAQIP

**Chester County Hospital**

- Infant Safety Bundle Project

**Pennsylvania Hospital**

- Fall 2017, A | Spring 2018, A

**TOP DOCTORS PHILADELPHIA MAGAZINE**

Each year, Philadelphia Magazine compiles its “Top Doctors” list of the region’s best physicians. In 2017, 198 Penn physicians were included in the rankings.
TRUVEN HEALTH 100 TOP HOSPITALS FOR 2017
Truven Health Analytics, now part of IBM Watson Health, is one of the industry’s most comprehensive sources of healthcare information. This is the 11th time Lancaster General Hospital has appeared on the list since 1997, an achievement shared by only a handful of hospitals across the nation.

Lancaster General Health

UGO AWARD
Community Wellness Venture for contributions to the People’s Emergency Center in West Philadelphia.

Penn Presbyterian Medical Center

UNICEF/WHO BABY FRIENDLY DESIGNATION
Hospital of the University of Pennsylvania
Lancaster General Health
Pennsylvania Hospital

VPP STAR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) WITH VOLUNTARY PROTECTION PROGRAMS (VPP) STAR STATUS
VPP Star recognizes organizations and employees who have implemented effective safety and health management systems and maintain injury and illness rates below national averages. This prestigious honor includes Lancaster General Health and facilities and services associated with its license including BURLE, Women & Babies Hospital and 14 outpatient centers. VPP recognizes organizations and employees who have implemented effective safety and health management systems and maintain injury and illness rates below national averages.

Lancaster General Health

COC OUTSTANDING ACHIEVEMENT AWARD
The American College of Surgeons Commission on Cancer (CoC) has granted a three-year accreditation and its highest honor, the Outstanding Achievement Award, to the Abramson Cancer Center at Penn Presbyterian Medical Center (PPMC). The Abramson Cancer Center at the Hospital of the University of Pennsylvania and Pennsylvania Hospital also received their three year accreditation with commendation at their last survey. Other Penn Medicine Hospitals’ cancer programs (Lancaster General Hospital and Chester County Hospital) are also Commission on Cancer Accredited and will have their reaccreditation surveys in the future.
The Quality and Patient Safety Award has been a long-standing opportunity for teams to formally document their achievements in quality and patient safety over 12 months. The Award has been designed to acknowledge Penn Medicine teams who have exhibited leadership and innovation in activities that ensure high-quality clinical outcomes, patient satisfaction, patient safety and cost efficiency.
Penn Medicine
Quality and Patient Safety Winner
More Rapid Liberation from Mechanical Ventilation, the Intensive Care Unit and Hospital by Using a Novel ICU Dashboard and Alert Program
Operational
Platelet Transfer: Project-Reducing Expiration and Cost
Honorable Mention
Decreasing the Incidence of Aspiration Pneumonia across the Penn Medicine Health System: A Report from the RAsPI (Reducing Aspiration Pneumonia Initiative) Collaborative
Honorable Mention
Alaris® Guardrails® Infusion Pump Library - Health System Standardization
Special Recognition Award was also given to the PennChart team for Implementation of PennChart (Penn Medicine’s electronic health record)

Chester County Hospital
Quality and Patient Safety Winner
Show Me the Way: Helping Patients and Employees Navigate During Construction
Operational
Decreasing Observation Length of Stay: A Multidisciplinary Approach to the Clinical Decision Unit
Honorable Mention
Partnering with Families Through the Implementation of an Infant Safety Bundle

Clinical Care Associates
Quality and Patient Safety Winner
Implementation of a Standard Office Workflow that Improves Clinical Quality Metrics
Operational
Bala Cynwyd Internal Call Center Project
Honorable Mention
Making Connections: Improving the Referral/Collaboration Process of Co-Located Behavioral Health Service in the Primary Care Setting

Clinical Practices of the University of Pennsylvania
Quality and Patient Safety Winner
Interventional Radiology Virtual Chemo Port Incision Checks
Operational
Nurse-Driven Symptom Management Process for Common RT Side Effects
Honorable Mention
The Oncology Evaluation Center, an APP-run Clinic, Provides Same-Day Evaluation of Oncology Patients in the Ambulatory Setting

Hospital of the University of Pennsylvania
Quality and Patient Safety Winner
Improving Time to Defibrillation in Inpatient Cardiopulmonary Arrest (CPA)
Operational
Virtual Calorimeter: Technology to Improve Enteral Nutrition Delivery in the Critically Ill
Honorable Mention
Creation & Development of the Department of Emergency Medicine’s Resuscitation & Critical Care Unit (ResCCU)
Honorable Mention
Disease specific therapy services intervention to reduce length of stay for stroke

Lancaster General Health
Quality and Patient Safety Winner
Universal Screening for Substance Abuse to Drive Evidence Based Protocols for Medical Treatment and Addiction Intervention
Operational
Lancaster General Microbiology Technology Innovations
Honorable Mention
Walter L Aument Family Health Center Mediset Safety Initiative

Penn Home Care and Hospice Services
Quality and Patient Safety Winner
Penn Home Infusion Therapy: Culture of Safety
Operational
PCAH: Reducing 30-Day Unplanned Rehospitalizations through Interdisciplinary Case Conferences and the Activation of a Rehospitalization Toolkit
Honorable Mention
Careway: Improving Patient Satisfaction Scores Through Our Partnership with CipherHealth

Penn Institute for Rehabilitation Medicine
Quality and Patient Safety Winner
Multifaceted Interdisciplinary Approach to Reducing Falls
Specialty Hospital at Rittenhouse Operational Admission Time Out

Penn Presbyterian Medical Center
Quality and Patient Safety Winner
Development and implementation of an Electronic Health Record-Based Sepsis Alert System
Operational
Bringing Meaning and Life Back to the Critically Ill at Penn Presbyterian Through Sedation Minimization
Honorable Mention
Implementation of Clinical Emergency Debriefing Program

Pennsylvania Hospital
Quality and Patient Safety Winner
Enhanced Recovery After Cardiac Surgery: Initiating an “On Table Extubation” (OTE) program in Patients undergoing isolated Coronary Artery Bypass Grafting, reducing 24 hour postoperative requirements
Operational
Caring for a New Patient Population: Elevating the Practice of Medical Surgical Nurses
Honorable Mention
Enhanced Recovery after Neurosurgery
Honorable Mention
An Inter-Professional Approach to Improving the Patient Experience
# Hospital Acquired Infection Days Free Award

The Penn Medicine “Hospital Acquired Infection (HAI) Days Free Award” was created to recognize units that keep patients free from hospital-acquired infections (CLABSIs, CAUTIs, VAPs). Penn Medicine established four levels of achievement: Bronze (500 days free), Silver (750 days free), Gold (1,000 days free) and Platinum (over 1,500 days free). The Health System has found the awards to be a tremendous source of pride for the units and a great motivator for continued high performance.

## Central Line Blood Stream Infections (CLABSI)

### Platinum
- **Chester County Hospital**
  - Progressive Care Unit
  - 4 Lasko Tower
- **Hospital of the University of Pennsylvania**
  - Rhoads 7
- **Lancaster General Health**
  - 6 East
- **Penn Presbyterian Medical Center**
  - ACE Acute Care for Elders Unit

### Gold
- **Chester County Hospital**
  - West Wing 1
  - 3 Lasko
- **Hospital of the University of Pennsylvania**
  - Ravdin 9
- **Lancaster General Health**
  - 3 East – Pediatrics
  - Pennsylvania Hospital
  - 4 Cathcart
- **Penn Presbyterian Medical Center**
  - Cupp 5 East

### Silver
- **Chester County Hospital**
  - West Wing 1
  - 3 Lasko
  - Neonatal Intensive Care
- **Hospital of the University of Pennsylvania**
  - Ravdin 9
  - Penn Presbyterian Hospital
  - 7 Cathcart/Preston
  - 3 Widener A
- **Penn Presbyterian Medical Center**
  - Cupp 4 East

### Bronze
- **Chester County Hospital**
  - West Wing Ground
  - 4 North
  - Critical Care Unit
- **Hospital of the University of Pennsylvania**
  - Silverstein 12
  - Founders 10
  - Ravdin 6
  - CICU
- **Lancaster General Health**
  - 5 North
  - 7 Lime
  - 5 North
- **Penn Presbyterian Medical Center**
  - NeuroIntensive Care Unit

## Catheter Associated Urinary Tract Infections (CAUTI)

### Central Line Blood Stream Infections (CLABSI)

### Platinum
- **Chester County Hospital**
  - Progressive Care Unit
  - 4 Lasko Tower
- **Hospital of the University of Pennsylvania**
  - Silverstein 8
  - CICU
- **Penn Presbyterian Medical Center**
  - Cupp 3 East

### Gold
- **Chester County Hospital**
  - West Wing 1
  - 3 Lasko
- **Hospital of the University of Pennsylvania**
  - Rhoads 7
  - Silverstein 9
- **Lancaster General Health**
  - 5 North
- **Penn Presbyterian Medical Center**
  - 3 Widener A

### Silver
- **Chester County Hospital**
  - West Wing 1
  - 3 Lasko
  - Neonatal Intensive Care
- **Hospital of the University of Pennsylvania**
  - Founders 12
  - Silverstein 9
- **Lancaster General Health**
  - 5 North
  - Penn Presbyterian Medical Center
  - Cupp 5 East

### Bronze
- **Chester County Hospital**
  - West Wing Ground
  - 4 North
  - Critical Care Unit
- **Hospital of the University of Pennsylvania**
  - Rhoads 7
  - Ravdin 6
  - Silverstein 7
- **Lancaster General Health**
  - 5 North
  - 7 Lime
  - 3 North
  - 4 West
  - 8 Lime
  - 6 North – Intermediate Intensive Care Unit
- **Pennsylvania Hospital**
  - 5 Cathcart
  - Penn Presbyterian Medical Center
  - 3 Shiedt
  - ACE Acute Care for Elders Unit

## Ventilator Associated Pneumonia (VAP)

### Platinum
- **Chester County Hospital**
  - Neonatal Intensive Care
  - Post Critical Care Unit
- **Hospital of the University of Pennsylvania**
  - Silverstein 9 NICU
- **Pennsylvania Hospital**
  - 3 Widener A

### Gold
- **Hospital of the University of Pennsylvania**
  - CCU
- **Lancaster General Health**
  - 6 North – Intermediate Intensive Care Unit
- **Pennsylvania Hospital**
  - 3 Widener B

### Silver
- **Pennsylvania Hospital**
  - 3 Shiedt

### Bronze
Penn Medicine recognizes employees for their contributions to patient safety through our entity-based Patient Safety and Quality Awards. These awards acknowledge staff who go above and beyond to ensure patient safety. Staff refer colleagues who speak out on behalf of patients or take the extra step to prevent harm. A committee of multidisciplinary leaders reviews and votes on winners.

**AWARDS**
- Good Catch Awards
- Patient Safety Advocate
- Patient Safety Innovator awards
- Patient Advocacy Recognition awards
- Annual Patient Safety Fair winners

**PRESENTED TO STAFF AT**
- Clinical Practices of the University of Pennsylvania
- Clinical Care Associates
- Chester County Hospital
- Hospital of the University of Pennsylvania
- Lancaster General Health
- Pennsylvania Hospital
- Penn Presbyterian Medical Center
- Good Shepherd Penn Partners
- Specialty Hospital at Rittenhouse
- Penn Home Care and Hospice Services
THANK YOU

to the many staff and administrators who contributed to this report. Your dedication to promoting patient safety and quality supports the culture of excellence that defines Penn Medicine today.
PENN MEDICINE WELCOMES PRINCETON HEALTH

“The joining together of Princeton Health and Penn Medicine represents an exciting new chapter in Penn Medicine’s growth. Princeton Health has an impressive reputation for providing high-quality care to patients close to home, and innovating in many types of community-based health and wellness initiatives.”

— RALPH W. MULLER, CEO of the University of Pennsylvania Health System