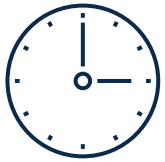
CHARTIS

One outcome, many drivers:

A collaborative approach to mortality improvement

On the Radar webinar series

October 2026



The webinar will start at the top of the hour.

MONTHLY INSIGHTS

Webinar schedule & topics

THE 3RD THURSDAY OF EVERY MONTH:

10AM Pacific, 1PM Eastern

TODAY

One outcome, many drivers: A collaborative approach to mortality improvement

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NOVEMBER

Physical environment: Common findings and causes

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On the Radar

Chartis and Greeley explore practical and future-focused topics in quality, regulatory & medical staff.





UPCOMING WEBINAR

Seconds to contaminate, years to recover

Apr 09, 2026

This session will examine regulatory standards governing high-level disinfection and sterilization, with emphasis on how surveyors interpret and apply those requirements in acute and procedural settings.

› REGISTER NOW

Navigating the Zoom interface

Handouts:

Check the chat function for copies of the slides for note taking and any other handouts.

Questions and comments:

Please participate in the discussion by asking question through the Q&A function during the webinar.

There will also be a survey you will receive immediately after the webinar that will give you an opportunity to ask additional questions or make comments.

Any questions not answered during the webinar will be addressed in a follow-up email or posting.



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Our **integrated lines of business** work alongside the Chartis Centers for AI & Strategic Intelligence to deliver against the last mile necessary to **transform healthcare delivery.**

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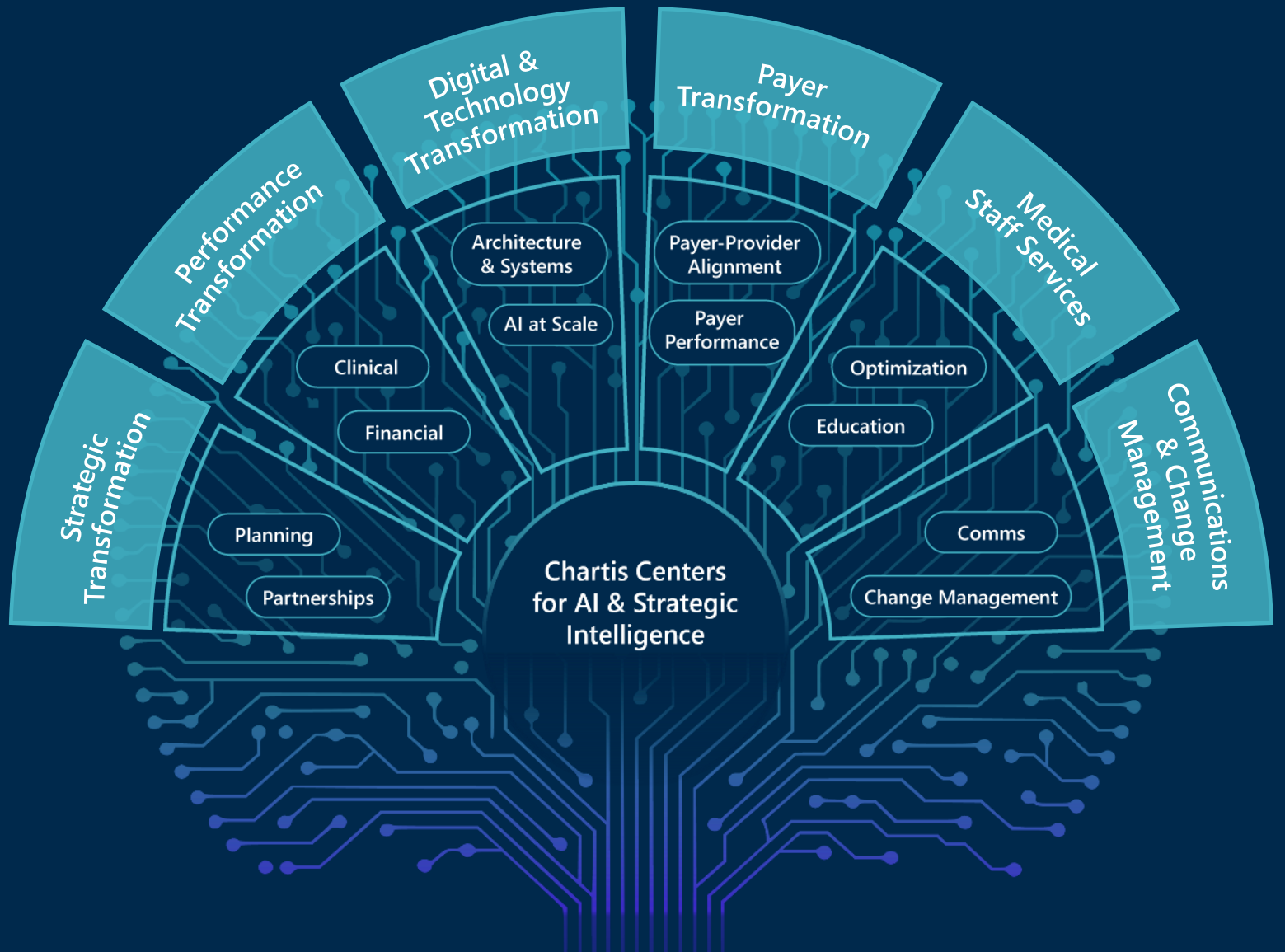
Real healthcare transformation.



High reliability care

UNPARALLELED BREADTH AND DEPTH

Our clients are all striving toward the same goal of providing safe, high-quality care—something that's becoming even more important with the many distractions and disruptions in healthcare today. We help clients achieve their organizational reliability, quality, and safety goals, leading to results in areas that matter most—improved care outcomes, staff engagement, operational stability, and total cost of care, enhanced reputation, and better patient experience.

High Reliability Organization (HRO)

- High reliability organizational design and infrastructure
- Quality, Value, and Performance Improvement
- Quality ratings and rankings optimization
- Patient safety / harm reduction / safety and reliability culture
- Adverse event response and remediation / RCA
- High fidelity measurement / Clinical Documentation Integrity (CDI)
- Care facilitation

Clinical Compliance, Regulatory, and Physical Environment Solutions

- Adverse event response
- Adverse action regulatory response and remediation
- Accrediting body readiness assessment
- Regulatory readiness rehearsal / mock surveys
- Life safety and environment of care assessment
- Policy simplification
- Infection prevention program

Bylaws, Rules and Regulations, and Peer Review

- Bylaws and rules and regulations assessment and redesign
- Peer review assessment and redesign
- Medical staff / medical director structure and governance
- Credentialing, OPPE

External Peer Review

- Physician/advanced practice professional external peer review
- Focused Professional Practice Evaluation (FPPE)
- Ongoing case review in support of OPPE/FPPE
- Medical necessity reviews
- Patient safety/carequality case reviews

MEMBERSHIP AND PROFESSIONAL EDUCATION SERVICES

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About the speaker



Tomas Villanueva, DO, MBA, FACPE, SFHM

Senior Partner, Clinical Transformation, Chartis

- Practicing, dual-boarded internist — 25+ years in clinical and operational leadership
- Inaugural Senior Fellow class, Society of Hospital Medicine (SFHM)
- Fellow, American Association for Physician Leadership (FACPE)
- DO with honors, Nova Southeastern University; MBA, University of Miami

Why this perspective on mortality?

Built hospital medicine from the ground up

Founded three hospital medicine programs in South Florida and served as Chief — the front-line service line most directly accountable for inpatient mortality outcomes.

Established palliative care and hospice where it didn't exist

Launched the first Palliative Care program and Hospice GIP (General Inpatient) unit at Baptist Health South Florida — the services most directly tied to end-of-life care quality and mortality context.

Mortality improvement is a named area of expertise

Operational leadership spans Capacity/Flow, Hospital Medicine Optimization, Utilization Management (including physician advisory), and Mortality Improvement itself.

Full continuum view of serious illness

Clinical background spans hospital medicine, palliative and hospice care, sub-acute/long-term care, and primary care — including building Baptist Health South Florida's first Chief of Primary Care role.

TV1

Today's *agenda*

1. **Why mortality?**
   The strategic case for mortality improvement — how it affects operations, quality, and financial performance

2. **Mortality review**
   Structured, multidisciplinary case review to identify trends and drive improvement

3. **Transfer center**
   Reducing the mortality impact of interhospital transfers through triage, communication, and timing

4. **Hospice and palliative care**
   Early identification and referral — including the Surprise Question and newer screening tools

5. **Clinical documentation and coding**
   Ensuring documentation accurately reflects severity of illness and risk of mortality

6. **Putting it all together**
   A systematic, comprehensive, data-driven approach — and the results it drives

Questions should be posted in the webinar interface throughout the presentation.

We will respond to any unanswered questions in writing following the webinar.

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Why mortality?



Florence Nightingale is credited as one of the first to treat high hospital mortality as evidence of poor care. After returning from the Crimean War in 1856–57, she used pioneering statistical graphics — including the "coxcomb" diagram she invented — to prove that most wartime deaths came from preventable disease, not battle wounds, driving sweeping hospital reforms.

> "It is as criminal to have a mortality of 17, 19, and 20 per thousand … as it would be to take 1,100 men out upon Salisbury Plain and shoot them."
>
> *— Florence Nightingale, 1858*

Mortality affects operations, quality, and financial performance



Operational

- Alignment
- Coordination
- Communication
- Staffing
- Clinician well-being
- Documentation
- Coding



Quality

- Unnecessary harm
- PSI, SSIs, and HACs
- Never events
- Length of stay
- Readmissions



Financial Impact

- Mortality is 22% of the CMS Overall Star Rating, which shapes negotiated payer rates
- Each star gained is associated with roughly a 3.4% lift in Medicare revenue per discharge
- Bottom-quartile HAC performers face a 1% cut to all Medicare payments
- Excess readmissions can reduce Medicare payments by up to 3%
- Higher-rated hospitals attract more patient volume and market share

Source: CMS Hospital Value-Based Purchasing, Hospital-Acquired Condition Reduction, and Hospital Readmissions Reduction program rules (CMS.gov); Tendo analysis of CMS Star Ratings revenue impact, 2026

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Components affecting different mortality outcomes

	Vizient	US News & World Report	CMS	Leapfrog
Inpatient or 30-day mortality	Inpatient	30-day	30-day	Inpatient (PSI-04 in-hospital measure)
Effect of comfort care code (Z51.5)	Risk-adjustment if POA	None	None	None identified in PSI-04 spec
Effect of DNR code (Z66)	Risk-adjustment if POA	None	None	None identified in PSI-04 spec
Effect of discharge into hospice care	Excluded as a hospital death; care remains in data as a hospital survivor	None	Hospice enrollment in the 12 months before admission, or on the first day of an inpatient stay, causes exclusion	Admissions from a hospice facility are excluded; survival to hospice discharge counts as a survivor
Effect of transfers from another facility	All transfers from another facility included	Uses same CMS claims data; cohort defined by admitting hospital	Originating hospital is accountable for 30-day mortality, not the receiving hospital	Transfers out to another acute care facility are excluded from the denominator

POA = present on admission. PSI-04 = AHRQ Patient Safety Indicator 04, Death Rate among Surgical Inpatients with Serious Treatable Complications (failure-to-rescue) — the in-hospital mortality measure underlying Leapfrog's Safety Grade. Sources: CMS QualityNet & AHRQ PSI-04 Technical Specifications (v2024/2025); U.S. News & World Report 2025-2026 Best Hospitals Methodology (RTI International); The Leapfrog Group, Fall 2025 Hospital Safety Grade measures; Vizient Clinical Data Base materials, 2022 (vendor-published).

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Public mortality ratings reflect care from 1.5 to nearly 5 years before publication

Rating system	Most recent data's age at publication	Oldest data in window, age at publication	Data window used
CMS Overall Hospital Star Rating	**~13–18 mo.**	**~4.5–5 years**	Uses a rolling ~3-year window (e.g., the April 2026 refresh used data from July 2021 through March 2025)
US News & World Report Best Hospitals	**~20 months**	**~4.5 years**	Uses the 3 most recent calendar years of Medicare claims (e.g., CY2021–CY2023 for the 2025–2026 rankings)
Leapfrog Hospital Safety Grade	**~22–24 mo.**	**~46 months**	PSI-90/PSI-4 (mortality-related) reporting window is ~24 months (e.g., mid-2022 through mid-2024 for the Spring 2026 grade)

Every major rating system reflects care delivered well before publication — typically 1.5 to 2 years old for the most recent data point, and up to 4–5 years old at the far end of the reporting window. A hospital's current mortality performance, including improvements made this year, will not be visible in any of these public ratings for at least 18–24 months, and sometimes longer.

Sources: CMS Overall Hospital Quality Star Ratings, April 2026 Refresh; Association of Health Care Journalists, Using Hospital Mortality and Readmission Rates in Your Reporting, 2024; U.S. News & World Report, 2025-2026 Best Hospitals Procedures & Conditions Methodology; The Leapfrog Group, Spring 2026 and Fall 2025 Hospital Safety Grade Scoring Methodology; Vastian, What to Do When Your Leapfrog Hospital Safety Grade Drops, 2026.

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Five key drivers of mortality outcomes

Four key drivers of mortality outcomes

TV1

OBSERVED ÷ EXPECTED = MORTALITY RANKING



1

Mortality review

Develop a multidisciplinary peer review process to identify trends affecting mortality at the organization while leveraging educational opportunities to engage palliative care and hospice care.

2

Transfer center

Enhance medical oversight to ensure appropriate placement, optimize triage and transport, and analyze methods to identify high risk for mortality and ensure a communication strategy is in place to effectively communicate to all stakeholders including patient caretakers.

3

Hospice and palliative care

Engage and assess medical staff culture, identify opportunities towards early recognition and intervention, and operationalize advanced care and end-of-life (EOL) discussions and care.

4

Clinical documentation and coding

Ensure that clinical documentation accurately reflects the complexity of care, risk of mortality, and severity of illness for all patients by documenting and coding all relevant patient comorbidities to maximize the capture of risk adjustment variables used in calculating expected mortality.

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Mortality review

Best-practice mortality review measurably reduces preventable deaths

The evidence is clearest for well-resourced programs with leadership backing and a blame-free culture

Without a structured program

- National estimates put preventable hospital deaths at 44,000–98,000/year absent systematic detection (IOM, 1999)
- Ad hoc, single-center review identifies only ~3%–11% of deaths as preventable — far below what structured methodology finds
- A national policy analysis found reporting activity increased, but its actual effect on preventable deaths "remains unclear" without dedicated resources and follow-through
- Similar problems recur across cases when learning isn't consistently shared or acted upon

With a best-practice program

- One NHS trust cut its Risk-Adjusted Mortality Index from 1.45 to under 1.00 within 3 years of a trust-wide structured review, backed by senior leadership
- A 7-year hospital-wide electronic review completed 91% of deaths, consistently flagged ~5.2% as potentially preventable, and drove concrete fixes to communication, end-of-life care, and transfer safety
- A systematic review of the literature found well-run reviews decrease gross mortality rates and effectively engage clinicians in improvement
- Success tracks specific features: leadership backing, dedicated resources, a blame-free culture, and a consistent path from case review to system-level action

Sources: Institute of Medicine, To Err Is Human, 1999; Chief C, et al. Preventable Hospital Mortality: Learning from Retrospective Case Record Review. (South Warwickshire NHS FT); Barnett S, et al. Reflections on Implementing a Hospital-Wide Provider-Based Electronic Inpatient Mortality Review System. BMJ Qual Saf, 2019; Kirkland LL, et al. Informing Best Practice for Conducting Morbidity and Mortality Reviews: A Literature Review. Intern Med J, 2018; Institute for Innovation and Improvement, "Is Anybody 'Learning' from Deaths?", 2023.

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Article

AMERICAN COLLEGE OF Medical Quality

Improving Mortality Through a Multihospital, Collaborative Quality Improvement Project

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Abstract

Improving hospital mortality is a key focus of quality and safety efforts at both the local and national level. Structured interventions can assist organizations in determining whether interventional efforts have led to sustained improvement. The PARiHS framework (Promoting Action on Research Implementation in Health Services) can assist organizations in implementing research into practice. This study investigates the use of the PARiHS framework in implementing a multihospital quality improvement project aimed at improving observed-to-expected mortality as measured by Vizient's Clinical Data Base (CDB). Structured interventions during the study period included mortality reviews, clinical documentation improvement opportunities, educational webinars, training and support in the use of CDB to explore ongoing opportunities for mortality improvement and quarterly reports to each participating hospital's leadership team on their performance. Data were gathered from an improvement collaborative in the Upper Midwest, which comprised 34 hospitals, of which 17 participated in the intervention. Measurement occurred from Quarter 4 2016 through Quarter 3 2020 and consisted of a preintervention, intervention, and postintervention period. Although both participating and nonparticipating hospitals achieved a significant reduction in their mortality observed-to-expected ratio from the preintervention period through the postintervention period, the participating hospitals achieved a greater reduction in their observed-to-expected mortality ratio ($P < 0.0004$). In addition, the participating hospitals achieved a relative 21% improvement in the mortality domain rank of the Vizient Quality & Accountability Study.

Geskey et al. Am J Med Qual. Published ahead of print January 25, 2022.
https://journals.lww.com/ajmqonline/Abstract/9000/Improving_Mortality_Through_a_Multihospital,.99913.aspx

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1

Mortality review

The problems are not bigger than their solutions

Problems

- Inconsistent process
- Limited reviews
- Culture issues with admitting futility
- Culture of reluctance
- No process for early assessment in the ED
- Inadequate access to palliative care and hospice
- Acceptance of futile transfers
- Non-honored patient wishes by families

Solutions

Establishing PI initiatives not peer review

- Mortality assessment tools
- 100% reviews
- Multidisciplinary review teams
- ID system/process not people issues
- Clinician education and not peer review
- Palliative and hospice access
- Reportable to the MEC
- ID requests for transfers on futile cases
- Optimized process for goals discussion and documentation

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Transfer center

Accepting transfers raises measured mortality, mostly reflecting case mix, not care quality

4.6 vs. 2.1 per 100

More than double the risk-adjusted mortality

In a national sample of 33M+ U.S. hospitalizations, transferred patients had risk-adjusted inpatient mortality more than double that of non-transferred patients, plus longer stays and more adverse events.

~17% higher

Case mix inflates the numbers, not just outcomes

A classic academic medical center study found severity-adjusted mortality would appear about 17% higher at hospitals with a typical transfer-patient mix — independent of actual quality of care.

Depends on diagnosis

Transfer helps some conditions, hurts others

Medicare data show transfer is linked to lower mortality odds for AMI, stroke, sepsis, and respiratory disease (specialized care benefit), but higher odds for CHF, pneumonia, renal failure, and several others.

OR 1.16–1.54

Timing is an addressable risk factor

Nighttime and weekend transfers carry significantly higher odds of ICU escalation (OR 1.54) and 30-day mortality (OR 1.16) than weekday daytime transfers — a staffing and throughput issue, not a case-mix one.

THE TAKEAWAY:

CMS mortality measures attribute deaths to the receiving hospital, so accepting complex transfers can lower a hospital's apparent ranking even with excellent care — while declining transfers for conditions that benefit from specialized care can cost lives. The fix is case-mix-aware benchmarking and shared mortality attribution across referral networks, not avoiding transfers.

Sources: Hill AD, et al. Interhospital Facility Transfers in the United States: A Nationwide Outcomes Study. J Patient Saf, 2016 (2009 NIS); Rosenberg AL, et al. Impact of Interhospital Transfers on Outcomes in an Academic Medical Center. Med Care, 1996; Mueller SK, et al. Impact of Patient-Level Characteristics on In-hospital Mortality After Interhospital Transfer. J Gen Intern Med, 2020; Wagner J, et al. Inter-hospital Transfer and Patient Outcomes: A Retrospective Cohort Study. BMJ Qual Saf, 2019 (CMS 2013 claims); Usher M, et al. Interhospital Transfer: Transfer Processes and Patient Outcomes. J Hosp Med, 2020.

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Best-practice interventions target the specific risks that drive transfer-related mortality

~90% adherence

Structured handoffs & accept tools

Physician-driven accept tools and structured ICU transfer instruments cut unnecessary procedures on arrival; pretransport recommendations followed ~90% of the time.

Tied to mortality

Complete transfer documentation

After adjusting for severity, more complete documentation was independently associated with lower in-hospital mortality, fewer adverse events, less duplicated testing.

Centralized triage

Dedicated transfer centers

A command center with trained triage clinicians and standardized algorithms reduces decision variability and enables ongoing quality review.

Tele-consult first

Avoid unneeded transfers

Specialist tele-consultation resolves cases that don't need transfer at all; nighttime/weekend transfers carry higher risk (OR 1.16–1.54), so timing matters too.

Up to 40% eligible

Early palliative & hospice referral for high-mortality-risk patients

Validated ICU trigger tools (e.g., PC-ICU score, AU-ROC 0.85) flag patients at high risk of dying, so they're screened for palliative/hospice needs — not just transfer readiness.

THE HONEST CAVEAT:

These interventions reliably improve care processes, appropriate resource use, and unwanted-intervention avoidance. Direct mortality reduction is best supported for documentation completeness and structured ICU transfer tools. Trigger-based palliative and hospice referral consistently reduces ICU length of stay and non-beneficial life-sustaining treatment but has not been shown to change mortality itself — by design, it targets patients already at very high risk of dying, and its goal is goal-concordant care, not survival.

Sources: Malpass HC, et al. J Crit Care, 2011; Herrigel DJ, et al. J Hosp Med, 2016; Usher M, et al. Defining Best Practices for Interhospital Transfers, 2021; Information Handoff and Outcomes of Critically Ill Patients Transferred Between Hospitals, J Crit Care, 2016; Rosenthal JL, et al. Am J Med Qual, 2018; The Hospitalist, 5 Best Practices and Resources for Interhospital Transfers, 2025; Nelson JE, et al. Choosing and Using Screening Criteria for Palliative Care Consultation in the ICU (IPAL-ICU), Crit Care Med, 2013; Norton SR, et al. Proactive Palliative Care in the Medical ICU. Crit Care Med, 2007; PC-ICU prediction score, eClinicalMedicine, 2025.

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Palliative care

The difference between palliative care and hospice and what they share

Palliative Care

Specialized medical care for people with serious illnesses. It focuses on giving relief from pain, symptoms, and stress. The main goal is to improve the quality of life for both the patient and their family

- Appropriate at any stage of a serious illness
- Delivered alongside curative or life-prolonging treatment
- Provided in the hospital, an outpatient clinic, or at home

In Common

- Focus on comfort and relief from symptoms
- Reduce psychological and family stress
- Address complex physical, psychological, and spiritual needs tied to serious illness
- Delivered by an interdisciplinary care team

Hospice Care

Comfort care for people with a serious, incurable illness who are near the end of life. Instead of trying to cure the disease, a team of experts focuses on stopping pain, easing stress, and supporting both the patient and their family

- Requires a physician-certified prognosis of 6 months or less
- Excludes Medicare coverage for curative treatment of the terminal illness
- Delivered wherever the patient calls home — residence, facility, or inpatient unit

Globally, specialized palliative care teams were projected to reach ~33,700 by 2025, up 32.7% from 2017 — yet still serving only about 14% of patients who need this care.

Sources: National Hospice and Palliative Care Organization (NHPCO); Center to Advance Palliative Care (CAPC); National Institute on Aging, What Are Palliative Care and Hospice Care?, 2026; CAPC, Navigating Payment Models, 2025.

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Palliative care consultation improves clinical operations, quality, and cost



Clinical & Operational

- Linked to substantially lower ICU admissions after discharge, vs. no palliative consult
- Reduces non-beneficial, aggressive end-of-life intervention (33% vs. 54% in a randomized trial)
- Earlier consultation (within 72 hours of admission) is linked to shorter length of stay than later consultation
- Facilitates earlier hospice referral — which, combined with the consult, is the main driver of lower 30-day readmissions



Quality Outcomes

- Improves quality-of-life scores vs. standard care alone (FACT-L 98.0 vs. 91.5, P = .03)
- Cuts depressive symptoms more than 2-fold (16% vs. 38%, P = .01)
- Associated with longer survival in a randomized lung cancer trial (11.6 vs. 8.9 months) despite less aggressive care
- Improves pain control and symptom management
- Increases documentation of patients' resuscitation status and goals-of-care preferences



Financial

- Cuts direct hospital costs by $3,237 per admission on average when consultation occurs within 3 days
- Savings are larger for cancer patients (–$4,251) than noncancer patients (–$2,105)
- Savings scale with comorbidity burden and are largest for liver failure (–$7,574) and kidney failure (–$3,589)
- Reduces short-term medical costs tied to lower post-discharge ICU utilization

Source: CMS Hospital Value-Based Purchasing, Hospital-Acquired Condition Reduction, and Hospital Readmissions Reduction program rules (CMS.gov); Tendo analysis of CMS Star Ratings revenue impact, 2026

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Palliative care changes how patients die—without raising mortality

11.6 vs 8.9

Longer median survival (months) with early palliative care

In a randomized trial of metastatic lung cancer, early palliative care patients lived longer than those on standard care, despite less aggressive end-of-life treatment (33% vs. 54%). HR for death: 1.70 (P = .01).

42% → 15%

Fewer patients died in the hospital

Among patients with advanced GI cancers, the share who died during a hospital admission fell from 42% with usual care to 15% after a palliative care consultation, while deaths at home rose from 31% to 58%.

40% lower

Lower odds of in-hospital death

Among hospitalized patients with comfort-measures-only orders, a specialty palliative care consult was associated with 60% lower adjusted odds of dying in the hospital (aOR 0.4, P < .0001) and higher odds of discharge to hospice.

16% vs 27%

Fewer 30-day readmissions

Among hospitalized patients with hematologic malignancies, palliative care consultation was linked to significantly fewer 30-day readmissions (16% vs. 27%, P = .024) — an effect driven largely by increased hospice referral, not the consult alone.

THE BROADER EVIDENCE BASE AGREES:

Across systematic reviews of palliative care in ICU and non-ICU hospital settings, the intervention consistently reduces length of stay and readmissions and lowers in-hospital mortality, with no evidence of harm found in any study to date.

Sources: Temel JS, Greer JA, Muzikansky A, et al. N Engl J Med. 2010;363(8):733-742; Paris J, Morrison RS. J Oncol Pract. 2014;10(3):174-177; Piscitello G, Durant D, Minnier T, et al. Am Hosp Palliat Care. 2026; Systematic review of hospital palliative care effects on length of stay and in-hospital mortality across ICU and non-ICU settings, Palliative & Supportive Care; DiMartino LD, Weiner BJ, Hanson LC, et al. J Palliat Med. 2018;21(1):62-68; Outcomes of Patients With Hematologic Malignancies Who Received Inpatient Palliative Care Consultation. JCO Oncol Pract. 2021.

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Hospice care

Hospice vs. comfort measures only: advantages and disadvantages by stakeholder

	Hospice		Comfort measures only (CMO)	
	Advantages	**Disadvantages**	**Advantages**	**Disadvantages**
For the patient	■ Equal or longer survival ■ Full interdisciplinary team + up to 13 months bereavement support	■ Requires ≤6-month prognosis and usually waiving curative-treatment coverage ■ Access barriers: high-cost needs, no caregiver, or inability to pay	■ Immediate comfort care, no enrollment delay or transfer ■ No need to formally waive curative-treatment coverage	■ 73%–78% die in the hospital; 94% in the ICU ■ Median order-to-death is ~1 day — little time to prepare
Quality outcomes	■ Fewer in-hospital deaths where enrollment is higher (R = –0.51) ■ Caregiver PTSD ~5x lower than after an ICU death (4.4% vs. 21.1%)	■ Benefit depends on timely referral — many patients enroll too late to gain full benefit ■ Possible positive influence on Quality Scores	■ Dignified, appropriate option when death is expected within hours to days	■ Only 22%–40% ever transition to hospice before death ■ Without a palliative consult, odds of in-hospital death are far higher ■ Negative effect on Quality Scores
For the hospital	■ Saves Medicare $2,561–$6,430/patient ($3.5B nationally) ■ Frees inpatient/ICU beds once patient is discharged	■ Per-diem reimbursement may not cover complex, high-cost patients, discouraging enrollment	■ No referral or transfer logistics required ■ Usable when hospice can't be arranged quickly enough	■ Patient stays on hospital's ~$3,130–$9,000+/day cost structure until death ■ Delayed hospice transitions add avoidable bed-days

Sources: Aldridge Carlson et al., Health Aff. 2012;31(12):2690-2698; Fishman et al., PMC2647686; Connor et al., J Pain Symptom Manage. 2007;33(3):238-246; Wennberg et al., BMJ. 2004;328:607; Kelley et al., Health Aff. 2013;32(3):552-561; Piscitello et al. 2026; Tucker et al. 2025; Wright et al., JAMA 2008; KFF Hospital Expenses per Inpatient Day, 2024.

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Hospice transition outperforms CMO across operations, quality, and cost



Clinical & Operational

- 73%–78% of patients placed on comfort measures only (CMO) die in the hospital rather than transitioning to hospice
- ICU patients on CMO die in-hospital 94% of the time, vs. 53%–59% on subspecialty/medicine units
- Median time from CMO order to death is ~1 day (2.3 hours in the ICU) — a narrow window to arrange hospice
- Patients discharged to hospice from CMO often wait longer than clinically necessary for services to be arranged
- A specialty palliative consult is linked to 2.4x higher odds of discharge to hospice instead of in-hospital death



Quality Outcomes

- A specialty palliative consult (a bridge to hospice) is linked to 60% lower odds of in-hospital death among CMO patients
- Only 22%–40% of CMO patients are ever successfully transitioned to hospice before death
- Hospice/GIP adds a full interdisciplinary team — chaplaincy, social work, and up to 13 months of bereavement support — that CMO alone does not include
- Caregiver PTSD is nearly 5x higher after an ICU death than after a home hospice death (21.1% vs. 4.4%)
- Hospice enrollment is linked to equal or longer patient survival — not shorter



Financial

- Each avoidable day awaiting hospice arrangement carries the average U.S. inpatient cost of ~$3,130/day (~$4,000–$9,000+/day in the ICU)
- Hospice shifts costs to the Medicare per-diem hospice benefit, which fully covers medications, equipment, and staff
- Earlier, longer hospice enrollment is linked to $2,561–$6,430 in Medicare savings per patient vs. matched non-hospice care
- Faster CMO-to-hospice transitions free high-cost ICU and inpatient beds for other patients needing acute care

Sources: Piscitello G, Durant D, Minnier T, et al. Outcomes for Hospitalized Patients with Comfort Measures Only Orders. Am J Hosp Palliat Care. 2026 (n=6,789, four U.S. hospitals, 2022-2024); Tucker M, Hovern D, Liantonio J, et al. End of Life Outcomes Following Comfort Care Orders: A Single Center Experience. Am J Hosp Palliat Care. 2025 (n=541); Wright AA, et al. JAMA. 2008 (caregiver PTSD by place of death); Connor SR, et al. J Pain Symptom Manage. 2007;33(3):238-246; Kelley AS, et al. Health Aff. 2013;32(3):552-561; KFF State Health Facts, Hospital Expenses per Adjusted Inpatient Day, 2024.

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Hospice use strengthens clinical operations, quality, and financial performance



Clinical & Operational

- Cuts hospital admissions by ~79% in the 6 months after enrollment
- Cuts ICU admissions by ~78% over the same period
- Reduces emergency department visits by ~35%
- Frees inpatient and ICU capacity for higher-acuity patients
- Shifts site of care to the home, aligned with patient preference
- Adds interdisciplinary support: nursing, chaplaincy, social work



Quality Outcomes

- Associated with equal or longer survival — no diagnosis group shows shorter survival
- Linked to fewer in-hospital deaths across hospitals (R = –0.51)
- Improves pain control and symptom management
- Raises patient and family satisfaction scores
- Cuts caregiver PTSD nearly 5-fold vs. an ICU death (4.4% vs. 21.1%)
- Increases concordance with patients' end-of-life care preferences



Financial

- Saves Medicare $2,561–$6,430 per patient, depending on enrollment length
- Lowers total Medicare spending for hospice users by $3.5B nationally
- Cuts family out-of-pocket costs by up to $464 in the final 3 months
- Reduces total family healthcare spending by up to $6,426 in the final month
- Avoids the cost of non-beneficial aggressive intervention at end of life

Sources: Kelley AS, et al. Health Aff. 2013;32(3):552-561; Aldridge MD, et al. Health Serv Res. 2021;56(4):773-783; National Alliance for Care at Home / NORC, Value of Hospice in Medicare Report, 2026; Wennberg JE, et al. BMJ. 2004;328(7440):607; Connor SR, et al. J Pain Symptom Manage. 2007;33(3):238-246; Wright AA, et al. JAMA. 2008 (caregiver PTSD by place of death); hospice enrollment and acute service use in advanced heart failure, PMC5373665.

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Clinical documentation

Clinical documentation integrity shapes reported mortality outcomes — without changing actual care

0.45 improvement

One academic medical center's coding initiative

At Ohio State's Wexner Medical Center, a documentation-improvement initiative reviewed 70 codes over 8 months and improved acute care surgery's observed-to-expected mortality ratio by 0.45 — the largest gain of four high-acuity service lines reviewed.

–44%

A children's hospital cut its O:E ratio nearly in half

A study of 206 patients found that implementing a clinical documentation integrity program reduced the observed-to-expected mortality ratio by 44%, driven by better capture of comorbidities in the sickest patients.

Expected, not observed

CDI changes the denominator, not patient survival

As the OSU study states plainly: "the observed value is not changed by proper documentation of high-acuity patients." CDI corrects the expected mortality estimate to reflect true severity — it doesn't change who lives or dies.

800+ hospitals

The stakes are rankings, ratings, and payment

Vizient's risk-adjustment model alone is used by 800+ academic and community hospitals for benchmarking; CMS value-based payments, U.S. News, and Leapfrog rankings rely on similarly documentation-dependent risk models.

THE HONEST TAKEAWAY:

Appropriate CDI doesn't change how many patients survive — it changes whether a hospital's true case-mix severity is accurately reflected in the "expected" side of the mortality ratio. Underdocumented comorbidities understate expected mortality, making O:E ratios, public rankings, and value-based payments look worse than the actual quality of care warrants.

Sources: Horwood CR, Latimer T, Powers CJ, et al. Improving the Mortality Index by Capturing Patient Acuity Through Interprofessional Real-Time Documentation Improvement in a Single Hospital System. Surgery, 2018 (Ohio State Wexner Medical Center); Impact of a Clinical Documentation Integrity Program on Severity of Illness of Expired Patients (n=206); Aghajan Y, et al. Optimizing Neuroscience Mortality: A Collaborative Approach to Documentation Improvement. Neurol Clin Pract, 2024; ACDIS, Risk-Based CDI: A Holistic Approach to Record Review, 2021; Chartis, Four Essentials to Optimize CDI for Better Quality Outcomes, 2024.

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REM must reflect every patient — not just those who died

Relative Expected Mortality (REM) is a **population-level statistic** — the risk model's average predicted mortality across every patient in a cohort, calculated from documented diagnoses, complications, and POA status.

It is the "expected" half of the Observed:Expected ratio used in CMS, Vizient, Leapfrog, and U.S. News rankings alike — which is exactly why it can't be accurate if only some patients are fully documented.

✗ Only decedents documented thoroughly

A biased, incomplete picture

If only the patients who ultimately died get fully documented, the risk model is trained on a skewed slice of the population.

The many survivors' true severity — including the ones who were just as sick but recovered — never gets captured.

Result: population-level REM is understated, making the hospital's O:E ratio look worse than actual quality warrants.

✓ Every patient documented thoroughly

An accurate, representative picture

Comorbidities, complications, and POA status are captured consistently across every patient — survivors and non-survivors alike.

The risk model reflects the hospital's true case mix, not just its sickest outcomes.

Result: REM accurately represents the whole population, keeping the O:E ratio — and the rankings built on it — fair.

REM is a population statistic — it can only be accurate if documentation is complete for every patient, every time.

REM methodology per Vizient Clinical Data Base risk-adjustment model. See also: Horwood CR, et al. Surgery, 2018 (Ohio State Wexner Medical Center); ACDIS, Risk-Based CDI, 2021.

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Putting it all together

TV1

One outcome. Five drivers. One disciplined approach.

Mortality improvement isn't a single initiative — it's a system of structured review, timely action, and accurate documentation that compounds across every driver.

1

Mortality review

Structured review changes outcomes

2

Transfer center

Coordination protects high-risk transfers

3

Hospice & palliative care

Earlier referral, better-aligned care

4

Clinical documentation & coding

Accuracy makes performance fair

The result: care that is safer, measurement that is fairer, and performance that reflects the truth of what your teams are already doing well.

Let's build this system together.

Questions

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Thank *you*

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