Update on Hospital Mortality Measures and Their Implications

J. Brian Cassel, PhD
Palliative Care Research Director
Virginia Commonwealth University
Brian.Cassel@vcuhealth.org

With thanks to Danielle Noreika (VCU), Laura Hanson (UNC), Diane Meier (CAPC)

February 2020

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Join us for upcoming CAPC events

Upcoming Webinars

- **The Positive Influence of Palliative Care on Organizational and Team Wellness**

  February 25 at 12:30pm ET

- **Addressing the Changing Hospice Landscape** (Open to non-members)

  March 16 at 12:30pm ET

Upcoming Virtual Office Hours

- **Marketing to Increase Referrals**

  February 13 at 12pm ET

- **Business Planning Using the CAPC Impact Calculator**

  February 13 at 2pm ET

Update on Hospital Mortality Measures and Their Implications

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FAQs

- “Consultants just told our hospital executives that inpatient hospice will reduce mortality and improve our Medicare reimbursement, and star ratings – is that true?”
- “Does palliative care involvement remove a deceased patient from hospital mortality scores?”
- “Does it matter if DNR code or comfort care goals are documented as present-on-admission?”
- “We are overwhelmed with innumerable measures of hospital re-admissions and mortality – which ones do we really need to pay attention to?!?”

Goals

- Review core concepts in measuring hospital mortality
- Clarify what is measured by whom and how
- Offer a multi-pronged strategy for leveraging these measures to enhance care for patients and families with life-limiting illnesses
- Update palliative care and hospice field on this topic since Cassel, Jones, Meier et al, “Hospital mortality rates: How is palliative care taken into account?” Journal of Pain and Symptom Management 2010 40(6): 914-925.

Inpatient versus 30-day mortality

Inpatient mortality

How many hospitalized patients die while hospitalized?

Death during acute admission (DRG)

30-day mortality

How many hospitalized patients die within 30 days of admission?

Death in any setting or payment scenario

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Risk-adjustment

- Evaluating hospital quality: Does hospital A have higher, same, or lower mortality compared to national average, **while controlling for severity of illness of the patients**?
- Why? Because the hospitals will have different proportions of the sickest patients in any given month, quarter, year
- Mostly done using ICD-10 codes +/- demographics

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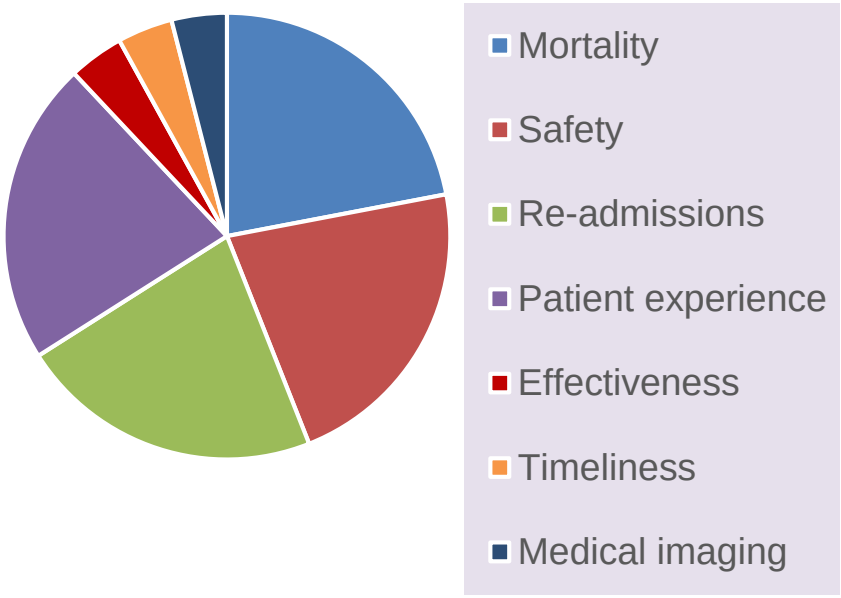
"Observed versus expected"

- Nationally, 3% of hospitalized patients with _____ condition die in hospital
- Nationally, survival of hospital stay for _____ is related to 20 variables
- Hospital A had 100 patients
  - 3 died.
  - Given the 100 patients' variables, 2 were expected to have died.
  - Observed : Expected ratio is 3/2 = 1.5
- Hospital B had 200 patients
  - 6 died.
  - Given the 200 patients' variables, 8 were expected to have died.
  - Observed : Expected ratio is 6/8 = 0.75
- In both cases 3% died but their O:E ratios are very different.
- An O:E of 1.0 would indicate as many patients died as expected.

Why health system executives attend to mortality scores

- CMS includes 30-day mortality in Value-Based Purchasing which affects inpatient reimbursement
- CMS includes 30-day mortality in star ratings which are visible to the public
- US News & World Report and other entities include 30-day mortality and/or in-hospital mortality in their scores which are visible to the public
- Benchmarking entities such as Vizient and Premier calculate in-hospital mortality and the scores are visible to all members

CMS Star ratings: 7 domains



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CMS: 30-day mortality affects reimbursement

Three 30-day mortality measures are part of the Value-Based Purchasing score.

- Deaths are all-cause, all-setting within 30 days of admission
- Risk-adjustment takes patient-level and hospital-level characteristics into account
- AMI, HF, Pneumonia since FFY2014. Adding COPD in FFY2021, CABG in FFY2022.
- Transfers: originating hospital is on the hook for 30-day mortality, not receiving hospital
- Hospice in the 12 months prior to the index admission, or on the first day of an acute admission, is cause for exclusion.
- The mortality measures comprise most or all of the “Clinical care domain” which is 25% of the total VBP score
- CMS does not exclude cases with comfort care (Z515 ICD10 code) or DNR (Z66)

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Source: https://www.qualitynet.org/ – search for hospital outcome measures methodology

CMS: 30-day re-admissions affect reimbursement

The Re-admission Reduction Program also affects inpatient reimbursement.

- Re-admissions are all-cause within 30 days of discharge
- Risk-adjustment takes patient-level and hospital-level characteristics into account
- AMI, HF, Pneumonia since FFY2013, COPD & elective hip/knee since 2015 and CABG since 2017
- Must be alive at discharge and continue Medicare FFS for the following 30 days
- Transfers: receiving hospital is on the hook for 30-day re-admissions, not originating hospital
- Hospice enrollment before index admission is not cause for exclusion
- Hospice after index admission is not mentioned as a specific cause for exclusion
- Hospital's proportion of Medicaid-eligible patients factored into RRP penalty
- CMS does not exclude cases with comfort care (Z515 ICD10 code) or DNR (Z66)

Source: https://www.qualitynet.org/ – search for hospital outcome measures methodology
https://khn.org/news/medicare-eases-readmissions-penalties-against-safety-net-hospitals/

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CMS public reporting of star ratings and specific measures

- Publicly reported Mortality measures include
  - The three 30-day mortality metrics in the VBP (HF, MI, PN)
  - Plus 30-day mortality metrics for COPD, Stroke and CABG
  - Plus an inpatient mortality measure: surgical inpatients with serious treatable complications (e.g., sepsis, DVT/PE, shock/cardiac arrest, GI hemorrhage, etc.)
- Publicly reported Re-admission measures include
  - The conditions & procedures in the RRP (HF, MI, PN, COPD, CABG, elective hip or knee)
  - Plus 30-day re-admission for Stroke
  - Plus a global measure of hospital-wide (all conditions & procedures) re-admission
- Publicly reported Re-admission scores do not factor in % Medicaid-eligible patients

Sources:
https://www.medicare.gov/hospitalcompare/Data/Measure-groups.html
https://www.medicare.gov/hospitalcompare/Data/Data-Updated.html#
https://www.qualitynet.org
https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V41/TechSpecs/PSI%2004%20Death%20among%20Surgical%20Inpatients.pdf

US News & World Report's "Best Hospitals": 30-day Mortality

- USN&WR ranks hospitals using Medicare FFS data, AHA data, and reputation surveys
- 30-day mortality is a significant component (37.5%) of the overall score
- All transfers into a hospital from another hospital are excluded
- Scores are adjusted for risk (severity of illness) and for proportion with Medicaid (dual eligible)
- Neither hospice nor comfort care cases are excluded
- In-hospital mortality has not been a metric in Best Hospitals since 2007
- Hospitals do get credit for having palliative care and/or hospice services (based on AHA annual survey), each of which is one of 7 to 9 "patient services" for each of the 12 specialty ratings. "Patient services" contribute to the Structure score and comprise <4% of the total score.

Sources: https://media.beam.usnews.com/da/5b/7646c0e744aea61f55e5aa816870/190709-bh-procedures-conditions-methodology-2019.pdf;
https://media.beam.usnews.com/8c/7b/6e1535d141bb9329e23413577d99/190709-bh-methodology-report-2019.pdf;

Inpatient versus 30-day mortality

Inpatient mortality

More easily gamed than 30-day mortality

Used by Healthgrades, IBM-Watson-Truven, Vizient, Premier

30-day mortality

Better measure of hospital care

Used by CMS, USN&WR, Healthgrades, IBM-Watson-Truven

Sources: CMS: https://www.qualitynet.org/
Premier & Vizient: Personal communications.
Healthgrades: https://www.healthgrades.com/quality/2018-methodology-mortality-and-complications-outcomes and personal communications.
IBM Watson/Truven: http://truvenhealth.com/Portals/0/assets/100topAssets/100-Top-Hospitals-Study.pdf

Comfort care code (Z515) and DNR code (Z66)

- No entity (CMS or other) collects billing/administrative data on actual encounters with specialist palliative care teams.
- The Z515 “palliative care encounter” ICD10 code is best thought of as a comfort care code, because it refers to the goal or intent of hospitalization, not necessarily the involvement of palliative care specialists. Referring to this as the comfort care code avoids confusion.
- Keep in mind that these entities are using hospital billing data, not physician billing data.

Continued on next slide

Sources: Premier & Vizient: Personal communications.
Healthgrades: https://www.healthgrades.com/quality/2018-methodology-mortality-and-complications-outcomes and personal communications.
IBM Watson/Truven: http://truvenhealth.com/Portals/0/assets/100topAssets/100-Top-Hospitals-Study.pdf

Comfort care code (Z515) and DNR code (Z66) – continued

- CMS and US News & World Report (Medicare data)
  - Cases with Z515 (comfort care) or Z66 (DNR) codes are not excluded.
  - It is not clear whether these codes are evaluated in risk-adjustment.
- Healthgrades hospital ratings (Medicare data)
  - Uses a mixture of inpatient and 30-day mortality computations.
  - The comfort care (Z515) code is a factor in risk-adjustment for computation of mortality for 16 conditions, regardless of whether the code is flagged as Present On Admission (POA).
  - Similarly DNR status (Z66) is not basis for exclusion, but is involved in risk-adjustment for mortality computations for 12 conditions, regardless of whether the code is flagged as POA.

Continued on next slide

Sources: Premier & Vizient: Personal communications.
Healthgrades: https://www.healthgrades.com/quality/2018-methodology-mortality-and-complications-outcomes and personal communications.
IBM Watson/Truven: http://truvenhealth.com/Portals/0/assets/100topAssets/100-Top-Hospitals-Study.pdf

Comfort care code (Z515) and DNR code (Z66) – continued

- IBM Watson / Truven “100 top hospitals” (Medicare data)
  - Uses a mixture of in-hospital and 30-day mortality computations.
  - Cases with the Z515 comfort care code are not excluded; that variable is included in the risk-adjustment process regardless of POA flag.
  - In contrast, cases with the Z66 DNR code are excluded if that code is flagged as POA.
- Premier and Vizient benchmarking (hospital billing/administrative data)
  - Premier and Vizient measure inpatient mortality (during acute hospitalization) only.
  - Cases with the Z515 comfort care code or Z66 DNR code are not excluded; the presence of the comfort care (Z515) and DNR (Z66) ICD-10 codes is included in some risk-adjustment models if they are flagged as present-on-admission (POA). When present, they have a large weight in the risk-adjustment for inpatient mortality.

Sources: Premier & Vizient: Personal communications.
Healthgrades: https://www.healthgrades.com/quality/2018-methodology-mortality-and-complications-outcomes and personal communications.
IBM Watson/Truven: http://truvenhealth.com/Portals/0/assets/100topAssets/100-Top-Hospitals-Study.pdf

Impact of discharging patients from hospital to hospice

Inpatient mortality

- Patient survives acute admission (even if physically in same bed in GIP hospice)
- Hospital stay is still in analysis but not as an observed death

30-day mortality

- No impact for CMS unless happens on 1st day of hospital stay
- Healthgrades removes patients discharged to hospice from whole analysis for 13 conditions

Sources:https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/acutepaymtsysfctsht.pdf
http://www.mmplusinc.com/news-articles/item/inpatient-faq-may-2018
Healthgrades: https://www.healthgrades.com/quality/2018-methodology-mortality-and-complications-outcomes and personal communications.

Inpatient mortality and hospice

- Nationally, 3% of hospitalized patients with _____ condition die in hospital
- Nationally, survival of hospital stay for _____ is related to 20 variables
- Hospital C had 300 patients
  - 6 died in acute stay, 3 others discharged to GIP hospice in swing beds.
  - Given the 300 patients' variables, 10 were expected to have died.
  - Observed : Expected ratio is 6/10 = 0.6
  - 2% of patients died, and another 1% transitioned to hospice.

Summary table

	CMS	US News & World Report	HealthGrades	IBM Watson / Truven	Premier or Vizient
Inpatient or 30-day mortality	30-day	30-day	Both	Both	Inpatient
Effect of comfort care code (Z515)	None	None	Risk-adjustment regardless of POA, for 16 conditions	Risk-adjustment regardless of POA	Risk-adjustment if POA
Effect of DNR code (Z66)	None	None	Risk-adjustment regardless of POA, for 12 conditions	Risk-adjustment if POA	Risk-adjustment if POA
Effect of discharge into hospice care	None unless on 1st day of hospital stay	None	Patients excluded for 13 medical conditions	None	Not a hospital death; case remains in data as a hospital survivor

POA = Present On Admission

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Summary narrative

- Comfort care intent (as denoted via Z515 comfort care code in hospital billing) does not affect evaluation of 30-day mortality for Medicare's value-based purchasing or star ratings, or US News & World Reporting rankings.
- Comfort care intent does not exclude any deaths, but may improve the risk-adjustment for HealthGrades, IBM Watson/Truven, Premier, or Vizient mortality calculation; for some of those, this is only if the Z515 code was denoted as "present on admission" (POA).
- Enrolling hospitalized patients into hospice care does exclude them from some mortality calculations when evaluated by HealthGrades, IBM Watson/Truven, Premier or Vizient, but doesn't affect CMS or USN&WR 30-day mortality scores.
- DNR status (Z66 code) factors into some risk-adjustment but this may depend on whether it was flagged as "present on admission" (POA).

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Two other notes on CMS and hospice

- Hospital reimbursement for the acute stay may be affected by discharge to any subacute care setting (e.g., SNF, rehab, hospice), if the length of stay (LOS) for the acute stay is short: Medicare prorates the reimbursement for *some* DRGs, *if* the patient is transferred to a subacute setting *and* the LOS is at least 1 day less than the mean national LOS for that DRG. As of Oct 2018, Medicare's post-acute transfer policy (PACT) includes hospice among these subacute settings.
- If a patient was enrolled in hospice at any point in the 12 months prior to an acute hospitalization, CMS will remove them from 30-day mortality scoring.

Returning to the FAQs

FAQ	Answer
➔ "Consultants just told our hospital executives that inpatient hospice will reduce mortality and improve our Medicare reimbursement and star ratings – is that true?"	➔ Inpatient yes, 30-day no ➔ No
➔ "Does palliative care involvement remove a deceased patient from hospital mortality scores?"	➔ No
➔ "Does it matter if DNR code or comfort care goals are documented as present-on-admission?"	➔ Yes for some entities
➔ "We are overwhelmed with innumerable measures of hospital re-admissions and mortality – which ones do we really need to pay attention to?!?"	➔ Ask your stakeholders

Cross-cutting strategies

- Excellent documentation and coding will help almost all risk-adjusted measures of mortality and re-admissions
- It may seem silly to document everything for a dying patient admitted for comfort care – but there is value in stating every condition the patient has such as malnutrition and delirium, and noting what was already present on admission
- Systematic efforts at serious illness conversations, offering palliative care across settings, and offering home hospice will help to reduce end-of-life hospitalizations and re-hospitalizations
- Portraying palliative care – even a palliative care unit – as a bridge rather than a destination may help to reduce length of stay and hospital deaths for palliative care patients

What can a palliative care leader do?

- Know what your health system is most concerned about
  - Know thy stakeholders!
  - What payers or ratings entities do your execs pay the most attention to?
  - What scores or problems keep them up at night?
- Know your health system's status on those measures
- Debunk myths but don't get hung up on that
- Participate in quality improvement efforts
- Offer cross-cutting solutions that can hit multiple problems or ratings
- Encourage programmatic, systematic efforts that will have most benefit for patients and families

What should a hospital do?

Programmatically

- ➔ Reduce end-of-life admissions through early involvement of office & home-based palliative care
- ➔ Engage hospital palliative care early in an admission for relevant patients
- ➔ Offer hospice enrollment (inpatient “GIP” hospice) for hospitalized patients where appropriate

Documentation and coding

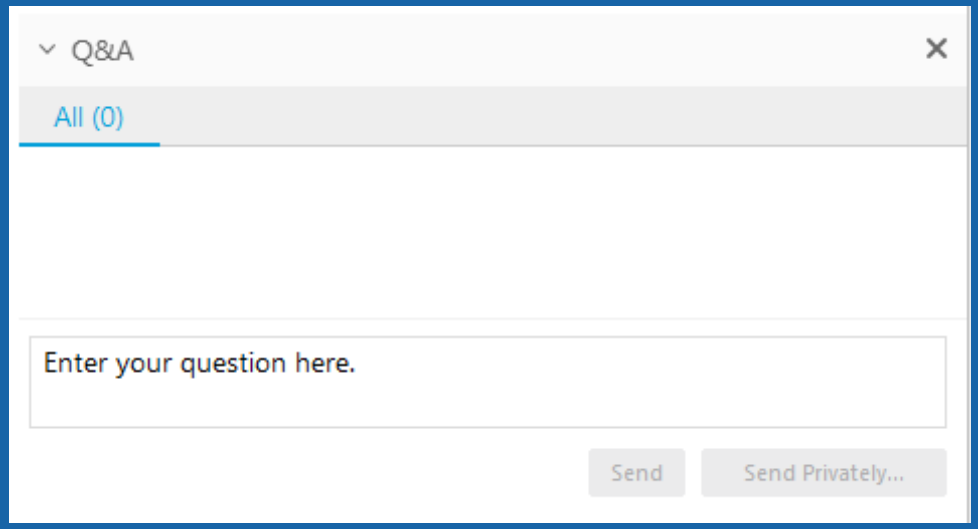
- ➔ For patients admitted to hospital with POLST in place or DNR or comfort care intent at admission, hospital billing should use codes Z66 or Z515 and the “present on admission” flag as appropriate.
- ➔ Review other documentation and coding practices to ensure that severity of illness is captured.

Community strategies

- ➔ Partner with hospices to ensure your community has options for facility-based hospice

How to Submit Questions

Please type your question into the questions pane on your WebEx control panel.



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