Hospital Readmission Reduction Program (HRRP) Revisited

Outcomes, Risks and Benefits

2022 Annual Conference

CMSA

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Introduction

- There has been a focus on readmission reduction and prevention in acute care facilities since 2009. Potentially preventable readmissions have been related to failed or ineffective discharge planning especially for patients with chronic, high-focus diseases such as congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD).
- With over 10 years of work invested into the Hospital Readmission Reduction Program, it is an excellent opportunity to review the outcomes, risks and benefits identified through the myriad of literature and evidence-based practices related to readmission reduction activities. This presentation will explore the history of the HRRP, current practices to reduce readmissions and explore the risks and benefits to patients and the healthcare system.

Learning Outcomes

1. Learners will be able to identify key events in the history of the Hospital Readmission Reduction Program (HRRP) and reasons for focus on readmissions.
2. Learners will explore readmission reduction outcomes and evidence-based practices surrounding readmissions from 2009-current.
3. Learners will examine topics and concepts associated with the risks and benefits identified in the literature related to HRRP initiatives.

The Readmissions Reduction Journey

Review

- Hospital Readmission Reduction Program (HRRP)
  - The Hospital Readmissions Reduction Program (HRRP) is a Medicare value-based purchasing program that encourages hospitals to improve communication and care coordination to better engage patients and caregivers in discharge plans and, in turn, reduce avoidable readmissions.
  - The program supports the national goal of improving health care for Americans by linking payment to the quality of hospital care.

What is a "Readmission"?

- A hospital readmission is defined as when a patient who had been discharged from a hospital is admitted again to any acute healthcare facility within a specified time frame.
- The original hospital stay is referred to as the "index admission" and the subsequent hospital stay is defined as the "readmission."
- Most common time frames for research purposes:
  - 30-day
  - 90-day
  - 1-year readmissions

Conditions/Procedures

- CMS includes the following six condition or procedure-specific 30-day risk-standardized unplanned readmission measures in the program:
- Acute myocardial infarction (AMI)
- Chronic obstructive pulmonary disease (COPD)
- Heart failure (HF)
- Pneumonia
- Coronary artery bypass graft (CABG) surgery
- Elective primary total hip arthroplasty and/or total knee arthroplasty (THA/TKA)

Why Readmissions?

Quality of care

- Readmissions within 30 days of discharge for same/ similar diagnosis are deemed "potentially avoidable admissions"
- Perception of "failure of discharge plan"
- In addition to the financial risk, readmissions are publicly reported as quality metric and impact the facility's Medicare Star rating

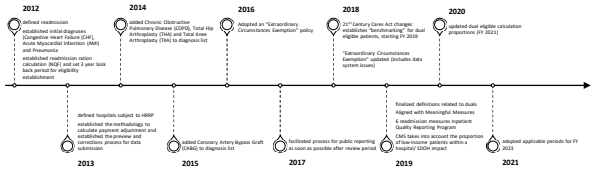
Financial implications

- Penalties are levied on facilities with higher than average rates of readmission
- Admissions identified as "readmissions" will not be reimbursed

Revisions Timeline

- 2012:
  - defined readmission
  - established initial diagnoses (Congestive Heart Failure (CHF), Acute Myocardial Infarction (AMI) and Pneumonia
  - established readmission ration calculation (NQF) and set 3 year look back period for eligibility establishment
- 2013:
  - defined hospitals subject to HRRP
  - established the methodology to calculate payment adjustment and established the preview and corrections process for data submission
- 2014:
  - added Chronic Obstructive Pulmonary Disease (COPD), Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA) to diagnosis list
- 2015:
  - added Coronary Artery Bypass Graft (CABG) to diagnosis list
- 2016:
  - Adopted an "Extraordinary Circumstances Exemption" policy
- 2017:
  - facilitated process for public reporting as soon as possible after review period
- 2018:
  - 21st Century Cares Act changes: establishes "benchmarking" for dual eligible patients, starting FY 2019
  - "Extraordinary Circumstances Exemption" updated (includes data system issues)
- 2019:
  - finalized definitions (dual-eligible, dual proportion and applicable period of dual eligibility).
  - Aligned with Meaningful Measures and beginning FY 2020, the 6 readmission measures will be removed from the Hospital Inpatient Quality Reporting Program
  - Starting in FY2019, CMS takes into account the proportion of low-income patients within a hospital, since they are more likely to be readmitted due to other socio-economic factors.
- 2020:
  - updated dual eligible calculation proportions (FY 2021)
- 2021:
  - adopted applicable periods for FY 2023

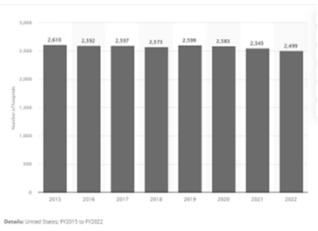
Timeline



Periods and Penalties

In FY2022, from the 3,046 hospitals Medicare assessed for hospital readmissions, 2,499 (or 82 %) were penalized for readmission rates exceeding 30-day risk-standardized readmission rates.

This is only slightly lower than in FY 2015 where 2,610 hospitals were penalized.



Details: United States; FY2015 to FY2022

Outcomes 2009- present

Statistics 2013

- 1 of 5 (19.8%) Medicare patients are readmitted within 30 days
- 34% readmitted within 90 days
- 61% discharged with medical conditions were rehospitalized/died within 1 year
- 51.5% discharged with surgical conditions were rehospitalized/died within 1 year
- 50.2% did not have a PCP visit within the immediate 30-day post hospitalization period

Statistics 2021

- 15.5% Medicare patients are readmitted within 30 days
- 30% readmitted within 90 days
- 39.7% of readmitted patients die within 1 year of the 1st readmission
- 35% of patients hospitalized with pneumonia/readmitted died within 1 year of discharge.
- 48.8% did not have a PCP visit within the immediate 30-day post hospitalization period

National Health Statistics Report, 2022

Statistics: Overall

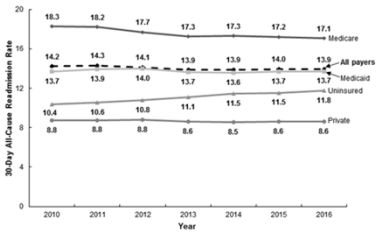
Medicare All Cause Readmissions, latest data release (2017-2019 reporting period) demonstrates a 15.5 % readmission rate.

2010: 18.3%

2014: 17.3%

2019: 15.5%

Total decrease: 2.8% reduction 2010-2019



Impact of Readmissions

Why the Focus?

Acute hospital readmissions

Costs associated:
$26 billion in Medicare spending in 2015.
$29 billion in Medicare spending in 2019.

According to CMS, the population of people diagnosed with chronic medical conditions (current: 133M) is predicted to rise to 170 million by the year 2030 (American Hospital Association, 2021).

FY 2019: 82% of hospitals in HRRP received readmission penalties.

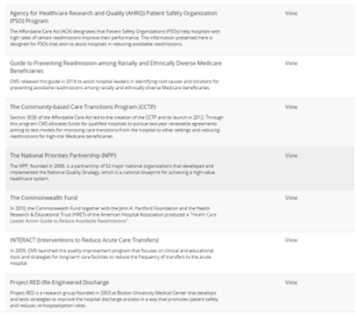
EXAMPLES: Congestive Heart Failure (CHF) & Chronic Obstructive Pulmonary Disease (COPD)

CHF
2012 Readmission Rate: 34.0%
2019 Readmission Rate: 21.9%
•2012: $65 billion
•2020: $43.6 billion
•2030 projected: $69.7 billion

COPD
2012 Readmission Rate: 27.0%
2019 Readmission Rate: 19.7%
2010: $32.1 Billion
2020: $49.0 Billion
52.6% increase in 10 years

Evidence-Based Practices in Readmission Reduction

CMS Quality Net



Agency for Healthcare Research and Quality (AHRQ) Patient Safety Organization (PSO) Program The Affordable Care Act (ACA) designates that Patient Safety Organizations (PSOs) help hospitals with high rates of certain readmissions improve their performance. The information presented here is designed for PSOs that wish to assist hospitals in reducing avoidable readmissions.	View
Guide to Preventing Readmission among Racially and Ethnically Diverse Medicare Beneficiaries CMS released this guide in 2016 to assist hospital leaders in identifying root causes and solutions for preventing avoidable readmissions among racially and ethnically diverse Medicare beneficiaries.	View
The Community-based Care Transitions Program (CCTP) Section 3026 of the Affordable Care Act led to the creation of the CCTP and its launch in 2012. Through this program CMS allocates funds for qualified hospitals to pursue two-year renewable agreements aiming to test models for improving care transitions from the hospital to other settings and reducing readmissions for high-risk Medicare beneficiaries.	View
The National Priorities Partnership (NPP) The NPP, founded in 2008, is a partnership of 52 major national organizations that developed and implemented the National Quality Strategy, which is a national blueprint for achieving a high-value healthcare system.	View
The Commonwealth Fund In 2010, the Commonwealth Fund together with the John A. Hartford Foundation and the Health Research & Educational Trust (HRET) of the American Hospital Association produced a "Health Care Leader Action Guide to Reduce Avoidable Readmissions".	View
INTERACT (Interventions to Reduce Acute Care Transfers) In 2009, CMS launched this quality improvement program that focuses on clinical and educational tools and strategies for long-term care facilities to reduce the frequency of transfers to the acute hospital.	View
Project RED (Re-Engineered Discharge Project RED is a research group founded in 2003 at Boston University Medical Center that develops and tests strategies to improve the hospital discharge process in a way that promotes patient safety and reduces re-hospitalization rates.	View

Patient Safety Organizations (PSO)

- Created in 2005, under the Patient Safety and Quality Improvement Act.
- Voluntarily reporting quality and patient safety data from individual providers and healthcare organizations. Goal: Learning and creating solutions
- 2019: over ½ of acute care facilities are working with PSOs and 8-0% say the feedback and analysis on patient safety events have helped to prevent similar future events.
- Avoidable readmissions fall into Patient Safety

Findings from the September 23, 2019 Final Report: Patient Safety Organizations: Hospital Participation, Value, and Challenges from the Office of The Inspector General, Department of Health and Human Services, OEI-01-17-00420.

- There are eight patient safety activities that are carried out by, or on behalf of a PSO, or a healthcare provider:

1. Efforts to improve patient safety and the quality of healthcare delivery
2. The collection and analysis of patient safety work product (PSWP)
3. The development and dissemination of information regarding patient safety, such as recommendations, protocols, or information regarding best practices
4. The utilization of PSWP for the purposes of encouraging a culture of safety as well as providing feedback and assistance to effectively minimize patient risk
5. The maintenance of procedures to preserve confidentiality with respect to PSWP
6. The provision of appropriate security measures with respect to PSWP
7. The utilization of qualified staff
8. Activities related to the operation of a patient safety evaluation system and to the provision of feedback to participants in a patient safety evaluation system

- AHRQ, 2022

AHRQ Resources

Comprehensive Case Management Programs

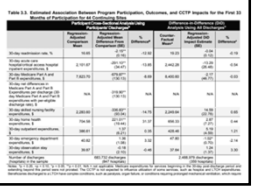
- Comprehensive care coordination models have been shown to demonstrate the most impact on reducing readmissions for the target populations.
- Models feature the goal of using a holistic approach to develop collaborative, interdisciplinary teams to facilitate patient self-management from time of admission through a defined post-discharge period was provided and included vital interventions currently absent from the standard discharge process.
- Assessment and evaluation of the patient's available social supports and the need to restructure the discharge process to eliminate fragmentation and communication breakdowns were acknowledged as top priorities.
- Top strategies include:
  - consistent use of continuous medication reconciliation at each level of care
  - use of standardized tools and patient education across the care continuum
  - active coordination of follow-up appointments including making and confirming follow up appointments prior to discharge
  - an effective, real-time handoff to the next level of care
  - making contact with the patient within 48-72 hours post discharge to review and reinforce the discharge plan to increase the communication needed to effect a successful transition.

Early Days Interventions

- Early in the evaluation of readmission impact, Kay (2006) established a 'continuum of care' at Carolinas Medical Center, Raleigh, NC; following a CHF patient from admission through connection to post-acute resources, using a multidisciplinary team approach and included referral to a home health program, which followed patients in the community over a six (6) week period after discharge, to assess, educate, evaluate and identify early intervention opportunities.
- Readmissions decreased as well, from 18.2% to 11%.
- This study demonstrated that structured care continuum development by specially trained professionals created a measurable reduction in readmissions for the target population. Furthermore, patients reported increased quality of life.
- Glaser and El-Haddad (2015) reviewed the risk for readmission for patients discharged without post-acute services and reported that the incidence of readmission was over 30% higher in the discharged to outpatient follow-up population than it was for the population actively linked to post-acute services or follow-up.

Community Based Care Transitions Program

- Under CMS Innovation Center, started 2012 with 17 partners
- The CCTP, launched in February 2012, ran for 5 years. Participants were awarded two-year agreements that may be extended annually through the duration of the program based on performance.
- Community-based organizations (CBOs) used care transition services to effectively manage Medicare patients' transitions and improve their quality of care.
- Funded by up to $300 million in total funding was available for 2011 through 2015.
- The CBOs were paid an all-inclusive rate per eligible discharge based on the cost of care transition services provided at the patient level and of implementing systemic changes at the hospital level.
  - CBOs were only paid once per eligible discharge in a 180-day period for any given beneficiary.
  - Decrease in costs for INP, NH and OBS costs
  - Increase in costs in HHC services
  - Decreased readmissions by 12.92%



Evidence Based Practice Review
Comprehensive Case Management Programs

- Care Transitions Initiative (CTI)
  - CTI data demonstrates a 13.8% readmission rate in the control group versus 8.9% readmission rate in the study group.
- RED (Re-Engineering Discharge) https://www.ahrq.gov/patient-safety/settings/hospital/red/toolkit/index.html
  - Patient education and enhanced preparation for discharge
  - RED reported readmission rates decreasing from 24% to 16% on average.
- BOOST (Better Outcomes for Older Adults through Safe Transitions) https://www.hospitalmedicine.org/globalassets/professional-development/professional-dev-pdf/boost-guide-second-edition.pdf
  - Screens for "8 P's"
  - Problems with Medications, Psychological, Principal Diagnosis, Physical Limitations, Poor health literacy, Patient support, Prior hospitalization and Palliative care.
  - BOOST reported a 21% reduction
- INTERACT (Interventions to Reduce Acute Care Transfers) https://pathway-interact.com/interact-tools/interact-tools-library/
  - Focus on transfers between post-acute levels of care and hospitals
  - Improve identification, evaluation and communication about changes in resident's status
    - SBAR
    - Decision Support Tools
    - "Stop & Watch" (high risk identification)
    - Advance Care Planning tool
    - Quality Improvement Tool for review of acute care transfers
- Transitional Care Intervention (TCI)
  - APRN led, meeting with patients pre-discharge, post-discharge phone call, active handoff to PCP, prescheduled follow up appts.
  - Results of this study demonstrated a readmission rate of 8.3% for the intervention group versus the control group's 36.8% readmission rate
- Bobay, Bahr and Weiss (2015) note that of the 32 hospitals surveyed many hospitals are utilizing one of these identified transitional care models as a base but have customized their programs by combining features of other models to address their specific populations and needs.
- PACC Program
  - Post-acute transition of care model initiated during the admission; utilizing focused patient/family education and a structured telephone outreach program through the immediate thirty-day post acute period for a target population of chronic condition patients.
  - Reduced COPD readmissions by 10.45% and CHF readmissions by 6.0% during pilot.
  - implemented at 42 hospitals across the country after pilot

EBP: Telephonic Interventions

- Single Call Format
  - Harris, Long, Percy & Patronas (2016), using a single call model for a COPD population demonstrated a decrease in 30-day readmissions from 20.05% pre-intervention to 11.25% post-intervention.
  - Melton, Foreman, Scott, McGinnis & Cousins (2016) implemented a single post-discharge call intervention, focused on three topics; review of discharge instructions, medication education and confirmation of scheduled follow up appointments. This single event intervention demonstrated a 22% reduction in readmission for the population of 1,994 participants.
- Multiple call formats include programs with duration of 30-days to one (1) year post-discharge.
  - A study by Copeland, Berg, Johnson and Bauer (2010) reported significant decreases in readmission rates for CHF patients within the first sixty (60) days post-discharge; after one year, there were no significant differences in the pre- or post-intervention populations. Call content included patient education, lifestyle changes, diet, medication and early identification of symptom exacerbation.
  - Takeda, Taylor, Khan, Krum & Underwood (2012) followed patients for a six (6) months, utilizing a specially trained nurse (RN) to provide education, medication reconciliation and schedule medical appointments. This program demonstrated a 58% reduction in readmissions for the CHF population.

EBP: Condition Management

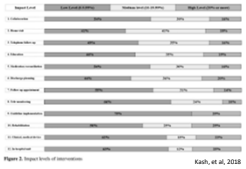
- Blee, Roux, Gautreaux, Sherer and Garey (2015) utilized a pharmacist driven medication education program to increase understanding and compliance with medication usage.
  - Reductions in COPD readmissions were reported from 21.3% pre-intervention to 8.6% post-intervention.
- Cavalier and Sickels (2015) developed a checklist for chronic care management education, focused on CHF and COPD patients. The checklist drives the patient education throughout the inpatient admission to account for all education required for effective diagnosis management.
  - Use of the checklist reported a reduction in readmission for the population from 28.8% to 17.4%.
- Basoor, et al (2013) investigated use of a checklist for discharge planning interventions as "a tool to remind the healthcare team to improve the quality of care for CHF patients".
  - Items on the checklist included recommended medications, interventions and counseling topics such as treatment and adherence, specific condition management education and referrals to diabetic educator, dietician or cardiac rehabilitation services as needed. The patient's individual post-acute follow up appointment needs were also included and the checklist was framed as a physician order sheet to facilitate the execution of orders in a timely manner. In the study, forty eight patients received the checklist intervention versus forty eight that received the current standard of care.
  - Results demonstrated that the intervention group noted a significant decrease in readmissions from 20% to 2% and that further use over a six-month period decreased readmissions in CHF patients from 42% to 23%.

EBP: Care Coaches

- Pomerantz, et al (2010) investigated the use of 'care coaches" in a telephonic engagement model to improve clinical outcomes.
- The care coaches were identified as registered nurses with experience in behavior modification strategies and were supported by an interprofessional care team.
- Their primary intervention was "to educate and motivate patients to achieve sustained behavior change".
- Through the establishment of one-on-one relationships and a scheduled, structured outreach program over a one (1) year period and inclusive of 3,305 participants, care coach program demonstrated a decrease in admissions per thousand from 44.91 to 23.66.
- The study also noted a decrease in the average length of stay and decrease in the use of the emergency department which were associated with a reduction in cost of care for the population.

EBP: Current Innovations, 2018 and on

- Review of Literature: 2018-2022
- Retrospective reviews
- Economic interpretation
- Intended vs Unintended Consequences
- Top 5 Recommendations identified
  - Most frequently studied and most successful strategies to decrease readmissions include those that are collaboration focused:
  - home visits, telephone follow-up, education and discharge planning.
- Incorporate Social Determinants of Health under 21st Century Cures Act



Kash, et al, 2018

Reducing Readmissions

Pharmacist Led

- Zupec, et al (2022) note that 20% of hospital readmissions are medication related problems (MRP).
- This model utilized pharmacists to conduct hospital discharge visits to review medications and provide education to reduce adverse drug events and medication errors and ensure medication adherence through post-discharge calls.
- Program has the potential to achieve 15% reduction avoidable readmissions (based on current data extrapolation) and significant net savings to the hospital.

Primary Care Practice Led

- Spivack, et al (2021) developed a 12-point primary care readmission avoidance activity list.
- Activities include:
  - Receipt/Review of Hospital Discharge Summary within 72 hours of discharge
  - Medication reconciliation
  - Home visits
  - Case Manager/Health Coach in the practice
  - Regular follow up calls/telehealth visits in the 1st 30 days post-discharge
  - Health literacy evaluation
  - Patient centered education
  - Culturally tailored care
  - SDoH screening
  - Connection to resources for SDoH gaps
  - Incorporate patient centered care strategies
  - Shared decision-making model
- Findings: practices that perform 10/12 of these activities had a significantly lower risk of patient readmission.

Risks & Benefits

- Years worth of work in reducing avoidable readmissions
- Areas of concern identified
  - Intended/Unintended Effects
  - Throughput vs Readmissions: Competing Priorities
  - Impact of Social Determinants of Health
  - Patient's Role in Readmission Reduction?
  - Morbidity/Mortality Concerns

Intended vs. Unintended Effects

Intended

- Reduce readmissions
- Penalties draw attention to the issue
- Readmissions publicly reported
- Quality metric

Unintended

- Heart failure mortality rates increased according to JAMA study
  - Does not take advanced condition management issues into consideration
- Readmission reduction is not a "best indicator" of quality of care

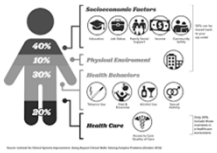
Throughput vs. Readmissions

- Throughput: the effective movement of patients along the internal care continuum.
- Length of stay issues (DRG payment, GMLOS)

- Columbia University Business School Study entitled "Should Hospitals Keep Their Patients Longer?" (Bartel, et al, 2020)
- 6.6 M Medicare patients followed.
- Compared the potential benefits of a one day extended hospital stay to those of outpatient care in terms of reduced readmissions, death rates and costs.
- The study found that waiting an extra day to discharge patients can:
  - Reduce the mortality risk for pneumonia patients by 22 percent
  - Reduce the mortality risk for heart attack patients by 7 percent
  - Result in five-to-six times more lives being saved compared with outpatient care
  - Decreases the risk of readmission for severe heart attack patients by 7 percent
- Hypothesis; keeping patients hospitalized for an extra day would help them reach a higher level of stability and would give doctors and nurses more time to educate them about post-discharge behavior.
- Some of their more detailed findings:
  - Letting high-severity heart-failure patients stay in the hospital for one more day decreases their readmission risk by 7 percent.
  - Keeping all pneumonia patients who have Medicare fee-for-service plans in the hospital for an extra day would save 19,063 lives.

Social Determinants of Health

- Growing body of evidence suggests that HRRP programs have resulted in disproportionate financial penalties for providers that care for vulnerable and low-income populations (Joint-Maddox, et al, 2019).
- Poverty, disability, housing instability, residence in a disadvantaged neighborhood have been associated with higher readmission rates.
- Social risk and readmission are closely linked. Access to quality care across the continuum?
- Individuals with social risk have a higher incidence of medical risk.
- Readmissions linked to post-discharge issues:
- Access to primary care
- Follow up appointment attendance
- Health literacy
- Ability to adhere to health regimens
- Access and affordability of Rx



- Safety Net hospitals has higher readmission rates versus more affluent hospitals.

- **More Affluent**

Dx	Safety Net	More Affluent
AMI	1.020	0.986
PNA	1.031	0.984
CHF	1.037	0.977

- Adding Social Risk Factors (SRF) to Risk Adjustment has been demonstrated to decrease readmissions and the associated penalties. Furthermore, adding SRF at the patient level ensures that facility performance measures are not "adjusted away".

- Over ½ of safety net hospitals saw penalties decline.
  - 4.0-7.5% of facilities went from having a penalty to having ZERO penalty.
  - $17 M reduction in penalties for safety net hospitals (Joynt-Maddox, et al, 2019).

Impact of the Patient's Role in Readmission Reduction

- Patient's role in healthcare still not factored into Readmission Reduction

- Adherence to treatment plan?
- Health literacy status considered?
- Patient engagement/activation?
- No significant research available

Mortality Concerns

- CMS' calculations places higher value on reducing readmissions than improving mortality rates. (Castelucci, 2017)
  - Mortality costs hospital 0.2% compared to the maximum 3% readmission penalty
- Wadhera, et al (2019) report that "while post-discharge deaths for patients with HF were increasing prior to HRRP, this trend accelerated after HRRP put in place". (7.9% in 2008 to 9.2% in 2014, reflecting 16.5% increase in mortality)
- Mortality rates post-hospitalization for Pneumonia were stable prior to HRRP but increased after the program began, from 7.6% to 8.6%. (Khera, et al, 2018)
- COPD: Mortality rates reported as 6.91% pre HRRP, 6.59% when COPD was added to conditions under HRRP and 7.30% for period 2016-17 (Niera, et al, 2021).
- AMI mortality rates demonstrate no difference pre/post HRRP (Niera, et al, 2021).
- Mortality was concentrated in patients who had NOT been readmitted as INP. Notes this population had increased use of ED visits or Observation stays instead of INP level of care.

Conclusion

- HRRP has been successful at reducing 30-day hospital readmissions, especially during the initial 5 years of the program.
- Significant case management research, programs developed
  - Focus on patient education, patient engagement and better care transitions
- HRRP penalties may compromise safety net hospitals to be able to continue to provide care
- Concern over increasing trend in mortality for HRRP dx.
- Does not include OBS level of care (gaming the system?) or ED care (triaging with an eye to readmission prevention?)
- Risk adjustment methods need improvement for better accounting of SDoH factors

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