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1 **When Payment Models Distort Perceptions and Care Delivery for Patients with Heart**
2 **Failure**

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22 Behavioral economics is a social science that tries to understand how human and organizational
23 psychological factors interact with incentive structures that drive micro and macro decision-
24 making. Payment models for hospital services are known to influence medical documentation,
25 coding practices, physician behavior, and patient experiences.¹ The Centers for Medicare &
26 Medicaid Services (CMS) is the single largest payer for healthcare services in the United States.
27 Shifts in CMS payment models can substantially influence documentation, coding, and care
28 delivery, often with unintended consequences. The CMS “Hospital Quality Initiatives” include
29 three large programs – the Hospital Readmission Reduction Program (HRRP), Hospital Value-
30 Based Purchasing (VBP), and the Hospital-Acquired Condition Reduction Program (HACRP) –
31 that administer substantial financial penalties (up to 3%, 2%, and 1% of the total annual CMS
32 hospital payments respectively) for risk-adjusted performance metrics for select discharge
33 diagnoses. Patients admitted for acute decompensated heart failure (HF), a common and costly
34 condition, are featured prominently in both HRRP and VBP payment models. Therefore, an
35 index HF admission triggers several potential financial penalties from the perspective of a
36 healthcare system related to 30-day readmission and mortality rates.

37

38 In the February 2019 issue of the Journal, Walkey et al. used a representative administrative
39 claims database of U.S. hospitals and observed coding shifts for a growing proportion of patients
40 with HF away from a primary discharge diagnosis of HF to acute respiratory failure (ARF)
41 between 2006 to 2014.² The prevalence of primary ARF and secondary HF was 0.4% in 2006
42 and increased 8.5-fold to 3.4% by 2014. This is concerning in that hospitals may have learned to
43 game discharge diagnoses secondary to financial incentives that would offload the sickest
44 patients with HF into alternative diagnosis-related group (DRG) category not monitored by the

45CMS quality improvement programs. One would expect this simple reclassification to improve
46both readmissions and mortality metrics for patients with a primary discharge diagnosis of HF,
47without any actual change in care or clinical outcomes. The authors note that the shift in coding
48practices misrepresents risk-adjusted mortality rates when hospitals exclude these patients with
49HF from index events with the increasingly prevalent coding practice.

50

51These observations add to concerns that policies that incompletely identify a cohort with HF or
52focus solely on outcomes not properly risk-adjusted do not achieve their stated goals. The
53hospital risk-standardized 30-day readmission measures which serve as the basis for HRRP
54penalties utilize only administrative variables, consistently demonstrate poor discrimination and
55fail to account for the competing risk of mortality. As a result, hospitals are profiled and
56penalized not based on the quality of care provided but based on the patients under their care.
57Furthermore, some policies may encourage lower quality care that is not readily observable or
58easily measured. In parallel with the current work, health services researchers have demonstrated
59that patients with HF are increasingly triaged to observational status or discharged from
60Emergency Departments directly home to avoid being counted as 30-day readmissions.^{3,4} With
61the implementation of HRRP, recent studies identified likely upcoding of comorbid conditions
62along with changes in the CMS claims submission process that artificially lowered risk-adjusted
6330-day readmission rates. What was initially touted as evidence of an early policy success,
64turned out to be substantially overstated.^{5,6} Overall, the observable changes in practices after
65implementation of new CMS payment policies were gaming of administrative coding and
66inappropriate triage, rather than improvements in transitions of care, outpatient disease
67management, and use of evidence-based, guideline-directed clinical practices. Had the quality of

68hospital-based HF care actually improved one would expect reductions all types of urgent returns
69to the hospital in the first 30 days and in both mortality and readmission rates.

70

71The greatest concerns with releasing policies without prior testing and prospective monitoring is
72that vulnerable patients could be unintentionally harmed as a result. After CMS announced and
73instituted HRRP, initial reports only focused on changes in inpatient 30-day rehospitalization
74rates, cost saving, and claims of policy success. Subsequently, independent analyzes have
75demonstrated that after the HRRP announcement and penalty phase hospitalized patients with
76HF have had notable increases in post-discharge short-term mortality.^{7,8} The timing of the
77increases in 30-day mortality closely corresponded to the timing of the declines in
78rehospitalization and were not explained by increased use of hospice care. Further, the increase
79in mortality associated with the HRRP was largely driven by patients who were not readmitted to
80the hospital but died within 30 days of discharge. These findings increase the likelihood that
81HRRP financially incentivized inappropriate triage and restricting of inpatient readmissions
82accounts for the harm observed. This occurred despite being a period of improved use of
83guideline-directed medical therapies and approvals for novel therapies shown to reduce both
84readmission risk and mortality.^{9,10} The most sensitive and vulnerable hospitalized patients with
85HF may have experienced unintended consequences related to inappropriate triage and arbitrary
86financial penalties to their hospitals that lowered the quality of care delivered.

87

88To improve the likelihood of actual success and to minimize risks, new policies should be
89formulated in close consultation with clinicians actively involved in care, professional societies,

90patients, and caregivers. Policies need to be implemented with evidence-based guidance on how
91to safely and effectively achieve the stated goals along with provision of necessary resources.
92Prospective testing prior to national implementation is also advisable. First testing the HRRP in
93one or more demonstration projects, may have allowed detection of policy motivated increases in
94severity coding, shifts in primary diagnoses assigned, adverse triage strategies, and unintended
95harm. With such testing, significant modifications to the policy could have been made prior
96national implementation and millions of patients being exposed to increased mortality risk.
97Rigorous, proactive, truly independent, monitoring and evaluation of policies should be
98mandatory to discourage and detect gaming, ensure stated aims are being achieved, and rapidly
99detect if any unintended consequences emerge.

100

101There is no evidence that the CMS financial incentives programs have significantly improved
102patient-centered outcomes in a meaningful way. It was misguided to base national policies on an
103untested premise that the causal pathway between readmission penalties and improved care
104quality/outcomes was direct, not susceptible to gaming, and without potential risks. Absconding
105patients into diagnoses that avoid financial penalties and utilizing higher severity administrative
106codes does nothing to improve the quality of care. Failing to alter or halt policies that have been
107associated with patient harm would be egregious. Performance metrics that map to actual
108evidenced-based practices may be a more consistent way to incentivize and improve clinical care
109in a meaningful way. Much of the success in reducing variations and delivering evidenced-based
110care in acute coronary syndromes was based on direct actionable performance metrics.^{11,12}

111Refocusing efforts on improving transition of care, greater access to HF disease management

112programs, and receipt of evidenced-based treatments are far more patient-centered and safer
113approaches to improve outcomes.

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