Published in final edited form as:

Ann Surg. 2015 June ; 261(6): 1027–1031. doi:10.1097/SLA.0000000000000778.

Medicare's Hospital Readmission Reduction Program in Surgery May Disproportionately Affect Minority-Serving Hospitals

Terry Shih, MD¹, Andrew M. Ryan, PhD², Andrew A. Gonzalez, MD, JD, MPH¹, and Justin B. Dimick, MD, MPH¹

¹Center for Healthcare Outcomes and Policy, University of Michigan, Ann Arbor, MI, USA

²Division of Outcomes and Effectiveness Research, Department of Public Health, Weill Cornell Medical College, New York, NY, USA

STRUCTURED ABSTRACT

Objective—To project readmission penalties for hospitals performing cardiac surgery and examine how these penalties will affect minority-serving hospitals.

Background—The Hospital Readmission Reduction Program (HRRP) will potentially expand penalties for higher-than-predicted readmission rates to cardiac procedures in the near future. The impact of these penalties on minority-serving hospitals is unknown.

Methods—We examined national Medicare beneficiaries undergoing coronary artery bypass grafting (CABG) in 2008–2010 (N=255,250 patients, 1,186 hospitals). Using hierarchical logistic regression, we calculated hospital observed-to-expected readmission ratios. Hospital penalties were projected according to the HRRP formula using only CABG readmissions with a 3% maximum penalty of total Medicare revenue. Hospitals were classified into quintiles according to proportion of black patients treated. Minority-serving hospitals were defined as hospitals in the top quintile while non-minority-serving hospitals those in the bottom quintile. Projected readmission penalties were compared across quintiles.

Results—Forty-seven percent of hospitals (559 of 1,186) were projected to be assessed a penalty. Twenty-eight percent of hospitals (330 of 1,186) would be penalized <1% of total Medicare revenue while 5% of hospitals (55 of 1,186) would receive the maximum 3% penalty. Minority-serving hospitals were almost twice as likely to be penalized than non-minority-serving hospitals (61% vs. 32%) and were projected almost triple the reductions in reimbursement (\$112 million vs. \$41 million).

Conclusions—Minority-serving hospitals would disproportionately bear the burden of readmission penalties if expanded to include cardiac surgery. Given these hospitals' narrow profit margins, readmission penalties may have a profound impact on these hospitals' ability to care for disadvantaged patients.

Correspondence and Requests for Reprints: Terry Shih, MD, Center for Healthcare Outcomes & Policy, 2800 Plymouth Road, Building 16, Office 100N-07, Ann Arbor, MI 48109, Phone: (734) 647-6234, Fax: (734) 998-7473, tyshih@umich.edu.

Disclosures: Dr. Dimick is a consultant and equity owner in ArborMetrix, Inc, which provides software and analytics for measuring hospital quality and efficiency. The company had no role in the study herein.

Keywords

Readmissions; Coronary Artery Bypass; Health Services Research; Policy Evaluation

Introduction

In October 2012, the Centers for Medicare and Medicaid Services (CMS) began to reduce reimbursement to hospitals with “excessive” readmission rates for medical conditions through the Hospital Readmission Reduction Program (HRRP).¹ The program will expand to hip and knee replacement in 2015,² and is expected to incorporate other surgical procedures including cardiac surgery in the near future.³ Although well intentioned, many stakeholders are concerned that the HRRP will have unintended consequences for minority-serving hospitals, penalizing hospitals with the least resources. Other value-based purchasing policies, such as pay-for-performance, have drawn criticism for their potential to worsen health care disparities.^{4, 5}

Whether minority-serving hospitals will be disproportionately impacted when the HRRP is expanded to surgery is unknown. Analysis of the medical conditions covered under the program suggests safety-net hospitals bear a disproportionate share of financial penalties.⁶ It is possible that similar disparities will be present in surgical populations. However, there are reasons to believe that HRRP penalties may be distributed differently for surgical conditions. Whereas patients with common medical conditions are often admitted to local hospitals where they initially present, surgical referral patterns are different. Frequently, large minority populations are referred to secondary or tertiary care hospitals, where the high volume of complex operations often translates to higher quality care. Consequently, minority-serving hospitals may not have higher readmission rates that translate to higher financial penalties.

In this context, we sought to project the reduction in Medicare payments for hospitals if the HRRP is extended to cardiac surgery. Using data from national Medicare beneficiaries undergoing coronary artery bypass graft (CABG) surgery, we profiled hospitals based on the proportion of African-American patients to determine the extent to which HRRP penalties will affect minority-serving hospitals.

Methods

Data Source and Study Population

We created our main analytic dataset using CMS’ national Medicare Provider Analysis and Review (MedPAR) files for patients undergoing CABG during the calendar years 2008–2010. MedPAR contains discharge abstracts for 100% of fee-for-service hospitalizations from Medicare beneficiaries. Data from this three-year period were used to calculate excess readmission ratios. The excess readmission ratios were then applied to 2010 payment data for CABG-only and for all patients to calculate readmission penalties.

We identified all patients undergoing CABG ages 65–99 using appropriate procedure codes from the *International Classification of Diseases*, Ninth Revision (ICD-9) (36.10-19).

Because diagnosis-related group (DRG) codes are used to calculate readmission adjustment factors, we included only those CABG patients with a corresponding DRG for coronary bypass (231–236). To minimize the potential for case-mix differences between hospitals, we excluded patients with procedure codes indicating other operations were simultaneously performed with CABG (i.e. valve surgery) (35.00–99, 36.2, 37.32, 37.34, 37.35). Patients who did not survive to hospital discharge were also excluded from readmission analysis.

Excess Readmission Ratios

Though methodology for joint replacement is available online, CMS has not yet reported methodology for CABG. Therefore, we used methodology analogous to joint replacement and the medical conditions in the program.⁷

The first step to calculating the readmission adjustment factor is to determine an excess readmission ratio for CABG for each hospital. This is calculated based on observed-to-expected readmission rates over a 3-year period. Using our CABG dataset, we identified all patients readmitted within 30 days of discharge. 30-day readmission rates were risk- and reliability-adjusted using hierarchical logistic regression to account for age, gender, and comorbidities as well as measurement noise due to low case volumes. Comorbidities were obtained from secondary diagnosis codes using the methods of Elixhauser.⁸ The Elixhauser method is a validated tool developed by the Agency for Healthcare Research and Quality to be used for administrative data.⁹ CMS utilizes Condition Categories for risk adjustment available online.⁷ Importantly, we did not adjust for race or socioeconomic status per HRRP methodology.¹⁰ Observed-to-expected ratios were generated at the hospital level using our hierarchical model.

Readmission Payment Adjustment Factor

The next step in determining the readmission payment adjustment factor is calculating how much CMS is paying for excess CABG readmissions compared to aggregate payments for all discharges over a 1-year period (2010 in our data). Aggregate payments for excess CABG readmissions were calculated by multiplying the total DRG payments a hospital receives for CABG DRGs by the excess readmission ratio - 1. The total DRG payment a hospital receives for CABG DRGs was obtained from the 2010 national MedPAR file. The data file was collapsed by DRG code, and we divided the aggregate DRG payment for each CABG DRG (231–236) by the national volume for each DRG to generate a DRG-specific average Medicare payment. The DRG-specific average payment was multiplied by each hospital's DRG-specific volume and summed for all six CABG DRGs to generate an overall total DRG payment each hospital receives for CABG DRGs. We then determined aggregate payments for all discharges by summing payments for base DRGs for all discharges at each hospital. Hospitals that performed <25 CABGs over the 3-year period were defaulted to an observed-to-expected ratio of zero per HRRP methodology and aggregate payments for excess CABG readmissions were defaulted to zero.

The percent penalty is then calculated by dividing the aggregate payment for excess CABG readmissions by the aggregate payment for all discharges. Initially, the HRRP penalized hospitals up to 1% of total annual Medicare revenue, but will have increased to a 3% penalty

when the program is expected to expand to surgical procedures. Therefore, penalties in excess of 3% were defaulted to a 3% maximum penalty. In our analysis, we incorporated only CABG readmissions to calculate the percent penalty. When applied, CMS will incorporate readmissions for all included conditions (acute myocardial infarction, heart failure, pneumonia, and joint replacement currently) to calculate an aggregate percent penalty.

The HRRP reports statistics for each hospital as a readmission payment adjustment factor, which is 1 minus the penalty. The lowest possible adjustment factor is 0.970 (3% penalty), and an adjustment factor of 1.000 signifies no penalty. We generated dollar penalty amounts for each hospital by multiplying the penalty by the overall aggregate base DRG payments for each hospital. CMS will impose the penalty only on the base DRG payments, and will not apply to additional Medicare payments paid to compensate for hospitals' general operating expenses, training of medical residents, or disproportionate share hospital (DSH) payments for treatment of larger than normal numbers of low-income patients.

Statistical Analysis

To determine the extent to which readmission penalties would affect minority-serving hospitals, we stratified hospitals into 5 equal groups according to the percentage of black Medicare CABG patients at each hospital. Minority-serving hospitals were designated as hospitals in the top quintile of proportion of black patients and vice versa for those hospitals serving the lowest proportion of black patients. We did not include other minority groups in our definition of minority-serving hospitals because they are not represented well in the Medicare population and racial and ethnic groups other than Whites and Blacks in Medicare data are not reliably coded.¹¹ Patient demographics were compared across quintiles using chi-squared test or ANOVA as appropriate.

Statistical analyses were conducted using Stata 12 statistical software (College Station, TX).

Results

Demographics

Between 2008 and 2010, 255,250 patients underwent CABG in 1,186 hospitals. Eighteen percent of patients were readmitted within 30 days ($n=45,081$). The majority of black patients were concentrated in minority-serving hospitals (Figure 1). Specifically, 57% of all black patients underwent CABGs in the top quintile. In contrast, 0.1% of black patients underwent CABGs in the bottom quintile. Patients in minority-serving hospitals tended to be younger, more likely to be female, and had a greater comorbidity burden than patients in non-minority serving hospitals (Table 1).

Readmission Penalties

The mean risk- and reliability-adjusted readmission rate across all hospitals was 18.0%. Overall, 330 hospitals (28%) would be penalized <1% of total Medicare revenue, 114 hospitals (10%) would be penalized between 1.00% and 1.99%, 60 hospitals (5%) would be penalized between 2.00% and 2.99%, and 55 hospitals (5%) would receive the maximum

capped-out 3% penalty (Table 2). Hospital readmission rates, proportion of hospitals penalized, and dollar penalties for each quintile are presented in Table 3. Readmission rates were higher at minority-serving hospitals compared to non-minority-serving hospitals (19.2% vs. 17.2%). The higher readmission rates also translated into more penalties. A higher proportion of minority-serving hospitals were penalized compared to non-minority serving hospitals (60.8% vs. 32.2%) (Figure 2). Notably, readmission rates and the proportion of hospitals penalized increased incrementally across hospital quintiles. Minority-serving hospitals were projected to suffer a \$112 million reduction in Medicare reimbursement compared to the \$41 million reduction for non-minority-serving hospitals.

Discussion

In our study, minority-serving hospitals had higher risk-adjusted readmission rates than non-minority-serving hospitals for cardiac surgery. Correspondingly, minority-serving hospitals were found to be twice as likely as non-minority-serving hospitals to suffer reduced Medicare reimbursement when the Hospital Readmission Reduction Program is expanded to cardiac surgery. This translated to an almost threefold difference in financial penalties between minority-serving and non-minority-serving hospitals.

It is well known that racial and ethnic minorities experience worse health care outcomes compared to Whites¹². Building on numerous prior studies examining health care disparities for mortality and complications,^{13–15} recent work has demonstrated that readmission rates are also related to race and socioeconomic status.^{16–18} Because of higher readmission rates at minority-serving hospitals, many stakeholders are concerned that the HRRP will unintentionally negatively impact minority-serving hospitals. This is particularly problematic because CMS' current risk-adjustment methods do not incorporate race or socioeconomic status despite the well-documented increased risk of readmission in minorities and low socioeconomic status populations. In the first two years, Medicare has assessed more than \$500 million in penalties.¹⁹ Preliminary analysis of the first round of penalties under the HRRP confirmed these fears: large teaching hospitals and safety-net hospitals were more likely receive Medicare reimbursement cuts.⁶ Our study builds on the existing literature by projecting penalties when the HRRP expands to surgical conditions. Though the differences between referral for medical conditions and surgical conditions could possibly alleviate the disparities in readmission rates, our study suggests that minority-serving hospitals will similarly bear a disproportionate burden of penalties when the HRRP incorporates surgical conditions.

There are limitations to our study. One important aspect of our analysis to consider is our method of estimating percent penalties and the translation of these percentages into dollars. Financial penalties assessed for CABG will never stand alone. They will be part of a larger penalty that will be assessed for all conditions included in the HRRP. Though our methods were analogous in calculating the penalties in our analysis, we did not exactly replicate the methodology that will be used by CMS. CABG will be incorporated as part of a bundle of conditions including pneumonia, heart failure, myocardial infarction, as well as newly added chronic obstructive pulmonary disease and hip and knee replacement. However, as

mentioned above, black patients also have worse readmission rates for other conditions, so including all conditions will likely only exacerbate the disparities in readmission penalties.

Another possible limitation is the use of administrative data for our analysis, which has well-known limitations in risk-adjustment.²⁰ Comorbidities are derived from diagnosis codes and are not as reliable as those derived directly from the medical record. However, readmissions data are optimally captured in administrative Medicare data, as patients may be readmitted to a different hospital than the hospital that they underwent their index surgery. These readmissions may not be captured in clinical registry data. Furthermore, in its current design, the HRRP uses the same administrative claims data that we have used in our analysis.

This study has important implications for policy. Much of the conceptual framework supporting readmission penalties relies on the assumption that readmissions represent inadequate inpatient management, inappropriate early discharge, or poor coordination of outpatient care. Though the evidence is mixed, most interventions to reduce readmissions require increased utilization of hospital resources.^{21, 22} These interventions often entail early telephone follow-up, increased frequency of outpatient visits, or visiting nurse care. Penalizing hospitals with high readmission rates may only exacerbate the situation: affected hospitals will have less financial resources to invest in interventions to reduce readmissions. As many minority-serving hospitals already face difficult financial situations, the HRRP may induce a “reverse Robin Hood effect,” where the poor only get poorer.

In formulating a national strategy to combat racial and ethnic disparities in healthcare, the Institute of Medicine has recommended the creation of “health care interventions to promote payment systems to ensure an adequate supply of services to minority patients, and limit provider incentives that may promote disparities.”¹² Our analysis suggests that the HRRP in its current form will exacerbate existing disparities, and thus the penalties as they are currently structured should be reconsidered. One consideration would be to include socioeconomic status and race into the risk adjustment model. These were originally not included in the risk adjustment model, because doing so would imply a tacit allowance for minority patients to experience worse outcomes. However, evidence suggests many readmissions may actually be symptoms of lower socioeconomic conditions such as living alone, limited education, and lack of self-management skills.²³ These factors may be driving higher readmission rates at minority-serving hospitals, and hospitals may be penalized for these factors outside of their control. The recent Medicare Payment Advisory Committee report to Congress also recommends this change, and has also called attention to these findings, citing “shortcomings” in the policy that “can work at cross-purposes to the policy’s intent.”²⁴

A potential compromise would be to hold on the expansion of the HRRP to more conditions until further analysis can be performed on the ramifications of the policy. Decreasing financial resources to minority-serving hospitals may only exacerbate disparities in readmissions. Conversely, harsh financial penalties may be a strong impetus for high-readmission hospitals to improve their quality quickly. Further research on the effects of

financial penalties on readmission rates of the medical conditions already included in the HRRP will better inform and shape future readmissions policy.

Conclusion

Our analysis suggests that minority-serving hospitals will be disproportionately penalized when the Hospital Readmission Reduction Program is expanded to surgical conditions. Not only will a greater number of these hospitals suffer reduced reimbursement, the amount collected from these hospitals will be much greater than non-minority-serving hospitals. As minority-serving hospitals tend to operate on small profit margins, readmission penalties may have a profound impact on these hospitals' ability to care for disadvantaged patients.

Acknowledgments

Funding: This study was supported by grants to Dr. Shih and Dr. Gonzalez from the National Institutes of Health (5T32HL07612309 and 5T32HL07612308), Dr. Ryan from the Agency for Healthcare Research and Quality (K01HS018546-01), and Dr. Dimick from the National Institute of Aging (R01AG039434). The views expressed herein do not necessarily represent the views of the United States Government.

References

- Centers for Medicare & Medicaid Services. [Accessed November 22, 2013] Readmissions Reduction Program. Available at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html>
- Centers for Medicare & Medicaid Services. . Medicare Program; Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long Term Care; Hospital Prospective Payment System and Fiscal Year 2014 Rates; Quality Reporting Requirements for Specific Providers; Hospital Conditions of Participation; Payment Policies Related to Patient Status; Final Rule. Federal Register. 2013; 78:50495–1040. [PubMed: 23977713]
- Medicare Payment Advisory Commission. [Accessed January 22, 2014] Report to Congress: Promoting Greater Efficiency in Medicare. 2007. Available at: http://www.medpac.gov/documents/jun07_entirereport.pdf
- Ryan AM. Will value-based purchasing increase disparities in care? N Engl J Med. 2013; 369:2472–4. [PubMed: 24369072]
- Casalino LP, Elster A, Eisenberg A, et al. Will pay-for-performance and quality reporting affect health care disparities? Health Aff (Millwood). 2007; 26:w405–14. [PubMed: 17426053]
- Joynt KE, Jha AK. Characteristics of hospitals receiving penalties under the Hospital Readmissions Reduction Program. JAMA. 2013; 309:342–3. [PubMed: 23340629]
- QualityNet. [Accessed January 22, 2014] Measure Methodology Reports: Readmission Measures. Available at: <http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1219069855841>
- Elixhauser A, Steiner C, Harris DR, et al. Comorbidity measures for use with administrative data. Med Care. 1998; 36:8–27. [PubMed: 9431328]
- Southern DA, Quan H, Ghali WA. Comparison of the Elixhauser and Charlson/Deyo methods of comorbidity measurement in administrative data. Med Care. 2004; 42:355–60. [PubMed: 15076812]
- Centers for Medicare & Medicaid Services. [Accessed January 22, 2014] Frequently Asked Questions: CMS Publicly Reported Risk-Standardized Outcome Measures. 2013. Available at: http://www.qualitynet.org/dcs/BlobServer?blobkey=id&blobnocache=true&blobwhere=1228890103189&blobheader=multipart%2Foctet-stream&blobheadername1=Content-Disposition&blobheadervalue1=attachment%3Bfilename%3DRiskStdOutcomeMsr_FAQs_092013.pdf&blobcol=urldata&blobtable=MungoBlobs

11. Zaslavsky AM, Ayanian JZ, Zaboriski LB. The validity of race and ethnicity in enrollment data for Medicare beneficiaries. *Health Serv Res.* 2012; 47:1300–21. [PubMed: 22515953]
12. Smedley, BD.; Stith, AY.; Nelson, AR., et al. *Unequal treatment: confronting racial and ethnic disparities in health care.* Washington, D.C: National Academy Press; 2003.
13. Go AS, Mozaffarian D, Roger VL, et al. Executive summary: heart disease and stroke statistics--2013 update: a report from the American Heart Association. *Circulation.* 2013; 127:143–52. [PubMed: 23283859]
14. Peterson ED, Shaw LK, DeLong ER, et al. Racial variation in the use of coronary-revascularization procedures. Are the differences real? Do they matter? *N Engl J Med.* 1997; 336:480–6. [PubMed: 9017942]
15. Rose KM, Foraker RE, Heiss G, et al. Neighborhood socioeconomic and racial disparities in angiography and coronary revascularization: the ARIC surveillance study. *Ann Epidemiol.* 2012; 22:623–9. [PubMed: 22809799]
16. Joynt KE, Orav EJ, Jha AK. Thirty-day readmission rates for Medicare beneficiaries by race and site of care. *JAMA.* 2011; 305:675–81. [PubMed: 21325183]
17. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. *N Engl J Med.* 2009; 360:1418–28. [PubMed: 19339721]
18. Rathore SS, Foody JM, Wang Y, et al. Race, quality of care, and outcomes of elderly patients hospitalized with heart failure. *JAMA.* 2003; 289:2517–24. [PubMed: 12759323]
19. Rau, J. [Accessed November 22, 2013] Armed with Bigger Fines, Medicare to Punish 2,225 Hospitals for Excess Readmissions [Kaiser Health News web site]. 2012. Available at: <http://www.kaiserhealthnews.org/stories/2013/august/02/readmission-penalties-methodology.aspx>
20. Iezzoni LI. Assessing quality using administrative data. *Ann Intern Med.* 1997; 127:666–74. [PubMed: 9382378]
21. Hansen LO, Young RS, Hinami K, et al. Interventions to reduce 30-day rehospitalization: a systematic review. *Ann Intern Med.* 2011; 155:520–8. [PubMed: 22007045]
22. Kripalani S, Theobald CN, Anctil B, et al. Reducing Hospital Readmission Rates: Current Strategies and Future Directions. *Annu Rev Med.* 2014; 65:471–85. [PubMed: 24160939]
23. Arbaje AI, Wolff JL, Yu Q, et al. Postdischarge environmental and socioeconomic factors and the likelihood of early hospital readmission among community-dwelling Medicare beneficiaries. *Gerontologist.* 2008; 48:495–504. [PubMed: 18728299]
24. Medicare Payment Advisory Commission. [Accessed December 27, 2013] Report to Congress: Medicare Payment Policy. 2013. Available at: http://www.medpac.gov/documents/Mar13_entirereport.pdf

Figure 1. Variation in Proportion of Black Population Served by Hospitals

Hospital population stratified into quintiles by proportion of the black population served.

Each quintile represents approximately 20% of hospitals. Quintile 1=“Non-minority serving hospitals”, Quintile 5=“Minority serving hospitals.”

Figure 2. Proportion of Hospitals Penalized within Hospital Quintiles of Race

Proportion of hospitals penalized within each hospital quintile of proportion of black population served (Quintile 1=“non-minority serving hospitals”, Quintile 5=“minority-serving hospitals”).

Table 1

Comparative demographics in each hospital quintile

Variable	Overall	Hospital Quintiles					p value
		1 (Non-minority serving hospital)	2	3	4	5 (Minority-serving hospital)	
Black patients, N (% of all black patients)	14,381	14 (0.1)	621 (4.3)	1,680 (11.7)	3,899 (27.3)	8,167 (56.7)	N/A
Mean age, years (standard deviation)	75.5 (5.9)	73.7 (5.9)	73.7 (5.9)	73.6 (5.9)	73.4 (5.9)	73.1 (5.8)	<0.001
Male, %	69.4	70.8	70.4	69.6	69.1	66.9	<0.001
Comorbidities, %							<0.001
No comorbidities	8.1	8.4	8.4	8.0	7.9	7.6	
1 comorbidity	26.7	27.4	27.7	26.7	26.8	25.3	
2 comorbidities	33.1	32.8	32.9	33.2	33.2	33.5	
3 comorbidities	32.1	31.4	31.1	32.1	32.1	33.6	

Comorbidities are coded via *International Classification of Diseases, 9th edition, Clinical Modification* Codes per Elixhauser Method. Each comorbidity was treated as dichotomous variable in risk adjustment, though is presented as a composite for ease of interpretation in this table.

Projected number of hospitals to experience reduced total Medicare revenue due to Hospital Readmission Reduction Program

Table 2

Range of Penalties	Number of Hospitals	%
No reduction in reimbursement	627	52.9%
<1.00% reduction	330	27.8%
1.00% – 1.99% reduction	114	9.6%
2.00% – 2.99% reduction	60	5.1%
3.00% reduction	55	4.6%

Table 3

Readmissions data for each hospital quintile

Variable	Overall	Hospital Quintiles				
		1 (Non-minority serving hospital)	2	3	4	5 (Minority-serving hospital)
Hospitals, N	1,186	233 (19.7%)	240 (20.2%)	237 (20.0%)	239 (20.1%)	237 (20.0%)
Patients, N (%)	255,250	32,864 (12.9%)	57,711 (22.6%)	58,427 (22.9%)	61,154 (24.0%)	45,094 (17.7%)
Adjusted Readmission Rates (Mean)	18.0%	17.2%	17.5%	17.7%	18.4%	19.2%
Penalized Hospitals (%)	47.1%	32.2%	43.3%	47.7%	51.5%	60.8%
Amount penalized (\$)	\$436 million	\$41 million	\$77 million	\$72 million	\$134 million	\$112 million