Understanding Medicare Disproportionate Share changes for FY 2014
TABLE OF CONTENTS

FY 2014 MEDICARE DISPROPORTIONATE SHARE HOSPITAL AND UNCOMPENSATED CARE PAYMENTS 2
  Overview 2

FY 2014 PAYMENT MECHANICS 3
  Empirically justified DSH payments 3
  Uncompensated Care payments 3
    Total Uncompensated Care payment for each hospital 4
    Per-discharge payments 5
    Eligibility for Uncompensated Care payments 5

PAYMENT IMPACT BY HOSPITAL AND BY AREA 6
  Impact by hospital 6
  Impact by region 7
  Impact by state 8

MEDICARE ADVANTAGE PLAN ISSUES 9

FY 2015 ILLUSTRATIVE DSH CHANGES 11

CONCLUSION 11

DATA RELIANCE AND LIMITATIONS 12

REFERENCES 12

ACKNOWLEDGMENTS 12

APPENDIX 13
Overview
For fiscal year (FY) 2014, Medicare overhauled the methodology for determining the Disproportionate Share Hospital (DSH) payment component of the Inpatient Prospective Payment System (IPPS), which Medicare uses to pay acute care hospitals for inpatient services. Under the new methodology, operating DSH payments are reduced by 75% to create the “empirically justified” DSH payment. A new Uncompensated Care payment offsets much of the 75% reduction to operating DSH payments. Across all providers, the Uncompensated Care payment is expected to be about 70.7% of operating DSH payments under the old methodology. Combined, the total 2014 empirically justified DSH and Uncompensated Care payments are expected to be about 95.7% of the DSH payments under the old methodology—a 4.3% decrease. Capital DSH payments will not change. The changes to the DSH payment methodology are estimated to reduce total IPPS payments by about 0.4%, but the changes by area and by provider can be significant.

Medicare Advantage plans may see a slightly lower reduction in DSH payments to providers, which is due to the methodology used by the Centers for Medicare and Medicaid Services (CMS) to calculate prospective Uncompensated Care payments.

This paper quantifies the changes by area, provides details of the mechanics of the new DSH and Uncompensated Care payments, and discusses issues specific to Medicare Advantage plans.

Changes to the DSH payment methodology are expected to lower DSH payments by approximately 4.3% in total. The impact by area and provider varies significantly.

FFY 2014 MEDICARE DISPROPORTIONATE SHARE HOSPITAL AND UNCOMPENSATED CARE PAYMENTS

Overview
For fiscal year (FY) 2014, Medicare overhauled the methodology for determining the Disproportionate Share Hospital (DSH) payment component of the Inpatient Prospective Payment System (IPPS), which Medicare uses to pay acute care hospitals for inpatient services. Under the new methodology, operating DSH payments are reduced by 75% to create the “empirically justified” DSH payment. A new Uncompensated Care payment offsets much of the 75% reduction to operating DSH payments. Across all providers, the Uncompensated Care payment is expected to be about 70.7% of operating DSH payments under the old methodology. Combined, the total 2014 empirically justified DSH and Uncompensated Care payments are expected to be about 95.7% of the DSH payments under the old methodology—a 4.3% decrease. Capital DSH payments will not change. The changes to the DSH payment methodology are estimated to reduce total IPPS payments by about 0.4%, but the changes by area and by provider can be significant.

Medicare Advantage plans may see a slightly lower reduction in DSH payments to providers, which is due to the methodology used by the Centers for Medicare and Medicaid Services (CMS) to calculate prospective Uncompensated Care payments.

This paper quantifies the changes by area, provides details of the mechanics of the new DSH and Uncompensated Care payments, and discusses issues specific to Medicare Advantage plans.
FY 2014 PAYMENT MECHANICS

Empirically justified DSH payments
For FY 2014, Medicare continues to calculate DSH payments using the prior methodology, but the payment calculated under the prior methodology is reduced by 75%. This component of the payment is referred to as the “empirically justified” DSH payment. As with DSH payments under the prior methodology, the empirically justified DSH is paid prospectively per discharge, on a diagnosis-related group (DRG) weighting and transfer-adjusted basis, with an annual settlement as part of the hospital cost report process.

Uncompensated Care payments
New for FY 2014, Medicare introduced an Uncompensated Care payment, which offsets much of the 75% reduction to the operating DSH payments. As with DSH payments before FY 2014, the Uncompensated Care payment is made prospectively and settled annually according to each hospital’s target Uncompensated Care payment, as part of the hospital cost report process. The Uncompensated Care is paid prospectively as a flat amount per discharge rather than by DRG- and transfer-adjusted, the previous methodology for DSH payments. Figure 1 illustrates the FY 2014 DSH changes on a nationwide basis.

FIGURE 1: ILLUSTRATION OF DSH PAYMENT MECHANICS, NATIONWIDE, FY 2014

- Pre-2014
  - Prior Operating DSH
- FY 2014
  - A: Empirically Justified DSH
    - 25% of prior DSH
  - B: Uncompensated Care Payment
    - 70.7% of prior DSH, nationwide (2014)
    - Paid per discharge, based on hospital’s share of uncompensated care
Total Uncompensated Care payment for each hospital
The FY 2014 total Uncompensated Care payment for each hospital is calculated as the product of three values:

1. **The CMS Office of the Actuary’s FY 2014 estimate of the total DSH payment under the old methodology amount multiplied by 75%.** The FY 2014 “old” DSH estimate is set in the FY 2014 Final Rule with corrections and will not be revised. For FY 2014, the “old” DSH estimate is $12.791 billion, and 75% of this value is $9.593 billion.

2. **An adjustment for the estimated percent decrease in the national rate of uninsured compared to a base of 2013.** In the FY 2014 Final Rule, the estimated percent decrease in the national rate of uninsured was 5.6%: \[
\frac{(17\% - 18\%)}{18\%} \]. This estimated change in uncompensated care is increased by 0.1%, per law, for FY 2014. The resulting adjustment is then \[1 - (5.6\% + 0.1\%)] = 0.943.

3. **Each eligible hospital’s estimated uncompensated care relative to the estimated uncompensated care for all eligible hospitals.** This is based on each hospital’s Medicaid and Supplemental Security Income (SSI) days as a percent of the estimated total for all eligible facilities. The numerator is based on each hospital’s Medicaid and SSI days from the most recent Medicare cost report (FY 2011 or 2010). The denominator reflects the estimated nationwide Medicaid and Medicare SSI days for DSH-eligible hospitals. These values are set in the FY 2014 Final Rule and will not be revised.

In summary, each eligible hospital’s total Uncompensated Care payment for FY 2014 is calculated as:

- **Factor 1:** Estimated FY 2014 DSH under old methodology * 0.75
- **Factor 2:** Estimated decrease in uninsured from calendar year (CY) 2013 to FY 2014
- **Factor 3:** \([\text{Hospital’s Medicaid + SSI days}] / [\text{Estimated nationwide Medicaid + SSI days}]\)

Each of these factors is estimated and finalized as part of the rule-making process. By contrast, even though exchange enrollment has been significantly lower than projected, the estimated rate of uninsured for FY 2014 (and the corresponding total Uncompensated Care payments), will not be restated.

The per discharge payments are settled to each hospital’s total Uncompensated Care payment as part of the cost report settlement process. If prospective Uncompensated Care payments are made to a hospital that is later determined to be ineligible for DSH and Uncompensated Care payments in that fiscal year, then the hospital will be required to refund CMS. Similarly, hospitals that do not receive prospective Uncompensated Care payments, but later are determined to be eligible for the payments in that fiscal year, will receive a lump sum payment from CMS.

---

1 The population of Medicare SSI is generally low-income individuals who are over 65, blind, or disabled. In most states, Medicare SSI individuals are eligible for Medicaid.
Per-discharge payments
Uncompensated Care payments are made on a prospective basis as a per-discharge payment. The per-discharge payment is not adjusted by DRG or for transfers, unlike most IPPS payment components. The per-discharge payment is determined as part of the rule-making process and equals:

The hospital’s estimated total FY 2014 Uncompensated Care payment divided by the hospital’s average annual fee-for-service (FFS) Medicare discharges for FY 2010 through FY 2012

Uncompensated Care payments are considered when calculating inpatient outlier payments. Because the per-discharge payment is not DRG- and transfer-adjusted, the new Uncompensated Care payment will generally dampen outlier payments for low-severity DRGs and increase outlier payments for high-severity DRGs.

Figure 2 shows a sample discharge at St. Joseph Hospital in Tacoma, Washington. (ID: 500108). In this example the total IPPS payment increases by 11% under the new DSH methodology. Because the Uncompensated Care payment is a flat per-discharge payment and the other payment components are adjusted by DRG weight, discharges with a lower DRG weight generally have a higher increase under the new methodology. We expect the average DRG weight for St. Joseph Hospital in 2014 to be higher than the DRG weight for transient ischemia and that the new methodology will have almost no impact in aggregate for this facility.

### FIGURE 2: ILLUSTRATION OF DSH PAYMENT MECHANICS, SAMPLE FY 2014 DISCHARGE

<table>
<thead>
<tr>
<th>DRG: 069 - TRANSIENT ISCHEMIA</th>
<th>DRG - WEIGHT: 0.6948</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAYMENT CATEGORY</strong></td>
<td><strong>OLD METHODOLOGY</strong></td>
</tr>
<tr>
<td>Operating Base + IME</td>
<td>$4,134</td>
</tr>
<tr>
<td>Operating DSH</td>
<td>$623</td>
</tr>
<tr>
<td>Operating Total</td>
<td>$4,757</td>
</tr>
<tr>
<td>Uncompensated Care</td>
<td>$0</td>
</tr>
<tr>
<td>Capital Base + IME</td>
<td>$331</td>
</tr>
<tr>
<td>Capital DSH</td>
<td>$22</td>
</tr>
<tr>
<td>Capital Total</td>
<td>$352</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$5,109</td>
</tr>
</tbody>
</table>

Eligibility for Uncompensated Care payments
Only hospitals that are eligible for the empirically justified DSH (i.e., the DSH payment under the old methodology) are eligible for the new Uncompensated Care payment. Excluded facilities include:

- Providers not paid under IPPS (e.g., Critical Access Hospitals)
- Sole Community Hospitals (SCHs) paid using the hospital-specific rate versus the federal rate\(^2\)
- Maryland hospitals
- Hospitals participating in the Rural Community Hospital Demonstration Program

---

2 Note that SCHs are paid the greater of the hospital-specific rate and the federal rate. The federal rate is the standard IPPS payment methodology and includes empirically justified DSH and Uncompensated Care payments for eligible hospitals. Therefore if the federal rate is greater than the hospital-specific rate, then the SCH would be eligible for DSH and Uncompensated Care payments.
PAYMENT IMPACT BY HOSPITAL AND BY AREA

To develop summary-level impact estimates, we estimated the impact at the provider level using:

- IPPS payment rates for FY 2014 with and without the new DSH and Uncompensated Care payment rules
- Discharge data from FY 2012 MedPAR trended to FY 2014
- Average case mix (DRG weight) from the FY 2014 hospital impact file (reflecting FY 2012 data and FY 2014 DRG weights), trended to estimated FY 2014 coding levels

We calibrated our estimate of the total empirically justified DSH payments and Uncompensated Care payments to match the CMS estimates in the FY 2014 Final Rule. Using these assumptions, we were able to reproduce the CMS estimates of 4.3% reduction to operating DSH payments and a 0.4% reduction to overall IPPS payments.

We aggregated the provider-level results by state, region, and other variables to produce the results in this paper.

Impact by hospital

Figure 3 shows a summary of the impact of FY 2014 DSH/Uncompensated Care changes as a percentage of total IPPS payments across hospitals. The blue bar represents count of hospitals, while the red bar represents the count of FFS discharges (for the associated hospitals). For example, the bars in the -2% to 0% IPPS payment impact range contains approximately 600 hospitals with approximately 13 million expected FY 2014 discharges.
Impact by region

Figure 4 shows a summary of the impact of DSH/Uncompensated Care changes as a percentage of total IPPS payments by region for 2014. While the overall reduction to IPPS is projected to be 0.4% nationwide (shown by the horizontal black line), the impact ranges from a decrease of 2.7% for the Pacific region (Washington, Oregon, California, Alaska) to an increase of 1.6% for the Mountain region (Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming). Puerto Rico is projected to experience a massive increase to overall IPPS reimbursement in 2014, expected to be nearly a 50% increase (off the chart).

A mapping from state to region (Census Division) is shown as Appendix on page 13.

We note that CMS published estimates of the impact of DSH/Uncompensated Care payments on total IPPS payments, by region, in Table 1 of Appendix A of the FY 2014 IPPS Final Rule. Our estimates are close to CMS’s estimates in most cases, but not identical. We are aware of several methodological differences in our analysis relative to CMS’s, which may drive the differences. For estimates by region, we recommend reviewing CMS’s results in Table 1 of Appendix A of the FY 2014 IPPS Final Rule in conjunction with the results in our Figure 4 above.
**Impact by state**

Figure 5 shows the impact of DSH/Uncompensated Care changes as a percentage of total IPPS payments by state for 2014. Figure 5 shows significant variation, reflecting disconnects between historical DSH payments and projected proportions of uncompensated care.

**FIGURE 5: IMPACT OF DSH AND UNCOMPENSATED CARE PAYMENT CHANGES BY STATE, REFLECTS OVERALL PROJECTED CHANGE TO FY 2014 IPPS**

<table>
<thead>
<tr>
<th>STATE</th>
<th>IMPACT OF CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>-0.1%</td>
</tr>
<tr>
<td>AK</td>
<td>-0.4%</td>
</tr>
<tr>
<td>AZ</td>
<td>2.5%</td>
</tr>
<tr>
<td>AR</td>
<td>-0.5%</td>
</tr>
<tr>
<td>CA</td>
<td>-3.2%</td>
</tr>
<tr>
<td>CO</td>
<td>0.9%</td>
</tr>
<tr>
<td>CT</td>
<td>-0.9%</td>
</tr>
<tr>
<td>DC</td>
<td>-1.6%</td>
</tr>
<tr>
<td>DE</td>
<td>-1.5%</td>
</tr>
<tr>
<td>FL</td>
<td>1.2%</td>
</tr>
<tr>
<td>GA</td>
<td>0.2%</td>
</tr>
<tr>
<td>HI</td>
<td>0.2%</td>
</tr>
<tr>
<td>ID</td>
<td>2.3%</td>
</tr>
<tr>
<td>IL</td>
<td>-0.9%</td>
</tr>
<tr>
<td>IN</td>
<td>-0.5%</td>
</tr>
<tr>
<td>IA</td>
<td>-0.6%</td>
</tr>
<tr>
<td>KS</td>
<td>-1.1%</td>
</tr>
<tr>
<td>KY</td>
<td>-1.2%</td>
</tr>
<tr>
<td>LA</td>
<td>0.8%</td>
</tr>
<tr>
<td>ME</td>
<td>-1.5%</td>
</tr>
<tr>
<td>MA</td>
<td>-1.4%</td>
</tr>
<tr>
<td>MI</td>
<td>-1.4%</td>
</tr>
<tr>
<td>MN</td>
<td>-0.7%</td>
</tr>
<tr>
<td>MS</td>
<td>-0.9%</td>
</tr>
<tr>
<td>MO</td>
<td>-1.6%</td>
</tr>
<tr>
<td>MT</td>
<td>-0.5%</td>
</tr>
<tr>
<td>NE</td>
<td>-0.8%</td>
</tr>
<tr>
<td>NV</td>
<td>0.8%</td>
</tr>
<tr>
<td>NH</td>
<td>-0.4%</td>
</tr>
<tr>
<td>NJ</td>
<td>-0.1%</td>
</tr>
<tr>
<td>NM</td>
<td>2.7%</td>
</tr>
<tr>
<td>NY</td>
<td>-0.3%</td>
</tr>
<tr>
<td>NC</td>
<td>-1.1%</td>
</tr>
<tr>
<td>ND</td>
<td>-0.3%</td>
</tr>
<tr>
<td>OH</td>
<td>0.5%</td>
</tr>
<tr>
<td>OK</td>
<td>0.6%</td>
</tr>
<tr>
<td>OR</td>
<td>0.4%</td>
</tr>
<tr>
<td>PA</td>
<td>1.2%</td>
</tr>
<tr>
<td>PR</td>
<td>49.8%</td>
</tr>
<tr>
<td>RI</td>
<td>2.3%</td>
</tr>
<tr>
<td>SC</td>
<td>0.4%</td>
</tr>
<tr>
<td>SD</td>
<td>-0.6%</td>
</tr>
<tr>
<td>TN</td>
<td>0.1%</td>
</tr>
<tr>
<td>TX</td>
<td>-0.1%</td>
</tr>
<tr>
<td>UT</td>
<td>1.6%</td>
</tr>
<tr>
<td>VT</td>
<td>-1.0%</td>
</tr>
<tr>
<td>VA</td>
<td>-0.2%</td>
</tr>
<tr>
<td>WA</td>
<td>-1.7%</td>
</tr>
<tr>
<td>WV</td>
<td>-0.3%</td>
</tr>
<tr>
<td>WI</td>
<td>-0.2%</td>
</tr>
<tr>
<td>WY</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
MEDICARE ADVANTAGE PLAN ISSUES

Medicare Advantage (MA) plans are required by CMS to make empirically justified DSH and Uncompensated Care payments to non-contracted hospitals. Payments to contracted hospitals may or may not include the new Uncompensated Care payments, depending on the contract. In general, contracted providers expect MA plans to make Uncompensated Care payments when the “DSH component” is part of the contracted payment. Besides cash-flow concerns, this was one of the primary reasons CMS made the Uncompensated Care payment a per discharge payment in the FY 2014 Final Rule; it had been intended to be a lump-sum payment in the Proposed Rule.

When making Uncompensated Care payments, MA plans will pay the prospective amounts, specifically the DSH adjustments to the base rate and the Uncompensated Care per discharge amount. This is because MA plans generally do not have a settlement process with hospitals. Below are important items to consider about the FY 2014 Uncompensated Care per discharge amounts:

- The county area adjustments underlying the 2014 MA capitation rates were calculated as a 50%/50% blend of:
  - FFS spending for 2007 through 2011
  - FFS spending for 2007 through 2011, adjusted to reflect the 2013 fee schedules and factors (wage indices and geographic practice cost indices)

Prior to MA payment year 2014, CMS had not adjusted the FFS rates for changes in fee schedules that may have varied significantly between areas. Because the DSH changes go into effect for FY 2014, the 2014 payment rates do not reflect these changes, and MA plans in areas with large increases that are due to the new Uncompensated Care payment may find they have unfavorable financial results in 2014.

The 2015 Advance Notice proposed to adjust the area factors used in the 2015 FFS rates to reflect the new Uncompensated Care payment. In 2015, the MA payment rates are based on FFS costs for the majority of counties.³ For 6-year phase-in counties, 66.7% of the payment rate is based on the county’s FFS costs.

- The per discharge amounts were estimated by CMS in the FY 2014 Final Rule as the expected total FY 2014 Uncompensated Care payments divided by the average annual FFS Medicare discharges based on FY 2010, FY 2011, and FY 2012. Because the expected total FY 2014 Uncompensated Care payments are trended from FY 2010 cost report data and the admit counts are untrended, we expect the prospective or per discharge Uncompensated Care payments to be overstated by 1% to 2%, based on CMS’s estimate that FFS Medicare discharges will increase slightly from FY 2010 to FY 2014.

- CMS’s estimate of Factor 1 in the Uncompensated Care payment formula is based on 2014 DSH payment levels that are about 6% higher than the prospective empirically justified DSH amounts in the 2014 PC Pricer software released by CMS. Our understanding is that CMS expects 2014 empirically justified DSH payments to increase from the prospective amounts in the PC Pricer, which would be due to Medicaid expansion increasing the Medicaid ratio component of the empirically justified DSH calculation.

³ The ACA dictates that MA county rates are a function of fee-for-service costs. The transition from pre-ACA rates to ACA rates occurs over two, four, or six years, depending on the county’s difference between 2010 MA rates and FFS costs. Two and four year counties have already fully transitioned to ACA rates.
The Uncompensated Care payments are distributed based on each hospital's Medicaid and Medicare SSI days for all Part A eligible beneficiaries—days for both MA and FFS Medicare beneficiaries. However, the per discharge payments are developed using only FFS Medicare admissions. All things being equal, providers with a high ratio of MA to FFS Medicare admissions will benefit more from the Uncompensated Care payment formula than providers with a lower ratio.

Figure 6 illustrates this dynamic. It shows a summary of the impact of DSH/Uncompensated Care changes as a percentage of total IPPS payments for 2014, grouped by each hospital's county quartile of MA penetration. For example, the average impact for hospitals in counties with the highest MA membership as a percentage of eligible enrollees is shown on the right.

For the counties with the lowest MA penetration, we project that the overall impact to FY 2014 IPPS payments will be a 1.1% decrease, on average. By contrast, for the counties with the highest MA penetration, we project that the overall impact to FY 2014 IPPS payments will be a 0.1% decrease, on average.

The county quartiles are as follows:

Quartile 1: < 9.6% MA penetration, average of 6% penetration
Quartile 2: 9.6% to 17.5% MA penetration, average of 14% penetration
Quartile 3: 17.5% to 27.4% MA penetration, average of 22% penetration
Quartile 4: > 27.4% MA penetration, average of 41% penetration

As discussed in the section above, the impact of the Uncompensated Care payment on total inpatient payments varies significantly by area. MA plans will want to monitor the impact of these changes and use this information in developing their 2015 bids.
FY 2015 ILLUSTRATIVE DSH CHANGES

FY 2015 could see further decreases to DSH payments, driven by updates to Factor 2 in the Uncompensated Care payment formula, which reflects the projected decrease in the national uninsured rate. Factor 2 in 2015 will consider the FY 2015 uninsured rate relative to the 2013 uninsured rate. Current Congressional Budget Office (CBO) estimates of the 2013 uninsured rate are approximately 18%. Significant improvements in the uninsured rate will have a significant impact on the Factor 2 calculations, as illustrated below.

The FY 2014 Final Rule uses a 17% uninsured rate estimate for FY 2014, relative to an 18% uninsured rate for CY 2013:

- Improvement in uninsured rate: \( \text{abs}[(17\% - 18\%) / 18\%] = 5.6\% \)
- Additional adjustment: 0.1%, per law, for FY 2014
- Final Factor 2: \( 1 - (5.6\% + 0.1\%) = 0.943 \)

Assuming a 16% uninsured rate for FY 2015, relative to an 18% uninsured rate for CY 2013:

- Improvement in uninsured rate: \( \text{abs}[(16\% - 18\%) / 18\%] = 11.1\% \)
- Additional adjustment: 0.2%, per law, for FY 2015
- Final Factor 2: \( 1 - (11.1\% + 0.2\%) = 0.887 \)

Likewise, a 15% uninsured rate for FY 2015 would bring Factor 2 down to 0.831. If the uninsured rate remains 17% in FY 2015, the FY 2015 Factor 2 value would stay relatively flat at 0.942.

While Factor 2 does not impact the empirically justified DSH payment, decreases to Factor 2 have a direct impact on the Uncompensated Care payment and a corresponding impact on the overall IPPS reimbursement for DSH-eligible hospitals.

CONCLUSION

FY 2014 brings significant changes to the methodology used to calculate DSH payments. While the nationwide impact to total FY 2014 IPPS payments is projected to be a small decrease, the impact varies significantly by hospital and by region. Because MA plans generally do not have a settlement process with hospitals, they will pay prospective Uncompensated Care amounts to non-contracted hospitals and contracted hospitals where payments include the “DSH component,” which may be slightly overstated relative to final (settled) fee-for-service DSH payments. Aggregate DSH payments may continue to decline in FY 2015 as the percentage of uninsured Americans decreases.
DATA RELIANCE AND LIMITATIONS

In performing our analysis, we relied on data and other information published by the Centers for Medicare and Medicaid Services (CMS) and the Congressional Budget Office (CBO). We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

The estimates presented in this report are based on Milliman research and on our experience in working with health plans and healthcare providers. Our projected estimates are not predictions of the future; they are projections based on the assumptions. Actual experience will vary from our estimates for many reasons, including differences in case mix, in utilization patterns, and in the delivery of healthcare services, as well as other nonrandom and random factors. It is important to monitor actual experience and make adjustments as appropriate.

We are members of the American Academy of Actuaries, and we meet the qualification standards for performing the analyses in this report.

REFERENCES


ACKNOWLEDGMENTS

We wish to acknowledge Darcy Allen for providing peer review of this report. We also appreciate the contributions of Ed Jhu and John Pickering.
APPENDIX

Census Regions and Divisions of the United States

[Map of the United States showing regions and divisions]
Milliman is among the world’s largest providers of actuarial and related products and services. The firm has consulting practices in healthcare, property & casualty insurance, life insurance and financial services, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

milliman.com

CONTACT
For further information, please contact your local Milliman office or:

Charlie Mills
charlie.mills@milliman.com

Kathryn Rains-McNally
kathryn.rains-mcnally@milliman.com

1301 Fifth Avenue
Suite 3800
Seattle, WA 98101

The opinions stated in this article are those of the authors and not Milliman Inc. This material is intended solely for educational purposes and presents information of a general nature. It is not intended to guide or determine any specific individual situation and persons should consult qualified professionals before taking specific actions. Neither the authors nor the authors’ employer shall have any responsibility or liability to any person or entity with respect to damages alleged to have been caused directly or indirectly by the content of this material. This material may be used solely for personal noncommercial purposes. This material may not be copied, distributed, republished, uploaded, posted, or transmitted in any way without the prior written consent of Milliman.

Copyright © 2014 Milliman Corporation. All rights reserved.