Data on Differences in Medicare Advantage (MA) and Part D Star Rating Quality Measurements for Socioeconomic Status

Review of Internal Analyses and Responses to Request for Information

Center for Medicare,
Medicare Drug Benefit and C & D Data Group

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Public Release

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Issue

A number of MA and Part D plans believe that plans with a high percentage of dual eligible (Dual) and/or LIS enrollees are disadvantaged in the current Star Ratings Program.

RFI Submissions

- A Request for Information (RFI) was issued that sought:
  - Analyses and research that demonstrated that dual status causes lower MA and Part D quality measure scores.
  - Research that demonstrates that high quality performance in MA or Part D plans can be achieved in plans serving dual eligible beneficiaries.
- In response to the RFI, CMS received over 65 submissions from organizations, sponsors, researchers, and associations. Approximately half of the submissions were quantitative in nature.

Note: The comparisons contained within this presentation are limited to quantitative submissions that employed statistical significance testing.

RFI Submissions

- Advantages:
  - Access to detailed patient-level data.
  - Varied methodologies.
  - Ability to share best practices.
- Disadvantages:
  - Limited generalizability since contract specific.
  - Many submissions did not use statistical tests.

Internal Research

- CMS conducted a series of research studies, both internally and in conjunction with contractors.

- Advantages:
  - Access to Star Ratings data across contracts and at different levels of measurement (e.g., beneficiary, plan-level, contract-level).
  - Ability to link beneficiary-level datasets.
  - Employed advanced statistical methodologies.

Internal Research

- In our analyses, we adjusted performance measures using modeling and examined:*
  - The effect of Dual/LIS status alone with and without contract fixed effects;
  - The effect of Dual/LIS status when controlling for Dual/LIS status, age, sex, and race/ethnicity with contract fixed effects;
  - The effect of controlling for self-rated health status, education, and age;
- In addition, we examined:
  - Differences in performance on measures within contracts disaggregated by the percentage of Dual/LIS in the contract.
  - Differences in Star Ratings based on percentage of Dual/LIS in the contract.
  - Differences is measure performance per measure between Dual/LIS and non-Dual/non-LIS between groups based on percentage of Dual/LIS in a contract for Duals/LIS.

* *The list is not exhaustive of all research conducted to-date.*

Interpretation of Results

Note:

- Regardless of the statistical methodology employed, statistically significant results do not imply practical (meaningful) significance. Given the large quantity of data available for internal research, the practical significance was evaluated in addition to the statistical significance.
  - *Large sample sizes can lead to significant results that are not meaningful in nature. For example, an odds ratio of 0.99 may result in a rejection of the null hypothesis, but in a practical sense, does not lead to the interpretation of a difference in likelihood between the two groups.*

Measures Examined

- There are 46 Part C and D Star Rating measures for 2015. A total of 19 measures were included in the extensive review.
  - In general, a measure was *excluded* from the analysis if:
    - The measure was already case-mix adjusted for socio-economic status*;
    - The focus of the measurement was not a beneficiary-level issue, but rather, a plan-level issue;
    - The measure was being retired/revised; or
    - It was a measure for Special Needs Plans (SNPs) only.

**Plan All-Cause Readmissions (HEDIS) is an adjusted measure, but it is not adjusted for socio-economic status. We are monitoring any changes to the Fee-For-Service measure for readmissions to ensure alignment in the specification.*

Measures Examined

Part C Measures*

- Breast Cancer Screening (HEDIS)
- Colorectal Cancer Screening (HEDIS)
- Annual Flu Vaccine (HEDIS/CAHPS)
- Adult BMI Assessment (HEDIS)
- Osteoporosis Management in Women who had a Fracture (HEDIS)
- Diabetes Care – Eye Exam (HEDIS)
- Diabetes Care – Kidney Disease Monitoring (HEDIS)
- Diabetes Care – Blood Sugar Controlled (HEDIS)
- Controlling Blood Pressure (HEDIS)
- Rheumatoid Arthritis Management (HEDIS)
- Monitoring Physical Activity (HEDIS/HOS)
- Reducing the Risk of Falling (HEDIS/HOS)
- Plan All-Cause Readmissions (HEDIS)

Part D Measures

- High Risk Medication
- Diabetes Treatment
- Medication Adherence for Diabetes Medication (Oral)
- Medication Adherence for Hypertension (RAS antagonists)
- Medication Adherence for Cholesterol (Statins)

Part C & Part D Measures

- Complaints about the Health or Drug Plan

**Appeals measures were excluded from the preliminary analysis, but CMS plans to examine them in the future.*

Excluded measures are listed in the Appendix.

Overall Findings

- Analyses to date show some evidence of differential outcomes for a small subset of measures examined; however, there is no evidence to definitely identify low-income status as driving these differences or other factors such as comorbidities, original reason for entitlement, education, race/ethnicity, etc.
    - For some measures, the magnitude and/or direction of the association dissipated or reversed after controlling for factors such as age, self-reported health status, education, sex, and race/ethnicity.
- In some cases, there are no differential outcomes by Dual/LIS status.
- MedPAC analyses suggest that original reason for entitlement could be driving differences rather than low income status.
- Where there are differential outcomes, more analysis is needed to identify the drivers of differences.

Recommendations

Criteria for Recommendation

The following definition for a *strong association* was applied for the basis of the recommendations for the 19 measures examined:

*A strong association** has a median absolute difference in performance between LIS and non-LIS greater than or equal to 5% and/or a measure having no contracts where LIS enrollees perform as well or better than non-LIS enrollee within the contract.

* *The criteria for a 'strong association' uses the variance adjusted values for the difference between the LIS and non-LIS rates per contract.*

Short-Term Recommendation

- 10 out of 19 measures analyzed do not have a *strong association** with Dual/LIS status.
  - We recommend no changes to the measure specifications, but will continue to examine them.
- 9 of the 19 measures revealed a *strong association* with Dual/LIS status.
  - For 7 of the 9 measures, we recommend additional research and a modification of their weights for the 2016 Star Ratings Program.
  - For 2 of the measures, we recommend further research, but no modification of their weights for the 2016 Star Ratings Program.

* *The definition of a 'strong association' is provided on the previous slide.*

Additional Research Recommendation

- Since there is no clear indication that dual status is the sole underlying factor of the observed differences and perhaps, there may be multiple factors driving scores, CMS recommends additional research.*
  - Prematurely acting on an observed association and permanently modifying the Star Rating Methodology by classifying the effect as a Dual/LIS effect may have unintended consequences such as masking true disparities in care or controlling for the incorrect underlying factor.

** This recommendation aligns with MedPAC and others who suggested the need for research to identify if the differences are due to Dual/LIS status or other factors.*

Additional Research Recommendation*

- The additional research will be conducted on the measures that were found to have a strong association because:
  - There is no clear indication that the Dual/LIS status is the primary driver of the differences.
  - Even with a strong association, in many cases, there are contracts that are performing well on the quality measures.
  - Our preliminary research and others (MedPAC) have shown that there may be factors other than Dual/LIS driving these differences.

** The research will primarily focus on the set of nine measures initially identified with a strong association (refer to slides 28 through 41), but will extend to all relevant Star Ratings measures.*

Weighting Recommendation

- The MA Star Ratings Program employs a solid, reliable methodology. CMS continuously reviews the methodology and seeks to enhance the methodology to improve the Star Ratings Program, incentivize plans, and provide information that is a true reflection of the performance and experience of the enrollees. CMS cannot risk masking disparities in care or the integrity of the Star Ratings Program by implementing long term changes that are not grounded in scientific evidence.

- However, to provide relief to plans that are serving a large number of Dual or LIS beneficiaries, CMS is proposing to reduce by 50 percent the weight of seven targeted measures. (Proposed Approach referred to as the Weighting Recommendation)

Measures Recommended for Additional Research and a 2016 Weighting Modification*

- Part C
  - Breast Cancer Screening
  - Colorectal Cancer Screening
  - Diabetes Care – Blood Sugar Controlled
  - Osteoporosis Management in Women who had a Fracture
  - Rheumatoid Arthritis Management
  - Reducing the Risk of Falling

- Part D (For PDPs only)
  - Medication Adherence for Hypertension (RAS antagonists)

**The modified weights would be applied only to the individual measure stars for this subset of measures and would not be incorporated into the measure weights used for the improvement measures.*

Weighting Recommendation

- MA and 1876 Contracts will have the weights for the following subset of measures adjusted for the 2016 Star Ratings calculations:
  - Breast Cancer Screening (HEDIS)
  - Colorectal Cancer Screening (HEDIS)
  - Osteoporosis Management in Women who had a Fracture (HEDIS)
  - Diabetes Care – Blood Sugar Controlled (HEDIS)
  - Rheumatoid Arthritis Management (HEDIS)
  - Reducing the Risk of Falling (HEDIS/HOS)

Weighting Recommendation

- PDPs only will have the weight for the following measure adjusted for the 2016 Star Ratings calculations:
  - Medication Adherence for Hypertensions (RAS Antagonists)

* *The weight of this measure will remain unchanged for MA-PDs based on the preliminary research.*

Weighting Recommendation

Modified Weights: Each of the seven measures recommended for a revised weight will have their weights reduced to one-half of the 2015 Star Ratings weight for the measure.

Measure	2015 Weight	2016 Revised Weight
Contract Type: MA and 1876		
Breast Cancer Screening	1.0	0.5
Colorectal Cancer Screening	1.0	0.5
Osteoporosis Management in Women who had a Fracture	1.0	0.5
Diabetes Care – Blood Sugar Controlled	3.0	1.5
Rheumatoid Arthritis Management	1.0	0.5
Reducing the Risk of Falling	1.0	0.5
Contract Type: PDP		
Medication Adherence for Hypertensions (RAS Antagonists)	3.0	1.5

Weighting Recommendation

- This is an *interim step* while CMS conducts additional research about what is driving the association.

- Long-term adjustments should be based on further in-depth examination of the issue by CMS and its HHS partners in quality measurement.
  - We will share the RFI and research findings with the measure developers, ASPE, and other parties for their review and consideration as we continue our internal research.

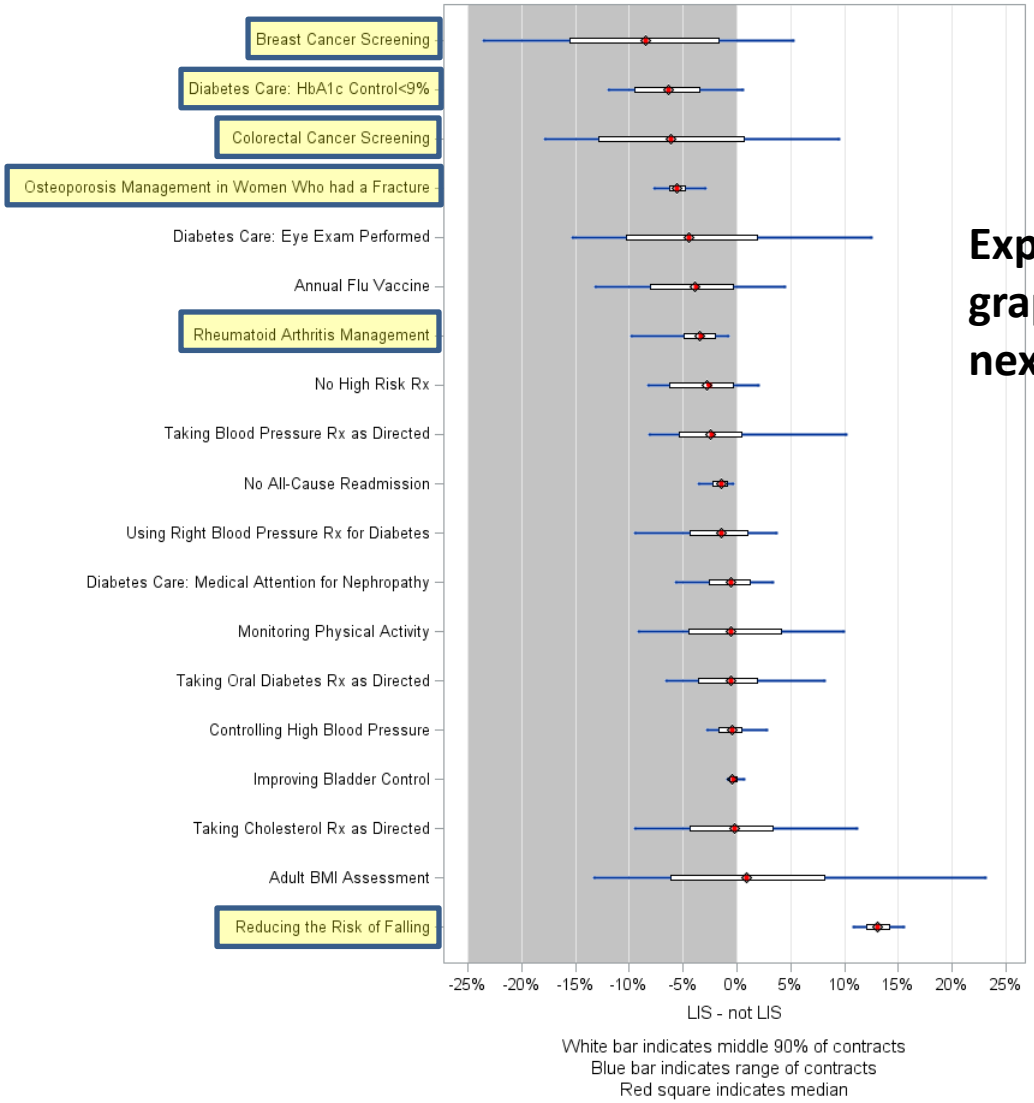
No Changes Currently Recommended in Measure Specifications

- Part C
  - Annual Flu Vaccine*
  - Adult BMI Assessment
  - Diabetes Care – Eye Exam*
  - Diabetes Care – Kidney Disease Monitoring*
  - Controlling Blood Pressure
  - Monitoring Physical Activity
  - Plan All-Cause Readmissions*
- Part D (For MA-PDs)
  - High Risk Medication*
  - Diabetes Treatment
  - Medication Adherence for Hypertension (RAS antagonists)*
  - Medication Adherence for Diabetes Medications*
  - Medication Adherence for Cholesterol (Statins)
- Part D (PDPs)
  - Diabetes Treatment*
  - Medication Adherence for Diabetes Medications*
  - Medication Adherence for Cholesterol (Statins)*

**Research indicates statistical significance, but the criteria was not met for inclusion in the weighting recommendation.*
Note: Detailed research findings for these measures are included in the Appendix.

Summary of Research and RFI Analysis for Measures Recommended for Further In-depth Examination

Variation between Dual/LIS and non-Dual/non-LIS Beneficiaries for MA Contracts*



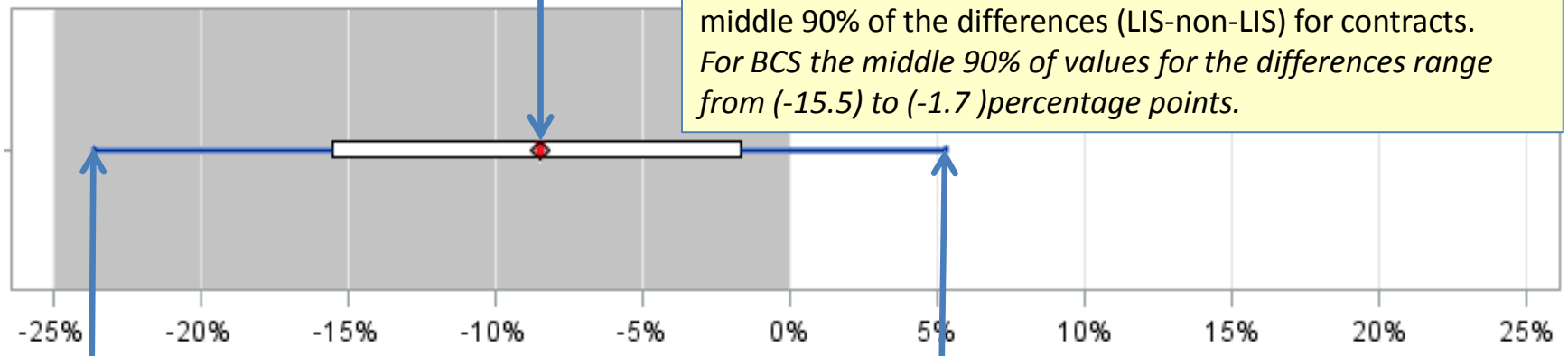
Explanation of graphic is on the next slide.

* *Highlighted measures are recommended for additional in-depth research and a weighting modification. Complaints about the Health Plan or Drug Plan is recommended for further in-depth research, but not included in the visual.*

Interpretation of Visual for Breast Cancer Screening (BCS)

The red square represents the median difference between LIS and non-LIS rates for the measure for contracts. *For BCS the median difference is (-8.5) percentage points.*

The width of the white rectangle represents the range of the middle 90% of the differences (LIS-non-LIS) for contracts. *For BCS the middle 90% of values for the differences range from (-15.5) to (-1.7)percentage points.*

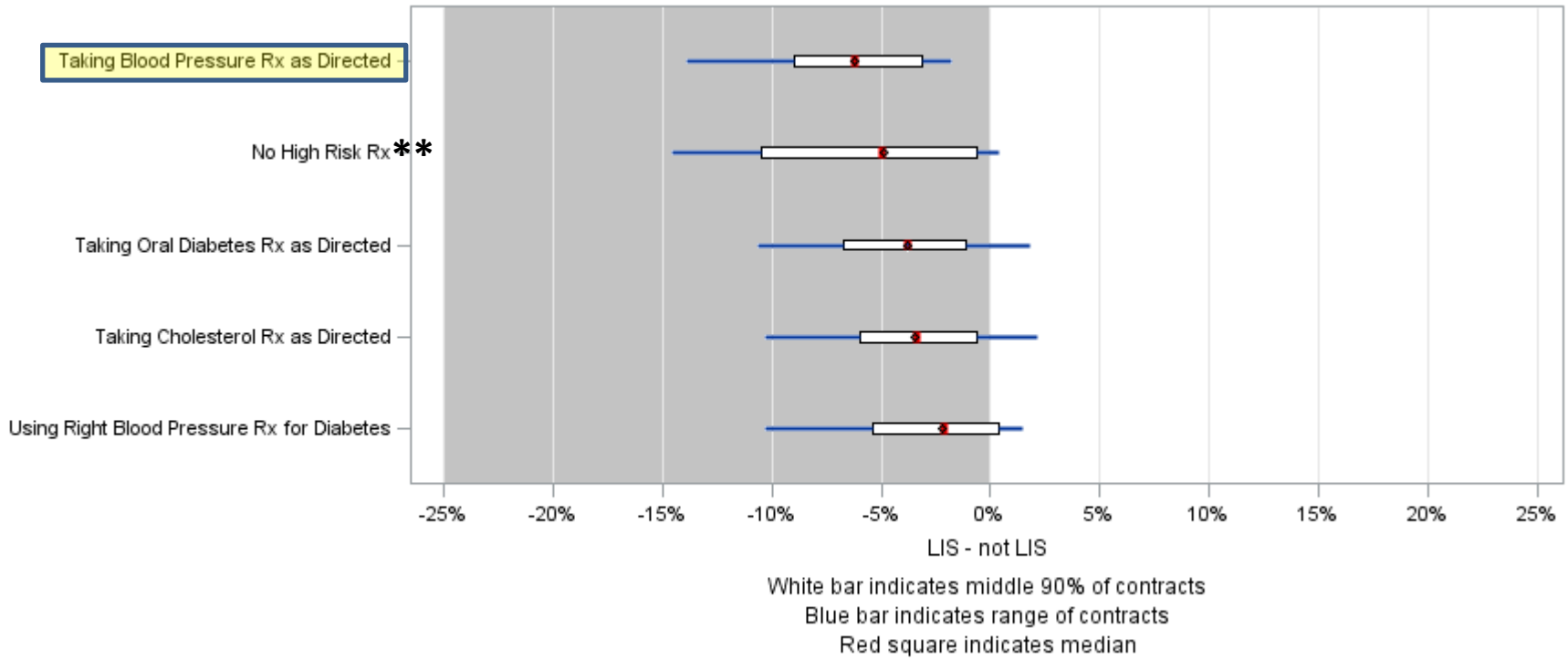


The estimated minimum value for the difference between LIS and non-LIS for a contract is the value that is represented by the first point on the blue line. *For BCS the estimated minimum difference between LIS and non-LIS for a contract is (-23.6) percentage points.*

The estimated maximum value for the difference between LIS and non-LIS for a contract is the value that is represented by the end point on the blue line. *For BCS the estimated maximum difference between LIS and non-LIS for a contract is 5.3 percentage points.*

The horizontal axis represents the difference in the LIS and nonLIS performance rates per contract. The estimated (variance adjusted) difference and not the raw difference between the groups is employed because it removes the effect of noise (sampling error) that otherwise would be present. Unadjusted differences (without the correction for noise) upwardly biases the range and would result in a larger than true range for the LIS-nonLIS differences. The use of either observed values or the estimates based on modeling would minimally impact the median. The adjusted median is represented in the visual (red square).

Variation between Dual/LIS and non-Dual/non-LIS Beneficiaries for PDP Contracts*



** The highlighted measure is recommended for additional in-depth research and a weighting modification.*

***The graphic depicts the complement of the High Risk Medication (HRM) measure rates for PDP contracts. Although the preliminary research revealed a strong association for High Risk Medication, the measure is a provider-related measure, not driven by beneficiary behavior and therefore, is recommended for further in-depth research, but not a modification of its weight.*

Breast Cancer Screening

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Breast Cancer Screening rates. This association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a high degree of variation in the difference between LIS and non-LIS scores in contracts.
- There is a significant difference in the mean rates *between* LIS and non-LIS for contracts with less than 50% Dual/LIS.
- Mean LIS performance does not vary significantly by percentage of LIS *within* contract.
- Mean non-LIS performance does vary significantly by percentage of LIS *within* contract.

Breast Cancer Screening continued on next slide.

Breast Cancer Screening

CMS Internal Research	RFI Responses*

• Education, self-rated health status, and dual status are associated with Breast Cancer Screening (BCS) rates:
  • Education has a moderate positive association with BCS rates when controlling for self-rated health status, age and dual status.
  • Dual status has a moderate negative association with BCS rates when controlling for education, age and self-rated health status.
  • Self-rated health status has a strong positive association with BCS rates when controlling for age, education, and dual status.
	• Analyzed by 15 submitters with 10 employing statistical significance testing:
	  • Several analyses found that Duals (as a group) experienced lower performance outcomes as compared to non-Duals (as a group) (n = 6).
	  • Some studies found no difference in performance outcomes between Duals and non-Duals (n = 3).
	  • One study (in Puerto Rico) found that Duals experienced better performance outcomes as compared to non-Duals.

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

**Dual eligible and/or LIS enrollees are referenced as 'Duals' in the slides.*

Colorectal Cancer Screening

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Colorectal Cancer Screening rates. This association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a high degree of variation in the mean difference between LIS and non-LIS scores in contracts.
- There is a significant difference in the mean rates between LIS and non-LIS for contracts with less than 25% Dual/LIS.
- Mean LIS performance does not vary significantly by percentage of LIS *within* contract.
- Mean non-LIS performance does vary significantly by percentage of LIS *within* contract.

Colorectal Cancer Screening continued on next slide.

Colorectal Cancer Screening

CMS Internal Research	RFI Responses

• Education has a moderate positive association with Colorectal Cancer Screening rates when controlling for self-rated health status, age and dual status.	• Analyzed by 17 respondents with 12 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n = 7).
	  • A few found no difference in performance outcomes between the between Duals and non-Duals (n = 3).
	  • A couple found that Duals experienced better performance outcomes as compared to non-Duals (n = 2).

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

Diabetes Care – Blood Sugar Controlled

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Diabetes Care – Blood Sugar Controlled rates. This association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
- Significant differences *between* the mean rates for LIS and non-LIS enrollees for contracts with a low percentage (less than 50%) of LIS enrollees.

Diabetes Care – Blood Sugar Controlled continued on next slide.

Diabetes Care – Blood Sugar Controlled

CMS Internal Research	RFI Responses

• Mean LIS performance does not vary significantly by percentage of LIS *within* contract.
• Mean non-LIS performance does vary significantly by percentage of LIS *within* contract.
• There is a moderate positive association with self-rated health status when controlling for age, education, and Dual Eligibility.
	• Analyzed by 16 respondents with 12 employing statistical significance tests:
	  • Most studies found that Duals experienced lower performance outcomes as compared to non-Duals (n = 8).
	  • Several found no difference in performance outcomes between the between Duals and non-Duals (n=3).
	  • One found that Duals experienced better performance outcomes as compared to non-Duals.

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

Osteoporosis Management in Women who had a Fracture

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Osteoporosis Management in Women who had a Fracture rates. This association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a low degree of variation in the mean difference between LIS and non-LIS scores in contracts.
- Significant difference *between* the mean rates for LIS and non-LIS enrollees for contracts with less than 25% of Dual/LIS enrollees.
- Mean LIS performance does not vary significantly by percentage of LIS *within* contract.

Osteoporosis Management in Women who had a Fracture continued on next slide.

Osteoporosis Management in Women who had a Fracture

CMS Internal Research	RFI Responses

• Mean non-LIS performance does vary significantly by percentage of LIS *within* contract.	• Analyzed by 17 respondents with 13 employing statistical significance testing:
	  • Several studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=3).
	  • The majority found no difference in performance outcomes between the between Duals and non-Duals (n=8).
	  • A couple found that Duals experienced better performance outcomes as compared to non-Duals (n=2).

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

Rheumatoid Arthritis Management

CMS Internal Research	RFI Responses
• Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Rheumatoid Arthritis Management rates. This association remains after controlling for age, sex, and race/ethnicity. • Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts. • Significant difference *between* the mean rates for LIS and non-LIS enrollees for contracts with less than 25% of LIS enrollees. • Mean LIS and non-LIS performance does vary significantly by percentage of LIS *within* contract.	Analyzed by 19 respondents with 13 employing statistical significance testing: • Several studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=4). • Many found no difference in performance outcomes between the between Duals and non-Duals (n=9).

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

Reducing the Risk of Falling

CMS Internal Research	RFI Responses
• Controlling for contract effects and Dual/LIS status, there is a statistically significant positive association between Dual/LIS status and Reducing the Risk of Falling rates. This association remains after controlling for age, sex, and race/ethnicity. • Overall, there is a low degree of variation in the difference between LIS and non-LIS scores in contracts.	• Two respondents analyzed this measure; neither used statistical significance tests.

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors such as comorbidities and original reason for entitlement.

Medication Adherence for Hypertension (RAS antagonists) for PDPs

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Medication Adherence for Hypertension for PDPs. This association remains after controlling for age, sex, and race/ethnicity for PDPs.
- Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
- There is a significant difference *between* the mean rates for LIS and non-LIS enrollees for overall mean contract-level adherence rates.

Medication Adherence for Hypertension (RAS antagonists) for PDPs continued on next slide.

Medication Adherence for Hypertension (RAS antagonists)

CMS Internal Research	RFI Responses*

• Mean LIS performance does vary significantly by percentage of LIS *within* for PDPs contracts.	• Analyzed by 19 respondents with 14 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=10).
	  • Several found no difference in performance outcomes between the between Duals and non-Duals (n=3).
	  • One found that Duals experienced better performance outcomes as compared to non-Duals.

Interpretation: Recommend additional research to understand whether the relationship is driven primarily by Dual/LIS status or other factors within PDP contracts.

** Responses were not limited to PDPs only.*

High Risk Medication for PDPs

CMS Internal Research	RFI Responses*

• Controlling for contract effects and Dual/LIS status, there is a statistically significant association between Dual/LIS status and High Risk Medication. This association remains after controlling for age, sex, and race/ethnicity.
• Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
	• Analyzed by 16 respondents with 12 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=11).
	  • One found no difference in performance outcomes between the between Duals and non-Duals.

Interpretation: Recommend further analysis to understand associations, including where it is related to measure exclusions (e.g. , excluding current users of high risk mediations who turn 65), and/or organization type differences (e.g. delivery of care models - MA-PDs vs PDPs).

** Responses were not limited to PDPs only.*

Complaints about the Health or Drug Plan

CMS Internal Research	RFI Responses
• LIS beneficiaries were less likely to file a complaint about their health or drug plans.	• One respondent analyzed this measure, but statistical significance tests were not used.

Interpretation: Recommend additional research, including research on the feasibility of case-mix adjustment (similar to CAHPS).

Appendices

- **Measures Excluded from Analysis**
- **Measure Findings: Current Recommendation of No Changes to Specifications**

Measures Excluded from Analysis

Part C Measures Excluded

- Cardiovascular Care – Cholesterol Screening (retired)
- Diabetes Care – Cholesterol Screening (retired)
- Diabetes –Cholesterol Controlled (retired)
- HOS measures of Improving or Maintaining Physical/Mental Health (case-mix adjusted)
- Improving Bladder Control (NCQA currently revising specifications)
- CAHPS measures except flu (case-mix adjusted)
- SNP Care Management (SNP only)
- Care for Older Adults measures (SNP only)
- Members Choosing to Leave the Plan (examined previously)
- Health Plan Quality Improvement (aggregation of individual measures)
- Appeals measures (future examination planned)

Part D Measures Excluded

- CAHPS measures (case-mix adjusted)
- Members Choosing to Leave the Drug Plan (examined previously)
- Drug Plan Quality Improvement (aggregation of individual measures)
- Appeals measures (future examination planned)
- Medicare Plan Finder Price Accuracy (not a beneficiary-level issue)

Measure Findings:
Current Recommendation of No Changes to Specifications

Annual Flu Vaccine

CMS Internal Research	RFI Responses
• Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Annual Flu Vaccine rates. • There is no association for Dual/LIS status when controlling for additional individual characteristics (age, sex, and race/ethnicity). • Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.	• Analyzed by two respondents, but neither employed statistical significance testing.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Adult BMI Assessment

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant positive association between Dual/LIS status and Adult BMI Assessment rates. This association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a high degree of variation in the mean difference between LIS and non-LIS scores in contracts.
- No significant differences *between* the mean rates for LIS and non-LIS enrollees per group of contracts based on the percentage of LIS enrollees for contracts.
- Mean LIS performance does not vary significantly by percentage of LIS *within* contract.

Adult BMI Assessment continued on next slide.

Adult BMI Assessment

CMS Internal Research	RFI Responses

• Mean non-LIS performance does vary significantly by percentage of LIS *within* contract.	• Analyzed by 12 respondents with 8 employing statistical significance testing:
	  • The majority of studies found no difference in performance outcomes between the between Duals and non-Duals (n=5).
	  • Some found that Duals experienced better performance outcomes as compared to non-Duals (n=3).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Diabetes Care – Eye Exam

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Diabetes Care-Eye Exam rates.
- There is no association for Dual/LIS status when controlling for additional individual characteristics (age, sex, and race/ethnicity).
- Overall, there is a high degree of variation in the mean difference between LIS and non-LIS scores in contracts.
- Significant differences *between* the mean rates for LIS and non-LIS enrollees for contracts with either a low percentage (less than 25%) or high percentage (greater than 75%) of LIS enrollees.

Diabetes Care – Eye Exam continued on next slide.

Diabetes Care – Eye Exam

CMS Internal Research	RFI Responses

• Mean LIS performance does vary significantly by percentage of LIS *within* contract.
• Mean non-LIS performance does not vary significantly by percentage of LIS *within* contract.
• Education and age are associated with Diabetes Care - Eye Exam rates:
  • Education has a strong positive association with Diabetes Care - Eye Exam rates when controlling for self-rated health status, age and dual status.
  • Age has a strong positive association with Diabetes Care - Eye Exam rates when controlling for education, age and self-rated health status.
	• Analyzed by 15 respondents with 10 employing statistical significance testing:
	  • Several studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=3).
	  • Half of the studies found no difference in performance outcomes between the between Duals and non-Duals (n=5).
	  • A couple found that Duals experienced better performance outcomes as compared to non-Duals (n=2).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Diabetes Care – Kidney Disease Monitoring

CMS Internal Research	RFI Responses
• Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Diabetes Care – Kidney Disease Monitoring rates. • No significant association for Dual/LIS in analysis that included additional individual characteristics (age, sex, and race/ethnicity). • Overall, there is a moderate degree of variation in the mean difference between LIS and non-LIS scores in contracts. • No difference *between* the mean rates for LIS and non-LIS enrollees for contracts based on percentage of LIS enrollees. • Mean LIS performance does not vary significantly by percentage of LIS or non-LIS *within* contract.	Analyzed by 16 respondents with 11 employing statistical significance testing: • One study found that Duals experienced lower performance outcomes as compared to non-Duals. • Over half found no difference in performance outcomes between the between Duals and non-Duals (n=6). • Several found that Duals experienced better performance outcomes as compared to non-Duals (n= 4).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Controlling Blood Pressure

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is not a statistically significant negative association between Dual/LIS status and Controlling Blood Pressure rates. This lack of association remains after controlling for age, sex, and race/ethnicity.
- Overall, there is a low degree of variation in the difference between LIS and non-LIS scores in contracts.
- No significant differences *between* the mean rates for LIS and non-LIS enrollees per group of contracts based on the percentage of LIS enrollees for contracts.

Controlling Blood Pressure continued on next slide.

Controlling Blood Pressure

CMS Internal Research	RFI Responses
• Mean LIS performance does vary significantly by percentage of LIS *within* contract. • Mean non-LIS performance does vary significantly by percentage of LIS *within* contract. • Moderate positive association with education after controlling for education, Dual Eligibility, and age.	• Analyzed by 7 respondents with 4 employing statistical significance testing: • All studies found no difference in performance outcomes between the between Duals and non-Duals.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Monitoring Physical Activity

CMS Internal Research	RFI Responses
• Controlling for contract effects and Dual/LIS status, there is no statistically significant association between Dual/LIS status and Monitoring Physical Activity rates. • Statistically significant negative association for Dual/LIS in analysis that included additional individual characteristics (age, sex, and race/ethnicity). • Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.	• Two respondents analyzed this measure; neither used statistical significance tests.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Plan All-Cause Readmissions*

CMS Internal Research	RFI Responses

• Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Plan All-Cause Readmissions rates. This association remains after controlling for age, sex, and race/ethnicity.
 	
**Plan All-Cause Readmissions (HEDIS) is an adjusted measure, but it is not adjusted for socio-economic status. We are monitoring any changes to the Fee-For-Service measure for readmissions to ensure alignment in the specification.*
	• Analyzed by 8 respondents with 7 employing statistical significance testing:
	  • A couple of studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=2).
	  • Several studies found no difference in performance outcomes between the between Duals and non-Duals (n=3).
	  • A couple found that Duals experienced better performance outcomes as compared to non-Duals (n=2).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Diabetes Treatment

CMS Internal Research	RFI Responses

• Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Diabetes Treatment. This association remains after controlling for age, sex, and race/ethnicity.
 	
• Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
	• Analyzed by 11 respondents with 8 employing statistical significance testing:
	  • One study found that Duals experienced lower performance outcomes as compared to non-Duals.
	  • The majority of studies found no difference in performance outcomes between the between Duals and non-Duals (n=6).
	  • One found that Duals experienced better performance outcomes as compared to non-Duals.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Medication Adherence for Diabetes Medications

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Diabetes Adherence for MA-PDs.
- A significant positive association for Dual/LIS in analysis that included additional individual characteristics (age, sex, and race/ethnicity) for MA-PDs.
- Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
- No significant difference *between* the mean rates for LIS and non-LIS enrollees for overall mean contract-level adherence rates for PDPs but not MA-PDs.

Medication Adherence for Diabetes Medications continued on next slide.

Medication Adherence for Diabetes Medications

CMS Internal Research	RFI Responses

• Mean LIS performance does vary significantly by percentage of LIS *within* contract for both MA-PD and PDP contracts.	• Analyzed by 18 respondents with 13 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=6).
	  • Some found no difference in performance outcomes between the between Duals and non-Duals (n=5).
	  • A couple found that Duals experienced better performance outcomes as compared to non-Duals (n=2).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

Medication Adherence for Cholesterol (Statins)

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Medication Adherence for Cholesterol (Statins) for MA-PDs.
- A significant positive association for Dual/LIS in analysis that included additional individual characteristics (age, sex, and race/ethnicity) for MA-PDs.
- Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
- There is a significant difference *between* the mean rates for LIS and non-LIS enrollees for overall mean contract-level adherence rates.

Medication Adherence for Cholesterol (Statins)next slide.

Medication Adherence for Cholesterol (Statins)

CMS Internal Research	RFI Responses

• Mean LIS performance does vary significantly by percentage of LIS *within* contract for MA-PDs but not PDP contracts.	• Analyzed by 19 respondents with 14 employing statistical significance testing:
	  • The majority of studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=8).
	  • Some found no difference in performance outcomes between the between Duals and non-Duals (n=3).
	  • Some found that Duals experienced better performance outcomes as compared to non-Duals (n=3).

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

High Risk Medication for MA-PDs

CMS Internal Research	RFI Responses*

• Controlling for contract effects and Dual/LIS status, there is a statistically significant association between Dual/LIS status and High Risk Medication for MA-PDs. This association remains after controlling for age, sex, and race/ethnicity.
• Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
	• Analyzed by 16 respondents with 12 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=11).
	  • One found no difference in performance outcomes between the between Duals and non-Duals.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

** Responses were not limited to MA-PDs only.*

Medication Adherence for Hypertension (RAS antagonists) for MA-PDs

CMS Internal Research

- Controlling for contract effects and Dual/LIS status, there is a statistically significant negative association between Dual/LIS status and Medication Adherence for Hypertension for MA-PDs. This association remains although the level of significance decreases after controlling for age, sex, and race/ethnicity for MA-PDs.
- Overall, there is a moderate degree of variation in the difference between LIS and non-LIS scores in contracts.
- There is a significant difference *between* the mean rates for LIS and non-LIS enrollees for overall mean contract-level adherence rates.

Medication Adherence for Hypertension (RAS antagonists) for MA-PDs continued on next slide.

Medication Adherence for Hypertension (RAS antagonists) for MA-PDs

CMS Internal Research	RFI Responses*

• Mean LIS performance does vary significantly by percentage of LIS *within* for MA-PD contracts.	• Analyzed by 19 respondents with 14 employing statistical significance testing:
	  • Many studies found that Duals experienced lower performance outcomes as compared to non-Duals (n=10).
	  • Several found no difference in performance outcomes outcomes between the between Duals and non-Duals (n=3).
	  • One found that Duals experienced better performance outcomes as compared to non-Duals.

Interpretation: Recommend no changes to measure specifications since the Dual/LIS effect is not of practical (meaningful) significance.

** RFI submissions were not limited to MA-DPs only.*