Leveraging Data-Driven Insights to Support Development of Targeted Supplemental Benefits Under Newly Expanded Flexibilities in Medicare Advantage to Improve Outcomes in High-Cost, High-Need Beneficiaries

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Background

- The number of Medicare beneficiaries enrolled in managed Medicare Advantaged (MA) plans has more than tripled from 5.3 million in 2004 to 18.5 million in 2017 representing 33% of the Medicare population in the US[1]
- Despite the increasing role of MA, few insights into the MA population exist due to lack of encounter data comparable to that available for traditional Medicare Fee-for-Service (FFS)[2,3]
- Since more than 50% of healthcare spending is concentrated among 5% of the population with substantial healthcare needs, MA plans must successfully manage quality and spending for high-need beneficiaries to be successful[4]
- To date, clinical characteristics, utilization, spending patterns, and quality outcomes among dual eligible and non-dual eligible beneficiaries enrolled in MA plans have not been comprehensively studied
- MA organizations were designed to enable competition among health plans on quality and cost by providing incentives to improve coordination of care and adding benefits that are not part of traditional Medicare
- In 2019, Congress waived the uniform benefit requirement for chronically ill enrollees, and authorized plans to cover non-health supplemental benefits for the chronically ill, while the Centers for Medicare and Medicaid Services (CMS) relaxed requirements for meaningful differences between MA plan benefit packages
- MA plans need to better understand the clinical and social risk factors of their members to develop new benefits designed to address those factors most impacting utilization, cost, and quality outcomes

Objective

Understand the demographic and socioeconomic profile of the Medicare Advantage population and differences in healthcare utilization, expenditure patterns and quality outcomes among high-need dual eligible versus non-dual eligible beneficiaries.

Methods

Data Source

- Member-level data extracted from a large nationally representative and statistically de-identified administrative claims database was the main data source used for this study
  - The database includes longitudinal patient-level data for more than 160 million individual health plan members from a broad range of sources across all payer types (commercial, ACA exchange, Medicare Advantage, and managed Medicaid), geographic regions (capturing virtually all US counties), healthcare settings (inpatient, office-based, and outpatient services), and provider specialties
- Centers for Medicare and Medicaid Services (CMS) monthly membership reports were used to identify dual status and original reason for entitlement to Medicare
- Member-level data was linked with socioeconomic and demographic characteristics (known as social determinants of health or SDH) based on ZIP+4 areas, which results in roughly 30 million discrete "near neighborhoods" representing an average of 5 households.[5] This level of granularity provides a much more precise assignment of SDH to individual members

Statistical Analysis

- We used a national sample of 1,813,937 MA beneficiaries in 2015 to conduct a cross-sectional descriptive analysis of dual eligible versus non-dual eligible MA beneficiaries
- Descriptive statistics were generated to evaluate differences in demographic, socioeconomic, clinical, utilization, spending, and quality measures between the 2 populations

Results

Data Source

Demographic characteristics by dual status of the MA beneficiary population in 2015 are shown in Table 1:

- 33% of dual eligible enrollees were under 65 years of age compared to only 8.8% of non-duals
- The percent female was higher among full and partial duals (64.8% and 64.4%) compared to non-duals (56.4%)
- The majority of MA enrollees identified as white, but the percent of full duals that identified as racial/ethnic minorities was 45.4% compared to 12.8% of non-dual eligible beneficiaries
- The majority of MA enrollees were concentrated in urban/suburban areas, but a larger proportion of non-duals reside in rural towns or isolated rural areas (9.6% compared to 5.3% of full duals and 6.1% of partial duals)
- Most MA members were enrolled in an HMO, but the percent of non-dual enrollees in HMOs was significantly lower (60.3% compared to 97.5% of full duals and 88.9% of partial duals)
- While the majority of MA beneficiaries enrolled at age 65, the percent of full duals who enrolled due to disability/ESRD was higher by 28.9 percentage points

Table 1: Demographic Characteristics of MA Beneficiaries 2015

Characteristic	Full Dual	Partial Dual	Non-Dual
Number	132,796	58,234	547,869
Age (Mean)	67.2	70.9	73.4
0 – 54	19.2%	9.0%	2.6%
55 – 64	13.9%	13.6%	6.2%
65 – 69	17.5%	18.4%	24.5%
70 – 74	16.3%	20.2%	25.1%
75 – 79	12.9%	16.2%	17.9%
80 – 84	9.3%	11.9%	12.6%
≥ 85	10.9%	10.7%	11.2%
Gender			
Female	64.8%	64.4%	56.4%
Male	35.3%	35.7%	43.6%
Race/Ethnicity			
White	50.4%	65.9%	85.3%
Black	22.0%	21.5%	10.6%
Asian	5.6%	2.5%	1.0%
Hispanic or Latino	17.9%	6.9%	1.3%
Other Race	4.2%	3.2%	1.9%
Rural/Urban Area Type			
Urban	87.9%	82.1%	72.8%
Suburban	6.9%	11.9%	17.6%
Rural Town Large	3.3%	3.8%	5.3%
Rural Town Small/Isolated	2.0%	2.3%	4.3%
Plan Type			
PPO	1.6%	4.9%	23.5%
HMO	97.5%	88.9%	60.3%
HMO-POS	0.9%	6.2%	16.3%
Other	0.0%	0.0%	0.0%
Original Reason for Entitlement			
Age	53.8%	60.8%	82.8%
Disability	46.1%	39.1%	17.2%
ESRD and/or Disability	0.1%	0.1%	0.0%

Social Determinants of Health

The MA population has a growing number of beneficiaries with factors that put them at greater risk of becoming high need, high cost patients (Table 2):

- More than half of full duals lived in a neighborhood with median income below $30,000, compared to only 16.3% of non-duals
- More than half of full duals lived in a neighborhood where 20% or more of households lived below the federal poverty level (55.4%), compared to 38.5% of partial duals and only 19.0% of non-duals
- A higher proportion of full duals lived in a neighborhood where less than 20% had a bachelor degree or higher (63.8%), compared to 46.9% of partial duals and 37.0% of non-duals

Table 2: Social Determinants of Health in MA Beneficiaries 2015

Characteristic	Full Dual	Partial Dual	Non-Dual
Median Household Income			
< $15,000 - $29,999	56.2%	39.2%	16.3%
$30,000 - $49,999	23.2%	27.5%	25.4%
$50,000 - $74,999	13.6%	20.3%	28.9%
$75,000 - ≥ $125,000	7.0%	12.9%	29.4%
Percent of Households Below Federal Poverty Level			
0% - 19%	44.6%	61.5%	81.0%
20% - 100%	55.4%	38.5%	19.0%
Percent of Household with Bachelor Degree or Higher			
0% - 19%	63.8%	53.1%	37.0%
20% - 100%	36.2%	46.9%	63.0%

Figure 1. Common Chronic Conditions: Full Dual versus Non-Dual MA Beneficiaries

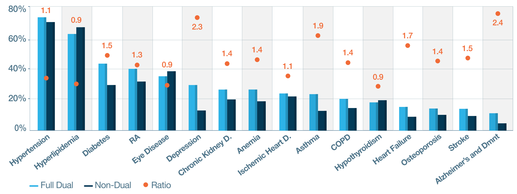


Figure 2. Charlson Comorbidity Index (CCI): Full Dual versus Non-Dual MA Beneficiaries

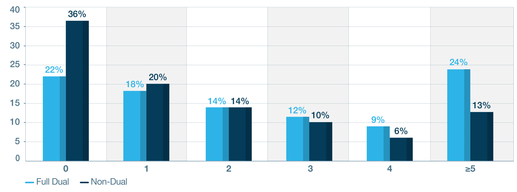


Figure 3. Utilization Ratio: Full Dual versus Non-Dual MA Beneficiaries

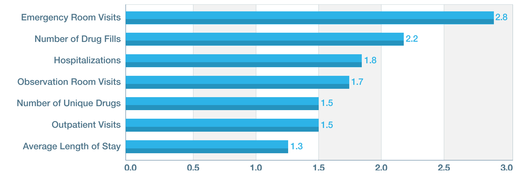


Figure 4. Cost Ratio: Full Dual versus Non-Dual MA Beneficiaries

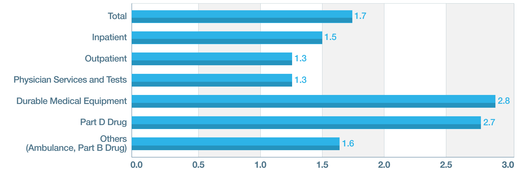
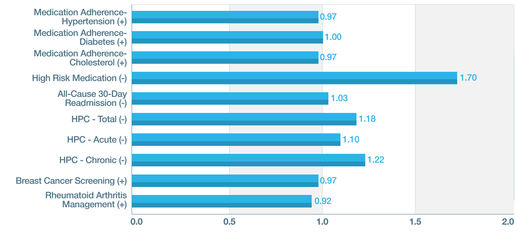


Figure 5. Quality Measure Rate Ratio: Full Dual versus Non-Dual MA Beneficiaries



Note: HPC is Hospitalization for Potentially Preventable Complications

Key Findings

Dual eligible beneficiaries are significantly more likely to be high need, high cost. Duals:

- Are younger, more likely to be female, more likely to be racial/ethnic minority, more likely to live in an urban area, and far more likely to be disabled
- Have more social determinants of health, including living in a neighborhood where 20% or more of households lived below the federal poverty level and where fewer than 20% had a bachelor degree or higher
- Have higher prevalence of common chronic conditions, including depression (2.3x), Alzheimer's disease (2.4x), diabetes, asthma, heart failure and stroke (all ≥ 1.5x). They also have a larger number of co-morbid conditions based on the CCI
- Have much higher utilization of health services including emergency room visits (2.8x), drug fills (2.2x), hospitalizations (1.8x), observation room visits (1.7x), unique medications (1.5x), and outpatient visits (1.5x)
- Have 70% higher costs overall, including 2.7x higher Part D drug spending, 2.8x higher spending on durable medical equipment, 1.5x higher inpatient hospitalization costs, and 1.3x higher spending on physician services and tests
- Perform worse on most quality outcomes, including 70% greater use of high-risk medications and 18% higher rates of potentially avoidable hospitalizations overall

Discussion

- This study presents new evidence regarding differences among dual eligible and non-dual eligible MA members' demographic, socioeconomic and clinical profile, healthcare resource utilization, quality outcomes, and cost
- Results suggest the need to control the growing use of certain costly healthcare services. Interventions designed to reduce complications in high-risk patients and better manage members' social risk factors could help limit the high rates of emergency room visits, multiple medications, and reduce avoidable hospitalizations
- A better understanding of specific risk factors among high need MA beneficiaries, such as those who are dual eligible, is essential to developing new non-medical benefits aimed at improving outcomes and reducing costs in this rapidly growing population

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