Issue Brief

Examining Health Care Disparities: An Analysis of Home Health Care Received by Connecticut's Dually Eligible Population

I. Introduction

The Center for Medicare Advocacy (Center) is a national, non-profit law organization founded in 1986 that works to advance access to comprehensive Medicare and quality health care. The Center works to advance its mission through education, advocacy, direct legal representation, litigation, and policy work.

Additionally, the Center designed and implements a Medicare Maximization Third Party Liability Project in partnership with the Connecticut Department of Social Services (DSS). Pursuant to this Project, the Center appeals Medicare denials for dually eligible Connecticut residents for whom Connecticut's Medicaid program paid for Skilled Nursing Facility or Home Health care services for Connecticut's dually eligible population. As a result, since 1988, the Center has pursued thousands of Medicare appeals annually to seek Medicare coverage for services on behalf of Connecticut's dually eligible population to ensure they receive appropriate Medicare coverage and that Medicaid is the payer of last resort.

Beneficiaries are referred to as "dually eligible" because they are simultaneously enrolled in Medicare and Medicaid.[1] In the United States, there were 12.2 million individuals enrolled in both Medicare and Medicaid in 2018.[2] The total dually eligible population in the country continues to grow.[3] Dually eligible individuals tend to experience higher rates of multiple chronic health issues and social support needs and require higher levels of health care. The high utilization of health care by, and high levels of spending for, dually eligible individuals make this population important to study and examine for possible changes and initiatives.

[1] Individuals entitled to Social Security retirement benefits who are 65 years of age or older and individuals entitled to Social Security disability benefits for not less than 24 months are eligible to participate in Medicare. Individuals entitled to Railroad Retirement benefits or Railroad Retirement disability benefits and individuals with end-stage renal disease and amyotrophic lateral sclerosis are also entitled to participate. 42 U.S.C. § 1395c. Unlike Medicare, which is entirely a federal program, Medicaid is a shared state-federal program, paid in part by both entities and administered by state agencies with federal oversight. Eligibility for Medicaid is predicated on the income of the beneficiary.
[2]https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/DataStatisticalResources/Downloads/MedicareMedicaidDualEnrollmentEverEnrolledTrendsDataBrief2006-2018.pdf; For the most recent year available (2013) Connecticut's dually eligible population is listed at 170,800, see https://www.kff.org/medicaid/state-indicator/dual-eligible-beneficiaries/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D
[3] The total number of dually eligible beneficiaries increased from 8.6 million to 12.2 million between 2006 and 2018. *Id.*

In an effort to improve Connecticut's health systems and identify health care disparities, the Center proposed to study data from its DSS Home Health Medicare Maximization Project, which involves dually eligible individuals. In 2019 the Center obtained a grant from the Connecticut Health Foundation which provided the opportunity to review and analyze its data and prepare this Report. Through analysis of Medicaid paid home health services for dually eligible people, the Center hopes to identify any possible disparities in the receipt of care within the dually eligible population and propose possible interventions that might lead to improved access to necessary health care. The analysis considered data regarding race, ethnicity, diagnosis, and geographic location. The Center is grateful to DSS for allowing this analysis of the Project's data.

Project Objectives

> **Objective 1:** Identify existing health care disparities for people of color in Connecticut including, but not limited to, race, ethnicity, diagnosis, disability and geographic location.
>
> **Objective 2:** Draft and disseminate a report on findings, including potential interventions that may lead to improved health care equity

II. Methods: Data Analyzed to Meet the Project Objectives

In order to begin the project we first had to determine the data set and comparison points for analysis. We initially intended to focus on analyzing approximately 19,000 home health records selected by the Center for appeal for dually eligible home health beneficiaries in Connecticut between 2007 and the present.

As we moved forward, we determined that using data just from cases we selected for appeal would be inadequate to develop a universe from which to draw useful conclusions, as cases selected for appeal represent only those which the Center believes meet Medicare coverage guidelines. We concluded that a more valuable study could be done from a sample of <u>all</u> the home health data for the dually eligible population that we receive from DSS. We have such data from 2008-2018, the latest full project year for which we have the needed Medicaid paid services. Therefore, the data available for this study includes all Medicaid paid claims for Connecticut dually eligible home health beneficiaries from 2008-2018.

- **Time Period Analyzed**

We chose to analyze data during the three project years with the largest number of beneficiaries and the most services: 2013, 2014 and 2015 (1/1/13-12/31/15). This three-year period includes 4,981 beneficiaries with a total of 1,897,851 Medicaid paid services for the geographic areas we analyzed. The specific information available for analysis included zip code, gender, age, race, primary medical diagnosis for which services were ordered, as well as dates of specific services rendered and service hours.

- **Urban PUMAs versus Surrounding PUMAs**

The Center decided to focus its analysis on racial disparities in geographic areas by comparing the intensity of the receipt of home health care services in city centers to the intensity of receipt of such care in the surrounding areas. The Center also wanted to analyze data based on race and diagnosis, so a similar comparison was done analyzing the receipt of care by race and specific medical diagnosis across city centers and their surrounding areas.

The Center used *Public Use Microdata Areas* (PUMAs) only for the purposes of grouping geographic areas for analysis, PUMAs are statistical geographic areas used for disseminating the American Community Survey (ACS)[4]. Data was obtained from the ACS with the intent of using it is a point of comparison for the overall data provided by DSS. Ultimately, the ACS data was not utilized as we could not be certain it provided an appropriate comparison due to the nature of the questions asked to respondents, and the specific population being studied for this Report. PUMAs were used at the suggestion of the Center's consultant, William Simonsen, a Professor in the Department of Public Policy at the University of Connecticut.[5] The geographic areas chosen for review were Bridgeport, Hartford, and New Haven, and their corresponding surrounding areas. The surrounding PUMAs were grouped together to form reliable comparison points based on population.

PUMAs used for Bridgeport and surrounding areas include the following:

PUMA #	Towns In PUMA
100	Danbury, Ridgefield, Bethel, Brookfield, New Fairfield, Redding & Sherman Towns
101	Fairfield, New Canaan, Wilton, Weston & Easton Towns
102	Stamford & Greenwich Towns
103	Norwalk, Westport & Darien Towns
105	Stratford, Shelton, Trumbull, Newtown & Monroe Towns
104	Bridgeport Town

PUMAs used for Hartford and surrounding areas include the following:

PUMA #	Towns In PUMA
300	Hartford County (North)
303	West Hartford, Farmington, Simsbury, Bloomfield, Avon & Canton Towns
304	Bristol, Southington & Burlington Towns
306	Glastonbury, Newington, Wethersfield, Rocky Hill & Marlborough Towns
301	Manchester & East Hartford Towns
302	Hartford Town
305	New Britain, Berlin & Plainville Towns

**Note: PUMAs 301, 302, and 305 were combined to form the Hartford Urban data*

[4] PUMAs are designated every 10 years with the Census, the most recent PUMA year is 2012, see https://www.census.gov/programs-surveys/geography/guidance/geo-areas/pumas.html . See also https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2012/geography-changes.html.

[5] Prof. William Simonsen provided pro bono assistance on this project. Working with Professor Simonsen provided our staff with a better understanding of data analysis and insight into our own data. This insight has been invaluable to the Project, and will also be useful to the Center's ongoing work and future endeavors.

PUMAs used for New Haven Town and surrounding areas include the following:

PUMA #	Towns In PUMA
900	New Haven County (Northwest)
902	Meriden, Wallingford & North Haven Towns
903	Hamden, Ansonia, Seymour, Derby, Woodbridge & Bethany Towns
904	West Haven, Milford & Orange Towns
906	East Haven, Branford, Guilford, Madison & North Branford Towns
901	Waterbury Town
905	New Haven Town

**Note: PUMAS 901 and 905 were combined to form New Haven Urban data*

- **Races Analyzed**

The specific races included in the available data for analysis from DSS were American Indian, Asian, Black, Caucasian, Hispanic, Native American, and Pacific Islander. Based on the data we received from DSS it appears that not all areas we analyzed included beneficiary data for each race.

- **Services Analyzed**

The services available for analysis included home health aide, skilled nursing, and skilled therapies which includes physical therapy, occupational therapy and speech therapy. It should be noted that although we included therapy services in our analysis, the information from DSS indicates that Medicaid paid for very little therapy services. Based on our experience reviewing home health medical records for Medicare appeals, we believe this may be because many home health agencies "split bill" – meaning they bill the therapy services to Medicare, and bill the remaining home health aide and other services to Medicaid. For this Report we combined all Medicaid paid services together.

- **Diagnoses Analyzed**

14,000 different primary diagnoses were identified in the home health services paid for by Medicaid for dually eligible beneficiaries during the three years (January 1, 2013 through December 31, 2015) we analyzed. After analyzing the different primary diagnoses as they appear in the International Classification of Diseases, the top five diagnoses were diabetes, schizophrenia, hypertension, paranoia, and depressive disorder.[6] In addition to focusing on race, our analysis also focused on the top two diagnoses – schizophrenia and diabetes. Notably, these top two diagnoses prevalent in the Medicaid population represent both mental and physical illnesses.

[6]The diagnoses provided from the Department of Social Services were classified using the International Classification of Diseases (ICD). For the first two years analyzed here, (2013 and 2014), and for part of 2015, ICD-9-CM was used. As of October 1, 2015 codes were transitioned to a revised ICD-10-CM. ICD-10 codes capture a much higher level of detail than with ICD-9 and includes 5 times as many diagnoses codes than ICD-9. https://www.cdc.gov/nchs/icd/icd10cm_pcs_background.htm. Because of this transition and change in classifications we combined like diagnoses.

III. Findings

The following analysis shows the intensity of the utilization of services for each individual race within the dually eligible population receiving Medicaid home health services. Specifically, the below charts show the number and percent of beneficiaries for each race receiving services in each geographic region as compared to the number and percent of actual services each race received in the same geographic region. The analysis for each specific region is further broken down by all diagnoses, schizophrenia, and diabetes for each area, Bridgeport, Hartford and New Haven. The percentages highlighted in blue reflect where the specific race received less services as compared to their percentage of the population receiving services. It should be noted that the number of beneficiaries for American Indian, Asian, Native American and Pacific Islander were not substantial enough to draw any conclusions so we did not comment on those groups. Therefore, the analysis focuses on the Black, Caucasian and Hispanic populations.

A. Comprehensive Analysis of Race in Urban versus Surrounding PUMAs for all Diagnoses

1. The information for all diagnoses with Bridgeport, Hartford and New Haven and all surrounding PUMAs combined:

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Connecticut Surrounding	American Indian	2	918	**0.10%**	**0.12%**
Connecticut Surrounding	Asian	37	7,755	**1.77%**	**1.00%**
Connecticut Surrounding	Black	369	143,694	**17.64%**	**18.46%**
Connecticut Surrounding	Caucasian	1,524	582,178	**72.85%**	**74.80%**
Connecticut Surrounding	Hispanic	158	42,525	**7.55%**	**5.46%**
Connecticut Surrounding	Native American	1	1,056	**0.05%**	**0.14%**
Connecticut Surrounding	Pacific Islander	1	144	**0.05%**	**0.02%**
Connecticut Surrounding Total		**2,092**	**778,270**	**100.00%**	**100.00%**
Connecticut Urban	American Indian	2	727	**0.07%**	**0.06%**
Connecticut Urban	Asian	27	7,558	**0.93%**	**0.68%**
Connecticut Urban	Black	807	311,485	**27.93%**	**27.82%**
Connecticut Urban	Caucasian	1,526	620,029	**52.82%**	**55.38%**
Connecticut Urban	Hispanic	517	176,039	**17.90%**	**15.72%**
Connecticut Urban	Native American	7	3,244	**0.24%**	**0.29%**
Connecticut Urban	Pacific Islander	3	499	**0.10%**	**0.04%**
Connecticut Urban Total		**2,889**	**1,119,581**	**100.00%**	**100.00%**
OVERALL		**4,981**	**1,897,851**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 17.64% of the population, receiving 18.46% of the services (difference of +0.82%)
- Urban Areas: 27.93% of the population, receiving 27.82% of the services (difference of -0.11%)

Caucasian Population

- Surrounding PUMAs: 72.85% of the population, receiving 74.80% of the services (difference of +1.95%)
- Urban Areas: 52.82% of the population, receiving 55.38% of the services (difference of +2.56%)

Hispanic Population

- Surrounding PUMAs: 7.55% of the population, receiving 5.46% of the services (difference of -2.09%)
- Urban Areas: 17.90% of the population, receiving 15.72% of the services (difference of - 2.18%)

2. **The information for all diagnoses for Bridgeport and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Bridgeport Surrounding	American Indian	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Asian	15	3,292	**2.13%**	**1.30%**
Bridgeport Surrounding	Black	166	60,278	**23.58%**	**23.88%**
Bridgeport Surrounding	Caucasian	467	175,946	**66.34%**	**69.72%**
Bridgeport Surrounding	Hispanic	56	12,856	**7.95%**	**5.09%**
Bridgeport Surrounding	Native American	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding Total		**704**	**252,372**	**100.00%**	**100.00%**
Bridgeport	American Indian	.	-	**0.00%**	**0.00%**
Bridgeport	Asian	7	1,916	**0.97%**	**0.60%**
Bridgeport	Black	198	81,445	**27.35%**	**25.36%**
Bridgeport	Caucasian	368	172,592	**50.83%**	**53.74%**
Bridgeport	Hispanic	151	65,186	**20.86%**	**20.30%**
Bridgeport	Native American	-	-	**0.00%**	**0.00%**
Bridgeport	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Total		**724**	**321,139**	**100.00%**	**100.00%**
OVERALL		**1,428**	**573,511**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 23.58% of the population, receiving 23.88% of the services (difference of +0.30%)
- Bridgeport Urban: 27.35% of the population, receiving 25.36% of the services (difference of -1.99%)

Caucasian Population

- Surrounding PUMAs: 66.34% of the population, receiving 69.72% of the services (difference of +3.38%)
- Bridgeport Urban: 50.83% of the population, receiving 53.74% of the services (difference of +2.91%)

Hispanic Population

- Surrounding PUMAs: 7.95% of the population, receiving 5.09% of the services (difference of -2.86%)
- Bridgeport Urban: 20.86% of the population, receiving 20.30% of the services (difference of -0.56%)

3. **The information for all diagnoses for Hartford and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Hartford Surrounding	American Indian	1	253	**0.13%**	**0.10%**
Hartford Surrounding	Asian	12	1,708	**1.60%**	**0.64%**
Hartford Surrounding	Black	122	47,071	**16.22%**	**17.72%**
Hartford Surrounding	Caucasian	559	203,532	**74.34%**	**76.63%**
Hartford Surrounding	Hispanic	58	13,027	**7.71%**	**4.90%**
Hartford Surrounding	Native American	-	-	**0.00%**	**0.00%**
Hartford Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Hartford Surrounding Total		**752**	**265,591**	**100.00%**	**100.00%**
Hartford Urban	American Indian	1	61	**0.11%**	**0.02%**
Hartford Urban	Asian	13	3,763	**1.40%**	**1.25%**
Hartford Urban	Black	222	79,491	**23.97%**	**26.49%**
Hartford Urban	Caucasian	489	166,137	**52.81%**	**55.36%**
Hartford Urban	Hispanic	196	48,638	**21.17%**	**16.21%**
Hartford Urban	Native American	2	1,501	**0.22%**	**0.50%**
Hartford Urban	Pacific Islander	3	499	**0.32%**	**0.17%**
Hartford Urban Total		**926**	**300,090**	**100.00%**	**100.00%**
OVERALL		**1,678**	**565,681**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 16.22% of the population, receiving 17.72% of the services (difference of +1.50%)
- Hartford Urban: 23.97% of the population, receiving 26.49% of the services (difference of +2.52%)

Caucasian Population

- Surrounding PUMAs: 74.34% of the population, receiving 76.63% of the services (difference of +2.29%).
- Hartford Urban: 52.81% of the population, receiving 55.36% of the services (difference of +2.55%)

Hispanic Population

- Surrounding PUMAs: 7.71% of the population, receiving 4.90% of the services (difference of -2.81%)
- Hartford Urban: 21.17% of the population, receiving 16.21% of the services (difference of -4.96%)

4. **The information for all diagnoses for New Haven and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
New Haven Surrounding	American Indian	1	665	**0.16%**	**0.26%**
New Haven Surrounding	Asian	10	2,755	**1.57%**	**1.06%**
New Haven Surrounding	Black	81	36,345	**12.74%**	**13.96%**
New Haven Surrounding	Caucasian	498	202,700	**78.30%**	**77.87%**
New Haven Surrounding	Hispanic	44	16,642	**6.92%**	**6.39%**
New Haven Surrounding	Native American	1	1,056	**0.16%**	**0.41%**
New Haven Surrounding	Pacific Islander	1	144	**0.16%**	**0.06%**
New Haven Surrounding Total		**636**	**260,307**	**100.00%**	**100.00%**
New Haven Urban	American Indian	1	666	**0.08%**	**0.13%**
New Haven Urban	Asian	7	1,879	**0.56%**	**0.38%**
New Haven Urban	Black	387	150,549	**31.23%**	**30.21%**
New Haven Urban	Caucasian	669	281,300	**54.00%**	**56.45%**
New Haven Urban	Hispanic	170	62,215	**13.72%**	**12.48%**
New Haven Urban	Native American	5	1,743	**0.40%**	**0.35%**
New Haven Urban	Pacific Islander	-	-	**0.00%**	**0.00%**
New Haven Urban Total		**1,239**	**498,352**	**100.00%**	**100.00%**
OVERALL		**1,875**	**758,659**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 12.74% of the population, receiving 13.96% of the services (difference of +1.22%)
- New Haven Urban: 31.23% of the population, receiving 30.21% of the services (difference of -1.02%)

Caucasian Population

- Surrounding PUMAs: 78.30% of the population, receiving 77.87% of the services (difference of -0.43%)
- New Haven Urban: 54.00% of the population, receiving 56.45% of the services (difference of +2.45%)

Hispanic Population

- Surrounding PUMAs: 6.92% of the population, receiving 6.39% of the services (difference of -0.53%)
- New Haven Urban: 13.72% of the population, receiving 12.48% of the services (difference -1.24%)

B. Comprehensive Analysis of Race in Urban versus Surrounding PUMAs for Diabetes

1. The information for Diabetes with Bridgeport, Hartford, and New Haven and all surrounding PUMAs combined is as follows:

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Connecticut Surrounding	American Indian	1	89	**0.22%**	**0.08%**
Connecticut Surrounding	Asian	8	366	**1.74%**	**0.31%**
Connecticut Surrounding	Black	99	29,483	**21.48%**	**25.30%**
Connecticut Surrounding	Caucasian	294	72,467	**63.77%**	**62.19%**
Connecticut Surrounding	Hispanic	58	13,064	**12.58%**	**11.21%**
Connecticut Surrounding	Native American	1	1,056	**0.22%**	**0.91%**
Connecticut Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Connecticut Surrounding Total		**461**	**116,525**	**100.00%**	**100.00%**
Connecticut Urban	American Indian	-	-	**0.00%**	**0.00%**
Connecticut Urban	Asian	5	1,395	**0.64%**	**0.72%**
Connecticut Urban	Black	200	45,813	**25.61%**	**23.58%**
Connecticut Urban	Caucasian	370	95,702	**47.38%**	**49.27%**
Connecticut Urban	Hispanic	203	50,698	**25.99%**	**26.10%**
Connecticut Urban	Native American	2	550	**0.26%**	**0.28%**
Connecticut Urban	Pacific Islander	1	98	**0.13%**	**0.05%**
Connecticut Urban Total		**781**	**194,256**	**100.00%**	**100.00%**
OVERALL		**1,242**	**310,781**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 21.48% of the population, receiving 25.30% of the services (difference of +3.82%)
- Urban Areas: 25.61% of the population, receiving 23.58% of the services (difference of -2.03%)

Caucasian Population

- Surrounding PUMAs: 63.77% of the population, receiving 62.19% of the services (difference of -1.58%)
- Urban Areas: 47.38% of the population, receiving 49.27% of the services (difference of +1.89%)

Hispanic Population

- Surrounding PUMAs: 12.58% of the population, receiving 11.21% of the services (difference of -1.37%)
- Urban Areas: 25.99% of the population, receiving 26.10% of the services (difference of +0.11%)

2. **The information for Diabetes for Bridgeport and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Bridgeport Surrounding	American Indian	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Asian	2	159	**1.43%**	**0.46%**
Bridgeport Surrounding	Black	44	12,454	**31.43%**	**35.94%**
Bridgeport Surrounding	Caucasian	81	19,609	**57.86%**	**56.59%**
Bridgeport Surrounding	Hispanic	13	2,428	**9.29%**	**7.01%**
Bridgeport Surrounding	Native American	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding Total		**140**	**34,650**	**100.00%**	**100.00%**
Bridgeport	American Indian	-	-	**0.00%**	**0.00%**
Bridgeport	Asian	-	-	**0.00%**	**0.00%**
Bridgeport	Black	50	12,943	**28.25%**	**21.26%**
Bridgeport	Caucasian	86	30,317	**48.59%**	**49.79%**
Bridgeport	Hispanic	41	17,630	**23.16%**	**28.95%**
Bridgeport	Native American	-	-	**0.00%**	**0.00%**
Bridgeport	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Total		**177**	**60,890**	**100.00%**	**100.00%**
OVERALL		**317**	**95,540**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Population

- Surrounding PUMAs: 31.43% of the population, receiving 35.94% of the services (difference of +4.51%)
- Bridgeport Urban: 28.25% of the population, receiving 21.26% of the services (difference of -6.99%)

Caucasian Population

- Surrounding PUMAs: 57.86% of the population, receiving 56.59% of the services (difference of -1.27%)
- Bridgeport Urban: 48.59% of the population, receiving 49.79% of the services (difference of +1.20%)

Hispanic Population

- Surrounding PUMAs: 9.29% of the population, receiving 7.01% of the services (difference of -2.28%)
- Bridgeport Urban: 23.16% of the population, receiving 28.95% of the services (difference of +5.79%).

3. **The information for Diabetes for Hartford and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Hartford Surrounding	American Indian	-	-	**0.00%**	**0.00%**
Hartford Surrounding	Asian	3	142	**1.69%**	**0.33%**
Hartford Surrounding	Black	35	10,698	**19.66%**	**25.21%**
Hartford Surrounding	Caucasian	118	28,154	**66.29%**	**66.35%**
Hartford Surrounding	Hispanic	22	3,439	**12.36%**	**8.10%**
Hartford Surrounding	Native American	-	-	**0.00%**	**0.00%**
Hartford Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Hartford Surrounding Total		**178**	**42,433**	100.00%	100.00%
Hartford Urban	American Indian	**-**	-	**0.00%**	**0.00%**
Hartford Urban	Asian	4	1,039	**1.37%**	**2.03%**
Hartford Urban	Black	53	9,791	**18.21%**	**19.16%**
Hartford Urban	Caucasian	143	26,145	**49.14%**	**51.17%**
Hartford Urban	Hispanic	90	14,018	**30.93%**	**27.44%**
Hartford Urban	Native American	-	-	**0.00%**	**0.00%**
Hartford Urban	Pacific Islander	1	98	**0.34%**	**0.19%**
Hartford Urban Total		**291**	**51,091**	100.00%	100.00%
OVERALL		**469**	**93,524**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Populations

- Surrounding PUMAs: 19.66% of the population, receiving 25.21% of the services (difference of +5.55%)
- Hartford Urban: 18.21% of the population, receiving 19.16% of the services (difference of +0.95%)

Caucasian Populations

- Surrounding PUMAs: 66.29% of the population, receiving 66.35% of the services (difference of +0.06%)
- Hartford Urban: 49.14% of the population, receiving 51.17% of the services (difference of +2.03%)

Hispanic Population

- Surrounding PUMAs: 12.36% of the population, receiving 8.10% of the services (difference of -4.26%)
- Hartford Urban: 30.93% of the population, receiving 27.44% of the services (difference of -3.49%)

4. **The information for Diabetes for New Haven and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
New Haven Surrounding	American Indian	1	89	**0.70%**	**0.23%**
New Haven Surrounding	Asian	3	65	**2.10%**	**0.16%**
New Haven Surrounding	Black	20	6,331	**13.99%**	**16.05%**
New Haven Surrounding	Caucasian	95	24,704	**66.43%**	**62.63%**
New Haven Surrounding	Hispanic	23	7,197	**16.08%**	**18.25%**
New Haven Surrounding	Native American	1	1,056	**0.70%**	**2.68%**
New Haven Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
New Haven Surrounding Total		**143**	**39,442**	**100.00%**	**100.00%**
New Haven Urban	American Indian	-	-	**0.00%**	**0.00%**
New Haven Urban	Asian	1	356	**0.32%**	**0.43%**
New Haven Urban	Black	97	23,079	**30.99%**	**28.05%**
New Haven Urban	Caucasian	141	39,240	**45.05%**	**47.69%**
New Haven Urban	Hispanic	72	19,050	**23.00%**	**23.15%**
New Haven Urban	Native American	2	550	**0.64%**	**0.67%**
New Haven Urban	Pacific Islander	-	-	**0.00%**	**0.00%**
New Haven Urban Total		**313**	**82,275**	**100.00%**	**100.00%**
OVERALL		**456**	**121,717**		

For the Black, Caucasian and Hispanic population the above chart shows the following:

Black Population

- Surrounding PUMAs: 13.99% of the population, receiving 16.05% of the services (difference of +2.06%)
- New Haven Urban: 30.99% of the population, receiving 28.05% of the services (difference of -2.94%)

Caucasian Population

- Surrounding PUMAs: 66.43% of the population, receiving 62.63% of the services (difference of -3.80%)
- New Haven Urban: 45.05% of the population, receiving 47.69% of the services (difference of +2.64%)

Hispanic Population

- Surrounding PUMAs: 16.08% of the population, receiving 18.25% of the services (difference of +2.17%)
- New Haven Urban: 23.00% of the population, receiving 23.15% of the services (difference of +0.15%)

C. Comprehensive Analysis of Race in Urban versus Surrounding PUMAs for Schizophrenia

1. The information for Schizophrenia with Bridgeport, Hartford, and New Haven and all surrounding PUMAs combined is as follows:

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Connecticut Surrounding	American Indian	-	-	0.00%	0.00%
Connecticut Surrounding	Asian	2	73	0.84%	0.07%
Connecticut Surrounding	Black	38	20,259	15.97%	18.46%
Connecticut Surrounding	Caucasian	188	85,797	78.99%	78.16%
Connecticut Surrounding	Hispanic	10	3,644	4.20%	3.32%
Connecticut Surrounding	Native American	-	-	0.00%	0.00%
Connecticut Surrounding	Pacific Islander	-	-	0.00%	0.00%
Connecticut Surroundng Total		**238**	**109,773**	**100.00%**	**100.00%**
Connecticut Urban	American Indian	2	684	0.63%	0.45%
Connecticut Urban	Asian	1	103	0.31%	0.07%
Connecticut Urban	Black	99	44,763	30.94%	29.20%
Connecticut Urban	Caucasian	201	100,413	62.81%	65.50%
Connecticut Urban	Hispanic	17	7,346	5.31%	4.79%
Connecticut Urban	Native American	-	-	0.00%	0.00%
Connecticut Urban	Pacific Islander	-	-	0.00%	0.00%
Connecticut Urban Total		**320**	**153,309**	**100.00%**	**100.00%**
OVERALL		**558**	**263,082**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Populations

- Surrounding PUMAs: 15.97% of the population, receiving 18.46% of the services (difference of + 2.49%)
- Urban PUMAs: 30.94% of the population, receiving 29.20% of the services (difference of -1.74%)

Caucasian Populations

- Surrounding PUMAs: 78.99% of the population, receiving 78.16% of the services (difference of -0.83%)
- Urban Areas: 62.81% of the population, receiving 65.50% of the services (difference of +2.69%)

Hispanic Populations

- Surrounding PUMAs: 4.20% of the population, receiving 3.32% of the services (difference of -0.88%)
- Urban Areas: 5.31% of the population, receiving 4.79% of the services (difference of -0.52%)

2. **The information for Schizophrenia for Bridgeport and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Bridgeport Surrounding	American Indian	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Asian	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Black	13	6,752	**16.05%**	**18.13%**
Bridgeport Surrounding	Caucasian	63	28,164	**77.78%**	**75.63%**
Bridgeport Surrounding	Hispanic	5	2,325	**6.17%**	**6.24%**
Bridgeport Surrounding	Native American	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Surrounding Total		**81**	**37,241**	**100.00%**	**100.00%**
Bridgeport	American Indian	-	-	**0.00%**	**0.00%**
Bridgeport	Asian	-	-	**0.00%**	**0.00%**
Bridgeport	Black	23	8,908	**25.56%**	**19.89%**
Bridgeport	Caucasian	60	33,578	**66.67%**	**74.97%**
Bridgeport	Hispanic	7	2,301	**7.78%**	**5.14%**
Bridgeport	Native American	-	-	**0.00%**	**0.00%**
Bridgeport	Pacific Islander	-	-	**0.00%**	**0.00%**
Bridgeport Total		**90**	**44,787**	**100.00%**	**100.00%**
OVERALL		**171**	**82,028**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Population

- Surrounding PUMAs: 16.05% of the population, receiving 18.13% of the services (difference of +2.08%)
- Bridgeport Urban: 25.56% of the population, receiving 19.89% of the services (difference of -5.67%)

Caucasian Population

- Surrounding PUMAs: 77.78% of the population, receiving 75.63% of the services (difference of -2.15%)
- Bridgeport Urban: 66.67% of the population, receiving 74.97% of the services (difference of +8.30%)

Hispanic Population

- Surrounding PUMAs: 6.17% of the population, receiving 6.24% of the services (difference of +0.07%)
- Bridgeport Urban: 7.78% of the population, receiving 5.14% of the services (difference of -2.64%)

3. **The information for Schizophrenia for Hartford and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
Hartford Surrounding	American Indian	-	-	**0.00%**	**0.00%**
Hartford Surrounding	Asian	2	73	**2.60%**	**0.20%**
Hartford Surrounding	Black	18	10,252	**23.38%**	**28.71%**
Hartford Surrounding	Caucasian	55	24,723	**71.43%**	**69.24%**
Hartford Surrounding	Hispanic	2	658	**2.60%**	**1.84%**
Hartford Surrounding	Native American	-	-	**0.00%**	**0.00%**
Hartford Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
Hartford Surrounding Total		**77**	**35,706**	**100.00%**	**100.00%**
Hartford Urban	American Indian	**1**	18	**1.02%**	**0.04%**
Hartford Urban	Asian	-	-	**0.00%**	**0.00%**
Hartford Urban	Black	28	13,916	**28.57%**	**29.06%**
Hartford Urban	Caucasian	64	31,097	**65.31%**	**64.94%**
Hartford Urban	Hispanic	5	2,856	**5.10%**	**5.96%**
Hartford Urban	Native American	-	-	**0.00%**	**0.00%**
Hartford Urban	Pacific Islander	-	-	**0.00%**	**0.00%**
Hartford Urban Total		**98**	**47,887**	**100.00%**	**100.00%**
OVERALL		**175**	**83,593**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Population

- Surrounding PUMAs: 23.38% of the population, receiving 28.71% of the services (difference of +5.33%)
- Hartford Urban: 28.57% of the population, receiving 29.06% of the services (difference of +0.49%)

Caucasian Population

- Surrounding PUMAs: 71.43% of the population, receiving 69.24% of the services (difference of -2.19%)
- Hartford Urban: 65.31% of the population, receiving 64.94% of the services (difference of -0.37%)

Hispanic Population

- Surrounding PUMAs: 2.60% of the population, receiving 1.84% of the services (difference of -0.76%)
- Hartford Urban: 5.10% of the population, receiving 5.96% of the services (difference of +0.86%)

4. **The information for Schizophrenia for New Haven and its surrounding PUMAs is as follows:**

PUMA Name	Race	# Beneficiaries	Services	% of Beneficiaries/PUMAS	% of Services/PUMAS
New Haven Surrounding	American Indian	-	-	**0.00%**	**0.00%**
New Haven Surrounding	Asian	-	-	**0.00%**	**0.00%**
New Haven Surrounding	Black	7	3,255	**8.75%**	**8.84%**
New Haven Surrounding	Caucasian	70	32,910	**87.50%**	**89.37%**
New Haven Surrounding	Hispanic	3	661	**3.75%**	**1.79%**
New Haven Surrounding	Native American	-	-	**0.00%**	**0.00%**
New Haven Surrounding	Pacific Islander	-	-	**0.00%**	**0.00%**
New Haven Surrounding Total		**80**	**36,826**	**100.00%**	**100.00%**
New Haven Urban	American Indian	1	666	**0.76%**	**1.10%**
New Haven Urban	Asian	1	103	**0.76%**	**0.17%**
New Haven Urban	Black	48	21,939	**36.36%**	**36.18%**
New Haven Urban	Caucasian	77	35,738	**58.33%**	**58.94%**
New Haven Urban	Hispanic	5	2,189	**3.79%**	**3.61%**
New Haven Urban	Native American	-	-	**0.00%**	**0.00%**
New Haven Urban	Pacific Islander	-	-	**0.00%**	**0.00%**
New Haven Urban Total		**132**	**60,635**	**100.00%**	**100.00%**
OVERALL		**212**	**97,461**		

For the Black, Caucasian and Hispanic populations the above chart shows the following:

Black Population

- Surrounding PUMAs: 8.75% of the population, receiving 8.84% of the services (difference of +0.09%)
- New Haven Urban: 36.36% of the population, receiving 36.18% of the services (difference of -0.18%)

Caucasian Population

- Surrounding PUMAs: 87.50% of the population, receiving 89.37% of the services (difference of +1.87%)
- New Haven Urban: 58.33% of the population, receiving 58.94% of the services (difference of +0.61%)

Hispanic Population

- Surrounding PUMAs: 3.75% of the population, receiving 1.79% of the services (difference of -1.96%)
- New Haven Urban: 3.79% of the population and received 3.61% of the services (difference of -0.18%)

IV. Discussion

A. Analysis of Race in Urban versus Surrounding PUMAs for all Diagnoses

1. All Diagnoses with Bridgeport, Hartford, and New Haven and all surrounding PUMAs combined

In analyzing the intensity of receipt of home health services by race across combined urban and surrounding PUMAs and all diagnoses, the data shows two trends that are present throughout the areas studied. First, Caucasians generally receive more care in both urban and suburban settings. Here, Caucasians when compared to their percentage of the population receive 1.95% more services in surrounding PUMAs and 2.56% more services in urban PUMAs. Second, the Hispanic population generally receives less care when compared to their respective percentage of the population. In surrounding PUMAs the Hispanic population utilized 2.09% less care than their percentage of the population and in urban PUMAs 2.18% less. Further, the Hispanic population both in this category and generally across all categories analyzed presented with the smallest population in the surrounding PUMAs.

When looking at the Black population, there was no noticeable difference in receipt of care compared to their overall population, though this is not consistent throughout all the factors analyzed, as discussed below.

The breakout analysis of specific urban PUMAs and their surrounding PUMAs that follows may be more illustrative of disparities that exist in specific geographic regions of Connecticut. However, the combined data does show that overall the Hispanic population may be receiving less care as compared to their population than others in the home health setting.

2. All Diagnoses for Bridgeport and its Surrounding PUMAs

The Bridgeport region shows two potential areas of disparities. The first is the Black urban population which receives 1.99% less care when compared to its percentage of the population. In comparison, the Black population in the surrounding PUMAs received 0.30% more services when compared to their percentage of the population. The second possible area of disparity was in the Hispanic population. In both urban and surrounding PUMAs the Hispanic population received less care than its percentage of the population. In surrounding PUMAs, the Hispanic population received 2.86% less care and in the Bridgeport urban PUMAs 0.56% less care. From this data one could conclude that the Hispanic population surrounding Bridgeport and the Black urban population of Bridgeport face a similar disparity in receipt of home health care.

The Caucasian population received more care in both the surrounding and urban Bridgeport PUMAs (+3.38% in surrounding PUMAs and +2.91% in urban).

Given the potential disparity of services received in the Bridgeport region further analysis is warranted to identify the root causes of the disparity and possible remedies. This will be discussed further in the conclusions section below.

3. All Diagnoses for Hartford and its Surrounding PUMAs

The one identifiable disparity in the Hartford region was among the Hispanic population, where receipt of care was 2.81% less when compared to their population in surrounding PUMAs, and 4.96% less in the urban Hartford PUMAs. The percentage of care received by Hispanics in urban Hartford PUMAs represents the largest disparity in receipt of care when looking at the analysis of all diagnoses by race across surrounding and urban PUMAs (Bridgeport, Hartford, and New Haven).

The Black and Caucasian populations each received more home care services when compared to their respective percentages of the population in both surrounding PUMAs and urban Hartford PUMAs.

Given the disparity of services received by Hispanics in the Hartford region further analysis is warranted to identify the root causes of the disparity and possible remedies. This will be discussed further in the conclusions section below.

4. All Diagnoses for New Haven and its Surrounding PUMAs

Compared to Bridgeport and Hartford, New Haven shows the least disparity in receipt of home care services among the Black, Caucasian, and Hispanic populations.

The Black population received less care in the urban New Haven PUMA by 1.02% and received more care in the surrounding PUMAs by 1.22%. Conversely, the Caucasian population received more care in the urban New Haven PUMA by 2.45% and less care in the surrounding PUMAs by 0.43%.

As with both Bridgeport and Hartford, Hispanics received less care in both urban New Haven, 1.24% less, and in the surrounding PUMAs, 0.53% less.

B. Analysis of Race in Urban versus Surrounding PUMAs for Diabetes

1. Diabetes for Bridgeport, Hartford, and New Haven and all Surrounding PUMAs combined

In analyzing the receipt of home health services by race for people with diabetes as a primary diagnosis across Bridgeport, Hartford, and New Haven, the data shows a trend that is present when looking separately at each geographic area. With the exception of urban Hartford, the Black population generally receives a lower percentage of services when compared to their respective percentages of the population in all urban PUMAs analyzed and utilizes higher percentages of services when compared to their respective percentages of the population in all surrounding PUMA locations. For all three areas combined they received 2.03% less services relative to their population in urban areas and 3.82% more services relative to their population in surrounding PUMA areas.

The Caucasian and Hispanic populations each received more care when compared to their respective percentages of the population in the urban PUMAs (+1.89% and +0.11% respectively) and less care when compared to their respective percentages of the population in the surrounding PUMAs (-1.58% and -1.37% respectively).

The breakout analysis of specific urban PUMAs and their surrounding PUMAs that follows may be more illustrative of disparities that exist in geographic regions of Connecticut.

2. Diabetes for Bridgeport and its Surrounding PUMAs

The largest identifiable disparity in the Bridgeport region was among the Black population, where 6.99% less care was received when compared to their population in the urban Bridgeport PUMAs. On the other hand, the Black population received more care than their population by 4.51% in the surrounding PUMAs. The receipt of care percentage by Blacks with a primary diagnoses of diabetes in the urban Bridgeport PUMA represents the largest disparity in receipt of home health care in the entire study.

The Caucasian and Hispanic populations each received more care when compared to their respective percentages of the population in the urban Bridgeport PUMA (+1.20% and +5.79% respectively) and less care when compared to their respective percentages of the population in the surrounding PUMAs (-1.27% and -2.28% respectively).

Given the disparity of services utilized by Blacks in the urban Bridgeport PUMA further analysis is warranted to identify the root causes of the disparity and possible remedies. This will be discussed further in the conclusions section below.

3. Diabetes for Hartford and its Surrounding PUMAs

Similar to the analysis for all diagnoses, one identifiable disparity in the Hartford region for those diagnosed with diabetes was among the Hispanic population, where 4.26% less care was received compared to the population in surrounding PUMAs, and 3.49% less care was received in the urban Hartford PUMAs.

The Black and Caucasian populations each received more care compared to their respective percentages of the population in both surrounding PUMAS and urban Hartford PUMAs.

Given the disparity of services utilized by Hispanics in the Hartford region further analysis is warranted to identify the root causes of the disparity and possible remedies. This will be discussed further in the conclusions section of the paper.

4. Diabetes for New Haven and its Surrounding PUMAs

As with the analysis of all diagnoses, compared to Bridgeport and Hartford, New Haven had the least disparity in receipt of home care compared to the population for Blacks, Caucasians and Hispanics.

The Black population received less care in the urban New Haven PUMA by 2.94% and more care in the surrounding PUMAs by 2.06%.

The Caucasian population received more care in the urban New Haven PUMA by 2.64% and less care in the surrounding PUMAs by 3.80%.

This is the only area where Hispanics received more care in both urban New Haven PUMA (+0.15%) and the surrounding PUMAs (+2.17%).

C. Analysis of Race in Urban Versus Surrounding PUMAs for Schizophrenia

1. Schizophrenia for Bridgeport, Hartford, and New Haven and all Surrounding PUMAs combined

The data of combined urban PUMAs and surrounding PUMAs revealed mixed results among the population with schizophrenia as a primary diagnosis. The Black population received more services in surrounding PUMAs (+2.49%) compared to their percentage of the population, and less care in urban PUMAs (-1.74%). The Caucasian population received 0.83% less home care services compared to the percentage of their population in surrounding Pumas, and received 2.69% more services in urban PUMAs. The Hispanic population received 0.97% less care in surrounding PUMAs, and 0.52% less services in urban PUMAs when compared to their percentage of the population. Overall the data showed a trend in Blacks and Hispanics receiving less home care services in the urban PUMAs, and more home care in the surrounding PUMAs.

2. Schizophrenia for Bridgeport and its Surrounding PUMAs

The largest disparity in this category was among Black individuals in the urban Bridgeport PUMA, which received 5.67% less services when compared to their percentage of the population. This was one of the largest disparities across all categories analyzed. Comparatively, Black individuals in surrounding PUMAs received 2.08% more services. This shows a large discrepancy in care for the Black population in urban versus suburban settings in the Bridgeport region. This is an area that merits more study and potential intervention to address the disparity in services.

The Caucasian population received 2.15% less services in surrounding PUMAs, but received 8.30% more services in the urban Bridgeport PUMA. The receipt of home care services by Caucasians in the urban Bridgeport PUMA represents the highest percentage difference in the receipt of care across all categories studied.

The Hispanic population received slightly more services than its percentage of the population in surrounding PUMAs, at 0.07% and 2.64% less services in the urban Bridgeport PUMA.

Overall the data shows that Caucasians with schizophrenia received a disproportionally high percentage of care in the Bridgeport urban PUMA compared to their Black and Hispanic counterparts. The schizophrenic population in Bridgeport should be studied further to determine root causes and suggest possible remedies for the disparity in services.

3. Schizophrenia for Hartford and its Surrounding PUMAs

The main disparity in care in the Hartford region was for Caucasians in surrounding PUMAs, which showed they received 2.19% less care than their percentage of the population. In the urban Hartford population the Caucasian population received 0.37% less care.

The Black population received more care in surrounding PUMAs with, 5.33% more services received when compared to their percent of the population. This appears to be a trend in the category with higher utilization by the Black population in surrounding PUMAs.

The Hispanic population with schizophrenia in the Hartford region did not show a disparity in either more or less receipt of care, with percentages showing less than 1% of a disparity in care.

4. Schizophrenia for New Haven and its Surrounding PUMAs

The New Haven data did not show substantial disparity in care among all populations. The one exception was the Hispanic population in surrounding PUMAs which showed a difference of 1.96% less care received compared to their percentage of the population.

IV. Conclusions and Recommendations

As previously noted, the data analyzed for dually eligible individuals in Connecticut that received home health care services shows the intensity of the receipt of services for each individual race. Specifically, the data shows the number and percent of beneficiary's for each race in each geographic region receiving services as compared to the number and percent of services each race received in the same geographic region. Based on an analysis of the data discussed above, it appears that certain dually eligible populations received less care as compared to their percentage of the population. For example:

A. **Bridgeport Black Population:** In urban Bridgeport the Black population received substantially less home care compared to their population in the area for both those with a primary diagnoses of diabetes and schizophrenia. In the urban Bridgeport area the Black population with a primary diagnosis of diabetes received 6.99% less home care services as compared to their population. Also in the urban Bridgeport area, the Black population with a primary diagnosis of schizophrenia received 5.67% less home health services when compared to their percentage of the population.

Recommendation: We recommend further study to determine why segments of the Black population, particularly in certain areas, appear to be receiving less home health services compared to their percent of the population. We also recommend that the agencies providing home health services in these areas receive education regarding the identified discrepancies and that they allocate resources to ensure appropriate services are received by populations that appear to be using less services.

B. **Hispanic Population**: It also appears from the data analyzed that the most substantial discrepancy in receipt of home care lies with the Hispanic population which appears not to have received services consistent with the population in both urban and surrounding PUMA areas. This was shown by looking at all of the diagnoses combined and also when looking at a break out of the services provided for those with a primary diagnoses of diabetes and schizophrenia.

   The discrepancy in the receipt of home care services among the Hispanic population is not surprising to us, given the Center for Medicare Advocacy's experience reviewing and preparing Medicare appeals for Connecticut's home health Medicare Maximization Project. In many of the cases we review the documentation clearly notes language barriers and home health agencies do not always assign staff that understands the beneficiary's primary language. In many cases the Center reviews, the patient is noted to speak "Spanish only". In other cases, the beneficiary is noted to speak primarily Spanish, or "some

English." Sometimes, but not always, the medical record documents that a family member or friend is present during the home health visit to interpret. Too often, however, the individual cannot understand what is said or written and family members and friends are unavailable, or have language barriers of their own.

A major consequence of language barriers is ineffective communication with those ordering, arranging, and providing care, which in turn, can lead to a lack of proper care or inadequate care. When language barriers exist it is difficult, if not impossible, for the nurses, therapists, and home health aides to properly assess the individual's needs, gather information to communicate with the treating physician, and explain the care and care plan strategies to the patient. For example, diabetes is a very prevalent primary diagnosis in the State of Connecticut Medicaid population – and is one of the diagnoses we studied. It is a chronic disease that requires effective communication for beneficiary education and self-management. Thus, a language barrier creates significant challenges for diabetic beneficiaries to obtain and maintain proper care.

Recommendation: Understanding the major role language plays in creating barriers to health care is critical to making sure that communication errors are not made and proper care is provided. In order to ensure culturally competent care, additional bilingual home health staff should be recruited, trained and retained to ensure that beneficiaries, families, and health care providers can communicate through a shared language.

C. In addition, we suggest these overall recommendations:

Recommendation: In addition to the data from DSS that we analyzed for this Report, we also recommend further studies regarding the dually eligible population. Our analysis focused on dually eligible individuals who actually received services and focused on their intensity of utilization of the services. It would be beneficial to analyze the entire population of Connecticut dually eligible individuals to determine whether there are disparities in accessing health care among the entire population. This could be done by analyzing the ACS data from the Census which has further information about eligibility for Medicare and Medicaid, disability, age, race, gender and geographic location. This comparative data could be used to answer questions about and explore potential barriers to accessing care.

Recommendation: In addition to recommendations to address possible disparities in the receipt of care we also recommend that further research be done regarding the ordering and provision of medical social services as part of Medicaid paid home health services. As noted in this Report, the services analyzed included all services that were billed to DSS by Connecticut home health agencies. The services billed include skilled nursing, therapy and home health aide services. One important service that did not appear in the DSS payment data was medical social services. Given the specificity of the payment data that we received and analyzed for this Report, it is not clear to what extent DSS pays for medical social services for recipients of home health care.

Medicare provides coverage of home health services when the services are medically reasonable and necessary and when the individual is confined to his or her home, the individual needs skilled services, a plan for furnishing the services has been established and such services are furnished by, or under arrangement with, a Medicare-certified home health agency.[7] If these triggering

[7] 42 U.S.C. § 1395x(m) and 42 C.F.R. § 409.42.

conditions are satisfied, the individual also qualifies for Medicare coverage of dependent services such as home health aide, medical social worker services and medical supplies.[8]

Medical social services can be covered by Medicare if certain requirements are met. Medicare regulations specifically state that the services may be covered if they "…are necessary to resolve social or emotional problems that are expected to be an impediment to the effective treatment of the beneficiary's medical condition or to his or her rate of recovery."[9]

The Medicare Benefit Policy Manual gives examples of services of these professionals that can be covered. Examples include assessment of the social and emotional factors related to the individual's illness, need for care, response to treatment and adjustment to care; assessment of the relationship of the individual's medical and nursing requirements to the individual's home situation, financial resources and availability of community resources; appropriate action to obtain available community resources to assist in resolving the individual's problem; counseling services required by the individual; and a brief intervention to remove a clear and direct impediment to the effective treatment of the individual's medical condition or to the individual's rate of recovery.[10]

The thousands of cases and related medical records reviewed by the Center speak to the critical role these social services could play for dually eligible beneficiaries, including helping to manage their health care, behavioral, financial, and social issues. An example of the effectiveness of a social worker would be the assessment of a diabetic patient who has recently become insulin dependent and is not yet stabilized. In many such cases, during home visits the nurse notices that supplies left in the home for use appear to be missing, or have not been used, or the patient is not compliant with the ordered health regimen - but he/she refuses to discuss the matter. An assessment and intervention in such a case by a medical social worker would be essential to determine if there are underlying social or emotional problems that are impeding the patient's treatment and well-being.[11]

We recommend further research regarding how medical social work services are reimbursed by Medicaid and received by dually eligible people receiving home health care. Although it is clear that Medicare covers these services as part of the home health benefit, it does not appear that social worker services are actually received as a component of home health services paid for by Medicaid. The Medicaid and dually eligible population in particular would greatly benefit from these important services. The unique skills of a social worker would be valuable to promoting proper health care and could help reduce health inequities. Receipt of social work services could also be cost-effective, as these services may increase patients' well-being and compliance with necessary health plans.

V. A Word About the Pandemic

At the time of this writing, the United States is in the midst of the COVID-19 Pandemic. The Pandemic has exacerbated the many challenges of our current health care system and highlighted the need for access to quality health care at home. The full effects of COVID-19 on the health of racial and ethnic minority groups and its impact on their ability to access necessary health care are

[8] 42 U.S.C. § 1395x(m)(3)-(5).
[9] 42 C.F.R. § 409.45(c)(2)(i).
[10] Medicare Benefit Policy Manual 100-02, Chapter 7, § 50.3.
[11] Medicare Benefit Policy Manual 100-02, Chapter 7, § 50.3, Example 1.

not yet fully known. It is clear, however, that health care disparities are real, including for home health care provided to Connecticut's dually eligible population.

Now, more than ever, the unequal access to home health care services among various minority and low-income groups needs to be addressed. The Center for Medicare Advocacy remains committed to focusing on these ongoing issues surrounding access to care among dually eligible Connecticut residents and is available to help in any way we can.[12]

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