NEW YORK STATE Department of Health

Quality Connection

Division of Quality Measurement // Bureau of Quality Measurement and Evaluation health.ny.gov

June 2015 // Volume 5, Issue 1

Diabetes Self-Management Education/Training Use Among Medicaid Recipients

OVERVIEW

Approximately 1.5 million New Yorkers over the age of 18 had diabetes in 2011. This corresponded to an age-adjusted rate of 10.4 adults with diabetes per 100 adults in New York State (NYS).[1] In the same year, it was estimated that approximately 8% of all Medicaid recipients in NYS had diabetes. Those Medicaid recipients with diabetes were associated with 20 percent of the overall annual costs of Medicaid, or $9.9 billion, in 2011. This high level of spending indicates a need to promote evidence-based strategies that are associated with positive health outcomes and decreased costs of health care for this population. One such strategy is a referral to Diabetes Self-Management Education/Training (DSME/T) for Medicaid recipients who have been diagnosed with diabetes.

The American Association of Diabetes educators (AADE) defines DSME/T as "a collaborative process through which people with or at risk for diabetes gain the knowledge and skills needed to modify behavior and successfully self-manage the disease and its related conditions."[2] DSME/T is included in the American Diabetes Association (ADA) Standards of Care for People with Diabetes and focuses on seven behaviors: healthy eating, being active, monitoring, taking medication, problem solving, healthy coping, and reducing risks.[3,4]

In New York State, DSME/T is of interest to health systems and health system partners including health care providers, insurance plans, employers, patients, and health departments because of its association with positive outcomes for people with diabetes and decreased costs of health care for this population. For example, Nicolucci, et al. carried out a large case control study (886 cases and 1,888 controls) and found that "patients [with diabetes] who had not received any kind of outpatient education showed a more than fourfold increased risk of developing a major complication opposed to patients who received some form of education."[5] Other studies have found that diabetes education is associated with "decreased cost, cost saving, cost-effectiveness, and [a] positive return on investment."[6] DSME/T is also of interest in New York State because it is directly related to the NYS Prevention Agenda goals and several quality improvement projects of the Delivery System Reform Incentive Payment Program (DSRIP).[7,8]

DSME/T has been a benefit for NYS Medicaid recipients who are diagnosed with diabetes since 2009. The benefit covers 10 hours of DSME/T for each qualifying event (newly diagnosed or complex condition) over a 6-month period or 1 hour of DSME/T training over a 6-month period for patients who are considered medically stable.[9] The benefit is available to Medicaid recipients who attend DSME/T programs approved by the ADA and/or AADE. This newsletter investigates use of the DSME/T benefit among adult NYS Medicaid recipients with diabetes.

METHODS

Member-level data from the New York State Department of Health (NYSDOH) Medicaid Data Mart is used to calculate the percentage of Medicaid recipients with diabetes that use the DSME/T benefit in a given measurement year. The member-level data used in this analysis includes all fee-for-service (FFS) claims and encounter records for continuously enrolled Medicaid recipients with diabetes for each calendar year between 2009 and 2013.

The denominator is the number of Medicaid recipients with diabetes. In order to be included in the denominator, the Medicaid recipient has to be between 18 and 75 years of age, continuously enrolled for the measurement year (11 or 12 months of coverage), and not dually enrolled in Medicaid and Medicare. In addition, the recipient has to have at least one inpatient or two outpatient visits with a diagnosis of diabetes (ICD-9 codes: 250.xx, 648.0x, 648.8x, 775.0, 775.1) or a pharmacy claim for a diabetes medication during the measurement year or the year prior. The denominator includes 112,210 Medicaid recipients in 2009. The denominator increases each year and reaches 230,104 Medicaid recipients in 2013.

The numerator is the number of Medicaid recipients with diabetes (from the denominator) who attend one or more DMSE/T sessions in the measurement year. DSME/T sessions are identified using the codes provided in the Medicaid billing guidelines (CPT Procedure codes: G0108 (individual session) or G0109 (group session)) or the following provider specialty codes: 095 (Certified Diabetes Educator – Managed Care Use Only) or 103 (CDE: Certified Diabetes Educator).

RESULTS

Figure 1 shows the percentage of Medicaid recipients diagnosed with diabetes (based on the criteria described in the Methods section) who have a FFS claim or encounter record for at least one DSME/T session in the measurement year. Overall, there has been an increase in the use of DSME/T services among Medicaid recipients diagnosed with diabetes from 2.9% in 2009 to 3.8% in 2013.

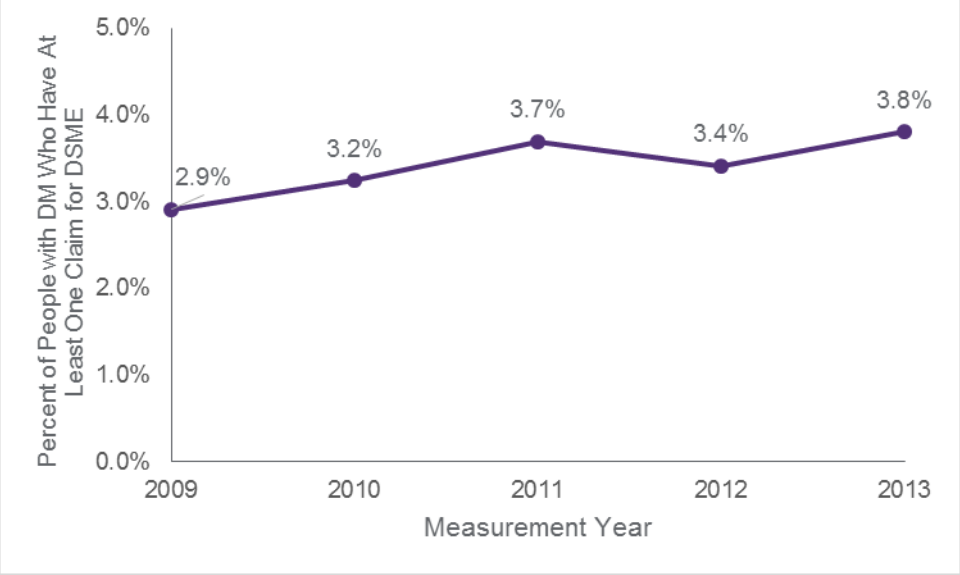

Figure 1. Statewide DSME/T Use by Medicaid Recipients with Diabetes

Table 1 shows the percentage of Medicaid recipients with diabetes who made use of the DSME/T benefit for each measurement year, 2009 through 2013, by gender, age, race/ethnicity, DSRIP region, and Medicaid delivery system (FFS / Medicaid Managed Care (MMC)). These results are summarized below:

DSME/T Use by Gender: In NYS, a higher percentage of female Medicaid recipients with diabetes attend DSME/T compared to male Medicaid recipients with diabetes in each measurement year. With the exception of 2012 which shows a slight decrease in DSME/T use for both genders, the percentage of both male and female Medicaid recipients with diabetes who attend DSME/T sessions increases each year between 2009 and 2013.

Table 1. DSME/T Use by Subgroup: Measurement Years 2009 through 2013

Subgroup	DMSE/T Use in Measurement Year (Percent)					1-yr Percent Change	5-yr Percent Change
	2009	2010	2011	2012	2013		
Gender							
Female	3.20	3.59	3.95	3.65	4.06	11.32	26.9
Male	2.53	2.78	3.36	3.10	3.46	11.66	36.6
Age							
18 to 24	6.69	5.96	7.07	6.29	7.43	18.10	11.1
25 to 34	5.81	5.19	5.50	4.86	5.63	15.72	-3.1
35 to 44	3.46	3.68	4.01	3.81	4.08	6.97	17.8
45 to 64	2.53	3.00	3.47	3.19	3.54	11.03	39.9
65 +	1.83	1.83	2.11	2.08	2.62	26.11	42.9
Race/Ethnicity							
Asian / Pacific Islander	2.04	1.99	2.07	2.24	3.66	63.29	79.9
Black	2.49	2.86	3.12	2.98	3.07	2.88	23.0
Hispanic	1.94	2.32	2.80	2.62	2.99	14.06	54.1
Native American	4.17	3.58	5.77	4.55	5.58	22.82	33.8
Other	1.95	1.97	2.71	2.39	2.65	10.89	35.9
Unknown	1.88	2.17	2.45	2.28	3.06	34.37	62.6
White	5.72	6.20	6.99	6.22	6.17	-0.80	7.8
DSRIP Region							
Capital District	10.98	12.53	12.79	10.70	10.79	0.86	-1.7
Central NY	6.59	8.15	7.77	6.37	6.81	6.99	3.3
Finger Lakes	12.61	11.40	10.97	10.61	10.55	-0.57	-16.3
Long Island	3.93	4.76	4.33	3.60	3.92	8.84	-0.2
Mid-Hudson	1.95	2.20	3.29	2.50	2.70	8.15	38.4
Mohawk Valley	4.48	8.48	13.26	13.33	14.95	12.21	233.5
North Country	14.30	18.47	15.65	13.62	13.07	-4.04	-8.6
NYC	1.54	1.74	2.10	2.07	2.60	25.49	69.0
Southern Tier	7.64	8.38	13.46	14.54	11.85	-18.50	55.0
Tug Hill Seaway	3.26	6.34	11.29	10.30	6.29	-38.94	92.9
Western NY	7.80	6.49	7.08	5.82	5.89	1.17	-24.5
Unknown or Out of State	2.47	2.14	2.43	2.28	2.18	0.86	-11.5
Delivery System							
FFS	4.49	6.21	7.13	6.90	6.93	0.48	54.1
MMC	2.62	2.70	3.18	3.05	3.53	15.56	34.7
Total	**2.91**	**3.25**	**3.70**	**3.42**	**3.81**	**11.4**	**30.6**

1-yr Percent Change = [(2013 – 2012)/2012] * 100 5-yr Percent Change = [(2013 – 2009)/2009] * 100

DSME/T use by Age: Overall, all of the age groups see an increase in the percentage of Medicaid recipients with diabetes using the DSME/T benefit between 2009 and 2013 except for the 25 to 34 age group which sees a slight decline in DSME/T use over this same time period. The 18 to 24 age group consistently has the highest percentage of Medicaid recipients with diabetes who attend DSME/T across all of the measurement years. This can be attributed to a higher percentage of people with Type I diabetes in this age group. For example, in 2012, 30% of the Medicaid recipients with diabetes in the 18-24 age group had Type I diabetes, and 10% of those individuals with Type I diabetes attended DSME/T compared to 4% of the people with Type II diabetes. The other age groups have smaller percentages of people with Type I diabetes. As a result, the percent of DSME/T use in these other age groups is not increased as much by DSME/T use by those individuals with Type I diabetes. The 65 and over age group has the lowest percentage of Medicaid recipients with diabetes who attend DSME/T each year. The 65 and over age group percentages may be low due to a number of people over 65 being dually enrolled in Medicaid and Medicare and thus eliminated from consideration in this analysis.

DSME/T Use by Race/Ethnicity: Overall, DSME/T use increases for all race/ethnicities between 2009 and 2013. Non-Hispanic White and Native American Medicaid recipients with diabetes have the highest percentages for use of the DSME/T benefit in each measurement year. Asian and Pacific Islander Medicaid recipients with diabetes have the greatest increase in DSME/T use between 2009 and 2013.

DSME/T Use by DSRIP Region: DSME/T use is highest in the North Country for each of the measurement years except for 2013 where the North Country sees a slight decline in DSME/T use. Mohawk Valley has the greatest increase in use of the DSME/T benefit between 2009 and 2013 with the percentage of Medicaid recipients with diabetes attending at least one DSME/T session increasing from 4.5% in 2009 to approximately 15% in 2013. Other DSRIP regions seeing increases in DSME/T use between 2009 and 2013 include the Central NY, Mid-Hudson, New York City (NYC), Southern Tier, and Tug Hill Seaway regions. The Capital District, Finger Lakes, Long Island, North Country, and Western NY regions have all seen decreases in DSME/T use among Medicaid recipients with diabetes since 2009.

DSME/T Use by Delivery System: A higher percentage of Medicaid recipients with diabetes who receive Medicaid through a FFS system attend DSME/T compared to Medicaid recipients with diabetes who are enrolled in MMC in each measurement year. Overall, both Medicaid recipients with diabetes in FFS and MMC plans have increased their use of the DMSE/T benefit since 2009.

CONCLUSION

This newsletter investigates use of the DSME/T benefit among adult NYS Medicaid recipients with diabetes for measurement years 2009 through 2013. While use of the DSME/T benefit has increased since the benefit's inception in 2009, it is still an underutilized benefit with 96% of the adult Medicaid population with diabetes not attending any DSME/T sessions in 2013.

According to the results of a Reducing Risks Symposium convened by the AADE in 2011, a major hurdle for diabetes educators is the lack of referrals from health care providers.[10] If these findings hold in NYS, then it is possible that DSME/T use among Medicaid recipients with diabetes is low because health care providers in NYS do not refer patients to DSME/T. One reason health care providers may not refer patients to DSME/T is that the benefit is not well-promoted. However, it is also possible that healthcare providers refer patients to DSME/T but the patients choose not to attend any sessions. This is one area in which future work can be carried out to further investigate DSME/T use by Medicaid recipients diagnosed with diabetes.

Another possible reason for the low percentages associated with use of the DSME/T benefit may be that DSME/T sessions are not being coded based on the Medicaid billing guidelines, i.e. using procedure codes G0108 or G0109. It is also possible that healthcare providers are referring their patients to Medical Nutrition Therapy (MNT), which is also recommended as an evidence-based treatment for patients with diabetes, instead of DSME/T. Investigating the number of patients who are attending MNT sessions and the number of patients who are attending both MNT and DSME/T sessions is another area for future work.

Based on the results of this analysis, NYSDOH recommends the following actions:

- Widespread education about the DSME/T benefit for Medicaid recipients and outreach to clinicians to promote the benefit.
- Health plans should encourage clinicians to refer Medicaid recipients with diabetes to DSME/T sessions since it is an evidence-based strategy that is associated with positive health outcomes and decreased costs of health care for this population.*
- Those health care facilities billing Medicaid for DSME/T sessions should use the appropriate Medicaid billing codes (G0108 or G0109).
- Additional work should be carried out to identify barriers to use of the DSME/T benefit by the Medicaid recipients with diabetes.

The lead analyst for this study was Tara Cope. If you have any questions about this analysis, or if you have suggestions for further analyses on this or another topic, please email Tara at taracope@health.ny.gov. Report design and layout by Public Affairs Group, New York State Department of Health.

REFERENCES

1. NYSDOH. BRFSS brief 1306: diabetes: new york state adults, 2011. Available at: http://www.health.ny.gov/statistics/brfss/reports/docs/1306_brfss_diabetes.pdf. Accessed May 20, 2015.

2. American Association of Diabetes Educators. Glossary of accreditation terminology. Available at: http://www.diabeteseducator.org/ProfessionalResources/accred/Glossary.html. Accessed April 27, 2015.

3. American Diabetes Association. American diabetes association standards of medical care in diabetes - 2015. Available at: http://professional.diabetes.org/admin/UserFiles/0%20-%20Sean/Documents/January%20Supplement%20Combined_Final.pdf. Accessed April 27, 2015.

4. American Association of Diabetes Educators. What is diabetes education? Available at: http://www.diabeteseducator.org/DiabetesEducation/Definitions.html. Accessed April 27, 2015.

5. Nicolucci A, Cavaliere D, Scorpiglione N, Carinci F, Capani F, Tognoni G, Benedetti M. A comprehensive assessment of the avoidability of long-term complications of diabetes. *Diabetes Care* 1996; 19(9): 927-33.

6. Boren S, Fitzner K, Panhalkar P, Specker J. Costs and benefits associated with diabetes education: a review of the literature. *The Diabetes Educator* 2009; 35(1): 72-96.

7. NYSDOH. NYS prevention agenda 2013-2017. Available at: http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/plan/chronic_diseases/focus_area_3.htm#goals. Accessed April 24, 2015.

8. NYSDOH. DSRIP project toolkit. Available at: http://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf. Accessed April 24, 2015.

9. NYSDOH. NYS Medicaid Update – April 2013, Volume 29 – Number 5. Available at https://www.health.ny.gov/health_care/medicaid/program/update/2013/2013-04.htm#dsm. Accessed April 24, 2015.

10. Kent D, Melkus G, Stuart P, McKoy, J, Urbanski P, Boren S, Coke L, Winters J, Horsley N, Sherr D, Lipman R. Reducing the risks of diabetes complications through diabetes self-management education and support. *Population Health Management* 2013; 16(2): 74 – 81.

* See the following websites for lists of accredited programs:

AADE: http://www.diabeteseducator.org/ProfessionalResources/accred/Programs.html#New York

ADA: http://professional.diabetes.org/ERP_List.aspx