New York State Health Foundation's
DIABETES POLICY CENTER
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CERTIFIED DIABETES EDUCATORS IN NEW YORK:

Findings From a Statewide Market Analysis and Recommendations for Improving Access to Diabetes Self-Management Education Services

The New York State Health Foundation's Diabetes Policy Center and The Center for Health Workforce Studies

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EXECUTIVE SUMMARY

INTRODUCTION

More than 1.8 million New York State residents have diabetes, and diabetes prevalence has doubled in the last decade. Another 3.7 million to 4.2 million New Yorkers are estimated to have pre-diabetes.[1] Diabetes affects New York State residents disproportionately based on race, ethnicity, and income level.[2] Most minority populations have significantly higher prevalence rates of Type 2 diabetes than that of the white population [3] and higher rates of diabetes-related complications and death, in some instances by as much as 50% as the total population.[4] Low-income and uninsured people with diabetes are at greater risk for diabetes and its complications.[5,6,7,8,9,10] Diabetes also contributes substantially to rising health care costs. The total cost of diabetes for New York in 2006 was estimated at $12.9 billion, including $8.7 billion in excess medical costs attributed to diabetes and $4.2 billion in lost productivity.[11] On average, the cost of health care for a person with diabetes is more than five times as much as the cost for those without diabetes—$13,000 vs. $2,500.[12]

Diabetes self-management education (DSME) helps people with or at risk of diabetes manage their disease and prevent complications. The American Diabetes Association's *National Standards for Diabetes Self-Management Education* defines DSME as the "ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. This process incorporates the needs, goals, and life experiences of the person with diabetes and is guided by evidence-based standards. The overall objectives of DSME are to support informed decision-making, self-care behaviors, problem-solving, and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life."

Certified diabetes educators (CDEs) are health professionals with specialized knowledge of DSME. CDEs work with individuals and groups of people with or at risk of diabetes to help them modify behaviors and manage their disease. CDEs employ a holistic approach to change, helping patients develop practical strategies for successfully managing their diabetes. Currently, there are only 1,000 CDEs certified in New York.[14] As of January 1, 2009, New York State Medicaid began reimbursing for select CDE services in clinical settings.[15] Medicare also reimburses for similar DSME services.

CONTENTS

As part of its $35 million, five-year campaign to reverse the diabetes epidemic in New York, the New York State Health Foundation's Diabetes Policy Center partnered with the Center for Health Workforce Studies at the School of Public Health, University at Albany to conduct a market analysis of CDEs in New York and develop recommendations for improving access to DSME in the State.

KEY FINDINGS

The analysis revealed several important findings related to CDEs and DSME in New York. The key findings fall into four main categories that will be discussed in detail in this report:

- the need for CDEs and DSME services;
- the supply and availability of CDEs and DSME services;
- the workforce pipeline for CDEs; and
- the demand for CDEs.

Need for CDEs and DSME Services

FINDING: There is a large and a significant unmet need for DSME.

Of the 342 organizations that provide services to diabetes patients in New York and responded to the survey, many report that large portions of their patient populations were diagnosed with the disease. Nearly half of all providers indicate that more than 51% of patients who they treat are diagnosed with diabetes. More than two-thirds of CDEs report a significant unmet need for diabetes education services in their geographic area.

Supply and Availability of CDEs and DSME Services

FINDING: The supply and availability of CDEs is small relative to the need for their services.

There are only 1,000 CDEs certified in New York. Not all are providing DSME and the majority do not provide DSME full time.

FINDING: A quarter of providers do not provide DSME.

Although three-quarters of responding organizations offer DSME, one-quarter report that they do not. There also are differences in who provides diabetes services by type of organization.

FINDING: The CDE workforce is not well distributed geographically.

Most CDEs were located in densely populated urban areas while people with diabetes live in both urban and rural communities.

FINDING: There is a lack of racial, ethnic, and linguistic diversity among New York's CDEs.

Although most racial and ethnic minority populations are at greater risk for diabetes and its complications, the vast majority of CDEs in New York are non-Hispanic white. Only 17% report fluency in a language other than English.

FINDING: CDEs are not serving New Yorkers with the highest burden of diabetes.

Almost half of CDEs report having no Medicaid patients in their caseloads and more than half do not have "self-pay"* patients in their caseloads.†

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* "Self-pay" is typically used to refer to the uninsured. However, it is possible that respondents also assumed other forms of self-payment when they responded to the question, such as people who have insurance but no DSME benefit, people with limited or exhausted DSME insurance benefits, and people who can afford to pay private consultants.

† Studies show that people with diabetes who are uninsured are less likely than the insured to be aware of their disease, get the diabetes care they need, and have their diabetes in control. A May 2005 report from the Robert Wood Johnson Foundation using data from the Centers for Disease Control and Prevention's 2003 National Health Interview Survey showed that many uninsured people with diabetes are not getting the care they need, which puts them at greater risk for complications. For example, 78% of uninsured people with diabetes did not have a professional examine their feet for sores, and three out of five did not have a dilated eye examination in the past year.

Workforce Pipeline of CDEs

FINDING: Most employers report that no staff in their organizations are pursuing CDE certification.

Despite a limited supply of CDEs, the majority of employers indicate that none of their staff are currently pursuing CDE certification.

FINDING: CDEs report practicing in their profession for many years prior to seeking CDE certification.

Most CDEs practice in their profession for many years before seeking certification. More than half of CDEs practiced in their health profession nine years or more before becoming certified, and one-third practiced for 15 years or more.

FINDING: More than one-quarter of CDEs report difficulty meeting all certification requirements.

More than one-quarter of CDEs report that it was difficult or very difficult meeting all of the certification requirements, and 17% report that it was difficult or very difficult finding an acceptable professional practice experience.

FINDING: Most employers do not provide support for CDE certification.

The majority of CDEs report that they did not receive any support from their employers for costs associated with obtaining or maintaining certification in diabetes education. Similarly, only approximately one-third of all providers responding to a financial support question indicate that they provide full financial support to their employee for this cost, and more than half of diabetes service providers offer no support for the cost of the certification examination.

Demand for CDEs

FINDING: Almost half of CDEs report some difficulty finding a job as a CDE.

Nearly half (47%) of CDEs indicate that it is difficult or very difficult finding CDE employment in their geographic area.

FINDING: CDEs and employers indicate a lack of reimbursement for DSME services.

When asked about the factors that influenced demand for CDEs, nearly half of CDEs report limited reimbursement for CDE services. More than half indicate that limited reimbursement interfered with their ability to serve patients in need of DSME.[‡] CDEs in physician offices were more likely to report that limited reimbursement interferes with their ability to serve patients in need. Most provider organizations agree that reimbursement for DSME does not cover the cost of providing those services.

FINDING: CDEs indicate that factors related to referrals, awareness, and other personnel limit demand for their services.

CDEs indicate other possible factors that limit demand for their services include a lack of timely referral, a lack of physician and patient awareness of the competencies of CDEs, and the use of other health personnel in the provision of diabetes education services.

RECOMMENDATIONS

Recommendation to Support Diabetes Prevention

Diabetes prevalence has doubled in the last decade and continues to grow. An estimated 3.7 to 4.2 million New York adults have pre-diabetes, which means they have an elevated risk for developing diabetes. Preventing New Yorkers with pre-diabetes from developing the disease is critical to reversing the diabetes epidemic in the State.

Reimburse for pre-diabetes education services.

Because CDEs' expertise includes identifying and managing diabetes risk factors and supporting patient behavior modification, CDEs could play an important role in preventing diabetes among New Yorkers diagnosed with pre-diabetes. A diagnostic protocol and ICD-9 codes are already available to enable reimbursement.[§]

[‡] In January 2009, New York State Medicaid began enrolling CDEs in a new program that reimburses eligible providers for DSME services provided by CDEs to Medicaid eligible patients. The survey was conducted in summer 2009 and, at that time, 14.7% of CDEs had already enrolled in the program but more than one-third of CDEs (34.3%) were unaware of the program.

[§] The New York State Department of Health's Diabetes Prevention and Control Program has developed a protocol for diagnosing pre-diabetes with representatives of providers, physician and health care associations, and health plans. Additionally, there are four ICD-9 codes that are related to pre-diabetes: 790.2 – abnormal glucose, 790.21 – impaired fasting glucose, 790.22 – impaired fasting glucose (oral test), and 790.28 – other abnormal glucose.

Recommendations to Increase Access to and the Appropriate Use of CDEs

The demand for DSME and CDE services does not yet match the need for those services. Therefore, supply cannot be addressed without also addressing demand. There are a number of strategies that can be employed to make optimal use of the current supply and expertise of CDEs and other trained diabetes educators.

Increase reimbursement for DSME.

Both CDEs and providers of diabetes education services indicate that reimbursement for DSME is inadequate and does not cover the costs of providing it. Increasing reimbursement for these valuable services would help increase both the supply of and demand for DSME and CDEs, which would better enable New York's providers to respond to the rising tide of diabetes.

Expand Medicaid reimbursement for DSME services provided in American Diabetes Association (ADA)-recognized and American Association of Diabetes Educators (AADE)-accredited diabetes centers.

Nearly 100 diabetes centers in New York are recognized by ADA or accredited by AADE and use teams to provide a wide array of DSME services. These centers expand access to DSME by having CDEs work as part of interdisciplinary teams with other professionals trained in diabetes education and already are eligible for Medicare reimbursement.

Expand reimbursement for CDEs' role as a professional resource.

Recognizing that we will never have enough CDEs to serve every patient with diabetes, New York can leverage CDEs' expertise as a resource to other health professionals who work with patients with diabetes. Options may include reimbursing CDEs for professional education services or leading a team of non-certified personnel.

Expand reimbursement for CDE services provided remotely.

Reimbursing for remote counseling, including through the telephone, would help address the lack of CDEs in rural areas in New York and fill a critical gap in DSME services. Many rural areas have few or no CDEs, and efforts to increase the supply are not a quick or efficient solution. Many health care organizations are already monitoring diabetes patients via the telephone. More than 44% of all outpatient providers who responded to the employer survey provide telephone monitoring of diabetes patients. Telephone services were employed in outpatient settings by 62% of providers with multiple affiliations and 31% of health centers/clinics.

Allow reimbursement for CDEs in all health centers.

Health centers/clinics, particularly federally qualified health centers (FQHCs), serve patients at high risk for diabetes and its complications. The Federal Uniform Data System (UDS) indicates that New York State FQHCs serve more than 66,000 patients with diabetes. Because this number only includes those with a primary diagnosis of diabetes who had a visit in 2008 and does not include patients at FQHC look-alikes, those who have undiagnosed diabetes, or those with pre-diabetes, the actual diabetes burden likely is much higher. Nearly 26% of health centers/clinics that responded to the employer survey indicated that they do not use CDEs. Currently, only FQHCs that adopt ambulatory patient groups (APGs) can take advantage of the Medicaid reimbursement enhancement for CDEs, which may hinder the use of CDEs. Indeed, two-thirds (67.6%) of health centers/clinics indicated that reimbursement did not cover the cost of diabetes education.[Ð]

Increase access to DSME for the uninsured.

Uninsured people with diabetes are less likely to get the diabetes care they need. Not surprisingly, most CDEs in New York do not have self-pay patients in their caseloads. Continuing to expand health coverage is critical to improving access to care for New Yorkers with diabetes. However, support is still needed for those who are currently uninsured or may remain so, such as undocumented immigrant adults.

[Ð] Note that one-third (32.4%) of providers from health centers/clinics were unsure about whether reimbursement for diabetes education covered the cost of providing the services.

Increase awareness of and referrals to CDEs and diabetes centers.

Providers, health care organizations, provider professional associations, health care trade associations, and provider educational partners should support and participate in statewide education—particularly to primary care physicians—about the availability and value of DSME and the competencies of CDEs. Providers should routinely refer patients to CDEs and diabetes centers, including at initial diagnosis. This will help address the patient self-management issues that physicians and other providers often highlight as an important reason for poor diabetes control and outcomes. CDE organizations and diabetes centers need support in publicizing their services and data on improved outcomes for patients with diabetes.

Recommendations to Increase the Supply and Diversity of CDEs

Although the surveys clearly reveal that the high need for diabetes education services has not yet translated into high demand for CDEs, there are supply issues that can be addressed. This is especially important because diabetes prevalence is on the rise and the time horizon for producing more CDEs can take many years. There are a number of steps that can be taken to accelerate the process of generating more CDEs by making it easier and more attractive to eligible professionals.

Provide financial support for professionals to become CDEs.

Health care providers and organizations can "grow" their own CDEs by supporting the costs of becoming and staying certified and providing practice opportunities. The cost of a core curriculum course can exceed $2,000, which makes it difficult for many professionals to personally finance the course. Other sources of financial support might come from health plans, purchasers, government agencies, and foundations. Similar to programs for other providers, a service requirement could be attached to the financial support.

Support diverse professionals to become CDEs.

Encourage eligible professionals who are underrepresented minorities and/or have fluency in languages other than English to become CDEs by providing financial support for the cost of certification and opportunities to obtain the necessary practice hours. Again, a service requirement could be attached to the financial support.

Pay more for health professionals who have CDE certification.

A common finding in the interviews with CDEs and employers prior to conducting the surveys was that CDEs were paid according to their professional license or certification (e.g., as nurses or dietitians) and on the same scale as non-CDE professionals with the same professional license or certification. This makes the time and expense of pursuing CDE certification less attractive to eligible professionals. Employers can demonstrate that they value the certification and the special knowledge and skills that CDEs have by paying more for professionals with the certification. Obviously, this is related to the availability of enhanced reimbursement.

CONCLUSION

CDEs have been shown to play an important role in helping people prevent and manage diabetes and its complications. New York has taken a significant step toward improving access to DSME services by reimbursing for certain CDE services through Medicaid. As we face the increasing crisis of diabetes, more steps need to be taken to ensure that all New Yorkers with or at risk for diabetes can get the support they need to prevent and manage the disease and avoid serious and life-threatening complications. This report provides data and offers several recommendations that can help reverse the diabetes epidemic in New York.

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BACKGROUND

More than 1.8 million New York State residents have diabetes, and diabetes prevalence has doubled in the last decade. This number will likely double again by the year 2050. An estimated 3.7 million to 4.2 million New Yorkers—at least 25% of the adult population—have pre-diabetes.[16] Diabetes affects people disproportionately based on race, ethnicity, and income level.[17] All minorities, except Alaska Natives, have a prevalence of Type 2 diabetes that is two-to-six times greater than that of the white population.[18] Certain minorities also have higher rates of diabetes-related complications and death, in some instances by as much as 50% as the total population.[19] Diabetes is the third leading cause of death among blacks and fourth among Hispanics.[20] In New York City, 16% of Asians have diabetes, which is the highest rate of diabetes among all racial and ethnic groups.[21] Low-income people with diabetes are at greater risk for diabetes and its complications.[22,23,24] The burden of diabetes also differs by insurance status. Studies show that people with diabetes who are uninsured are less likely than the insured to be aware of their diabetes, get the diabetes care they need, and have their diabetes in control.[25,26,27] Diabetes also contributes substantially to rising health care costs. The total cost of diabetes for New York State in 2006 was estimated at $12.9 billion, including $8.7 billion in excess medical costs attributed to diabetes and $4.2 billion in lost productivity.[28] On average, the cost of health care for a person with diabetes is more than five times as much as the cost for those without diabetes—$13,000 vs. $2,500.[29]

Diabetes self-management education (DSME) is critical to helping people with diabetes manage their disease and prevent complications. Certified diabetes educators (CDEs) are health professionals with specialized knowledge of diabetes education and management. CDEs work with individuals and groups of people diagnosed with diabetes to help them modify behaviors and gain control of their disease through DSME. CDEs employ a holistic approach to change, helping patients to develop practical strategies for successfully managing their diabetes. Currently, there are only 1,000 CDEs certified in New York.[30] As of January 1, 2009, New York State Medicaid began reimbursing for select CDE services in clinical settings.[31] Medicare also reimburses for similar CDE services.

The New York State Health Foundation (NYSHealth) has launched a $35 million, five-year campaign to reverse the diabetes epidemic in New York. As part of this effort, NYSHealth partnered with the Center for Health Workforce Studies at the School of Public Health, University at Albany (the Center) to conduct a market analysis of CDEs in New York.

A MARKET ANALYSIS OF CERTIFIED DIABETES EDUCATORS IN NEW YORK

The analysis of CDEs in New York included a literature review, key informant interviews, a survey of the State's CDEs, and a survey of providers of diabetes education services, including employers of CDEs. The purpose of this analysis was to better understand the CDE workforce and inform recommendations. This report summarizes key findings and offers several recommendations to improve access to DSME in New York.

This report highlights findings from the survey of the State's CDEs that was conducted by the Center and fielded from June to September 2009. At the time of the survey, the National Certification Board for Diabetes Educators reported that there were approximately 1,000 CDEs in New York. Surveys were sent to 691 CDEs for whom current addresses were available and 481 CDEs responded to the survey for a response rate of nearly 70%.

The report also includes findings from a statewide employer survey. Representatives of 342 health care organizations in New York that provide diabetes services to patients responded to a survey about provision of diabetes education services

Certified Diabetes Educators: Basic Facts

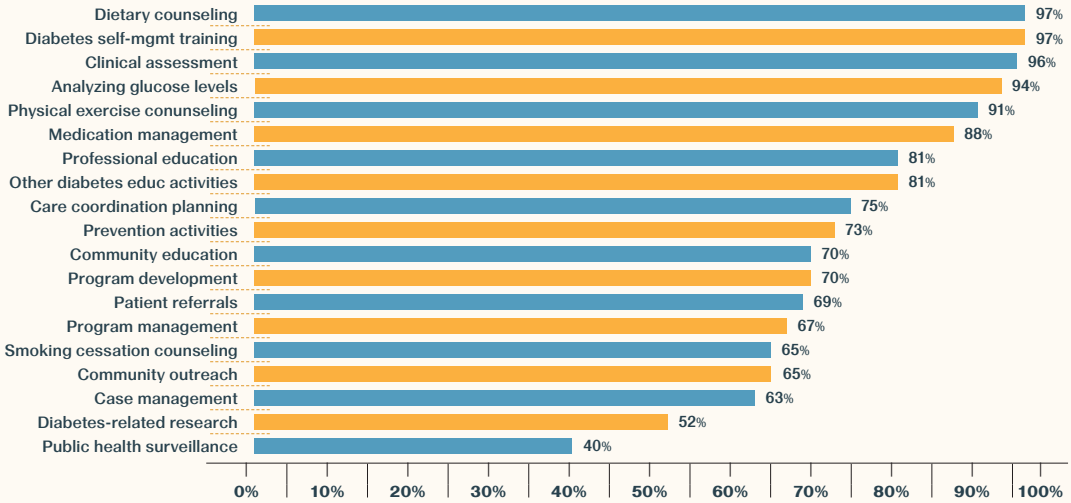
CDEs give patients the knowledge, skills, and necessary tools to manage diabetes and avoid complications. To become certified, a diabetes educator must already be a licensed health professional, such as a registered nurse, registered dietitian, or registered pharmacist. Prospective CDEs must complete two years of professional experience in the underlying profession, provide proof of 1,000 hours of professional practice experience in DSME, and complete a minimum of 15 hours of continuing education related to diabetes. In addition, the educator must submit an application and fee (currently $350) and demonstrate competency in diabetes through an extensive written exam. Certification must be renewed once every five years by completing 1,000 hours of diabetes education and continuing education or retaking the exam.

In New York, Medicaid offers reimbursement for CDEs to provide DSME in hospital outpatient departments, diagnostic and treatment centers, and federally qualified health centers that elect to use APGs. Reimbursement covers 10 hours of diabetes education during six continuous months for newly diagnosed individuals with diabetes or individuals with diabetes and a medically complex condition. For individuals with diabetes who are medically stable, no more than one hour of diabetes education is reimbursable. Reimbursement does not cover telephone follow-up or case management.

In general, Medicare covers a total of 10 hours of initial training within a continuous 12-month period and two hours of follow-up training each year after that. One of the hours can be given on a one-on-one basis, and the other nine hours of training are given in a group class. The initial training must be completed no more than 12 months from the time a patient starts the training. Other requirements apply.

WHAT CDES IN NEW YORK DO

Percentage of CDEs Reporting Any Hours Spent on Various Tasks, New York 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question D.24

and employment of CDEs. There were 348 known employers of CDEs who were solicited to complete the survey and 206 of these known employers completed the survey (59%). The remainder of the responses were from organizations not previously identified as providing diabetes education services.

The analysis reveals several important findings related to CDEs and DSME in New York. The key findings fall into four main categories that will be discussed in detail in this report:

- the need for CDEs and DSME services;
- the supply and availability of CDEs and DSME services;
- the workforce pipeline for CDEs; and
- the demand for CDEs.

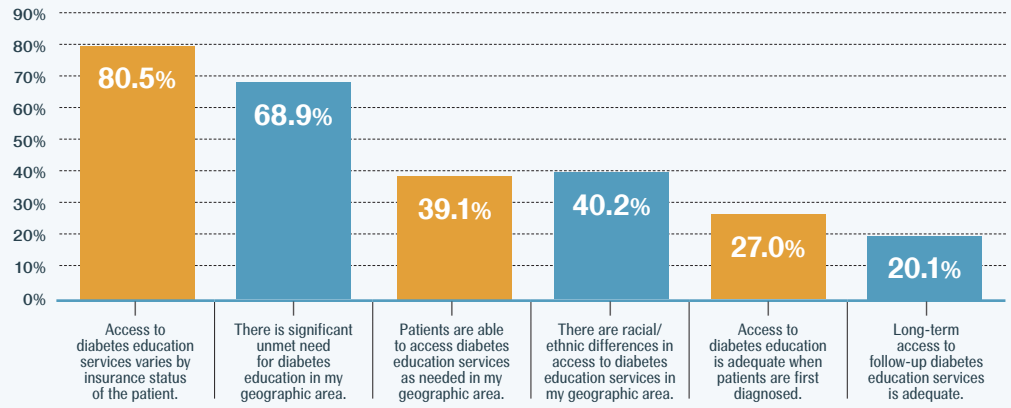
Need For CDEs and DSME Services

FINDING: There is a Large and a Significant Unmet Need for DSME.

As indicated, New York is in the midst of a diabetes epidemic that continues to grow. Health providers are feeling this burden acutely. Of the 342 organizations providing services to diabetes patients in New York that responded to the survey, many report that large portions of their patient populations were diagnosed with the disease. Twenty-two percent indicate that almost all (76% to 100%) of the patients treated at their facilities were patients with diabetes. Hospital-based organizations were the most likely to indicate that most of their patients had diabetes (43%). Nearly half (47%) of all providers indicate that more than 51% of patients treated were diagnosed with diabetes.

More than two-thirds (69%) of CDEs report significant unmet need for diabetes education services in their geographic area. In addition, 81% indicate that diabetes education services varied by the insurance status of the patient. (See Figure 1.)

FIGURE 1. Percentage of Agreement with Statements about Access to CDE Services, New York CDEs, 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question G.39a-f

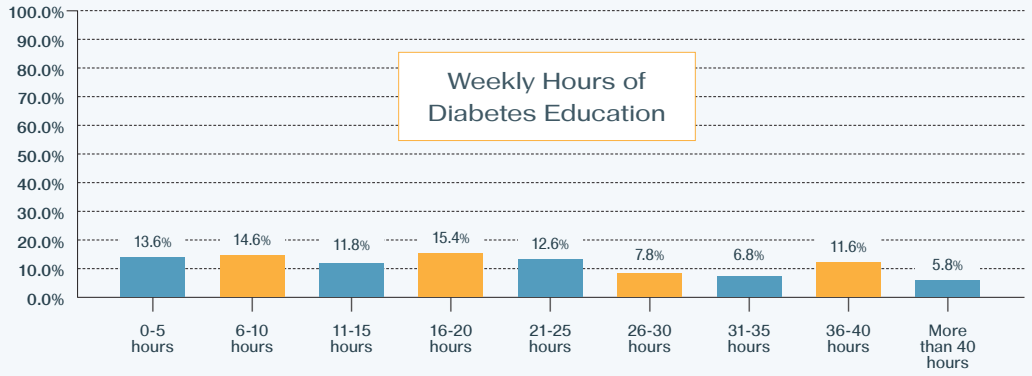
Additionally, although 88% of CDEs report that they feel they provided quality diabetes education, only half (49%) feel they were able to provide the quantity of services patients needed. More than one-third (34%) report they had more diabetes education work than they could manage.

Supply and Availability of CDEs and DSME Services

FINDING: The Supply and Availability of CDEs is Small Relative to the Need for Their Services.

Despite the high need for DSME, there are only 1,000 CDEs certified in New York State and not all are providing diabetes education services. Of survey respondents, 10% indicate that they are not providing diabetes education services. More striking is that the majority of CDEs do not provide diabetes education on a full-time basis. The CDE survey reveals that more than two-thirds of CDEs (68%) provide 25 or fewer hours per week of diabetes education services to patients and nearly one-quarter of survey respondents (24%) provide more than 20 hours of health services other than diabetes education in an average week. (See Figure 2.)

FIGURE 2. Percentage of CDEs in New York and Average Weekly Hours Spent Providing Diabetes Education in New York, 2009

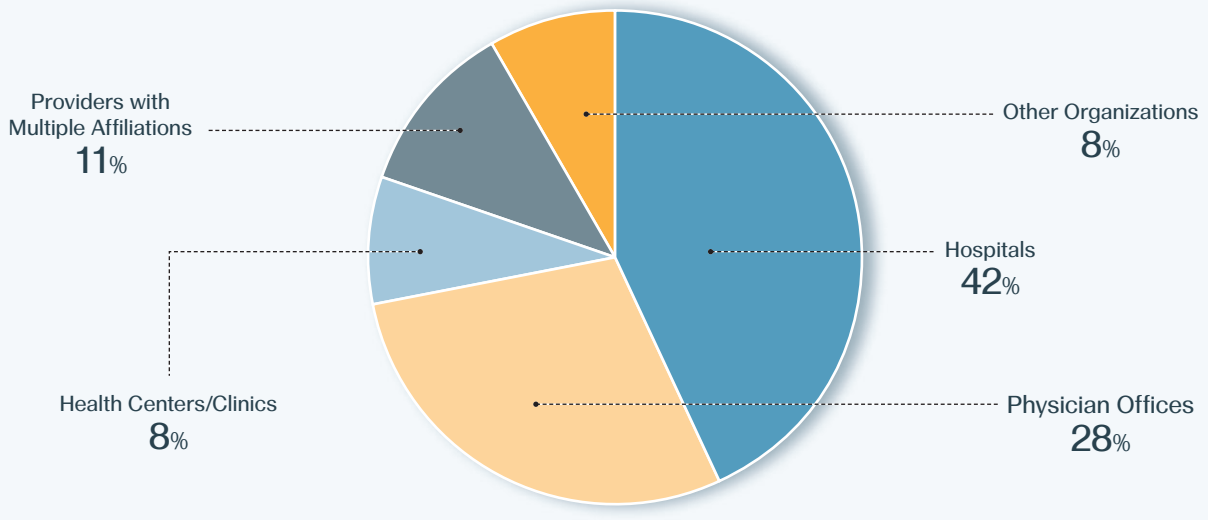


Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question D. 24.

FINDING: A Quarter of Providers of Diabetes Services Do Not Provide DSME.

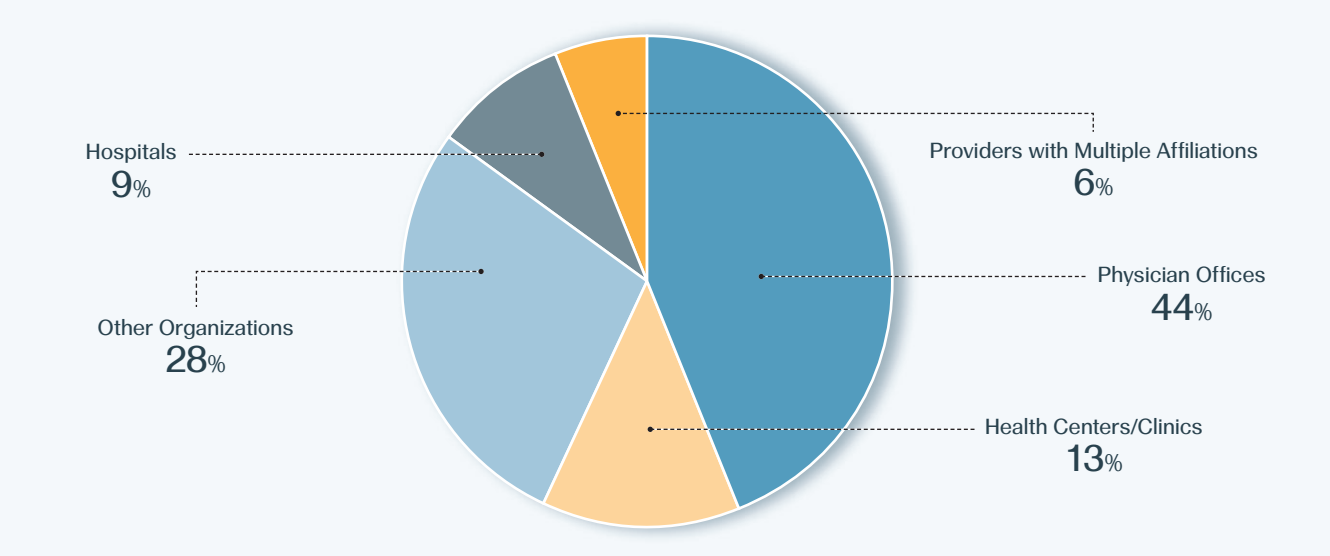
Although three-quarters of responding organizations (75%) offer DSME, 25% do not. The survey also reveals differences in who provides diabetes services by type of organization. (See Figures 3 and 4.)

FIGURE 3. Providers Who Provide DSME by Type, New York, 2009



Source: CHWS, Survey of Providers of Diabetes Education, NY, 2009, Questions A.1, B.6, and C.10

FIGURE 4. Providers That Do Not Provide or Are Unsure About Providing DSME by Type, New York, 2009

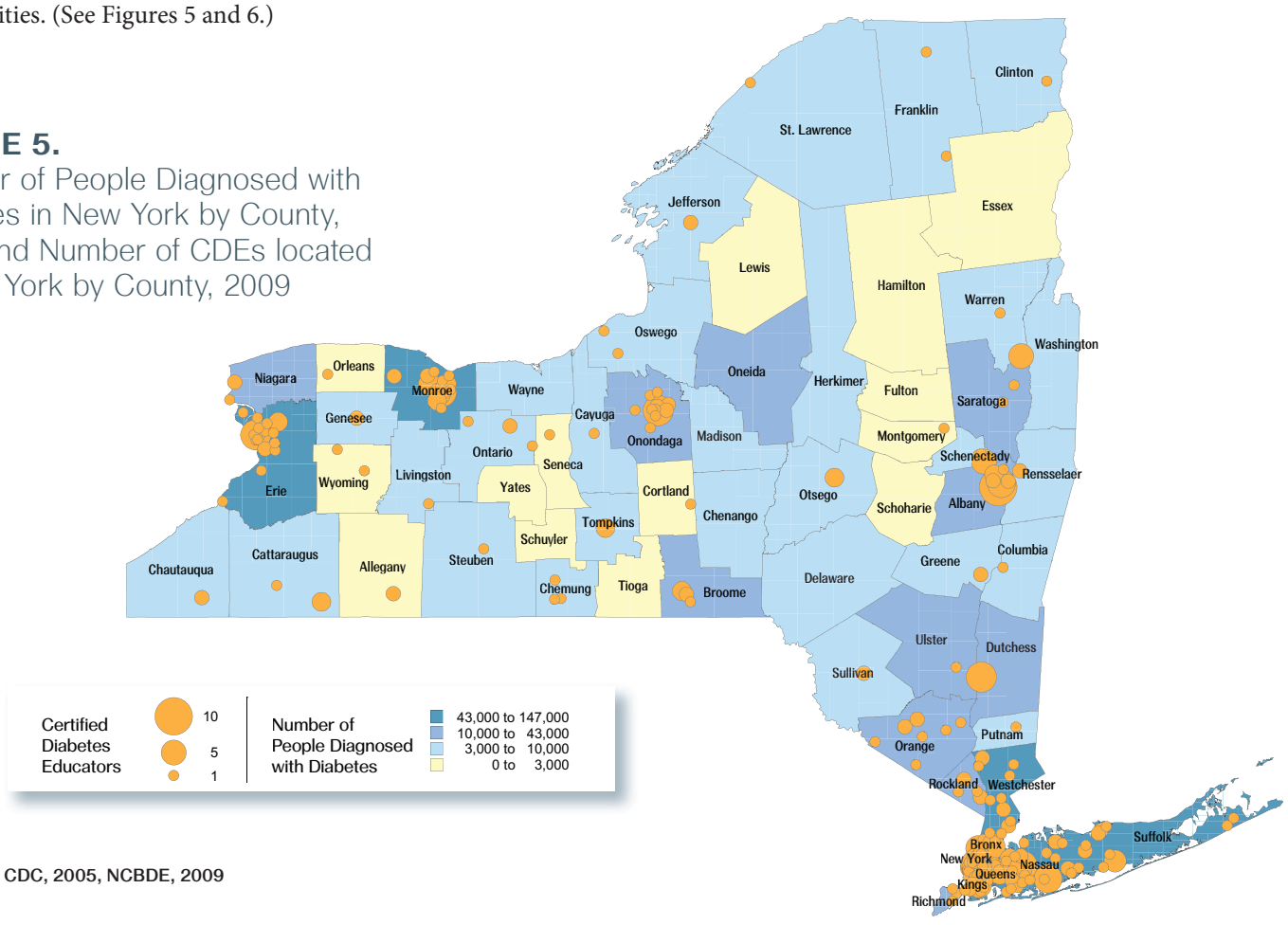


Source: CHWS, Survey of Providers of Diabetes Education, NY, 2009, Questions A.1, B.6, and C.10

FINDING: The CDE workforce is not well distributed geographically.

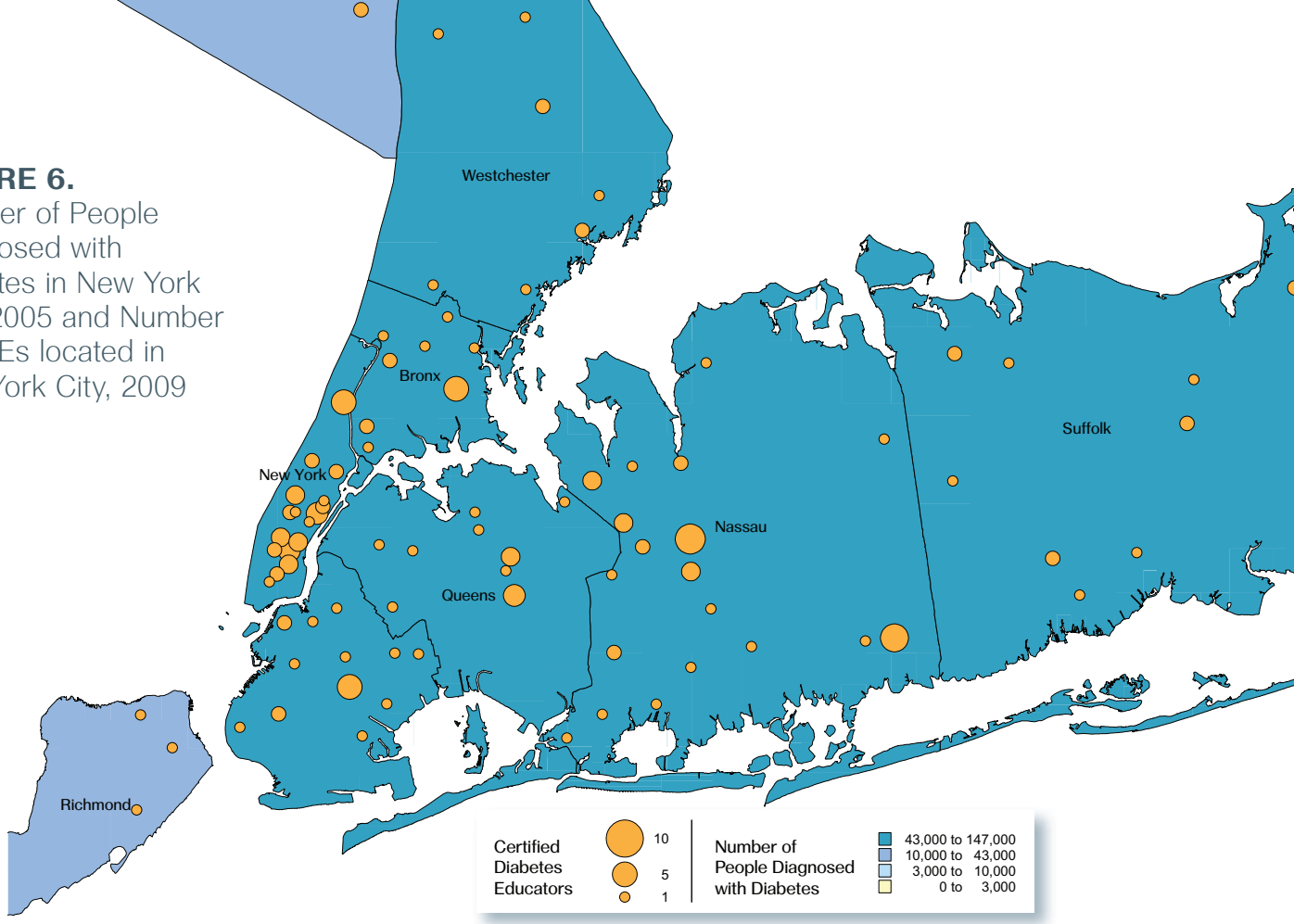
Most CDEs were located in densely populated urban areas, while people with diabetes live in both urban and rural communities. (See Figures 5 and 6.)

FIGURE 5.
Number of People Diagnosed with Diabetes in New York by County, 2005 and Number of CDEs located in New York by County, 2009



Sources: CDC, 2005, NCBDE, 2009

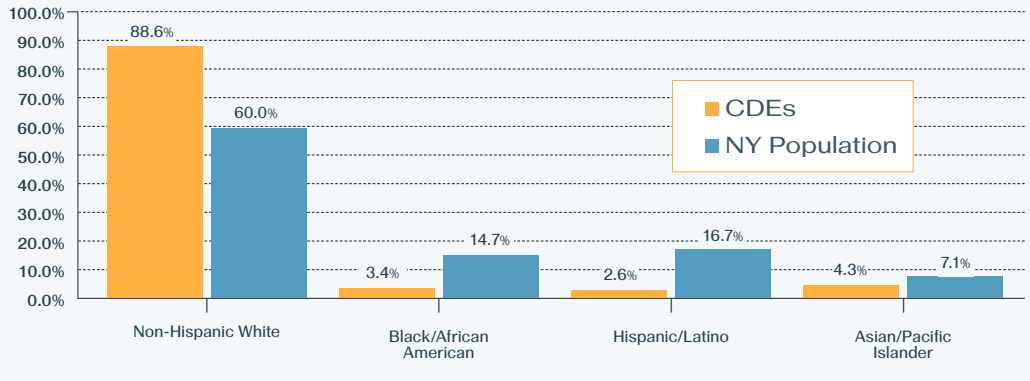
FIGURE 6.
Number of People Diagnosed with Diabetes in New York City, 2005 and Number of CDEs located in New York City, 2009



Sources: CDC, 2005, NCBDE, 2009

FINDING: There is a Lack of Racial, Ethnic, and Linguistic Diversity Among New York's CDEs.
Eighty-nine percent of CDEs in New York are non-Hispanic white. A small percentage of CDEs report being Asian or Pacific Islander (4%), black/African American (3%), Hispanic/Latino (3%) or "Other" (2%). (See Figure 7.)

FIGURE 7. Race/Ethnicity of CDEs (2009) and Population (2008) in New York



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Questions A.3 and A.4; U.S. Census Bureau, 2008 American Community Survey, American Factfinder, Table B03002.

Additionally, less than 17% of CDEs report speaking a language other than English. (See Figure 8.)

FIGURE 8. Fluency of CDEs in Languages Other Than English in New York, 2009

Language	% of CDEs
Spanish	5.4%
Mandarin	1.5%
Cantonese	0.6%
Russian	0.6%
Italian	1.0%
Any African language	0.4%
Other Asian/Middle Eastern language	2.1%
Other	7.3%

Source: CHWS, Survey of Certified Diabetes

FINDING: CDEs Are Not Serving New Yorkers with the Highest Burden of Diabetes.

Although diabetes disproportionately affects low-income populations, almost half (49%) of CDEs report having no Medicaid patients in their caseloads and more than half (54%) do not have "self-pay" patients in their caseloads. (See Figure 9.)

Additionally, the racial/ethnic demographics of the patients whom CDEs are serving does not match the excess burden of diabetes borne by New York's racial and ethnic minorities. The CDE survey shows that:

- One-third of CDEs (33%) indicate that white patients with diabetes constituted more than 50% of their patient census.
- More than a quarter of CDEs (29%) indicate that fewer than 10% of their patients were black/African American, and an additional 29% of CDEs indicate that black/ African-American patients constitute between 11% and 20% of their patient census.
- Two-fifths (41%) of CDEs indicate that 10% or fewer of their patients are Hispanic/Latino.

FIGURE 9. Percentage of CDEs by Patient Insurance Type and Percentage of CDE Caseload, New York, 2009

	Percentage of Patient Caseload					
Insurance Type	**0%**	**1-25%**	**26-50%**	**51-75%**	**76-100%**	**Total**
Private insurance	33.7%	12.4%	24.5%	19.5%	9.9%	100.0%
Medicare	40.8%	13.8%	25.7%	13.5%	6.2%	100.0%
Medicaid	49.8%	28.2%	12.8%	5.7%	3.4%	99.9%
Self pay	53.9%	39.0%	3.4%	1.1%	2.5%	99.9%
Other	86.9%	5.0%	1.1%	0.9%	6.0%	99.9%
Don't know	89.9%	1.6%	0.9%	0.7%	6.9%	100.0%

Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question F. 37 Note: Totals do not equal 100% due to rounding error.

Workforce Pipeline of CDEs

FINDING: Most Employers Report That No Staff in Their Organizations Are Pursuing CDE Certification.

Despite a limited supply of CDEs, 59% of employers indicate that none of their staff are currently pursuing CDE certification, and an additional 15% are unsure if any of their current staff are pursuing certification. (See Figure 10.)

FIGURE 10. Current Staff Pursuing CDE Certification by Type of Organization, New York, 2009

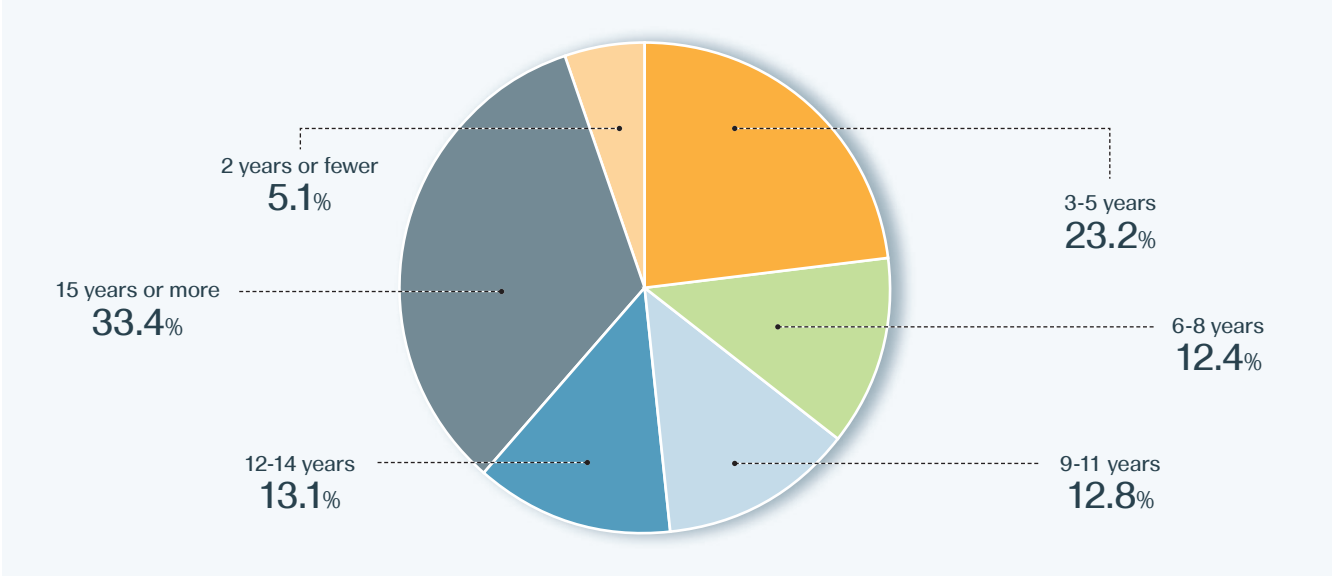
Type of Organization	Actively Pursuing Certification			Total
	Yes	No	Unsure	
Hospitals	25.0%	55.6%	19.4%	100.0%
Providers with Multiple Affiliations	48.3%	44.8%	6.9%	100.0%
Physician Offices	28.2%	73.1%	12.8%	100.0%
Health Centers/Clinics	23.6%	27.3%	12.7%	100.0%
Other Organizations	21.2%	69.7%	9.1%	100.0%
Diabetes Centers	34.8%	49.4%	15.7%	100.0%

Source: CHWS, Survey of Providers of Diabetes Education, NY, 2009, Questions A. 1, B.6, and C. 23.

FINDING: CDEs Report Practicing in Their Profession for Many Years Prior to Seeking CDE Certification.

Certification in diabetes education is not an entry-level credential. A candidate for CDE certification must provide more than 1,000 hours of diabetes counseling prior to taking the certification examination, and many practice in their profession for many years before seeking certification. More than half of CDEs (59%) practiced in their health profession for nine years or more before becoming certified, and one-third (33.4%) practiced for 15 years or more. (See Figure 11.)

FIGURE 11. Time Practicing in Health Profession Before CDE Certification, NY CDEs, 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question B.11

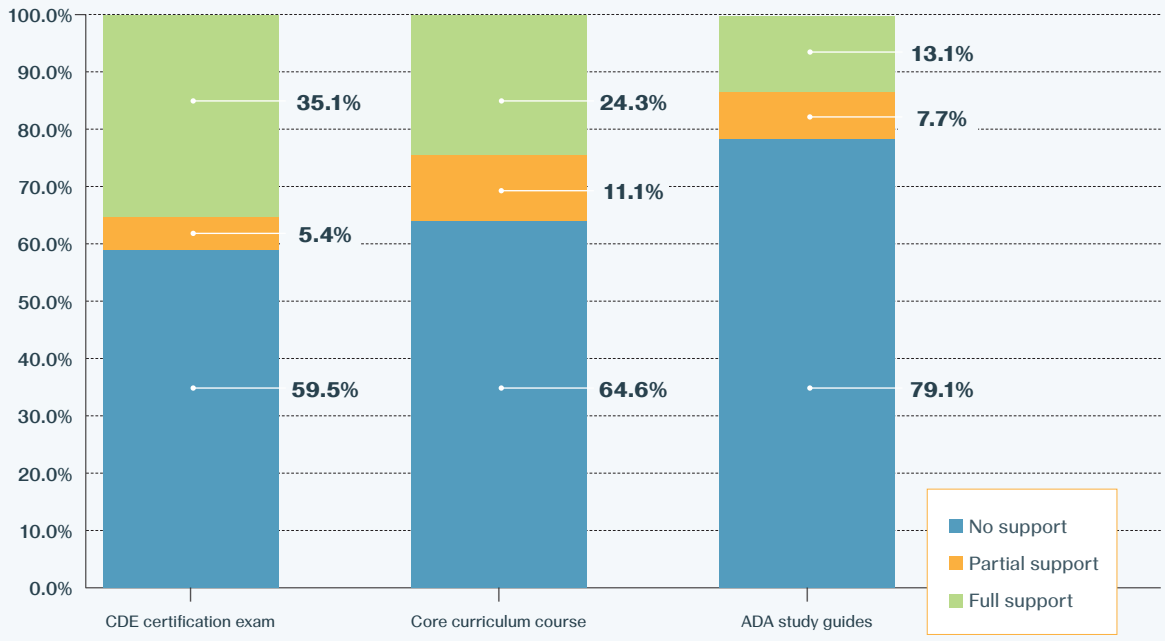
FINDING: More Than a Quarter of CDEs Report Difficulty Meeting All Certification Requirements.

More than one-quarter (28%) of CDEs report that it was difficult or very difficult meeting all of the certification requirements, and 17% report that it was difficult or very difficult finding an acceptable professional practice experience.

FINDING: Most Employers Do Not Provide Support for CDE Certification.

The majority of CDEs report that they did not receive any support from their employers for costs associated with obtaining or maintaining certification in diabetes education. Those who did receive full or partial support were more likely to obtain it for the certification exam than for core curriculum courses or study guides. (See Figure 12.)

FIGURE 12. Reported Employer Support for Various Aspects of CDE Preparation, New York CDEs, 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question B.15

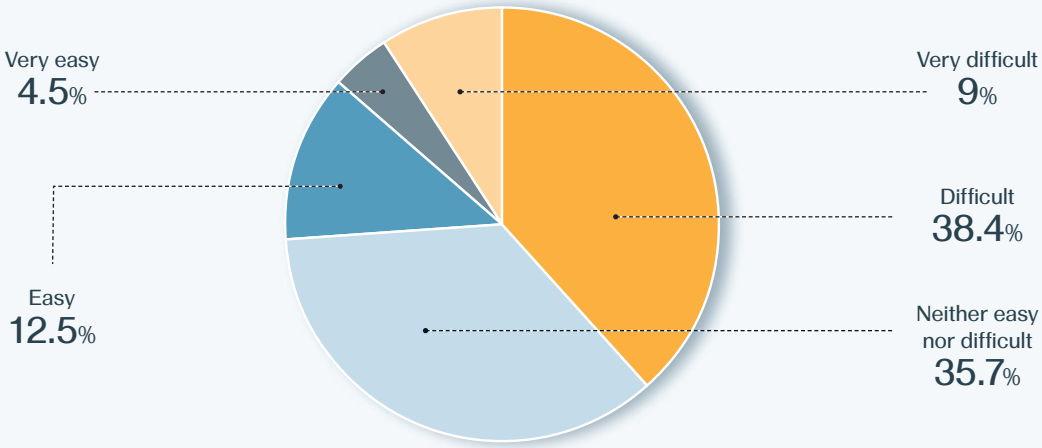
The employer survey findings are similar. While just more than one-third (34%) of all providers responding to a question about support for the cost of the CDE certification examination indicate that they provide full financial support to their employees for this cost, more than half (52%) of diabetes service providers offer no support for the cost of the certification examination. There also are differences by employer type and specific costs of certification. (See Figure 13 on page 16.)

FIGURE 13. Level of Employer Financial Support for the Costs of Becoming a Certified Diabetes Educator, New York, 2009

Level of Support	Full Support	Partial Support	No Support	Totals
CDE Certification Examination				
All Providers (N=248)	**33.9%**	**14.1%**	**52.0%**	**100.0%**
Hospitals (N=99)	46.5%	13.1%	40.4%	100.0%
Providers with Multiple Affiliations (N=28)	32.1%	25.0%	42.9%	100.0%
Physician Offices (N=59)	17.0%	17.0%	66.1%	100.1%
Health Centers/Clinics (N=30)	26.7%	13.3%	60.0%	100.0%
Other (N=32)	34.4%	3.1%	62.5%	100.0%
Diabetes Core Curriculum Workshops				
All Providers (N=238)	**21.0%**	**25.6%**	**53.4%**	**100.0%**
Hospitals (N=95)	25.3%	28.4%	46.3%	100.0%
Providers with Multiple Affiliations (N=26)	26.9%	30.8%	42.3%	100.0%
Physician Offices (N=53)	7.5%	30.2%	62.3%	100.0%
Health Centers/Clinics (N=31)	25.8%	19.4%	54.8%	100.0%
Other (N=33)	21.1%	12.1%	66.7%	99.9%
ADA Diabetes Self Study Guides				
All Providers (N=238)	**18.5%**	**15.9%**	**65.6%**	**100.0%**
Hospitals (N=89)	21.3%	13.5%	65.2%	100.0%
Providers with Multiple Affiliations (N=24)	16.7%	29.2%	54.2%	100.1%
Physician Offices (N=52)	11.5%	17.3%	71.2%	100.0%
Health Centers/Clinics (N=31)	29.0%	19.4%	51.6%	100.0%
Other (N=31)	12.9%	6.5%	80.6%	100.0%
Other				
All Providers (N=47)	**29.8%**	**8.5%**	**61.7%**	**100.0%**
Hospitals (N=11)	36.4%	0.0%	63.6%	100.0%
Providers with Multiple Affiliations (N=4)	50.0%	25.0%	25.0%	100.0%
Physician Offices (N=13)	0.0%	15.4%	84.6%	100.0%
Health Centers/Clinics (N=3)	0.0%	0.0%	100.0%	100.0%
Other (N=16)	50.0%	6.3%	43.8%	100.1%

Source: CHWS, Survey of Providers of Diabetes Education, NY, 2009, Question A.1, B.6, and D.24.

FIGURE 14. Reported Difficulty in Finding a Job as a CDE, New York, 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Question E.33

Demand for CDEs

FINDING: Almost Half of CDEs Report Some Difficulty Finding a Job as a CDE.

Nearly half (47%) of CDEs indicate that it is difficult or very difficult finding CDE employment in their geographic area compared to just 17% of CDEs who report that it was easy or very easy to find a job as a CDE. (See Figure 14.)

FINDING: CDEs and Providers Indicate the Lack of Reimbursement for DSME Services.

When asked about the factors that influenced demand for CDEs, 45% of CDEs report limited reimbursement for CDE services. More than half (58%) indicate that limited reimbursement interferes with their ability to serve patients in need of DSME.** CDEs in physician offices are more likely to report that limited reimbursement interferes with their ability to serve patients in need.

There also is agreement among provider organizations that reimbursement for DSME does not cover the cost of providing those services. (See Figure 15.)

FIGURE 15. Reimbursement Covering the Cost of Providing Diabetes Education Services, 2009

Type of Organization	Reimbursement Covers the Cost for Providing Diabetes Education Services			
	Yes	No	Unsure	Total
Hospitals	8.1%	56.8%	35.1%	100.0%
Providers with Mulitple Affiliations	5.7%	62.9%	25.7%	100.0%
Physician Offices	10.5%	64.5%	25.0%	100.0%
Health Centers/Clinics	0.0%	67.6%	32.4%	100.0%
Other Organizations	13.3%	70.0%	23.3%	100.0%
Diabetes Centers	12.2%	60.0%	27.8%	100.0%
All Organizations	8.0%	62.2%	29.7%	100.0%

Source: CHWS, Survey of Providers of Diabetes Education, NY, 2009, Questions, A.1, B.6, and C.16.

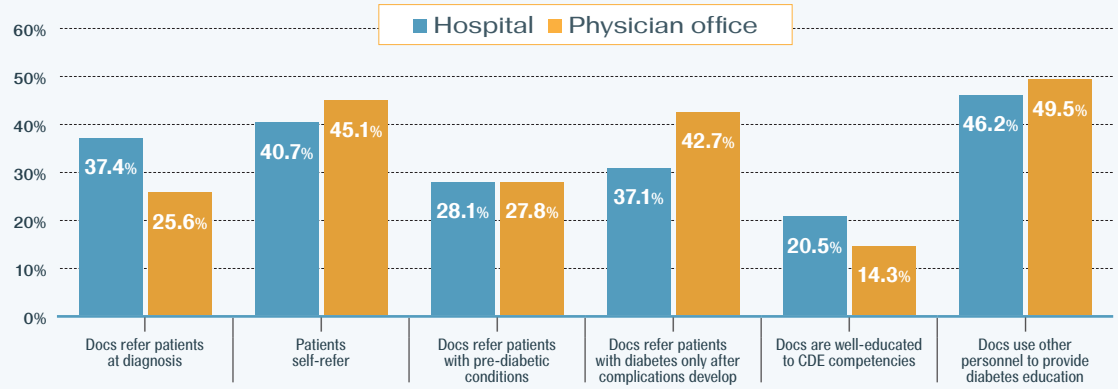
** In January 2009, New York State Medicaid began enrolling CDEs in a new program that reimburses eligible providers for DSME services provided by CDEs to Medicaid eligible patients. The survey was conducted in summer 2009 and, at that time, 14.7% of CDEs had already enrolled in the program but more than one-third of CDEs (34.3%) were unaware of the program.

Just under 28% of all types of organizations that do not provide DSME services indicate that the reason is that reimbursement does not cover the costs of DSME services. This is particularly true for physician offices, with 55.6% citing reimbursement not covering the costs as the reason they do not provide DSME services. Additionally, 25% of organizations that provide DSME in New York indicate they did not use CDEs for various reasons. More than half (56%) of the providers that do not use CDEs indicate that the organization is unable to support the salaries for CDEs.

FINDING: CDEs Indicate That Factors Related to Referrals, Awareness, and Other Personnel Limit Demand for Their Services.

CDEs identify other possible factors that limit demand, including the lack of timely referral, lack of physician and patient awareness of the competencies of CDEs, and use of other health personnel in the provision of diabetes education services. There are some variations between CDEs in hospitals and those in physician offices. CDEs employed in hospitals are more likely to report that physicians refer patients with diabetes at diagnosis, while those in physician offices are more likely to report that physicians refer patients only after complications develop. CDEs in hospitals also are more likely to agree that physicians are well educated about CDE competencies. (See Figure 16.)

FIGURE 16. Percentage in Agreement with Statements about Access to CDE Services, by Primary Worksite, New York CDEs, 2009



Source: CHWS, Survey of Certified Diabetes Educators in New York, 2009, Questions G.39g-l, C.19a

NEW YORK'S DIABETES CENTERS

There are nearly 100 diabetes centers located throughout New York. (See Figures A and B.) The majority of diabetes centers (63%) indicate affiliation with a hospital. More than 20% are affiliated with physician offices and 12.8% with provider organizations with multiple affiliations. Eighty percent of the diabetes centers that responded to the survey of providers of diabetes education indicate that their DSME program is recognized by the ADA, and 22% are accredited by the AADE. These programs expand access to DSME by having CDEs work as part of interdisciplinary teams with other professionals trained in DSME and provide a broad array of services to inpatients and outpatients with diabetes, including one-on-one and group counseling, and medication management. ADA-recognized and AADE-accredited DSME programs currently are eligible for Medicare reimbursement.

FIGURE A: Number of People Diagnosed with Diabetes in New York State by County, 2005 and Number of DSME Programs Recognized by ADA or Accredited by AADE in New York by County, 2009

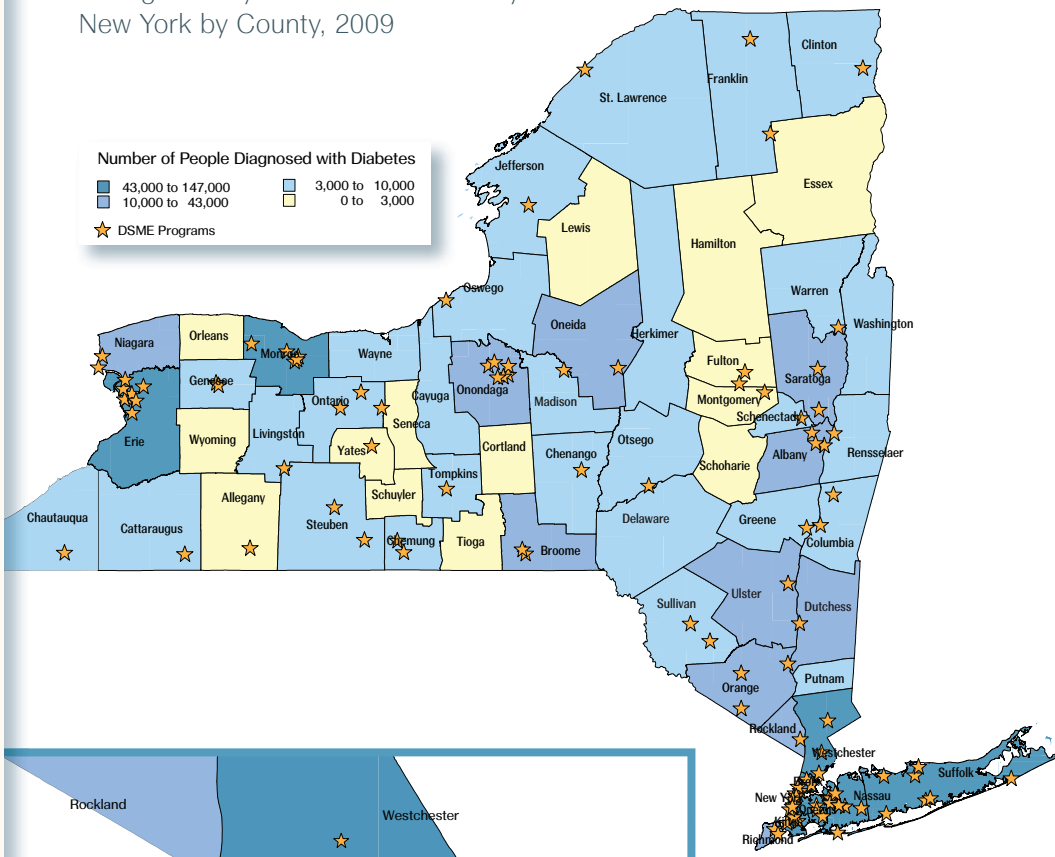
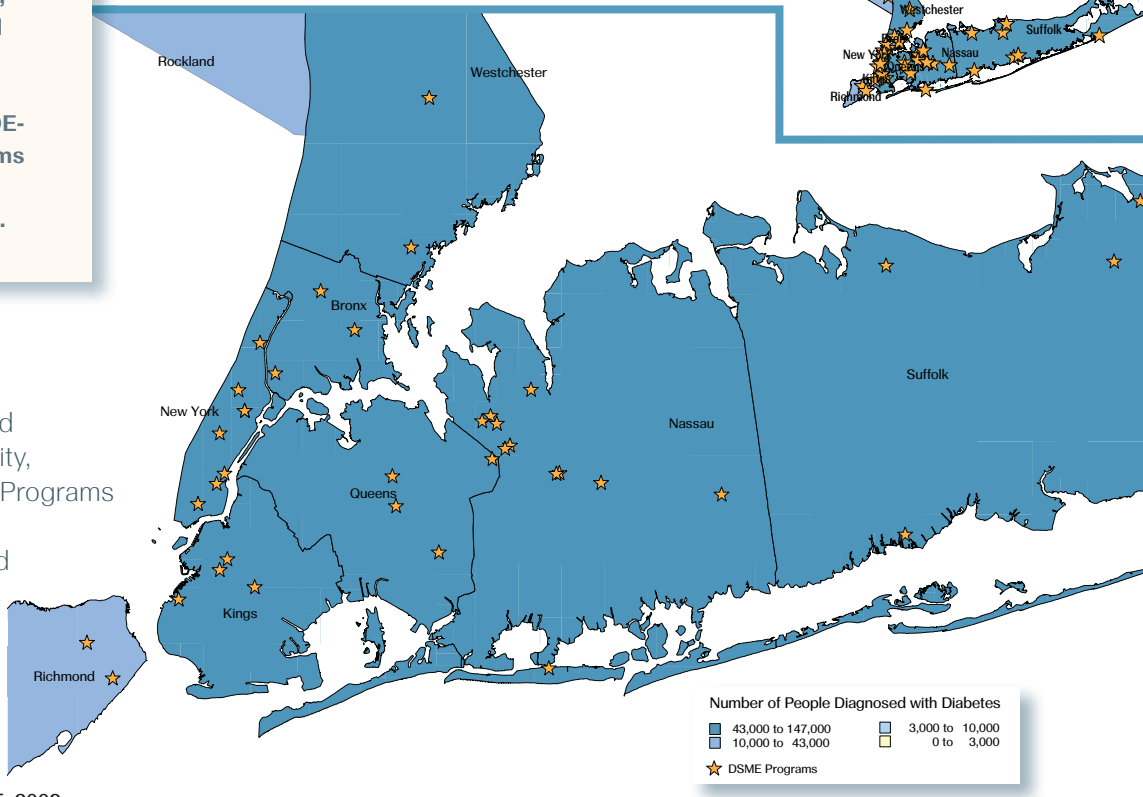


FIGURE B.
Number of People Diagnosed with Diabetes in New York City, 2005 and Number of DSME Programs Recognized by ADA or Accredited by AADE Located in New York City, 2009



Source: CDC, 2005; ADA, 2009; AADE, 2009

RECOMMENDATION TO SUPPORT DIABETES PREVENTION

Diabetes prevalence has doubled in the last decade and continues to grow. An estimated 3.7 to 4.2 million New York adults have pre-diabetes, which means they have an elevated risk for developing diabetes. Preventing New Yorkers with pre-diabetes from developing the disease is critical to reversing the diabetes epidemic in the State.

Reimburse for Pre-Diabetes Education Services.

Because CDEs' expertise includes identifying and managing diabetes risk factors and supporting patient behavior modification, CDEs could play an important role in preventing diabetes among New Yorkers diagnosed with pre-diabetes. A diagnostic protocol and ICD-9 codes are already available to enable reimbursement.[32]

RECOMMENDATIONS TO INCREASE ACCESS TO AND THE APPROPRIATE USE OF CDEs

The demand for DSME and CDE services does not yet match the need for those services. Therefore, supply cannot be addressed without also addressing demand. There are a number of strategies that can be employed to make optimal use of the current supply and expertise of CDEs and other trained diabetes educators.

Increase Reimbursement for DSME.

Both CDEs and providers of diabetes education services indicate that reimbursement for DSME is inadequate and does not cover the costs of providing it. Increasing reimbursement for these valuable services would help increase both the supply of and demand for DSME and CDEs, which would better enable New York's providers to respond to the rising tide of diabetes.

Expand Medicaid Reimbursement for DSME Services Provided in American Diabetes Association (ADA)-Recognized and American Association of Diabetes Educators (AADE)-Accredited Diabetes Centers.

Nearly 100 diabetes centers in New York are recognized by ADA or accredited by AADE and use teams to provide a wide array of DSME services. These centers expand access to DSME by having CDEs work as part of interdisciplinary teams with other professionals trained in diabetes education and already are eligible for Medicare reimbursement.

Expand Reimbursement for CDEs' Role as a Professional Resource.

Recognizing that we will never have enough CDEs to serve every patient with diabetes, New York can leverage CDEs' expertise as a resource to other health professionals who work with patients with diabetes. Options may include reimbursing CDEs for professional education services or leading a team of non-certified personnel.

Expand Reimbursement for CDE Services Provided Remotely.

Reimbursing for remote counseling, including through the telephone, would help address the lack of CDEs in rural areas in New York and fill a critical gap in DSME services. Many rural areas have few or no CDEs, and efforts to increase the supply are not a quick or efficient solution. Many health care organizations are already monitoring diabetes patients via the telephone. More than 44% of all outpatient providers who responded to the employer survey provide telephone monitoring of diabetes patients. Telephone services were employed in outpatient settings by 62% of providers with multiple affiliations and 31% of health centers/clinics.

Allow Reimbursement for CDEs in All Health Centers.

Health centers/clinics, particularly federally qualified health centers (FQHCs), serve patients at high risk for diabetes and its complications. The Federal Uniform Data System (UDS) indicates that New York State FQHCs serve more than 66,000 patients with diabetes. Because this number only includes those with a primary diagnosis of diabetes who had a visit in 2008 and does not include patients at FQHC look-alikes, those who have undiagnosed diabetes, or those with pre-diabetes, the actual diabetes burden likely is much higher. Nearly 26% of health centers/clinics that responded to the employer survey indicated that they do not use CDEs. Currently, only FQHCs that adopt APGs can take advantage of the Medicaid reimbursement enhancement for CDEs, which may hinder the use of CDEs. Indeed, two-thirds (67.6%) of health centers/clinics indicated that reimbursement did not cover the cost of diabetes education.††

Increase Awareness of and Referrals to CDEs and Diabetes Centers.

Providers, health care organizations, provider professional associations, health care trade associations, and provider educational partners should support and participate in statewide education—particularly to primary care physicians—about the availability and value of DSME and the competencies of CDEs. Providers should routinely refer patients to CDEs and diabetes centers, including at initial diagnosis. This will help address the patient self-management issues that physicians and other providers often highlight as an important reason for poor diabetes control and outcomes. CDE organizations and diabetes centers need support in publicizing their services and data on improved outcomes for patients with diabetes.

RECOMMENDATIONS TO INCREASE THE SUPPLY AND DIVERSITY OF CDEs

Although the surveys clearly reveal that the high need for diabetes education services has not yet translated into high demand for CDEs, there are supply issues that can be addressed. This is especially important because diabetes prevalence is on the rise and the time horizon for producing more CDEs can take many years. There are a number of steps that can be taken to accelerate the process of generating more CDEs by making it easier and more attractive to eligible professionals.

Provide Financial Support for Professionals to Become CDEs.

Health care providers and organizations can "grow" their own CDEs by supporting the costs of becoming and staying certified and providing practice opportunities. The cost of a core curriculum course can exceed $2,000, which makes it difficult for many professionals to personally finance the course. Other sources of financial support might come from health plans, purchasers, government agencies, and foundations. Similar to programs for other providers, a service requirement could be attached to the financial support.

Support Diverse Professionals to Become CDEs.

Encourage eligible professionals who are underrepresented minorities and/or have fluency in languages other than English to become CDEs by providing financial support for the cost of certification and opportunities to obtain the necessary practice hours. Again, a service requirement could be attached to the financial support.

Pay More for Health Professionals Who Have CDE Certification.

A common finding in the interviews with CDEs and employers prior to conducting the surveys was that CDEs were paid according to their professional license or certification (e.g., as nurses or dietitians) and on the same scale as non-CDE professionals with the same professional license or certification. This makes the time and expense of pursuing CDE certification less attractive to eligible professionals. Employers can demonstrate that they value the certification and the special knowledge and skills that CDEs have by paying more for professionals with the certification. Obviously, this is related to the availability of enhanced reimbursement.

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†† Note that one-third (32.4%) of providers from health centers/clinics were unsure about whether reimbursement for diabetes education covered the cost of providing the services.

CONCLUSION

CDEs have been shown to play an important role in helping people prevent and manage diabetes and its complications. New York has taken an important step toward improving access to DSME services by reimbursing for certain CDE services through Medicaid. As we face the increasing crisis of diabetes, more steps need to been taken to ensure that all New Yorkers with or at risk for diabetes can get the support they need to prevent and manage the disease, and avoid serious and life-threatening complications. The recommendations offered are critical steps that can help reverse the diabetes epidemic in New York.

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APPENDIX A: DATA AND METHODS

CDE SURVEY

Project research staff designed the CDE survey instrument after completing a comprehensive literature review and conducting a series of interviews with key stakeholders in diabetes education, including currently practicing CDEs in New York, employers of CDEs, and health insurers. These activities provided sufficient context on key issues related to the use of CDEs in the delivery of diabetes education services to inform survey design.

The survey asked about demographics, educational background and career pathways, current employment, roles and functions, patients served, access to services, and demand for CDEs.

The survey instrument was pilot-tested by approximately 20 CDEs in New York. Each CDE received the pilot questionnaire and an appraisal form that asked questions about the appropriateness and completeness of the survey content. The survey instrument was revised based on the feedback of the pilot participants. The final questionnaire was reviewed and approved by the New York State Department of Health Institutional Review Board.

The survey instrument was available as either a paper document (in an optical scan format) or online as a Web-based survey. The online survey was built on the Inquisite survey platform. An online identifier was provided to each CDE in the information letter that was mailed with the paper survey.

Mailing lists for CDEs in New York were obtained from the National Certification Board of Diabetes Educators (NCBDE) and from the AADE. After eliminating duplicates, the final list contained mailing and/or email addresses for 718 CDEs. The first survey mailing to the 718 CDEs was completed in mid-June 2009. A reminder mailing was sent in mid-July 2009 to all the CDEs who had not yet responded. A final mailing was sent in late August 2009 to remaining non-respondents. In all, 27 surveys were returned as not deliverable because of bad addresses or no forwarding address. This reduced the number of CDEs to whom surveys were successfully mailed to 691.

The multiple survey mailings and online survey yielded 481 responses from 691 CDEs, a response rate of almost 69.6%. More than half of the survey participants (54.6%) responded after the first mailing. An additional 22% of respondents completed the survey online. Those who answered the survey after the second mailing represented 14.8% of all respondents, and those who responded after the third mailing were 8.6% of the total.

Survey data were processed, aggregated, and placed in an SPSS dataset for analysis. This report describes the results of that analysis.

CDE EMPLOYER SURVEY

Research staff at the Center designed the survey of providers of diabetes education. The content of the questionnaire was determined after completion of a comprehensive literature review and after conducting extensive interviews of currently practicing CDEs in New York, directors of diabetes clinics and centers, managers of insurance companies, and other stakeholders in diabetes education to understand issues of concern about providing diabetes education.

The survey contained questions about the type of organization in which survey respondents worked, the services provided, diabetes self-management education, certified diabetes educators in the organization, and attitudes about providing diabetes education services. Each question provided defined response options including, in some cases, an "other" category with the opportunity to describe the meaning of "other" if that response was selected.

The survey instrument was reviewed and edited by project staff at the New York State Health Foundation's Diabetes Policy Center and was pilot tested by 14 representatives of health care organizations providing diabetes education services in New York in late July and early August 2009. Each pilot test participant received the pilot questionnaire and an appraisal form with questions about the appropriateness and completeness of the survey content. Adjustments to the survey were subsequently made based on the feedback of the pilot participants. The final questionnaire was reviewed and approved by the New York State Department of Health Institutional Review Board.

The survey questionnaire was a paper document (in an optical scan format) that was mailed to participants with a letter explaining survey intent and requesting completion.

SAMPLE AND LIMITATIONS

Identification of providers of diabetes education services in New York was challenging. Certified diabetes educators are specialized in providing diabetes education services. Therefore, it was assumed that CDE employers were providing diabetes education services to patients. A list of CDE employers in New York State was obtained from the AADE Web site. A Web search to identify addresses of these organizations was then conducted. There were 348 known employers in New York who were identified in this process, and these constituted the core list of participants for this survey.

In addition, the Center purchased a list of names with geographic identifiers (i.e., ZIP codes, FIPS codes, counties) of all primary care physicians in New York State (defined as family medicine physicians, general practitioners, and internal medicine physicians) from the American Medical Association (AMA). A geographically representative sample was selected from that preliminary list. The AMA then supplied the complete addresses for the selected sample. At the same time, a list of all endocrinologists with addresses in New York was purchased from the AMA.

In addition, a list of all hospitals and FQHCs was added to the list of known employers, the list of endocrinologists, and the sample of primary care physicians. The compiled list was then reviewed for duplications among facilities. For example, the list of known employers included hospitals that were also on the list of hospitals that was part of the sample. There was an exception, however, to the de-duplication process: physicians who were located in the same practices as other physicians were not removed from the list. Reaching primary care physicians and endocrinologists—even those who practiced in groups—was an important primary objective of the research. For that reason, some physician responses presented in this report may be from physicians practicing in the same physical location as another responding physician.

A major limitation was the large size of the list developed for the survey mailing that contained 1,672 names. There were fewer than 1,000 CDEs in the State in 2009, so it was reasoned that the number of providers of diabetes education services should not much exceed that number and might, in fact, be less. About 10% of CDEs had indicated on the survey of CDE professionals that they were not actively practicing and some CDEs worked with multiple CDEs in a single place of employment. However, it was also known that 45% of CDEs indicated secondary employment at another location affiliated with their primary employer or at an unaffiliated organization. It was also understood that some provider organizations employed health professionals other than CDEs to provide diabetes education services.

While acknowledging that including a broad range of possible providers in the survey mailing would likely reduce the response rate, to best achieve the project goals, it was determined that the surveys should be mailed to an inclusive list of possible provider organizations even if the number exceeded a reasonable estimate of providers.

Ultimately, 592 surveys of the 1,672 mailed were returned, 68 of which were bad addresses. Some providers returned blank surveys noting they did not provide services to diabetes patients. There were 342 providers who completed the survey and provided diabetes education services to patients. Among the 342 responses, 206 responses were from the group of 348 known employers of CDEs. This resulted in a response rate from the core sample of employers of 59.2%. The remainder of responses (342 - 206 = 136) were from organizations or physician offices that were not previously identified as providing diabetes education services.

The overall response rate was 32.7%. This is owing in part to the fact that a number of the providers solicited to complete the survey did not supply services to diabetes patients and did not return the survey, which significantly reduced the overall response rate.

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The Center for Health Workforce Studies at the School of Public Health, University at Albany was established in 1996 to collect, analyze, and present data about health care workers to inform provider, professional, government, and education organizations; policymakers; and the public. Today the Center is a national leader in the field of health workforce studies. It supports and improves health workforce planning and access to quality health care through its collection, tracking, analysis, interpretation, and dissemination of information about health professionals at the national, state, and local levels.

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