

Diabetes Self-Management Education Survey - New Hampshire 2015



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Background

In 2013, an estimated 96,498 (9.2% of) adults in New Hampshire (NH) had diabetes, a group of diseases characterized by defects in insulin production or action and resulting in high levels of blood glucose. Uncontrolled, diabetes can damage small blood vessels and cause diseases of the heart, kidney, eye, and soft tissues and death (1). In 2013, diabetes was the 7th leading cause of death in New Hampshire (2). Diabetes disproportionately affects older adults; in 2013, an estimated 20.2% of New Hampshire adults 65 years or older had diabetes compared with 9.2% among adults ages 45–54 years and 1.8% in adults 25–34 years (1). New Hampshire has a large proportion of adults born between 1951 and 1965, and with the population aged 65–74 years of age expected to double in the next 20 years, the number of diabetes cases in New Hampshire might increase (3).

In addition to trends in aging, the New Hampshire population is becoming more racially and ethnically diverse, and diabetes disproportionately affects certain races or ethnicities. From 2000–2010, the New Hampshire minority population increased by about 67%, whereas the white population increased by 3% (3). The *Health and Equity in New Hampshire: 2013 Report Card* identified disparities in the prevalence of diabetes among minorities compared with the white, non-Hispanic population (4).

With proper care, persons with diabetes can control hyperglycemia and prevent complications. A key component of diabetes care is diabetes self-management education (DSME) and support to increase the knowledge, skill, and ability necessary for diabetes self-care (5). The American Diabetes Association (ADA) recommends that people receive education and support upon diagnosis and as needed thereafter. DSME improves self-care behavior and quality of life; lowers hemoglobin A1c; increases use of primary and preventive services; lowers use of acute, inpatient hospital services; and lowers Medicare and insurance claim costs (5).

The ADA and the American Association of Diabetes Educators (AADE) provide recognition or accreditation for programs that meet national standards for DSME and support. The standards specify requirements for instructional staff, program staff, and curriculum (6). Accredited or recognized DSME

programs may also offer additional services such as Medical Nutrition Therapy (MNT), Medication Therapy Management (MTM), and the National Diabetes Prevention Program (NDPP).

DSME is often provided by a Certified Diabetes Educator (CDE), a health professional who possesses comprehensive knowledge of and experience in diabetes management. To be eligible to take the Certification Exam for Diabetes Educators, one must have at least 2 years' experience in their respective discipline and have provided at least 1,000 hours of DSME (5).

The NH Department of Health and Human Services, Division of Public Health Services (DPHS) sought to understand the current capacity of New Hampshire diabetes educators and accredited or recognized DSME programs for program planning purposes. DPHS partnered with Granite State Diabetes Educators (GSDE), the only professional organization in New Hampshire dedicated to diabetes educators, to pilot a survey to describe characteristics of the certified diabetes educator workforce and DSME programs in New Hampshire.

Methods

DPHS and GSDE collected information on the New Hampshire diabetes workforce and education programs using two methods: a pilot survey and a stakeholder meeting.

DPHS and GSDE created a survey based on a similar survey from the New York State Health Department. Questions included educator demographics, professional experience, CDE status, and characteristics of DSME programs. Respondents were asked an open-ended question about salary (dollar amount per time period); responses were converted to an hourly dollar amount based on time specified (work week defined as 40 hours, month as 160 hours, and year as 2,000 hours). Lists of potential diabetes educators were obtained from the National Certification Board of Diabetes Educators (NCBDE), GSDE membership list, DPHS Diabetes Coalition List, and list of diabetes educators from the Dartmouth-Hitchcock website (7). After comparing lists and eliminating duplicates, paper surveys were mailed to 183 prospective respondents along with a stamped return envelope in January 2015. Reminders were sent by GSDE via e-mail to its members. Exclusion criteria were respondents who reported being retired or employed out of state.

DPHS and GSDE held a meeting on June 18, 2015 with GSDE members and other stakeholders to discuss preliminary survey findings, identify gaps in the survey findings, and suggest activities based on a Centers for Disease Control and Prevention (CDC) DSME Technical Assistance Guide (8). A staff member of the NH Department of Administrative Services, Bureau of Education and Training, facilitated the meeting and divided participants into three groups: group 1 discussed the CDE workforce and availability of DSME; group 2 discussed payers and payment mechanisms; and group 3 discussed referral policies and practices and patient willingness to attend DSME. The groups were asked to prioritize activities as suggested in the CDC DSME Technical Assistance Guide with each attendee receiving ten votes. Participants were also asked to suggest additional activities that were not listed in the CDC DSME Technical Assistance Guide.

Results

Of 183 surveys mailed, 13 were returned as undeliverable. This reduced the number of diabetes educators to whom surveys were presumed to be successfully mailed to 169; 81 (48%) surveys were returned. Three were excluded because the respondent reported being retired or working out of state and 14 were excluded because respondents were not CDEs, resulting in a total of 64 surveys included in the final analysis. Of 14 not currently CDEs, 9 reported intention to become a CDE.

Demographic and Professional Characteristics of the CDE Workforce

Of the 64 respondents who were currently CDEs, 63 (98%) were female and 39 (61%) were 55 years or older. Of 62 reporting their highest degree, 35 (56%) had a Master's, 23 (37%) had a Bachelor's, and one (2%) had an advanced professional degree. Most respondents worked as either an RN/APRN (32; 50%) or registered dietitian (30; 47%). One (2%) respondent reported speaking French, and 1 (2%) reported speaking Hindi. No respondent reported speaking Spanish or any African language. Regarding the setting where diabetes education was provided, 46 (73%) were outpatient, 6 (10%) inpatient, and 11 (17%) both. Only 21 (34%) worked as a program coordinator or manager. The median hourly wage was \$35.80 per hour.

Becoming a CDE

Of the 64 respondents with CDE, 40 (63%) had worked in their health profession for at least 9 years before becoming a CDE, 43 (67%) took 2 years or less to complete initial CDE certification, and 39 (61%) had been a CDE for at least 9 years. Of 63 respondents answering questions about the difficulty of

meeting all CDE requirements, 22 (35%) said it was easy or very easy, 27 (43%) said it was neither easy nor difficult, and 14 (22%) said it was difficult. Regarding employer financial support for CDE certification, 38 (61%) reported support for the CDE certification exam, 26 (46%) for the core curriculum course, and 17 (30%) for ADA study guides.

Characteristics of CDE Practice and Diabetes Education Programs

Of 61 respondents reporting hours worked per week for their positions, 46 (75%) worked fewer than 20 hours per week in diabetes education. Of the 10 New Hampshire counties, all counties except one (Cheshire) had at least one respondent report providing outpatient diabetes education in that county (Table 1). No respondent reported having programs in more than one county. Of 52 respondents, 35 (67%) worked at programs that had achieved ADA recognition, 10 (19%) achieved AADE accreditation, and 7 (13%) had both. Ten (18%) respondents reported offering NDPP and 27 (47%) reported offering non-NDPP prediabetes education. Most (37/51, 73%) offered group DSME, with the average class size less than or equal to 10 (n = 35); almost half of the group classes (17/37, 46%) met monthly. Of 53 respondents, 52 (98%) offered one-on-one education, with 31 (60%) seeing more than 11 patients per week. Only 21 (33%) had enrolled or expected to enroll for reimbursement of DSME by New Hampshire Medicaid providers. Respondents reported receiving referrals from multiple sources including MD/DO (n = 48), APRN (n = 44), physician assistants (n = 29), and other (n = 12).

Only 33% of respondents had enrolled or expected to enroll for reimbursement of DSME by NH Medicaid Providers.

Over half (28/52, 54%) of programs had support from a secretary or office manager. Regarding program promotion, 38 (59%) reported outreach to providers, 25 (39%) reported health fairs or community outreach, 17 (27%) reported writing for media and public, 19 (30%) published web content, 9 (14%) used social media, and 9 (14%) used media-buy placement.

Respondents were asked about using electronic medical records (EMRs) to receive DSME referrals or send follow-up notes to referring providers; 39 (61%) reported using EMR to receive referrals and 37 (n = 58%) reported using EMR to send notes to referring providers. Of 57 respondents, 41 (72%) reported that at least 50% of referred patients attend DSME programs, 38 (67%) reported that attendees completed at least 50% of the content areas, and 17 (30%) reported that attendees completed at least

Table 1. Distribution of Certified Diabetes Educators and the Diabetes Education Programs They Provide, by County, New Hampshire Diabetes Workforce Survey, 2015

County	Number of CDE ¹ respondents	DSME ²	MNT ³	NDPP ⁴	Other prediabetes program
Belknap	1	1	1	1	1
Carroll	3	2	3	1	0
Cheshire	0	0	0	0	0
Coos	1	0	1	0	1
Grafton	5	5	4	1	2
Hillsborough	17	16	16	1	9
Merrimack	7	7	7	5	3
Rockingham	10	9	9	1	6
Strafford	5	5	4	0	4
Sullivan	1	0	1	0	0
Total	50	45	46	10	26

¹Certified Diabetes Educator; ²Diabetes Self-Management Education; ³Medical Nutrition Therapy; ⁴National Diabetes Prevention Program

75% of the content areas. Regarding lack of participation of referred patients, respondents reported reasons including perception of not needing the information (n = 41), out-of-pocket costs (n = 30), lack of transportation (n = 27), aversion to group classes (n = 22), inconvenient time (n = 21), too far to drive (n = 13), difficulty scheduling (n = 10), too ill (n = 5), too long to wait (n = 4), language barrier (n = 3), and program is too long (n = 3).

Respondents were asked about barriers to referral to DSME programs as mentioned by health care providers. Of 64 respondents, reported barriers included patient not interested (n = 35), issues with insurance coverage or cost (n = 7), referral process too time consuming (n = 7), DSME not available at convenient times (n = 6), referral process is too complicated (n = 5), no feedback received from DSME instructors (n = 1), and DSME not available locally (n = 1).

Stakeholder Meeting

Of 27 participants attending the meeting, professional roles included diabetes educators (n = 13), DPHS staff (n = 3), quality improvement (n = 4), community members (n = 2), other public health professionals (n = 3), physician (n = 1), and a representative of a NH Medicaid Managed Care Organization (n = 1).

According to the Centers for Disease Control and Prevention, the “Key Drivers” of DSME participation are: availability of accredited/recognized programs, payment mechanisms, referral policies and practices, and people with diabetes willing to go to DSME programs.

Group 1 discussed the CDE workforce and availability of accredited or recognized DSME programs. Regarding the CDE workforce, priorities included working with both undergraduate and graduate health professions schools to teach about diabetes education including DSME and CDE, GSDE establishing a mentorship program for CDEs in New Hampshire, developing a peer-learning group or list serve, and partnering with area health education centers to increase workforce. Regarding DSME programs, the group prioritized promotion of alternative locations and methods of delivery of DSME that might appeal to patients and referring providers (e.g., telehealth, pharmacies, and churches), providing marketing and communications

to promote DSME programs, and providing support to establish new ADA-recognized or AADE-accredited DSME programs (e.g., hiring a consultant to provide mentoring to programs and assist new sites in obtaining recognition or accreditation).

Group 2 (Payers and Payment Mechanisms) prioritized clarification of DSME coverage status by Medicaid MCOs and Medicare, providing training and consultation to DSME programs on billing practices to maximize reimbursement, and working with established DSME programs to consider offering additional services such as MNT, MTM, and NDPP.

Group 3 (Referral Policies and Practices and Willingness of Patients to Attend DSME) prioritized the integration of DSME programs/referrals into coordinated care, such as Patient-Centered Medical Homes, building EMR-generated or other systems to facilitate and track referrals to DSME and enhance decision support, and using targeted marketing/social media approaches to reach providers/health care systems. Regarding willingness of patients to attend DSME, the group identified promotion of alternative locations for delivery of DSME that are appealing to both patients and referring providers such as telehealth, pharmacies, and churches, using community health workers to link people with

diabetes to DSME programs and to assist in delivering DSME, and using strategic communication strategies to teach persons with diabetes about the importance of DSME and DSME benefits/coverage (e.g., DSME waiting room triggers).

All groups identified additional information that would be needed to address the identified priorities. Group 1 recommended assessing the extent to which diabetes and CDE are included in curricula at health professional schools. Group 2 recommended seeking clarification about DSME coverage by public and private insurers, including the marketplace insurance plans and understanding more about challenges faced by DSME programs related to billing. Finally, group 3 identified a need to understand the level of integration of DSME into healthcare quality initiatives, such as Patient-Centered Medical Homes and Accountable Care Organizations, and a need to support existing efforts by DSME programs to market their services to providers.

Discussion

This report describes the results of a pilot survey of the diabetes educator workforce and DSME programs in New Hampshire. Survey respondents were predominantly women older than 55 years. With the New Hampshire population becoming more ethnically diverse, survey data indicated only limited linguistic diversity among New Hampshire's diabetes educators. These findings suggest that the current diabetes educator workforce in New Hampshire might be insufficient for diabetes education needs if educators retire and are not replaced or if educators are unable to fully engage patients because they do not speak the same language.

Although patient utilization of diabetes education was not assessed in this report, an estimated 18% of all people with diagnosed diabetes participated in DSME in 2013 (9), suggesting that DSME might be underutilized. However, DSME can only be fully utilized with a prepared DSME-related workforce.

An estimated 18% of all people diagnosed with diabetes participated in DSME in 2013 (8).

Increased coverage for DSME is likely to lead to increased utilization of this service. In New Hampshire, commercial payers are required by law to cover DSME, and Medicaid Care Management Organizations cover DSME. Since the Affordable Care Act, Medicaid expansion has had >40,000 New Hampshire adults enroll, and the insurance marketplace has seen 53,000 enrollees (10, 11). However,

survey respondents expressed concern over high out-of-pocket costs for diabetes education being a

barrier to utilizing these services. Thus, increased health insurance coverage might not result in increased access to diabetes education if other barriers remain.

This survey had several limitations. First, the survey was a convenience sample that cannot be considered representative. The survey might not be representative of the entire diabetes education workforce; the 14 respondents who were not CDEs were excluded in the analysis, and it is possible that respondents were significantly different from non-respondents regarding demographics, educational or professional backgrounds, and current practice environments. Second, the survey was a pilot survey. After reviewing survey results, some responses were difficult to analyze because respondents were asked to report ranges rather than actual numbers, and some questions were unusable because of concerns with phrasing and answer-choice selection. We did not ask specific questions about practices, so we do not know if respondents might have worked at several locations. Third, the survey did not ask about cultural competency issues, so although an educator does not speak another language the educator might still provide culturally competent services. Fourth, the survey did not ask about benefits or other employee compensation. Finally, the survey did not collect information on the patient populations served.

However, the survey was an initial attempt to better understand characteristics of the diabetes educator workforce and DSME programs in New Hampshire and helped identify informational needs. For example, understanding differences in challenges faced by new CDEs as compared with current or experienced CDEs might help guide areas of focus for improvement. Additionally, seeking input from healthcare providers on barriers to DSME referrals, awareness of DSME benefits, knowledge of how/where to refer to programs, the nature of relationships between providers and DSME programs, and other needs related to diabetes education might help inform resource allocation and public health project planning. Finally, understanding patients' perspectives on DSME is important, including identifying barriers to participation and coverage gaps.

Although recognized as an evidence-based and key element of diabetes care, DSME is often an underutilized service. Ultimately, DPHS wants to increase participation in accredited programs because diabetes self-management is a critical part of diabetes care (6), and understanding more about the current context in New Hampshire will help to guide efforts.

Next Steps

Based on needs identified from the survey and stakeholder meeting, DPHS is sponsoring the American Association of Diabetes Educators' workshop, "Building Your Diabetes Education Program" in May 2016. The workshop will help sustain existing DSME programs and assist organizations that will pursue accreditation/recognition. DPHS will consider revising and repeating the survey in future years.

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