Where Diabetes Educators have been, where they are now, and their future role in Diabetes Management

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Thank you

Ann Albright
Anne Daly
Belinda Childs
Debbie Hinnen
Davida Kruger
Geri Spollett
Hope Warshaw
Linda Delahanly

Ebers Papyrus

Early Insulin Package
Preplanned Diet Pad

Non-Compliance to Diabetic Meal Plan

“I’d rather change a person’s religion than their food habits.”

--Margaret Mead

The Mid -1970s

• Hallmark years in diabetes care, emergence of the self – management movement
• In 1974, a professional group called the American Association of Diabetes Educators (AADE), was formed to provide diabetes educators a forum to focus on their unique needs and goals
• The founding members wanted to give diabetes educators additional opportunities to explore and develop their role as part of the health care team

The Mid -1970s, continued

• Diabetes nurse specialist positions were created highlighting a growing recognition of the special education needs of the person with diabetes
• The diabetes nurse was usually responsible for all education except diet instruction, and in some cases, provided that aspect of care as well
• The hospital dietitian had many diverse responsibilities and also was responsible for teaching the “diabetic diet”
• Occasionally, a dietitian was hired to be part of a diabetes teaching team
• A few dietitians were in private practice
• Use of A1C was proposed in 1976 by Anthony Cerami

The Late 1970s

• Changes in diabetes care terms:
  - “diabetic” became “person with diabetes”
  - “compliance” became “adherence”
  - “diabetes management” became “diabetes care”
  - “diet” became “meal plan”

• Common nutrition issues:
  - reduced saturated fat
  - cholesterol
  - high fiber/complex carbohydrate meal plans
  - alternative sweeteners
The Late 1970s

- The person with diabetes was recognized increasingly as a member of the health care team.
- Self blood glucose testing was becoming accepted among health care professionals (HCPs) specializing in diabetes.
- The procedure was initially referred to as home blood glucose monitoring (HBGM).
- AADE wrote a position statement on the topic, there was discussion regarding the appropriateness of the term because the test certainly could be performed outside the home.
- The decision was made to use the term self blood glucose monitoring (SMBG).

Diabetes Care and Education Practice Group (DCEPG)

- In 1978, a dietetic practice group within the American Dietetic Association was formed to focus on the care and education of people with diabetes.
- With solid leadership, DCE began an exciting adventure into advancing the role of the dietitian within diabetes care.
- The National Diabetes Data Group described and defined new diabetes classifications and diagnostic criteria in a paper published in December, 1979.
- The terms juvenile onset and maturity onset were discontinued, and the new terminology that was provided was, insulin dependent and non-insulin dependent diabetes mellitus, and impaired glucose tolerance.

Self-Monitoring of Blood Glucose ADA, Consensus Conference, 1986

1. Advance the technology
2. Assure accuracy
3. Establish algorithms for adjusting insulin
4. Patients require education to self-regulate their glycemic control (using SMBG and insulin dose self-adjustment)


Developing Knowledgeable Educators

- First exam for CDEs administered by NCBDE (1986)
- National standards for diabetes patient education programs set by ADA

Patient Centered Approach

Robert Anderson, PhD; University of Michigan, challenged the “you should” approach. Focused on the patient perspective “how can I live well with diabetes and live my life well?” Marti Funnell and Robert Anderson pioneered the empowerment approach in diabetes education.
The 1990s

- Focus on diabetes education to make lifestyle adjustments
- Increased patient education
- Use of computer-based education
- Enhanced technology: insulin pumps, continuous glucose monitoring systems, blood glucose meters and downloadable software

Era of Pattern Management

- New management skills required for health care professionals
- Blood glucose checks more prevalent and user friendly
- Health care professionals used the information more effectively
- A1C as a gold standard; future: Time in range (TIR), below TIR or above TIR; glycemic variability? A standardized way of looking at glucose data: Ambulatory Glucose Profile?

DCCT results announced at the 1993 ADA Scientific Sessions

The DCCT provided evidence that metabolic control made a difference, the era of intensive therapy had arrived. The training of many HCPs in intensive therapy, including insulin pump therapy, opened up many opportunities for the expanded role of the nurse and dietitian teams:

- Understanding the role of nutrition, glucose results, behavior, and medication management contributed to the expanded role of these HCPs

Diabetes Control and Complications Trial


Diabetes Prevention Program (DPP)/Nutrition Practice Guidelines (NPG) Results

- DPP clearly demonstrated the value of:
  - medical nutritional therapy (MNT)
  - patient education
  - physical activity

- NPGs for type 1, type 2 and GDM:
  - provided evidence-based roadmaps for improved outcomes
  - proved the efficacy of MNT

Building on a Firm Foundation

- Diabetes care has evolved over the years
- Factors that have shaped the care and education for people with diabetes:
  - scientific research
  - advanced technologies
  - evolving health care systems
Role of Diabetes Clinicians
- Focus on all aspects of diabetes care
- Review blood glucose patterns
- Adjust food and medication plans
- Offer recommendation for diabetes management
- Use medical, education and counseling skills in combination with nutrition expertise

Mission of Diabetes Care Providers
- Encourage cross-training of all diabetes clinicians
- Promote advanced practice credential for all disciplines
- Form multidisciplinary teams to provide quality care
- Integrate skills of the HCP with those of people with diabetes and families
- Expand role to provide increased opportunities in excellence

The state of health care and diabetes education

The Evidence

<table>
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<tr>
<th>Hospitalization Rates and Charges</th>
<th>Patients</th>
<th>Hospitalization/100 person-yr</th>
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<td>34.48</td>
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<td>Any other visit</td>
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<td>34.35</td>
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</tr>
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</table>


The Evidence

DSME improves outcomes (A1C by 0.76%)¹
- Education is effective and cost-saving ²
- Team-based care best predictor of improved glycemia³
- Access to a nurse associated with improved outcomes⁴
- Technological approaches are showing promise⁵

Here is where we are today:
The FACTS

Affordable Care Act
The Forces on Diabetes Education
- Prevention
- Preventing hospital readmissions
- Processes to improve primary care
- Need for health disciplines to practice at their highest level
- Technological approaches a recurring theme

Referrals and Participation
- 1/3 to 1/2 of diabetes patients in the US receive DSME
- 6.6% insured, newly diagnosed adults (18-65 years) participated in DSME during 1st year after DX.
- 4% of Medicare participants – receive DSME and/or MNT
- DSME programs struggle to cover their costs, even operating at peak service load
- 31% of PCPs (65% of specialists) reported that they have a diabetes educator available to them in their practice setting
- Poor referral practices
  - Conflict regarding management goals and philosophy
  - Fear of referrals to specialists

Value placed on our services

CPT Description | Charge | Health Plan 1 | Health Plan 2 | Health Plan 3
--- | --- | --- | --- | ---
97802 MNT Ind initial | $77 | $10.97 | $22.33 | $17.52
97803 MNT Ind Subseq | $66 | $10.97 | $22.33 | $17.52
97804 MNT Group | $36 | $6.18 | $14.94 | $14.00
97805 MNT Group Subseq | $36 | $6.18 | $14.94 | $14.00
GO270 MNT Group TX change | $71 | $21.08 | $27.81 | $27.50
GO271 MNT 2 or + sessions | $36 | $12.01 | $14.94 | $14.00
G0108 DSME Individual | $87 | $28.70 | $26.68 | $59.50
G0109 DSME Group | $46 | $16.91 | $15.37 | $26.00

2014 statistics
Total US CDEs 18,401
- 29.1 million people or 9.1% of the U.S. population have diabetes
- 4000 practicing endocrinologists in clinical care, aging population, next generation seeing fewer patients, and working fewer hours

Educator solutions:
- Consider educator as central resource for hospital staff education and support, transition coordinator, and insurer
- Outreach to primary care
- Empower educator to support therapeutic management (approved physician protocols)
- Educator role with technology – e.g. telemedicine
- Refer, refer, refer..........
Our Guiding Principles
1. Build on evidence
2. Data driven
3. Population health
4. Expand roles
5. Meet the needs of the specific environment
6. Community based

CDEs work with Primary Care
- Strengthen DE relationships with primary care
- Use EMR resources to proactively identify patients
- Empower DEs to take the lead in helping patients manage their diabetes
- Realize a team approach
- DEs work with PCP to design a personalized plan of care

Glucose to Goal: Process Steps
1. Identify practices in community
2. Meet with practices to determine methods for identifying high risk patients, (e.g. A1C, BP)
3. Use EMR resources
4. Adopt a more aggressive approach by reaching out to patients
5. Establish method for communication
6. Deliver program
7. Bill for DSME
8. Collect and report data

From Medical Home
To Our Insurer

Our Future?
Professor Sir George Alberti at the July, 2015 Keystone Diabetes meeting presented on Changes in Diabetes Treatment over the past 50 years and stated “The most important change in the last 50 years is the introduction of patient education, diabetes self management and patient empowerment”

Position Statement on DSME
At the recent American Diabetes Association meeting in Boston a new position statement on diabetes self-management education and support was released. It is a joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. The primary purpose of the position statement is to provide guidance on when DSME/S should be provided. The paper provides clear expectations about this and reduces confusion about who needs DSME/S. Four critical times are clearly outlined and described in the paper in the DSME/S Algorithm of Care. Action steps and guiding principles are provided for implementation. A session on the position statement is Friday afternoon. We can all use the position statement to advocate for DSME/S programs and access for our patients.
Our Future?
- Diabetes epidemic continues to escalate
- People will require more health care and self-management
- Education and team care improve diabetes outcomes
- Team members are willing to assume expanded responsibility
- Access remains a challenge
- Resources & reimbursement are limited

Our Future?
- Is the role of the CDE going to morph into the educator’s educator?
- We teach others who will be in the front lines?
- Will CDEs be able to move forward with CDEs as team leaders for diabetes care in a broad spectrum manner or not only in education, but ongoing support?

Our Future?
- Fewer endocrinologists, CDEs? How many will be there in the future?
- CDEs more required than ever
- Decreasing pool of providers wanting to become CDEs, salaries of CDEs not keeping up, they either leave the profession, don’t join
- Technology continues to skyrocket and CDEs have to stay on the cutting edge and learn more all the time

Our Future: Clinical and Community
- Increase in linking of the clinical and community sectors, to address the preventive measures
- More seamless connections between health supporting/promoting services/interventions in the clinical settings and those available in community locations
- Linking both these settings is crucial to make this link effective

Our Future: Clinical and Community
- Innovations in reimbursement models that allow payment for services based on outcomes regardless of where they are delivered
- CDEs are the key in linking the clinical and community sectors
- Much of what CDEs address is highly influenced by the patient’s surroundings and helping assure the management is realistic in the real world
- This can be best accomplished if we can work with people in the many places they live their lives

Our Future: Translating Research into Practice
- Diabetes educators can be real leaders in translating science into practice
- There are many promising discoveries to improve diabetes care and prevent diabetes
- It usually takes too much time to move the discoveries into practice
- When they are moved to practice, they are often not scaled to achieve population-wide reach
- CDEs can take what has been discovered in research, examine what is occurring in the places where they work and look for innovative ways to scale what has been shown to work, but not moving into daily practice
Our Future: Technology & Innovation

- Ability to use technology and innovation going on with technology and healthcare, a change occurring in tandem with changes in healthcare.
- The EHR will and is allowing for better tracking of whether someone received DE/DSMES.
- The EHR can flag when someone should be referred.
- DSME can be delivered virtually.

Our Future: PCP office, locations convenient to people with diabetes

- Outpatient hospital care has been and will continue to transition to primary care offices.
- Other convenient locations, where people live: supermarkets, pharmacies, strip malls, and food banks.
- We have to go to where people live, not make them come to us.

Our Future: Virtual Diabetes Education

- Since the bottom line is so important to CMS, private payers and insured health plans.
- The huge pre-diabetes population can be cost effectively managed with frequent coaching/counseling, which can be delivered virtually.
- The CDE can figure out what works best for which person.
- The CDC approved virtual DPP programs are an example of more to come in this arena.

Our Future: Social Media, Apps?

- Use of social media, either Facebook, Twitter, Instagram, and it goes on and on.
- An app for every occasion!
- Role of the CDE in using social media for counselling, coaching, individual or group.
- An app for fee for service or for third party payers, an Uber type model.
- Sky is the limit for the CDE, with the diabetes epidemic.

Deborah Greenwood, AADE, President on Social Media

Social Media is changing our world, and we have an important role to play. It is our responsibility as educators to be familiar with all the tools to support people with and affected by diabetes.

AADE in Practice, July 2015.

Our Future: CDEs think in terms of Billable Hours?

- An analysis of diabetes educator productivity in 22 sites demonstrated that, on average, educators were billing 0.55 hours of education (either one to one or group).
- Spent only 25% of their time on billable activities.
- These type of findings don't justify the salary, and yet the educator could be paid much more based on their credentials, knowledge and experience.
- Awareness and acknowledgement of this is important, so it can be fixed.

Our Future: Healthcare reform, as the Affordable Care Act (AC) turns five

Five trends that ignite healthcare transformation:
1. Risk shift: Raising the stakes for all healthcare players, ACA has accelerated a shift in risk away from traditional insurers and onto providers, pharmaceutical companies and even consumers.
2. Primary Care: Back to basics, experimentation in new payment models and expansion of insurance coverage are making primary care once again the critical touchpoint.
3. New entrants: Innovators in the New Health Economy: From data analytics to mobile technology, new businesses are inspiring innovation and redefining value based on consumer preferences.
4. Health Insurance: From wholesale to retail: In doing business directly with consumers, insurers are changing their fundamental business model.
5. States: Reform’s pivotal stage: States have emerged as key players in the reconfigured health care landscape, from the decision over whether to expand Medicaid, states have notable discretion in implementing the law.

Healthcare reform: Five Trends to watch as the ACA turns five, Health Research Institute, March, 2015

Our Future: Next five years with the post ACA world

1. Risk Shift: Weigh the risks of taking on new functions as business models change
   • With reimbursement and competitive pressures, revisit strategies to emphasize saving over spending and quality over quantity, to serve more consumers effectively and demonstrate affordability.

Our Future: Next five years with the post ACA world continued:
2. Primary Care: Watch closely as the reimbursement pendulum swings. Shifting from fee-for-service to accountable care, consider ways to deliver quality care that satisfies the increased demand generated by the newly insured.
3. New entrants: Innovate to meet the demands of the new healthcare consumer.
4. Health Insurance: Target the consumer.
5. States: Work with the states. Engage the states as they continue to shape the future landscape and to assume an even bigger role in the management of healthcare costs.

Medicaid State expansion and Outcomes

- A study on the surge in newly identified diabetes among Medicaid patients in 2014, within Medicaid expansion states under the ACA.
- The study suggests that in these states an increased number of Medicaid patients with diabetes are being diagnosed and treated earlier.
- This could lead to better outcomes.

Kaufman H, et al., Diabetes Care, online, March 2015

The Digital Doctor: The Digital CDE?

- Is computerized medicine really an improvement on the past?
- Or are we at risk of losing the vital bond of the HCP relationship?
- In the Digital Doctor, the case is made that despite some serious shortcomings, computerized medicine is here to stay, and in the long run may improve our health.

The Digital Doctor, Robert Wachter, April 2015
In the medical profession as well as in diabetes education, the physical communication, the high touch care makes a difference.

EHRs have transformed physicians and in some cases CDEs into data entry clerks!

This type of interaction does not encourage optimal communication with the patient.

Computers can store vast amounts of “big data” and be programmed to anticipate mistakes and other events.

Mobile devices and social media make diabetes management more efficient.

For example: patients texting, emailing, skyping to communicate and share their diabetes numbers, can help in reducing expensive outpatient appointments and hospitalizations.

The Digital Age is our “Brave New World” and has its own landmines, large and small.

But once we enter this age prepared, it will free up the CDE to do more efficiently, and maximize the management of the person with diabetes.

Welcome to our exciting future, but let’s start getting prepared for it.

References