Diabetes Educator: The Role and Experience in a Tertiary Government Hospital – A Technical Note

Mengutseinuo Goswami

Diabetes Educator (Nursing Officer), All India Institute of Medical Sciences, New Delhi, India

Abstract

Diabetes educator (DE) has a clear and important role in the overall management of patients with diabetes in all stages of care by providing much needed detailed information and support on adequate understanding of the pathology and safe-execution of the prescription by the specialist and other life-style changes to combat diabetes effectively. This is more significant in countries like India where there is an unfavourable ratio of physicians to patients with diabetes. The accessibility of the health-care team by the huge number of patients with diabetes in the government hospitals and consequent rush hours can be effectively compensated by the DE by relieving the physician of routine and repeated individual counselling contributing to effective physician utilization and avoiding fatigue and burnout. Literature has evidence that this cost-effective intervention can improve patient outcome and warrants more investment in formal training and continuous academic development of DEs. In this manuscript, a step-by-step counselling of patients with diabetes is described for easy understanding and execution.

Key words: *diabetes educator, counselling of diabetes, self-management plan*

Introduction

In 2020, the International Diabetes Federation (IDE) has estimated that 463 million people have diabetes globally and 77 million in India with a prevalence of 8.9% in the adult population in this country[1]. Recent study has confirmed exponential rise of diabetes in India in the future (101 million and 134.2 million in 2030 and 2045 respectively) along with similar increase in other countries[2]. There has been report of failure to reach clinical target goals in diabetic management in advanced countries like the USA despite advancement in pharmacotherapy and related technology and the study showed that, between 2010 and 2016, the improved outcome had stalled or even reversed[3]. Although, there is a lack of comparable study in India, it might be reasonable to assume similar circumstances in diabetic care. The government health sector in India provides free service to all but there is still a lack of patient centred care that provides diabetes self-management education and support in many hospitals. Other factors like poor patient knowledge of diabetes, suboptimal medication adherence, persistent clinical inertia, lack of data for monitoring and evaluation through clinical audit worsens the standards of diabetes care in India. This is more obvious in the primary care settings where maximum number of patients visit. To counter this situation, literature has supported the role of uninterrupted supply of drugs, provision of essential laboratory investigations, training and availability of qualified diabetes educators (DE) and availability of specialist support in addition to screening for depression and cessation of smoking[4]. A DE is usually a nurse who specializes in the care and management of patients with diabetes[5]. Depending on the healthcare system, they can be registered nurse, advanced practice nurse or nurse working in an expanded role. They are trained and experienced to provide required knowledge and counselling to any patients with diabetes in a group or individually[5].

Corresponding author:
Mengutseinuo Goswami
Diabetes Educator (Nursing Officer)
All India Institute of Medical Sciences, New Delhi, India. Mobile no: +919910584006
Email: ankurinspine@gmail.com

So, DE bridges the gap between the clinical and self-management aspects of care on an individual level and impart people with diabetes the knowledge, skill and confidence to accept responsibility for self-management. The obligation of DE also includes collaboration with the team of physicians, making informed decisions, solving problems, developing personal goals and coping with emotion and stresses[6].

Materials and Method

All India Institute of Medical Science at New Delhi is a tertiary care government hospital and is a teaching and research institute. Of the many thousand patients visiting the institute's various Out Patient Departments (OPD); approximately 250 patients visit the department of endocrinology and 40-50 new or existing patients seek help of the DE. The generally followed principles for referral to the DE, but not limited to are as follows:

1. All newly diagnosed cases.

2. Follow-up at 3 - 6 months or annually, or when desired glycaemic control is not achieved.

3. If there is a diabetic complication.

4. If a woman with diabetes plans a family.

5. New onset or existing psychological stress.

6. Changes happening in the life of the patient involving living situation, limitation due to ageing, diabetic complications etc with impact on the treatment.

7. Patient's wish to learn, refresh knowledge, doubt clarification etc.

Patients are usually counselled individually on one-to-one basis that last from 10 – 30 minutes depending on the need (existing patient with minor doubts vs newly diagnosed one). On few occasions, however, common knowledge like insulin injection technique is explained in a small group and questions answered. The following routine of counselling and documentation is adhered to depending on the nature and stage of the diagnosis.

Newly diagnosed:

1. Thorough history including medical history and any current medication.

2. To assess health and cultural beliefs, health limitations, financial status, family support

3. To check knowledge about diabetes

4. To teach timing, interpretation and use of portable glucometer and Self-Monitoring of Blood Glucose (SMBG) for documentation, future evaluation and feedback; storage of medications including insulin, transport of insulin (cold chain maintenance) use of treatment devices (insulin pen, injection, pump etc), disposal of used devises etc.

5. To impart knowledge on benefits of physical activity and recommendations.

6. To prevent, identify and to undertake necessary action for acute and chronic complications.

7. Risk reduction – cessation of smoking, moderation / stopping alcohol.

8. Insulin self-dose adjustment in patients with frequent blood-sugar (BS) fluctuation.

9. Addressing psychological issues and concerns to accept living with diabetes. If the psychological issues do not improve or deteriorates the treating physician is informed for a psychiatry referral.

10. Referral to a dietitian and diabetic foot care specialist.

11. Referral to an Ophthalmologist.

12. To promote individual strategies for better health through life-style modification (LSM) including yoga etc.

13. Information on existing resources (both online and printed) for a better understanding of the current and future health condition following diagnosis of diabetes.

14. Referral to the hospital social service worker for a less privileged patient.

Follow-up visits:

It happens usually at 3, 6 and 12 months unless there

is a complication or desire by the patient to see the DE. The following are carried out during this visit.

1. To take a history of diabetes control and other new health conditions.

2. To assess the benefits of the initial visit.

3. To check Insulin injection sites (for hypertrophy etc).

4. To check the previous knowledge imparted and to reinforce treatment goals and self-management goals.

5. To identify the causes of ineffective treatment (if any) and to address them.

6. Psychological support for sustained LSM and to live with diabetes.

7. Yearly assessment by the diabetic foot care or earlier if required.

8. Yearly assessment by an Ophthalmologist.

Special visits:

These visits are made during diagnosis of complications or patients with potential factors for complication. The following are checked and imparted on one-to-one basis as these patients are prone to deteriorate unless effective measures are taken urgently.

1. To check and revise already imparted knowledge on diabetes care and to emphasize possible ill-effects unless they are adhered to.

2. To identify the barriers of effective treatment (if any) and to address them.

3. To develop and support LSM.

4. Psychological support following long standing disease or any complication leading to any physical limitation.

5. Any other issues raised by the patient.

During major life events:

These visits happen when there is significant change in the living environment, support from the family and society, physical limitation following age or diabetes related complications etc. The following are checked and imparted.

1. To check and revise already imparted knowledge on diabetes care.

2. To adjust self-management plan for diabetes.

3. To repeat and support independent self-management skills and to monitor its efficacy, if allowed by the prevailing physical limitations.

4. To provide knowledge to the new care giver on diabetic management, documentation of health data and identification of complications etc.

5. To provide psychological support in the changing scenario and to emphasize that the entire team of the care giver is there in case of need at any point of time.

6. To develop treatment goals and personal strategies in the changing environment.

7. Referral to the hospital social service worker if the patient requires assistance in the changing environment.

8. Any other issues raised by the patient.

Apart from the Out Patient Clinics, the admitted patients with diabetes (admission usually follow special circumstances like complications), are thoroughly evaluated and counselled on case-to-case basis using the same basic steps as outlined above. As the patients usually stay in the hospital for more than a day, they are counselled repeatedly and knowledge checked and revised if needed.

Discussion

DEs have covered a long way and served patients with diabetes since the concept was introduced by Apollinaire Bouchardat in 1883 in his book Le Diabète Sucré. He advised people with type 2 diabetes to follow a low-calorie diet and exercise more to improve their blood glucose values which is valid even today. The service of a DE has been incorporated in the treatment

of patients with diabetes in Europe as an organized principle or even by law (Italy)[7]. DE continue to represent a diverse group of professionals in the US that includes nurses (50%), dietitians (35%), pharmacists (6%), and others (6%). The most commonly held credential for the specialty continues to be the Certified Diabetes Educator (86%), with only 5% of the DE indicating that they held the Board Certified–Advanced Diabetes Management credential[8]. In the US, it has been documented that DEs are effective in improving clinical, psycho-social and behavioural out-come in patients with diabetes[9-12]. The situation in other developed countries like the UK is far from optimal where between 2010 and 2012 the number of diagnosed cases diabetes rose by 10% but there was a fall of 3% in the number of sites who employ any Diabetes Specialist Nurses or DE[13]. In Australia, there has been a gradual movement of the diabetes educator workforce from a nursing dominant entity, with an emphasis on interprofessional role boundaries, to an interdisciplinary body, in which role flexibility is encouraged[14]. However, in India the concept of DE is a new one excepting few apex medical institutes and is an evolving area of interest for the health-education planners and policy makers. There is an urgent need for the employers, health care providers, health boards, universities, association of allied health care professionals to take necessary steps to train DEs in adequate numbers to effectively manage exploding diabetes epidemic in India.

Conclusions and implications for nursing practice:

Understanding diabetes for better management and avoiding / delaying complications has been well incorporated in many advanced health care systems in the world and its effects documented. While it is easier for a paramedic like a nurse to become a DE with a short duration of training, due to nature of the basic education, it has been an area that requires more attention. Investment in the training and continuous development of DEs will go a long way in imparting much needed information to the patients with diabetes thereby helping to curb the epidemic.

Conflict of Interest: Nil.

Ethical Clearance: This is a narrative technical note.

Ethical Clearance: Not required.

Source of Funding: None.

References

1. International Diabetes Federation - Home [Internet]. Idf.org. 2021 [cited 17 May 2021]. Available from: https://www.idf.org/.
2. Saeedi P, Petersohn I, Salpea P, Malanda B, Karuranga S, Unwin N et al. Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas, 9th edition. Diabetes Research and Clinical Practice. 2019;157:107843.
3. Kazemian P, Shebl F, McCann N, Walensky R, Wexler D. Evaluation of the Cascade of Diabetes Care in the United States, 2005-2016. JAMA Internal Medicine. 2019;179(10):1376.
4. Basu S, Sharma N. Diabetes self-care in primary health facilities in India - challenges and the way forward. World Journal of Diabetes. 2019;10(6):341-349.
5. Diabetes Nurse Educator Programs - 05/2021 [Internet]. Coursef.com. 2021 [cited 17 May 2021]. Available from: https://www.coursef.com/diabetes-nurse-educator-programs.
6. Funnell M. Patient empowerment: What does it really mean? Patient Education and Counseling. 2016;99(12):1921-1922.
7. Grüsser M. [Internet]. Idf.org. 2021 [cited 17 May 2021]. Available from: https://www.idf.org/component/attachments/attachments.html?id=238&task=download.
8. Sherr D, Lipman R. The Diabetes Educator and the Diabetes Self-management Education Engagement. The Diabetes Educator. 2015;41(5):616-624.
9. Siminerio L, Ruppert K, Huber K, Toledo F. Telemedicine for Reach, Education, Access, and Treatment (TREAT). The Diabetes Educator. 2014;40(6):797-805.
10. Phillips L, Barb D, Yong C, Tomolo A, Jackson S, Olson D et al. Translating What Works. Journal of Diabetes Science and Technology. 2015;9(4):857-864.

11. Shea S, Weinstock R, Teresi J, Palmas W, Starren J, Cimino J et al. A Randomized Trial Comparing Telemedicine Case Management with Usual Care in Older, Ethnically Diverse, Medically Underserved Patients with Diabetes Mellitus: 5 Year Results of the IDEATel Study. Journal of the American Medical Informatics Association. 2009;16(4):446-456.

12. Hunt J, Siemienczuk J, Gillanders W, LeBlanc B, Rozenfeld Y, Bonin K et al. The impact of a physician-directed health information technology system on diabetes outcomes in primary care: a pre- and post-implementation study. Journal of Innovation in Health Informatics. 2009;17(3):165-174.

13. Audit N, 2012 N, 2010-2012 N, Report N. National Diabetes Inpatient Audit (NaDIA) - 2012 - NHS Digital [Internet]. NHS Digital. 2021 [cited 17 May 2021]. Available from: https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-inpatient-audit/national-diabetes-inpatient-audit-nadia-2012.

14. King O, Nancarrow S, Grace S, Borthwick A. Diabetes educator role boundaries in Australia: a documentary analysis. Journal of Foot and Ankle Research. 2017;10(1).