

## Why do we need Nurse Case Management in Self-management of Diabetes Mellitus?

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In Sri Lanka, the prevalence of Diabetes Mellitus (DM) has been progressively increasing over last 20 years, evidenced by many studies conducted over years. Hospital admissions and mortality for DM and its related complications have been raised over last few years (2008-2015) in Sri Lanka<sup>1</sup>. In 2014, it was estimated that 7% of the death was due to DM in Sri Lanka<sup>2</sup>. In addition, DM was the 13th leading cause of death in Sri Lanka in 2015<sup>1</sup>.

Though, DM is incurable, it could be managed better if the patients are aware of the disease, risk factors, treatments and its complications<sup>3</sup>. The knowledge on better self-management of DM could reduce the complications and improve the quality of life among patients<sup>4</sup>.

Self-management of DM is an encompassing activities pertaining to taking care of one's health and their disease<sup>5</sup>, and defined as patient's adherence to a self-treatment regimen including diet, maintaining physical activity, daily monitoring of blood glucose levels, and adhering to medication therapy and foot care<sup>6</sup>. Self-management of DM places the patient at the center of the care and empowers them to make daily decisions about their disease in improving health outcomes<sup>7</sup>. Successful self-management of DM is closely connected to the self-care behaviors of individuals that patients initiate and engage in independently to maintain health and wellbeing<sup>8</sup>.

The Nurse Case Management (NCM) is a strategy used to coordinate the activities performed by a nurse to provide the health care services of patients<sup>9</sup>. NCM is defined as a dynamic and collaborative approach to provide and coordinate health care services in a participative process to identify and facilitate options and services for meeting individual's health needs<sup>10</sup>.

The primary objective of NCM is to help patients to understand and to accept responsibility for the self-management of their disease and related health problems. Further, nurse case manager works closely with patients with DM on lifestyle modifications and day to day self-management practices for better clinical outcomes<sup>11</sup>. In addition, diabetes nurse case management plays an important role in providing holistic individualized care by developing rapport with patients, facilitating communication between patients and care provider as well as empowering patients with adequate knowledge necessary for self-management of DM.

Diabetes nurse case management, through education provides high quality care for patients by emphasizing the importance of self-management and promoting patients' choice and self-directed decision-making<sup>11</sup>. Furthermore, it is providing wide range of intervention by nurses to improve diabetes self-management through, counseling and support on self-management<sup>12</sup>. It was emphasized that diabetes self-management education is the prime responsibility of nurse during the implementation of clinical based interventions<sup>13</sup>.

The nurse case management for diabetes self-management could help patient to achieve near normal glycemic control by the significant improvement in HbA1c level<sup>14</sup>. It was evident that NCM intervention significantly improves HbA1c level at least by 0.5% compared to control group<sup>15</sup>. Thus, NCM program has to be enhanced to provide intensified care for DM patients with poor glycemic control.

The NCM could be able to deal better by encouraging the patients on self-management in diet modification, regular exercise, regular follow up, regular medications and glucose monitoring, only after better understanding of patient's factors for poor glycemic control and the barriers for improvement. Whereas, NCM provides individualized patient care and monitoring the outcomes and removes the burden of time and effort of physicians.

Though, diabetes clinics and diabetes education centers are available only in some hospitals in Sri Lanka and the diabetes education provided to the patients with DM by diabetes nurse educator is inadequate or limited as far as the investigators are concerned. It leads to lack of follow up on patients' outcome, poor communication and coordination with physician in the management plan.

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Thus, NCM is proposed to overcome these issues through regular follow up of patient's outcomes by discussing the management plan between health care provider and patient and becomes the vital components of NCM for optimal glycemic control. In addition, NCM provides individualized nursing care for patient to develop self-management skills in order to achieve their target glycemic control<sup>16</sup>.

Therefore, Self-management of DM among patients with DM through nurse case management would be useful in controlling blood glucose level and other clinical parameters. The nurse case management need to be added simultaneously during clinical practice targeting individualized care for better glycemic outcome.

## References

1. Annual Health Bulletin, Sri Lanka, 2015. Available at: [http://www.health.gov.lk/moh\\_final/english/others.php?pid=110](http://www.health.gov.lk/moh_final/english/others.php?pid=110) (Accessed 17 March 2017).
2. World Health Organization and Ministry of Health, Nutrition and Indigenous medicine. *Healthy lifestyle centers: taking NCD care to the heart of the community*. 2016. WHO Country office, Sri Lanka.
3. Sabri AA, et al. Comparing knowledge of diabetes mellitus among rural and urban diabetics. *McGill Journal of Medicine* 2007; **10**(2): 87-9.
4. United Kingdom Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with Sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998; **352** (9131): 837-53.
5. Moser A, Van der Bruggen H, Widdershoven G, Spreeuwenberg C. Self-management of type 2 diabetes mellitus: a qualitative investigation from the perspective of participants in a nurse-led, shared-care programme in the Netherlands. *BMC Public Health* 2008; **8**: 91.
6. Sousa VD, Hartman SW, Miller EH, Carrou MA. New measures of diabetes self-care agency, diabetes self-efficacy, and diabetes self-management for insulin-treated individuals with type 2 diabetes. *Journal of Clinical Nursing* 2008; **18**(9): 1305-12.
7. Baghbanian A, Tol A. The introduction of self-management in type 2 diabetes care: A narrative review. *Journal of Education and Health Promotion* 2012; **1**: 35. Available at: <http://doi.org/10.4103/2277-9531.102048> (Accessed 22 August 2018).
8. Venkatesh S, Weatherspoon L, Kaplowitz S, Song W. Acculturation and glycemic control of Asian Indian adults with type 2 diabetes. *Journal of Community Health* 2013; **38**(1): 78-85.
9. Zeng Z, et al. Effect of case management on patients with type 2 diabetes mellitus. *Chin Nurs Res* 2016; **3**(2): 71-6.
10. Llewellyn A, Leonard M. Nursing case management review and resource manual (3rd ed.), 2009. Silver Spring, MD: American Nurses Credentialing Center.
11. Watts SA, Lawrence RH, Kern E. Diabetes nurse case management training program: enhancing care consistent with the chronic care and patient-centered medical home models. *Clinical Diabetes* 2011; **29** (1): 25- 31.
12. Loveman E, Royle P, Waugh N. Specialist nurses in diabetes mellitus. *Cochrane Database Syst Rev* 2013. Available at: <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858CD003286/full>. (Accessed 03 August 2018).
13. Karakurt P, Kasikci MK. The effect of education given to patients with type 2 diabetes mellitus on self-care. *International Journal of Nursing Practice* 2012; **18**(2): 170-9.
14. Aubert, et al. Nurse Case Management To Improve Glycemic Control in Diabetic Patients in a Health Maintenance Organization: A Randomized, Controlled Trial. *Annals of Internal Medicine* 1998; **129**(8): 605-612.
15. Wilson C, et al. Nurse case manager effectiveness and case load in a large clinical practice: Implications for workforce development. *Diabetes Medicine* 2005; **22** (8): 1116-120.
16. Mullen BA, Kelley PA. Diabetes nurse case management: an effective tool. *J Am Acad Nurse Pract* 2006; **18**: 22-30.