

The Problem of Rising Cost of treatment of Diabetes

Prof Samar Banerjee

Editor in Chief: Journal of Clinical Diabetology,
drsamarbanerjee@gmail.com

Diabetes is a one of the greatest killer disease and remains mostly undetected till the complications set in. Diabetes if not properly tackled, leads to complications such as cardiovascular diseases, eye diseases, kidney diseases, and neurovascular diseases. As per International Diabetes Federation (IDF) 2015 statistics, approximately 415 million people are affected with diabetes globally and it may rise to 642 million by 2040 and the greatest increase is predicted to occur in low income countries. In addition, around 318 million adults are also reported to be affected with impaired glucose tolerance.

The financial burden on the diabetes affected individuals, their families, as well as national health systems is enormous. Furthermore, when the micro- and macro vascular complications set in, the cost of therapy gets escalated more than 3 to 5 times. Experts all over the world propose feasible strategies that could be undertaken to attain affordable diabetes care to all deserving individuals.

In a population-based country like India, a study on cost of illness by Singh estimated the direct cost (medical and nonmedical) for the treatment of diabetes and its complications, indirect cost due to the loss in productivity due to diabetes related morbidity and intangible cost associated with pain and sufferings. In India, the patients and their families mostly had to depend on household incomes to meet almost 85–95% of all healthcare costs and thus the lowest income group stands the most burdened. A

low income family was found to spend as much as 20% of its family income for an adult with diabetes and up to 35% of income for a child with diabetes. In average, over a period of five years, a diabetes affected person will have set aside around Rs. 150,000 towards diabetes treatment.

In the areas of middle and low-income countries, diabetes affect more of younger populations (59% under the age of 50) compared to that of high-income countries (26% under the age of 50). This early onset of diabetes combined with the increased life expectancy makes diabetes a burden that needs to be borne for a longer period of time. This situation is further aggravated by higher rates of urbanization, changes in dietary and lifestyle practices, gestational diabetes mellitus, intra-uterine malnutrition and foetal programming, and the 'thrifty genotype' serve as contributing factors towards this higher prevalence in diabetes. This disease leads to a dramatic negative impact both on the patient's own budgets and overall healthcare budget of the government. Healthcare expenses become two to three times higher for diabetes and due to the long standing nature of illness and its associated complications, management and treatment of diabetes become a costly concern especially for those belonging to middle or low income categories.

The number of persons with diabetes is growing worldwide but at faster rate in India than other countries. The disease is exerting increasing

proportion of toll both on the patient's household budgets and overall healthcare budget of the government. Every person has the right to live long and access to standard minimum medicines. Though primary prevention is the prime target, immediate action is necessary to control the storm of diabetes and to introduce cost-effective treatment strategies.

In India, estimates suggest that about 85–95% of all healthcare costs are borne by individuals and their families from household income as most people are not insured. For about 70% of them are at breaking point to avail the resource to meet up the treatment costs,

Studies in India show that, for a low income family for an adult with diabetes, as much as 20% percent and for a diabetic child, up to 35% of income is spent on diabetes care. If one has diabetes for 5 years, he will have to spend around Rs. 1,50,000 on diabetes treatment only. The cost increases with complications if not properly treated initially. Indirect and intangible costs are also larger for diabetes. The indirect costs arises the loss of production as a result of frequent absence from work, an inability to work because of disability, premature retirement and even premature mortality. Intangible costs are those that reduce the quality of life.

Major reasons behind rising cost of diabetes are dearth of regular screening programmes that aids in early detection and management of the disease, absence of proper awareness about the disease and its management among patients and their supporting members, patients non-complaint during initial years when diabetes is asymptomatic, newer therapies and ancillary supplies becoming expensive, lack of proper financial support or insurance schemes for the deserving patients to meet the treatment expenses often resulting in increased drop-out rates, use of complementary and alternative medicinal practices with unproven benefits leading to future complications. The other important causes are widespread advertisements in print and electronic media giving fake publicity to unproven therapies and unhealthy fast-food culture, wrong injection techniques and wrong timing of oral anti-diabetic

drugs resulting in treatment failure and development of future complications, lack of proper training among the practitioners regarding chronic disease management and sub-optimal knowledge of clinical practice protocols, clinical inertia among the physicians to start on insulin therapy and sub-optimal intensification of therapy due to the fear of hypoglycaemia, time constraints faced by the physician to spend more time with the patient to teach them and impart them education.

Effective prevention is considered as a cost-effective healthcare. Primary prevention aids in preventing susceptible individuals from developing diabetes by reducing or delaying the onset of diabetes. Secondary prevention consist of early detection, prevention and treatment and reduction of the rate of developing complications and slow their progression.

The following recommendations can aid in dispensing affordable diabetic care to all the diabetes affected individuals irrespective of their socioeconomic status:

- 1) Early detection
- 2) Spreading awareness among the public
- 3) Life style interventions
- 4) Legal actions against unscientific remedies and magical therapies
- 5) Legal actions against unethical advertisements
- 6) Affordable and accessible healthcare
- 7) Rational prescribing of drugs
- 8) Subsidies, community insurance schemes, discount pharmacies
- 9) Educating the practitioners
- 10) Role of media

Government should do the following:

1. remove all the taxes and duties from insulin and diabetes supplies.
2. prepare long-term treatment strategies and increase the number of patients treated.
3. be more vigil about the large differences between the procurement price and the patient price of oral diabetics in the public sector and investigate what the reasons behind these differences.
4. substitute quality-assured generics when the

quality-assured generic products are cheaper than the originator brand.

5. may choose to provide medicines procured at low prices through the government hospital, private or NGO sector such as, the national diabetes association, voluntary organizations special outlets or special schemes within the private sector.
6. ensure the availability of diabetes treatment accessories for monitoring and syringes at affordable prices without taxes or duties.
7. monitor the prices, availability and affordability of diabetes medicines with transparent publications.

Pharmaceutical companies should maintain cheaper pricing schemes for the least developed countries and this pricing should also be available through NGO and voluntary organizations. The World Health Organization should assist countries in developing policies to reduce the price of medicines and increase the availability of quality assured diabetes medicines.

Professional bodies of physicians can purchase medicines in bulk and supply to needy patients based on the recommendations by their members as RSSDI is doing in India.

Patients group or organization can do the same and raise their voice against abnormal price hike and counselling their members for proper control of diabetes and prevention of complications. They should also motivate the government for proper implementation of diabetes health care.

In addition, more easily affordable insurance schemes particularly for the low income group have an important role to play in financially protecting vulnerable households. As the prediction is that the Indian diabetic population will rise to more than 80.9 million by the year 2030, immediate health policy restructuring drug price control, improvement of awareness about diabetes for early detection and treatment and government investment will be needed to solve the economic constraints.

Now we should come up with simple framework and affordable clinical practice recommendations for

screening, preventing as well as managing diabetes that are relevant to our nation. In our country majority of the population is below the poverty line and living in rural areas. As such, these guidelines should at first be applicable to these individuals. The simple strategies suggested here will definitely be successful in offering effective and affordable healthcare to all deserving individuals with robust support of various stakeholders including government and nongovernmental agencies, health practitioners and pharmaceutical industries.

We are already late. Let us start now.

Suggested readings

1. IDF Diabetes Atlas. Brussels, Belgium: International Diabetes Federation; 2015.
2. Whiting DR, Guariguata L, Weil C, Shaw J. IDF diabetes atlas: global estimates of the prevalence of diabetes for 2011 and 2030. *Diabetes Res Clin Pract* 2011; 94:311–21.
3. Guariguata L, Whiting D, Hambleton I, Beagley J, Linnenkamp U, Shaw J. Global estimates of diabetes prevalence for 2013 and projections for 2035. *Diabetes Res Clin Pract* 2014;103:137–49.
4. Singh J. Economic burden of diabetes. In: Muruganathan A, Geetha T (editors). *Medicine Update India: Association of Physicians of India*; 2013. p. 205.
5. Unit EI. *The silent epidemic: an economic study of diabetes in developed and developing countries*. London, United Kingdom: The Economist, Economic Intelligence Unit; 2007.
6. Consensus recommendations on exploring effective solutions for the rising cost of diabetes. Shaukat M, Sadikot, Ashok Kumar Das, John Wilding, Ali Siyan, Abdul Hamid Zargar, Banshi Saboo, S.R. Aravind, Bhavana Sosale, Sanjay Kalra, G. Vijayakumari, K.K. Manojanj, Anuj Maheshwari, Jayant K. Panda, Samar Banerjee, Rajeev Chawla, Sambu Potty Vasudevan, O.S. Syam Sundar, Jothydev Kesavadev. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 2017;11:141–7.