International Journal of Community Medicine and Public Health
Panchagnula NB. Int J Community Med Public Health. 2017 Dec;4(12):4382-4385
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20175308

Review Article

Conquering mount diabetes: the highest peak in India

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Received: 26 October 2017
Revised: 16 November 2017
Accepted: 17 November 2017

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ABSTRACT

The term diabetes has come into colloquial usage over time. As the day passes by, we have more people being diagnosed and more people facing complications. How the silent killer is creeping its way into the world is a known thing. Are all our task forces ready to face the end result? Though we have enough research and supportive facilities, the provider-consumer distance in a developing country like India is a transparent issue. Bolstering the team dynamics and a well-structured team approach right from the primary care provider's level, might offer us a solution for all that we are facing today.

Keywords: Diabetes, Non-communicable diseases, Health care system

PROBLEM STATEMENT

We are in a scientifically and technologically growing world. It goes without surprise that we have to pay a tax for this kind of a quick growth, rather a leap. Our share of the tax as healthcare professionals is a rising incidence and prevalence of chronic morbidities. Of these chronic morbidities, non-communicable diseases (NCDs) are a constantly addressed subject. Diabetes is an important public health problem, one of four priority non-communicable diseases (NCDs) targeted for action by world leaders.[1] What draws major attention in a developing country like India is the availability of excellent solutions to such problems but barriers to avail the solution. It is not a less known fact that, our country is galloping, towards bagging the title as "The Diabetes Capital of the World". It is estimated that a total of *66.8 million individuals are diagnosed to have diabetes mellitus in India*.[2] Spending time trying to estimate what the problem statement might be down the lane is a futile exercise unless we analyze the existing barriers to achieve a success rate in reducing the incidence of the disease and put into play, those strategies of primordial, primary, secondary and tertiary prevention.

EXCERPTS FROM PATIENT INTERVIEWS

"*It doesn't hurt me to take more of those pills every day. It hurts me when I see those monthly readings and my physician yells at me for not taking my pills regularly…"*

"*I finished taking the prescribed course of pills few months ago and then felt better. I went to a doctor because I have this wound on my foot which is not healing at all and he sent me here that my sugars are high. I wasn't told that I had to continue the pills…"*

"Why should I continue taking medicines when I don't feel sick?"

"A diabetic diet? I was never told about it. I was asked to take these pills twice a day and cut down the quantity of food I eat, that is it."

"I am a daily wage laborer and work at a far off place. How can I come to the primary health center once every month to meet the doctor, get my blood work up, stand in a queue and get my pills refilled for a month? Losing one day of work means my family and I have to stay hungry for that day."

"The quack in our village gives us native medicine for free. My husband felt that was enough for both him and me. Both of us were diagnosed to have diabetes in the same year, the expense was way beyond what we could afford, which is why we took to the quack. We are here today because his toe got black and I have loose stools for months now. We wish the treatment and hospitals were more accessible."

"There was an eye camp in our community few years ago and the doctors said that I had changes in my eye which would make me blind and referred me to a higher center. The eye doctor there said it looked like diabetes, and I did not understand. I was sent to a physician the same day, and was prescribed two shots of insulin every day. I was overwhelmed by the idea of poking myself twice a day every day for the rest of my life, but I couldn't discuss it with the doctor because there were too many people around."

"My sister was diagnosed with diabetes but was only asked to exercise and modify her diet. So when I had high readings when I checked 'em at home, I thought even I could fix it that way."

"The first doctor changed my pills three times and still there was no control, so I found a new doctor and he had prescribed the same pill which I started with. I got frustrated and stopped everything all together."

While interning at a primary health care center or a tertiary care center as a matter of fact, it is not uncommon to hear statements like these coming from a patient.[3] When such patients are further interviewed, to one's surprise, all that they know is this equation, "Diabetes= sugar; sugar=sweet; sweets are to be excluded from diet; a round pill and an oval pill twice a day, for the rest of our life".

EXCERPTS FROM DOCTOR INTERVIEWS

"Most of the patients are taken aback by the diagnosis itself. They go into denial and never come back. By the time they want to seek treatment, complications must have already set in…"

"We have separate out-patient hours for reviewing our old patients. Most of the times, we have a proxy coming in to refill the prescription and more often without follow-up fasting and postprandial plasma glucose profiles. So when we see the patient seven to eight months later, we are in the emergency room trying to bring him out of an episode of hyperglycemia."

"Half knowledge always kills. We have seen patients who over dose on oral hypoglycemic drugs because they had a heavy meal at a party without consulting their physician."

"Patients are hesitant to disclose their socio-economic status/demographic details to the doctor or the initial interviewer at a hospital most of the times. This is generally obtained in order to analyze the patient's accessibility to the current hospital, the nearest primary health care center, cost affordability, other channels of follow-up and support."

"Over-the-counter management of the common cold has now expanded into prescribing antibiotics, oral hypoglycemic drugs, anti-hypertensive drugs, etc… The pharmacist is looked upon more because he has instant remedies for all their complaints."

Somewhere in the physician patient interface, counseling has become an outdated component; the most frequently heard excuses being:[4]

1. Inability to cater time to a patient due to a huge patient load
2. Lack of establishment of patient-doctor rapport
3. Lack of a follow up or reporting system and the list goes on.

Most of the budding physicians do not consider counseling to be essential, frequently stated reasons being:

1. *"The patient will not understand"*
2. *"The patient is illiterate"*
3. *"The patient asks too many questions"*
4. *"The patient keeps repeating the same mistake and tests my patience every visit".*

THE URBAN-RURAL-URBAN SLUM STORY

The government has provided health care access based on the population of a region. For the first time in 1946, the health care system was seen to be taking shape, from the strategies and guidelines placed down by the Bhore Committee, in the form of a three tier health care system.[5]

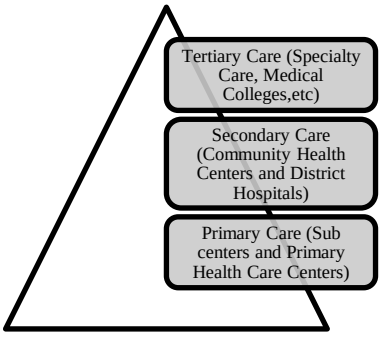

Figure 1: The three tier health care system in India.[5,6]

Each of these health centers is assigned, as a responsibility, population of an area as follows:

Table 1: Population assigned and level of health care.[6]

Level of health care	Urban and rural area coverage	Hilly/tribal/ remote area coverage
Sub center	5000	3000
Primary health care centre	30000	20000
Secondary health care	120000	80000

Based on census reports, expansion of health care centers has taken place accordingly. But what have not improved proportionately are the quality of health care and the availability of health care professionals. While addressing these issues, population expansion did not pause. This gap was slowly being filled by registered medical practitioners, alternative medicine providers and private hospitals initially, till it all got lopsided and health care became an expensive commodity to avail.

The situation further went down the spiral when numbers started taking over the game. The prevalence of diabetes mellitus is higher in the urban population when compared to that in the rural population. But on the other hand, more than 70% of the Indian population is rural, thus more number of diabetics are seen in the rural population though the prevalence is low.[2]

The other factor which strongly influences the statistics and twists the scenario are the concepts of urbanization of areas which classify as rural/slum areas and the places which have floating population. In the former factor considered, the scenario being assessed cannot be compared and contrasted with the existing statistics of what area it has been assumed to be. In the latter scenario, the resident and permanent population of the area is less than what is apparent. Thus, the healthcare system, its activities and progress are remarked either as "deficit/under delivering" and "ideal", respectively. The prevalence of a particular disease being studied in such areas yields a percentage, falsely higher or lower than that of the national average, leaving us with a distorted picture of the demon.

THE "DIABETES MELLITUS IS AN ENDOCRINE DISEASE–I EXACTLY KNOW WHERE TO GO" ATTITUDE

The issue with partial awareness is that the patient seeks tertiary care directly, which equates to blindly driving into a jungle with no direction map. Once the consultation is over and the patient starts the medication, he/she finds it trivial to just go for a follow up to see the physician write "Continue the same treatment". So as the visits go farther and farther the motivation and compliance/adherence see a falling trend.

PROPOSED INTERVENTIONS

1. At the level of primary health care:
   a. Primary health centers are where, the first patient doctor communication occurs. At this level, the medical officers are supposed to ensure that weekly diabetic clinics are conducted and patients visiting the OPD are screened for NCDs based on current guidelines and the patients are identified and one to one counseling takes place. If one picks up a case with complications, referrals should take place to a higher center for further work up, facility and benefit of a patient. Supervision of such activity is a must and should be documented.
   b. Like DOTS providers and ICTC counselors, a NCDs counselor is required at each health center to address small groups of population.[7]
   c. Medical officers and students should be encouraged to conduct and participate in CME (continuing medical education) in order to remain up-to-date with the problem statement and current guidelines.[8]
   d. Adoption of globally proposed guidelines, if apt for the population.
   e. High school and college going students of an area covered by a sub-center or a primary health center may be chosen to volunteer in community education regarding non-communicable diseases and be trained for the same. Anganwadi Workers or PHC in-charge can supervise these activities.[9]
      i. Community based beliefs, myths and practices can be addressed in a more congenial environment.
      ii. Diabetic diet and exploration of options within the available resources can be learnt by conducting workshops.[10]

      Participation of the medical officer would make the interface a much healthier one and also provides a deeper understanding of the social dynamics of the population to plan necessary interventions.
   f. Timely referral along with efficiently addressing the need of referral, to the patient and the attendants.

2. At the level of secondary health care:
   a. Efficient management of referred cases and timely referral to tertiary care.
   b. Community education.[9]
   c. Analysis of updated data from primary health centers to widen resources and improve approach.

3. At the level of tertiary health care:
   a. Counseling the patient regarding the medication and difficulties in adhering to the prescribed schedule.

b. The requirement of following up with a primary care physician and including one in the team should be emphasized upon.
c. A tertiary care provider should always remember that each patient is different and that the whole approach should be tailor made for each.

CONCLUSION

The work of pioneers in the areas of diabetes has echoed the requirement of balanced team dynamics in managing a diabetic, time and again. It is a true thing that the doctor patient ratio is disproportionate. But it is a known fact that there are always solutions to a problem. And the physician can always utilize supportive healthcare staff, train them and appoint them to counsel, review and follow up the patient.

Following a flat hierarchy always emphasizes upon the requirement of everyone in the system to take equal responsibility of each patient and follow up accordingly. This, for sure would improve the current scenario, a little, by little. But holistically approaching even that little would bring about a noticeable change.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Panchagnula NB. Conquering mount diabetes: the highest peak in India. Int J Community Med Public Health 2017;4:4382-5.