

# Concerns about hypoglycemia in India: The Diabetes Attitudes Wishes and Needs (DAWN2) study

Sanjay Kalra, Rakesh Sahay<sup>1</sup>, Ambika Gopalakrishnan Unnikrishnan<sup>2</sup>

Department of Endocrinology, Bharti Hospital and BRIDE, Karnal, Haryana, <sup>1</sup>Osmania Medical College, Hyderabad, Andhra Pradesh, <sup>2</sup>CEO, Chellaram Institute of Diabetes, Pune, Maharashtra, India

## ABSTRACT

Hypoglycemia is an important complication of diabetes management, associated with both acute and chronic medical implications. Hypoglycemia is also associated with significant psychosocial stress. The recently conducted second Diabetes Attitudes Wishes and Needs study (DAWN2) explores this aspect of hypoglycemia. This brief communication discusses data related to worry about hypoglycemia in the Indian cohort of people with diabetes and family members. It suggests strategies to reduce this avoidable stress.

**Key words:** Diabetes, hypoglycemia, cultural competence, insulin, oral antidiabetic drugs

## HYPOGLYCEMIA

The recently conducted second Diabetes Attitudes Wishes and Needs (DAWN2) study explored various aspects of healthcare provisions for people with diabetes, in 17 countries spread across four continents. While the study predominantly focused on psychosocial aspects of diabetes care, it also touched some biological domains of the illness, including hypoglycemia (1, 2, and 3). Hypoglycemia is a perfect example of a disease state that fits the biopsychosocial model of disease. Hypoglycemia is a biological condition, which is associated with psychological morbidity (fear and worry about hypoglycemia) for the person with diabetes, as well as social impact (concern on part of family members). In fact, the social impact of hypoglycemia extends far beyond the immediate family. Hypoglycemia is associated with a significant proportion of road traffic accidents and fatalities. This psychosocial element of hypoglycemia is strongly highlighted in the Indian cohort of the DAWN2 study.

## ATTITUDES AND PRACTICES

More than half of all the people with diabetes (PWD) (54.6% overall, 60.9% in India) worry about the risk of hypoglycemia events.<sup>[1]</sup> This is a major impact of diabetes on their lives. This view is echoed by family members (FM), who worry about this risk to an even greater extent (63.5% overall, 79.0% in India).<sup>[2]</sup> In fact, though Indian PWD seem average (ranked 11 out of 17 countries) in their worry about hypoglycemia, Indian FM report to worrying more often than all participating countries expect Algeria.

This fear of hypoglycemia episodes, however, does not seem to be matched by optimal self management in terms of testing blood sugar. Indian PWD report self-monitoring only 2.2 days in the preceding 7 days, as compared with the overall mean of 3.6 days, and report a similar frequency of testing the number of times recommended by their HCP. In this regard, Indian PWD rank near bottom, just above Mexico and Japan. Again, these statistics are corroborated by Indian HCP, who strongly (83.5%) feel that major improvement in self management is needed by patients in the area of testing blood sugar.<sup>[3]</sup> This proportion is numerically less only than the responses from China and Algeria.

## CLINICAL IMPLICATION

These statistics should stimulate action to improve

### Access this article online

#### Quick Response Code:



Website:  
[www.joshd.net](http://www.joshd.net)

DOI:  
10.4103/2321-0656.120277

**Corresponding Author:** Dr. Sanjay Kalra, Department of Endocrinology, Bharti Hospital and B.R.I.D.E, Karnal, Haryana, India.  
E-mail: [brideknl@gmail.com](mailto:brideknl@gmail.com)

the quality and provision of healthcare, with regard to hypoglycemia. PWD should be offered treatments, which pose less risk of hypoglycemia, thus reducing their worries and concerns. These include injectable drugs such as detemir, glargine and degludec, and oral antidiabetic drugs like metformin, gliptins, and pioglitazone and alpha-glucoamidase inhibitors. This will positively impact the diabetes-related distress faced by FM as well.

Use of drugs that need less frequent self monitoring of blood glucose (SMBG) should be encouraged. These are the same molecules that are less prone to causing hypoglycemia.

At the same time, active self management of diabetes including regular SMBG and adherence to HCP-suggested advice, must be promoted. Patient and FM empowerment can be carried out by providing educational programmes and activities designed to improve awareness of hypoglycemia and its management. Such programs need to be implemented on a large scale, in concordance with other diabetes education modules. The etiology, predisposing factors, and symptomatology of hypoglycemia should be highlighted. The high risk of hypoglycemia in periods of fasting, such as Ramadan, Buddhist Lent, or Navratras, should be emphasized.

Hypoglycemia awareness training (HAT)<sup>[4]</sup> is an essential part of this education. Cultural and social issues do not leave the realm of hypoglycemia untouched. The cross-cultural and linguistic impact on perception of hypoglycemia has been described as well.<sup>[5]</sup> Hypoglycemia may present as a subtle difficulty in praying, concentrating, or meditating during fasts.<sup>[6]</sup> These aspects should be included in person-centered HAT modules. HCPs, too,

may need training in the concept of HAT, as well as culture-sensitive or language-specific HAT.

Sensitization of HCPs towards the importance of preventing hypoglycemia is the corner stone of success for all these activities. A concerted campaign, to highlight the hypoglycemia-related issues uncovered by DAWN2, will help in achieving these goals.

## REFERENCES

1. Nicolucci A, Kovacs Burns K, Holt RI, Comaschi M, Hermanns N, Ishii H, *et al.* Diabetes Attitudes, Wishes and Needs second study (DAWN2™): Cross-national benchmarking of diabetes-related psychosocial outcomes for people with diabetes. *Diabet Med* 2013;30:767-77.
2. Kovacs Burns K, Nicolucci A, Holt RI, Willaing I, Hermanns N, Kalra S, *et al.* Diabetes Attitudes, Wishes and Needs second study (DAWN2™): Cross-national benchmarking indicators for family members living with people with diabetes. *Diabet Med* 2013;30:778-88.
3. Holt RI, Nicolucci A, Kovacs Burns K, Escalante M, Forbes A, Hermanns N, *et al.* Diabetes Attitudes, Wishes and Needs second study (DAWN2™): Cross-national comparisons on barriers and resources for optimal care-healthcare professional perspective. *Diabet Med* 2013;30:789-98.
4. Cox DJ, Kovatchev B, Koev D, Koeva L, Dachev S, Tcharaktchiev D, *et al.* Hypoglycemia anticipation, awareness and treatment training (HAATT) reduces occurrence of severe hypoglycemia among adults with type 1 diabetes mellitus. *Int J Behav Med* 2004;11:212-8.
5. Bhutani J, Kalra B, Bhutani S, Kalra S. *Indian J Endocrinol Metab* [In Press].
6. Latt TS, Kalra S. Managing diabetes during fasting-A focus on Buddhist Lent. *Diabetes Voice* 2012;57:42-5.

**How to cite this article:** Kalra S, Sahay R, Unnikrishnan AG. Concerns about hypoglycemia in India: The Diabetes Attitudes Wishes and Needs (DAWN2) study. *J Soc Health Diabetes* 2014;2:48-9.

**Source of Support:** Nil. **Conflict of Interest:** None declared.