



# COST EFFECTIVE CUSTOMISATION OF TARGETS: OUTCOMES AFTER 12 YEARS OF TELEMEDICINE IN 853 PATIENTS WITH TYPE 2 DIABETES



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## BACKGROUND

With ever increasing number of patients with diabetes, doctors hardly get time for educating them. Majority of physicians practice alone without the support of a team and it is a major challenge to reach targets without the risk of hypoglycemia. Telemedicine, making use of ordinary telephones and emails are easy to use and is a cost effective tool to maintain customized targets via consultations and education. In our centre, subjects are being followed up via Diabetes Tele Management System(DTMS<sup>®</sup>) since 1999 managed by a multidisciplinary team. 4 point blood sugar values will be reported by subjects through phone, email or secure website. DTMS<sup>®</sup> team follows up with patients as needed on modifications of drug dosages, diet and exercise.

## AIM

To assess the cost effective customization of all three targets of diabetes therapy and its outcomes after 12 years.

## METHOD

We conducted a retrospective cohort study using electronic medical records at our centre in type 2 diabetes patients enrolled with our DTMS<sup>®</sup>. We categorised patients being registered under DTMS<sup>®</sup> into 3 groups as seen in Table 1. The total cholesterol target was set as less than 135 mg/dl for all the 3 groups. Blood pressure targets were set based on the presence and absence of comorbidities, age of the patient and albuminuria.

Tele titration was aimed at 3 objectives:

- a) gradually reaching the targets
- b) avoiding hypoglycemia
- c) avoiding weight gain if already overweight.

We analysed records of 853 patients who completed 12 years of telemedicine follow up in each of these groups.

Table: 1

Category	Group	Age	Mean A1c at initial visit	Target A1c	Target FBS (mg/dl)	Target Post prandial (mg/dl)	A1c ± SD at 12 years
A	Newly diagnosed, not on any therapies, no co-morbid illnesses	<70 ys	10.5%	< 6%	<95	<135	6.4 ± 2.3%
B	Patients with one or more co-morbid illnesses	<60 yrs	9.4%	<7%	<120	<150	7.6 ± 1.8%
C	Elderly, with recurrent episodes of hypoglycemia, multiple co-morbid illnesses	>60 yrs	10.2%	<8.5%	<180	<230	8.6 ± 2.6%

## RESULTS

We recorded HbA1c, total cholesterol and blood pressure at the initial visit and at subsequent physical visits every 3-6 months. Targets were sustained for HbA1c, blood pressure and total cholesterol in 86%, 92% and 96% patients respectively.

## DISCUSSION

Diabetes being complex disease, frequent and continuous education is essential. Patients require multiple medications, frequent therapy changes and customized targets where frequent telemedicine visits in addition to physical visits have been proven to be cost effective for dosage modifications, periodic education and enforcing lifestyle adherence. Telemedicine offers a viable and cost effective method for periodic education and counselling thereby achieving and maintaining targets within acceptable ranges.

## REFERENCE

J.Kesavadev et al. Telemedicine for diabetes care: An Indian perspective - feasibility and efficacy. Indian J Endocrinol Metab 2015; 19(6).

Conflict of Interest Disclosure:

This poster *does not* contain any trade names. This poster *does not* cover any unapproved uses of specific drugs, other products or devices.

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