

# Advocacy for a responsive health system to control diabetes: learning from western Indian state Gujarat, India

Sandul Yasobant<sup>1</sup>, Deepak Saxena<sup>1</sup>, Mayur Trivedi<sup>1</sup>, Kumar Gaurav<sup>2</sup>, Sushil Patel<sup>3</sup>, Mayur Patel<sup>4</sup>

<sup>1</sup>Indian Institute of Public Health Gandhinagar, Ahmedabad, Gujarat, India.

<sup>2</sup>Public Health Foundation of India, New Delhi, India.

<sup>3</sup>Akshar Diabetes Centre, Vadodara, Gujarat, India.

<sup>4</sup>All India Institute of Diabetes & Research, Ahmedabad, Gujarat, India.

Correspondence to: Sandul Yasobant, E-mail: yasobant@iiphg.org

Received April 06, 2016. Accepted April 26, 2016

## Abstract

**Background:** Health advocacy is vital for the attainment of better health outcomes. First step in the process of advocacy is to identify the problems followed by potential interventions. Along with the need of advocacy, one needs to understand and recognize that the sustainability and effectiveness of any program can be enhanced only by the commitment of policymakers. Keeping this background, this study tried to document that, how advocacy works to make a health system responsive to control diabetes burden in one of the western Indian state, Gujarat.

**Objectives:** Present study aims to document the initiatives undertaken by the Government for control of diabetes followed by advocacy at different level of the health system.

**Materials and Methods:** Interventions in the form of training and advocacy mobilization were carried out in three districts of Gujarat namely Mehsana district (Rural), Vadodara district (Tribal), and Ahmedabad district (Urban). Responses by the health system were documented with reference to diabetes management and access to diabetic care.

**Results:** Awareness about availability of services was done with frontline health workers. Participation of medical college in training of health-care providers, improved the capacity and managerial effectiveness on diabetic management. Specific budgetary provision for diabetes management, improved availability of antidiabetes drugs by public-private-partnership (PPP) and supply of Auto-Analyzer to all the health facilities and enhancing Management of Information System (MIS) through advocacy found to be effective.

**Conclusion:** Targeted advocacy at different level was successful. Key advocacy strategies such as training to all health-care providers, involving community-level health workers with incentives improving access to diabetic care, ensuring availability of diabetic drugs through PPP and developing MIS increased reporting of diabetes cases. Further studies are required in other parts of developing nation to understand the key strategies applicable to respective settings.

**KEY WORDS:** Advocacy, diabetes, diabetic care, health system, India

## Access this article online

Website: <http://www.ijmsph.com>

DOI: 10.5455/ijmsph.2016.06042016447

Quick Response Code:



## Introduction

Advocacy, in the social and economic development context aims to create or change policies, laws, regulations, distribution of resources or other decisions that affect people's lives and to ensure that such decisions lead to implementation.<sup>[1]</sup> Health advocacy is vital for the attainment of better health outcomes. First step in the process of advocacy

is identification of the problem, and identifying the potential interventions and for its sustainability looks for better advocacy with Government.<sup>[2,3]</sup> World Health Organization defines advocacy for health as “a combination of individual and social actions designed to gain political commitment, policy support, social acceptance, and systems for a particular health goal or program”.<sup>[4]</sup> It emphasizes responsibility of health professionals as advocates of health at all levels in society. It is though paradoxical that health professionals still relate themselves to treatment of the disease rather than to prevention of the disease, whereas their role as defined in primary health care relates more to disease prevention. Advocacy requires technical know-how, evidence-based information, identification of stakeholders, and opponents.<sup>[5]</sup> Along with the need of advocacy one needs to understand and recognize that the sustainability and effectiveness of any program can be enhanced only by the commitment of policymakers. Seeking such commitment is an important step in planning and launching any health strategy. There are examples from Israel and Canada where nutrition and tobacco control movements have been successful due to effective advocacy and behavior change communication.<sup>[6]</sup> In a low-middle-income country like India, diabetes mellitus is reaching potentially epidemic proportions. Given the disease is now highly visible across all sections of society within India, there is now the demand for urgent advocacy activities at regional and national levels to try to mitigate the potentially catastrophic increase in diabetes that is predicted for the upcoming years.<sup>[7]</sup>

Research suggests an estimated 62 million diabetics are in India and may afflict up to 79.4 million by 2030.<sup>[8]</sup> Around 47% of total diabetics in India lives in rural settings; this reiterates the fact that a condition long perceived to be lifestyle-related urban phenomenon, has not only percolated well into rural areas but is on rise as well.<sup>[9]</sup> Diabetes in rural India has seen major upward shift. A three-fold increase in diabetes was observed over 14 years as per the results of two rural surveys in southern India.<sup>[10]</sup> Rural India also faces the problem of poor resource settings, in terms of health infrastructure.<sup>[11]</sup> In such settings, rapidly increasing prevalence as well as the chronic nature of diabetes poses additional burden. On one hand the lack of awareness about the illness, its prevention, mitigation, and poor access to quality care limit an early diagnosis and treatment, while on the other hand, it increases diabetes-related complications.<sup>[12]</sup> Since now, Gujarat too has not been able to provide free-of-charge antidiabetic care through its rural infrastructure beyond community health centers.

In the absence of state-wide, large-scale surveys, diabetes prevalence in Gujarat is not correctly known. However, different surveys put the disease burden at range of 7%–13% in urban Ahmedabad.<sup>[13]</sup> While estimates are available from urban pockets of the state, the rural areas also face similar epidemic of diabetes. A recent estimate in rural population across state indicates that diabetes prevalence (old and new cases combined) in rural Gujarat among men was at 11% and women at 8% in 2012. This was found to be the third highest after Kerala and Tamil Nadu.<sup>[14]</sup> Clearly, diabetes is an

emerging public health issue in Gujarat that needs comprehensive response. While urban areas are better equipped with private as well as public health-care facilities to respond to the emerging needs for the management of diabetes, the rural population remains underserved. The health system needs to be geared to tackle these challenges, while ensuring health care that is universally accessible and of acceptable quality.<sup>[15]</sup> Advocacy with the Government at different levels is needed to improve or strengthen the current system. Therefore, present study aims to document the initiatives undertaken by government for the control of diabetes followed by advocacy at different levels of health system.

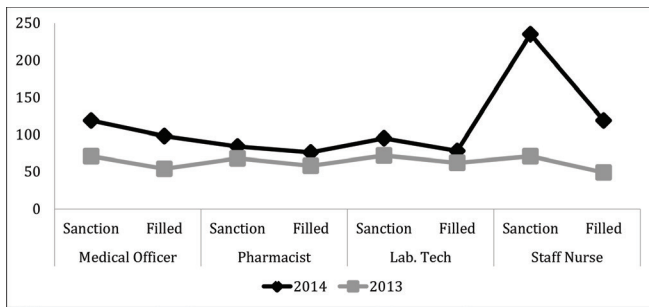
## Materials and Methods

An interventional study was carried out in three districts of Gujarat namely Mehsana (rural), Vadodara (tribal), and Ahmedabad (urban). Interventions in form of training of Health-care providers and advocacy at different levels were given. Based on various observations during the study period, advocacy was done at different levels from state level to community level. Block-level advocacy was provided every month by planning and implementation of project strategies, and similarly quarterly advocacy was given to district level and state level followed by every 6 months. A descriptive analysis was conducted using R version 3.0.1 software for comparison of baseline to end-line indicators.

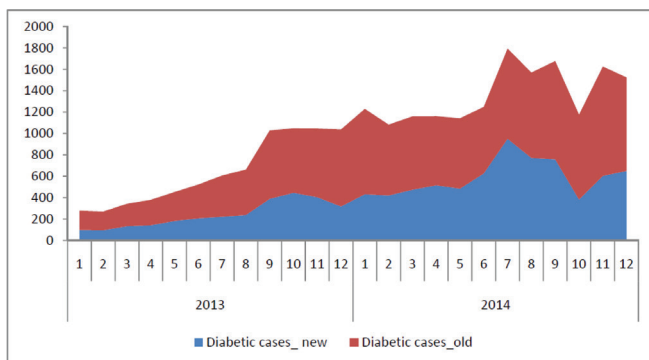
## Results

To improve the capacity of government health facilities Primary Health Centres (PHCs), Community Health Centres (CHCs), Urban Health Centres (UHCs), Sub-District Hospital (SDH) and District Hospital (DH) for diabetic care; training was carried out and about 177 doctors and 1260 paramedical staffs were trained by the experts, including refresher training during the intervention phase 2013–2014. On other hand, advocacy for increasing human resources for diabetic care was also carried to fill-up the vacant positions in the system. Figure-1 indicates the number of human resources sanctioned and filled over time. Increase in filled medical officers (MOs) post from 54 to 98, that of pharmacists from 58 to 76, laboratory technicians from 62 to 78, and nurses from 49 to 119 have resulted because of advocacy in these study districts.

Overall, there is an increasing trend of diabetes cases, especially in Ahmedabad and Mehsana, as can be seen in Figure 2. In majority of centers, total diabetic visits have seen huge improvement up to 400% during the implementation period. About 25,713 patients over a period of 2 years were notified during the implementation phase. The findings clearly indicate that diabetes consultation and its management have increased at PHC and UHC of these intervention districts over the study period. Increased load of “old cases” indicates that the use of government health centers for follow-up diabetes care has also improved during the study period.



**Figure 1:** Trend of availability of human resources for diabetic care in study areas; comparison over time



**Figure 2:** Improvement in reporting of diabetes cases treated at selected public health facilities in study areas; comparison over time

The various peaks in the graph could be because of three reasons. First, based on growing interest out of sustained Informed Education Communication (IEC) over a period of time, certain PHCs have conducted health and diagnosis camps in their premises. Such camps generate inconsistently higher demand for diagnosis and consultations, and thus affect the overall trend. The other possibility of such peaks has to do with inconsistent supply of glucometer strips. The peaks could be reflection of response to the pent-up unmet demand due of lack of strips at particular centers, which are met due to availability of the strips. Third, as a part of the intervention, efforts were made to (1) provide refresher training to various officials during block level meetings, and (2) visit to various facilities and interaction with health-care officials and workers as and when possible.

## Discussion

During monitoring activities, many issues regarding diabetes care were identified at each level and based on observations advocacy activities were planned, which was found successful. Some of the major observations and study activities are discussed here.

## Diabetes Health-Care Services: Accessibility and Awareness

Awareness about access to diabetes services in nearby health facility was absent among the community. In order to solve this issue, advocacy was given to Gram Sanjeevini committee and local leaders about availability of diabetes management services in their locality. As there are nearest contact points with the community, there are the best people who can disseminate information rapidly at the community level. Accredited Social Health Activist (ASHA) workers were also provided with sensitization inputs during block-level meetings. Such inputs were expected to result in the initiation of community-level discourse on diabetes.

Considering diabetes as an emerging rural health issue, and as support to the community-level efforts, initiated under Conquer Diabetes Project, government has initiated various responses at the grassroot level. One such is provision of incentive for diabetes-related work to village-level field worker, for example, ASHA. New Government Resolution (GR) was passed for use of ASHA worker for screening of diabetes and emphasis was given to train all ASHA workers on diabetes management. As per the recent directive, the ASHA worker will receive INR 10/- as an incentive for identifying each new case, and INR 50/- for facilitation of laser treatment of diabetic retinopathy. This is an important milestone in advocacy of rural response to diabetes problem. Findings suggest that there is an increasing trend of diabetes cases. In majority of centers, total diabetic visits improved tremendously up to 400% during the project compared to baseline at the start of the project.

## Human Resources for Diabetic Care and Training

To provide better health care to the diabetes patients, there was a need of sufficient staff at the facility. Because of advocacy, government recruited MOs, lab technicians, pharmacists, and so on. Overall, there is 10%–15% improvement in staff deficiency during the study period.

To increase diabetes health care at government health facilities (PHC/CHC/UHC/SDH/DH) during project intervention, total 177 doctors were trained by the expert (Including refresher training). Refresher training for MOs as a part of hand holding and updating their knowledge on management of diabetes was given. A total number of 1260 paramedic staff received training from all the study areas.

## Antidiabetic Drugs and Availability

Even with the availability of sufficient and trained staff for management of any disease, proper care could not be provided if proper supply of drugs, diagnostic equipment, and kits are not available. One of the areas of improvement that emerged from the study was availability of different diabetes drugs at government health facilities. Details of medicines such as Glibenclamide (2.5 mg and 5 mg), insulin, and metformin (500 mg) were sought in the monthly monitoring formats. The monthly reports over study period suggested that, in most facilities, antidiabetic drugs were not available

for free distribution to the patients who need them. The issue of unavailability of medicine at PHCs and UHCs was raised at all forums as part of advocacy efforts.

Ensuring the availability of antidiabetic drug at each facility by the public-private partnership (PPP) was initiated after advocacy. Learning from success story, Chief District Health Officer (CDHO) encouraged other medical officers to do same at their respective health center. During end-line survey, most of the respondents narrated that there were improvements in the availability of antidiabetic drugs, because of this PPP initiative.

### Diabetic diagnostic facilities and accessibility

Another major improvement is in terms of improved access to diabetes testing services at public health facilities of the study area. The intervention focused to improve blood sugar intervention. While random blood sugar (RBS) was encouraged, the training especially promoted measurement of fasting blood sugar (FBS) and postprandial blood sugar (PPBS). Overall, total laboratory testing for blood sugar monitoring has improved by more than 250% in study sites. While improvement in RBS is more pronounced at 269%, the FBS and PPBS has also improved at an encouraging rate of 164% and 232%, respectively, during 15 months of active interventions.

District panchayat provided Auto-Analyzer to all the health facilities to increase diabetes testing and provide good health care to the diabetes patient. Most of the respondents agreed during interview that they do not need to go to district for the diabetes tests as testing facilities were available at PHC/CHC/UHC. They also opined now it is easy to access diabetes health care. The lab technicians are available and ready to undertake the tests.

### Budget for Diabetes Care

Current study found lack of budget for various aspects of control and diagnosis of diabetes such as drugs for management of diabetes, testing kits for diagnosis, and referral services. During the routine evaluation and monitoring, it was

noticed that lack of blood sugar testing facility was a major bottleneck in improving the testing. To overcome this issue, advocacy with the government was done to ensure that the essential requirements for glucose testing was made available, to make budgetary provisions for supply of drugs, testing kits and referral services for patients of Diabetes Program for the financial year 2014–2015 in the state Project Implementation Plan (PIP). Sensitization meeting was also conducted with the MOs to ensure that requirement of drugs and equipment must have included in their demand list.

Advocacy with district officer (CDHO) to make available testing equipment and drugs at PHC level and make suggestion for its inclusion in state provision. Meetings were organized with health committee members, district collector, and District Development Officer (DDO) to ensure that all PIP provision for diabetes should be approved in an executive committee meeting of district health society.

In the year 2013–2014, government of Gujarat has allotted INR 230 million for all Non-Communicable Diseases (NCDs) that includes diabetes, hypertension, stroke, cancer, mental health, and so on. In the year 2014–2015, government has allotted INR 110 million from the total budget (INR 230 million) specifically for diabetes management, which includes training of health-care workers, testing kits and drug supply, and IEC activities.

### Management of Information System (MIS)

Availability of reliable data on any disease is important for proper planning and implementation of health program. The monitoring of diabetes cases, in terms of testing and consultation, was virtually absent before the project in selected health facilities. To improve record system for diabetes, advocacy was provided to district officials for regular flow of data.

Absence of protocol for maintaining registers for diabetes was also observed. Hence, as a part of the project, a diabetic patient register was developed and distributed to all PHCs of the study area. The purpose of the register was to maintain diabetes Out-Patient Department (OPD) record and personal history of patients at the PHC level. Diabetes registers and

**Table 1:** Response of government to advocacy

Issues/findings	Health system response to advocacy activities for control of diabetes
Lack of awareness among community	GR <sup>a</sup> for involvement of ASHA <sup>b</sup> for creating awareness and screening ASHA incentives for providing diabetes care
Lack of trained staff for management of diabetes	Replication of training for diabetes in other states Participation of medical college and SIHFW <sup>c</sup>
Lack of staff	Improved staff recruitment
Nonavailability of antidiabetic drugs	Specific budgetary provision for diabetes management, improved availability of antidiabetes drugs by PPP <sup>d</sup>
Lack of testing facility for diabetes	District panchayat provided Auto-Analyzer to all the health facilities
Lack of monitoring mechanism	Diabetes register and patient cards developed under project were accepted and distributed to all over state

<sup>a</sup>Government resolution.

<sup>b</sup>Accredited Social Health Activist.

<sup>c</sup>State Institute of Health & Family Welfare.

<sup>d</sup>Public-Private Partnership.

patient cards were unique and first-of-its-kind initiative for data management of diabetes cases at the PHC, which was initiated in current project. State government responded positively to the idea and such cards were distributed all over the state by the government.

Advocacy to the government results numerous changes in improving and delivering diabetes health care at urban, rural, and tribal area of project intervention. To summarize, Table 1 depicts various health system responses to advocacy activities for control of diabetes initiatives taken by government at different levels.

## Conclusion

Diabetes management remains a challenge for developing countries and developed countries. Awareness about availability of health-care services was done with ASHA and Gram Sanjeevini committee and local leaders' incentives for mobilizing toward diabetes care works successfully in the study area. Participation of medical college in training of health-care providers improved the capacity, and managerial effectiveness on diabetic management has an important role to improve diabetic care. Specific budgetary provision for diabetes management, improved availability of antidiabetes drugs by PPP, and supply of Auto-Analyzer to all the health facilities by district panchayat and finally the Diabetes registers and patient cards were unique and first-of-its-kind initiative for data management of diabetes cases at primary care centers thus improving MIS resulted because of the continuous advocacy in these areas.

Targeted advocacy at different levels was successful. Key advocacy strategies such as training to all health-care providers, involving community-level health workers with incentives improving access to diabetic care, ensuring availability of diabetic drugs through PPP and developing MIS through diabetic card/register increased reporting of diabetes cases tremendously up to 400% during the intervention period. Further studies are required in other parts of developing nation to understand the key strategies applicable to respective settings.

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**How to cite this article:** Yasobant S, Saxena D, Trivedi M, Gaurav K, Patel S, Patel M. Advocacy for a responsive health system to control diabetes: learning from western Indian state Gujarat, India. *Int J Med Sci Public Health* 2016;5:2239-2243

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