# PROTOCOL OF COMMUNITY BASED YOGIC LIFESTYLE INTERVENTION: A NATIONAL STRATEGY FOR PREVENTION AND EFFECTIVE MANAGEMENT OF TYPE 2 DIABETES AMONG ELDERLY IN INDIA

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#### INTRODUCTION

- Estimation increase of 69% of type 2 DM (T2DM) by 2030 in developing countries
- India Projected as 'diabetes capital of world'
- The prevalence of T2DM increases with age
- 30.42% of elderly in India have T2DM.

#### INTRODUCTION

- Yoga as effective, safe, cost effective lifestyle intervention in elderly
- Need for translating into prevention programs at the national level

#### AIM

 To develop and implement the community based protocol of yogic lifestyle intervention for prevention and effective management of T2DM in elderly

- Design
  - Exploratory study design
- Process of research
  - Literature review
  - In-depth interviews and focused group discussion with experts

- Literature review (2003 2013)
  - 22 Indian and 58 Non-Indian prevalence studies of T2DM
  - 14 Indian and 6 Non-Indian yoga intervention studies
- No comprehensive community based yoga protocol developed till date
- Interview guide developed based on the literature review

- Interview guide questions focusing on
  - Main aim of the study
  - Research protocol of the study
  - Research design for prevalence studies
  - Sample size for prevalence studies
  - Standard criteria for identifying pre diabetes/T2DM
  - Research design for intervention studies
  - Sample size for intervention studies
  - Others topics to be included in the protocol.

- Individual In-depth interviews followed by five focused group discussions with two to three experts at a time
- Sample 6 experts

(epidemiologist, medical physician, yoga expert, researchers and field survey analyst)

## Socio-Demographic details of experts

Experts (n=6)			
	n [(% /		n [(% /
Variable	mean (SD)]	Variable	mean
			(SD)]
Age of the experts	48.2	Education (years)*	18.18
(years)*	(15.42)		(2.77)
Occupation		Gender	
Epidemiologist	1 (16.66)	Male	4 (66.67)
Research Experts	2 (33.33)	Female	2 (33.33)
Yoga Expert	1 (16.66)		
Medical Physician	1 (16.66)	Experience in the field (Post formal	24.09
		education)*	(14.65)
Field survey analyst	1 (16.66)		

#### **DATA ANALYSIS**

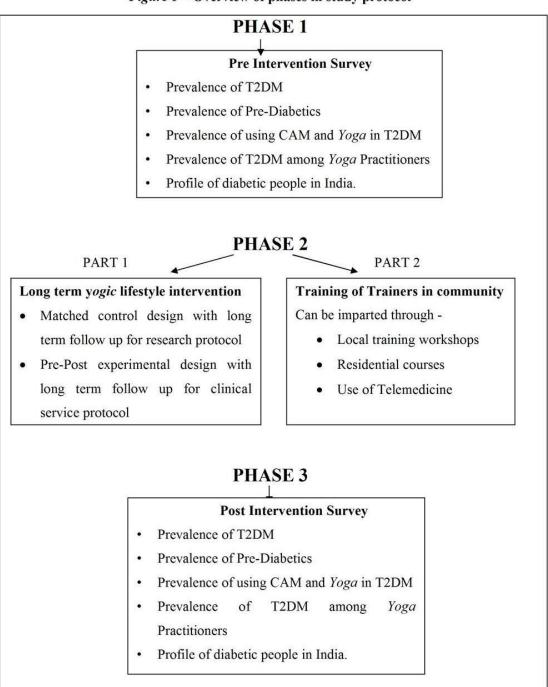
- Transcribed in a word processor manually
- Reviewed several times and was organized according to the order of the questions
- Manual content analysis as data generated was not too large
- Important and new suggestions (themes) were teased out

### PROTOCOL EMERGED

- Three phases
  - Pre-intervention Prevalence survey (5 sub-protocols)
  - Efficacy studies and training of Trainers
    - Efficacy studies of yoga module in DM
    - Training of the trainers in the local community
  - Post intervention Prevalence Survey (same as in phase

1)

Figure 1 - Overview of phases in study protocol



#### **PILOT STUDY OF PHASE 1**

- Pre- Prevalence study with n = 1602
- Systemic random sampling
- Self reported prevalence of T2DM 14.23% (n = 228)
- People at risk of T2DM ( qualifying diabetes risk test by ADA) 12.42% (n = 199)
- Elderly with T2DM or at risk 40% (n = 170)

#### PILOT STUDY OF PHASE 2

- Training of local trainers
- Two 10 days camps
- $n = 45\overline{5}$  (elderly and non-elderly)
- yogic lifestyle intervention
- Significant improvement in Fasting Blood Sugar
   (FBS) levels (p < 0.05; n = 180) among the elderly</li>

#### PILOT STUDY OF PHASE 3

Long-term follow-up of the subjects and Phase
 3 with re-assessment of prevalence is to be conducted.

#### **CONCLUSION**

 The successful implementation and results of the above protocol at Rajkot shows that it is feasible to translate *yogic* lifestyle intervention in the community

#### **CONCLUSION**

 The present protocol is planned to be implemented in two cities in each of the six zones of India as a pilot project. (north, south, east, west, central and north-east)

#### **CONCLUSION**

 The successful implementation in the community would help to achieve the ultimate goal of prevention and management of T2DM among the elderly at national level.

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# THANK YOU

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