

**Chronic disease detection and prevention  
programme for Malviya Nagar Residents**

**Final report: SE/06/228301**

### **Pre-intervention survey**

The whole Malviya Nagar area was covered under this programme with a total population size of 3,00,000. A baseline cross sectional survey from an adult population (20-69 years) was conducted. The survey methodology consisted of interviews by questionnaires for chronic disease awareness and risk factor status (the questionnaire is appended; appendix 1). We intended to cover 500 people in the survey from 10 different resident welfare units (50 from each unit). The interviewer's (field staff trained to administer questionnaire) visited consecutive adjacent houses in these units till they get 50 adults in the age group of 20-69 years. In total 448 individuals responded to the pre-intervention survey. The interviewer's visited the houses with RWA representatives. The refusal rate was as low as 2%. Additionally, we had group discussions with RWA representatives of this area. Based on the inputs from the group discussions and the survey we have arranged following health promotion programs.

### **Medical camp and health promotion program: 3 Dec 2006**

Dr Yogananda Shastry, Honorable Minister, Ministry of Health and Family Welfare, Government of Delhi inaugurated the medical camp. There were consultants from all major specialties including endocrinology, cardiology, cancer and ophthalmology. This was organized in association with the welfare association of Malviya Nagar. The medical camp was announced in advance and the resident welfare unit's members were told to identify and inform those require medical attention in their area. They brought people with high risk of CVD for consultation and referral. Screening for high blood pressure and blood sugar was

carried out in all individuals attended the medical camp. ECGs were taken as per the advice by the cardiologist. All high risk individuals were referred to AIIMS OPD for further consultation. Health education lectures and discussions were also carried out on the same day for the community members. In total 250 members participated in the medical camp and health promotion program.

### **Training of trainers**

Basic cardiac life support training was provided to selected members of the community (15 members) using CPR manikins. Following this, the trainers in turn provided BCLS training to community members on every week ends (Saturdays). In total, 12 sessions was conducted and 90 community members attended the training sessions.

### **Other health promotion activities**

We had also organized two separate medical camps and health promotion programs in two different locations. Facilities for anthropometric measurements, blood pressure measurement, blood glucose measurements were arranged at the site. Thirty four community members attended the first medical camp and 67 in the second medical camp.

Health promotion materials were displayed at the medical camp site and pamphlets on diabetes, high blood pressure, tobacco use, need for physical activity and healthy diet were distributed to the selected community members. Additionally, our research staff also distributed health promotion materials during the household survey. These include handouts and booklets on various aspects

of prevention of CVD and control of CVD risk factors. We have used the same health education materials that we have developed for the CVD surveillance programme in industries.

Two dedicated telephone support lines were established for counseling on diet, physical activity and tobacco use. Individuals with any risk factors of cardiovascular disease were encouraged to contact our support staff through this dedicated phone connection. One line was attended by a trained medical doctor and second line by a trained nutritionist. They were placed at our office and were employees of our organization. Most of the telephone enquiries (180/230) were from individuals with diabetes and hypertension.

We have also initiated an anti-tobacco campaign and community members were encouraged to contact our support staff to receive tips on quitting tobacco. The response was really good and 220 individuals already contacted our support staff. However, we do not have follow up data on how many of these individuals really quit tobacco.

Although, we planned interaction sessions with the existing health care staff with an objective to promote evidence based treatment practices we could only coordinate informal discussions with them separately at their work places.

### **Post intervention survey**

Similar to the baseline survey, using the same data collection tool, a post intervention survey was completed on June 30, 2007. This survey was carried out using the same methodology as in the pre-intervention survey. Altogether, 459 individuals responded to the house to house survey in the post intervention

phase. Approximately 50% of these individuals (220) attended the baseline survey as well. We have summarized the results of pre-post comparison in the following section.

## **Results**

**Table 1: General characteristics**

Variable	Pre-Intervention	Post intervention
Age (Mean $\pm$ SD)	49.5 (14.7)	48.9 (14.3)
Males (%)	52.9	52.6
Education		
No formal schooling	17.9%	18.3%
Up to primary school	17.1%	17.1%
Primary –secondary school	43.1%	43.1%
Above secondary school	20.3%	19.9%

**Table 2: Awareness and treatment practices (before and after intervention)**

Variable	Pre-Intervention	Post intervention
Blood pressure checked in last 6 months	53.7%	66.4% *
Blood pressure within normal limits (below 120/80 mm of Hg)	34.8%	42.5%*
On medical treatment for high blood pressure	14.9%	14.3%
Blood sugar checked in last 6 months	32.2%	39.0%*
Blood sugar within normal limits (as told by doctor)	40.7%	40.6%
On medical treatment for high blood sugar	8.8%	8.9%
Cholesterol levels checked in the last 6 months	18.9%	27.8%*

\*P value<0.05

**Table 3: Factors preventing CVD (awareness levels)**

Variable	Pre-Intervention	Post intervention
Lose weight	38.5%	45.1%*
Quit smoking	49.6%	52.9%
Reduce fat in meals	18.0%	38.5%*
Reduce salt in meals	15.4%	21.5%*
Eating more fruits	9.0%	27.4%*
Increasing physical activity	10.6%	22.3%

\*P<0.05

**Table 4: Efforts to improve health status in the last 6 months**

Variable	Pre-Intervention	Post intervention
Lose weight	28.3%	38.1%*
Quit smoking	12.6%	29.5%*
Reduce fat in meals	37.4%	38.2%
Reduce salt in meals	16.7%	26.1%*
Eating more fruits	22.5%	22.0%
Increasing physical activity	43.1%	48.1%

P <0.05

**Conclusion:**

The health interventions had significant impact on improving the awareness and practice patterns of the target population. Additionally, significantly higher proportion of individuals adopted healthier lifestyle options after the intervention period. The resident welfare association members are keen on continuing the activities in this community. Our team is still working with the community and assisting them in coordinating similar health promotional activities.

# APPENDIX 1

ID No

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Date of Interview

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Name

Address

Sex (1=male, 2=female)

1. Age (in completed years)    |\_\_|

2. Can you read and write?

1.	Yes	<input type="checkbox"/>
2.	No	<input type="checkbox"/>

3. What is the highest level of education that you have completed? **MARK ONE BOX ONLY.**

1.	No formal schooling	<input type="checkbox"/>
2.	Primary school	<input type="checkbox"/>
3.	Secondary school	<input type="checkbox"/>
4.	Higher education (eg. Diploma/Technical/University studies)	<input type="checkbox"/>

4. Which of these best describes your quality of life? **MARK ONE BOX**

1.	Excellent	<input type="checkbox"/>
2.	Very Good	<input type="checkbox"/>
3.	Good	<input type="checkbox"/>
4.	Fair	<input type="checkbox"/>
5.	Poor	<input type="checkbox"/>

5. Which of these best describes your health? **MARK ONE BOX**

1.	Excellent	<input type="checkbox"/>
2.	Very Good	<input type="checkbox"/>
3.	Good	<input type="checkbox"/>
4.	Fair	<input type="checkbox"/>
5.	Poor	<input type="checkbox"/>

6. Have you ever been told by a doctor that you have had any of the following?

1	Heart attack	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2	Angina	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
3	Stroke	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
4	Peripheral vascular disease (disease of the arteries)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
5	Diabetes (sugar)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
6	Hypertension (high blood pressure)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
7	High cholesterol	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

7. On average, how much physical activity do you do each day during working hours and after working hours? *MARK ONE BOX IN EACH COLUMN*

		During Working hours	After Working Hours	
1.	<b>LOTS</b>	<input type="checkbox"/>	<input type="checkbox"/>	Eg. Lifting heavy weights, construction work, labourers, running
2.	<b>MEDIUM</b>	<input type="checkbox"/>	<input type="checkbox"/>	Eg. Bike riding, rickshaw drivers, carrying buckets of water or loads of laundry to and from wells multiple times a day, walking long distances up and down hills
3.	<b>LIGHT ACTIVITY</b>	<input type="checkbox"/>	<input type="checkbox"/>	Eg. Walking on the level, standing all day working at a shop, housework such as cooking, cleaning in the house
4.	<b>ALMOST NONE</b>	<input type="checkbox"/>	<input type="checkbox"/>	Eg. Seated at a desk, driving a car, watching television, reading, resting

8.

Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was your BP checked in the last 6 months?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was it within normal limits?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Are you taking BP- lowering tablets?

9.

Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was your sugar checked in the last 12 months?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was it within normal limits?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Are you taking sugar-lowering tablets?

10.

Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was your cholesterol checked in the last 12 months?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Was it within normal limits?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>	Are you taking cholesterol lowering tablets?

11. Do you use tobacco currently?

	<i>Smoking</i>	<i>Chewing</i>	<i>Snuffing</i>
1.	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
2.	No <input type="checkbox"/>	No <input type="checkbox"/>	No <input type="checkbox"/>

12. How often do you consume alcoholic drinks like Whisky, Rum, Gin, Beer, Wine, Toddy, Arrack, etc.?

(None at all = 1; 5 or more days a week = 2; 1-4 days a week = 3; 1-3 days a month = 4; Less than once a month = 5; Not responding = 9)

13. **How often do you consume fruits/fruit juice?**

[Daily = 1, 3-4 times a week = 2, Occasionally = 3, Never = 4]

14. How many times in a day do you consume vegetables (Both cooked and raw)?  
 [4 - 5 times = 1; 2-3 times = 2; once a day = 3; less than daily = 4]

15. Do you add extra salt to your meals/salad? (No=1; Yes=2)

16. Which of the following actions may prevent a person getting a heart attack or stroke?

1. Lose weight	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
2. Quit smoking	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
3. Increase exercise	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
4. Eat more fish	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
5. Drink less alcohol	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
6. Reduce fat in meals	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
7. Reduce salt in meals	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
8. Eat more fresh fruit	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
9. Eat more green leafy vegetables	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>

17. In the last 12 months, have you done any of the following to improve your health?

1. Lose weight	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
2. Quit smoking	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
3. Increase exercise	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
4. Eat more fish	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
5. Drink less alcohol	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
6. Reduce fat in meals	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
7. Reduce salt in meals	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
8. Eat more fresh fruit	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
9. Eat more green leafy vegetables	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>

18. Do you consider any of the following as symptoms of heart attack?

1. Radiating Chest Pain	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
2. Discomfort on chest	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
3. Breathlessness	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
4. Sweating	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
5. Perspiration and Coolness of extremities	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
6 Vomiting/nausea and anxiety	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>

19. Do you consider any of the following as symptoms of brain attack?

1. Sudden loss of consciousness	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
2. Weakness on any part of the body	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>
3. Paralysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unsure <input type="checkbox"/>

