



International Symposium



September 7 - 9, 2011
Hilton San Francisco
TheForum11.org

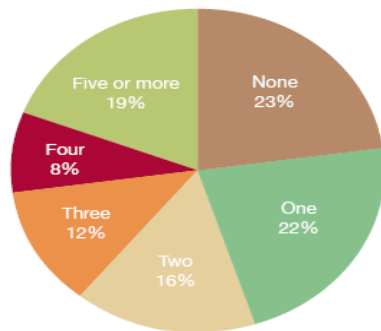
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Opportunities for Chronic Care in India

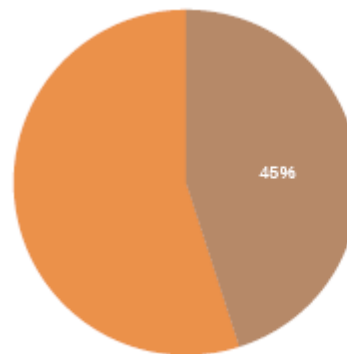
- ▶ Need for DM
- ▶ History & Present status of DM in India
- ▶ The DM Opportunity

India does not want to go the US way !

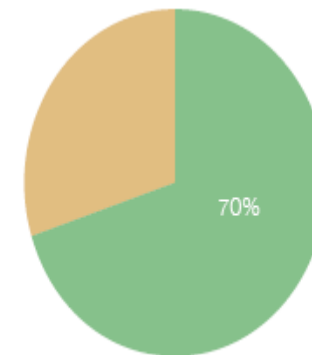
- ▶ 77 % of American workers have at least one Chronic Disease
- ▶ 1 out of 2 Americans have a Chronic disease
- ▶ 7/10 people die of Chronic diseases
- ▶ USA accounts for almost 50 % of the global healthcare spending



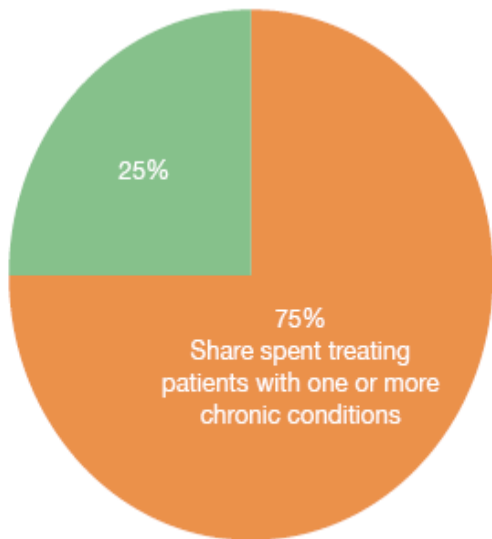
Source: Newsweek Web Exclusive



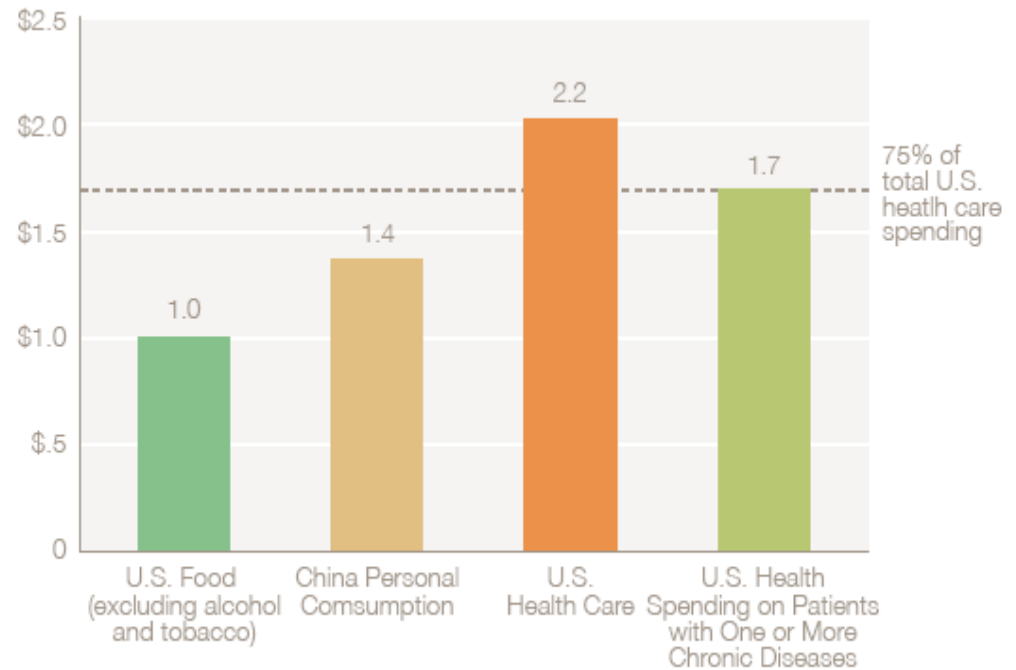
Source: RAND Corporation



Source: CDC



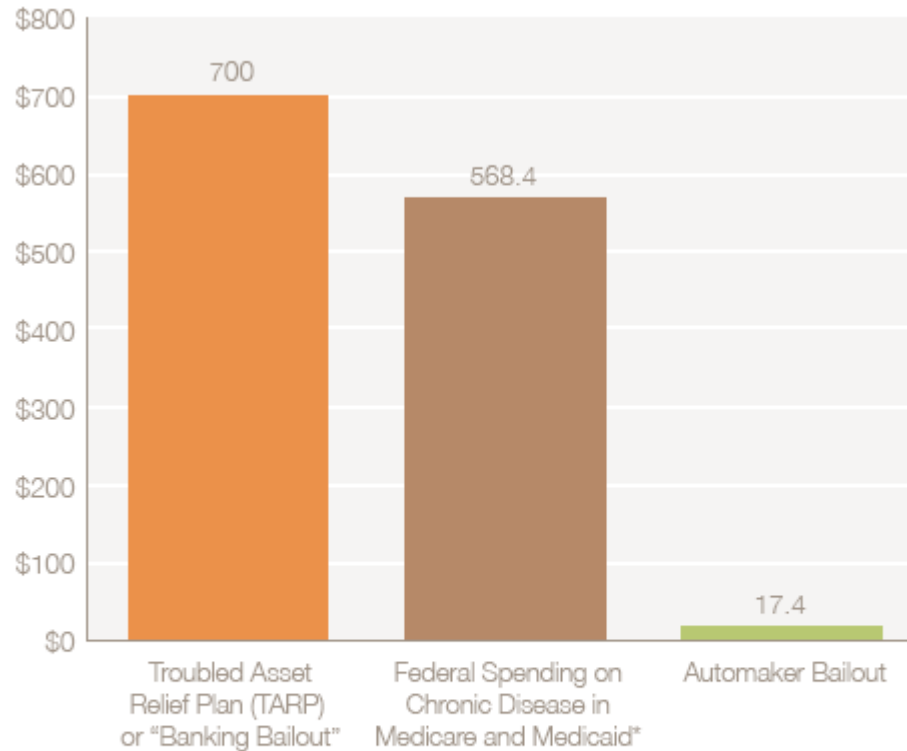
Source: CMS



Source: McKinsey & Company, CDC, CMS

Estimates – in Trillion Dollars

Price that the governments pay for not managing chronic diseases is much more than the cost of preventing chronic diseases© !



*Calculated with projected figures for 2008 Medicare and Medicaid spending based on the assumption that 96 percent of Medicare spending and 83 percent of Medicaid spending went towards the treatment of patients with one or more chronic conditions.
Source: CMS; Politico, Associated Press

Had US taken to Disease Management , Economic crises could have been averted !

Myths

- ▶ Chronic diseases mainly affect high income countries
- ▶ LMICs should control infectious diseases before chronic diseases
- ▶ Chronic diseases mainly affect rich people

Reality

- ▶ 4/5 Chronic Disease deaths are in LMICs
- ▶ LMICs are at the centre of both old and new public health challenges
- ▶ Both rich and poor are likely to develop chronic diseases, and everywhere are more likely to die as a result.

Myths

- ▶ Chronic diseases primarily affect old people.
- ▶ Chronic diseases mainly affect men

Reality

- ▶ Almost half of chronic disease deaths occur prematurely, in people under 70 years of age and one quarter of all chronic disease deaths occur in people under 60 years of age.
- ▶ Chronic diseases, including heart disease affect women and men almost equally

Myths

- ▶ Chronic diseases are the result of unhealthy “life styles”
- ▶ Chronic diseases cannot be prevented

Reality

- ▶ Individual responsibility can have its full effect only where individuals have equitable access to a healthy life, and are supported to make healthy choices
- ▶ The major causes of chronic diseases are known, and if these risk factors were eliminated, at least 80% of all heart disease, stroke and type 2 diabetes & more than 40% of cancer would be prevented

Myths

- ▶ Chronic diseases prevention and control is too expensive
- ▶ “My grandfather smoked and was overweight –and he lived to 96”
- ▶ Everyone has to die of something

Reality

- ▶ A full range of chronic disease interventions are very cost effective for all regions of the world.
- ▶ In any population, there will be a certain number of people who do not demonstrate the typical patterns seen in the vast majority
- ▶ But death does not need to be slow, painful, or premature

- ▶ Some Caribbean countries are losing 5-8 % of their GDP just due to diabetes and Hypertension
- ▶ An additional 2 % reduction in chronic disease death rates world wide , per year over the next 10 years will prevent 36 million premature deaths by 2015 - WHO Report
- ▶ General Motors owes USD 20 Bn to retiree healthcare trust
- ▶ 75 % of the healthcare spending of the USD 2.3 trillion in healthcare goes to chronically ill patients - Hillary Clinton
- ▶ Chronic diseases cause 86 % of deaths and 77 % of disease burden in the WHO European region. The disorders are largely preventable and are linked by common risk factors - WHO Report 2008

- ▶ 14 % patients of Arthritis = 140 Million (WHO)
- ▶ 10 % patients of Hypertension = 100 Million (WHO)
- ▶ 5 % patients with Diabetes = 50.7 Million (2010, IDF)
- ▶ There are more than 100 million 'undiagnosed' patients of Diabetes & Hypertension
- ▶ India already has 150 million elderly patients (> 73 Years of age)
- ▶ Have not included patients with other chronic diseases like Asthma, CVD, Cancer , Psychiatric disorders etc.

Currently, in Urban India , 8/10 deaths are due to NCD's & in Rural India 6/10 deaths are due to NCD's(WHO 2011)

*Prevalence**

- ▶ 44 % males & 42 % females Obese
- ▶ 18 % males & 8 % females suffering from Hypertension
- ▶ 21 % males & 11 % females suffering from Diabetes
- ▶ 7 % Students suffering from Hypertension
- ▶ Overall occurrence across populations was : Obesity 44 %, Diabetes 20 %, Hypertension 16 %

* As a result of random sample survey based on stratified sampling

Populations @ Risk

▶ Diabetes	18.50 %
▶ Hypertension	36.20 %
▶ Obesity	40.30 %
▶ High Cholesterol	36.11 %

Populations @ Risk

- ▶ Diabetes & Hypertension 7.90 %
- ▶ Diabetes & High Cholesterol 4 %
- ▶ Diabetes & Obesity 10 %
- ▶ Obesity & Hypertension 18 %
- ▶ Obesity & High Cholesterol 9.52 %
- ▶ High Cholesterol & Hypertension 8.11 %

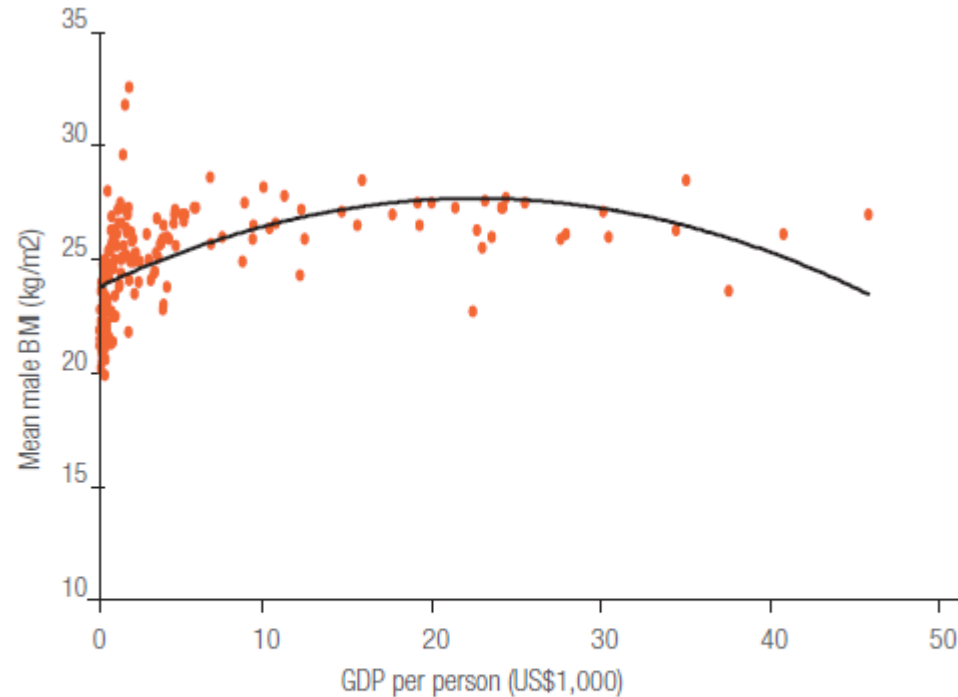
66 % of the population had at least one out of – Diabetes , Hypertension , Obesity or High Cholesterol.

- ▶ Conducted in four states : Maharashtra , Jharkhand , Chandigarh & Tamil Nadu
- ▶ 16000 people tested
- ▶ In Maharashtra , Diabetes prevalence is 9.1 % in Urban areas & 5.6 % in rural areas
- ▶ In Tamil Nadu, Diabetes Prevalence is 11.7 % in Urban areas & 6.6 % in Rural areas

- ▶ In Jharkhand , Diabetes Prevalence is 11.4 % in Urban areas & 2.8 % in Rural areas
- ▶ In Chandigarh , Diabetes Prevalence is 13 % in Urban areas & 11.9 % in Rural areas
- ▶ This study will now be extended to N-E states with 32000 people
- ▶ INDIAB will also be rolled out in 17 states with 100,000 people

- ▶ 4608 samples (Rural 2604 & Urban 2004)
- ▶ Conducted In Delhi , Haryana, Jaipur, Pune , Kolkata , Kochi & Chandigarh
- ▶ 1/2 Urban Women & 1/3 Rural women suffer from Hypertension
- ▶ 1/5 Hypertensive women were under treatment & < 4 % are controlled
- ▶ 1/2 of Urban & 1/4 of Rural women were aware of their condition
- ▶ Hypertension is directly responsible for 57 % deaths due to stroke & 24 % fatalities due to heart attack

- ▶ Indians are genetically pre-disposed to CVD
- ▶ Indians (South Asians) have High fat around liver
- ▶ In as much as Indians prefer Vegetarian food , but it is 'Rich-food'
- ▶ India is a young nation today , but 25 years from now ?
- ▶ India still does not have DM as a segment of healthcare ,but it the right time to start incorporating DM in practice and policy
- ▶ Prevention gets in the minds of people only after the first intervention



Source WHO Global InfoBase

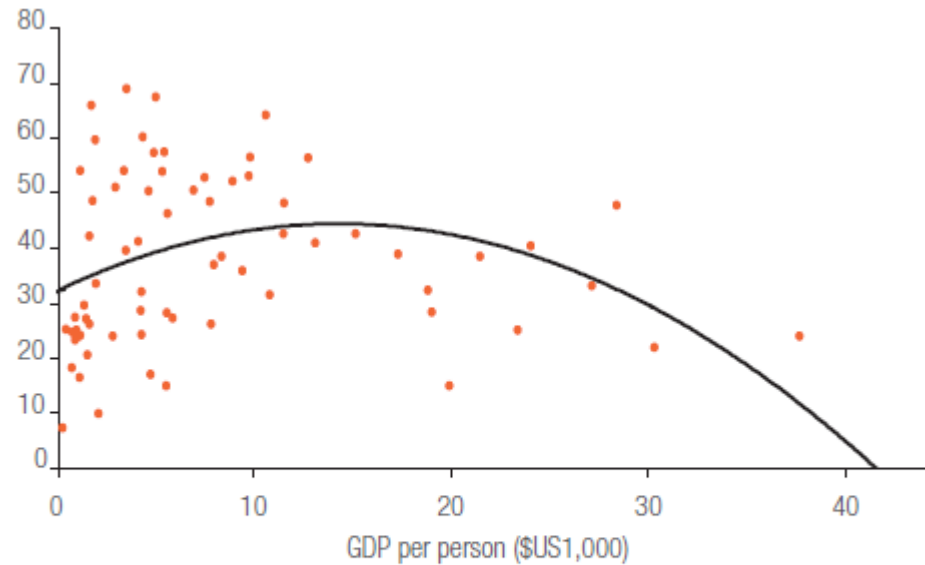
(http://www.who.int/ncd_surveillance/infobase; accessed 14 July 2006)

Note The sample comprises 170 countries and the robust regression results are:

$$\text{Male BMI} = 23.7 + 0.35 \text{ GDPpc} - 0.0078 (\text{GDPpc})^2 \quad (R^2=0.29).$$

The coefficients are significant at the 1% level.

Mean Body Mass Index (BMI) Versus Gross Domestic Product per person (2002)



Source WHO World Health Statistics 2006
 (<http://www.who.int/whosis/whostat2006/en/index.html>; accessed 16 September 2006)
Note The sample comprises 69 countries and the robust regression results are:
 Male smoking prevalence = $31.8 + 1.72 \text{ GDPpc} - 0.060 (\text{GDPpc})^2$ ($R^2=0.11$).
 The coefficients are significant at the 1% level.

Smoking prevalence among men (age>14) versus GDP per person (2002)

Impact of All major chronic diseases
& specifically for CVD & Cancer
Mahal et al. 2010 - India



- ▶ The odds of incurring catastrophic hospitalization expenditures are nearly 160 percent higher with cancer and 30 percent greater with CVD as compared to communicable conditions that result in hospital stays.
- ▶ CVD: Additional health care expenses due to CVD (in current INR) more than doubled over the period from 1995-96 to 2004
- ▶ Cancer: Individuals with cancer report greater use of health services, higher levels of 'out of pocket' health spending and greater rates of catastrophic spending and impoverishment in their households, in comparison to those who do not report cancer.

- ▶ Economic cost could amount to as much as 20 percent of its state domestic product (GDP). Further, 25 percent of all deaths in the 25-70 year age group was attributed to CVD

- ▶ EIU Estimated the economic costs by assessing direct medical care costs, lost productivity as a result of mortality, morbidity and disability associated with diabetes.
- ▶ The costs for India are about 2.1 percent of GDP.

COPD (chronic bronchitis & emphysema),
and asthma -
Murthy and Sastry (a) 2005



- ▶ Estimated the direct and indirect costs of treatment of COPD of individuals over the age of 30 years
- ▶ Treatment costs for a patient with severe COPD was nearly INR 33,000.

- ▶ Lost productivity due to premature deaths and disability cost India 9 billion dollars in 2005, a loss projected to amount to \$ 237 billion by 2015 (WHO).
- ▶ India is expected to lose a whopping US \$ 225 billion (Rupees 10 lakh crore), which is over a fifth of the country's current GDP, in 10 years up to 2015, by way of national income foregone due to productivity loss from the increased rate of heart disease, stroke and diabetes, which is expected to double in the 30 year period (from 29% in 1990 to 57% in 2020 - FICCI).
- ▶ The annual income losses to households affected by CVDs in India in 2004 were 144-158 billion INR, which amounted to more than one-third of all income losses due to all of the chronic diseases. (Mahal et al 2010)
- ▶ In the South-East Asia Region, 51% of all *deaths are due to chronic disease* (WHO)

- ▶ Medybiz was a PRM company that transformed into a DM company
- ▶ DMAI – The Population Health Improvement Alliance was formed in 2008-9
- ▶ DMAI started sensitizing the policy makers on DM
- ▶ In 2009 , three global players entered India & currently there are about 10 DM companies and one adds every quarter
- ▶ Government announced mandatory screening for diabetes & Hypertension in 2010

- ▶ Government plans to screen 200 million people for diabetes & hypertension by March 2012
- ▶ A study revealed that in Bangalore City, 14 % people were suffering from Diabetes & 21 % from Hypertension
- ▶ In Chennai , out of 300,000 tested , 50,000 were suffering from diabetes and 60,000 from hypertension
- ▶ All people above the age group of 30 years will be tested for diabetes & hypertension
- ▶ Initial roll out will be in Delhi , Kolkata , Mumbai , Chennai , Hyderabad & Bangalore

- ▶ National Program for Prevention and control of Cancer , Diabetes , CVD & Stroke (NPCDS)has been launched
- ▶ NPCDS Program would be rolled out in 100 districts in 21 states
- ▶ In the 12th Plan , the NPCDS program will be rolled out in 640 districts
- ▶ National Program for Healthcare of the elderly has been launched

National Screening Program – Where it is headed ?



- ▶ Like any other nation, Indian government is no different !
- ▶ The national screening program was announced for 100 districts , reduced to 10 and now is being done in slums of Delhi & Mumbai
- ▶ The success of the program is a BIG ?.
- ▶ Once these people are diagnosed , what does the government do to them ?
- ▶ This calls for a PPP to make it a success

- ▶ Hospitals will need it for CRM & Outcome driven healthcare
- ▶ Pharma companies need it for compliance and prescription refills
- ▶ Insurance companies need it for reducing insurance claims
- ▶ Private sector need DM for addressing absenteeism & productivity
- ▶ PSU's need it for managing the healthcare expenses of retirees
- ▶ ECHS has 2.3 Million beneficiaries and adds 60,000 every year – It needs to have ECHS DM Service to avoid high healthcare expenses related to chronic diseases

- ▶ Government has to ensure that the secondary prevention & DM becomes integrated into healthcare system to avoid repeating what USA Healthcare system is passing through
- ▶ Mobile companies are looking at Healthcare VAS & DM is the key component
- ▶ Chemists need it for CRM of chronic customers
- ▶ Telemedicine & diagnostic companies are focusing on DM as one of the key offering
- ▶ Patients are becoming aware of the benefits of DM & retail consumers are responding positively to DM

- ▶ Industry is growing fast , and needs to come together to create more awareness amongst users , practitioners ,and create an impact on the policy makers
- ▶ Practitioners need to be ‘sensitized’ on the drastic improvements in chronic patients through DM
- ▶ Industry needs to invest in ‘case studies’ to show case the impact of DM on patients and medical practice
- ▶ Government needs to come out with protocols on DM for various chronic disorders and mandate the PSU’s to adopt DM
- ▶ Industry needs to impress on the educational institutes to invest in capacity building for DM & start programs for DM

- ▶ US models of DM would not work in India .
- ▶ India needs basic, low cost & mobile technology driven DM interventions, which are supported by POCD & backed by remote monitoring stations
- ▶ DM organizations must work closely with specialists and also work directly with the patients
- ▶ DM must start with Obesity management , diabetes and CVD

- ▶ Senior citizens and people with co-morbidities are the right people to be put on the DM programs
- ▶ Thumb rule be that the cost of DM program should not exceed the cost of medicines to start with , and must fuse the basics of technology with basic healthcare
- ▶ Leveraging mobile Technology in India could significantly impact the success of DM programs . (> 850 Million Mobile phone connections in India)
- ▶ DM is growing around 20 % in the matured markets and Indian market can have a much faster and stable growth in the next 15 years

There are about 400 million cases of chronic disorders (including Elderly people and those at the risk of chronic disorders). Even if we take one dollar per month per case of chronic disorder , the market potential is about 4.8 Billion USD at this moment !! So make India healthy and your balance sheets healthier – Promote DM

Thanks

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Disclosures & Acknowledgements

- Views presented are personal
- Presenter is associated with OTC, Retail & healthcare organizations across USA, Europe , U.K. Middle-East & India .
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11th-13th November, 2011. Mumbai, India

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