



The Abu Dhabi CVD Response

Dr Cother Hajat
MRCP MFPH PhD

Health Authority Abu Dhabi

OxHA Summit, 20th April 2010



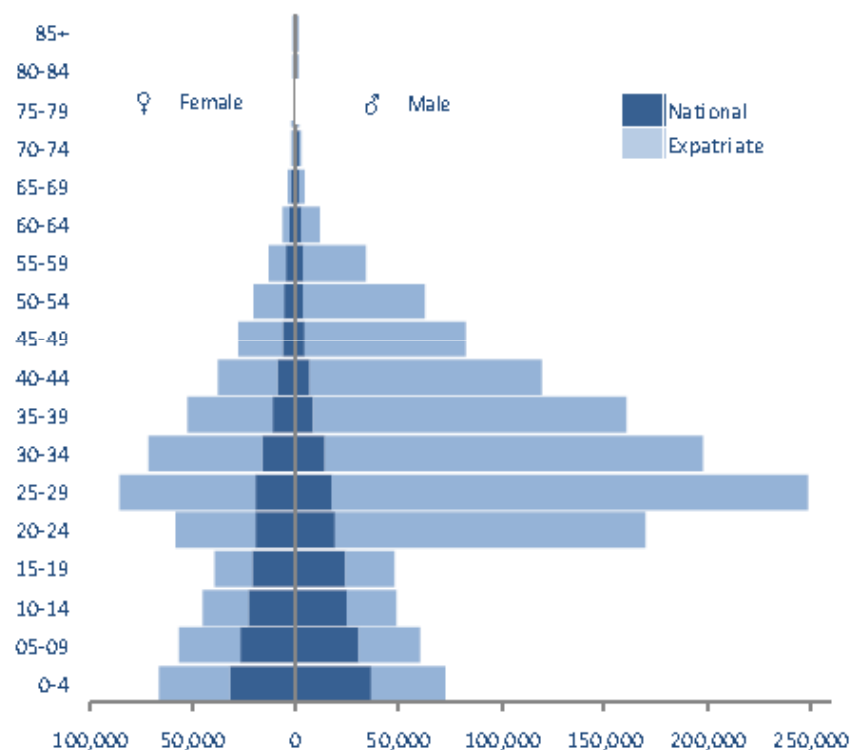
Abu Dhabi & the IOM report

About Abu Dhabi

- Largest Emirate in the United Arab Emirates;
- 2.1 million population;
- 20% local, 80% expatriates;
- Health Authority Abu Dhabi – role of MOH for Abu Dhabi; regulator of healthcare system

IOM Report

- Provides a comprehensive ‘road-map’ of interventions for tackling CVD
- It provides confirmation of evidence base for several elements of work underway for CVD in Abu Dhabi
- For other areas it provokes some ways in which to move forward with the work either with external stakeholder input or through specific recommendations
- Lastly it identifies some opportunities through which Abu Dhabi can contribute to the global CVD agenda





Overview of Abu Dhabi CVD Status relative to IOM recommendations

IOM recommendation	Abu Dhabi Status
1. Recognize Chronic Diseases as a Development Assistance Priority	
2. Improve Local Data	Advanced
3. Implement Policies to Promote Cardiovascular Health	Advanced
4. Include Chronic Diseases in Health Systems Strengthening	Moderate
5. Improve National Coordination for Chronic Diseases	Advanced
6. Research to Assess What Works in Different Settings	Opportunity
7. Disseminate Knowledge and Innovation Among Similar Countries	Opportunity
8. Collaborate to Improve Diets	Moderate
9. Collaborate to Improve Access to CVD Diagnostics, Medicines and Technologies	Moderate
10. Advocate for Chronic Diseases as a Funding Priority	
11. Define Resource Needs	Opportunity
12. Report on Global Progress	Opportunity



IOM Report Recommendations – Advanced Status

Recommendation

2. Improve local data

- surveillance systems
- to monitor and control chronic diseases
- to report on cause-specific mortality and the primary determinants of CVD
- sustainable

Abu Dhabi Response

Data system best-in-class with linked datasets for whole population on:

Nationals:

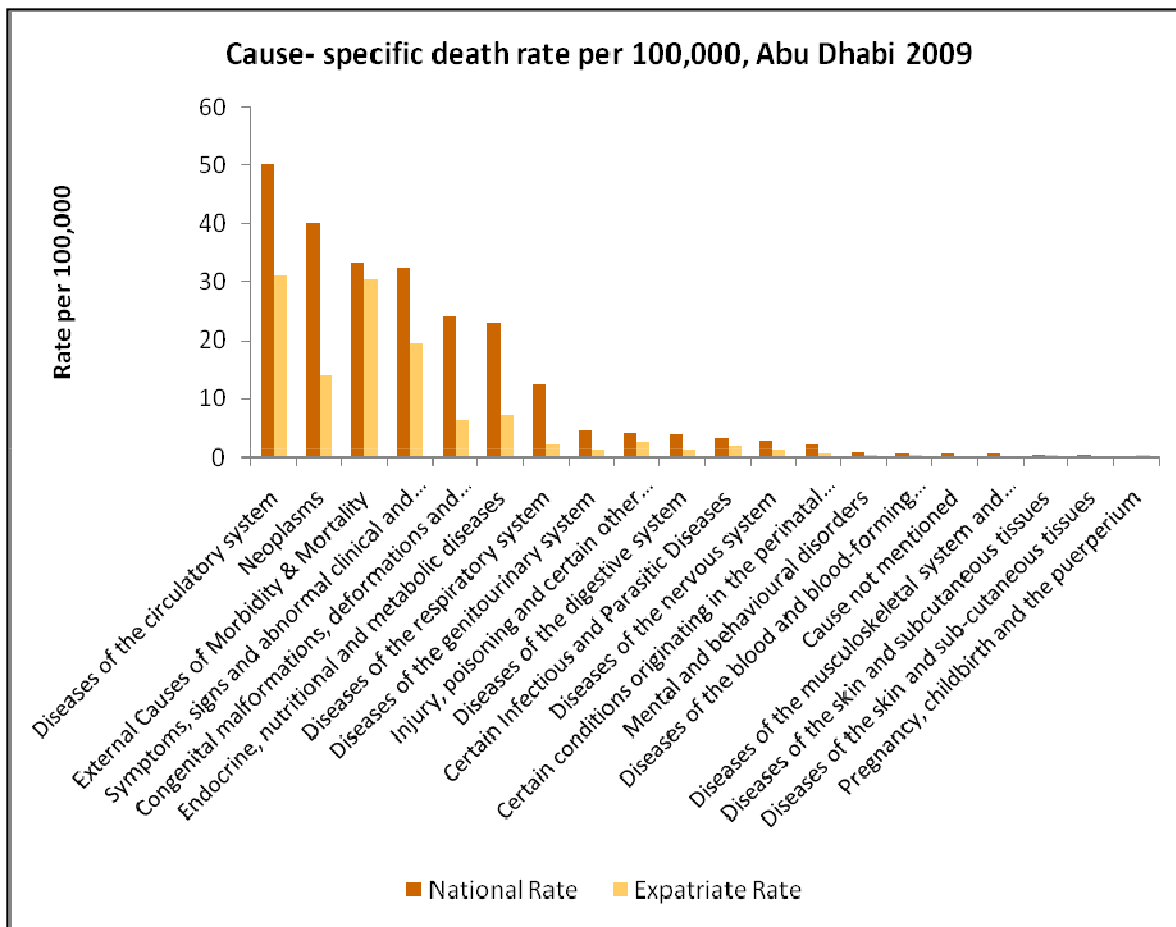
- **Cardiovascular** risk factor profile for 96% population (repeated at 3 year intervals)

All AD residents:

- all **healthcare episodes** (ICD and CPT codes)
- **diabetes visit** results/outcomes (observation codes; HbA1c, glc, BP, retinopathy results etc)
- **mortality** through death certification using ICD10 codes
- **birth** outcomes data through birth notification
- **infectious disease** notification
- **school screening** (annual BMI)
- **injury** surveillance
- **cardiovascular** risk factor profile planned 2010 (repeated at 3 year intervals)
- **sustainable**: e-notifications and integrated with healthcare system



Cause Specific Mortality



Top 3 causes of mortality:

Nationals:

1. Circulatory (50/100,000)
2. External causes (40/100,000)
3. Neoplasms (33/100,000)

Expatriates:

1. Circulatory (31/100,000)
2. External (30/100,000)
3. Unknown (20/100,000)

Congenital abnormalities much higher in Nationals (24/100,000) than Expatriates (7/100,000)

Source: HAAD Mortality Report



Primary Determinants of CVD

All CVD Risk Factors

- Prevalence rates
- Odds Ratios of association with diabetes and CVD outcomes of heart attack and stroke
- Population Attributable Risk
- In 2-5 years, Abu Dhabi CVD risk score

Diabetes

- As above; and
- Validation of HbA1c as a screening and diagnostic test against OGTT and fasting glucose
- Diabetes control and natural history at population level
- Metabolic syndrome, prevalence, sensitivity analysis of criteria and association with outcomes



IOM Report Recommendations – Advanced Status

Recommendation

3. Implement Policies to Promote Cardiovascular Health

- population-wide efforts
- based on local needs
- accompanied by sustained health communication campaigns

5. Improve National Coordination for Chronic Diseases

- establish a commission that reports to a high-level cabinet authority
- coordinate the implementation of efforts
- mechanism for communicating and coordinating among relevant executive agencies

Abu Dhabi Response

Policies and regulations for:

Healthcare Sector Response:

- Clinical Standards
- Customer-Focused Service Innovation
- Customer Compliance
- Research/Health Ventures

Non-health sector response:

Government coordination through the 'Health Policy Agenda'

Working groups based on solutions

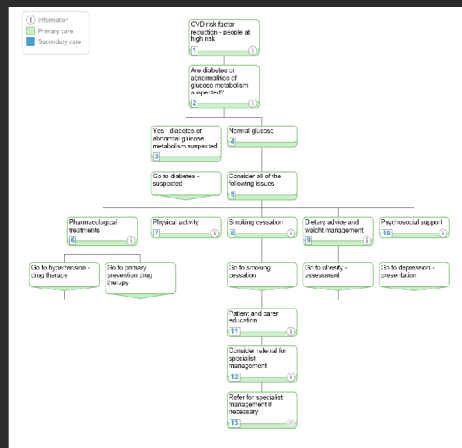
Some examples underway:

- Urban planning
- School health
- Occupational health
- Nutrition



Health Sector response

Evidence-based care



Clinical Guidelines & Standards

- Educate market on HAAD clinical care Standards for Facilities and Clinicians
- Develop and maintain a full set of Evidence Based Care Pathways (with international partner)

Disease Management Model of care

- Encourage local and International partners
- Clear standards for DMP providers

Increasing Role of primary care providers:

- Develop customer-friendly ways to treat CVD risk
- Adapt/build facilities to drive healthy lifestyles
- Get involved with ideas and research

Continuous review of effectiveness and cost-effectiveness

- Technical Advisory Committee (under PHR Department)
- Proactive reviews of cost-effectiveness (under Health Systems Financing)

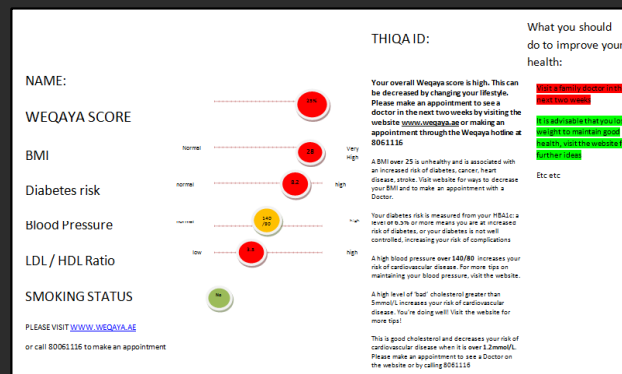
Customer compliance

Facilities

- Implement “payment for quality” to drive facility and clinician incentives
- Routinely monitor activity (through claims data)

Individuals

- Drive individual compliance with screening and treatment using a flexible and reactive mix of mechanics (“Encourage, Enable and Enforce”)



Encourage: health promotion campaigns

Enable: Weqaya reports, helpline & interactive website to

- Summarise personal Weqaya results
- Provide specific targets
- Showcase menu of options to create personal programme
- Generate user data (linked to all HAAD datasets)

Enforce: Weqaya screening linked to free health insurance card

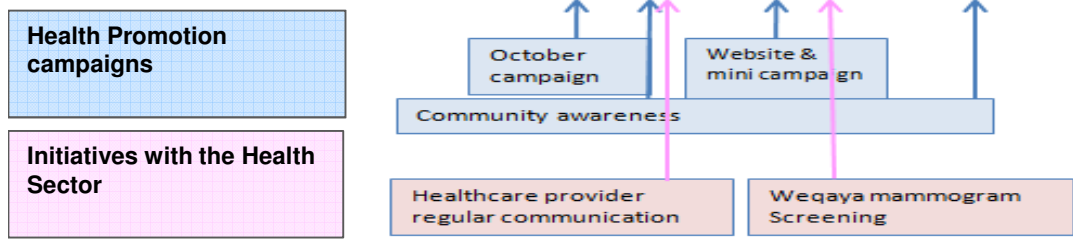
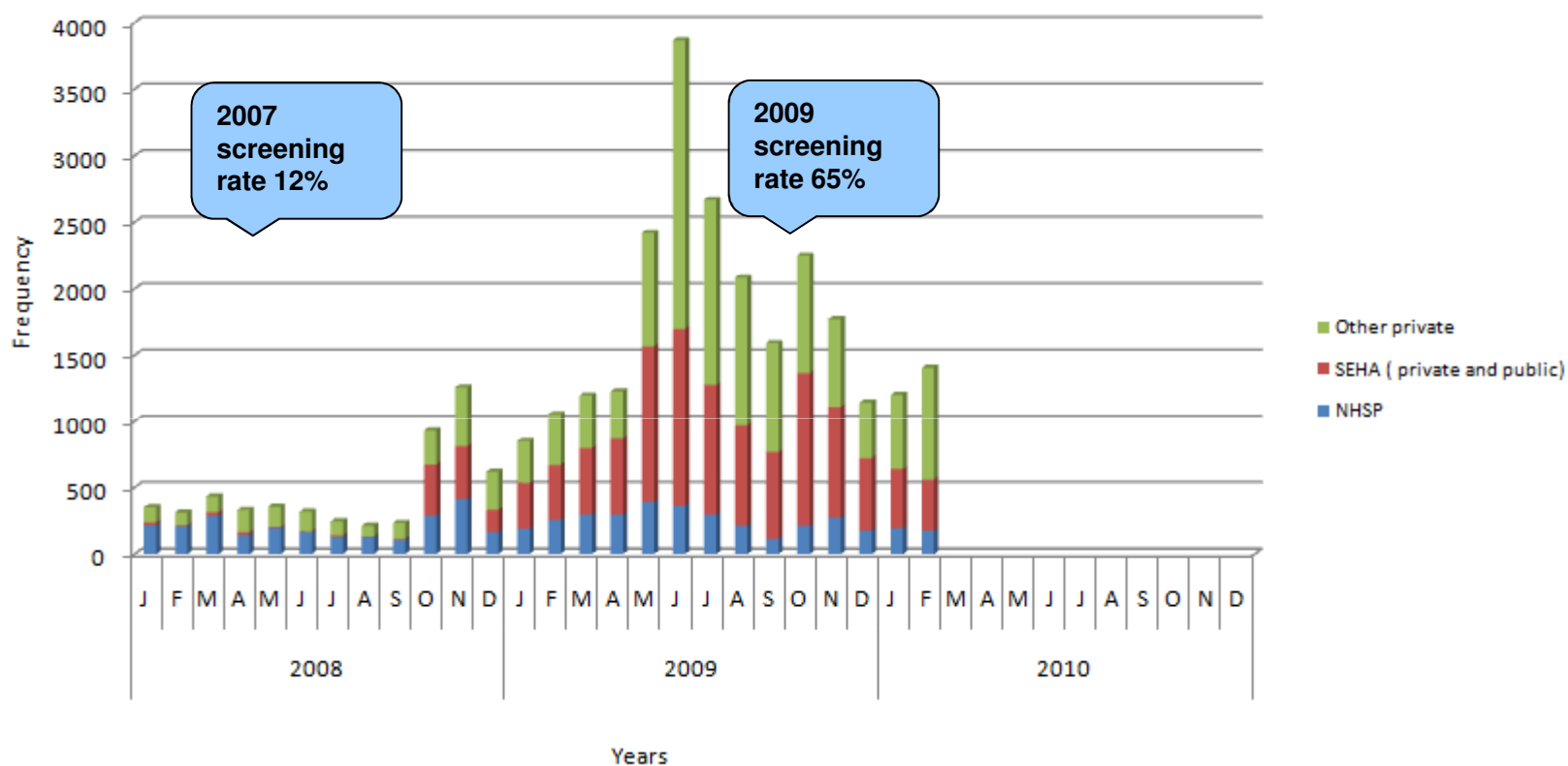
Active Compliance & Monitoring

- Regular reporting against targets
- Joint problem-solving to drive continuous improvement



Example of Breast Cancer for Health Sector Response

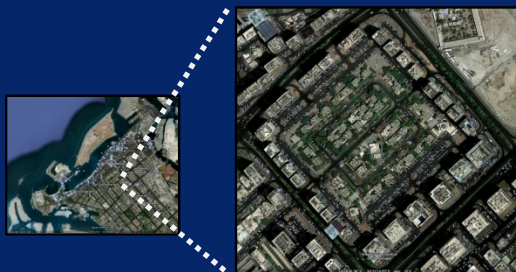
Number of monthly mammograms per facility, Abu Dhabi





Non-Healthcare Sector Response – Examples underway

Urban Planning: “Demonstration Block” with Urban Planning Council



- Pilot of urban forms which encourage healthy/discourage unhealthy behaviours
- Near real-time feedback of:
 - Physical activity
 - Road accidents
- “Learning by doing”
- Broader subsequent roll-out

Education: Opening school facilities for families in evenings



- Setting Health baseline for individuals and school communities
- Piloting of targeted interventions
- Assessment of impact
- Continuous refinement of approach

Occupational Health: Pilot programme for corporate wellness



- Initial pilot programme with Senior Management of Abu Dhabi Department of Economic Development (n = 10)
- Initial Evidence of acceptability and development of materials for phase 2 pilot

Nutrition: Healthy foods Working Group with Abu Dhabi Food Control Authority



- Driving implementation of Abu Dhabi Food Law (2006)
- Working Group established to improve nutrition of Abu Dhabi community



IOM Report Recommendations - Opportunities

Recommendation

6. Research to Assess What Works in Different Settings

-research to determine which intervention approaches will be most effective and feasible to implement in low and middle income countries

7. Disseminate Knowledge and Innovation Among Similar Countries

-communicate and coordinate among countries with similar epidemics, resources, and cultural conditions in order to encourage and standardize evaluation, help determine locally appropriate best practices, encourage innovation, and promote dissemination of knowledge

Abu Dhabi Response

- data architecture allows investigation into:
- different tiers of CVD screening to predict risk
 - full eg Weqaya screen
 - semi eg HbA1c and BMI?
 - basic eg Waist circumference
- automatic tracking of impact of interventions
- WHO EMRO CVD Strategy
- role of NCDnet
- Other
- Role for Abu Dhabi?



IOM Report Recommendations - Opportunities

Recommendation

11. Define Resource Needs

- Assessment of the future financial and resource needs... to prevent and reduce the burden of CVD and related chronic diseases.
- These initial case studies should establish an analytical framework with the goal of expanding beyond the initial pilot countries

12. Report on Global Progress

- Use standardized indicators and methods for measurement,
- Provide objective data to track progress in the global effort against CVD

Abu Dhabi Response

- Abu Dhabi in the timely position where data structure and current data resources can be utilised to conduct such analyses
- Weqaya 'tool-kit' could be adapted for low and middle income settings
- Objective data can be provided to track progress in the UAE & GCC



Appendix



Specific targets for Weqaya programme

Targets	End 2010	2015	2030
Input	<ul style="list-style-type: none"> Smoking ban in public places, improved tobacco labeling and advertising ban Individual health records for CVD risk Greater pedestrianisation of Abu Dhabi Urban Planning Council “Demonstration Block” piloting specific interventions for roll-out across the emirate of Abu Dhabi Evidence-based focus on health in the workplace 	<ul style="list-style-type: none"> Evidence-based mandatory labeling of food to encourage healthy choices Pricing policy providing incentives to consume healthier food and beverage 	<ul style="list-style-type: none"> Comprehensive programme of financial incentives to encourage ‘healthy’ behaviour including diet and exercise
Process	<ul style="list-style-type: none"> Improvement in diets of Abu Dhabi residents: <ul style="list-style-type: none"> – 30% reduction in salt intake – 80% reduction in consumption of trans-fats – Reduced overall calorie intake Increase in physical activity >50% uptake of CVD health appointments 	<ul style="list-style-type: none"> Significant reduction in tobacco consumption 	<ul style="list-style-type: none"> Abu Dhabi recognised as one of the “healthiest places to live in the world”
Outcome	<ul style="list-style-type: none"> Measurable reduction in deaths from heart attacks and strokes due to improved acute care 	<ul style="list-style-type: none"> 25% reduction in obese children 10% reduction in obese adults 10% reduction in smoking rate 10% reduction in CVD events (compared with predicted) 	<ul style="list-style-type: none"> Compared with predicted: <ul style="list-style-type: none"> – 40% reduction in CVD events – 75% reduction in CVD mortality 33% reduction in healthcare costs per diabetic patient Increased life expectancy in Abu Dhabi

Source: HAAD Weqaya Screening (2008-09); International data from WHO and global experts (e.g., Johns Hopkins); Belgin Unal Coronary heart disease policy models: a systematic review, 2006



Comparison of key indicators for UAE – WHOSIS data

Location	Age-standardized mortality rate	Age-standardized mortality rate	Life expectancy at birth 1990(year)	Life expectancy at birth 2000 (years)	Life expectancy at birth 2006(year)	Maternal mortality ratio
United States of America	188	460	75	77	78	11
United Arab Emirates	369	625	73	76	78	37
Germany	211	444	75	78	80	4
United Kingdom	182	434	76	78	79	8
Thailand	199	559	69	70	72	110
Singapore	171	376	75	78	80	14