Understanding Health Profile and the prevention of Non-Communicable Diseases

PRESENTED AT
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Agenda

- Background
- Prevalence of NCD
- Research Project: Health Profile of the middle-aged residents in Tsuen Wan
- Preliminary research findings: Environmental, Behavioral and Biomedical risk factors
- Conclusion

Background of Non-communicable diseases (NCDs)

Changing Mortality pattern: From acute to chronic

- Technology advancements on medical and hygiene
- Life expectancy increase

Characteristics of NCDs:

- Prolonged, do not resolve spontaneously
- Development of NCD highly associate with individual's risk factors in daily routines

Common NCDs:

- heart disease, stroke, cancer, chronic respiratory diseases and diabetes etc

High prevalence of NCDs:

- Urban, developed cities and wealthy group

NCDs in Asia….

China

- More than 80% of all death are caused by NCDs

Singapore

- The leading principle cause of death: Cancer (27.7%)
- Age-standardized mortality rates of NCDs: 376 (WHO, 2002)

Hong Kong

- Cancer and Heart Disease remain as the 1st & 2nd cause of death from 2001 – 2009
- 61% of registered death were attributed to 4 major NCDs
- Cancer (32.3%), Heart Disease (15%), Stroke (8.8%) and Lower respiratory disease (5.1%)

Project: Health Profile of the Middle-Aged Residents in Tsuen Wan

- **"Tsuen City's Health Parade 2010"** organized by Tsuen Wan Adventist Hospital and Tsuen Wan Safe and Healthy Community Steering Committee

- Duration: July 2010 – July 2011

- Program:

-Regular lectures on healthy lifestyle

-Health check program

-Day camp

- Health questionnaire (targeted sample)

Tsuen Wan District

- One of the 18 Districts in HKSAR

- Area: about 6,000 hectares in the western part of the New Territories

- Total population (2009): 292 900
- Male: 47.2%
- Female: 52.7%
- Middle-aged population (45-64) : 28.7%

Tsuen Wan As a Safe community and Healthy cities

- Member of the "China Hong Kong Safe and Healthy Community Network" since November 2005.

- World Health Organization recognized Tsuen Wan district as the 101th "safe community" in June 2006.

- Participated in the "Alliance for Healthy Cities".

The Scope of Ageing and NCD's Prevention: -Taking a Life Course Approach

Infancy and Childhood

Old Age

Ageing: From a life-course perspective
Functional capacity decline with age

Environmental Risk Factors + **Behavioral Risk Factors** + **Biomedical Risk Factors**

Low Risk of NCDs

High Risk of NCDs

Development of NCDs:
Risk Factors accumulate at all stages of life span

Secure growths and development in early life

Protect from risk factors, maintain highest possible level of function in adult life

Prevention on NCDs:
Early prevention and health education

Prevent disability in older age

Sampling and research method

- Target samples: 600 (age 41-65)
- Confidence interval of 4, 95% confidence level
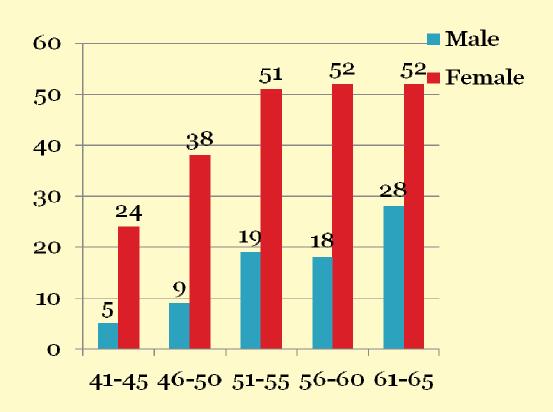- Purposive sampling: 20 sub-groups

	Male				Female			
Occupation	Working		Non-working		Working		Non-working	
Edu. level	F.4 or below	F.5 or above	F.4 or below	F.5 or above	F.4 or below	F.5 or above	F.4 or below	F.5 or above
Age 41-45	15	15	15	15	15	15	15	15
46-50	15	15	15	15	15	15	15	15
51-55	15	15	15	15	15	15	15	15
56-60	15	15	15	15	15	15	15	15
61-65	15	15	15	15	15	15	15	15
Sub-total	300				300			
Total	600							
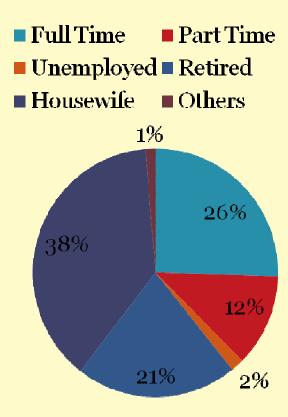
Research Protocol: STEPwise Instruments (WHO, 2005)

Part 1: Health Questionnaire	Interview questions	Risk factors
Personal Information	Age, Sex, Occupation, Income, Edu. Level, & Housing type	Environmental
Lifestyle	Eating style, Smoking habits, Alcohol consumptions & Physical activity	Behavioral
Medical History	Personal & Family medical history	Biomedical + Environmental
Part 2: Health Check Data	**Interview questions**	**Risk factors**
Personal health data	Height, Weight, Body Fat, Waist, Blood pressure, Cholesterol & Glucose	Biomedical

Preliminary Findings

- No. of interviews: 298 (as. at 31.10.2010)
- Male: 80   Female:217

1. Eating Habits

Figure 1a: Inadequate vegetables, fruits and water intake (N=298)

	N	%
< 3 days per week of Fruits intake	50	16.7
< 3 days per week of Vegetable intake	9	3
Drinking < 3 glasses of water a day	18	6

Figure 1c: Frequency of healthy eating habits

	Always	Usually	Seldom	None
" 2 Plus 3 A Day"	36.3%	31%	10.7%	18.7%
"Low Fat, Low Slat, Low Sugar and High Fiber"	47%	32.3%	10.7%	9%
Grains, Vegetables and Meat as 3:2:1 proportion	49.7%	32.7%	7.7%	8.7%

2. Smoking

Current Smokers: 10 (34%)   **Non Smokers: 288 (99%)**

Figure 2a:Weekly smoking frequency of current smokers by sex		
	Male (N=7)	Female (N=3)
1 – 3 times	1	0
4 – 6 times	0	1
7 – 9 times	1	0
10 times or over	5	2

Figure 2b: Prevalence of common NCDs and the frequency of people exposed to passive smoking		
	Sometime	Always
Heart Disease	4	1
Hypertension	13	7
High Cholesterol	15	6

3. Alcohol Consumption

Figure 3a:
Obtain regular drinking habit and Common NCDs

Heart Disease	1
Angina pectoris	1
Hypertension	12
High Cholesterol	6
Diabetes	2
Central obesity	5
No illness	20

Figure 3b:
Drinking frequency among those who has regular drinking habit (N=42)

Every meal	1
Everyday	6
5-6 times per week	4
1 – 3 times per month	15
< 1 time per month	13
Others	3

4. Physical Activity

Figure 4a:
Frequency of moderate exercise per week (excluding workplace) and Overweight

	Overweight	
	Male (N=80)	Female (N=217)
No exercise	6	39
1 – 3 times	6	38
4 – 6 times	3	12
7 times +	2	23

Figure 4b:
Average sitting hour per day and Central Obesity

	Central Obesity	
	Male (N=80)	Female (N=217)
< 3 hours	9	21
4-6 hours	8	38
7-9 hours	2	3
10 hours +	0	2

Physical Activity

Figure 4c: Average sitting hour per day by employment		
	Working group (N=121)	Non working group (N=177)
<3 hours	32.2%	39.5%
4 – 6 hours	31.4%	1.6%
7 – 9 hours	25.6%	54.8%
10 hours +	6.6%	5%

Figure 4d: Consistently walk or cycling for at least 10 mins a day			
	Overall	Working Group	Non-working group
Yes	84%	95	157
No	15%	22	23

Biomedical Risk Factors

	1. Overweight (age over 30)	N	%
Male	Normal: 17-23%	33	11
	Obese: Exceed 25%	17	5.6
Female	Normal: 20 – 27%	51	17
	Obese: Exceed 30%	114	38
	2. Central obesity	N	%
Male	Exceed 90cm (35.4 inch)	19	6.3
Female	Exceed 80cm (31.5 inch)	65	21.7
	3. Blood Cholesterol	N	%
	Normal: <5.2 mmol/L	165	55.7
	High: > 5.2 mmol/L	133	44.3
	4. Blood Pressure	N	%
	Low: <90/60 mmHg	2	0.67
	High: >140/90 mmHg	20	6.7

Prevalence of NCD in Tsuen WAN

Prevalence of common NCDs by age group (N=298)					
	41-45	46-50	51-55	56-60	61=65
Stroke	0	0	0	0	1
Heart Disease	0	1	3	4	3
Angina pectoris	1	1	1	0	0
Hypertension	2	8	9	17	25
High Cholesterol	2	6	11	12	11
Diabetes	0	5	0	3	4
Central obesity	1	4	8	5	6
Brest Cancer	0	1	0	1	0
Intestinal Cancer	0	0	0	0	1
Other Cancer	0	1	0	0	0
No illness	24	27	38	36	36

We aim to….

- **Recruitment of Health care Ambassadors** :
Train up health ambassadors to promote/ encourage healthy living practices

- **Early warnings**:
Increase individual's awareness on their health status

- **Master a health profile as baseline assessment**:
Planning for NCD's prevention program that encore to the district's needs. Identify gaps and research needs for NCD control.

- **Making District/regional comparison**: Further research could also be made in different districts and regions

Living in a healthy city for all age....

Lowest Risk:
Children

A Healthy City
for all age

Highest Risk:
Elders

Potentially High
Risk:
Adults

-Secure good health &
development
-Understand the process of
ageing and the needs of health
education
-Train them to become health
ambassadors and care-givers

-Actively participate
in activity with less
physical & mentally
disability

-Adopt healthy lifestyle
-Take up responsibility to look after/educate their
parents and children
-As an agent to maintain intergeneration harmony

Thank you