Awareness and Prevention of Chronic Diseases in Japan

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Introduction

• Chronic diseases are common and costly to society, but often preventable\(^1\).

• Health-related quality of life is associated with chronic diseases (diabetes, chronic obstructive pulmonary disease (COPD), cancer, arthritis, and hypertension), and their risk factors (body mass index, physical inactivity, and smoking status)\(^2\).

• Several studies in the United States have focused on the prevalence and prevention of chronic diseases but there is a lack of data investigating these in Japan.

Objectives

- The focus of this study is to better understand the **awareness and prevention** of chronic diseases in Japan.
  - To further assess the “at-risk” & over 40 years old populations
  - To make cross country comparisons for further context
Methods: Data source

• 2012 Japan National Health and Wellness Survey
  + Annual cross-sectional Internet-based survey of adults (18 years and older)
  + Includes epidemiological data, treatment information, health behaviors, and health outcomes
  + Recruited through Internet panels though sampled in a stratified random sampling framework to ensure demographic representativeness (see Liu et al 2012)

• All respondents (N=30,000) were included and asked the following awareness questions:

• Awareness:
  + Awareness of chronic diseases were assessed using the following question: “Which of the following conditions are you aware of (COPD, depression, diabetes, high blood pressure, high cholesterol and osteoporosis)?”.
Methods: Measures

• Prevention

  + Prevention was assessed with the following question: “Which conditions to do take steps to prevent (heart attack/heart problems/stroke/mini-stroke, diabetes, osteoporosis)?”.
  + Prevention of COPD was based on respondents quitting smoking.
  + Prevention of depression was reflective of respondents as seeing an internist, psychiatrist or psychologist in the past six months

• Demographics

  + Age, gender, education, household income, employment status

• Health history

  + Body mass index (BMI), alcohol consumption, smoking, exercise behavior, comorbidities
Methods: Measures

• At Risk Groups

+ Risk of COPD was assessed with the Lung Function Questionnaire (LFQ≤18) or experiencing COPD.
+ Risk of depression symptoms were assessed with the Patient Health Questionnaire (PHQ-9) (mild depression or greater) or experiencing depression.
+ Risk of high cholesterol was based on cholesterol levels (≥ 200 mg/dL or borderline elevated or higher level) or experiencing high cholesterol.
+ Risk of high blood pressure was based on blood pressure readings (systolic ≥120 mm Hg and/or diastolic ≥80 mm Hg) or experiencing high blood pressure.
+ Risk of diabetes was based on doctor assessed risk with the question: “Has your doctor told you that your blood sugar levels are high, or that you have early diabetes or are at risk for developing diabetes?” or experiencing diabetes.
+ Risk of osteoporosis is based on an adjusted Fracture Risk Assessment Tool (FRAX) score (≥4factors) or experiencing osteoporosis.
Methods: Analyses

• Results are projected to reflect the total population using known population incidences for key subgroups
  + Weighting Variables: Gender and age
  + From the International Data Base of the U.S. Census Bureau and Organization for Economic Cooperation and Development

• Analyses
  + Descriptive results including means, standard deviations, and percentages were analyzed.
Overall Demographic and Lifestyle:
The sample composition is fairly balanced across Demographics & Lifestyle

<table>
<thead>
<tr>
<th></th>
<th>Total Japan Adult Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>106.5 M</td>
</tr>
<tr>
<td>(n=30,000)</td>
<td></td>
</tr>
<tr>
<td>% Men</td>
<td>48</td>
</tr>
<tr>
<td>Mean age</td>
<td>50</td>
</tr>
<tr>
<td>% Married</td>
<td>63</td>
</tr>
<tr>
<td>% Single, never married</td>
<td>26</td>
</tr>
<tr>
<td>% Retired</td>
<td>10</td>
</tr>
<tr>
<td>% College graduate (four year) or more</td>
<td>45</td>
</tr>
<tr>
<td>Mean number of adults in the household</td>
<td>2.4</td>
</tr>
<tr>
<td>Mean number of children in the household</td>
<td>0.4</td>
</tr>
<tr>
<td>% Annual Household Income &lt; ¥5,000,000</td>
<td>46</td>
</tr>
<tr>
<td>% Over Weight/Obese</td>
<td>18</td>
</tr>
<tr>
<td>% Currently Smoke Cigarette</td>
<td>20</td>
</tr>
<tr>
<td>% Drink Alcohol</td>
<td>69</td>
</tr>
<tr>
<td>Mean days exercising in the past month</td>
<td>5.3</td>
</tr>
</tbody>
</table>
KANTAR HEALTH

AWARENESS of Chronic Diseases in Japan

国立保健医療科学院
National Institute of Public Health
Awareness of Chronic Conditions:

There is relatively high awareness for most chronic diseases - except for COPD.
Awareness of Chronic Conditions

The level of awareness increases within the at risk populations.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Overall</th>
<th>Within Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPD</td>
<td>25.1%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Depression</td>
<td>82.7%</td>
<td>79.1%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>87.0%</td>
<td>78.4%</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>82.4%</td>
<td>77.6%</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>81.9%</td>
<td>63.2%</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>89.5%</td>
<td>71.0%</td>
</tr>
</tbody>
</table>

Largest GAP - Asymptomatic
Awareness of Chronic Conditions – Age ≥ 40

The level of awareness remains high, slightly higher, among 40+
PREVENTION of Chronic Diseases in Japan
Prevention of Chronic Conditions

The level of prevention is low, especially in the CV & Metabolic diseases

![Graph showing the percentage of prevention for various chronic conditions.]

- COPD: 23.0%
- Depression: 35.0%
- Diabetes: 7.7%
- Heart Problems/High Blood Pressure: 4.4%
- Heart Problems/High Cholesterol: 4.4%
- Osteoporosis: 5.7%

Overall
Prevention of Chronic Conditions

The level of prevention increases in the at-risk, especially with diabetes & osteo.
Prevention of Chronic Conditions – **Age ≥ 40**

The level of prevention increases slightly across all groups within the 40+ age group. The following chart illustrates the percentage of people within and outside the risk group for various chronic conditions.

- **COPD**: 26.4% Overall, 38.0% Within Risk Group
- **Depression**: 39.7% Overall, 47.2% Within Risk Group
- **Diabetes**: 9.7% Overall, 49.4% Within Risk Group
- **Heart Problems/High Blood Pressure**: 5.8% Overall, 7.5% Within Risk Group
- **Heart Problems/High Cholesterol**: 5.8% Overall, 8.1% Within Risk Group
- **Osteoporosis**: 7.5% Overall, 39.0% Within Risk Group

**US Comparison**
- **Within at-risk**: 62%
- **US**: 45%
Prevention of Chronic Conditions (Age ≥ 40 years) – Trending 2009-2013

With a 5 year trending it appears that the prevention % has not been increasing

Diabetes

Heart Problems / HBP
Conclusions

• Data suggests there is a relatively high level of awareness of most studied chronic diseases in Japan, and a need for COPD education.

• Although, data also suggests that prevention is limited in the studied chronic diseases in Japan, even amongst the at risk groups.
  + The largest % being only ~½ of patients told by their Dr. they were at risk for diabetes
  + Gaps versus US: Diabetes (49% vs 62%) and Heart Problems (8% vs. 45%)

• The lack of prevention is especially a concern with the rapidly aging population of Japan and further education beyond basic awareness is important to communicate prevention benefits, especially in the targeted high risk groups.
Limitations

- Cholesterol levels, blood pressure readings, sugar levels, etc., were not verified against any clinical information (e.g., medical chart).

- The NHWS is broadly representative of the Japan adult population, but the actual risk groups may differ from the overall population in Japan.

- The NHWS is a self-reported survey and therefore there may be some recall bias.
Thank You
Xie xie ni