Introduction

Large, nationally-representative data sources of epidemiological and health outcome information are scarce in Japan. The aim of this study was to assess the evidence for validity of the national patient-reported survey of the adult Japanese population. The data source for this comparison was the 2010 Japan National Health and Wellness Survey (NHWS) (N=25,000). The NHWS is a self-reported, Internet-based survey administered to the adult population of Japan. A random stratified sampling framework was implemented, with age and gender strata, to ensure the final NHWS sample is identical to the demographic composition of the Japanese population.

Methods

Data Source

The data source for this comparison was the 2010 Japan National Health and Wellness Survey (NHWS) (N=25,000). The NHWS is a self-reported, Internet-based survey administered to the adult population of Japan which assesses information on approximately 160 different conditions. A random stratified sampling framework was implemented, with age and gender strata, to ensure the final NHWS sample is identical to the demographic composition of the Japanese population.

Procedure

Large-scale epidemiological studies and meta-analyses of epidemiological studies from the literature were obtained (searched from PubMed). All studies must have been conducted in Japan and, ideally, from a demographically-representative sample.

Chronic conditions from this search which were comparable to the conditions assessed in NHWS were selected.

Applying sampling weights, data from the NHWS was projected to the entire Japan adult population. A random stratified sampling framework was implemented, with age and gender strata, to ensure the final NHWS sample is identical to the demographic composition of the Japanese population.

Methods

Objective

The aim of this study was to assess the evidence for validity of the NHWS by comparing prevalence estimates survey of the adult Japanese population compared to existing population-based studies.

Results

Table 1: Epidemiological Comparisons of NHWS and the Epidemiological Literature

<table>
<thead>
<tr>
<th>Condition</th>
<th>NHWS Literature Estimate</th>
<th>NHWS Estimate</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma in the Past 12 Months</td>
<td>3.45%</td>
<td>2.55%</td>
<td>Fukutoh et al., 2011</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease</td>
<td>10.9%</td>
<td>13.7%</td>
<td>Fukutoh et al., 2004</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease (Aware)</td>
<td>1.03%</td>
<td>1.37%</td>
<td>Inoue et al., 2009</td>
</tr>
<tr>
<td>Atrial Fibrillation</td>
<td>0.56%</td>
<td>0.73%</td>
<td>Inoue et al., 2009</td>
</tr>
<tr>
<td>Multiple Sclerosis</td>
<td>0.01%</td>
<td>0.06%</td>
<td>Houzen et al., 2008</td>
</tr>
<tr>
<td>Rheumatoid Arthritis</td>
<td>2.0%</td>
<td>0.99%</td>
<td>Shichikawa et al., 1999</td>
</tr>
<tr>
<td>Depression in the Past 12 Months</td>
<td>1.2%</td>
<td>3.26%</td>
<td>Kawakami et al., 2007 (Review)</td>
</tr>
</tbody>
</table>

Discussion

Although population-level data in Japan are scarce, patient-reported data can provide useful epidemiological estimates as an alternative valuable health outcome data across a variety of conditions. In many instances, NHWS prevalence rates were comparable to other sources though, because the NHWS is purely self-report, it provides a perspective based on awareness of diagnosis, which may not be relevant for all conditions.

Further comparisons between the NHWS and other population-based studies are warranted.

Limitations

The comparisons between the NHWS and the literature were purely based to be qualitative as differences in methodology (including sampling frame, source of diagnosis, year of study, wording of question, etc.) could dramatically influence the point estimates.

In differences methodology could mask true similarities or true discrepancies.

References