Update on the Scottish Health Survey

Health Survey Users Group

July 2015
Agenda

- **Background**: Where have we come from and where are we now?
- **Bio Measures**: How do we measure waist and blood pressure?; Do the measurements work?
- **New Content**: What is new on the study?; What is new in dissemination?
- **Using the Data**: How has data been used and how to access it?
Background
What is the history?

Scottish Office launch the Scottish Health Survey (SHeS) covering 16-64 year-olds

1995 1998

Now includes children aged 2-15 and those aged 65-74

2003

Now includes 0 – 1 year olds and those aged 75 and over
ECG readings to monitor electrical activity of the heart


Health Board boosts added

Interviewers begin collecting blood pressure, urine and saliva samples on the survey

Basic Methodology

• Continuous survey
• Sample from PAF
• 4,000 adults, 1,800 children
• Biological samples from 1,000

2015 = Year SHeS took place
Where are we at present?

<table>
<thead>
<tr>
<th>Year</th>
<th>Design &amp; Development</th>
<th>Fieldwork</th>
<th>Annual Report</th>
<th>Data in UK Archive</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td>Sept 2015</td>
<td>Sept 2015</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>In progress</td>
<td>Sept 2016</td>
<td>Sept 2016</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>By Feb 2017</td>
<td>Sept 2017</td>
<td>Sept 2017</td>
</tr>
</tbody>
</table>
Bio
Measurement
**Waist Measurements**

**The Issue:** Reducing cost but maintaining quality of waist measures

- Interviewers taking waist measurement
- New less invasive protocol: measuring midpoint around navel rather than traditional lower rib/iliac crest midpoint

<table>
<thead>
<tr>
<th>R² nurse/interviewer measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
</tr>
<tr>
<td>0.93</td>
</tr>
</tbody>
</table>

Results also showed little difference when interviewers & nurses both using their protocols

- Joint pair visits with nurse & interviewer (minimise gap between measurements)
  - 15 nurse/int pairs
  - 303 measurement sets
- Nurses using both protocols
- Formula for nurse-adjusted figures to allow comparability
- Allows us to predict reasonably accurately what results would have been from nurses
What Are Results Showing?

Mean Waist Circumference (cm)

<table>
<thead>
<tr>
<th>Year</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/9</td>
<td>96.5</td>
</tr>
<tr>
<td>2010/11</td>
<td>96.3</td>
</tr>
<tr>
<td>2012/13</td>
<td>98.1</td>
</tr>
</tbody>
</table>

- Orange bar = Nurse/nurse equivalent
- Red bar = Interviewer
What Are Results Showing?

Mean Waist Circumference (cm)

Little difference for males in mean waist circumference between interviewer and nurse equivalent measure.

- 2008/9: 96.5
- 2010/11: 96.3
- 2012/13: 97.4 (nurse/nurse equivalent), 98.1 (interviewer)

Legend:
- = Nurse/nurse equivalent
- = Interviewer
What Are Results Showing?

Little difference for males in mean waist circumference between interviewer and nurse equivalent measure.

Slightly more of a difference for female measurements.

<table>
<thead>
<tr>
<th></th>
<th>Males (16+)</th>
<th>Females (16+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/9</td>
<td>96.5</td>
<td>89.3</td>
</tr>
<tr>
<td>2010/11</td>
<td>96.3</td>
<td>89.0</td>
</tr>
<tr>
<td>2012/13</td>
<td>97.4 (Nurse)</td>
<td>89.6 (Interviewer)</td>
</tr>
</tbody>
</table>

Yellow = Nurse/nurse equivalent
Red = Interviewer
Blood Pressure Measurements

The Issue: Reducing cost but maintaining quality of blood pressure measures

- Interviewers taking blood pressure
- Exact same protocol as nurses, with same exact approach

• Joint pair visits with nurse & interviewer (minimise gap between measurements)
• Each taking three readings

R² nurse/interviewer measures

<table>
<thead>
<tr>
<th></th>
<th>Systolic</th>
<th>Diastolic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.77</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Good fit although some evidence of slightly lower readings for interviewers

- Formula for nurse-adjusted figures to allow comparability
- Allows us to predict reasonably accurately what results would have been from nurses
What Are Results Showing?

% Normotensive

All Adults (16+)

2008/9: 67.1
2010/11: 67.5
2012/13: 70.9

Orange = Nurse/nurse equivalent
Red = Interviewer
What Are Results Showing?

Marginal difference between interviewer and nurse equivalent. However, increase in normotension over time.

% Normotensive
All Adults (16+)

<table>
<thead>
<tr>
<th>Year</th>
<th>Nurse/nurse equivalent</th>
<th>Interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/9</td>
<td>67.1</td>
<td></td>
</tr>
<tr>
<td>2010/11</td>
<td>67.5</td>
<td></td>
</tr>
<tr>
<td>2012/13</td>
<td>71.6</td>
<td>70.9</td>
</tr>
</tbody>
</table>

N = Nurse/nurse equivalent
= Interviewer
New Content
Key New Questions

2014

Commonwealth Games
- Legacy
  - People getting active
  - Usage of available facilities

2015

Electronic Cigarettes
- Ever used
- Use nowadays
- Added to list of NRT products used in quit attempt

Cosmetic Procedures
- Treatments ever had (inc, laser eye surgery, cosmetic dental etc)
Dissemination

Core Dissemination

Main Report

Publicity via TV, Press, Internet

New Approach

New Summary Report

Scottish Government Internal “Communication Analysis” Award runner-up
Using the Data
How Has Data Been Used?

**Issues**

**Data Linkage**

“Use of record-linkage to handle response and improve alcohol consumption estimates in health survey data: a study protocol” Gray, L et all, *BMJ*

**Heart Murmurs**

“Heart murmur and dysrhythmia are associated with accidents leading to poor mental health and cognition” Shiue, I, *International Journal of Cardiology*

**Multi-morbidity**

“Widening our gaze on multimorbidity – exploring the relative contributions of short and long-term conditions to poor physical and mental health outcomes in working age adults” Bromley C, *JEpidemiol Community Health*

**Diabetes**

“Diabetes mellitus and mortality from all-causes, cancer, cardiovascular and respiratory disease: evidence from the Health Survey for England and Scottish Health Survey cohorts” Gordon-Dseagu VLZ et al, *Journal of Diabetes and Its Complications*
How To Use Linked Data?

What Linked Data Is Available?

We ask consent from all participants (adults and children) for linkage to NHS patient records:

- In-patient and out-patient visits to hospital, length of stay, waiting time etc
- Specific medical conditions, e.g. cancer, heart disease, diabetes
- Registration with practitioner, date and cause of death

Consent currently from around 85% of participants

How to Access?

Contact Information Services Division (part of NHS Services Scotland)
Thank you

If you want further information or would like to contact us

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