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### OBJECTIVES

The Sentinel Practices Data Sourcing (SPDS) project aimed to implement a sentinel site surveillance system within the Illawarra-Shoalhaven region of the state of New South Wales (NSW) in Australia to obtain a region-specific prevalence of chronic diseases and mental health disorders through the use of patient data obtained during primary care patient interactions. A pre-tested method of data extraction<sup>1</sup> was used, aimed at informing the population health planning within health service catchments of regional Australia.

### METHODS

Based on the geographic and demographic profile of the Illawarra-Shoalhaven Medicare Local (ISML) catchment, 17 general practices were recruited in line with the study inclusion criteria: -

- the practice must be located in one of the 7 Statistical Local Areas (SLAs) of the catchment;
- the practice must have more than 1 general practitioner (GP) working at the site;
- the practice employs more than one full-time GP or at least 2 part-time GPs; and
- the practice either has a clinical auditing software installed in their systems or is keen to get an ISML provided software Pen Computer Systems (PCS) Clinical Audit Tool™ (PCS CAT) installed and use it.

**Phase 1** Practice recruitment based on study inclusion criteria through email invitations and physical mail outs

**Phase 2** Data cleansing procedures including staff training and practice-wide data cleansing implementation

**Phase 3** Data collection of a cleaned, de-identified data extract

**Phase 4** Data collation into one integrated database and subsequent epidemiological analysis

Crude and age standardised prevalence figures were calculated for all major chronic diseases and were compared with national average prevalence figures.

### RESULTS

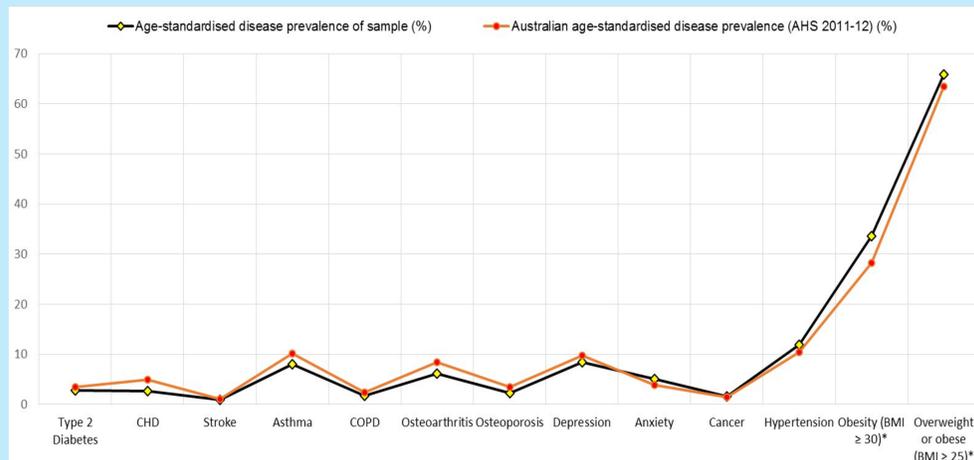
Of the 52 general practices within the 7 regional SLAs of the catchment that met the inclusion criteria, 17 consented to participate in the study, yielding data on n = 152,767 patients, and representing 39.7% of the regional population. Higher than national average estimates were found for the age-adjusted prevalence of a few chronic diseases as illustrated in the table and figure below.

#### Age-standardised prevalence of chronic conditions in the study sample compared to Australian national averages

Chronic Disease/Conditions (as defined and entered into electronic records by GP)	Age-standardised disease prevalence in sample (%)	Australian age-standardised disease prevalence (AHS 2011–12) (%)
Type 2 Diabetes	2.8	3.4
CHD	2.6	4.9
Stroke	0.9	1.1
Asthma	8.0	10.2
COPD	1.7	2.4
Osteoarthritis	6.1	8.4
Osteoporosis	2.2	3.4
Depression	8.4	9.7
Anxiety	<b>5.0</b>	3.8
Cancer	<b>1.6</b>	1.5
Hypertension	<b>11.9</b>	10.4
Obesity (BMI ≥ 30)*	<b>33.6</b>	28.3
<b>Overweight or obese (BMI ≥ 25)*</b>	<b>65.9</b>	63.4

\*Adults only.

Bold red font indicates higher prevalence than national estimates in the study sample



### DISCUSSION

Systematic data collected by patient visits to their general practitioners, routinely entered into desktop software in general practice, offers a feasible opportunity for a valid and sensitive surveillance system to be adopted in regional Australia and hence can facilitate monitoring of chronic disease prevalence and its associated risk factors. The study also highlights the significance of maintaining accurate, clean and complete primary care clinical databases which is imperative for this surveillance system to successfully and precisely quantify regional chronic disease burden.