

## Ambulatory Care Sensitive Conditions: Hospital Admissions

Health service utilisation data – such as hospital admissions – can provide insight into the activity of our health system but are not necessarily indicators of health (illness) status. This is because they do not measure the prevalence of conditions or diseases at the population level. People do not always access health services for many of the conditions and diseases that contribute to the disease burden. And people can only use health services that exist or are accessible and appropriate to them. In other words, the population’s experience of illness might be far and above what health service utilisation data tell us.

One way of evaluating the activity of the health system is through the Victorian Ambulatory Care Sensitive Conditions (ACSC) Study, managed by the Health Intelligence Unit, Public Health Branch, DHS.<sup>1</sup> ACSC are conditions for which hospitalisation is thought to be avoidable with the application of public health interventions and early disease management, usually delivered in an ambulatory setting such as primary care. Hospitalisations can be significantly reduced through preventing the onset of illnesses or conditions, or controlling acute episodic illnesses or conditions, or managing chronic diseases or conditions outside of the acute setting. There are three kinds of ACSC:

- **Vaccine-preventable.** This group of ACSC includes influenza, bacterial pneumonia, tetanus, measles, mumps, rubella, pertussis and polio-conditions for which vaccination is available.
- **Acute.** This group of ACSC includes dehydration/gastroenteritis, kidney infection, perforated ulcer, cellulitis, pelvic inflammatory disease, dental conditions, and ear, nose and throat infections. Acute ACSC might not be preventable but need not result in hospitalisation if adequate and timely primary care is received.

- **Chronic.** This group of ACSC includes diabetes, asthma, angina, hypertension, congestive heart failure and chronic obstructive pulmonary disease (COPD). Chronic ACSC are preventable through health and lifestyle-related behaviours or can be managed through primary care to avoid hospitalisation.

High rates of hospital admissions for ACSC in a given area can indicate problems with patient access to primary healthcare, inadequate skills and resources, disconnection with specialist services, or a combination of these and other factors. ACSC hospital admissions data can therefore help planners and policy makers to develop strategies to improve these facets of the health service system.

Information on Victorian ACSC at the local government area level is generated through the Victorian Health Information Surveillance System (VHISS) interactive reporting facility. The number and rate (per 1,000 population) of ACSC hospital admissions for females in the WMSR LGAs are presented below. The reference year is 2006-2007.<sup>2</sup> The information shows that the top three ACSC hospital admissions for women in the sub-region include diabetes complications (ranked 1<sup>st</sup> for all LGAs), dehydration and gastroenteritis, and pyelonephritis.

<sup>2</sup> As generated in January 2009. The ACSC rate has been age standardised and uses population figures for 2001.

ACSC HOSPITALISATIONS IN BRIMBANK – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	2232	28.4	27.3	29.5	6.3	14088
Dehydration and Gastroenteritis	445	5.2	4.8	5.7	1.7	765
Pyelonephritis	364	4.4	3.9	4.8	3.6	1294
Congestive Cardiac Failure	228	3.0	2.6	3.4	6.8	1557
Asthma	211	2.4	2.1	2.8	1.6	337
Dental Conditions	190	2.2	1.9	2.5	1.1	200
Iron Deficiency Anaemia	165	2.0	1.7	2.3	1.5	252
COPD	152	1.9	1.6	2.2	4.5	688
Cellulitis	140	1.7	1.4	2.0	4.8	668
Angina	111	1.4	1.1	1.7	1.8	196
Ear, Nose and Throat Infections	121	1.4	1.1	1.6	1.5	177
Convulsions and Epilepsy	109	1.3	1.0	1.5	2.5	272
Pelvic Inflammatory Disease	59	0.7	0.5	0.8	2.2	127
Influenza and Pneumonia	31	0.4	0.2	0.5	7.1	220
Other Vaccine-preventable Cond.	19	0.2	0.1	0.3	4.3	81
Gangrene	16	0.2	0.1	0.3	11.4	182
Hypertension	14	0.2	0.1	0.4	1.3	18
Perforated/Bleeding Ulcer	12	0.2	0.1	0.2	8.5	102

ACSC HOSPITALISATIONS IN HOBSONS BAY – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	1069	22.5	21.21	23.8	6.3	6710
Dehydration and Gastroenteritis	215	4.8	4.17	5.5	1.8	384
Pyelonephritis	168	3.7	3.15	4.3	3.9	646
Dental Conditions	98	2.3	1.87	2.8	1.2	115
COPD	105	2.2	1.78	2.6	6.2	650
Asthma	83	2.0	1.59	2.5	1.8	146
Congestive Cardiac Failure	101	2.0	1.60	2.4	8.3	834
Convulsions and Epilepsy	79	1.8	1.39	2.2	2.3	182
Iron Deficiency Anaemia	80	1.8	1.38	2.2	1.2	94
Ear, Nose and Throat Infections	71	1.7	1.33	2.1	1.7	117
Cellulitis	67	1.5	1.11	1.8	5.8	386
Angina	48	1.0	0.69	1.2	2.4	114
Influenza and Pneumonia	13	0.3	0.12	0.4	10.8	140
Pelvic Inflammatory Disease	10	0.2	0.09	0.4	2.0	20
Hypertension	10	0.2	0.09	0.4	3.0	30
Perforated/Bleeding Ulcer	11	0.2	0.09	0.4	4.9	54
Other Vaccine-Preventable Conds.	8	0.2	0.06	0.3	1.9	15
Gangrene	9	0.2	0.1	0.3	22.6	203

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<sup>1</sup> Victorian Ambulatory Care Sensitive Conditions Study at <http://www.health.vic.gov.au/healthstatus/acsc/index.htm>.

ACSC HOSPITALISATIONS IN MARIBYRNONG – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	803	23.6	22.0	25.1	6.1	4895
Dehydration And Gastroenteritis	185	5.3	4.5	6.1	1.8	324
Pyelonephritis	168	4.1	4.0	5.4	3.9	661
Iron Deficiency Anaemia	82	2.4	1.9	3.0	1.5	120
Dental Conditions	76	2.4	1.9	3.0	1.1	87
COPD	78	2.3	1.8	2.9	6.7	519
Convulsions and Epilepsy	62	2.1	1.5	2.6	2.0	125
Congestive Cardiac Failure	80	2.0	1.6	2.5	6.3	507
Asthma	62	1.9	1.4	2.4	2.3	142
Angina	41	1.1	0.8	1.5	2.3	94
Ear, Nose and Throat Infections	35	1.1	0.7	1.4	1.6	55
Cellulitis	32	0.9	0.6	1.2	7.0	224
Pelvic Inflammatory Disease	16	0.5	0.2	0.7	1.8	29
Influenza and Pneumonia	13	0.4	0.2	0.6	7.8	101
Other Vaccine-Preventable Cond.	12	0.4	0.2	0.6	3.0	36
Perforated/Bleeding Ulcer	10	0.3	0.1	0.5	6.3	63
Gangrene	10	0.3	0.1	0.4	21.9	219
Hypertension	7	0.2	0.1	0.4	1.1	8

ACSC HOSPITALISATIONS IN MELBOURNE – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	353	17.7	15.9	19.5	7.8	2736
Dental Conditions	64	3.3	2.3	4.2	1.1	69
Dehydration and Gastroenteritis	104	2.9	2.3	3.6	2.3	234
Pyelonephritis	91	2.5	1.9	3.2	3.8	341
Asthma	48	2.3	1.5	3.0	2.1	97
Congestive Cardiac Failure	46	2.0	1.5	2.7	6.1	277
Convulsions and Epilepsy	44	2.0	1.2	2.7	1.9	80
Iron Deficiency Anaemia	38	1.7	1.1	2.3	2.7	104
Cellulitis	35	1.6	1.1	2.2	3.7	130
COPD	24	1.3	0.8	1.8	5.0	121
Ear, Nose and Throat Infections	33	1.3	0.8	1.7	1.6	52
Angina	24	1.2	0.7	1.7	2.6	63
Pelvic Inflammatory Disease	17	0.6	0.3	0.8	1.8	31
Hypertension	6	0.3	0.1	0.5	2.5	15
Other Vaccine-Preventable Cond.	6	0.2	0.0	0.4	6.8	41
Influenza and Pneumonia	6	0.2	0.0	0.3	3.8	23

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ACSC HOSPITALISATIONS IN MELTON – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	542	23.0	21.1	24.9	5.7	3095
Dehydration and Gastroenteritis	213	6.0	5.2	6.9	1.6	341
COPD	115	4.0	3.2	4.7	4.6	532
Pyelonephritis	117	3.5	2.8	4.2	3.3	381
Dental Conditions	98	2.3	1.8	2.8	1.0	100
Congestive Cardiac Failure	50	2.2	1.6	2.8	6.9	344
Iron Deficiency Anaemia	71	2.2	1.6	2.7	1.5	105
Asthma	91	2.0	1.6	2.4	1.8	166
Cellulitis	38	1.4	0.9	1.9	5.3	202
Convulsions and Epilepsy	55	1.4	1.0	1.7	2.6	145
Angina	32	1.3	0.9	1.8	1.5	48
Ear, Nose and Throat Infections	57	1.2	0.9	1.5	1.5	83
Pelvic Inflammatory Disease	30	0.7	0.5	1.0	2.0	61
Influenza and Pneumonia	11	0.3	0.1	0.5	7.0	77
Perforated/Bleeding Ulcer	7	0.3	0.1	0.5	3.4	24
Hypertension	8	0.3	0.1	0.5	2.3	18

ACSC HOSPITALISATIONS IN MOONEE VALLEY – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Day
Diabetes Complications	1298	18.1	17.2	19.1	7.9	10281
Dehydration and Gastroenteritis	257	4.0	3.5	4.5	2.2	552
Pyelonephritis	189	2.8	2.4	3.2	5.4	1028
Dental Conditions	138	2.5	2.1	3.0	1.0	141
Congestive Cardiac Failure	189	2.4	2.0	2.7	7.0	1329
Iron Deficiency Anaemia	133	2.0	1.7	2.3	1.6	218
COPD	110	1.5	1.2	1.8	7.4	817
Asthma	72	1.3	1.0	1.6	2.6	189
Ear, Nose and Throat Infections	67	1.2	0.9	1.5	2.0	136
Convulsions and Epilepsy	70	1.2	0.9	1.5	2.2	153
Cellulitis	76	1.1	0.9	1.4	6.2	468
Angina	55	0.8	0.6	0.9	2.4	132
Pelvic Inflammatory Disease	23	0.4	0.2	0.6	1.9	44
Influenza and Pneumonia	19	0.3	0.2	0.4	12.6	239
Perforated/Bleeding Ulcer	15	0.2	0.1	0.3	4.2	63
Hypertension	7	0.1	0.0	0.2	2.7	19
Other Vaccine-Preventable Cond.	6	0.1	0.0	0.2	4.2	25
Gangrene	7	0.1	0.0	0.2	8.3	58

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ACSC HOSPITALISATIONS IN WYNDHAM – FEMALES						
	No. Admissions	Rate per 1000	Lower Limit CI	Upper Limit CI	Ave. No. Bed Days	Total No. Bed Days
Diabetes Complications	927	24.2	22.7	25.7	6.4	5910
Dehydration and Gastroenteritis	247	4.8	4.2	5.4	1.4	343
COPD	144	3.8	3.2	4.5	6.3	913
Pyelonephritis	161	3.4	2.8	3.9	3.5	557
Asthma	136	2.3	1.9	2.6	2.6	358
Dental Conditions	124	2.1	1.7	2.4	1.1	139
Iron Deficiency Anaemia	91	2.1	1.6	2.5	1.7	153
Cellulitis	72	1.5	1.2	1.9	4.6	332
Ear, Nose and Throat Infections	88	1.4	1.1	1.8	1.7	152
Congestive Cardiac Failure	44	1.3	0.9	1.7	10.1	442
Angina	51	1.3	0.9	1.6	1.2	60
Convulsions and Epilepsy	60	1.0	0.7	1.3	2.2	133
Pelvic Inflammatory Disease	31	0.5	0.3	0.7	2.5	76
Perforated/Bleeding Ulcer	10	0.3	0.1	0.4	8.7	87
Hypertension	9	0.3	0.1	0.4	1.7	15
Influenza and Pneumonia	13	0.2	0.1	0.4	10.9	141
Gangrene	5	0.1	0.0	0.3	19.8	99

Hospitalisations of Females by Ambulatory Care Sensitive Conditions  
 Western Metropolitan Sub-region Local Government Areas, 2006–2007  
 Source: Victorian Health Information Surveillance System<sup>3</sup>

<sup>3</sup> 'CI' denotes 'confidence interval'. 'COPD' is for 'Chronic Obstructive Pulmonary Disorder'.