Asthma Visits to

Alberta Emergency Departments:

April 1, 1999 to March 31, 2005

For more information on the clinical implications, please contact:

Brian H. Rowe, MD, MSc, CCFP(EM), FCCP
Department of Emergency Medicine, University of Alberta
Room 1G1.43 WMC
8440–112th Street NW
Edmonton, Alberta T6G 2B7 CANADA

Phone: (780) 407-6707
Fax: (780) 407-3982
E-mail: brian.rowe@ualberta.ca

For more information on the report methods, please contact:

Rhonda J. Rosychuk, PhD, PStat
Department of Pediatrics, University of Alberta
4th Floor, Room 9423, Aberhart Centre
11402 University Avenue NW
Edmonton, Alberta T6G 2J3 CANADA

Phone: (780) 492-0318
Fax: (780) 407-6435
E-mail: rhonda.rosychuk@ualberta.ca

May 14, 2007

Authors

Rhonda J. Rosychuk, PhD, PStat
AHFMR Population Health Investigator
Associate Professor and Biostatistician
Department of Pediatrics, University of Alberta

Brian H. Rowe, MD, MSc, CCFP(EM), FCCP
Canada Research Chair in Emergency Airway Diseases
Professor and Research Director
Department of Emergency Medicine, University of Alberta

Don C. Voaklander, PhD
Associate Professor
Department of Public Health Sciences
School of Public Health, University of Alberta

Terry P. Klassen, MD, MSc, FRCP(C)
Professor and Chair
Department of Pediatrics, University of Alberta

A. (Sentil) Senthilselvan, PhD
Professor and Associate Chair
Department of Public Health Sciences
School of Public Health, University of Alberta

Thomas J. Marrie, MD, FRCP(C)
Professor and Dean
Faculty of Medicine and Dentistry, University of Alberta

Acknowledgments

The authors thank Dongsu Wang and Christina Haines for providing extensive data analysis and data examination.

The authors greatly appreciate the efforts of Yan Jin and Sylvia Wilson at Alberta Health and Wellness in facilitating access to the data used in this report.

This report was made possible by an operating grant from the Canadian Institutes of Health Research (CIHR) and funding from the Alberta Lung Association.

Dr. Rosychuk is supported by the Alberta Heritage Foundation for Medical Research (AHFMR) as a Population Health Investigator. Dr. Rowe is supported by the Government of Canada as a 21st Century Canada Research Chair.

Disclaimer

This study is based in part on data provided by Alberta Health and Wellness. The interpretation and conclusions contained herein are those of the researchers and do not necessarily represent the views of the Government of Alberta. Neither the Government nor Alberta Health and Wellness express any opinion in relation to this study.

Executive Summary

Asthma is a widespread disease with a prevalence of 15% in children and approximately 7 to 10% in adults; exacerbations are common in the emergency department (ED) setting. Emergency departments are an important resource for all communities, by providing care to medically ill and traumatized patients. EDs also play a special role in providing care for traditionally under-served populations – the poor, the uninsured, certain minority groups, and rural residents – who often have trouble accessing other sources of care. Improving the care delivered in Alberta EDs requires a thorough knowledge of the frequency, nature and cause of illness. This report describes the epidemiology of asthma visits to Alberta EDs using administrative data sources.

During the 1999/2000 to 2004/2005 study period, the yearly number of Albertans who visited the ED for any reason grew from 1,584,966 to 1,748,101. ED visits for asthma accounted for 1.8% to 2.4% of the total visits. During the study period, 200,000 ED visits for asthma were made by 93,150 distinct individuals, with an average of 2.1 visits per individual. Most of the individuals (63.3%) had only one visit during the six year period, while 36.7% of individuals had multiple asthma-related ED visits. Children under 18 years of age represented 47.1% of the ED visits and more male than female children presented for asthma. The special populations of Welfare recipients and Aboriginals had higher ED visit rates for asthma than other groups. The ED visit rates varied by region and overall the ED visits for asthma have decreased over time.

The peak months for asthma ED visits were April, September, and December and Saturday, Sunday, and Monday had slightly higher volumes of ED visits than the other days of the week. Generally, ED visits showed two peak periods: 0800 to 1100 hours and 1900 to 2300 hours. The median length of time spent in the ED was 1 hour 35 minutes. Admitted individuals spent longer in the ED (median 4h 12m) with adults generally having longer times to admission than children. The large urban areas of Capital Health and Calgary Health Region had longer times in the ED than other regions.

The ED visits were followed by numerous follow-up visits in non-ED settings at different intervals. Nearly half of individuals (39,809) had at least one follow-up visit within 7 days following the ED visit. Fewer of the follow-up visits were primarily for asthma as the time since ED visit increased. Within 7 days of the end of the ED visit, 111,686 follow-up visits were recorded of which 49,384 were asthma-related. Most follow-up visits occurred in general practitioners' offices.

Summary: Asthma is a common presenting problem in Alberta EDs and further study of these trends is required in order to understand the associated factors relating to the variation in presentations. The impressive findings are an overall decrease in the rates of presentation over the study period, but disparities exist based on age, gender, region, and socio-economic/cultural status. Targeted interventions could be implemented to address specific groups and further reduce the asthma-related visits to Alberta EDs.

Contents

List of Figures

List of Tables

1 Introduction

The discipline of Emergency Medicine is an important area of health care delivery within the Canadian health care system. Emergency departments (ED) are an important resource for all communities, by providing care to medically ill and traumatized patients – 7 days a week, 24 hour a day, every day of the year. EDs also play a special role in providing care for traditionally under-served populations – the poor, the uninsured, certain minority groups, and rural residents – who often have trouble accessing other sources of care. With the development of both adult and paediatric Emergency Medicine residency training programs in Canada, the field of emergency medicine has linked its large clinical volume with increased administrative, educational, and research activities.[1] The goal of the discipline is to provide support, expertise, and coordination for the care of all acutely ill and injured patients in Canada.

This report is designed to assist health care planners, users and others with an understanding of the type and severity of asthma patients seen in Alberta EDs. The report is based on the principles that improving the care delivered in Alberta emergency departments requires a thorough knowledge of the frequency, nature and cause of illness presentations. This report is a collaborative effort of a multidisciplinary team aiming to describe the epidemiology of ED visits for asthma across the province of Alberta. It is based on data obtained during the 1999/2000 to 2004/2005 fiscal years from the Ambulatory Care Classification System (ACCS). The ED visits are reported from April 1, 1999, through March 31, 2005. Follow-up visits to physicians after ED visits are also described. These follow-up visits are available for up to 365 days after an individual's ED visit.

2 Background on Asthma

Asthma is a chronic, relapsing airway disease characterized by variable severity of dyspnea caused by a variety of stimuli. Acute asthma episodes are usually associated with widespread but variable airflow obstruction that is often reversible either spontaneously or with treatment. The primary pathophysiologic mechanism is airway inflammation which is associated with an increase in the existing bronchial hyper-responsiveness.[2] Short-lived, reversible episodes are commonly referred to as "asthma attack" (due to spasm of the bronchial muscles surrounding airways), while longer term, persistent episodes are referred to as "exacerbations". It is believed the pathophysiology of exacerbations involves inflammation and its resultant effects of increased airway secretions and mucosal edema that lead to variable airflow obstruction and increased responsiveness to various inhaled irritants. Typical symptoms of asthma include wheezing, shortness of breath, chest tightness, sputum production and cough. The severity of asthma ranges from mild to severe. Death due to asthma, though uncommon, still occurs with unsettling regularity.[3]

Asthma is a widespread disease with a prevalence of 15% in children and approximately 7 to

10% in adults; exacerbations are common in the ED setting.[4] Asthma in Canadian children has increased significantly from 3% in 1978 to 12% in 1996: a similar increase has been seen worldwide.[5] The magnitude of increase is not thought to be due to increased diagnosis alone, and researchers are currently exploring the basis for this, with much of the emphasis being placed on environmental factors, obesity, and the hygiene hypothesis.[6,7] A national study using the Student Lung Health Survey (SLHS) showed that in children 5 to 19 years of age, the prevalence varied from a high of 17.9% in Prince Edward Island to a low of 9.7% in Sherbrooke, Quebec.[8] Factors that have been identified to influence interregional variation include socioeconomic factors, Aboriginal status, rural versus urban status and birth weight.[9–11] Becker and colleagues demonstrated that primary prevention of asthma was possible by modifying key risk factors in an infants environment.[12] Emergency department visits present a key window of opportunity for in investigating childhood asthma as it is often the place where these children present with an acute exacerbation.

Asthma cannot be cured; however, acceptable control can be achieved by limiting exposure to triggering stimuli plus therapy with anti-inflammatory agents alone or in combination with bronchodilating agents. Several national guidelines exist to improve asthma control;[2,3] nevertheless, acute flare-ups are a common presentation to EDs with some subjects returning multiple times. In Canada, Asthma management accounts for nearly $500 million in medical expenditures every year; the treatment of acute asthma accounts for nearly a quarter of these costs.[13,14] It is for this reason that the surveillance and study of asthma in the ED setting is an important issue.

3 Methods

3.1 Study Period

The study period for ED visits is April 1, 1999, through March 31, 2005. When examining visits to physicians in non-ED settings after ED visits, the study period of the ED visits is April 1, 1999, to October 31, 2004, and the visits to physicians in non-ED settings are available from April 1, 1999, to October 31, 2005.

3.2 Data Description

The Ambulatory Care Classification System (ACCS) was developed as a flexible and integrated system for tracking the use of ambulatory care visits within government-funded facilities in Alberta. For example, clinic visits, emergency department visits, and services delivered within acute care institutions in Alberta are included in this database; however, acute care visits to walk-in clinics, doctor's private offices and private facilities are not required to be reported. In addition, deaths and in-hospital separations are not recorded in this database unless they originated from an Alberta ED.

Although ACCS tracks a variety of outpatient services, the data used in this report include only services defined as emergency or general emergency. All emergency department encounters in this province are entered into computerized abstracts that constitute the majority of records within the ACCS system. Using a uniform protocol, trained and supervised medical records nosologists code each chart using ICD-9-CM diagnostic codes[15] (prior to April 1, 2002) or ICD-10-CA (April 1, 2002 onward) at each ED in the province. As well, sport/recreation activity sub-codes (as appropriate) and ICD-9-CM diagnostic codes are assigned to each chart by the coder in certain regions.

Each ACCS record represents a service characterized by a combination of a personal health number (unique to each Alberta resident), a management information systems (MIS) code used to classify the type of service provided used and the date of visit. Together, these three identifiers make a given record unique within the data system.

Demographic data were obtained by linking the individuals in ACCS to the individuals in an annual Alberta Health Care Insurance Plan (AHCIP) cumulative registry file. The cumulative registry file includes all persons registered under the provincial health insurance plan at any time in a given year (in this case, the 1999/2000 to 2004/2005 fiscal years). This file includes persons who may have been in the province for only part of the year. Visitors to emergency departments who were not registered with the AB health care insurance plan were not included in this report. The demographic information includes: age, gender, health region of residence and socio-economic proxy. This demographic data was also provided for all members of the Alberta population.

In addition to the ED visit information, subsequent visits to physicians in non-ED settings, hereafter called follow-up visits, were obtained by linking the individuals in ACCS to the individuals in the Physician Claims database. The follow-up visits to physicians within 365 days of an individual's ED visit start date were provided. The maximum date for the follow-up visits is October 31, 2005. Up to three diagnosis ICD-9-CM codes were provided for each follow-up visit and these codes were not restricted to the ED visit diagnoses. Table 3.1 provides a list of the data fields and sources used in this report.

3.2.1 Diagnostic Information for ED Visit

Diagnostic information in ACCS consists of a main ambulatory diagnosis field, and five and nine additional diagnostic fields, for ICD-9-CM and ICD-10-CA codes, respectively. In the complete 1998/1999 ACCS file, a main ambulatory diagnosis was reported 100% of the time. A second diagnosis was reported 29% of the time; the third, fourth fifth and sixth were reported 6%, 1%, 0.4%, 0.1% of the time, respectively. Recent studies using ACCS data indicate that the accuracy of the diagnosis is approximately 97%.[16–18]

TABLE 3.1: Data fields used in this report.

Variable	Source
Diagnostic Information for ED Visit	ACCS
Disposition Status	ACCS
Date of ED Visit	ACCS
Time of ED Visit	ACCS
Age	AHCIP, ACCS
Gender	AHCIP, ACCS
Health Region of Residence	AHCIP
Socio-economic Proxy	AHCIP
Date of Follow-up Visit	Physician Claims
Diagnostic Information for Follow-up Visit	Physician Claims
Physician Specialty	Physician Claims
Follow-up Facility Type	Physician Claims

3.2.2 Disposition Status

All patients entering an ED are given a disposition according to the manner in which they are separated/released from the ambulatory service facility. Disposition codes are provided in Table 3.2. Service recipient is the terminology used to refer to an individual visiting an ED for medical care.

Regional and temporal variation in coding practices for left without being seen (LWBS) require special consideration when identifying persons who are not seen by a physician in an ED. Through discussions with medical coding experts, LWBS cases were defined as persons who either received a disposition code of '9' (LWBS) or a disposition code of '3' (left against medical advice) in addition to an ICD-9-CM code of 'V642' (refused surgery or procedure) recorded as the primary diagnosis. The equivalent ICD-10 code was 'Z532'.[19]

Discharged and admitted subgroups were created by defining discharged as disposition 1 and admitted as disposition 4, 5, or 6.

TABLE 3.2: Disposition codes and definitions.

Code	Definition
1	Discharged – visit concluded.
2	Discharged from program of clinic - will not return for further care. (This code refers only to the last visit of a service recipient discharged from a treatment program at which he/she has been seen for repeat services.)
3	Left against medical advice. (Intended care not completed.)
4	Service recipient admitted as an inpatient to Critical Care Unit or OR (Operating Room) in own facility.
5	Service recipient admitted as an inpatient to other area in own facility.
6	Service recipient transferred to another acute care facility (includes psychiatric, rehabilitation, oncology, and pediatric facilities).
7	DAA - Service recipient expired in ambulatory care service.
8	DOA - Service recipient dead on arrival to ambulatory care service.
9	Left without being seen. (Not seen by a professional service provider.)

3.2.3 Date of ED Visit

The start date is the month and day of the year the ED service was started. The end date is the month and day of the year the ED service ended.

3.2.4 Time of ED Visit

For analytical purposes, time of visit was reduced to hour of visit. The number of visits for a given hour represents the number of visits between the start of that hour and the hour following less one minute (for example, 11:00-11:59).

3.2.5 Age

The age available in the cumulative registry file is the age in years of a person at the end of a fiscal year. Therefore, the age ‘0’ represents all children who are one year of age less-a-day or younger at the end of the fiscal year (that is, were born during that fiscal year). When the age is not available in the cumulative registry file, the age recorded in ACCS is used. If there is an inconsistency in the reporting of age from both data sources, the cumulative registry file age is used.

Age groupings are formed into 5–year intervals (with the exception of newborns, the 1 to 4 year–old age group, and the 90+ year–old age group). Two age subgroups are also created: adults are

defined as all individuals 18 years of age or older and children (pediatrics) includes all individuals less than 18 year of age at date of ED visit.

3.2.6 Gender

The gender is reported in the cumulative registry file. Almost all Albertans are coded as having either a male (M) or female (F) gender. When the gender is not available in the cumulative registry file, the gender reported in ACCS is used.

3.2.7 Health Region of Residence

The health region of residence is reported according to which Regional Health Authority (RHA) the person lived at the end of the fiscal year. Currently, the province is divided into nine RHAs. These nine RHAs are further divided into 70 sub-Regional Health Authorities (sRHAs). Prior to 2003 the province was divided into 17 regions.[20] Alberta Health and Wellness uses postal code information and the geographic boundaries of the sRHAs to provide the sRHA of residence for each individual in the data file for analysis purposes. Figure 3.1 shows the sRHA boundaries and RHA names. The sRHA codes and names are provided in Table E.1.

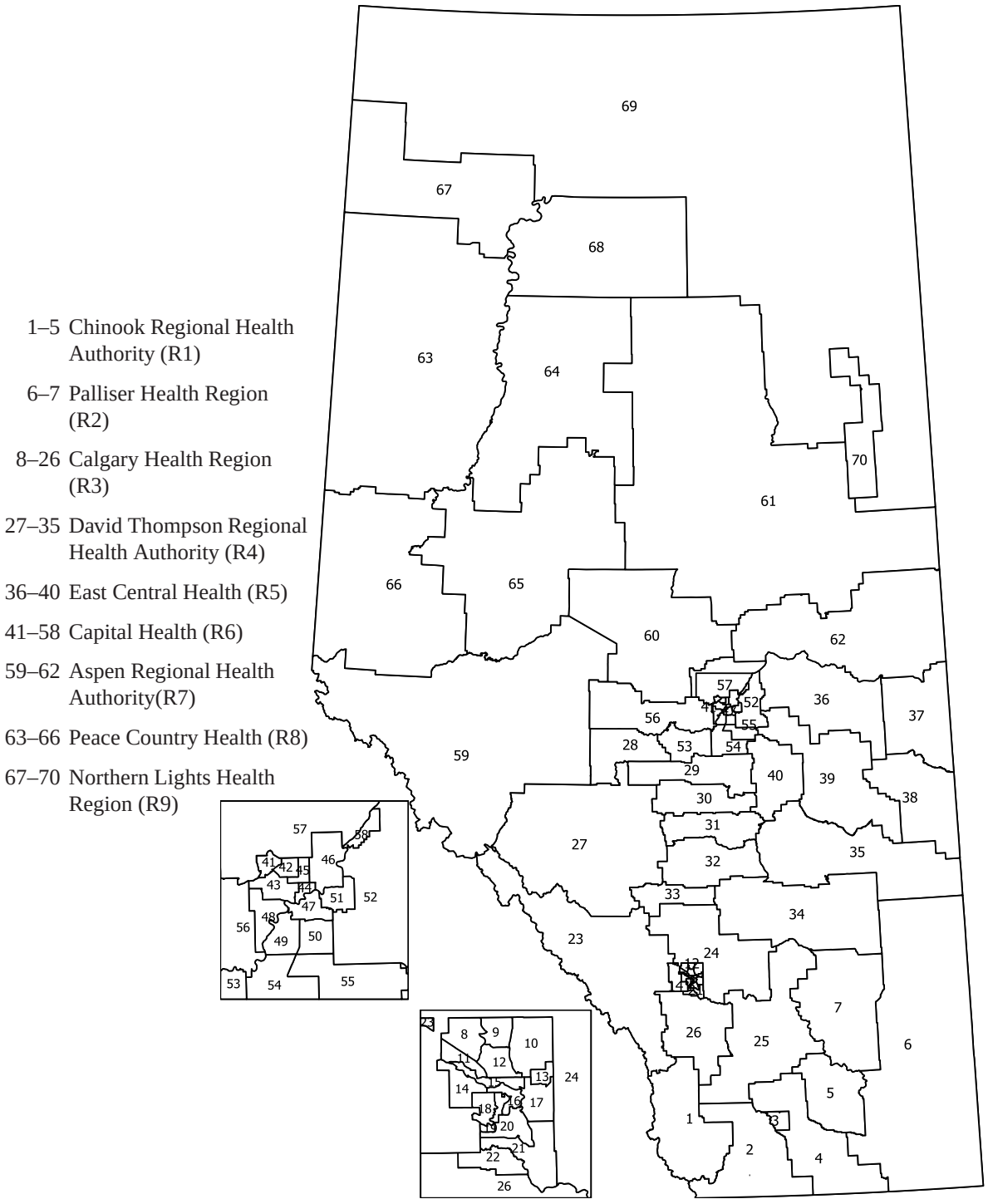
3.2.8 Socio-economic Proxy (pSES)

Healthcare in Alberta is funded by the Alberta government and is financed in part through health-care insurance premiums. Residents with lower incomes or on social services (e.g., welfare) are eligible for subsidies for these health premiums. As a result, the subsidy level can be used as a proxy measure for socio-economic status. In addition, many Aboriginal individuals in Alberta have "Treaty" status based on treaties between their First Nation bands and the Federal Government. These treaties entitle healthcare at no cost for any member of the First Nation band that signed the treaty (for further definition of "Treaty" status, please see reference to Indian and Northern Affairs Canada[21]). Consequently, the subsidy level variable combines data from a number of different fields into a single field with four possible values: "Aboriginal–with Treaty status" (A), "Welfare" (W), "Government Sponsored Programs" (S), and "Other" (O, regular). These groups are mutually exclusive: each individual is a member of only one group at the end of a fiscal year.

The socio-economic proxy must be used carefully when senior citizens are considered. Since October 1, 2004, all seniors have been exempt from paying Alberta Health Care Insurance premiums. In addition, the Welfare (assistance program) is not generally applicable to seniors.

This variable is used to determine Alberta residency for the purposes of analyzing data on Alberta

FIGURE 3.1: Alberta sub-Regional Health Authorities.



residents only. An Alberta resident is defined as an individual that has a non-missing socio-economic proxy (pSES).

3.2.9 Date of Follow-up Visit

The month and day of the year an individual visited a physician in a non-ED setting. The follow-up visit must occur within 365 days of an individual's ED visit end date to be included in the data set. The latest date for the follow-up visits is October 31, 2005. To enable 365 day follow-up of individuals making ED visits, a cut-off date of October 31, 2004, for ED visits is used in the follow-up visit analyses.

3.2.10 Diagnostic Information for Follow-up Visit

Diagnostic information in the Physician Claims file consists of three diagnostic fields. These diagnostic fields use ICD-9 codes only.

3.2.11 Physician Specialty

The Physician Claim file provides the specialty of the physician involved in the follow-up visit. For the purposes of this report, 11 physician specialty codes were used (Table 3.3).

TABLE 3.3: Physician specialty codes and definitions.

Code	Definition
CARD	Cardiology, including Cardiac Surgery
EMSP	Emergency Medicine - Specialty
FTER	Full Time Emergency Room
GAST	Gastroenterology, including Pediatric Gastroenterology
GP	General Practice
IDIS	Infectious Diseases
INMD	Internal Medicine
PED	Pediatrics
RSMD	Respiratory Medicine
THOR	Thoracic Surgery
Other	All other categories

3.2.12 Follow-up Facility Type

The follow-up facility type is the type of facility that provided the follow-up service. This information is provided by the Physician Claim file. Three categories of facility are used in this report

(Table 3.4).

TABLE 3.4: Facility codes and definitions.

Code	Definition
ACT	Active Treatment Hospital, including Active Treatment Clinic and Ambulatory Care Centre
OFFC	Practitioner's Office
Other	All other categories

3.3 Case Definition

The primary and secondary ambulatory care diagnoses were used to identify cases. These diagnostic fields are reserved for the diagnoses most responsible for the ambulatory service. Distinct individuals were identified using a personal health number (PHN). 'First visits' were used for the purposes of generating a numerator in rate calculations. This identification was completed by sorting by PHN and then the date/time of first visit, and retaining only the first record within the grouped sort order. The result is a unique record for each person dated at the first ED visit for asthma. Put simply, a case is any Alberta resident who makes at least one visit to an ED for asthma during the study period.

Two ICD-9-CM and ICD-10-CA codes were used to obtain the case data (Table 3.5). To be considered an asthma visit, the first or second diagnosis fields in ACCS had to have either of the diagnostic codes.

TABLE 3.5: Diagnostic codes for the case definition of asthma.

ICD-9-CM	ICD-10-CA
493.x {Asthma all forms}	J45.x {Asthma all forms}

For the follow-up visits, the same diagnostic codes were used to identify asthma follow-up visits and non-asthma follow-up visits. The first or second diagnostic fields had to match at least one of the diagnostic codes in Table 3.5 for the follow-up visit to be classified as an asthma follow-up visit.

3.4 Data Analysis

Frequencies and percentages summarize categorical data such as number of ED visits during the study period. Mean, standard deviation (SD), median, and interquartile range (IQR) summarize

continuous data such as age at ED visit. Graphical summaries include bar charts for categorical data and line plots for data over time. The numeric and graphic summaries are provided for each fiscal year and all years combined as well as for different subgroups such as age group, gender, and socio-economic proxy (pSES). For the pSES summaries, only individuals less than 65 years of age at time of ED visit are included. Adults ($\geq$ 18 years of age) and children ($<$18 years of age) data sets were created from full data set to facilitate separate adults and children summaries and analyses. For analyses that spanned the study period, children defines individuals whose age was less than 18 years at first ED visit regardless of the age at subsequent ED visits.

Individuals made multiple visits to the ED. When summarizing ED visit information, the number of visits and the number of individuals are determined. If the summary involves mutually exclusive categories, such as male or female, then the number of distinct (unique) individuals are reported. For information like disposition, the same individual may have multiple ED visits during the study period and each ED visit may have a different disposition. In this case, the number of individuals by category is reported but the individuals are not necessarily distinct.

For each fiscal year, the number of asthma ED visits per 1,000 population is calculated by five year age groups (newborn, 1–4 years, 5–9 years, ..., 85–89 years, 90+ years) and gender for the full data set. These same calculations are made by pSES. A smoothed curve is added to the graphical display. The curve is based on a robust scatter-plot smoothing algorithm (LOWESS).

Directly standardized rates (DSRs) and associated SDs[22] are calculated adjust for differences in the gender and age distributions over time and over geography. The Alberta population in 1999/2000 stratified by gender and age group is used as the reference population for DSRs based on the whole group. The DSRs are calculated by fiscal year and by RHA. The DSRs have no intrinsic meaning but are a way to compare data to adjust for gender and age distributions.

To facilitate analyses with both ED and follow-up visits, the ED visits are truncated to have end dates before October 31, 2004. That is, a reduced ED visit data set is used in conjunction with the follow-up visits to capture a full 365 days of follow-up visits following an ED visit. The follow-up visits are summarized for the 7, 14, 30, 90, and 365 days following the ED visit. Since individuals may have multiple ED visits, the follow-up visits may not necessarily be linked to *only* one ED visit. Unique follow-up visits are presented and summarized by follow-up visit level variables (e.g., facility type). For most variables at the ED visit level (e.g., age category), if multiple follow-up visits are linked to the multiple ED visits, the category of the earliest ED visit is used (e.g., age category at earliest ED visit in the multiply linked set).

A discharged data subset is created to examine the time from ED visit to the next ED visit as well as the time from ED visit to the first follow-up visit. The discharged subset includes one record per distinct individual who made an ED visit during November 1, 2003, to October 31, 2004, and whose ED visit concluded in discharge (disposition=1). If an individual had more than one

ED visit during this time frame, one ED visit is randomly selected to be the ED visit included in the discharged subset. The ED visits used in the discharged subset are referred to as index ED visits. The time from the index ED visit end date to the next ED visit start date is calculated. If an individual did not have an ED visit after the index ED visit, the time calculated is based on the time from the index ED visit to the end of the entire study period (March 31, 2005). These individuals' event times are censored at March 31, 2005. Similarly, the time from index ED visit to the first follow-up visit is calculated. If an ED visit had occurred before the first follow-up visit, the time was censored at the date of the ED visit. If an individual did not have a follow-up visit before the end of the study period, the time is censored at the end of the study period (i.e., March 31, 2005). Kaplan-Meier curves are created to display the times to these events by different factors.

There are several instances where data were missing or inconsistent. Health region of residence was occasionally coded as '99', an invalid value. These persons (five individuals who visited an ED province-wide) were removed from the region-specific analyses, but not from the other analyses. In the population data, 1,365 people had missing sRHA of residence and were not used in population calculations.

In situations where individuals had inconsistent age data (19 individuals who visited an ED province-wide), records were excluded from age-specific calculations. If ages were inconsistently reported over multiple visits, the age reported was used for yearly analyses. For 3,231 individuals in the population, information on age was missing. These individuals were excluded from the calculations of age group specific calculations.

If gender was inconsistently reported over multiple visits for an individual, the gender reported was used for yearly analyses and the most frequently reported gender was used for combined year analyses. If the individual's gender was missing or unknown, the records were excluded from the gender-specific analyses (7 individuals who visited an ED province-wide). For the follow-up visits, if gender was inconsistently reported over the time period, a unknown category (U) was created.

SAS[23] and Splus[24] were the statistical software packages used for data analysis.

4 Results

4.1 General Alberta Population

During the study period, the Alberta population grew from 2,957,008 in 1999/2000 to 3,210,035 in 2004/2005 (Table 4.1). Males and females represented nearly equal numbers of the population.

Both adults and children have increased in numbers over the years with 774,422 children in 2004/2005. Most of the population (82%) was part of the regular (Other) pSES group with 11% in the Government Sponsored Program group, 4% in the Aboriginal group, and 3% in the Welfare group.

The population for each RHA has increased over time. Calgary Health Region (R3) and Capital Health (R6) each had populations over one million as of March 31, 2005. Northern Lights Health Region (R9) had the smallest population size.

4.2 ED Visits for Asthma

4.2.1 General

During the study period, the yearly number of Albertans that visited the ED for any reason grew from 1,584,966 (1999/2000) to 1,748,101 (2004/2005). The number of ED visits for asthma from Albertans during the same period ranged from 30,440 to 37,443 accounting for 1.8% to 2.4% of the total visits (Table 4.2). Over all six fiscal years, 200,000 ED visits for asthma were made by 93,150 distinct individuals, with an average of 2.1 visits per individual (median 1, IQR 1 to 2, max 322). Most of the individuals (58,981, 63.3%) had only one visit during the six year period, while 36.7% of individuals had multiple asthma-related visits. For the majority of ED visits (75.4%), the asthma diagnosis was reported as the first diagnosis.

4.2.2 Age and Gender

Of the 200,000 ED visits for asthma, children under 18 years of age accounted for 47.1% (94,187) and seniors accounted for 6.4% (12,859) of the visits. Female exceeded male visits overall, 50.6% vs 49.4% (101,198 vs 98,802). Until age 14, however, more male than female children presented for asthma; a noticeable spike reaching 47.6/1000 visits for boys aged 1 to 4 years old in 2004/2005 compared to 26.9/1000 for girls the same age was observed (Figure 4.1). Following age 14, the trend reversed to demonstrate females had more visits than males, particularly in the 15–19 year range (12.1/1000 vs 8.7/1000, respectively), until approximately 70–74 years of age, at which time the rates are closer. A similar pattern was observed for the other fiscal years.

The gender and age group directly standardized rates have declined from 12.7/1000 in 1999/2000 to 10.1/1000 in 2004/2005 when all ages are considered and the population from the 1999/2000 year is used as a reference (Figure 4.2).

TABLE 4.1: Demographic information for Alberta population by fiscal year. Counts and percents (%) are provided by gender, age category, socio-economic proxy (pSES) for individuals less than 65 years of age, and Regional Health Authority (RHA). Since the data are not complete, the sample size is provided for age, pSES, and RHA.

	Fiscal Year					
	99/00	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**
n	2,957,008	3,007,582	3,072,384	3,124,487	3,165,157	3,210,035
Gender						
F	1,480,611(50)	1,505,318(50)	1,537,598(50)	1,563,460(50)	1,583,895(50)	1,607,665(50)
M	1,476,397(50)	1,502,264(50)	1,534,786(50)	1,561,027(50)	1,581,262(50)	1,602,370(50)
Age, yrs	2,956,283	3,006,911	3,071,800	3,123,985	3,164,752	3,209,691
mean(SD)	34.6(21)	34.8(21)	35.1(21)	35.3(21)	35.6(21)	35.8(21)
median	34.0	34.0	35.0	35.0	35.0	35.0
Category						
Adults	2,185,677(74)	2,236,717(74)	2,298,458(75)	2,349,836(75)	2,391,416(76)	2,435,269(76)
Children	770,606(26)	770,194(26)	773,342(25)	774,149(25)	773,336(24)	774,422(24)
pSES	2,657,808	2,700,038	2,756,969	2,801,176	2,834,437	2,870,819
A	104,095 (4)	107,581 (4)	110,515 (4)	113,181 (4)	115,760 (4)	118,294 (4)
O	2,148,874(81)	2,193,169(81)	2,261,620(82)	2,315,643(83)	2,337,552(83)	2,341,978(82)
S	322,879(12)	321,416(12)	308,558(11)	290,487(10)	296,812(11)	326,256(11)
W	81,960 (3)	77,872 (3)	76,276 (3)	81,865 (3)	84,313 (3)	84,291 (3)
RHA	2,956,797	3,007,309	3,072,171	3,124,248	3,164,905	3,209,858
R1	150,085 (5)	150,868 (5)	151,529 (5)	152,651 (5)	153,742 (5)	154,790 (5)
R2	93,602 (3)	95,565 (3)	97,458 (3)	98,006 (3)	99,363 (3)	100,610 (3)
R3	1,042,066(35)	1,067,058(36)	1,098,149(36)	1,122,521(36)	1,143,368(36)	1,164,535(36)
R4	273,703 (9)	277,706 (9)	282,345 (9)	286,336 (9)	290,311 (9)	293,723 (9)
R5	107,321 (4)	108,224 (4)	109,230 (4)	109,991 (4)	108,666 (3)	110,666 (3)
R6	929,328(31)	943,329(31)	961,950(31)	978,160(31)	990,931(31)	1,000,862(31)
R7	172,973 (6)	174,125 (6)	175,896 (6)	176,609 (6)	174,150 (6)	176,492 (6)
R8	126,278 (4)	127,196 (4)	129,430 (4)	130,885 (4)	132,873 (4)	134,794 (4)
R9	61,441 (2)	63,238 (2)	66,184 (2)	69,089 (2)	71,501 (2)	73,386 (2)

TABLE 4.2: ED visits and distinct individuals by diagnosis for each fiscal year.

	Fiscal Year					
	99/00	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**
All Conditions						
Visits	1,584,966	1,637,196	1,635,370	1,716,841	1,778,115	1,748,101
Individuals	722,263	745,455	744,300	781,928	802,638	804,480
Asthma reported as 1st or 2nd diagnosis						
Visits	37,443 (2.4)	35,321 (2.2)	32,676 (2.0)	30,440 (1.8)	32,564 (1.8)	31,556 (1.8)
Individuals	22,668 (3.1)	22,771 (3.1)	21,665 (2.9)	20,684 (2.6)	22,287 (2.8)	21,700 (2.7)
Asthma reported as 1st diagnosis only						
Visits	26,251 (1.7)	26,347 (1.6)	24,347 (1.5)	23,732 (1.4)	25,566 (1.4)	24,522 (1.4)
Individuals	18,824 (2.6)	19,186 (2.6)	17,986 (2.4)	17,391 (2.2)	18,818 (2.3)	18,145 (2.3)
Asthma reported as 2nd diagnosis only						
Visits	11,185 (0.7)	8,970 (0.5)	8,324 (0.5)	6,698 (0.4)	6,991 (0.4)	7,028 (0.4)
Individuals	5,790 (0.8)	5,379 (0.7)	5,347 (0.7)	4,716 (0.6)	5,116 (0.6)	5,107 (0.6)

FIGURE 4.1: Age-specific ED asthma visit rates per 1,000 population, 2004/2005.

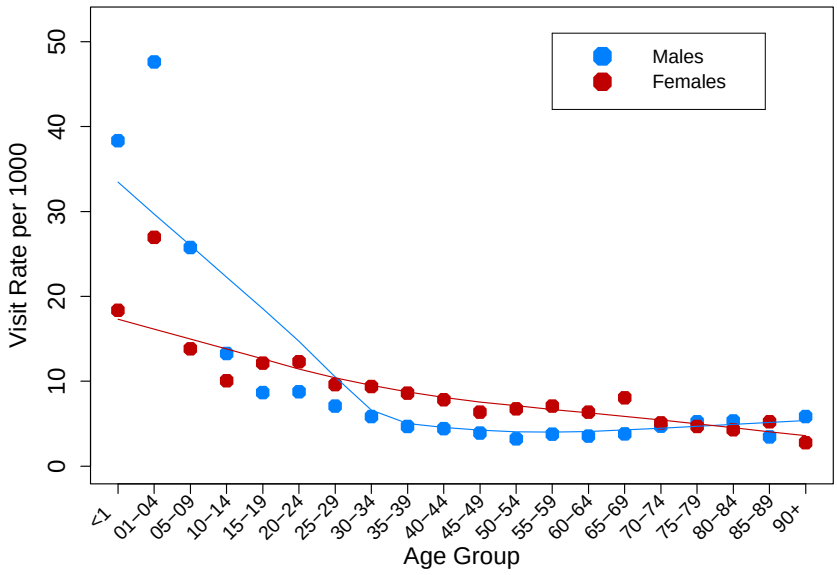
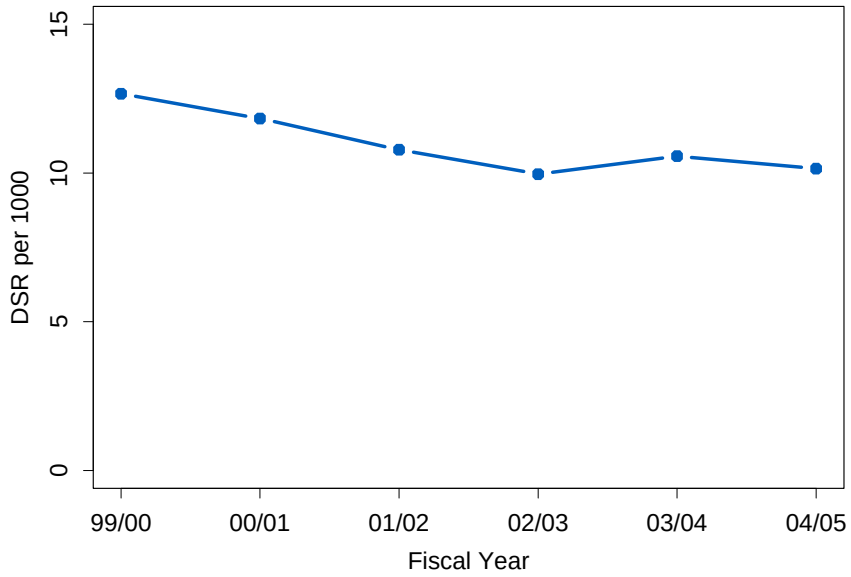


FIGURE 4.2: Gender and age group directly standardized rates (DSRs) per 1,000 population for each fiscal year.



4.2.3 Special Populations

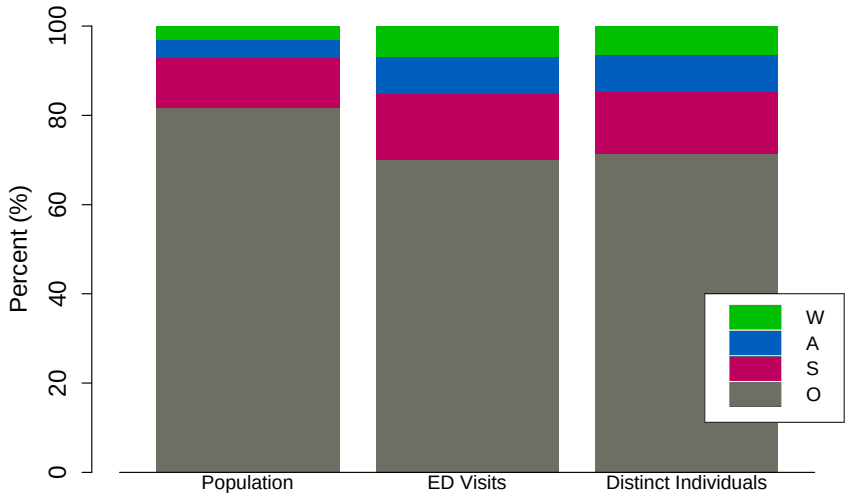
Individuals less than 65 years of age are grouped *a priori* into four socio-economic proxy (pSES) categories. In 2004/2005, the majority of asthma ED visits (70.1%, 20889/29820) were made by the Other (regular) pSES group (Table 4.3). Nearly 15% of ED visits were from 2,853 individuals in the Government Sponsored Program group. ED visits from the Aboriginal group numbered 2,507 (8.4%). The Welfare group had 6.8% of the ED visits. The Government Sponsored Program, Aboriginal, and Welfare groups had disproportionately more ED visits than population in 2004/2005 (Figure 4.3). Similar patterns were seen in each of the other years.

TABLE 4.3: ED visits by pSES (age less than 65 years) for each fiscal year and all years combined.

	Fiscal Year						All
	99/00	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**	**Years**
n	34,635	32,822	30,316	28,790	30,758	29,820	187,141
A	2,473 (7.1)	2,285 (7.0)	2,195 (7.2)	2,223 (7.7)	2,441 (7.9)	2,507 (8.4)	14,124 (7.5)
O	24,229(70.0)	23,360(71.2)	21,739(71.7)	20,863(72.5)	21,844(71.0)	20,889(70.1)	132,924(71.0)
S	5,585(16.1)	4,874(14.8)	4,393(14.5)	3,766(13.1)	4,340(14.1)	4,396(14.7)	27,354(14.6)
W	2,348 (6.8)	2,303 (7.0)	1,989 (6.6)	1,938 (6.7)	2,133 (6.9)	2,028 (6.8)	12,739 (6.8)

The visit rates per 1,000 population for the different pSES groups varied markedly (Figure 4.4). Visits from Aboriginal males less than one year old numbered 154 in 2004/2005 giving a visit

FIGURE 4.3: Population, ED visits, and distinct individuals by pSES (age less than 65 years), 2004/2005.

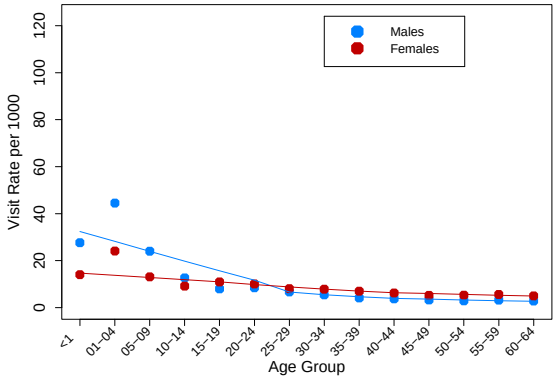


rate of 124.1/1000. Females in the same age group has a visit rate of 67.0/1000. These rates declined for older age groups but were considerably larger than the visit rates for the Welfare group (52.4/1000 for males, 22.5/1000 for females) and the Government Sponsored Program group (59.3/1000 for males, 18.7/1000 for females).

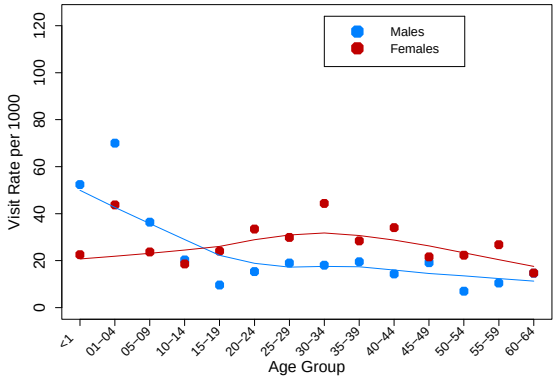
The directly standardized rates by the different pSES groups also varied considerably (Figure 4.5). Individuals from the Welfare group had the highest directly standardized rates, 28.6/1000 in 1999/2000 and 24.8/1000 in 2004/2005. The directly standardized rates for individuals from the Aboriginal group were 22.7/1000 in 1999/2000 and 19.2/1000 in 2004/2005. Members of the Government Sponsored Programs group had the next lowest directly standardized rates (16.5/1000 in 1999/2000, 12.4/1000 in 2004/2005) and the Other group had the lowest directly standardized rates (11.6/1000 in 1999/2000, 9.5/1000 in 2004/2005). The directly standardized rates for 2004/2005 were statistically different among the pSES groups.

FIGURE 4.4: Age-specific ED asthma visit rates per 1,000 population by pSES, 2004/2005.

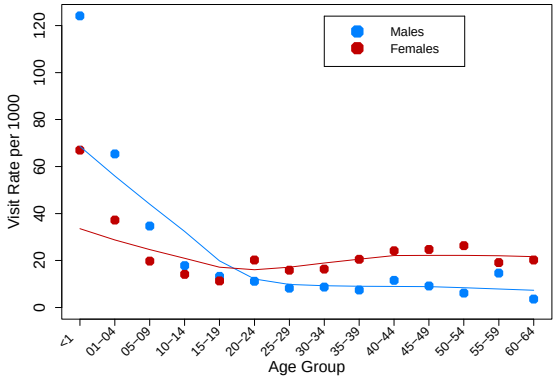
(a) Other



(b) Welfare



(c) Aboriginal



(d) Government Sponsored Programs

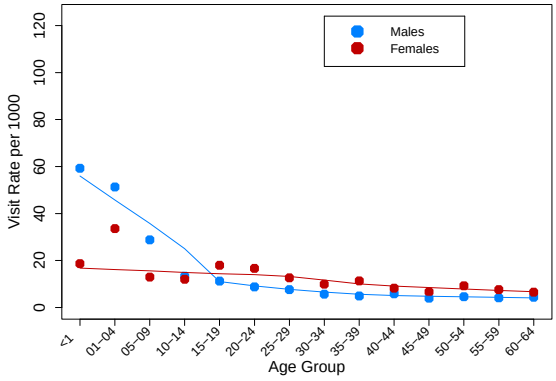
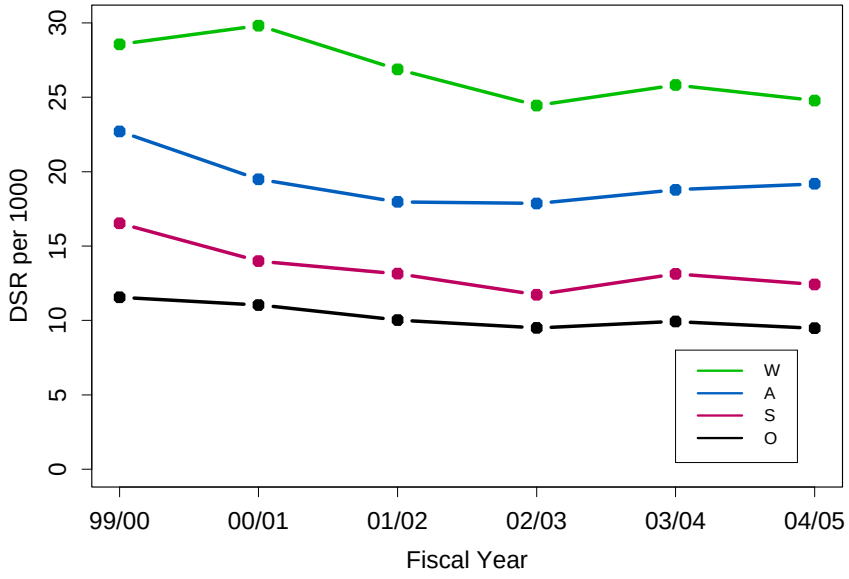


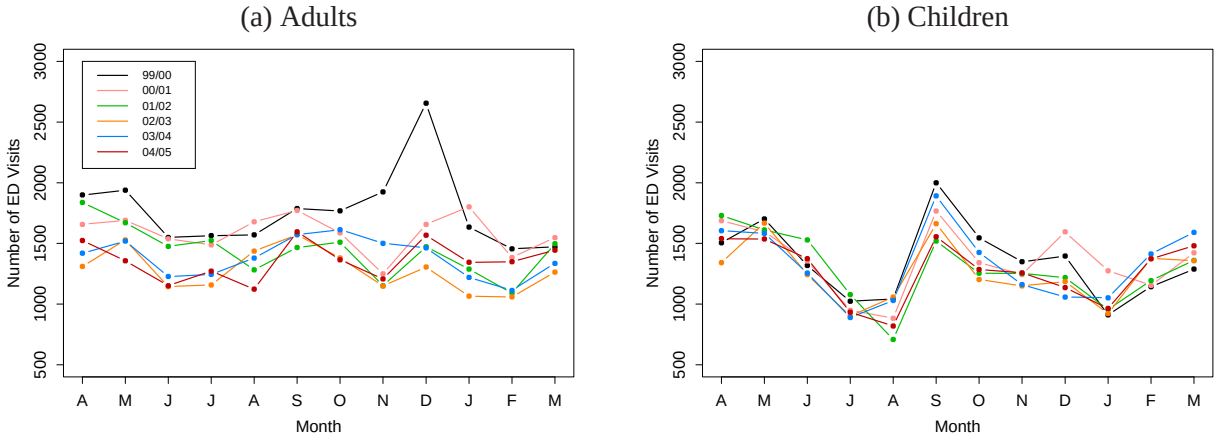
FIGURE 4.5: Gender and age group directly standardized rates (DSRs) per 1,000 population by pSES for each fiscal year.



4.3 Visit Timing

Time of visit was based on the start date and time of the ED encounter. Asthma ED visits for adults remained relatively constant throughout the year, recording between 1,123 to 1,596 per month for 2004/2005. The peaks occurred in April, September, and December. Children had fewer visits overall (ranging from 820 to 1,555 per month) but showed more definite peaks in April–May and September in that same year (Figure 4.6). For most months, the variability from year to year in monthly ED visits was smaller for children than for adults.

FIGURE 4.6: ED visits by month for each fiscal year by age category.

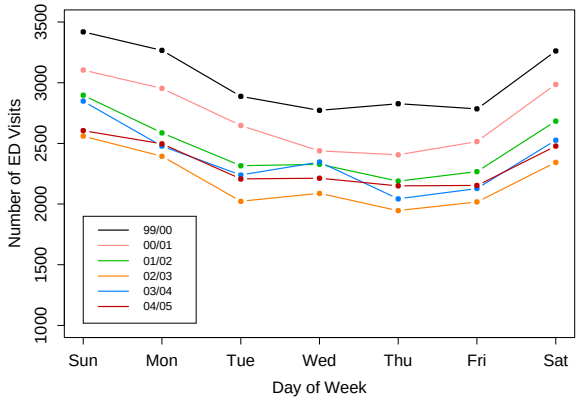


Saturday, Sunday, and Monday had slightly higher volumes of ED visits than the other days of the week over the study period. In 2004/2005, these days accounted for 4,784 (15.2%), 5,322 (16.9%), and 4,884 (15.5%) of visits, respectively. Adults and children showed similar patterns (Figure 4.7). The fewest number of visits were recorded on Thursday, the highest on Sunday. From year to year, the variability in the ED visits by day of the week was smaller for children than for adults.

The hour of the day was missing for 20,738 (10.4%) of the 200,000 ED visits. The number of missing hours decreased over time and in 2004/2005 the hour of the day was recorded for all 31,556 visits. Asthma visits were less frequent during the early morning hours: midnight to 0800 hours totaled 5,122 (16.2% of visits) in 2004/2005. Generally, ED visits showed two peak periods: 0800 to 1100 hours and 1900 to 2300 hours (Figure 4.8). When specific regions are considered, Capital Health and Calgary Health Region did not have as pronounced peak periods as the other RHAs (Figure 4.9).

FIGURE 4.7: ED visits by day of week for each fiscal year by age category.

(a) Adults



(b) Children

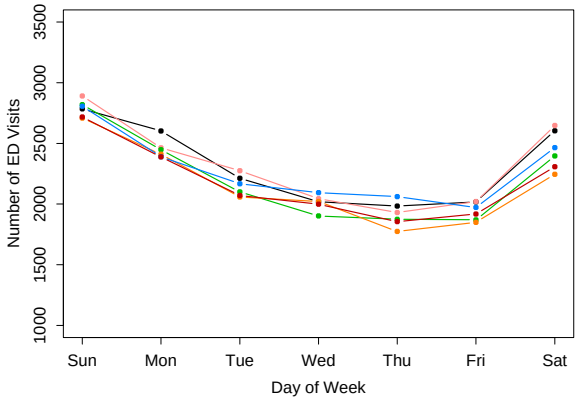
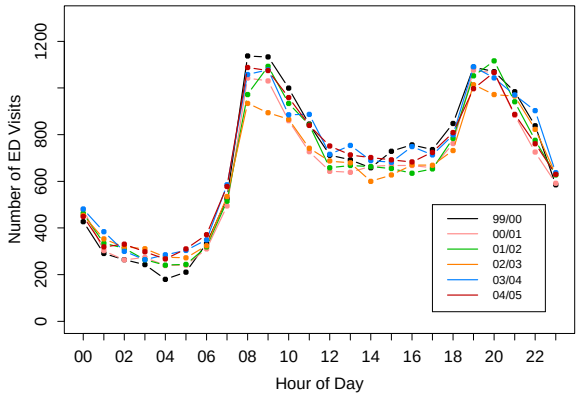


FIGURE 4.8: ED visits by hour of the day for adults and children.

(a) Adults



(b) Children

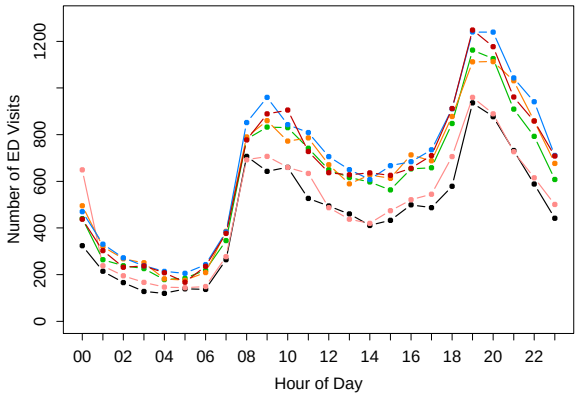
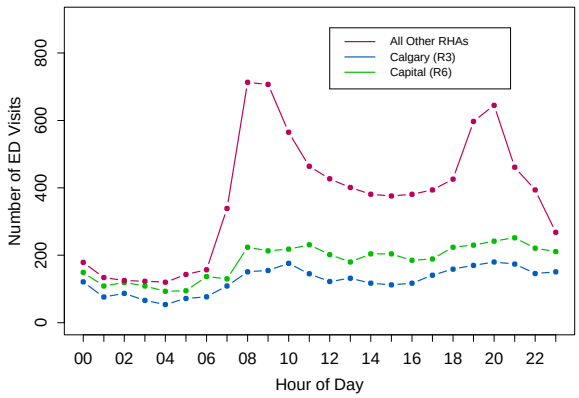
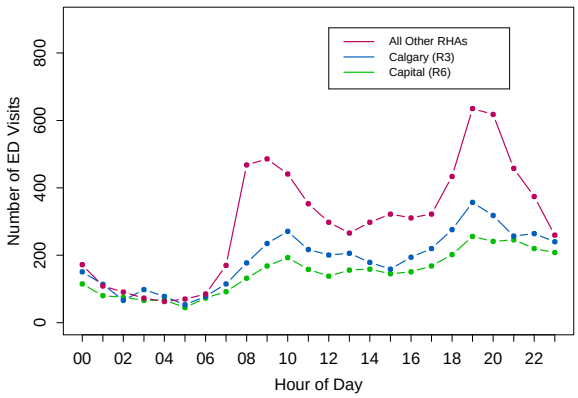


FIGURE 4.9: ED visits by hour of the day for adults and children for selected regions, 2004/2005.

(a) Adults



(b) Children



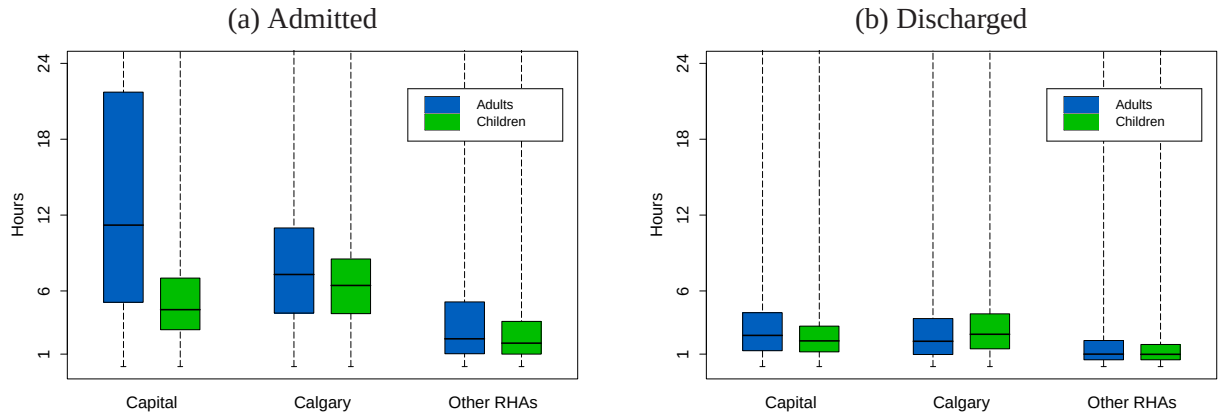
Of 178,394 visits with both ED start dates/times and end dates/times, 181 visits had identical start and end dates and times and most were discharged (130). Conversely, 14 ED visits reportedly exceeded 7 days. Of these, most (9) were in the David Thompson Regional Health Authority (R4) and most (9/14) were discharged. Of the remaining 178,199 ED visits the median time was 1h 35m (IQR 47m to 2h 54m). The times were similar for adults (median 1h 34m, IQR 45m to 3h 26m) and children (median 1h 37m, IQR 49m to 3h 10m). Discharged individuals had a median time of 1h 28m (IQR 45m to 2h 59m) and admitted individuals had a median of 4h 12m (IQR 1h 44m to 8h 12m).

The median times were 2h 26m (IQR 1h 19m to 4h 14m) in Capital Health (R6), 2h 37m (IQR 1h 17m to 4h 39m) in the Calgary Health Region (R3), and 1h 1m (IQR 34m to 2h 5m) in all other RHAs combined. Discharged individuals spent more time in the Capital Health and Calgary Health Region EDs than in other RHAs (Table 4.4, Figure 4.10). The times were similar for adults and children. Admitted individuals had median times of 6h 26m, 6h 43m, and 2h 1m for Capital Health, Calgary Health Region, and all other RHAs combined, respectively. Adults had generally longer times to admission than children.

TABLE 4.4: Duration of ED visit by admission or discharge status. Median (Med), 25th percentile (25^{th}), and 75th percentile (75^{th}) are provided.

	Capital (R6)			**Calgary (R3)**			**All Other RHAs**		
	Med	**25^{th}**	**75^{th}**	**Med**	**25^{th}**	**75^{th}**	**Med**	**25^{th}**	**75^{th}**
Admitted									
All	6h 26m	3h 33m	13h 15m	6h 43m	4h 13m	9h 09m	2h 01m	1h 01m	4h 14m
Adults	11h 12m	5h 06m	21h 44m	7h 19m	4h 15m	10h 59m	2h 13m	1h 02m	5h 08m
Children	4h 31m	2h 56m	7h 01m	6h 26m	4h 12m	8h 32m	1h 52m	1h 00m	3h 35m
Discharged									
All	2h 16m	1h 14m	3h 46m	2h 23m	1h 11m	4h 03m	1h 00m	0h 33m	1h 56m
Adults	2h 29m	1h 16m	4h 17m	2h 01m	0h 58m	3h 49m	1h 00m	0h 33m	2h 05m
Children	2h 03m	1h 11m	3h 13m	2h 34m	1h 25m	4h 11m	0h 59m	0h 33m	1h 46m

FIGURE 4.10: Duration of ED visits by admission or discharge status. The lower, middle, and upper boundaries of the boxes are the 25th percentile, median, and 75th percentile, respectively. The y-axis is truncated at 24 hours.



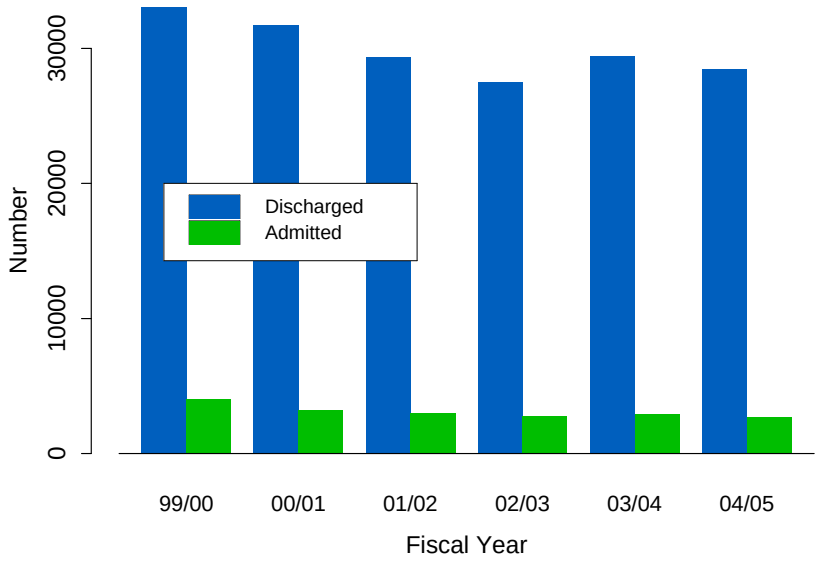
4.4 Outcomes

The vast majority of ED visits resulted in discharges from EDs (Table 4.5). In 2004/2005, 28,460 (90.2%) ED visits from 20,053 individuals resulted in discharge. There were 2,351 admissions to other areas of the ED facility (7.5% of ED visits) involving 2,117 individuals. These outcomes have decreased over time (Figure 4.11). There were 81 ED visits (78 individuals) that resulted in admission to critical care areas or operating rooms. Transfer to another facility was the outcome of 243 visits. Seven visits resulted in individuals who left without being seen, 383 left against medical advice, and 5 expired in ambulatory care service.

TABLE 4.5: ED visits by disposition for each fiscal year and all years combined.

		Fiscal Year						All
		99/00	00/01	01/02	02/03	03/04	04/05	Years
n		37,443	35,321	32,676	30,440	32,564	31,556	200,000
1	Discharged	33,050	31,755	29,374	27,511	29,435	28,460	179,585
2	Discharged from program of clinic	198	206	224	44	59	26	757
3	Left against medical advice	103	94	94	99	129	383	902
4	Admitted to CCU or OR	110	79	70	81	90	81	511
5	Admitted to other area	3,769	2,971	2,700	2,512	2,627	2,351	16,930
6	Admitted to another facility	139	205	207	189	222	243	1,205
7	Expired in ambulatory care service	5	4	3	3	1	5	21
8	Expired on arrival to ambulatory care service	4	0	1	0	0	0	5
9	Left without being seen	65	7	3	1	1	7	84

FIGURE 4.11: ED visits resulting in discharge or admission for each fiscal year. Discharges are defined as disposition 1 and admissions are defined as dispositions 4, 5, or 6.



Of the five individuals who expired in ambulatory care service in 2004/2005, four were female, ranged in age from 24–59, and only 1 out of 5 was from the Other pSES group. Overall, pre-death ED visits were uncommon, with 4 out of 5 having no previous or one previous ED visit during the study period. One female from the Other group was 59 years old and had 24 ED visits for asthma prior to the final ED visit.

In 2004/2005, three individuals were admitted to critical care (CC) areas at two separate occasions. All were female and had ages 4, 31, and 39. The oldest was from the Welfare group while the rest were from the Other group. The remaining 75 individuals (40 females, 35 males) only had one ED visit that resulted in admission to critical care areas and had a total of 430 ED visits during the study period. Their ages ranged from newborn to 86 years, with a median age of 17 years. Most were from the Other pSES group (43). For 17 of the ED visits, the first diagnostic code was not for asthma. The first diagnostic codes for these individuals included cardiac problems (e.g., chest pain or arrhythmia), pneumonia, and unspecified breathing problems; occasionally, these asthmatics had other non-asthma or non-treatment condition (such as appendicitis, diabetes) that resulted in CC hospitalization.

4.5 Repeat Visits

The majority of individuals (63.3%) visited the ED only once during the entire study period (Table 4.6). The remaining individuals, generally visited the ED less than ten times during the six year study period. Fewer than 2% of individuals (1,802) visited the ED more than ten times,

with 1,756 visiting 11 to 50 times, 33 visiting 51 to 100 times, nine visiting 101 to 200 times, and four visiting over 200 times (249, 252, 254, and 322 times). Similar patterns were seen for the adults and children subgroups. More adults had higher numbers of visits than the children. The maximum number of visits for a child was 98 and only five children had between 51 and 100 visits during the study period.

TABLE 4.6: Frequency and percent (%) of ED asthma visits.

	Number of ED Visits						
	1	**2**	**3**	**4**	**5**	**6–10**	**>10**
All	58,981 (63.3)	15,766 (16.9)	6,775 (7.3)	3,609 (3.9)	2,212 (2.4)	4,005 (4.3)	1,802 (1.9)
Adults	31,754 (66.5)	7,555 (15.8)	3,030 (6.3)	1,616 (3.4)	967 (2.0)	1,802 (3.8)	1,041 (2.2)
Children	27,227 (60.0)	8,211 (18.1)	3,745 (8.3)	1,993 (4.4)	1,245 (2.7)	2,203 (4.9)	761 (1.7)

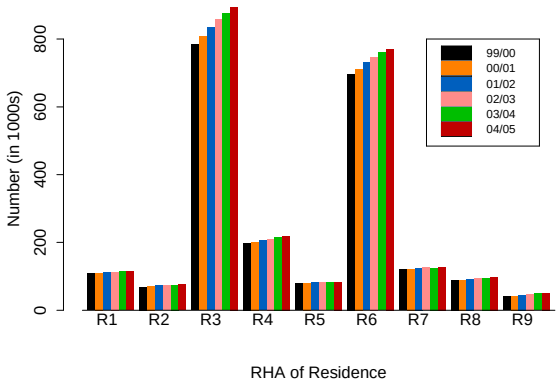
4.6 Regional Variation

Of the 199,971 ED visits reporting both sRHA of residence at end of fiscal year and sRHA of facility where ED visit was made, 59.9% (119,847) had the same sRHA for both residence and ED facility. When RHA is examined, 90.9% (181,736) visits had the same RHA for both residence and ED facility.

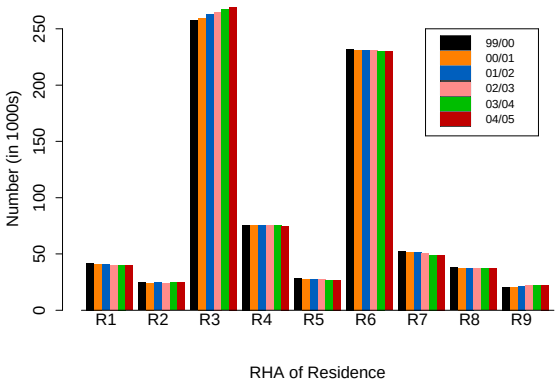
The gender and age group directly standardized rates have declined for most regions over the study period when all ages are considered and the Alberta population from the 1999/2000 year is used as a reference (Table 4.7, Figure 4.13). Capital Health (R6) and the Calgary Health Region (R3) had the lowest directly standardized rates. These were lower than the overall provincial rate in 2004/2005 (Figure 4.14) and most of the other RHAs had higher directly standardized rates than the provincial rate. The RHA with the highest rate in 2004/2005, Aspen Regional Health (R7), had about twice the standardized rate of ED visits as the largest urban areas of Capital Health and Calgary Health Region.

FIGURE 4.12: Population, ED visits, and distinct individuals making ED visits by RHA of residence for each fiscal year for adults and children.

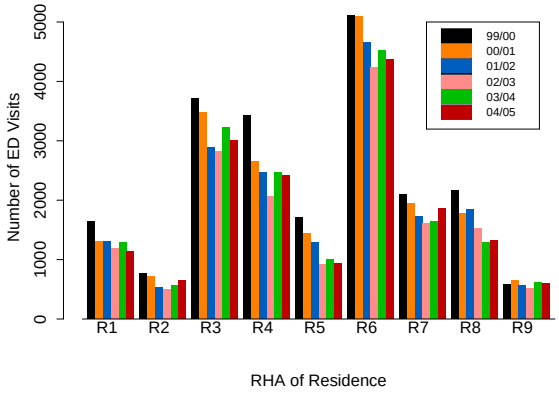
(a) Population, Adults



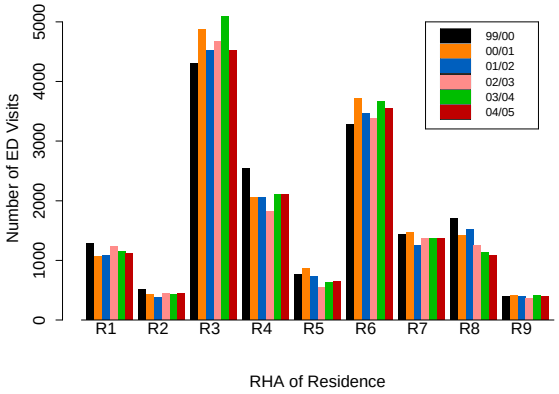
(b) Population, Children



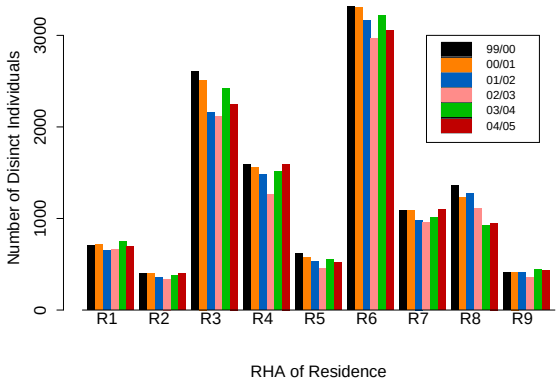
(c) ED Visits, Adults



(d) ED Visits, Children



(e) Distinct Individuals, Adults



(f) Distinct Individuals, Children

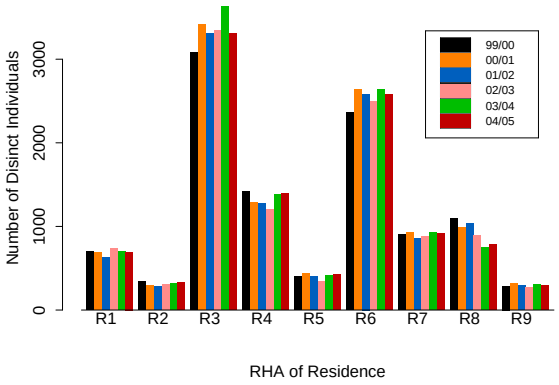


TABLE 4.7: Gender and age group directly standardized rates per 1,000 population by RHA for each fiscal year.

	Fiscal Year					
	99/00	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**
All Alberta						
	12.7	11.8	10.8	10.0	10.6	10.1
Regional Health Authority of Residence						
R1 Chinook Regional Health Authority	19.4	15.5	15.6	16.0	16.2	15.0
R2 Palliser Health Region	13.8	12.1	9.6	9.8	10.2	11.1
R3 Calgary Health Region	7.8	8.1	7.0	7.0	7.7	6.9
R4 David Thompson Regional Health Authority	21.6	16.9	16.0	13.7	15.9	15.7
R5 East Central Health	23.5	21.3	18.5	13.5	15.5	14.7
R6 Capital Health	9.1	9.5	8.7	8.1	8.6	8.3
R7 Aspen Regional Health	20.1	19.2	16.7	16.6	17.2	18.4
R8 Peace Country Health	29.4	24.2	25.3	20.8	17.8	17.5
R9 Northern Lights Health Region	15.4	17.9	14.3	12.1	13.9	13.8

FIGURE 4.13: Gender and age group directly standardized rates (DSRs) per 1,000 population by RHA for each fiscal year.

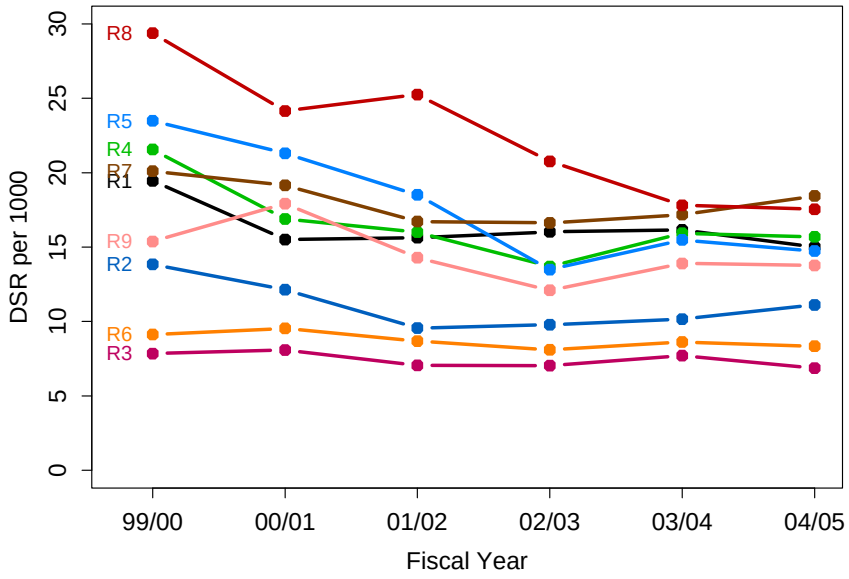
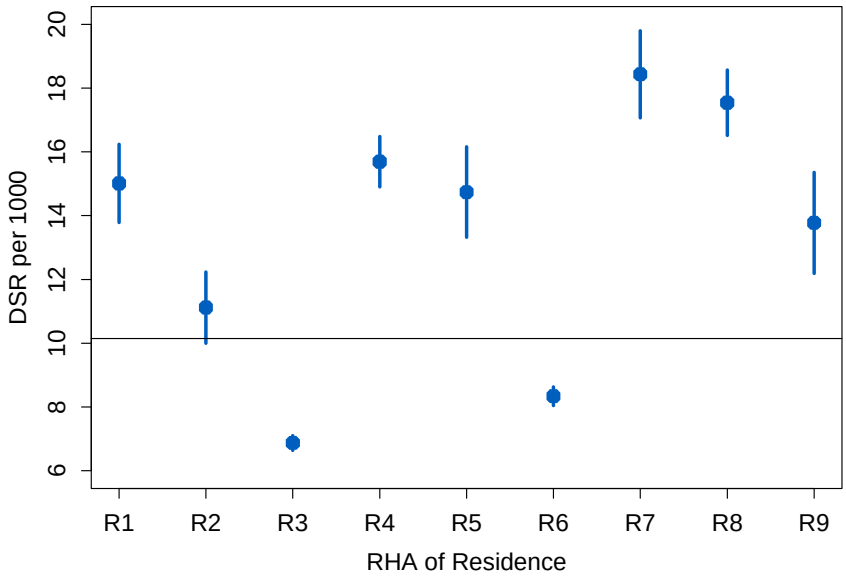


FIGURE 4.14: Gender and age group directly standardized rates (DSRs) per 1,000 population by RHA for 2004/2005. The DSR is provided as a dot surrounded by the 95% confidence interval for each RHA. The provincial DSR in 2004/2005 is represented as a horizontal line.



4.7 Follow-up Visits After ED Visits for Asthma

Between April 1, 1999, and October 31, 2004, there were 186,876 ED visits (90,811 ED visits from children and 96,065 ED visits from adults) for asthma made by 87,778 distinct individuals. Of those ED visits, 171,827 had an ED visit end data recorded. Of these ED visits, 171,822 ED visits ended between April 1, 1999, and October 31, 2004 (82,413 ED visits from children and 89,409 ED visits from adults). These ED visits represented 81,284 distinct individuals (39,416 children and 41,868 adults).

In the seven days following 60,151 ED visits, there were 111,686 follow-up visits and 44.2% were primarily for asthma (49,384, Table 4.8). At 30 days, there were 269,680 follow-up visits and at 365 days, there were 1,572,657 follow-up visits. Nearly half of the individuals (39,809) had at least one follow-up visit within 7 days following the ED visit. There were more follow-up visits from females than males. Individuals in the Welfare group had nearly 7% of ED visits but had 11.6%, 13.3%, and 13.4% of the follow-up visits at 7, 30, and 365 days, respectively. Fewer of the follow-up visits were primarily for asthma as the time since ED visit increased. The same general decrease was seen for adults and children, although children had higher proportions of asthma follow-up visits following the ED visit.

General practitioners were the most common physician group seen, accounting for 63.0%, 61.8%, and 62.9% of the follow-up visits at 7, 30, and 365 days after an ED visit, respectively. Children saw pediatricians for 32.2%, 28.7%, and 20.7% of their follow-up visits at 7, 30, and 365 days

after an ED visit. The majority (54.0%) of the follow-up visits seven days after the ED visit occurred at an active treatment hospital (including active treatment clinic and active ambulatory care centre).

TABLE 4.8: Follow-up visits at 7, 14, 30, 90, and 365 days after ED visit end date. Subgroup percentages are provided in parentheses.

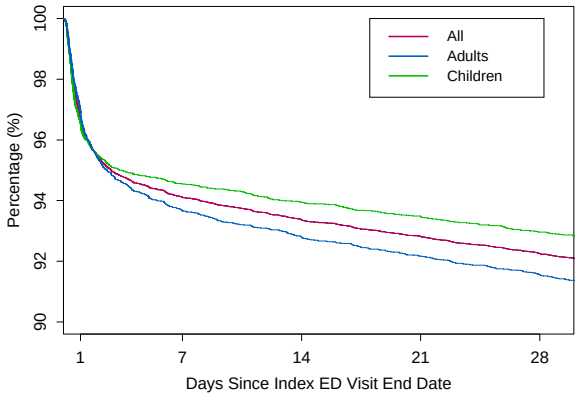
	Days Since ED Visit End Date				
	7	**14**	**30**	**90**	**365**
n	111,686	167,375	269,680	571,413	1,572,657
Age Category					
Adults	65,512 (58.7)	102,117 (61.0)	169,643 (62.9)	370,425 (64.8)	1,047,871 (66.6)
Children	46,174 (41.3)	65,258 (39.0)	100,037 (37.1)	200,988 (35.2)	524,786 (33.4)
Gender					
F	63,268 (56.6)	96,029 (57.4)	156,636 (58.1)	340,291 (59.6)	952,279 (60.6)
M	48,407 (43.3)	71,323 (42.6)	113,004 (41.9)	231,023 (40.4)	620,097 (39.4)
pSES (age less than 65 years)					
A	8,160 (8.2)	12,345 (8.3)	20,901 (8.8)	48,015 (9.5)	135,655 (9.8)
O	65,152 (65.5)	95,683 (64.5)	150,458 (63.1)	312,694 (61.9)	862,016 (62.2)
S	14,688 (14.8)	21,955 (14.8)	35,342 (14.8)	74,437 (14.7)	203,058 (14.6)
W	11,531 (11.6)	18,420 (12.4)	31,671 (13.3)	69,836 (13.8)	185,869 (13.4)
Diagnosis					
Asthma	49,384 (44.2)	64,577 (38.6)	87,577 (32.5)	139,732 (24.5)	266,425 (16.9)
Physician Type					
GP	70,330 (63.0)	104,594 (62.5)	166,642 (61.8)	353,442 (61.9)	989,512 (62.9)
INMD	8,287 (7.4)	12,325 (7.4)	19,528 (7.2)	37,854 (6.6)	84,345 (5.4)
PED	15,020 (13.4)	20,278 (12.1)	29,168 (10.8)	51,907 (9.1)	111,859 (7.1)
Facility Type					
ACT	60,341 (54.0)	79,270 (47.4)	113,500 (42.1)	211,193 (37.0)	520,500 (33.1)
OFFC	48,504 (43.4)	82,905 (49.5)	146,054 (54.2)	334,074 (58.5)	967,025 (61.5)
Other	2,841 (2.5)	5,200 (3.1)	10,126 (3.8)	26,146 (4.6)	85,132 (5.4)

During the November 1, 2003, to October 31, 2004 period, there were 31,289 ED visits with end dates recorded. These visits were made by 21,559 individuals. Nearly all of the ED visits resulted in discharge from the ED (28,223 ED visits, 19,947 individuals). A discharged subset was created to determine the time to next ED visit and time to follow-up visit. Only 2,969 individuals (14.9%) had a repeat ED visit (Figure 4.15a). At seven days after the index ED visit, about 6% the individuals had returned to the ED for another visit. The discharged subset had 19,022 individuals less than 65 years of age. About 4% and 7% of the individuals from the

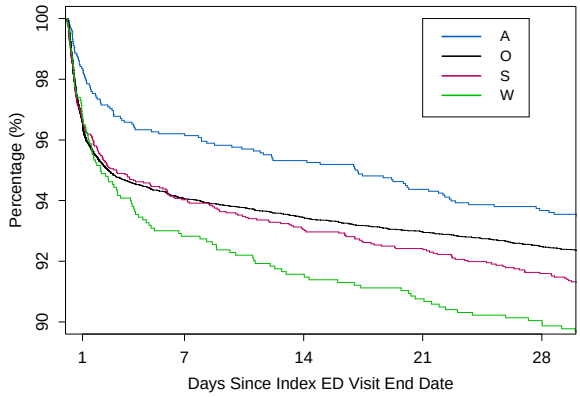
Aboriginal and Welfare groups, respectively, had returned to the ED within seven days of the index ED visit (Figure 4.15b).

FIGURE 4.15: Time to next ED visit after discharge from the ED for a subset individuals.

(a) All, Adults, Children



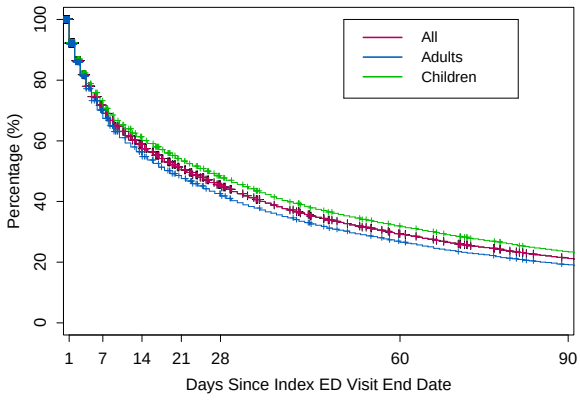
(b) pSES (age less than 65)



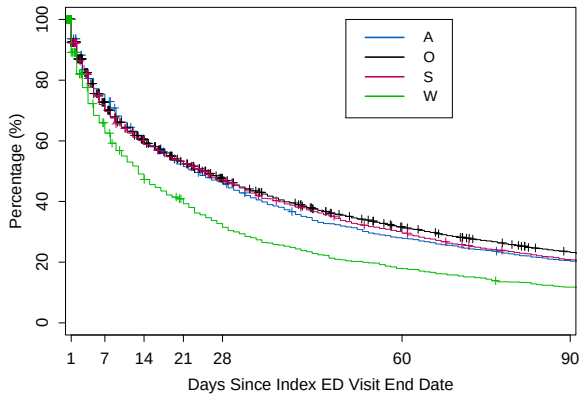
At seven days after the index ED visit, approximately 70% of individuals had yet to have a non-ED follow-up visit (Figure 4.16a). The estimated median time to the first follow-up visit was 22

FIGURE 4.16: Time to first follow-up visit after discharge from the ED for a subset of individuals. The plus signs denote individuals whose time to follow-up visit is censored because they have had another ED visit.

(a) All, Adults, Children



(b) pSES (age less than 65)



days. When the pSES groups are examined, the Aboriginal, Government Sponsored Program, and Other groups had very similar patterns with estimated median times of 23, 25, and 25 days, respectively (Figure 4.16b). The estimated median time to the first follow-up visit was 13 days for the Welfare group. Seven days after the ED visit end date, about 37% of individuals in the Welfare group had had a follow-up visit and approximately 30% of the remaining groups had had a follow-up visit.

5 Discussion

Compared to other respiratory conditions, asthma is a relatively frequent presentation to the ED and asthma remains an important health concern. Morbidity associated with the illness in terms of lost days of school and work are significant. Quality of life is decreased when lung function is compromised over a prolonged period, having impact on mental alertness, physical endurance, social interaction, and activities of daily living including household chores and occupational demands. The socio-demographic and seasonal patterns among children and young adults coupled with the potential for severe consequences (ICU admission and death) together justify continued exploratory and hypothesis-driven research in this area.

This study explored acute asthma as seen in over 100 EDs in the province of Alberta over a six year period. The strength of the ACCS database is that it contains comprehensive information regarding all asthma visits made by Albertans to EDs in the province. Moreover, the potential linkage of ACCS to registry (demographics) and health services (outcomes) data is an important advantage over simple cross-sectional research. The results from this study identify some important epidemiological trends and outcome information not previously explored; in addition, this is the most comprehensive provincial analysis of its kind for this respiratory problem. First, over time, despite increasing population figures for most regions of the province, the overall number of asthma visits to EDs across Alberta have declined. This is illustrated by the declining rate of asthma visits in the province from 1999/2000 to 2004/2005. There may be a variety of explanations for these trends, including but not limited to: ED overcrowding, improved access to after-hours care in major centres, and improved application of evidence based management by practicing physicians. ED overcrowding has been a growing concern across Alberta, especially in major centres.[25] Asthma patients likely realize this and select alternative after-hours encounters. Second, access to after-hours care has improved with the development of walk-in clinics in most urban and semi-urban centres. Finally, the use of inhaled corticosteroids and combination agents has been increasing in Canada, which as likely further improved control for asthmatics and reduced ED visits. Further research is required to determine the relative contributions of these factors.

In addition, the study was able to provide additional data regarding some important and “high-risk” populations who visit the ED with asthma. For example, visit rates are particularly high amongst children having Aboriginal status or receiving assistance from government sponsored programs. Males are more likely to visit an emergency department for asthma up until age 14 then the trend reverses until the senior years. These data do not necessarily suggest that children ‘grow out of asthma’; however, the data may suggest a greater vulnerability to the illness among persons of these extreme age groups and a need for more immediate treatment. Although women show a higher presentation rate than men, much of this is accounted for by women in the child-bearing years. It has been noted elsewhere that health conditions specific to women (like hormone

fluctuations and pregnancy) account for the majority of difference in overall health care utilization between men and women.[26] It is possible, therefore, that the differences observed in these data are related to increased concerns about overall health and a greater tendency to seek treatment not a genuine difference in the epidemiology of asthma.

This study spans six fiscal years. The pattern of asthma-related emergency department visits showed an association with age, gender, the time of day, and day of week. Unlike other respiratory problems in adults (e.g., community acquired pneumonia, COPD, influenza, etc.) there was less variation based on the time of year. The cycle in children was more typical of other North American epidemiological studies on asthma and was characterized by higher ED visit rates in spring and fall. The daily cycle of asthma visits was similar to the visitation cycle of all emergency department visits.[27] The tendency for cases to be reported on weekends and at certain periods of the day is an observation of particular interest, and may be explained by general ED utilization patterns. Specifically, time of visit may partly represent the time that is most convenient for people to report to an emergency department, or when it is least convenient to visit an alternative health care provider.

Standardized ED visit rates, adjusting for different age group and gender distributions, generally declined from 1999/2000 to 2004/2005. In 2004/2005, rates were lowest in the two largest and most urbanized areas of the province. The difference between the regions with the lowest rate, found in the Calgary Regional Health Authority (6.9/1000) and the Capital Health (8.3/1000), and the highest rate (18.4/1000), found in the Aspen Health Region, could point to substantive differences in the availability of alternative sources of care other than the ED in this region, or in the patterns of medical practice in non-urban settings. Methods of diagnosis and/or distribution of high-risk populations must also be considered; for example, large Aboriginal communities located in a region may skew the data somewhat. Further research is required to help explain these geographic variations.

These data reveal that persons in Welfare or Aboriginal subgroups are considerably more likely to visit an ED for asthma than other members of Alberta's population less than 65 years of age. This may partially explain the high visitation rates in many of the northern health regions, where the population of Aboriginal persons is high. Physician claims data have historically shown that Aboriginal Albertans suffer from higher rates of respiratory illness in general, conditions such as pneumonia, bronchitis, and respiratory infection.[28]

Canadian adult asthma consensus guidelines recommend that patients be regularly followed for their asthma using symptom and pulmonary function criteria.[29] Following an acute exacerbation requiring ED presentation, this follow-up re-assessment is even more critical. While largely unstudied, the guidelines recommend a re-assessment by the primary care provider (e.g., family physician or internist for adults and family physician or pediatrician for children); however, the timing of this follow-up is unclear. ED visits often represent failure of the chronic management of

patients with asthma, so it makes good sense that follow-up with the primary care provider should be encouraged and completed. Despite this, the frequency and intensity of post-ED follow-up visits are not known in great detail, since most asthma follow-up reported in research studies is spuriously high due to study participation.

Follow-up visits after ED visits were made in non-ED settings, for a variety of reasons, and at different intervals. Just under half of follow-up visits in the seven days after ED visits were asthma related. As the time from the original ED visit increased, the asthma-related follow-up visits decreased. Most follow-up visits were with general practitioners; however, children saw pediatricians for about 30% of follow-up visits made in the 7 to 14 day period following the ED visits. Further, for a large sample of patients discharged from the ED during a one year period, the majority did not have a follow-up visit within the first seven days after discharge from the ED. Only about 30% of the individuals had *any* follow-up visit during this time frame. Finally, this follow-up was influenced by other factors. For example, a *higher* proportion of the Welfare subgroup had a follow-up visit within 7 days (37%) compared to other subgroups (30%). Clearly, follow-up after an important ED visit for asthma is not occurring evenly and successfully across the province.

6 Limitations

Since many individuals report to their family physicians or local clinics for treatment, the ED setting did not capture all cases of acute asthma in the study period. This statement is particularly so in the more urban centres of the Capital and Calgary regional health authorities. In addition to the limited ability of ED administrative data to capture the ‘true’ incidence of the disease, many of the patterns observed could be the result of differences in emergency service delivery and not systematic differences in the distribution of the illness. Higher rates of ED visits may be the result of a disproportionately high use of emergency services in favour of other medical services in some locations compared to the pattern in urban areas. Higher rates of asthma visits among the very young (0–2 yrs) may be a result of misclassification of ‘bronchiolitis’ cases, higher use among the greater than 55 age group a misclassification of chronic obstructive pulmonary disorder (COPD) cases. It may even indicate a preference for emergency services in these populations.

Aboriginal status was based on Treaty Status, which remains a proxy measure for being Aboriginal. Specifically, this would exclude Metis, Inuit, and other culturally Aboriginal people who do not have Treaty Status. While this is a limitation and under-estimates the total number of Aboriginal patients in the sample, we do not feel this biases the results in a meaningful way.

From the data perspective, caution must be used in the use of claims data for a variety of reasons. First, the claims do not capture the non-Alberta and non-registered Albertans (a growing number

in the province). In addition, follow-ups outside the province are not identified (although these events are likely to be infrequent). Finally, data are only as good as the records kept by medical staff. Few EDs have a truly computerized EDIS, so data on times tends to be variably recorded. Consequently, missing information is common in this database. Despite these concerns, the ACCS data has been shown to be valid and reliable, and we feel these problems do not negate the trends identified and true bias is limited.

7 Conclusion

Asthma is a common presenting problem in Alberta EDs and the variations in presentation are impressive. Further study of these trends is required in order to understand the associated factors relating to these variations. The impressive findings are an overall decrease in the rates of presentation over the study period, the disparities in presentations based on age, gender, pSES, region, and cultural status. Understanding these presentations should assist policy makers in addressing specific groups for targeted interventions.

A Population Demographics

The appendices display tables and figures of detailed information. Totals (n) are provided. Frequencies are provided for each category as well as the percentage in brackets (%).

TABLE A.1: Population by age group for each fiscal year.

	99/00	00/01	01/02	02/03	03/04	04/05
n	2,957,008	3,007,582	3,072,384	3,124,487	3,165,157	3,210,035
<1	38,157 (1.3)	37,048 (1.2)	37,371 (1.2)	38,810 (1.2)	40,155 (1.3)	40,517 (1.3)
01–04	157,366 (5.3)	156,144 (5.2)	156,315 (5.1)	156,101 (5.0)	155,949 (4.9)	158,354 (4.9)
05–09	215,683 (7.3)	213,867 (7.1)	212,496 (6.9)	210,261 (6.7)	208,723 (6.6)	206,883 (6.4)
10–14	225,150 (7.6)	226,961 (7.5)	229,304 (7.5)	230,458 (7.4)	229,393 (7.2)	227,377 (7.1)
15–19	220,428 (7.5)	226,075 (7.5)	231,005 (7.5)	232,542 (7.4)	233,259 (7.4)	236,176 (7.4)
20–24	208,307 (7.0)	213,618 (7.1)	221,083 (7.2)	227,934 (7.3)	233,727 (7.4)	237,132 (7.4)
25–29	212,608 (7.2)	213,669 (7.1)	219,043 (7.1)	223,438 (7.2)	227,029 (7.2)	231,404 (7.2)
30–34	221,043 (7.5)	223,017 (7.4)	226,843 (7.4)	229,209 (7.3)	229,807 (7.3)	230,953 (7.2)
35–39	264,138 (8.9)	257,866 (8.6)	252,445 (8.2)	245,416 (7.9)	238,698 (7.5)	234,910 (7.3)
40–44	263,324 (8.9)	268,639 (8.9)	273,266 (8.9)	275,925 (8.8)	275,902 (8.7)	273,916 (8.5)
45–49	220,643 (7.5)	233,060 (7.7)	245,421 (8.0)	255,436 (8.2)	262,678 (8.3)	268,455 (8.4)
50–54	178,694 (6.0)	189,084 (6.3)	195,263 (6.4)	201,872 (6.5)	211,392 (6.7)	221,753 (6.9)
55–59	129,431 (4.4)	135,268 (4.5)	146,978 (4.8)	158,544 (5.1)	167,091 (5.3)	176,968 (5.5)
60–64	102,836 (3.5)	105,722 (3.5)	110,136 (3.6)	115,230 (3.7)	120,634 (3.8)	126,021 (3.9)
65–69	92,178 (3.1)	93,029 (3.1)	93,638 (3.0)	94,903 (3.0)	96,580 (3.1)	98,603 (3.1)
70–74	77,676 (2.6)	80,076 (2.7)	82,248 (2.7)	83,662 (2.7)	84,554 (2.7)	85,401 (2.7)
75–79	59,778 (2.0)	61,320 (2.0)	62,317 (2.0)	64,072 (2.1)	65,960 (2.1)	68,194 (2.1)
80–84	37,811 (1.3)	39,930 (1.3)	42,551 (1.4)	44,811 (1.4)	46,616 (1.5)	47,789 (1.5)
85–89	20,936 (0.7)	21,987 (0.7)	23,060 (0.8)	23,715 (0.8)	24,276 (0.8)	25,535 (0.8)
90+	10,096 (0.3)	10,531 (0.4)	11,017 (0.4)	11,646 (0.4)	12,329 (0.4)	13,350 (0.4)
missing	725 (0.0)	671 (0.0)	584 (0.0)	502 (0.0)	405 (0.0)	344 (0.0)

TABLE A.2: Population by gender for each fiscal year.

	99/00	00/01	01/02	02/03	03/04	04/05
n	2,957,008	3,007,582	3,072,384	3,124,487	3,165,157	3,210,035
F	1,480,611 (50.1)	1,505,318 (50.1)	1,537,598 (50.0)	1,563,460 (50.0)	1,583,895 (50.0)	1,607,665 (50.1)
M	1,476,397 (49.9)	1,502,264 (49.9)	1,534,786 (50.0)	1,561,027 (50.0)	1,581,262 (50.0)	1,602,370 (49.9)

TABLE A.3: Population by pSES for each fiscal year for those individuals less than 65 years of age.

	99/00	00/01	01/02	02/03	03/04	04/05
n	2,657,808	2,700,038	2,756,969	2,801,176	2,834,437	2,870,819
A	104,095 (3.9)	107,581 (4.0)	110,515 (4.0)	113,181 (4.0)	115,760 (4.1)	118,294 (4.1)
O	2,148,874 (80.9)	2,193,169 (81.2)	2,261,620 (82.0)	2,315,643 (82.7)	2,337,552 (82.5)	2,341,978 (81.6)
S	322,879 (12.1)	321,416 (11.9)	308,558 (11.2)	290,487 (10.4)	296,812 (10.5)	326,256 (11.4)
W	81,960 (3.1)	77,872 (2.9)	76,276 (2.8)	81,865 (2.9)	84,313 (3.0)	84,291 (2.9)

FIGURE A.1: Population by age group and gender, 2004/2005.

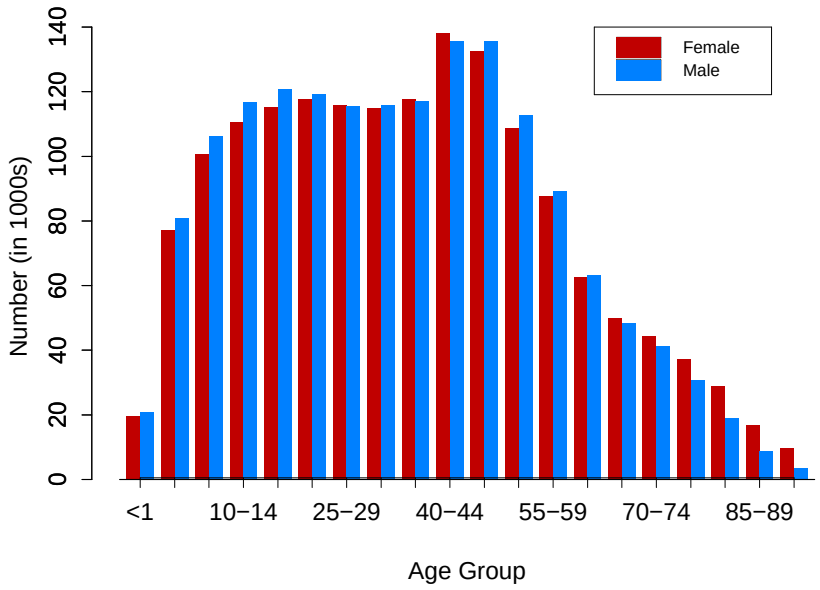


TABLE A.4: Population by gender and age group for each fiscal year.

		99/00	00/01	01/02	02/03	03/04	04/05
F	n	1,480,611	1,505,318	1,537,598	1,563,460	1,583,895	1,607,665
	<1	18,834 (1.3)	18,136 (1.2)	18,328 (1.2)	19,011 (1.2)	19,558 (1.2)	19,776 (1.2)
	01–04	76,610 (5.2)	76,140 (5.1)	76,540 (5.0)	76,355 (4.9)	76,344 (4.8)	77,347 (4.8)
	05–09	105,145 (7.1)	104,292 (6.9)	103,296 (6.7)	102,117 (6.5)	101,453 (6.4)	100,681 (6.3)
	10–14	109,789 (7.4)	110,669 (7.4)	111,814 (7.3)	112,525 (7.2)	111,690 (7.1)	110,741 (6.9)
	15–19	107,668 (7.3)	110,384 (7.3)	112,718 (7.3)	113,375 (7.3)	113,909 (7.2)	115,306 (7.2)
	20–24	103,273 (7.0)	105,596 (7.0)	109,473 (7.1)	113,061 (7.2)	116,060 (7.3)	117,843 (7.3)
	25–29	105,972 (7.2)	106,447 (7.1)	109,158 (7.1)	111,264 (7.1)	113,048 (7.1)	115,806 (7.2)
	30–34	111,224 (7.5)	111,888 (7.4)	113,281 (7.4)	114,252 (7.3)	114,305 (7.2)	114,981 (7.2)
	35–39	133,443 (9.0)	130,037 (8.6)	127,310 (8.3)	123,434 (7.9)	119,850 (7.6)	117,868 (7.3)
	40–44	130,328 (8.8)	133,362 (8.9)	136,154 (8.9)	138,118 (8.8)	138,462 (8.7)	138,108 (8.6)
	45–49	108,201 (7.3)	114,489 (7.6)	120,620 (7.8)	125,698 (8.0)	129,400 (8.2)	132,668 (8.3)
	50–54	88,221 (6.0)	93,203 (6.2)	96,098 (6.2)	99,149 (6.3)	103,910 (6.6)	108,929 (6.8)
	55–59	63,942 (4.3)	66,874 (4.4)	72,741 (4.7)	78,423 (5.0)	82,807 (5.2)	87,616 (5.4)
	60–64	51,509 (3.5)	52,929 (3.5)	55,102 (3.6)	57,528 (3.7)	60,176 (3.8)	62,808 (3.9)
	65–69	46,482 (3.1)	47,001 (3.1)	47,381 (3.1)	48,199 (3.1)	49,171 (3.1)	50,108 (3.1)
	70–74	40,933 (2.8)	41,956 (2.8)	42,892 (2.8)	43,517 (2.8)	43,808 (2.8)	44,235 (2.8)
	75–79	34,295 (2.3)	34,945 (2.3)	35,156 (2.3)	35,759 (2.3)	36,427 (2.3)	37,301 (2.3)
	80–84	23,303 (1.6)	24,553 (1.6)	26,032 (1.7)	27,350 (1.7)	28,324 (1.8)	28,869 (1.8)
	85–89	13,950 (0.9)	14,597 (1.0)	15,342 (1.0)	15,728 (1.0)	16,070 (1.0)	16,861 (1.0)
	90+	7,339 (0.5)	7,679 (0.5)	8,042 (0.5)	8,498 (0.5)	9,045 (0.6)	9,757 (0.6)
	missing	150 (0.0)	141 (0.0)	120 (0.0)	99 (0.0)	78 (0.0)	56 (0.0)
M	n	1,476,397	1,502,264	1,534,786	1,561,027	1,581,262	1,602,370
	<1	19,323 (1.3)	18,912 (1.3)	19,043 (1.2)	19,799 (1.3)	20,597 (1.3)	20,741 (1.3)
	01–04	80,756 (5.5)	80,004 (5.3)	79,775 (5.2)	79,746 (5.1)	79,605 (5.0)	81,007 (5.1)
	05–09	110,538 (7.5)	109,575 (7.3)	109,200 (7.1)	108,144 (6.9)	107,270 (6.8)	106,202 (6.6)
	10–14	115,361 (7.8)	116,292 (7.7)	117,490 (7.7)	117,933 (7.6)	117,703 (7.4)	116,636 (7.3)
	15–19	112,760 (7.6)	115,691 (7.7)	118,287 (7.7)	119,167 (7.6)	119,350 (7.5)	120,870 (7.5)
	20–24	105,034 (7.1)	108,022 (7.2)	111,610 (7.3)	114,873 (7.4)	117,667 (7.4)	119,289 (7.4)
	25–29	106,636 (7.2)	107,222 (7.1)	109,885 (7.2)	112,174 (7.2)	113,981 (7.2)	115,598 (7.2)
	30–34	109,819 (7.4)	111,129 (7.4)	113,562 (7.4)	114,957 (7.4)	115,502 (7.3)	115,972 (7.2)
	35–39	130,695 (8.9)	127,829 (8.5)	125,135 (8.2)	121,982 (7.8)	118,848 (7.5)	117,042 (7.3)
	40–44	132,996 (9.0)	135,277 (9.0)	137,112 (8.9)	137,807 (8.8)	137,440 (8.7)	135,808 (8.5)
	45–49	112,442 (7.6)	118,571 (7.9)	124,801 (8.1)	129,738 (8.3)	133,278 (8.4)	135,787 (8.5)
	50–54	90,473 (6.1)	95,881 (6.4)	99,165 (6.5)	102,723 (6.6)	107,482 (6.8)	112,824 (7.0)
	55–59	65,489 (4.4)	68,394 (4.6)	74,237 (4.8)	80,121 (5.1)	84,284 (5.3)	89,352 (5.6)
	60–64	51,327 (3.5)	52,793 (3.5)	55,034 (3.6)	57,702 (3.7)	60,458 (3.8)	63,213 (3.9)
	65–69	45,696 (3.1)	46,028 (3.1)	46,257 (3.0)	46,704 (3.0)	47,409 (3.0)	48,495 (3.0)
	70–74	36,743 (2.5)	38,120 (2.5)	39,356 (2.6)	40,145 (2.6)	40,746 (2.6)	41,166 (2.6)
	75–79	25,483 (1.7)	26,375 (1.8)	27,161 (1.8)	28,313 (1.8)	29,533 (1.9)	30,893 (1.9)
	80–84	14,508 (1.0)	15,377 (1.0)	16,519 (1.1)	17,461 (1.1)	18,292 (1.2)	18,920 (1.2)
	85–89	6,986 (0.5)	7,390 (0.5)	7,718 (0.5)	7,987 (0.5)	8,206 (0.5)	8,674 (0.5)
	90+	2,757 (0.2)	2,852 (0.2)	2,975 (0.2)	3,148 (0.2)	3,284 (0.2)	3,593 (0.2)
	missing	575 (0.0)	530 (0.0)	464 (0.0)	403 (0.0)	327 (0.0)	288 (0.0)

TABLE A.5: Population by gender and pSES for each fiscal year for individuals less than 65 years of age.

		99/00	00/01	01/02	02/03	03/04	04/05
F	n	1,314,159	1,334,446	1,362,633	1,384,310	1,400,972	1,420,478
	A	52,220 (4.0)	53,857 (4.0)	55,353 (4.1)	56,596 (4.1)	57,870 (4.1)	59,213 (4.2)
	O	1,039,535 (79.1)	1,060,962 (79.5)	1,095,300 (80.4)	1,123,522 (81.2)	1,132,193 (80.8)	1,126,091 (79.3)
	S	179,508 (13.7)	179,147 (13.4)	172,621 (12.7)	161,934 (11.7)	167,183 (11.9)	191,322 (13.5)
	W	42,896 (3.3)	40,480 (3.0)	39,359 (2.9)	42,258 (3.1)	43,726 (3.1)	43,852 (3.1)
M	n	1,343,649	1,365,592	1,394,336	1,416,866	1,433,465	1,450,341
	A	51,875 (3.9)	53,724 (3.9)	55,162 (4.0)	56,585 (4.0)	57,890 (4.0)	59,081 (4.1)
	O	1,109,339 (82.6)	1,132,207 (82.9)	1,166,320 (83.6)	1,192,121 (84.1)	1,205,359 (84.1)	1,215,887 (83.8)
	S	143,371 (10.7)	142,269 (10.4)	135,937 (9.7)	128,553 (9.1)	129,629 (9.0)	134,934 (9.3)
	W	39,064 (2.9)	37,392 (2.7)	36,917 (2.6)	39,607 (2.8)	40,587 (2.8)	40,439 (2.8)

TABLE A.6: Population by RHA for each fiscal year.

	99/00	00/01	01/02	02/03	03/04	04/05
n	2,956,797	3,007,309	3,072,171	3,124,248	3,164,905	3,209,858
R1	150,085 (5.1)	150,868 (5.0)	151,529 (4.9)	152,651 (4.9)	153,742 (4.9)	154,790 (4.8)
R2	93,602 (3.2)	95,565 (3.2)	97,458 (3.2)	98,006 (3.1)	99,363 (3.1)	100,610 (3.1)
R3	1,042,066 (35.2)	1,067,058 (35.5)	1,098,149 (35.7)	1,122,521 (35.9)	1,143,368 (36.1)	1,164,535 (36.3)
R4	273,703 (9.3)	277,706 (9.2)	282,345 (9.2)	286,336 (9.2)	290,311 (9.2)	293,723 (9.2)
R5	107,321 (3.6)	108,224 (3.6)	109,230 (3.6)	109,991 (3.5)	108,666 (3.4)	110,666 (3.4)
R6	929,328 (31.4)	943,329 (31.4)	961,950 (31.3)	978,160 (31.3)	990,931 (31.3)	1,000,862 (31.2)
R7	172,973 (5.9)	174,125 (5.8)	175,896 (5.7)	176,609 (5.7)	174,150 (5.5)	176,492 (5.5)
R8	126,278 (4.3)	127,196 (4.2)	129,430 (4.2)	130,885 (4.2)	132,873 (4.2)	134,794 (4.2)
R9	61,441 (2.1)	63,238 (2.1)	66,184 (2.2)	69,089 (2.2)	71,501 (2.3)	73,386 (2.3)

B ED Visit Demographics

TABLE B.1: ED visits and distinct individuals for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
Visits	37,443	35,321	32,676	30,440	32,564	31,556	200,000
Individuals	22,668	22,771	21,665	20,684	22,287	21,700	93,150

FIGURE B.1: ED visits and distinct individuals by fiscal year.

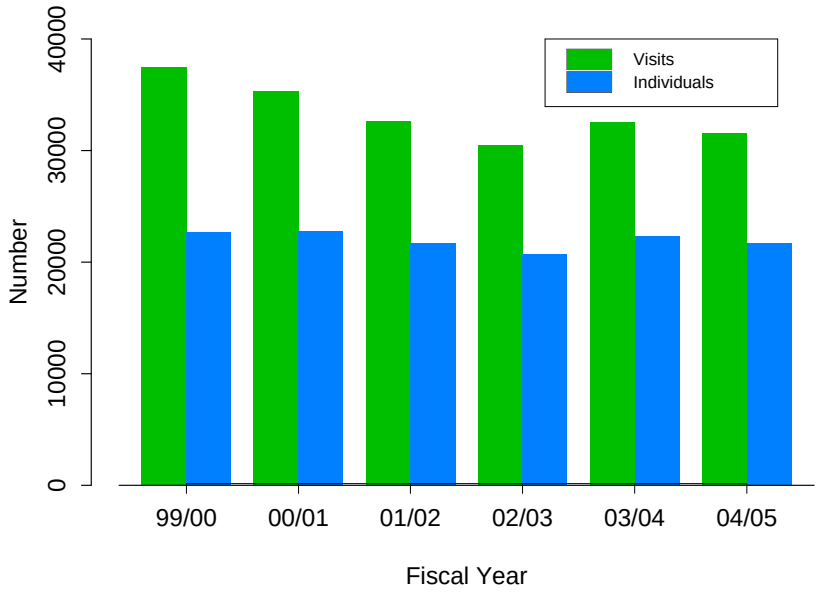


TABLE B.2: ED visits and distinct individuals by age category for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits							
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
Adults	21,218 (56.7)	19,049 (53.9)	17,266 (52.8)	15,371 (50.5)	16,608 (51.0)	16,301 (51.7)	105,813 (52.9)
Children	16,225 (43.3)	16,272 (46.1)	15,410 (47.2)	15,069 (49.5)	15,956 (49.0)	15,255 (48.3)	94,187 (47.1)
Distinct Individuals							
n	22,668	22,771	21,665	20,684	22,287	21,700	93,150
Adults	12,086 (53.3)	11,790 (51.8)	10,995 (50.8)	10,220 (49.4)	11,205 (50.3)	10,981 (50.6)	47,765 (51.3)
Children	10,582 (46.7)	10,981 (48.2)	10,670 (49.2)	10,464 (50.6)	11,082 (49.7)	10,719 (49.4)	45,385 (48.7)

TABLE B.3: ED visits and distinct individuals by gender for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits							
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
F	19,531 (52.2)	17,899 (50.7)	16,564 (50.7)	15,146 (49.8)	16,321 (50.1)	15,737 (49.9)	101,198 (50.6)
M	17,912 (47.8)	17,422 (49.3)	16,112 (49.3)	15,294 (50.2)	16,243 (49.9)	15,819 (50.1)	98,802 (49.4)
Distinct Individuals							
n	22,668	22,771	21,665	20,684	22,287	21,700	93,150
F	11,573 (51.1)	11,429 (50.2)	10,795 (49.8)	10,151 (49.1)	11,197 (50.2)	10,752 (49.5)	46,864 (50.3)
M	11,095 (48.9)	11,342 (49.8)	10,870 (50.2)	10,533 (50.9)	11,090 (49.8)	10,948 (50.5)	46,286 (49.7)

FIGURE B.2: ED visits by gender and pSES (age less than 65 years), 2004/2005.

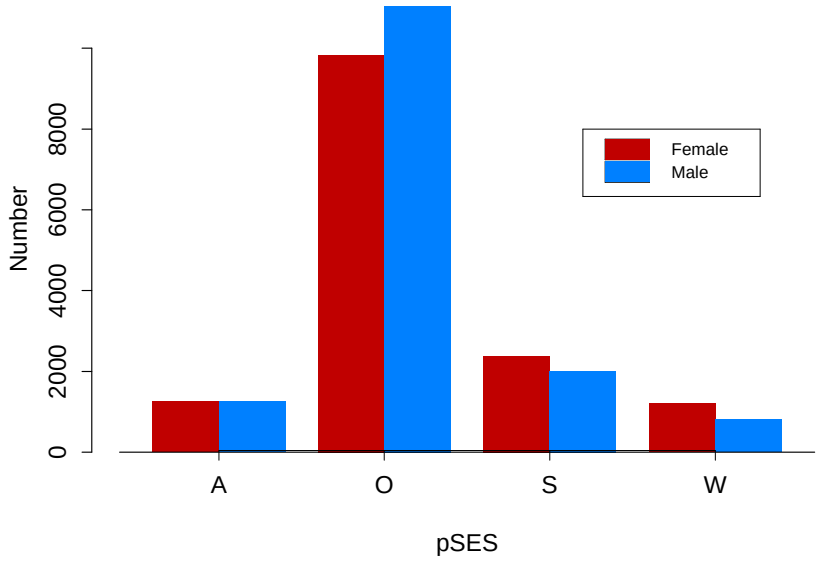


TABLE B.4: ED visits and distinct individuals by age group for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits							
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
<1	1,190 (3.2)	1,377 (3.9)	1,145 (3.5)	1,092 (3.6)	1,327 (4.1)	1,158 (3.7)	7,289 (3.6)
01–04	5,540 (14.8)	5,728 (16.2)	5,668 (17.3)	5,794 (19.0)	6,102 (18.7)	5,943 (18.8)	34,775 (17.4)
05–09	4,340 (11.6)	4,367 (12.4)	4,012 (12.3)	3,889 (12.8)	3,967 (12.2)	4,126 (13.1)	24,701 (12.4)
10–14	3,261 (8.7)	3,021 (8.6)	3,011 (9.2)	2,843 (9.3)	2,941 (9.0)	2,662 (8.4)	17,739 (8.9)
15–19	3,203 (8.6)	3,026 (8.6)	2,795 (8.6)	2,528 (8.3)	2,805 (8.6)	2,447 (7.8)	16,804 (8.4)
20–24	2,967 (7.9)	2,832 (8.0)	2,598 (8.0)	2,421 (8.0)	2,690 (8.3)	2,495 (7.9)	16,003 (8.0)
25–29	2,584 (6.9)	2,327 (6.6)	2,095 (6.4)	2,011 (6.6)	2,008 (6.2)	1,931 (6.1)	12,956 (6.5)
30–34	2,009 (5.4)	1,935 (5.5)	1,825 (5.6)	1,685 (5.5)	1,800 (5.5)	1,756 (5.6)	11,010 (5.5)
35–39	2,186 (5.8)	1,913 (5.4)	1,575 (4.8)	1,532 (5.0)	1,648 (5.1)	1,561 (4.9)	10,415 (5.2)
40–44	2,022 (5.4)	1,839 (5.2)	1,552 (4.7)	1,472 (4.8)	1,474 (4.5)	1,684 (5.3)	10,043 (5.0)
45–49	1,561 (4.2)	1,393 (3.9)	1,508 (4.6)	1,204 (4.0)	1,432 (4.4)	1,378 (4.4)	8,476 (4.2)
50–54	1,491 (4.0)	1,101 (3.1)	946 (2.9)	989 (3.2)	1,076 (3.3)	1,098 (3.5)	6,701 (3.4)
55–59	1,241 (3.3)	1,060 (3.0)	912 (2.8)	740 (2.4)	900 (2.8)	957 (3.0)	5,810 (2.9)
60–64	1,040 (2.8)	903 (2.6)	674 (2.1)	590 (1.9)	588 (1.8)	624 (2.0)	4,419 (2.2)
65–69	840 (2.2)	725 (2.1)	730 (2.2)	480 (1.6)	537 (1.6)	588 (1.9)	3,900 (2.0)
70–74	861 (2.3)	616 (1.7)	604 (1.8)	390 (1.3)	446 (1.4)	420 (1.3)	3,337 (1.7)
75–79	558 (1.5)	596 (1.7)	416 (1.3)	349 (1.1)	367 (1.1)	337 (1.1)	2,623 (1.3)
80–84	341 (0.9)	366 (1.0)	393 (1.2)	227 (0.7)	282 (0.9)	225 (0.7)	1,834 (0.9)
85–89	168 (0.4)	161 (0.5)	178 (0.5)	120 (0.4)	121 (0.4)	118 (0.4)	866 (0.4)
90+	40 (0.1)	35 (0.1)	39 (0.1)	84 (0.3)	53 (0.2)	48 (0.2)	299 (0.1)
Distinct Individuals							
n	22,668	22,771	21,665	20,684	22,287	21,700	93,150
<1	723 (3.2)	888 (3.9)	760 (3.5)	742 (3.6)	884 (4.0)	786 (3.6)	4,622 (5.0)
01–04	3,527 (15.6)	3,762 (16.5)	3,730 (17.2)	3,805 (18.4)	4,096 (18.4)	3,983 (18.4)	16,800 (18.0)
05–09	2,940 (13.0)	2,985 (13.1)	2,892 (13.3)	2,796 (13.5)	2,867 (12.9)	2,972 (13.7)	10,979 (11.8)
10–14	2,183 (9.6)	2,194 (9.6)	2,178 (10.1)	2,083 (10.1)	2,148 (9.6)	1,983 (9.1)	8,467 (9.1)
15–19	2,039 (9.0)	2,000 (8.8)	1,891 (8.7)	1,812 (8.8)	1,922 (8.6)	1,741 (8.0)	7,800 (8.4)
20–24	1,870 (8.2)	1,880 (8.3)	1,667 (7.7)	1,673 (8.1)	1,823 (8.2)	1,733 (8.0)	7,100 (7.6)
25–29	1,563 (6.9)	1,544 (6.8)	1,338 (6.2)	1,281 (6.2)	1,360 (6.1)	1,334 (6.1)	5,859 (6.3)
30–34	1,210 (5.3)	1,211 (5.3)	1,178 (5.4)	1,135 (5.5)	1,244 (5.6)	1,206 (5.6)	5,049 (5.4)
35–39	1,250 (5.5)	1,224 (5.4)	1,093 (5.0)	1,080 (5.2)	1,104 (5.0)	1,050 (4.8)	4,952 (5.3)
40–44	1,041 (4.6)	1,054 (4.6)	1,003 (4.6)	929 (4.5)	999 (4.5)	1,087 (5.0)	4,428 (4.8)
45–49	859 (3.8)	866 (3.8)	901 (4.2)	793 (3.8)	882 (4.0)	911 (4.2)	3,692 (4.0)
50–54	716 (3.2)	659 (2.9)	651 (3.0)	605 (2.9)	750 (3.4)	757 (3.5)	2,988 (3.2)
55–59	597 (2.6)	561 (2.5)	519 (2.4)	496 (2.4)	568 (2.5)	606 (2.8)	2,412 (2.6)
60–64	511 (2.3)	459 (2.0)	441 (2.0)	388 (1.9)	412 (1.8)	408 (1.9)	1,910 (2.1)
65–69	462 (2.0)	393 (1.7)	420 (1.9)	298 (1.4)	360 (1.6)	324 (1.5)	1,654 (1.8)
70–74	438 (1.9)	391 (1.7)	379 (1.7)	264 (1.3)	305 (1.4)	299 (1.4)	1,582 (1.7)
75–79	341 (1.5)	341 (1.5)	261 (1.2)	210 (1.0)	243 (1.1)	233 (1.1)	1,274 (1.4)
80–84	231 (1.0)	213 (0.9)	204 (0.9)	172 (0.8)	186 (0.8)	173 (0.8)	913 (1.0)
85–89	131 (0.6)	113 (0.5)	130 (0.6)	76 (0.4)	97 (0.4)	74 (0.3)	492 (0.5)
90+	36 (0.2)	33 (0.1)	29 (0.1)	46 (0.2)	37 (0.2)	40 (0.2)	177 (0.2)

TABLE B.5: ED visits and distinct individuals less than 65 years old by pSES for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits							
n	34,635	32,822	30,316	28,790	30,758	29,820	187,141
A	2,473 (7.1)	2,285 (7.0)	2,195 (7.2)	2,223 (7.7)	2,441 (7.9)	2,507 (8.4)	14,124 (7.5)
O	24,229 (70.0)	23,360 (71.2)	21,739 (71.7)	20,863 (72.5)	21,844 (71.0)	20,889 (70.1)	132,924 (71.0)
S	5,585 (16.1)	4,874 (14.8)	4,393 (14.5)	3,766 (13.1)	4,340 (14.1)	4,396 (14.7)	27,354 (14.6)
W	2,348 (6.8)	2,303 (7.0)	1,989 (6.6)	1,938 (6.7)	2,133 (6.9)	2,028 (6.8)	12,739 (6.8)
Distinct Individuals							
n	21,029	21,287	20,242	19,618	21,059	20,557	87,058
A	1,567 (7.5)	1,531 (7.2)	1,516 (7.5)	1,521 (7.8)	1,711 (8.1)	1,719 (8.4)	6,542 (7.5)
O	14,983 (71.2)	15,313 (71.9)	14,755 (72.9)	14,433 (73.6)	15,191 (72.1)	14,670 (71.4)	63,545 (73.0)
S	3,137 (14.9)	3,124 (14.7)	2,774 (13.7)	2,474 (12.6)	2,853 (13.5)	2,853 (13.9)	11,993 (13.8)
W	1,342 (6.4)	1,319 (6.2)	1,197 (5.9)	1,190 (6.1)	1,304 (6.2)	1,315 (6.4)	4,978 (5.7)

TABLE B.6: ED visits by gender and age group for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
F n	19,531	17,899	16,564	15,146	16,321	15,737	101,198
<1	320 (1.6)	394 (2.2)	392 (2.4)	351 (2.3)	451 (2.8)	363 (2.3)	2,271 (2.2)
01–04	2,039 (10.4)	1,892 (10.6)	1,948 (11.8)	2,045 (13.5)	2,125 (13.0)	2,085 (13.2)	12,134 (12.0)
05–09	1,596 (8.2)	1,579 (8.8)	1,543 (9.3)	1,462 (9.7)	1,451 (8.9)	1,392 (8.8)	9,023 (8.9)
10–14	1,386 (7.1)	1,275 (7.1)	1,230 (7.4)	1,136 (7.5)	1,277 (7.8)	1,115 (7.1)	7,419 (7.3)
15–19	1,982 (10.1)	1,746 (9.8)	1,598 (9.6)	1,455 (9.6)	1,542 (9.4)	1,400 (8.9)	9,723 (9.6)
20–24	1,776 (9.1)	1,652 (9.2)	1,515 (9.1)	1,379 (9.1)	1,541 (9.4)	1,449 (9.2)	9,312 (9.2)
25–29	1,589 (8.1)	1,322 (7.4)	1,232 (7.4)	1,202 (7.9)	1,174 (7.2)	1,113 (7.1)	7,632 (7.5)
30–34	1,273 (6.5)	1,254 (7.0)	1,146 (6.9)	1,011 (6.7)	1,099 (6.7)	1,079 (6.9)	6,862 (6.8)
35–39	1,295 (6.6)	1,205 (6.7)	982 (5.9)	947 (6.3)	1,085 (6.6)	1,014 (6.4)	6,528 (6.5)
40–44	1,199 (6.1)	1,207 (6.7)	968 (5.8)	879 (5.8)	944 (5.8)	1,083 (6.9)	6,280 (6.2)
45–49	1,106 (5.7)	969 (5.4)	935 (5.6)	802 (5.3)	873 (5.3)	846 (5.4)	5,531 (5.5)
50–54	986 (5.0)	730 (4.1)	620 (3.7)	612 (4.0)	715 (4.4)	735 (4.7)	4,398 (4.3)
55–59	839 (4.3)	693 (3.9)	617 (3.7)	488 (3.2)	587 (3.6)	620 (3.9)	3,844 (3.8)
60–64	594 (3.0)	514 (2.9)	411 (2.5)	373 (2.5)	391 (2.4)	399 (2.5)	2,682 (2.7)
65–69	487 (2.5)	444 (2.5)	471 (2.8)	301 (2.0)	319 (2.0)	404 (2.6)	2,426 (2.4)
70–74	409 (2.1)	342 (1.9)	336 (2.0)	213 (1.4)	263 (1.6)	226 (1.4)	1,789 (1.8)
75–79	338 (1.7)	335 (1.9)	285 (1.7)	194 (1.3)	206 (1.3)	175 (1.1)	1,533 (1.5)
80–84	198 (1.0)	218 (1.2)	190 (1.1)	148 (1.0)	149 (0.9)	124 (0.8)	1,027 (1.0)
85–89	98 (0.5)	106 (0.6)	115 (0.7)	89 (0.6)	97 (0.6)	88 (0.6)	593 (0.6)
90+	21 (0.1)	22 (0.1)	30 (0.2)	59 (0.4)	32 (0.2)	27 (0.2)	191 (0.2)
M n	17,912	17,422	16,112	15,294	16,243	15,819	98,802
<1	870 (4.9)	983 (5.6)	753 (4.7)	741 (4.8)	876 (5.4)	795 (5.0)	5,018 (5.1)
01–04	3,501 (19.5)	3,836 (22.0)	3,720 (23.1)	3,749 (24.5)	3,977 (24.5)	3,858 (24.4)	22,641 (22.9)
05–09	2,744 (15.3)	2,788 (16.0)	2,469 (15.3)	2,427 (15.9)	2,516 (15.5)	2,734 (17.3)	15,678 (15.9)
10–14	1,875 (10.5)	1,746 (10.0)	1,781 (11.1)	1,707 (11.2)	1,664 (10.2)	1,547 (9.8)	10,320 (10.4)
15–19	1,221 (6.8)	1,280 (7.3)	1,197 (7.4)	1,073 (7.0)	1,263 (7.8)	1,047 (6.6)	7,081 (7.2)
20–24	1,191 (6.6)	1,180 (6.8)	1,083 (6.7)	1,042 (6.8)	1,149 (7.1)	1,046 (6.6)	6,691 (6.8)
25–29	995 (5.6)	1,005 (5.8)	863 (5.4)	809 (5.3)	834 (5.1)	818 (5.2)	5,324 (5.4)
30–34	736 (4.1)	681 (3.9)	679 (4.2)	674 (4.4)	701 (4.3)	677 (4.3)	4,148 (4.2)
35–39	891 (5.0)	708 (4.1)	593 (3.7)	585 (3.8)	563 (3.5)	547 (3.5)	3,887 (3.9)
40–44	823 (4.6)	632 (3.6)	584 (3.6)	593 (3.9)	530 (3.3)	601 (3.8)	3,763 (3.8)
45–49	455 (2.5)	424 (2.4)	573 (3.6)	402 (2.6)	559 (3.4)	532 (3.4)	2,945 (3.0)
50–54	505 (2.8)	371 (2.1)	326 (2.0)	377 (2.5)	361 (2.2)	363 (2.3)	2,303 (2.3)
55–59	402 (2.2)	367 (2.1)	295 (1.8)	252 (1.6)	313 (1.9)	337 (2.1)	1,966 (2.0)
60–64	446 (2.5)	389 (2.2)	263 (1.6)	217 (1.4)	197 (1.2)	225 (1.4)	1,737 (1.8)
65–69	353 (2.0)	281 (1.6)	259 (1.6)	179 (1.2)	218 (1.3)	184 (1.2)	1,474 (1.5)
70–74	452 (2.5)	274 (1.6)	268 (1.7)	177 (1.2)	183 (1.1)	194 (1.2)	1,548 (1.6)
75–79	220 (1.2)	261 (1.5)	131 (0.8)	155 (1.0)	161 (1.0)	162 (1.0)	1,090 (1.1)
80–84	143 (0.8)	148 (0.8)	203 (1.3)	79 (0.5)	133 (0.8)	101 (0.6)	807 (0.8)
85–89	70 (0.4)	55 (0.3)	63 (0.4)	31 (0.2)	24 (0.1)	30 (0.2)	273 (0.3)
90+	19 (0.1)	13 (0.1)	9 (0.1)	25 (0.2)	21 (0.1)	21 (0.1)	108 (0.1)

TABLE B.7: Distinct individuals visiting EDs for asthma by gender and age group for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
F n	11,573	11,429	10,795	10,151	11,197	10,752	46,864
<1	218 (1.9)	268 (2.3)	270 (2.5)	244 (2.4)	296 (2.6)	251 (2.3)	1,499 (3.2)
01–04	1,279 (11.1)	1,313 (11.5)	1,307 (12.1)	1,334 (13.1)	1,469 (13.1)	1,426 (13.3)	6,256 (13.3)
05–09	1,082 (9.3)	1,086 (9.5)	1,116 (10.3)	1,034 (10.2)	1,071 (9.6)	1,019 (9.5)	4,147 (8.8)
10–14	934 (8.1)	910 (8.0)	881 (8.2)	829 (8.2)	926 (8.3)	839 (7.8)	3,585 (7.6)
15–19	1,196 (10.3)	1,143 (10.0)	1,071 (9.9)	1,039 (10.2)	1,083 (9.7)	993 (9.2)	4,476 (9.6)
20–24	1,103 (9.5)	1,113 (9.7)	949 (8.8)	959 (9.4)	1,035 (9.2)	1,001 (9.3)	4,140 (8.8)
25–29	933 (8.1)	881 (7.7)	755 (7.0)	708 (7.0)	767 (6.9)	757 (7.0)	3,352 (7.2)
30–34	703 (6.1)	717 (6.3)	697 (6.5)	668 (6.6)	731 (6.5)	729 (6.8)	2,965 (6.3)
35–39	773 (6.7)	765 (6.7)	665 (6.2)	637 (6.3)	690 (6.2)	661 (6.1)	3,063 (6.5)
40–44	681 (5.9)	659 (5.8)	622 (5.8)	572 (5.6)	641 (5.7)	700 (6.5)	2,774 (5.9)
45–49	571 (4.9)	583 (5.1)	556 (5.2)	518 (5.1)	561 (5.0)	573 (5.3)	2,362 (5.0)
50–54	466 (4.0)	428 (3.7)	420 (3.9)	385 (3.8)	506 (4.5)	496 (4.6)	1,901 (4.1)
55–59	392 (3.4)	382 (3.3)	331 (3.1)	317 (3.1)	368 (3.3)	381 (3.5)	1,552 (3.3)
60–64	303 (2.6)	286 (2.5)	264 (2.4)	246 (2.4)	283 (2.5)	250 (2.3)	1,184 (2.5)
65–69	252 (2.2)	238 (2.1)	267 (2.5)	188 (1.9)	214 (1.9)	196 (1.8)	945 (2.0)
70–74	245 (2.1)	218 (1.9)	223 (2.1)	148 (1.5)	185 (1.7)	167 (1.6)	900 (1.9)
75–79	199 (1.7)	214 (1.9)	169 (1.6)	125 (1.2)	154 (1.4)	137 (1.3)	771 (1.6)
80–84	139 (1.2)	127 (1.1)	128 (1.2)	115 (1.1)	113 (1.0)	103 (1.0)	551 (1.2)
85–89	84 (0.7)	77 (0.7)	82 (0.8)	54 (0.5)	75 (0.7)	51 (0.5)	329 (0.7)
90+	20 (0.2)	21 (0.2)	22 (0.2)	31 (0.3)	29 (0.3)	22 (0.2)	112 (0.2)
M n	11,095	11,342	10,870	10,533	11,090	10,948	46,286
<1	505 (4.6)	620 (5.5)	490 (4.5)	498 (4.7)	588 (5.3)	535 (4.9)	3,123 (6.7)
01–04	2,248 (20.3)	2,449 (21.6)	2,423 (22.3)	2,471 (23.5)	2,627 (23.7)	2,557 (23.4)	10,544 (22.8)
05–09	1,858 (16.7)	1,899 (16.7)	1,776 (16.3)	1,762 (16.7)	1,796 (16.2)	1,953 (17.8)	6,832 (14.8)
10–14	1,249 (11.3)	1,284 (11.3)	1,297 (11.9)	1,254 (11.9)	1,222 (11.0)	1,144 (10.4)	4,882 (10.5)
15–19	843 (7.6)	857 (7.6)	820 (7.5)	773 (7.3)	839 (7.6)	748 (6.8)	3,324 (7.2)
20–24	767 (6.9)	767 (6.8)	718 (6.6)	714 (6.8)	788 (7.1)	732 (6.7)	2,960 (6.4)
25–29	630 (5.7)	663 (5.8)	583 (5.4)	573 (5.4)	593 (5.3)	577 (5.3)	2,507 (5.4)
30–34	507 (4.6)	494 (4.4)	481 (4.4)	467 (4.4)	513 (4.6)	477 (4.4)	2,084 (4.5)
35–39	477 (4.3)	459 (4.0)	428 (3.9)	443 (4.2)	414 (3.7)	389 (3.6)	1,889 (4.1)
40–44	360 (3.2)	395 (3.5)	381 (3.5)	357 (3.4)	358 (3.2)	387 (3.5)	1,654 (3.6)
45–49	288 (2.6)	283 (2.5)	345 (3.2)	275 (2.6)	321 (2.9)	338 (3.1)	1,330 (2.9)
50–54	250 (2.3)	231 (2.0)	231 (2.1)	220 (2.1)	244 (2.2)	261 (2.4)	1,087 (2.3)
55–59	205 (1.8)	179 (1.6)	188 (1.7)	179 (1.7)	200 (1.8)	225 (2.1)	860 (1.9)
60–64	208 (1.9)	173 (1.5)	177 (1.6)	142 (1.3)	129 (1.2)	158 (1.4)	726 (1.6)
65–69	210 (1.9)	155 (1.4)	153 (1.4)	110 (1.0)	146 (1.3)	128 (1.2)	709 (1.5)
70–74	193 (1.7)	173 (1.5)	156 (1.4)	116 (1.1)	120 (1.1)	132 (1.2)	682 (1.5)
75–79	142 (1.3)	127 (1.1)	92 (0.8)	85 (0.8)	89 (0.8)	96 (0.9)	503 (1.1)
80–84	92 (0.8)	86 (0.8)	76 (0.7)	57 (0.5)	73 (0.7)	70 (0.6)	362 (0.8)
85–89	47 (0.4)	36 (0.3)	48 (0.4)	22 (0.2)	22 (0.2)	23 (0.2)	163 (0.4)
90+	16 (0.1)	12 (0.1)	7 (0.1)	15 (0.1)	8 (0.1)	18 (0.2)	65 (0.1)

TABLE B.8: Age group and gender-specific ED visit rates per 1,000 population.

		99/00	00/01	01/0 2	02/03	03/04	04/ 05
F	<1	17.0	21.7	21.4	18.5	23.1	18.4
	01–04	26.6	24.8	25.5	26.8	27.8	27.0
	05–09	15.2	15.1	14.9	14.3	14.3	13.8
	10–14	12.6	11.5	11.0	10.1	11.4	10.1
	15–19	18.4	15.8	14.2	12.8	13.5	12.1
	20–24	17.2	15.6	13.8	12.2	13.3	12.3
	25–29	15.0	12.4	11.3	10.8	10.4	9.6
	30–34	11.4	11.2	10.1	8.8	9.6	9.4
	35–39	9.7	9.3	7.7	7.7	9.1	8.6
	40–44	9.2	9.1	7.1	6.4	6.8	7.8
	45–49	10.2	8.5	7.8	6.4	6.7	6.4
	50–54	11.2	7.8	6.5	6.2	6.9	6.7
	55–59	13.1	10.4	8.5	6.2	7.1	7.1
	60–64	11.5	9.7	7.5	6.5	6.5	6.4
	65–69	10.5	9.4	9.9	6.2	6.5	8.1
	70–74	10.0	8.2	7.8	4.9	6.0	5.1
	75–79	9.9	9.6	8.1	5.4	5.7	4.7
	80–84	8.5	8.9	7.3	5.4	5.3	4.3
	85–89	7.0	7.3	7.5	5.7	6.0	5.2
	90+	2.9	2.9	3.7	6.9	3.5	2.8
M	<1	45.0	52.0	39.5	37.4	42.5	38.3
	01–04	43.4	47.9	46.6	47.0	50.0	47.6
	05–09	24.8	25.4	22.6	22.4	23.5	25.7
	10–14	16.3	15.0	15.2	14.5	14.1	13.3
	15–19	10.8	11.1	10.1	9.0	10.6	8.7
	20–24	11.3	10.9	9.7	9.1	9.8	8.8
	25–29	9.3	9.4	7.9	7.2	7.3	7.1
	30–34	6.7	6.1	6.0	5.9	6.1	5.8
	35–39	6.8	5.5	4.7	4.8	4.7	4.7
	40–44	6.2	4.7	4.3	4.3	3.9	4.4
	45–49	4.0	3.6	4.6	3.1	4.2	3.9
	50–54	5.6	3.9	3.3	3.7	3.4	3.2
	55–59	6.1	5.4	4.0	3.1	3.7	3.8
	60–64	8.7	7.4	4.8	3.8	3.3	3.6
	65–69	7.7	6.1	5.6	3.8	4.6	3.8
	70–74	12.3	7.2	6.8	4.4	4.5	4.7
	75–79	8.6	9.9	4.8	5.5	5.5	5.2
	80–84	9.9	9.6	12.3	4.5	7.3	5.3
	85–89	10.0	7.4	8.2	3.9	2.9	3.5
	90+	6.9	4.6	3.0	7.9	6.4	5.8

TABLE B.9: Gender and age group directly standardized rates (DSRs) per 1,000 population for each fiscal year. Standard errors of the DSRs appear in parentheses.

	99/00	00/01	01/02	02/03	03/04	04/05
DSR	12.7 (0.2)	11.8 (0.1)	10.8 (0.1)	10.0 (0.1)	10.6 (0.1)	10.1 (0.1)
95% CI	12.3 to 13.0	11.6 to 12.1	10.6 to 11.0	9.8 to 10.2	10.4 to 10.8	10.0 to 10.3

TABLE B.10: ED visits and distinct individuals less than 65 years of age by gender and pSES for each fiscal year and all years combined.

		99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits								
F	n	17,980	16,432	15,137	14,142	15,255	14,693	93,639
	A	1,383 (7.7)	1,183 (7.2)	1,128 (7.5)	1,128 (8.0)	1,250 (8.2)	1,253 (8.5)	7,325 (7.8)
	O	12,064 (67.1)	11,313 (68.8)	10,489 (69.3)	9,878 (69.8)	10,458 (68.6)	9,840 (67.0)	64,042 (68.4)
	S	3,028 (16.8)	2,504 (15.2)	2,296 (15.2)	1,951 (13.8)	2,274 (14.9)	2,386 (16.2)	14,439 (15.4)
	W	1,505 (8.4)	1,432 (8.7)	1,224 (8.1)	1,185 (8.4)	1,273 (8.3)	1,214 (8.3)	7,833 (8.4)
M	n	16,655	16,390	15,179	14,648	15,503	15,127	93,502
	A	1,090 (6.5)	1,102 (6.7)	1,067 (7.0)	1,095 (7.5)	1,191 (7.7)	1,254 (8.3)	6,799 (7.3)
	O	12,165 (73.0)	12,047 (73.5)	11,250 (74.1)	10,985 (75.0)	11,386 (73.4)	11,049 (73.0)	68,882 (73.7)
	S	2,557 (15.4)	2,370 (14.5)	2,097 (13.8)	1,815 (12.4)	2,066 (13.3)	2,010 (13.3)	12,915 (13.8)
	W	843 (5.1)	871 (5.3)	765 (5.0)	753 (5.1)	860 (5.5)	814 (5.4)	4,906 (5.2)
Distinct Individuals								
F	n	10,634	10,534	9,904	9,490	10,427	10,076	43,256
	A	833 (7.8)	804 (7.6)	764 (7.7)	775 (8.2)	873 (8.4)	864 (8.6)	3,413 (7.9)
	O	7,299 (68.6)	7,253 (68.9)	6,954 (70.2)	6,733 (70.9)	7,283 (69.8)	6,889 (68.4)	30,485 (70.5)
	S	1,690 (15.9)	1,686 (16.0)	1,490 (15.0)	1,290 (13.6)	1,492 (14.3)	1,537 (15.3)	6,430 (14.9)
	W	812 (7.6)	791 (7.5)	696 (7.0)	692 (7.3)	779 (7.5)	786 (7.8)	2,928 (6.8)
M	n	10,395	10,753	10,338	10,128	10,632	10,481	43,802
	A	734 (7.1)	727 (6.8)	752 (7.3)	746 (7.4)	838 (7.9)	855 (8.2)	3,129 (7.1)
	O	7,684 (73.9)	8,060 (75.0)	7,801 (75.5)	7,700 (76.0)	7,908 (74.4)	7,781 (74.2)	33,060 (75.5)
	S	1,447 (13.9)	1,438 (13.4)	1,284 (12.4)	1,184 (11.7)	1,361 (12.8)	1,316 (12.6)	5,563 (12.7)
	W	530 (5.1)	528 (4.9)	501 (4.8)	498 (4.9)	525 (4.9)	529 (5.0)	2,050 (4.7)

TABLE B.11: Gender and age group directly standardized rates (DSRs) per 1,000 population by pSES for each fiscal year. These calculations are restricted to individuals less than 65 years of age. Standard errors of the DSRs appear in parentheses.

		99/00	00/01	01/02	02/03	03/04	04/05
A	DSR	**22.7** (1.2)	**19.5** (0.9)	**18.0** (0.7)	**17.9** (0.7)	**18.8** (0.7)	**19.2** (0.7)
	95% CI	20.3 to 25.1	17.6 to 21.4	16.6 to 19.4	16.5 to 19.3	17.5 to 20.1	17.9 to 20.5
O	DSR	**11.6** (0.2)	**11.0** (0.1)	**10.0** (0.1)	**9.5** (0.1)	**9.9** (0.1)	**9.5** (0.1)
	95% CI	11.2 to 11.9	10.8 to 11.3	9.8 to 10.3	9.3 to 9.7	9.7 to 10.1	9.3 to 9.7
S	DSR	**16.5** (1.1)	**14.0** (0.5)	**13.1** (0.5)	**11.7** (0.3)	**13.1** (0.4)	**12.4** (0.4)
	95% CI	14.5 to 18.6	13.1 to 14.9	12.1 to 14.2	11.1 to 12.4	12.4 to 13.9	11.7 to 13.1
W	DSR	**28.6** (1.2)	**29.8** (1.5)	**26.9** (1.3)	**24.5** (1.5)	**25.8** (1.0)	**24.8** (1.0)
	95% CI	26.2 to 31.0	26.8 to 32.8	24.3 to 29.5	21.5 to 27.4	23.9 to 27.8	22.9 to 26.6

C Timing of ED Visits

TABLE C.1: ED visits by month of year for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
Apr	3,404 (9.1)	3,344 (9.5)	3,567 (10.9)	2,652 (8.7)	3,024 (9.3)	3,063 (9.7)	19,054 (9.5)
May	3,640 (9.7)	3,287 (9.3)	3,282 (10.0)	3,197 (10.5)	3,101 (9.5)	2,893 (9.2)	19,400 (9.7)
Jun	2,867 (7.7)	2,893 (8.2)	3,005 (9.2)	2,387 (7.8)	2,483 (7.6)	2,527 (8.0)	16,162 (8.1)
Jul	2,587 (6.9)	2,437 (6.9)	2,602 (8.0)	2,060 (6.8)	2,135 (6.6)	2,205 (7.0)	14,026 (7.0)
Aug	2,614 (7.0)	2,562 (7.3)	1,991 (6.1)	2,495 (8.2)	2,409 (7.4)	1,943 (6.2)	14,014 (7.0)
Sep	3,787 (10.1)	3,539 (10.0)	2,985 (9.1)	3,234 (10.6)	3,465 (10.6)	3,151 (10.0)	20,161 (10.1)
Oct	3,314 (8.9)	2,928 (8.3)	2,764 (8.5)	2,583 (8.5)	3,039 (9.3)	2,650 (8.4)	17,278 (8.6)
Nov	3,274 (8.7)	2,493 (7.1)	2,405 (7.4)	2,299 (7.6)	2,661 (8.2)	2,465 (7.8)	15,597 (7.8)
Dec	4,051 (10.8)	3,252 (9.2)	2,690 (8.2)	2,490 (8.2)	2,521 (7.7)	2,703 (8.6)	17,707 (8.9)
Jan	2,546 (6.8)	3,077 (8.7)	2,243 (6.9)	1,987 (6.5)	2,272 (7.0)	2,308 (7.3)	14,433 (7.2)
Feb	2,600 (6.9)	2,539 (7.2)	2,285 (7.0)	2,436 (8.0)	2,527 (7.8)	2,722 (8.6)	15,109 (7.6)
Mar	2,759 (7.4)	2,970 (8.4)	2,857 (8.7)	2,620 (8.6)	2,927 (9.0)	2,926 (9.3)	17,059 (8.5)

FIGURE C.1: ED visits per month during the study period (dashed line = lowess smooth).

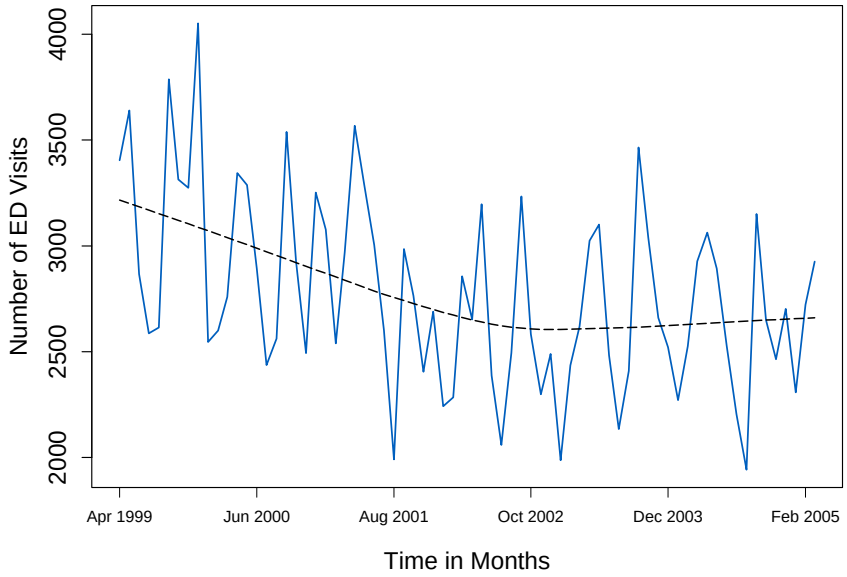


FIGURE C.2: ED visits per month for each fiscal year.

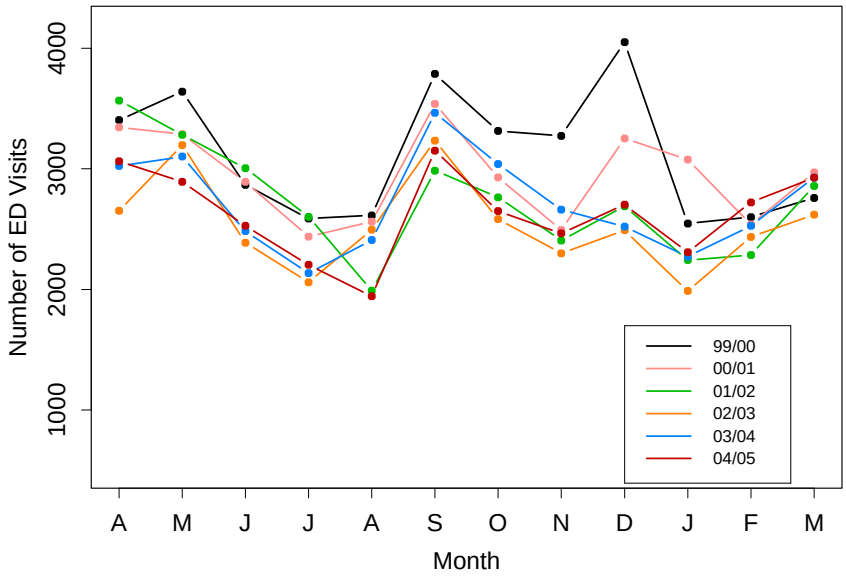


TABLE C.2: ED visits by month of year for each fiscal year and all years combined for adults.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	21,218	19,049	17,266	15,371	16,608	16,301	105,813
Apr	1,899 (8.9)	1,657 (8.7)	1,838 (10.6)	1,310 (8.5)	1,419 (8.5)	1,524 (9.3)	9,647 (9.1)
May	1,938 (9.1)	1,690 (8.9)	1,670 (9.7)	1,529 (9.9)	1,519 (9.1)	1,357 (8.3)	9,703 (9.2)
Jun	1,549 (7.3)	1,538 (8.1)	1,476 (8.5)	1,144 (7.4)	1,227 (7.4)	1,152 (7.1)	8,086 (7.6)
Jul	1,564 (7.4)	1,488 (7.8)	1,524 (8.8)	1,158 (7.5)	1,245 (7.5)	1,272 (7.8)	8,251 (7.8)
Aug	1,571 (7.4)	1,678 (8.8)	1,282 (7.4)	1,437 (9.3)	1,379 (8.3)	1,123 (6.9)	8,470 (8.0)
Sep	1,787 (8.4)	1,772 (9.3)	1,466 (8.5)	1,572 (10.2)	1,573 (9.5)	1,596 (9.8)	9,766 (9.2)
Oct	1,768 (8.3)	1,586 (8.3)	1,510 (8.7)	1,380 (9.0)	1,613 (9.7)	1,365 (8.4)	9,222 (8.7)
Nov	1,925 (9.1)	1,249 (6.6)	1,152 (6.7)	1,149 (7.5)	1,501 (9.0)	1,207 (7.4)	8,183 (7.7)
Dec	2,655 (12.5)	1,657 (8.7)	1,472 (8.5)	1,305 (8.5)	1,463 (8.8)	1,567 (9.6)	10,119 (9.6)
Jan	1,635 (7.7)	1,802 (9.5)	1,288 (7.5)	1,065 (6.9)	1,220 (7.3)	1,344 (8.2)	8,354 (7.9)
Feb	1,456 (6.9)	1,384 (7.3)	1,091 (6.3)	1,059 (6.9)	1,113 (6.7)	1,349 (8.3)	7,452 (7.0)
Mar	1,471 (6.9)	1,548 (8.1)	1,497 (8.7)	1,263 (8.2)	1,336 (8.0)	1,445 (8.9)	8,560 (8.1)

TABLE C.3: ED visits by month of year for each fiscal year and all years combined for children.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	16,225	16,272	15,410	15,069	15,956	15,255	94,187
Apr	1,505 (9.3)	1,687 (10.4)	1,729 (11.2)	1,342 (8.9)	1,605 (10.1)	1,539 (10.1)	9,407 (10.0)
May	1,702 (10.5)	1,597 (9.8)	1,612 (10.5)	1,668 (11.1)	1,582 (9.9)	1,536 (10.1)	9,697 (10.3)
Jun	1,318 (8.1)	1,355 (8.3)	1,529 (9.9)	1,243 (8.2)	1,256 (7.9)	1,375 (9.0)	8,076 (8.6)
Jul	1,023 (6.3)	949 (5.8)	1,078 (7.0)	902 (6.0)	890 (5.6)	933 (6.1)	5,775 (6.1)
Aug	1,043 (6.4)	884 (5.4)	709 (4.6)	1,058 (7.0)	1,030 (6.5)	820 (5.4)	5,544 (5.9)
Sep	2,000 (12.3)	1,767 (10.9)	1,519 (9.9)	1,662 (11.0)	1,892 (11.9)	1,555 (10.2)	10,395 (11.0)
Oct	1,546 (9.5)	1,342 (8.2)	1,254 (8.1)	1,203 (8.0)	1,426 (8.9)	1,285 (8.4)	8,056 (8.6)
Nov	1,349 (8.3)	1,244 (7.6)	1,253 (8.1)	1,150 (7.6)	1,160 (7.3)	1,258 (8.2)	7,414 (7.9)
Dec	1,396 (8.6)	1,595 (9.8)	1,218 (7.9)	1,185 (7.9)	1,058 (6.6)	1,136 (7.4)	7,588 (8.1)
Jan	911 (5.6)	1,275 (7.8)	955 (6.2)	922 (6.1)	1,052 (6.6)	964 (6.3)	6,079 (6.5)
Feb	1,144 (7.1)	1,155 (7.1)	1,194 (7.7)	1,377 (9.1)	1,414 (8.9)	1,373 (9.0)	7,657 (8.1)
Mar	1,288 (7.9)	1,422 (8.7)	1,360 (8.8)	1,357 (9.0)	1,591 (10.0)	1,481 (9.7)	8,499 (9.0)

TABLE C.4: ED visits by day of week for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
Sun	6,203 (16.6)	5,995 (17.0)	5,716 (17.5)	5,269 (17.3)	5,654 (17.4)	5,322 (16.9)	34,159 (17.1)
Mon	5,870 (15.7)	5,416 (15.3)	5,034 (15.4)	4,804 (15.8)	4,867 (14.9)	4,884 (15.5)	30,875 (15.4)
Tue	5,101 (13.6)	4,922 (13.9)	4,416 (13.5)	4,082 (13.4)	4,407 (13.5)	4,278 (13.6)	27,206 (13.6)
Wed	4,792 (12.8)	4,483 (12.7)	4,230 (12.9)	4,109 (13.5)	4,441 (13.6)	4,212 (13.3)	26,267 (13.1)
Thu	4,810 (12.8)	4,336 (12.3)	4,064 (12.4)	3,720 (12.2)	4,104 (12.6)	4,005 (12.7)	25,039 (12.5)
Fri	4,802 (12.8)	4,536 (12.8)	4,137 (12.7)	3,867 (12.7)	4,100 (12.6)	4,071 (12.9)	25,513 (12.8)
Sat	5,865 (15.7)	5,633 (15.9)	5,079 (15.5)	4,589 (15.1)	4,991 (15.3)	4,784 (15.2)	30,941 (15.5)

FIGURE C.3: ED visits by day of week for each fiscal year.

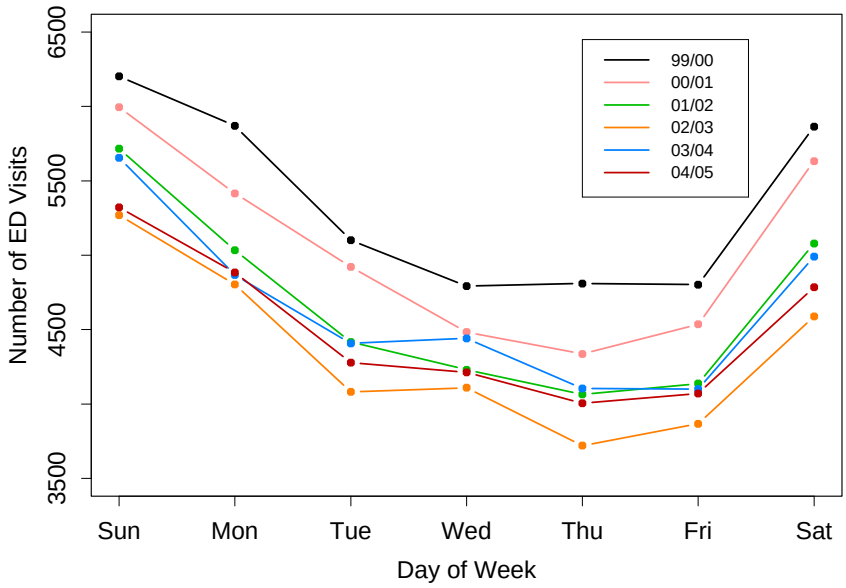


TABLE C.5: ED visits by day of week for each fiscal year and all years combined for adults.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	21,218	19,049	17,266	15,371	16,608	16,301	105,813
Sun	3,419 (16.1)	3,104 (16.3)	2,897 (16.8)	2,560 (16.7)	2,848 (17.1)	2,605 (16.0)	17,433 (16.5)
Mon	3,267 (15.4)	2,953 (15.5)	2,586 (15.0)	2,394 (15.6)	2,477 (14.9)	2,496 (15.3)	16,173 (15.3)
Tue	2,888 (13.6)	2,647 (13.9)	2,316 (13.4)	2,023 (13.2)	2,239 (13.5)	2,207 (13.5)	14,320 (13.5)
Wed	2,772 (13.1)	2,438 (12.8)	2,328 (13.5)	2,088 (13.6)	2,347 (14.1)	2,213 (13.6)	14,186 (13.4)
Thu	2,827 (13.3)	2,406 (12.6)	2,189 (12.7)	1,946 (12.7)	2,043 (12.3)	2,150 (13.2)	13,561 (12.8)
Fri	2,784 (13.1)	2,515 (13.2)	2,267 (13.1)	2,017 (13.1)	2,128 (12.8)	2,153 (13.2)	13,864 (13.1)
Sat	3,261 (15.4)	2,986 (15.7)	2,683 (15.5)	2,343 (15.2)	2,526 (15.2)	2,477 (15.2)	16,276 (15.4)

TABLE C.6: ED visits by day of week for each fiscal year and all years combined for children.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	16,225	16,272	15,410	15,069	15,956	15,255	94,187
Sun	2,784 (17.2)	2,891 (17.8)	2,819 (18.3)	2,709 (18.0)	2,806 (17.6)	2,717 (17.8)	16,726 (17.8)
Mon	2,603 (16.0)	2,463 (15.1)	2,448 (15.9)	2,410 (16.0)	2,390 (15.0)	2,388 (15.7)	14,702 (15.6)
Tue	2,213 (13.6)	2,275 (14.0)	2,100 (13.6)	2,059 (13.7)	2,168 (13.6)	2,071 (13.6)	12,886 (13.7)
Wed	2,020 (12.4)	2,045 (12.6)	1,902 (12.3)	2,021 (13.4)	2,094 (13.1)	1,999 (13.1)	12,081 (12.8)
Thu	1,983 (12.2)	1,930 (11.9)	1,875 (12.2)	1,774 (11.8)	2,061 (12.9)	1,855 (12.2)	11,478 (12.2)
Fri	2,018 (12.4)	2,021 (12.4)	1,870 (12.1)	1,850 (12.3)	1,972 (12.4)	1,918 (12.6)	11,649 (12.4)
Sat	2,604 (16.0)	2,647 (16.3)	2,396 (15.5)	2,246 (14.9)	2,465 (15.4)	2,307 (15.1)	14,665 (15.6)

FIGURE C.4: Daily ED visits during the study period.

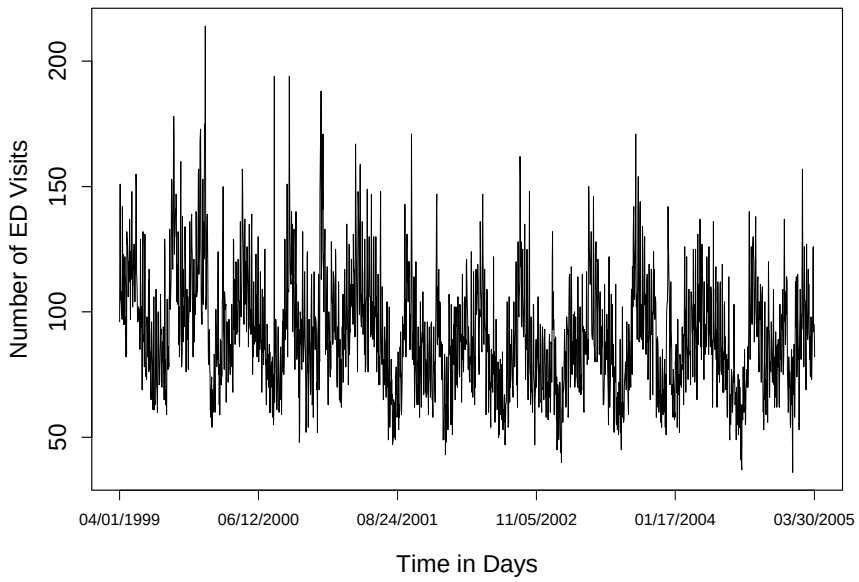


TABLE C.7: ED visits by hour of day for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
00:00–00:59	751 (2.0)	1,128 (3.2)	903 (2.8)	949 (3.1)	951 (2.9)	887 (2.8)	5,569 (2.8)
01:00–01:59	506 (1.4)	541 (1.5)	599 (1.8)	673 (2.2)	715 (2.2)	622 (2.0)	3,656 (1.8)
02:00–02:59	430 (1.1)	458 (1.3)	551 (1.7)	587 (1.9)	572 (1.8)	563 (1.8)	3,161 (1.6)
03:00–03:59	371 (1.0)	441 (1.2)	490 (1.5)	562 (1.8)	502 (1.5)	535 (1.7)	2,901 (1.5)
04:00–04:59	300 (0.8)	386 (1.1)	420 (1.3)	457 (1.5)	499 (1.5)	475 (1.5)	2,537 (1.3)
05:00–05:59	350 (0.9)	385 (1.1)	429 (1.3)	448 (1.5)	510 (1.6)	478 (1.5)	2,600 (1.3)
06:00–06:59	470 (1.3)	459 (1.3)	538 (1.6)	533 (1.8)	592 (1.8)	607 (1.9)	3,199 (1.6)
07:00–07:59	791 (2.1)	771 (2.2)	861 (2.6)	921 (3.0)	968 (3.0)	955 (3.0)	5,267 (2.6)
08:00–08:59	1,844 (4.9)	1,734 (4.9)	1,753 (5.4)	1,724 (5.7)	1,910 (5.9)	1,865 (5.9)	10,830 (5.4)
09:00–09:59	1,776 (4.7)	1,737 (4.9)	1,925 (5.9)	1,754 (5.8)	2,038 (6.3)	1,964 (6.2)	11,194 (5.6)
10:00–10:59	1,659 (4.4)	1,520 (4.3)	1,764 (5.4)	1,638 (5.4)	1,728 (5.3)	1,864 (5.9)	10,173 (5.1)
11:00–11:59	1,372 (3.7)	1,361 (3.9)	1,584 (4.8)	1,528 (5.0)	1,696 (5.2)	1,568 (5.0)	9,109 (4.6)
12:00–12:59	1,206 (3.2)	1,130 (3.2)	1,308 (4.0)	1,358 (4.5)	1,422 (4.4)	1,388 (4.4)	7,812 (3.9)
13:00–13:59	1,152 (3.1)	1,077 (3.0)	1,284 (3.9)	1,268 (4.2)	1,404 (4.3)	1,341 (4.2)	7,526 (3.8)
14:00–14:59	1,069 (2.9)	1,084 (3.1)	1,260 (3.9)	1,227 (4.0)	1,297 (4.0)	1,338 (4.2)	7,275 (3.6)
15:00–15:59	1,162 (3.1)	1,142 (3.2)	1,218 (3.7)	1,240 (4.1)	1,349 (4.1)	1,318 (4.2)	7,429 (3.7)
16:00–16:59	1,255 (3.4)	1,189 (3.4)	1,288 (3.9)	1,383 (4.5)	1,433 (4.4)	1,339 (4.2)	7,887 (3.9)
17:00–17:59	1,223 (3.3)	1,203 (3.4)	1,311 (4.0)	1,357 (4.5)	1,448 (4.4)	1,434 (4.5)	7,976 (4.0)
18:00–18:59	1,427 (3.8)	1,468 (4.2)	1,632 (5.0)	1,610 (5.3)	1,710 (5.3)	1,721 (5.5)	9,568 (4.8)
19:00–19:59	2,025 (5.4)	2,036 (5.8)	2,214 (6.8)	2,126 (7.0)	2,331 (7.2)	2,245 (7.1)	12,977 (6.5)
20:00–20:59	1,947 (5.2)	1,954 (5.5)	2,242 (6.9)	2,085 (6.8)	2,282 (7.0)	2,244 (7.1)	12,754 (6.4)
21:00–21:59	1,716 (4.6)	1,610 (4.6)	1,850 (5.7)	1,996 (6.6)	2,013 (6.2)	1,848 (5.9)	11,033 (5.5)
22:00–22:59	1,426 (3.8)	1,340 (3.8)	1,569 (4.8)	1,682 (5.5)	1,844 (5.7)	1,619 (5.1)	9,480 (4.7)
23:00–23:59	1,027 (2.7)	1,093 (3.1)	1,235 (3.8)	1,308 (4.3)	1,348 (4.1)	1,338 (4.2)	7,349 (3.7)
missing	10,188 (27.2)	8,074 (22.9)	2,448 (7.5)	26 (0.1)	2 (0.0)	0 (0.0)	20,738 (10.4)

FIGURE C.5: ED visits by hour of day for each fiscal year.

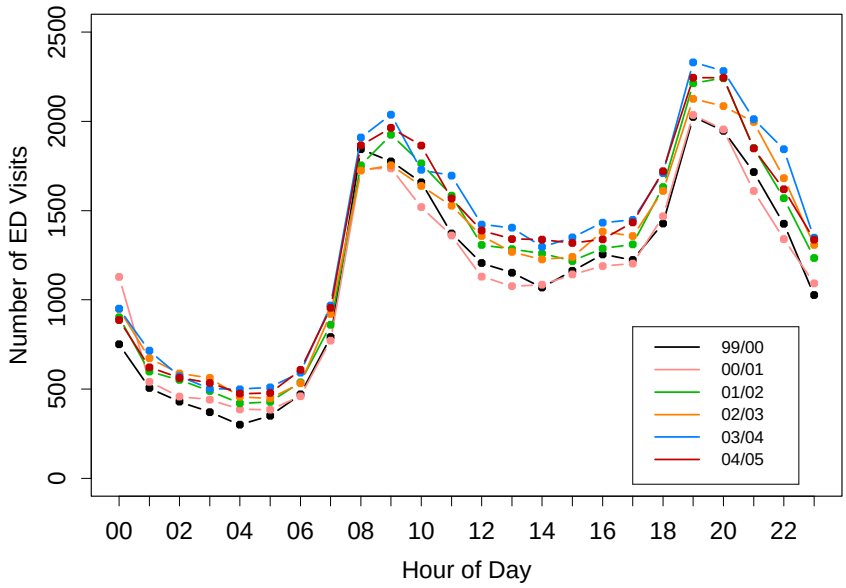


TABLE C.8: ED visits by hour of day for each fiscal year and all years combined for adults.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	21,218	19,049	17,266	15,371	16,608	16,301	105,813
00:00–00:59	427 (2.0)	479 (2.5)	463 (2.7)	454 (3.0)	481 (2.9)	449 (2.8)	2,753 (2.6)
01:00–01:59	291 (1.4)	303 (1.6)	335 (1.9)	353 (2.3)	384 (2.3)	319 (2.0)	1,985 (1.9)
02:00–02:59	264 (1.2)	263 (1.4)	313 (1.8)	319 (2.1)	300 (1.8)	331 (2.0)	1,790 (1.7)
03:00–03:59	243 (1.1)	274 (1.4)	264 (1.5)	311 (2.0)	264 (1.6)	298 (1.8)	1,654 (1.6)
04:00–04:59	180 (0.8)	239 (1.3)	241 (1.4)	275 (1.8)	285 (1.7)	267 (1.6)	1,487 (1.4)
05:00–05:59	211 (1.0)	241 (1.3)	244 (1.4)	272 (1.8)	304 (1.8)	310 (1.9)	1,582 (1.5)
06:00–06:59	333 (1.6)	310 (1.6)	319 (1.8)	324 (2.1)	349 (2.1)	371 (2.3)	2,006 (1.9)
07:00–07:59	527 (2.5)	494 (2.6)	515 (3.0)	535 (3.5)	585 (3.5)	578 (3.5)	3,234 (3.1)
08:00–08:59	1,137 (5.4)	1,042 (5.5)	972 (5.6)	934 (6.1)	1,058 (6.4)	1,088 (6.7)	6,231 (5.9)
09:00–09:59	1,133 (5.3)	1,030 (5.4)	1,093 (6.3)	894 (5.8)	1,078 (6.5)	1,075 (6.6)	6,303 (6.0)
10:00–10:59	999 (4.7)	860 (4.5)	934 (5.4)	866 (5.6)	885 (5.3)	959 (5.9)	5,503 (5.2)
11:00–11:59	845 (4.0)	727 (3.8)	842 (4.9)	742 (4.8)	887 (5.3)	840 (5.2)	4,883 (4.6)
12:00–12:59	712 (3.4)	643 (3.4)	658 (3.8)	687 (4.5)	716 (4.3)	751 (4.6)	4,167 (3.9)
13:00–13:59	692 (3.3)	639 (3.4)	668 (3.9)	679 (4.4)	754 (4.5)	713 (4.4)	4,145 (3.9)
14:00–14:59	658 (3.1)	664 (3.5)	663 (3.8)	600 (3.9)	689 (4.1)	702 (4.3)	3,976 (3.8)
15:00–15:59	729 (3.4)	668 (3.5)	655 (3.8)	627 (4.1)	682 (4.1)	692 (4.2)	4,053 (3.8)
16:00–16:59	756 (3.6)	668 (3.5)	635 (3.7)	670 (4.4)	749 (4.5)	683 (4.2)	4,161 (3.9)
17:00–17:59	736 (3.5)	658 (3.5)	653 (3.8)	669 (4.4)	713 (4.3)	724 (4.4)	4,153 (3.9)
18:00–18:59	848 (4.0)	762 (4.0)	784 (4.5)	732 (4.8)	799 (4.8)	809 (5.0)	4,734 (4.5)
19:00–19:59	1,089 (5.1)	1,076 (5.6)	1,052 (6.1)	1,014 (6.6)	1,091 (6.6)	997 (6.1)	6,319 (6.0)
20:00–20:59	1,070 (5.0)	1,065 (5.6)	1,116 (6.5)	972 (6.3)	1,043 (6.3)	1,067 (6.5)	6,333 (6.0)
21:00–21:59	984 (4.6)	883 (4.6)	941 (5.5)	965 (6.3)	970 (5.8)	887 (5.4)	5,630 (5.3)
22:00–22:59	838 (3.9)	725 (3.8)	776 (4.5)	823 (5.4)	903 (5.4)	761 (4.7)	4,826 (4.6)
23:00–23:59	585 (2.8)	592 (3.1)	627 (3.6)	631 (4.1)	637 (3.8)	630 (3.9)	3,702 (3.5)
missing	4,931 (23.2)	3,744 (19.7)	1,503 (8.7)	23 (0.1)	2 (0.0)	0 (0.0)	10,203 (9.6)

TABLE C.9: ED visits by hour of day for each fiscal year and all years combined for children.

	99/00	00/01	01/02	02/03	03/04	04/05	All
n	16,225	16,272	15,410	15,069	15,956	15,255	94,187
00:00–00:59	324 (2.0)	649 (4.0)	440 (2.9)	495 (3.3)	470 (2.9)	438 (2.9)	2,816 (3.0)
01:00–01:59	215 (1.3)	238 (1.5)	264 (1.7)	320 (2.1)	331 (2.1)	303 (2.0)	1,671 (1.8)
02:00–02:59	166 (1.0)	195 (1.2)	238 (1.5)	268 (1.8)	272 (1.7)	232 (1.5)	1,371 (1.5)
03:00–03:59	128 (0.8)	167 (1.0)	226 (1.5)	251 (1.7)	238 (1.5)	237 (1.6)	1,247 (1.3)
04:00–04:59	120 (0.7)	147 (0.9)	179 (1.2)	182 (1.2)	214 (1.3)	208 (1.4)	1,050 (1.1)
05:00–05:59	139 (0.9)	144 (0.9)	185 (1.2)	176 (1.2)	206 (1.3)	168 (1.1)	1,018 (1.1)
06:00–06:59	137 (0.8)	149 (0.9)	219 (1.4)	209 (1.4)	243 (1.5)	236 (1.5)	1,193 (1.3)
07:00–07:59	264 (1.6)	277 (1.7)	346 (2.2)	386 (2.6)	383 (2.4)	377 (2.5)	2,033 (2.2)
08:00–08:59	707 (4.4)	692 (4.3)	781 (5.1)	790 (5.2)	852 (5.3)	777 (5.1)	4,599 (4.9)
09:00–09:59	643 (4.0)	707 (4.3)	832 (5.4)	860 (5.7)	960 (6.0)	889 (5.8)	4,891 (5.2)
10:00–10:59	660 (4.1)	660 (4.1)	830 (5.4)	772 (5.1)	843 (5.3)	905 (5.9)	4,670 (5.0)
11:00–11:59	527 (3.2)	634 (3.9)	742 (4.8)	786 (5.2)	809 (5.1)	728 (4.8)	4,226 (4.5)
12:00–12:59	494 (3.0)	487 (3.0)	650 (4.2)	671 (4.5)	706 (4.4)	637 (4.2)	3,645 (3.9)
13:00–13:59	460 (2.8)	438 (2.7)	616 (4.0)	589 (3.9)	650 (4.1)	628 (4.1)	3,381 (3.6)
14:00–14:59	411 (2.5)	420 (2.6)	597 (3.9)	627 (4.2)	608 (3.8)	636 (4.2)	3,299 (3.5)
15:00–15:59	433 (2.7)	474 (2.9)	563 (3.7)	613 (4.1)	667 (4.2)	626 (4.1)	3,376 (3.6)
16:00–16:59	499 (3.1)	521 (3.2)	653 (4.2)	713 (4.7)	684 (4.3)	656 (4.3)	3,726 (4.0)
17:00–17:59	487 (3.0)	545 (3.3)	658 (4.3)	688 (4.6)	735 (4.6)	710 (4.7)	3,823 (4.1)
18:00–18:59	579 (3.6)	706 (4.3)	848 (5.5)	878 (5.8)	911 (5.7)	912 (6.0)	4,834 (5.1)
19:00–19:59	936 (5.8)	960 (5.9)	1,162 (7.5)	1,112 (7.4)	1,240 (7.8)	1,248 (8.2)	6,658 (7.1)
20:00–20:59	877 (5.4)	889 (5.5)	1,126 (7.3)	1,113 (7.4)	1,239 (7.8)	1,177 (7.7)	6,421 (6.8)
21:00–21:59	732 (4.5)	727 (4.5)	909 (5.9)	1,031 (6.8)	1,043 (6.5)	961 (6.3)	5,403 (5.7)
22:00–22:59	588 (3.6)	615 (3.8)	793 (5.1)	859 (5.7)	941 (5.9)	858 (5.6)	4,654 (4.9)
23:00–23:59	442 (2.7)	501 (3.1)	608 (3.9)	677 (4.5)	711 (4.5)	708 (4.6)	3,647 (3.9)
missing	5,257 (32.4)	4,330 (26.6)	945 (6.1)	3 (0.0)	0 (0.0)	0 (0.0)	10,535 (11.2)

D ED Visit Disposition

TABLE D.1: ED visits and individuals (not necessarily distinct) by disposition for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
ED Visits							
n	37,443	35,321	32,676	30,440	32,564	31,556	200,000
1	33,050 (88.3)	31,755 (89.9)	29,374 (89.9)	27,511 (90.4)	29,435 (90.4)	28,460 (90.2)	179,585 (89.8)
2	198 (0.5)	206 (0.6)	224 (0.7)	44 (0.1)	59 (0.2)	26 (0.1)	757 (0.4)
3	103 (0.3)	94 (0.3)	94 (0.3)	99 (0.3)	129 (0.4)	383 (1.2)	902 (0.5)
4	110 (0.3)	79 (0.2)	70 (0.2)	81 (0.3)	90 (0.3)	81 (0.3)	511 (0.3)
5	3,769 (10.1)	2,971 (8.4)	2,700 (8.3)	2,512 (8.3)	2,627 (8.1)	2,351 (7.5)	16,930 (8.5)
6	139 (0.4)	205 (0.6)	207 (0.6)	189 (0.6)	222 (0.7)	243 (0.8)	1,205 (0.6)
7	5 (0.0)	4 (0.0)	3 (0.0)	3 (0.0)	1 (0.0)	5 (0.0)	21 (0.0)
8	4 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (0.0)
9	65 (0.2)	7 (0.0)	3 (0.0)	1 (0.0)	1 (0.0)	7 (0.0)	84 (0.0)
Individuals							
1	20,415	20,919	19,898	19,149	20,648	20,053	86,955
2	161	144	154	25	23	23	494
3	99	91	92	91	127	374	827
4	104	75	66	79	89	78	468
5	3,281	2,630	2,430	2,269	2,361	2,117	12,780
6	136	190	198	185	220	233	1,120
7	5	4	3	3	1	5	21
8	4	0	1	0	0	0	5
9	65	7	3	1	1	7	84

TABLE D.2: ED visits by disposition and pSES (age less than 65 years) for each fiscal year and all years combined.

	99/00	00/01	01/02	02/03	03/04	04/05	All
1 n	30,940	29,831	27,538	26,196	27,981	27,033	169,519
A	2,077 (6.7)	1,971 (6.6)	1,917 (7.0)	1,955 (7.5)	2,135 (7.6)	2,252 (8.3)	12,307 (7.3)
O	21,874 (70.7)	21,426 (71.8)	19,930 (72.4)	19,198 (73.3)	20,081 (71.8)	19,095 (70.6)	121,604 (71.7)
S	5,002 (16.2)	4,439 (14.9)	3,971 (14.4)	3,371 (12.9)	3,917 (14.0)	3,932 (14.5)	24,632 (14.5)
W	1,987 (6.4)	1,995 (6.7)	1,720 (6.2)	1,672 (6.4)	1,848 (6.6)	1,754 (6.5)	10,976 (6.5)
2 n	184	196	200	43	53	25	701
A	14 (7.6)	21 (10.7)	11 (5.5)	1 (2.3)	0 (0.0)	1 (4.0)	48 (6.8)
O	142 (77.2)	133 (67.9)	142 (71.0)	30 (69.8)	32 (60.4)	18 (72.0)	497 (70.9)
S	23 (12.5)	32 (16.3)	38 (19.0)	6 (14.0)	21 (39.6)	6 (24.0)	126 (18.0)
W	5 (2.7)	10 (5.1)	9 (4.5)	6 (14.0)	0 (0.0)	0 (0.0)	30 (4.3)
3 n	97	93	93	98	126	378	885
A	7 (7.2)	8 (8.6)	8 (8.6)	10 (10.2)	11 (8.7)	35 (9.3)	79 (8.9)
O	52 (53.6)	51 (54.8)	57 (61.3)	54 (55.1)	81 (64.3)	248 (65.6)	543 (61.4)
S	16 (16.5)	16 (17.2)	10 (10.8)	17 (17.3)	15 (11.9)	50 (13.2)	124 (14.0)
W	22 (22.7)	18 (19.4)	18 (19.4)	17 (17.3)	19 (15.1)	45 (11.9)	139 (15.7)
4 n	88	65	51	66	83	76	429
A	5 (5.7)	0 (0.0)	4 (7.8)	5 (7.6)	1 (1.2)	4 (5.3)	19 (4.4)
O	61 (69.3)	43 (66.2)	30 (58.8)	42 (63.6)	59 (71.1)	47 (61.8)	282 (65.7)
S	12 (13.6)	11 (16.9)	7 (13.7)	9 (13.6)	10 (12.0)	16 (21.1)	65 (15.2)
W	10 (11.4)	11 (16.9)	10 (19.6)	10 (15.2)	13 (15.7)	9 (11.8)	63 (14.7)
5 n	3,144	2,447	2,237	2,207	2,302	2,065	14,402
A	362 (11.5)	270 (11.0)	234 (10.5)	239 (10.8)	271 (11.8)	193 (9.3)	1,569 (10.9)
O	1,968 (62.6)	1,587 (64.9)	1,449 (64.8)	1,420 (64.3)	1,460 (63.4)	1,321 (64.0)	9,205 (63.9)
S	506 (16.1)	341 (13.9)	336 (15.0)	332 (15.0)	343 (14.9)	351 (17.0)	2,209 (15.3)
W	308 (9.8)	249 (10.2)	218 (9.7)	216 (9.8)	228 (9.9)	200 (9.7)	1,419 (9.9)
6 n	111	181	190	178	211	231	1,102
A	5 (4.5)	15 (8.3)	21 (11.1)	13 (7.3)	23 (10.9)	19 (8.2)	96 (8.7)
O	82 (73.9)	115 (63.5)	126 (66.3)	117 (65.7)	129 (61.1)	156 (67.5)	725 (65.8)
S	14 (12.6)	32 (17.7)	29 (15.3)	31 (17.4)	34 (16.1)	37 (16.0)	177 (16.1)
W	10 (9.0)	19 (10.5)	14 (7.4)	17 (9.6)	25 (11.8)	19 (8.2)	104 (9.4)
7 n	5	3	3	1	1	5	18
A	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	1 (5.6)
O	5 (100.0)	2 (66.7)	3 (100.0)	1 (100.0)	1 (100.0)	1 (20.0)	13 (72.2)
S	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (40.0)	2 (11.1)
W	0 (0.0)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	2 (11.1)
8 n	3	0	1	0	0	0	4
O	2 (66.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (50.0)
S	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)
W	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)
9 n	63	6	3	1	1	7	81
A	3 (4.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (28.6)	5 (6.2)
O	43 (68.3)	3 (50.0)	2 (66.7)	1 (100.0)	1 (100.0)	3 (42.9)	53 (65.4)
S	12 (19.0)	3 (50.0)	1 (33.3)	0 (0.0)	0 (0.0)	2 (28.6)	18 (22.2)
W	5 (7.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (6.2)

TABLE D.3: Individuals (not necessarily distinct) less than 65 years of age visiting EDs for asthma by disposition and pSES for each fiscal year and all years combined.

		99/00	00/01	01/02	02/03	03/04	04/05	All
1	A	1,387	1,378	1,369	1,386	1,558	1,601	6,118
	O	13,828	14,348	13,823	13,600	14,290	13,731	62,004
	S	2,847	2,909	2,580	2,271	2,657	2,628	12,818
	W	1,170	1,187	1,079	1,066	1,166	1,169	5,304
2	A	12	15	10	1	0	1	35
	O	114	99	106	14	12	16	342
	S	18	14	15	6	7	5	61
	W	5	6	8	3	0	0	22
3	A	7	8	8	10	10	34	74
	O	49	51	56	53	81	244	519
	S	16	15	10	16	15	48	117
	W	21	16	17	11	18	43	112
4	A	5	0	4	5	1	4	19
	O	56	39	28	42	58	45	258
	S	12	11	7	9	10	16	63
	W	9	11	8	9	13	8	52
5	A	292	223	210	207	238	171	1,121
	O	1,758	1,439	1,318	1,284	1,341	1,201	7,287
	S	439	300	303	309	293	306	1,730
	W	261	206	176	188	193	174	1,008
6	A	5	14	18	13	23	14	80
	O	80	108	121	115	128	153	687
	S	14	26	29	29	34	35	161
	W	10	19	13	17	24	19	98
7	A	0	0	0	0	0	1	1
	O	5	2	3	1	1	1	13
	S	0	0	0	0	0	2	2
	W	0	1	0	0	0	1	2
8	A	0	0	0	0	0	0	0
	O	2	0	0	0	0	0	2
	S	0	0	1	0	0	0	1
	W	1	0	0	0	0	0	1
9	A	3	0	0	0	0	2	5
	O	43	3	2	1	1	3	53
	S	12	3	1	0	0	2	18
	W	5	0	0	0	0	0	5

E Regional Variation

TABLE E.1: Regional Health Authority (RHA) and sub-Regional Health Authority (sRHA) codes and names.

RHA		Code	sRHA
R1	Chinook Regional Health Authority	1	R101 Crowsnest Pincher Creek
		2	R102 Ft McLeod Cardston
		3	R103 Lethbridge
		4	R104 Picture Butte Raymond Milk R
		5	R105 Vauxhall Taber
R2	Palliser Health Region	6	R201 Palliser North and Central
		7	R202 Palliser West
R3	Calgary Health Region	8	R301 Calgary North East
		9	R302 Calgary Beddington Heights
		10	R303 Calgary Northwest
		11	R304 Calgary University
		12	R305 Calgary Charleswood
		13	R306 Calgary Marlborough
		14	R307 Calgary Shaganappi
		15	R308 Calgary Bowness
		16	R309 Calgary Scarboro
		17	R310 Calgary Forest Lawn
		18	R311 Calgary Lakeview
		19	R312 Calgary Mount Royal
		20	R313 Calgary Haysboro
		21	R314 Calgary Bonavista
		22	R315 Calgary South
		23	R320 Banff-Canmore
		24	R321 Didsbury-Strathmore
		25	R322 Vulcan-Claresholm
		26	R323 High River-Black Diamond
R4	David Thompson Regional Health Authority	27	R401 Clearwater
		28	R402 Brazeau
		29	R403 Wetaskiwin-Hobbema
		30	R404 Ponoka
		31	R405 Lacombe
		32	R406 Red Deer
		33	R407 Olds
		34	R408 Drumheller-Hanna
		35	R409 Stettler-Consort

Continued on next page

TABLE E.1 continued from previous page

RHA	Code	sRHA
R5 East Central Health	36	R501 Region 5 Northwest
	37	R502 Regions 5 Northeast
	38	R503 Region 5 Southeast
	39	R504 Region 5 South Central
	40	R505 Region5 Southwest
R6 Capital Health	41	R601 St. Albert
	42	R602 Edmonton Castle Downs
	43	R603 Edmonton Woodcroft
	44	R604 Edmonton Eastwood
	45	R605 Edmonton North Central
	46	R606 Edmonton North East
	47	R607 Edmonton Bonnie Doon
	48	R608 Edmonton West Jasper Place
	49	R609 Edmonton Twin Brooks
	50	R612 Edmonton Mill Woods
	51	R613 Sherwood Park
	52	R614 Strathcona County
	53	R615 Thorsby
	54	R616 Leduc Office
	55	R617 Beaumont
	56	R618 Westview
	57	R619 Sturgeon County
	58	R620 Fort Saskatchewan
R7 Aspen Regional Health Authority	59	R701 Aspen West
	60	R702 Aspen Central
	61	R703 Aspen North
	62	R704 Aspen East
R8 Peace Country Health	63	R801 Peace NW
	64	R802 Peace NE
	65	R803 Peace SE
	66	R804 Peace SW
R9 Northern Lights Health Region	67	R901 High Level
	68	R902 La Crete
	69	R903 Northern Lights Northwest
	70	R904 Fort McMurray

TABLE E.2: Population by RHA and sRHA for each fiscal year.

		99/00	00/01	01/02	02/03	03/04	04/05
R1	n	150,085	150,868	151,529	152,651	153,742	154,790
	R101	15,467(10.3)	15,433(10.2)	15,284(10.1)	15,170 (9.9)	14,863 (9.7)	14,647 (9.5)
	R102	22,623(15.1)	22,610(15.0)	22,482(14.8)	22,344(14.6)	22,304(14.5)	22,154(14.3)
	R103	71,106(47.4)	71,909(47.7)	72,729(48.0)	73,936(48.4)	75,237(48.9)	76,474(49.4)
	R104	25,270(16.8)	25,226(16.7)	25,287(16.7)	25,362(16.6)	25,440(16.5)	25,489(16.5)
	R105	15,619(10.4)	15,690(10.4)	15,747(10.4)	15,839(10.4)	15,898(10.3)	16,026(10.4)
R2	n	93,602	95,565	97,458	98,006	99,363	100,610
	R201	71,522(76.4)	72,738(76.1)	73,879(75.8)	74,439(76.0)	75,437(75.9)	76,528(76.1)
	R202	22,080(23.6)	22,827(23.9)	23,579(24.2)	23,567(24.0)	23,926(24.1)	24,082(23.9)
R3	n	1,042,066	1,067,058	1,098,149	1,122,521	1,143,368	1,164,535
	R301	64,654 (6.2)	68,361 (6.4)	72,562 (6.6)	76,341 (6.8)	79,705 (7.0)	83,162 (7.1)
	R302	45,675 (4.4)	48,925 (4.6)	51,953 (4.7)	54,521 (4.9)	57,691 (5.0)	61,291 (5.3)
	R303	62,156 (6.0)	65,536 (6.1)	69,467 (6.3)	73,210 (6.5)	76,533 (6.7)	79,017 (6.8)
	R304	38,677 (3.7)	39,694 (3.7)	41,327 (3.8)	42,554 (3.8)	43,803 (3.8)	45,336 (3.9)
	R305	81,374 (7.8)	80,702 (7.6)	78,849 (7.2)	78,312 (7.0)	76,677 (6.7)	74,897 (6.4)
	R306	60,476 (5.8)	60,592 (5.7)	61,393 (5.6)	61,341 (5.5)	60,395 (5.3)	59,453 (5.1)
	R307	45,527 (4.4)	47,439 (4.4)	51,149 (4.7)	54,808 (4.9)	59,021 (5.2)	63,549 (5.5)
	R308	62,830 (6.0)	62,565 (5.9)	62,097 (5.7)	61,801 (5.5)	61,194 (5.4)	60,195 (5.2)
	R309	49,040 (4.7)	49,318 (4.6)	49,466 (4.5)	49,030 (4.4)	48,653 (4.3)	47,760 (4.1)
	R310	62,735 (6.0)	63,096 (5.9)	63,239 (5.8)	62,638 (5.6)	61,612 (5.4)	60,297 (5.2)
	R311	54,284 (5.2)	54,949 (5.1)	55,176 (5.0)	55,379 (4.9)	55,177 (4.8)	54,169 (4.7)
	R312	37,895 (3.6)	38,089 (3.6)	38,116 (3.5)	37,940 (3.4)	37,631 (3.3)	37,248 (3.2)
	R313	88,541 (8.5)	88,884 (8.3)	88,907 (8.1)	87,864 (7.8)	86,395 (7.6)	84,814 (7.3)
	R314	76,543 (7.3)	77,739 (7.3)	79,554 (7.2)	81,096 (7.2)	83,046 (7.3)	85,363 (7.3)
	R315	45,871 (4.4)	49,059 (4.6)	53,364 (4.9)	56,734 (5.1)	59,971 (5.2)	64,350 (5.5)
	R320	41,167 (4.0)	42,221 (4.0)	42,311 (3.9)	43,291 (3.9)	44,044 (3.9)	44,388 (3.8)
	R321	66,541 (6.4)	70,297 (6.6)	79,371 (7.2)	84,643 (7.5)	89,217 (7.8)	94,799 (8.1)
	R322	15,187 (1.5)	15,277 (1.4)	15,247 (1.4)	15,375 (1.4)	15,402 (1.3)	15,223 (1.3)
	R323	42,893 (4.1)	44,315 (4.2)	44,601 (4.1)	45,643 (4.1)	47,201 (4.1)	49,224 (4.2)
R4	n	273,703	277,706	282,345	286,336	290,311	293,723
	R401	18,843 (6.9)	18,917 (6.8)	19,118 (6.8)	19,429 (6.8)	19,557 (6.7)	19,600 (6.7)
	R402	14,698 (5.4)	14,773 (5.3)	15,021 (5.3)	15,160 (5.3)	15,321 (5.3)	15,400 (5.2)
	R403	33,027(12.1)	33,283(12.0)	33,828(12.0)	34,244(12.0)	34,527(11.9)	34,380(11.7)
	R404	17,281 (6.3)	17,214 (6.2)	17,394 (6.2)	17,439 (6.1)	17,411 (6.0)	17,429 (5.9)
	R405	27,005 (9.9)	27,984(10.1)	28,603(10.1)	29,014(10.1)	29,225(10.1)	29,966(10.2)
	R406	102,361(37.4)	104,812(37.7)	107,556(38.1)	110,240(38.5)	113,623(39.1)	116,512(39.7)
	R407	15,429 (5.6)	15,617 (5.6)	15,872 (5.6)	16,034 (5.6)	16,033 (5.5)	16,159 (5.5)
	R408	26,523 (9.7)	26,631 (9.6)	26,433 (9.4)	26,341 (9.2)	26,202 (9.0)	25,890 (8.8)
	R409	18,536 (6.8)	18,475 (6.7)	18,520 (6.6)	18,435 (6.4)	18,412 (6.3)	18,387 (6.3)

Continued on next page

TABLE E.2 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05
R5	n	107,321	108,224	109,230	109,991	108,666	110,666
	R501	22,090(20.6)	22,136(20.5)	22,298(20.4)	22,377(20.3)	21,635(19.9)	22,246(20.1)
	R502	25,719(24.0)	26,406(24.4)	27,181(24.9)	27,630(25.1)	27,950(25.7)	28,599(25.8)
	R503	14,363(13.4)	14,451(13.4)	14,266(13.1)	14,125(12.8)	13,910(12.8)	14,019(12.7)
	R504	20,382(19.0)	20,213(18.7)	20,241(18.5)	20,239(18.4)	19,748(18.2)	20,195(18.2)
	R505	24,767(23.1)	25,018(23.1)	25,244(23.1)	25,620(23.3)	25,423(23.4)	25,607(23.1)
R6	n	929,328	943,329	961,950	978,160	990,931	1,000,862
	R601	51,366 (5.5)	52,291 (5.5)	53,513 (5.6)	54,441 (5.6)	55,334 (5.6)	55,764 (5.6)
	R602	38,308 (4.1)	39,042 (4.1)	39,684 (4.1)	41,049 (4.2)	42,823 (4.3)	44,575 (4.5)
	R603	80,581 (8.7)	81,126 (8.6)	82,429 (8.6)	83,197 (8.5)	82,562 (8.3)	81,186 (8.1)
	R604	60,374 (6.5)	61,015 (6.5)	61,610 (6.4)	60,952 (6.2)	61,088 (6.2)	59,839 (6.0)
	R605	63,849 (6.9)	64,913 (6.9)	66,731 (6.9)	68,193 (7.0)	69,507 (7.0)	70,206 (7.0)
	R606	67,752 (7.3)	68,460 (7.3)	69,651 (7.2)	70,684 (7.2)	71,029 (7.2)	71,239 (7.1)
	R607	87,670 (9.4)	88,347 (9.4)	89,244 (9.3)	90,044 (9.2)	89,449 (9.0)	88,053 (8.8)
	R608	94,262(10.1)	95,837(10.2)	97,339(10.1)	98,684(10.1)	100,061(10.1)	101,083(10.1)
	R609	79,492 (8.6)	81,643 (8.7)	83,673 (8.7)	85,964 (8.8)	88,851 (9.0)	92,523 (9.2)
	R612	91,754 (9.9)	92,735 (9.8)	94,498 (9.8)	96,085 (9.8)	98,095 (9.9)	99,530 (9.9)
	R613	45,404 (4.9)	46,815 (5.0)	48,919 (5.1)	50,802 (5.2)	52,145 (5.3)	53,520 (5.3)
	R614	25,622 (2.8)	25,943 (2.8)	26,282 (2.7)	26,526 (2.7)	26,474 (2.7)	26,534 (2.7)
	R615	8,312 (0.9)	8,487 (0.9)	8,598 (0.9)	8,637 (0.9)	8,681 (0.9)	8,619 (0.9)
	R616	18,774 (2.0)	18,827 (2.0)	19,103 (2.0)	19,522 (2.0)	19,843 (2.0)	20,350 (2.0)
	R617	10,010 (1.1)	10,367 (1.1)	10,683 (1.1)	10,863 (1.1)	10,915 (1.1)	11,520 (1.2)
	R618	62,610 (6.7)	63,751 (6.8)	65,651 (6.8)	67,805 (6.9)	69,917 (7.1)	71,203 (7.1)
	R619	29,854 (3.2)	30,120 (3.2)	30,487 (3.2)	30,631 (3.1)	29,793 (3.0)	30,772 (3.1)
	R620	13,334 (1.4)	13,610 (1.4)	13,855 (1.4)	14,081 (1.4)	14,364 (1.4)	14,346 (1.4)
R7	n	172,973	174,125	175,896	176,609	174,150	176,492
	R701	40,999(23.7)	40,863(23.5)	41,349(23.5)	41,442(23.5)	41,377(23.8)	41,620(23.6)
	R702	40,447(23.4)	40,662(23.4)	40,841(23.2)	41,040(23.2)	41,043(23.6)	40,804(23.1)
	R703	37,364(21.6)	37,731(21.7)	38,147(21.7)	38,443(21.8)	37,580(21.6)	38,297(21.7)
	R704	54,163(31.3)	54,869(31.5)	55,559(31.6)	55,684(31.5)	54,150(31.1)	55,771(31.6)
R8	n	126,278	127,196	129,430	130,885	132,873	134,794
	R801	25,898(20.5)	25,741(20.2)	25,685(19.8)	25,678(19.6)	25,494(19.2)	25,199(18.7)
	R802	14,712(11.7)	14,531(11.4)	14,561(11.3)	14,664(11.2)	14,651(11.0)	14,489(10.7)
	R803	21,175(16.8)	21,317(16.8)	21,346(16.5)	21,292(16.3)	21,403(16.1)	21,108(15.7)
	R804	64,493(51.1)	65,607(51.6)	67,838(52.4)	69,251(52.9)	71,325(53.7)	73,998(54.9)
R9	n	61,441	63,238	66,184	69,089	71,501	73,386
	R901	7,660(12.5)	7,797(12.3)	7,885(11.9)	7,984(11.6)	8,024(11.2)	8,003(10.9)
	R902	5,799 (9.4)	6,000 (9.5)	6,426 (9.7)	6,790 (9.8)	7,008 (9.8)	7,169 (9.8)
	R903	8,431(13.7)	8,551(13.5)	8,754(13.2)	8,765(12.7)	9,074(12.7)	9,223(12.6)
	R904	39,551(64.4)	40,890(64.7)	43,119(65.2)	45,550(65.9)	47,395(66.3)	48,991(66.8)

TABLE E.3: ED visits by RHA and sRHA of residence for each fiscal year and all years combined.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	2,930	2,369	2,400	2,415	2,436	2,257	14,807
	R101	272 (9.3)	241 (10.2)	200 (8.3)	195 (8.1)	228 (9.4)	202 (8.9)	1,338 (9.0)
	R102	571 (19.5)	329 (13.9)	631 (26.3)	425 (17.6)	434 (17.8)	358 (15.9)	2,748 (18.6)
	R103	976 (33.3)	885 (37.4)	751 (31.3)	867 (35.9)	933 (38.3)	829 (36.7)	5,241 (35.4)
	R104	818 (27.9)	640 (27.0)	579 (24.1)	619 (25.6)	590 (24.2)	615 (27.2)	3,861 (26.1)
	R105	293 (10.0)	274 (11.6)	239 (10.0)	309 (12.8)	251 (10.3)	253 (11.2)	1,619 (10.9)
R2	n	1,285	1,144	915	940	985	1,100	6,369
	R201	544 (42.3)	553 (48.3)	453 (49.5)	467 (49.7)	496 (50.4)	490 (44.5)	3,003 (47.2)
	R202	741 (57.7)	591 (51.7)	462 (50.5)	473 (50.3)	489 (49.6)	610 (55.5)	3,366 (52.8)
R3	n	8,010	8,346	7,415	7,490	8,316	7,534	47,111
	R301	343 (4.3)	404 (4.8)	347 (4.7)	338 (4.5)	408 (4.9)	362 (4.8)	2,202 (4.7)
	R302	291 (3.6)	357 (4.3)	351 (4.7)	345 (4.6)	361 (4.3)	354 (4.7)	2,059 (4.4)
	R303	532 (6.6)	584 (7.0)	548 (7.4)	547 (7.3)	733 (8.8)	562 (7.5)	3,506 (7.4)
	R304	194 (2.4)	233 (2.8)	175 (2.4)	222 (3.0)	204 (2.5)	197 (2.6)	1,225 (2.6)
	R305	510 (6.4)	435 (5.2)	447 (6.0)	450 (6.0)	430 (5.2)	373 (5.0)	2,645 (5.6)
	R306	528 (6.6)	527 (6.3)	438 (5.9)	439 (5.9)	427 (5.1)	451 (6.0)	2,810 (6.0)
	R307	300 (3.7)	307 (3.7)	357 (4.8)	320 (4.3)	358 (4.3)	357 (4.7)	1,999 (4.2)
	R308	436 (5.4)	458 (5.5)	430 (5.8)	356 (4.8)	378 (4.5)	353 (4.7)	2,411 (5.1)
	R309	301 (3.8)	262 (3.1)	213 (2.9)	224 (3.0)	276 (3.3)	218 (2.9)	1,494 (3.2)
	R310	641 (8.0)	637 (7.6)	523 (7.1)	494 (6.6)	520 (6.3)	496 (6.6)	3,311 (7.0)
	R311	463 (5.8)	513 (6.1)	397 (5.4)	362 (4.8)	411 (4.9)	289 (3.8)	2,435 (5.2)
	R312	187 (2.3)	194 (2.3)	149 (2.0)	158 (2.1)	141 (1.7)	152 (2.0)	981 (2.1)
	R313	678 (8.5)	680 (8.1)	606 (8.2)	598 (8.0)	624 (7.5)	555 (7.4)	3,741 (7.9)
	R314	504 (6.3)	525 (6.3)	398 (5.4)	505 (6.7)	520 (6.3)	483 (6.4)	2,935 (6.2)
	R315	243 (3.0)	259 (3.1)	266 (3.6)	283 (3.8)	357 (4.3)	278 (3.7)	1,686 (3.6)
	R320	332 (4.1)	334 (4.0)	288 (3.9)	303 (4.0)	344 (4.1)	284 (3.8)	1,885 (4.0)
	R321	802 (10.0)	830 (9.9)	680 (9.2)	803 (10.7)	990 (11.9)	891 (11.8)	4,996 (10.6)
	R322	215 (2.7)	318 (3.8)	222 (3.0)	246 (3.3)	244 (2.9)	290 (3.8)	1,535 (3.3)
	R323	510 (6.4)	489 (5.9)	580 (7.8)	497 (6.6)	590 (7.1)	589 (7.8)	3,255 (6.9)
R4	n	5,972	4,697	4,508	3,890	4,570	4,515	28,152
	R401	713 (11.9)	538 (11.5)	524 (11.6)	496 (12.8)	515 (11.3)	438 (9.7)	3,224 (11.5)
	R402	143 (2.4)	159 (3.4)	135 (3.0)	113 (2.9)	153 (3.3)	152 (3.4)	855 (3.0)
	R403	912 (15.3)	554 (11.8)	496 (11.0)	429 (11.0)	595 (13.0)	605 (13.4)	3,591 (12.8)
	R404	266 (4.5)	257 (5.5)	190 (4.2)	158 (4.1)	241 (5.3)	265 (5.9)	1,377 (4.9)
	R405	943 (15.8)	719 (15.3)	733 (16.3)	585 (15.0)	504 (11.0)	576 (12.8)	4,060 (14.4)
	R406	1,832 (30.7)	1,508 (32.1)	1,484 (32.9)	1,241 (31.9)	1,561 (34.2)	1,315 (29.1)	8,941 (31.8)
	R407	306 (5.1)	224 (4.8)	211 (4.7)	208 (5.3)	209 (4.6)	224 (5.0)	1,382 (4.9)
	R408	564 (9.4)	502 (10.7)	432 (9.6)	420 (10.8)	556 (12.2)	622 (13.8)	3,096 (11.0)
	R409	293 (4.9)	236 (5.0)	303 (6.7)	240 (6.2)	236 (5.2)	318 (7.0)	1,626 (5.8)

Continued on next page

TABLE E.3 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05	All
R5	n	2,480	2,298	2,017	1,459	1,627	1,585	11,466
	R501	1,205 (48.6)	1,141 (49.7)	1,016 (50.4)	567 (38.9)	580 (35.6)	587 (37.0)	5,096 (44.4)
	R502	248 (10.0)	216 (9.4)	262 (13.0)	157 (10.8)	224 (13.8)	241 (15.2)	1,348 (11.8)
	R503	200 (8.1)	246 (10.7)	166 (8.2)	163 (11.2)	229 (14.1)	210 (13.2)	1,214 (10.6)
	R504	554 (22.3)	505 (22.0)	321 (15.9)	318 (21.8)	257 (15.8)	259 (16.3)	2,214 (19.3)
	R505	273 (11.0)	190 (8.3)	252 (12.5)	254 (17.4)	337 (20.7)	288 (18.2)	1,594 (13.9)
R6	n	8,395	8,810	8,118	7,619	8,179	7,925	49,046
	R601	489 (5.8)	454 (5.2)	440 (5.4)	402 (5.3)	446 (5.5)	443 (5.6)	2,674 (5.5)
	R602	291 (3.5)	323 (3.7)	286 (3.5)	323 (4.2)	340 (4.2)	338 (4.3)	1,901 (3.9)
	R603	729 (8.7)	674 (7.7)	679 (8.4)	651 (8.5)	599 (7.3)	585 (7.4)	3,917 (8.0)
	R604	680 (8.1)	717 (8.1)	670 (8.3)	611 (8.0)	602 (7.4)	544 (6.9)	3,824 (7.8)
	R605	496 (5.9)	628 (7.1)	572 (7.0)	513 (6.7)	572 (7.0)	579 (7.3)	3,360 (6.9)
	R606	599 (7.1)	860 (9.8)	805 (9.9)	776 (10.2)	801 (9.8)	815 (10.3)	4,656 (9.5)
	R607	631 (7.5)	671 (7.6)	553 (6.8)	487 (6.4)	498 (6.1)	511 (6.4)	3,351 (6.8)
	R608	630 (7.5)	705 (8.0)	629 (7.7)	643 (8.4)	634 (7.8)	532 (6.7)	3,773 (7.7)
	R609	478 (5.7)	456 (5.2)	439 (5.4)	425 (5.6)	385 (4.7)	405 (5.1)	2,588 (5.3)
	R612	966 (11.5)	894 (10.1)	788 (9.7)	729 (9.6)	768 (9.4)	710 (9.0)	4,855 (9.9)
	R613	203 (2.4)	231 (2.6)	196 (2.4)	224 (2.9)	234 (2.9)	225 (2.8)	1,313 (2.7)
	R614	175 (2.1)	150 (1.7)	176 (2.2)	141 (1.9)	144 (1.8)	141 (1.8)	927 (1.9)
	R615	112 (1.3)	114 (1.3)	93 (1.1)	79 (1.0)	105 (1.3)	117 (1.5)	620 (1.3)
	R616	299 (3.6)	408 (4.6)	295 (3.6)	255 (3.3)	360 (4.4)	262 (3.3)	1,879 (3.8)
	R617	82 (1.0)	59 (0.7)	61 (0.8)	66 (0.9)	89 (1.1)	76 (1.0)	433 (0.9)
	R618	607 (7.2)	676 (7.7)	754 (9.3)	709 (9.3)	771 (9.4)	783 (9.9)	4,300 (8.8)
	R619	422 (5.0)	321 (3.6)	316 (3.9)	318 (4.2)	356 (4.4)	350 (4.4)	2,083 (4.2)
	R620	506 (6.0)	469 (5.3)	366 (4.5)	267 (3.5)	475 (5.8)	509 (6.4)	2,592 (5.3)
R7	n	3,531	3,399	2,977	2,973	2,996	3,229	19,105
	R701	731 (20.7)	714 (21.0)	641 (21.5)	706 (23.7)	674 (22.5)	778 (24.1)	4,244 (22.2)
	R702	680 (19.3)	701 (20.6)	563 (18.9)	640 (21.5)	635 (21.2)	659 (20.4)	3,878 (20.3)
	R703	671 (19.0)	623 (18.3)	654 (22.0)	610 (20.5)	578 (19.3)	634 (19.6)	3,770 (19.7)
	R704	1,449 (41.0)	1,361 (40.0)	1,119 (37.6)	1,017 (34.2)	1,109 (37.0)	1,158 (35.9)	7,213 (37.8)
R8	n	3,868	3,190	3,370	2,783	2,420	2,406	18,037
	R801	675 (17.5)	562 (17.6)	605 (18.0)	587 (21.1)	595 (24.6)	568 (23.6)	3,592 (19.9)
	R802	406 (10.5)	450 (14.1)	518 (15.4)	405 (14.6)	354 (14.6)	402 (16.7)	2,535 (14.1)
	R803	315 (8.1)	334 (10.5)	282 (8.4)	307 (11.0)	297 (12.3)	370 (15.4)	1,905 (10.6)
	R804	2,472 (63.9)	1,844 (57.8)	1,965 (58.3)	1,484 (53.3)	1,174 (48.5)	1,066 (44.3)	10,005 (55.5)
R9	n	972	1,065	954	869	1,033	1,005	5,898
	R901	132 (13.6)	122 (11.5)	165 (17.3)	150 (17.3)	166 (16.1)	173 (17.2)	908 (15.4)
	R902	13 (1.3)	14 (1.3)	31 (3.2)	14 (1.6)	28 (2.7)	22 (2.2)	122 (2.1)
	R903	54 (5.6)	71 (6.7)	94 (9.9)	53 (6.1)	69 (6.7)	62 (6.2)	403 (6.8)
	R904	773 (79.5)	858 (80.6)	664 (69.6)	652 (75.0)	770 (74.5)	748 (74.4)	4,465 (75.7)

TABLE E.4: Distinct individuals visiting EDs for asthma by RHA and sRHA of residence for each fiscal year and all years combined.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	1,412	1,407	1,275	1,399	1,451	1,385	5,831
	R101	174 (12.3)	161 (11.4)	137 (10.7)	145 (10.4)	170 (11.7)	155 (11.2)	646 (11.1)
	R102	271 (19.2)	234 (16.6)	251 (19.7)	208 (14.9)	250 (17.2)	220 (15.9)	1,001 (17.2)
	R103	582 (41.2)	612 (43.5)	523 (41.0)	592 (42.3)	610 (42.0)	586 (42.3)	2,437 (41.8)
	R104	244 (17.3)	246 (17.5)	223 (17.5)	260 (18.6)	250 (17.2)	253 (18.3)	1,064 (18.2)
	R105	141 (10.0)	154 (10.9)	141 (11.1)	194 (13.9)	171 (11.8)	171 (12.3)	683 (11.7)
R2	n	734	697	640	639	695	732	2,998
	R201	391 (53.3)	395 (56.7)	324 (50.6)	350 (54.8)	364 (52.4)	360 (49.2)	1,639 (54.7)
	R202	343 (46.7)	302 (43.3)	316 (49.4)	289 (45.2)	331 (47.6)	372 (50.8)	1,359 (45.3)
R3	n	5,685	5,924	5,475	5,457	6,049	5,558	24,703
	R301	259 (4.6)	307 (5.2)	277 (5.1)	254 (4.7)	309 (5.1)	272 (4.9)	1,213 (4.9)
	R302	216 (3.8)	268 (4.5)	256 (4.7)	254 (4.7)	270 (4.5)	264 (4.7)	1,067 (4.3)
	R303	363 (6.4)	409 (6.9)	405 (7.4)	410 (7.5)	508 (8.4)	420 (7.6)	1,727 (7.0)
	R304	145 (2.6)	177 (3.0)	127 (2.3)	151 (2.8)	151 (2.5)	158 (2.8)	667 (2.7)
	R305	365 (6.4)	350 (5.9)	317 (5.8)	308 (5.6)	317 (5.2)	293 (5.3)	1,425 (5.8)
	R306	376 (6.6)	359 (6.1)	314 (5.7)	316 (5.8)	331 (5.5)	310 (5.6)	1,443 (5.8)
	R307	220 (3.9)	227 (3.8)	258 (4.7)	236 (4.3)	276 (4.6)	267 (4.8)	1,080 (4.4)
	R308	324 (5.7)	325 (5.5)	298 (5.4)	250 (4.6)	277 (4.6)	258 (4.6)	1,255 (5.1)
	R309	223 (3.9)	210 (3.5)	170 (3.1)	175 (3.2)	204 (3.4)	169 (3.0)	873 (3.5)
	R310	457 (8.0)	451 (7.6)	393 (7.2)	362 (6.6)	388 (6.4)	372 (6.7)	1,728 (7.0)
	R311	302 (5.3)	347 (5.9)	272 (5.0)	270 (4.9)	291 (4.8)	207 (3.7)	1,233 (5.0)
	R312	143 (2.5)	155 (2.6)	125 (2.3)	131 (2.4)	109 (1.8)	122 (2.2)	608 (2.5)
	R313	513 (9.0)	510 (8.6)	460 (8.4)	440 (8.1)	449 (7.4)	420 (7.6)	2,032 (8.2)
	R314	385 (6.8)	391 (6.6)	313 (5.7)	382 (7.0)	390 (6.4)	365 (6.6)	1,649 (6.7)
	R315	198 (3.5)	215 (3.6)	213 (3.9)	217 (4.0)	268 (4.4)	238 (4.3)	988 (4.0)
	R320	222 (3.9)	245 (4.1)	243 (4.4)	212 (3.9)	258 (4.3)	212 (3.8)	1,030 (4.2)
	R321	487 (8.6)	479 (8.1)	499 (9.1)	567 (10.4)	639 (10.6)	636 (11.4)	2,369 (9.6)
	R322	137 (2.4)	164 (2.8)	143 (2.6)	148 (2.7)	165 (2.7)	144 (2.6)	642 (2.6)
	R323	350 (6.2)	335 (5.7)	392 (7.2)	374 (6.9)	449 (7.4)	431 (7.8)	1,674 (6.8)
R4	n	3,009	2,840	2,755	2,465	2,900	2,989	11,775
	R401	310 (10.3)	291 (10.2)	303 (11.0)	276 (11.2)	308 (10.6)	264 (8.8)	1,164 (9.9)
	R402	109 (3.6)	128 (4.5)	96 (3.5)	83 (3.4)	94 (3.2)	100 (3.3)	432 (3.7)
	R403	662 (22.0)	405 (14.3)	386 (14.0)	347 (14.1)	457 (15.8)	481 (16.1)	2,028 (17.2)
	R404	141 (4.7)	146 (5.1)	120 (4.4)	100 (4.1)	139 (4.8)	143 (4.8)	563 (4.8)
	R405	296 (9.8)	321 (11.3)	328 (11.9)	328 (13.3)	314 (10.8)	326 (10.9)	1,250 (10.6)
	R406	896 (29.8)	952 (33.5)	939 (34.1)	794 (32.2)	958 (33.0)	946 (31.6)	3,754 (31.9)
	R407	143 (4.8)	128 (4.5)	148 (5.4)	144 (5.8)	148 (5.1)	159 (5.3)	619 (5.3)
	R408	319 (10.6)	325 (11.4)	295 (10.7)	275 (11.2)	349 (12.0)	416 (13.9)	1,371 (11.6)
	R409	133 (4.4)	144 (5.1)	140 (5.1)	118 (4.8)	133 (4.6)	154 (5.2)	594 (5.0)
R5	n	1,021	1,004	932	801	967	938	4,002
	R501	389 (38.1)	404 (40.2)	371 (39.8)	287 (35.8)	324 (33.5)	321 (34.2)	1,446 (36.1)
	R502	123 (12.0)	112 (11.2)	124 (13.3)	95 (11.9)	148 (15.3)	127 (13.5)	546 (13.6)
	R503	115 (11.3)	126 (12.5)	91 (9.8)	96 (12.0)	128 (13.2)	124 (13.2)	504 (12.6)
	R504	217 (21.3)	216 (21.5)	179 (19.2)	172 (21.5)	166 (17.2)	173 (18.4)	770 (19.2)
	R505	177 (17.3)	146 (14.5)	167 (17.9)	151 (18.9)	201 (20.8)	193 (20.6)	736 (18.4)

Continued on next page

TABLE E.4 continued from previous page

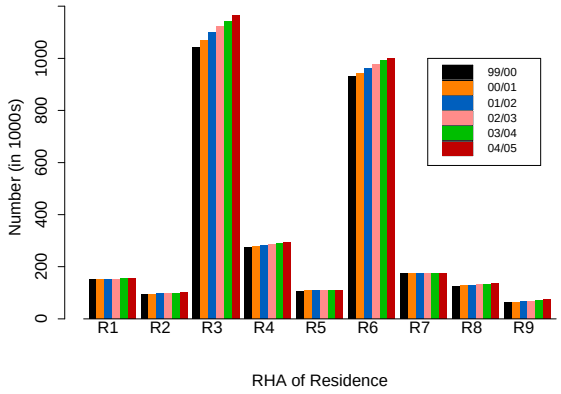
		99/00	00/01	01/02	02/03	03/04	04/05	All
R6	n	5,679	5,943	5,742	5,466	5,857	5,634	24,421
	R601	365 (6.4)	342 (5.8)	324 (5.6)	306 (5.6)	342 (5.8)	332 (5.9)	1,454 (6.0)
	R602	208 (3.7)	236 (4.0)	220 (3.8)	238 (4.4)	254 (4.3)	252 (4.5)	987 (4.0)
	R603	515 (9.1)	474 (8.0)	477 (8.3)	472 (8.6)	453 (7.7)	415 (7.4)	1,997 (8.2)
	R604	450 (7.9)	462 (7.8)	440 (7.7)	423 (7.7)	423 (7.2)	394 (7.0)	1,760 (7.2)
	R605	343 (6.0)	439 (7.4)	425 (7.4)	395 (7.2)	429 (7.3)	419 (7.4)	1,762 (7.2)
	R606	392 (6.9)	537 (9.0)	547 (9.5)	517 (9.5)	575 (9.8)	571 (10.1)	2,158 (8.8)
	R607	474 (8.3)	441 (7.4)	370 (6.4)	345 (6.3)	369 (6.3)	362 (6.4)	1,729 (7.1)
	R608	474 (8.3)	522 (8.8)	482 (8.4)	458 (8.4)	462 (7.9)	412 (7.3)	2,048 (8.4)
	R609	345 (6.1)	314 (5.3)	318 (5.5)	288 (5.3)	287 (4.9)	310 (5.5)	1,395 (5.7)
	R612	654 (11.5)	618 (10.4)	596 (10.4)	553 (10.1)	577 (9.9)	530 (9.4)	2,454 (10.0)
	R613	159 (2.8)	171 (2.9)	154 (2.7)	182 (3.3)	169 (2.9)	168 (3.0)	755 (3.1)
	R614	102 (1.8)	102 (1.7)	120 (2.1)	85 (1.6)	107 (1.8)	93 (1.7)	455 (1.9)
	R615	74 (1.3)	87 (1.5)	79 (1.4)	65 (1.2)	86 (1.5)	84 (1.5)	351 (1.4)
	R616	205 (3.6)	271 (4.6)	215 (3.7)	188 (3.4)	263 (4.5)	200 (3.5)	907 (3.7)
	R617	58 (1.0)	48 (0.8)	51 (0.9)	55 (1.0)	57 (1.0)	63 (1.1)	253 (1.0)
	R618	469 (8.3)	518 (8.7)	562 (9.8)	534 (9.8)	595 (10.2)	595 (10.6)	2,355 (9.6)
	R619	259 (4.6)	210 (3.5)	226 (3.9)	221 (4.0)	253 (4.3)	260 (4.6)	1,001 (4.1)
	R620	133 (2.3)	151 (2.5)	136 (2.4)	141 (2.6)	156 (2.7)	174 (3.1)	600 (2.5)
R7	n	1,987	2,016	1,841	1,838	1,939	2,005	8,093
	R701	480 (24.2)	454 (22.5)	413 (22.4)	447 (24.3)	447 (23.1)	443 (22.1)	1,878 (23.2)
	R702	404 (20.3)	431 (21.4)	368 (20.0)	367 (20.0)	364 (18.8)	427 (21.3)	1,638 (20.2)
	R703	392 (19.7)	378 (18.8)	379 (20.6)	362 (19.7)	359 (18.5)	355 (17.7)	1,531 (18.9)
	R704	711 (35.8)	753 (37.4)	681 (37.0)	662 (36.0)	769 (39.7)	780 (38.9)	3,046 (37.6)
R8	n	2,446	2,208	2,307	1,996	1,675	1,736	8,332
	R801	412 (16.8)	377 (17.1)	432 (18.7)	405 (20.3)	410 (24.5)	435 (25.1)	1,742 (20.9)
	R802	258 (10.5)	336 (15.2)	366 (15.9)	286 (14.3)	232 (13.9)	294 (16.9)	1,211 (14.5)
	R803	217 (8.9)	220 (10.0)	199 (8.6)	200 (10.0)	202 (12.1)	258 (14.9)	905 (10.9)
	R804	1,559 (63.7)	1,275 (57.7)	1,310 (56.8)	1,105 (55.4)	831 (49.6)	749 (43.1)	4,474 (53.7)
R9	n	695	730	696	622	752	723	2,990
	R901	89 (12.8)	77 (10.5)	114 (16.4)	97 (15.6)	106 (14.1)	111 (15.4)	394 (13.2)
	R902	8 (1.2)	8 (1.1)	26 (3.7)	11 (1.8)	25 (3.3)	18 (2.5)	81 (2.7)
	R903	43 (6.2)	55 (7.5)	76 (10.9)	41 (6.6)	52 (6.9)	52 (7.2)	248 (8.3)
	R904	555 (79.9)	590 (80.8)	480 (69.0)	473 (76.0)	569 (75.7)	542 (75.0)	2,267 (75.8)

TABLE E.5: Gender and age group directly standardized rates per 1,000 population by RHA for each fiscal year.

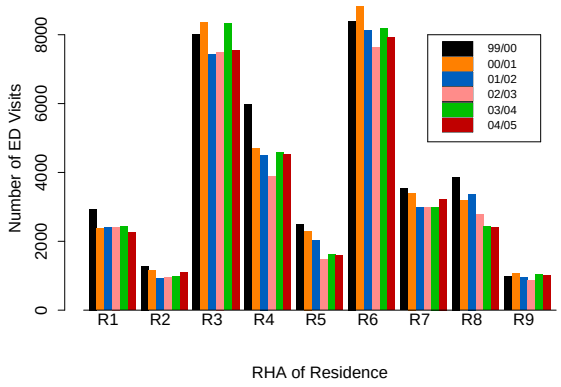
		99/00	00/01	01/02	02/03	03/04	04/05
R1	DSR	**19.4** (1.4)	**15.5** (0.7)	**15.6** (0.9)	**16.0** (0.9)	**16.2** (0.7)	**15.0** (0.6)
	95% CI	16.7 to 22.2	14.1 to 16.9	13.9 to 17.4	14.2 to 17.8	14.7 to 17.6	13.8 to 16.2
R2	DSR	**13.8** (0.8)	**12.1** (1.0)	**9.6** (0.5)	**9.8** (0.5)	**10.2** (0.5)	**11.1** (0.6)
	95% CI	12.3 to 15.4	10.2 to 14.1	8.5 to 10.6	8.8 to 10.7	9.2 to 11.1	10.0 to 12.2
R3	DSR	**7.8** (0.1)	**8.1** (0.1)	**7.0** (0.1)	**7.0** (0.1)	**7.7** (0.1)	**6.9** (0.1)
	95% CI	7.5 to 8.1	7.8 to 8.4	6.8 to 7.3	6.8 to 7.3	7.5 to 7.9	6.6 to 7.1
R4	DSR	**21.6** (0.8)	**16.9** (0.5)	**16.0** (0.4)	**13.7** (0.4)	**15.9** (0.4)	**15.7** (0.4)
	95% CI	19.9 to 23.2	16.0 to 17.8	15.1 to 16.9	12.9 to 14.5	15.1 to 16.7	14.9 to 16.5
R5	DSR	**23.5** (2.2)	**21.3** (1.3)	**18.5** (1.1)	**13.5** (0.7)	**15.5** (0.7)	**14.7** (0.7)
	95% CI	19.2 to 27.7	18.7 to 23.9	16.3 to 20.7	12.0 to 14.9	14.0 to 16.9	13.3 to 16.2
R6	DSR	**9.1** (0.2)	**9.5** (0.2)	**8.7** (0.2)	**8.1** (0.2)	**8.6** (0.1)	**8.3** (0.1)
	95% CI	8.7 to 9.5	9.2 to 9.9	8.4 to 9.0	7.8 to 8.4	8.3 to 8.9	8.0 to 8.6
R7	DSR	**20.1** (1.1)	**19.2** (0.7)	**16.7** (0.7)	**16.6** (0.6)	**17.2** (0.6)	**18.4** (0.7)
	95% CI	17.9 to 22.3	17.8 to 20.5	15.4 to 18.0	15.4 to 17.9	16 to 18.3	17.1 to 19.8
R8	DSR	**29.4** (0.8)	**24.2** (0.7)	**25.3** (0.7)	**20.8** (0.6)	**17.8** (0.6)	**17.5** (0.5)
	95% CI	27.8 to 31.0	22.8 to 25.5	23.9 to 26.6	19.6 to 21.9	16.6 to 19.0	16.5 to 18.6
R9	DSR	**15.4** (0.8)	**17.9** (2.1)	**14.3** (0.8)	**12.1** (0.7)	**13.9** (0.7)	**13.8** (0.8)
	95% CI	13.9 to 16.9	13.8 to 22.0	12.8 to 15.8	10.8 to 13.4	12.5 to 15.3	12.2 to 15.4

FIGURE E.1: Population, ED visits, and distinct individuals making ED visits by RHA of residence for each fiscal year.

(a) Population



(b) ED Visits



(c) Distinct Individuals

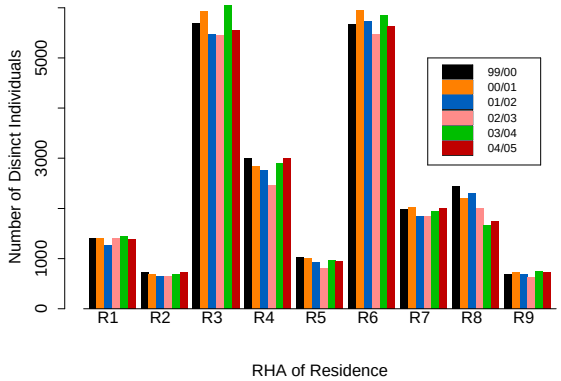
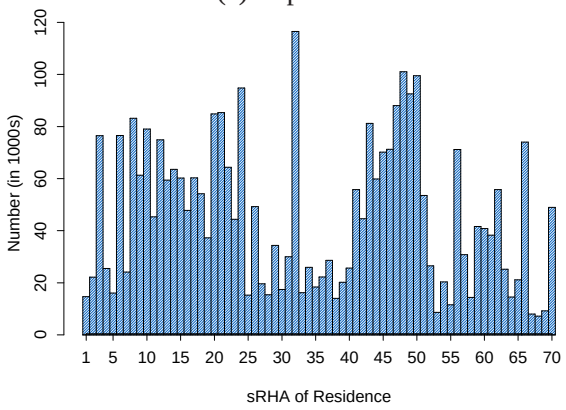
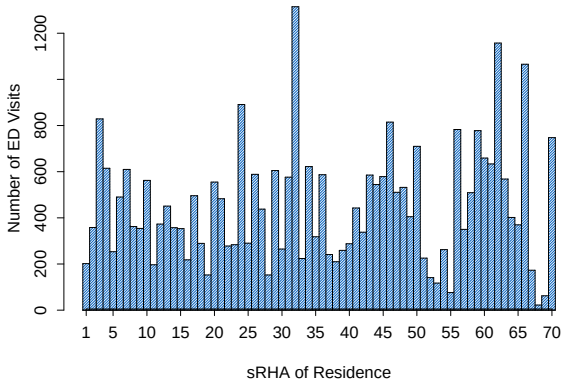


FIGURE E.2: Population, ED visits, and distinct individuals making ED visits by sRHA of residence for 2004/2005.

(a) Population



(b) ED Visits



(c) Distinct Individuals

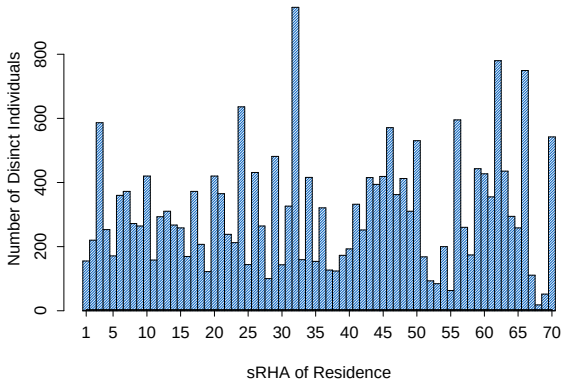


TABLE E.6: Population by RHA and sRHA of residence for each fiscal year for adults.

		99/00	00/01	01/02	02/03	03/04	04/05
R1	n	108,263	109,535	110,748	112,446	113,642	115,007
	R101	11,514 (10.6)	11,642 (10.6)	11,622 (10.5)	11,664 (10.4)	11,476 (10.1)	11,382 (9.9)
	R102	15,005 (13.9)	15,178 (13.9)	15,234 (13.8)	15,321 (13.6)	15,363 (13.5)	15,350 (13.3)
	R103	54,365 (50.2)	55,187 (50.4)	56,123 (50.7)	57,427 (51.1)	58,551 (51.5)	59,807 (52.0)
	R104	16,893 (15.6)	16,940 (15.5)	17,100 (15.4)	17,257 (15.3)	17,427 (15.3)	17,552 (15.3)
	R105	10,486 (9.7)	10,588 (9.7)	10,669 (9.6)	10,777 (9.6)	10,825 (9.5)	10,916 (9.5)
R2	n	69,149	71,187	72,914	73,571	74,869	75,995
	R201	53,290 (77.1)	54,543 (76.6)	55,675 (76.4)	56,306 (76.5)	57,249 (76.5)	58,236 (76.6)
	R202	15,859 (22.9)	16,644 (23.4)	17,239 (23.6)	17,265 (23.5)	17,620 (23.5)	17,759 (23.4)
R3	n	784,398	807,243	834,832	857,258	875,842	894,854
	R301	47,126 (6.0)	50,255 (6.2)	53,677 (6.4)	56,837 (6.6)	59,744 (6.8)	62,827 (7.0)
	R302	32,306 (4.1)	34,725 (4.3)	37,173 (4.5)	39,280 (4.6)	41,827 (4.8)	44,793 (5.0)
	R303	43,359 (5.5)	46,207 (5.7)	49,198 (5.9)	52,164 (6.1)	54,654 (6.2)	56,518 (6.3)
	R304	29,353 (3.7)	30,323 (3.8)	31,639 (3.8)	32,750 (3.8)	33,820 (3.9)	35,133 (3.9)
	R305	64,442 (8.2)	64,282 (8.0)	63,225 (7.6)	62,971 (7.3)	61,793 (7.1)	60,549 (6.8)
	R306	44,227 (5.6)	44,688 (5.5)	45,453 (5.4)	45,693 (5.3)	45,311 (5.2)	44,726 (5.0)
	R307	34,752 (4.4)	36,256 (4.5)	39,129 (4.7)	41,866 (4.9)	44,889 (5.1)	48,108 (5.4)
	R308	51,614 (6.6)	51,660 (6.4)	51,522 (6.2)	51,508 (6.0)	51,145 (5.8)	50,493 (5.6)
	R309	42,893 (5.5)	43,274 (5.4)	43,725 (5.2)	43,383 (5.1)	43,087 (4.9)	42,413 (4.7)
	R310	45,587 (5.8)	46,161 (5.7)	46,625 (5.6)	46,477 (5.4)	45,894 (5.2)	45,195 (5.1)
	R311	43,879 (5.6)	44,495 (5.5)	44,973 (5.4)	45,365 (5.3)	45,373 (5.2)	44,670 (5.0)
	R312	30,949 (3.9)	31,235 (3.9)	31,339 (3.8)	31,201 (3.6)	30,977 (3.5)	30,667 (3.4)
	R313	67,657 (8.6)	68,095 (8.4)	68,491 (8.2)	68,165 (8.0)	67,381 (7.7)	66,626 (7.4)
	R314	54,842 (7.0)	56,259 (7.0)	58,137 (7.0)	59,921 (7.0)	61,944 (7.1)	64,313 (7.2)
	R315	31,681 (4.0)	34,276 (4.2)	37,679 (4.5)	40,536 (4.7)	43,181 (4.9)	46,752 (5.2)
	R320	30,601 (3.9)	31,531 (3.9)	31,755 (3.8)	32,781 (3.8)	33,458 (3.8)	33,837 (3.8)
	R321	46,878 (6.0)	49,977 (6.2)	57,072 (6.8)	61,202 (7.1)	64,741 (7.4)	69,065 (7.7)
	R322	11,107 (1.4)	11,220 (1.4)	11,317 (1.4)	11,457 (1.3)	11,552 (1.3)	11,484 (1.3)
	R323	31,145 (4.0)	32,324 (4.0)	32,703 (3.9)	33,701 (3.9)	35,071 (4.0)	36,685 (4.1)
R4	n	197,813	202,114	206,622	210,853	215,121	218,973
	R401	13,268 (6.7)	13,445 (6.7)	13,669 (6.6)	13,967 (6.6)	14,123 (6.6)	14,207 (6.5)
	R402	10,406 (5.3)	10,571 (5.2)	10,822 (5.2)	10,945 (5.2)	11,133 (5.2)	11,271 (5.1)
	R403	22,172 (11.2)	22,578 (11.2)	23,082 (11.2)	23,512 (11.2)	23,826 (11.1)	23,880 (10.9)
	R404	12,533 (6.3)	12,594 (6.2)	12,810 (6.2)	13,019 (6.2)	13,090 (6.1)	13,230 (6.0)
	R405	19,363 (9.8)	20,116 (10.0)	20,625 (10.0)	21,084 (10.0)	21,353 (9.9)	22,004 (10.0)
	R406	75,369 (38.1)	77,694 (38.4)	80,225 (38.8)	82,707 (39.2)	85,787 (39.9)	88,514 (40.4)
	R407	11,536 (5.8)	11,771 (5.8)	12,032 (5.8)	12,199 (5.8)	12,305 (5.7)	12,417 (5.7)
	R408	19,474 (9.8)	19,625 (9.7)	19,563 (9.5)	19,654 (9.3)	19,709 (9.2)	19,595 (8.9)
	R409	13,692 (6.9)	13,720 (6.8)	13,794 (6.7)	13,766 (6.5)	13,795 (6.4)	13,855 (6.3)
R5	n	79,197	80,301	81,529	82,523	81,855	83,615
	R501	16,801 (21.2)	16,882 (21.0)	17,027 (20.9)	17,179 (20.8)	16,671 (20.4)	17,206 (20.6)
	R502	18,593 (23.5)	19,176 (23.9)	19,897 (24.4)	20,267 (24.6)	20,553 (25.1)	21,039 (25.2)
	R503	10,231 (12.9)	10,350 (12.9)	10,308 (12.6)	10,280 (12.5)	10,175 (12.4)	10,264 (12.3)
	R504	14,983 (18.9)	14,973 (18.6)	15,069 (18.5)	15,186 (18.4)	14,905 (18.2)	15,312 (18.3)
	R505	18,589 (23.5)	18,920 (23.6)	19,228 (23.6)	19,611 (23.8)	19,551 (23.9)	19,794 (23.7)

Continued on next page

TABLE E.6 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05
R6	n	697,117	711,932	730,755	746,725	760,322	771,085
	R601	37,480 (5.4)	38,475 (5.4)	39,614 (5.4)	40,624 (5.4)	41,606 (5.5)	42,148 (5.5)
	R602	27,189 (3.9)	28,014 (3.9)	28,907 (4.0)	30,139 (4.0)	31,688 (4.2)	33,036 (4.3)
	R603	66,055 (9.5)	66,811 (9.4)	68,179 (9.3)	69,096 (9.3)	68,756 (9.0)	67,943 (8.8)
	R604	48,664 (7.0)	49,410 (6.9)	50,167 (6.9)	49,628 (6.6)	49,851 (6.6)	49,211 (6.4)
	R605	47,869 (6.9)	48,826 (6.9)	50,313 (6.9)	51,656 (6.9)	52,784 (6.9)	53,459 (6.9)
	R606	48,930 (7.0)	49,856 (7.0)	51,196 (7.0)	52,144 (7.0)	52,913 (7.0)	53,494 (6.9)
	R607	71,921 (10.3)	72,551 (10.2)	73,721 (10.1)	74,615 (10.0)	74,554 (9.8)	73,600 (9.5)
	R608	70,923 (10.2)	72,458 (10.2)	74,077 (10.1)	75,515 (10.1)	76,856 (10.1)	78,031 (10.1)
	R609	60,802 (8.7)	62,679 (8.8)	64,473 (8.8)	66,390 (8.9)	68,712 (9.0)	71,630 (9.3)
	R612	64,419 (9.2)	65,883 (9.3)	67,788 (9.3)	69,730 (9.3)	71,817 (9.4)	73,245 (9.5)
	R613	33,098 (4.7)	34,348 (4.8)	36,058 (4.9)	37,651 (5.0)	38,772 (5.1)	39,999 (5.2)
	R614	18,573 (2.7)	18,932 (2.7)	19,323 (2.6)	19,658 (2.6)	19,753 (2.6)	19,944 (2.6)
	R615	6,113 (0.9)	6,237 (0.9)	6,354 (0.9)	6,404 (0.9)	6,479 (0.9)	6,487 (0.8)
	R616	13,890 (2.0)	14,046 (2.0)	14,392 (2.0)	14,764 (2.0)	15,163 (2.0)	15,586 (2.0)
	R617	6,613 (0.9)	6,941 (1.0)	7,270 (1.0)	7,480 (1.0)	7,616 (1.0)	8,145 (1.1)
	R618	44,658 (6.4)	45,813 (6.4)	47,613 (6.5)	49,520 (6.6)	51,373 (6.8)	52,574 (6.8)
	R619	20,189 (2.9)	20,573 (2.9)	20,995 (2.9)	21,266 (2.8)	20,878 (2.7)	21,774 (2.8)
	R620	9,731 (1.4)	10,079 (1.4)	10,315 (1.4)	10,445 (1.4)	10,751 (1.4)	10,779 (1.4)
R7	n	120,588	122,165	124,222	125,582	124,838	127,320
	R701	29,159 (24.2)	29,292 (24.0)	29,833 (24.0)	30,086 (24.0)	30,213 (24.2)	30,555 (24.0)
	R702	29,692 (24.6)	30,002 (24.6)	30,360 (24.4)	30,734 (24.5)	30,917 (24.8)	30,829 (24.2)
	R703	25,102 (20.8)	25,521 (20.9)	25,936 (20.9)	26,235 (20.9)	25,976 (20.8)	26,712 (21.0)
	R704	36,635 (30.4)	37,350 (30.6)	38,093 (30.7)	38,527 (30.7)	37,732 (30.2)	39,224 (30.8)
R8	n	88,401	89,753	91,927	93,510	95,539	97,533
	R801	18,437 (20.9)	18,489 (20.6)	18,499 (20.1)	18,597 (19.9)	18,549 (19.4)	18,345 (18.8)
	R802	10,281 (11.6)	10,261 (11.4)	10,329 (11.2)	10,488 (11.2)	10,536 (11.0)	10,474 (10.7)
	R803	14,073 (15.9)	14,267 (15.9)	14,416 (15.7)	14,423 (15.4)	14,554 (15.2)	14,512 (14.9)
	R804	45,610 (51.6)	46,736 (52.1)	48,683 (53.0)	50,002 (53.5)	51,900 (54.3)	54,202 (55.6)
R9	n	40,628	42,325	44,783	47,220	49,248	50,795
	R901	4,886 (12.0)	5,053 (11.9)	5,180 (11.6)	5,273 (11.2)	5,358 (10.9)	5,367 (10.6)
	R902	3,104 (7.6)	3,252 (7.7)	3,462 (7.7)	3,649 (7.7)	3,780 (7.7)	3,896 (7.7)
	R903	4,723 (11.6)	4,822 (11.4)	4,990 (11.1)	5,084 (10.8)	5,329 (10.8)	5,427 (10.7)
	R904	27,915 (68.7)	29,198 (69.0)	31,151 (69.6)	33,214 (70.3)	34,781 (70.6)	36,105 (71.1)

TABLE E.7: ED visits by RHA and sRHA of residence for each fiscal year and all years combined for adults.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	1,642	1,298	1,313	1,184	1,293	1,136	7,866
	R101	153 (9.3)	131 (10.1)	102 (7.8)	94 (7.9)	133 (10.3)	91 (8.0)	704 (8.9)
	R102	317 (19.3)	147 (11.3)	396 (30.2)	220 (18.6)	228 (17.6)	132 (11.6)	1,440 (18.3)
	R103	546 (33.3)	503 (38.8)	409 (31.2)	433 (36.6)	502 (38.8)	455 (40.1)	2,848 (36.2)
	R104	480 (29.2)	405 (31.2)	315 (24.0)	298 (25.2)	330 (25.5)	334 (29.4)	2,162 (27.5)
	R105	146 (8.9)	112 (8.6)	91 (6.9)	139 (11.7)	100 (7.7)	124 (10.9)	712 (9.1)
R2	n	774	724	532	504	563	649	3,746
	R201	294 (38.0)	312 (43.1)	274 (51.5)	249 (49.4)	304 (54.0)	286 (44.1)	1,719 (45.9)
	R202	480 (62.0)	412 (56.9)	258 (48.5)	255 (50.6)	259 (46.0)	363 (55.9)	2,027 (54.1)
R3	n	3,704	3,479	2,886	2,817	3,227	3,010	19,123
	R301	101 (2.7)	108 (3.1)	91 (3.2)	120 (4.3)	110 (3.4)	107 (3.6)	637 (3.3)
	R302	95 (2.6)	102 (2.9)	70 (2.4)	86 (3.1)	97 (3.0)	89 (3.0)	539 (2.8)
	R303	218 (5.9)	196 (5.6)	174 (6.0)	155 (5.5)	219 (6.8)	183 (6.1)	1,145 (6.0)
	R304	78 (2.1)	79 (2.3)	63 (2.2)	77 (2.7)	49 (1.5)	46 (1.5)	392 (2.0)
	R305	232 (6.3)	176 (5.1)	176 (6.1)	168 (6.0)	176 (5.5)	157 (5.2)	1,085 (5.7)
	R306	234 (6.3)	226 (6.5)	179 (6.2)	178 (6.3)	180 (5.6)	199 (6.6)	1,196 (6.3)
	R307	114 (3.1)	96 (2.8)	96 (3.3)	80 (2.8)	100 (3.1)	85 (2.8)	571 (3.0)
	R308	219 (5.9)	224 (6.4)	176 (6.1)	131 (4.7)	165 (5.1)	162 (5.4)	1,077 (5.6)
	R309	162 (4.4)	159 (4.6)	114 (4.0)	118 (4.2)	148 (4.6)	114 (3.8)	815 (4.3)
	R310	266 (7.2)	241 (6.9)	207 (7.2)	202 (7.2)	203 (6.3)	202 (6.7)	1,321 (6.9)
	R311	221 (6.0)	232 (6.7)	187 (6.5)	144 (5.1)	198 (6.1)	133 (4.4)	1,115 (5.8)
	R312	108 (2.9)	105 (3.0)	81 (2.8)	68 (2.4)	64 (2.0)	71 (2.4)	497 (2.6)
	R313	301 (8.1)	259 (7.4)	213 (7.4)	181 (6.4)	228 (7.1)	211 (7.0)	1,393 (7.3)
	R314	197 (5.3)	180 (5.2)	117 (4.1)	154 (5.5)	166 (5.1)	151 (5.0)	965 (5.0)
	R315	88 (2.4)	66 (1.9)	86 (3.0)	67 (2.4)	101 (3.1)	95 (3.2)	503 (2.6)
	R320	179 (4.8)	157 (4.5)	113 (3.9)	122 (4.3)	152 (4.7)	137 (4.6)	860 (4.5)
	R321	443 (12.0)	413 (11.9)	321 (11.1)	351 (12.5)	485 (15.0)	388 (12.9)	2,401 (12.6)
	R322	135 (3.6)	216 (6.2)	116 (4.0)	160 (5.7)	127 (3.9)	212 (7.0)	966 (5.1)
	R323	313 (8.5)	244 (7.0)	306 (10.6)	255 (9.1)	259 (8.0)	268 (8.9)	1,645 (8.6)
R4	n	3,434	2,645	2,458	2,068	2,460	2,417	15,482
	R401	431 (12.6)	307 (11.6)	263 (10.7)	229 (11.1)	272 (11.1)	239 (9.9)	1,741 (11.2)
	R402	81 (2.4)	88 (3.3)	77 (3.1)	72 (3.5)	87 (3.5)	91 (3.8)	496 (3.2)
	R403	422 (12.3)	258 (9.8)	230 (9.4)	200 (9.7)	266 (10.8)	251 (10.4)	1,627 (10.5)
	R404	174 (5.1)	165 (6.2)	107 (4.4)	82 (4.0)	126 (5.1)	144 (6.0)	798 (5.2)
	R405	551 (16.0)	408 (15.4)	415 (16.9)	301 (14.6)	233 (9.5)	291 (12.0)	2,199 (14.2)
	R406	1,101 (32.1)	845 (31.9)	819 (33.3)	711 (34.4)	914 (37.2)	777 (32.1)	5,167 (33.4)
	R407	205 (6.0)	151 (5.7)	137 (5.6)	124 (6.0)	116 (4.7)	137 (5.7)	870 (5.6)
	R408	333 (9.7)	294 (11.1)	237 (9.6)	233 (11.3)	330 (13.4)	325 (13.4)	1,752 (11.3)
	R409	136 (4.0)	129 (4.9)	173 (7.0)	116 (5.6)	116 (4.7)	162 (6.7)	832 (5.4)

Continued on next page

TABLE E.7 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05	All
R5	n	1,714	1,432	1,290	916	1,005	935	7,292
	R501	894 (52.2)	792 (55.3)	703 (54.5)	376 (41.0)	407 (40.5)	394 (42.1)	3,566 (48.9)
	R502	125 (7.3)	107 (7.5)	144 (11.2)	93 (10.2)	125 (12.4)	141 (15.1)	735 (10.1)
	R503	128 (7.5)	159 (11.1)	105 (8.1)	107 (11.7)	141 (14.0)	112 (12.0)	752 (10.3)
	R504	393 (22.9)	280 (19.6)	194 (15.0)	189 (20.6)	135 (13.4)	128 (13.7)	1,319 (18.1)
	R505	174 (10.2)	94 (6.6)	144 (11.2)	151 (16.5)	197 (19.6)	160 (17.1)	920 (12.6)
R6	n	5,107	5,094	4,654	4,239	4,520	4,371	27,985
	R601	242 (4.7)	218 (4.3)	200 (4.3)	194 (4.6)	193 (4.3)	215 (4.9)	1,262 (4.5)
	R602	139 (2.7)	150 (2.9)	134 (2.9)	140 (3.3)	168 (3.7)	175 (4.0)	906 (3.2)
	R603	535 (10.5)	456 (9.0)	480 (10.3)	396 (9.3)	367 (8.1)	386 (8.8)	2,620 (9.4)
	R604	528 (10.3)	537 (10.5)	484 (10.4)	420 (9.9)	423 (9.4)	382 (8.7)	2,774 (9.9)
	R605	295 (5.8)	384 (7.5)	315 (6.8)	264 (6.2)	295 (6.5)	268 (6.1)	1,821 (6.5)
	R606	370 (7.2)	515 (10.1)	445 (9.6)	437 (10.3)	435 (9.6)	437 (10.0)	2,639 (9.4)
	R607	427 (8.4)	456 (9.0)	401 (8.6)	344 (8.1)	326 (7.2)	324 (7.4)	2,278 (8.1)
	R608	384 (7.5)	390 (7.7)	347 (7.5)	397 (9.4)	369 (8.2)	292 (6.7)	2,179 (7.8)
	R609	287 (5.6)	258 (5.1)	276 (5.9)	264 (6.2)	194 (4.3)	199 (4.6)	1,478 (5.3)
	R612	487 (9.5)	418 (8.2)	391 (8.4)	347 (8.2)	358 (7.9)	318 (7.3)	2,319 (8.3)
	R613	91 (1.8)	119 (2.3)	101 (2.2)	100 (2.4)	111 (2.5)	107 (2.4)	629 (2.2)
	R614	102 (2.0)	63 (1.2)	82 (1.8)	98 (2.3)	78 (1.7)	87 (2.0)	510 (1.8)
	R615	72 (1.4)	66 (1.3)	51 (1.1)	39 (0.9)	71 (1.6)	64 (1.5)	363 (1.3)
	R616	181 (3.5)	230 (4.5)	148 (3.2)	127 (3.0)	184 (4.1)	136 (3.1)	1,006 (3.6)
	R617	27 (0.5)	16 (0.3)	16 (0.3)	22 (0.5)	45 (1.0)	37 (0.8)	163 (0.6)
	R618	378 (7.4)	401 (7.9)	386 (8.3)	337 (7.9)	437 (9.7)	447 (10.2)	2,386 (8.5)
	R619	242 (4.7)	153 (3.0)	159 (3.4)	157 (3.7)	160 (3.5)	166 (3.8)	1,037 (3.7)
	R620	320 (6.3)	264 (5.2)	238 (5.1)	156 (3.7)	306 (6.8)	331 (7.6)	1,615 (5.8)
R7	n	2,092	1,941	1,721	1,605	1,632	1,855	10,846
	R701	411 (19.6)	375 (19.3)	343 (19.9)	379 (23.6)	368 (22.5)	417 (22.5)	2,293 (21.1)
	R702	456 (21.8)	455 (23.4)	353 (20.5)	375 (23.4)	392 (24.0)	426 (23.0)	2,457 (22.7)
	R703	417 (19.9)	402 (20.7)	402 (23.4)	301 (18.8)	286 (17.5)	376 (20.3)	2,184 (20.1)
	R704	808 (38.6)	709 (36.5)	623 (36.2)	550 (34.3)	586 (35.9)	636 (34.3)	3,912 (36.1)
R8	n	2,167	1,779	1,851	1,532	1,291	1,322	9,942
	R801	362 (16.7)	304 (17.1)	315 (17.0)	344 (22.5)	324 (25.1)	328 (24.8)	1,977 (19.9)
	R802	236 (10.9)	247 (13.9)	287 (15.5)	233 (15.2)	198 (15.3)	222 (16.8)	1,423 (14.3)
	R803	175 (8.1)	184 (10.3)	145 (7.8)	158 (10.3)	146 (11.3)	188 (14.2)	996 (10.0)
	R804	1,394 (64.3)	1,044 (58.7)	1,104 (59.6)	797 (52.0)	623 (48.3)	584 (44.2)	5,546 (55.8)
R9	n	584	657	561	506	616	606	3,530
	R901	67 (11.5)	62 (9.4)	71 (12.7)	72 (14.2)	84 (13.6)	108 (17.8)	464 (13.1)
	R902	5 (0.9)	4 (0.6)	13 (2.3)	8 (1.6)	14 (2.3)	8 (1.3)	52 (1.5)
	R903	24 (4.1)	39 (5.9)	53 (9.4)	28 (5.5)	39 (6.3)	44 (7.3)	227 (6.4)
	R904	488 (83.6)	552 (84.0)	424 (75.6)	398 (78.7)	479 (77.8)	446 (73.6)	2,787 (79.0)

TABLE E.8: Distinct individuals visiting EDs for asthma by RHA and sRHA of residence for each fiscal year and all years combined for adults.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	708	715	646	663	748	691	2,969
	R101	93 (13.1)	87 (12.2)	75 (11.6)	69 (10.4)	102 (13.6)	80 (11.6)	353 (11.9)
	R102	113 (16.0)	93 (13.0)	112 (17.3)	92 (13.9)	121 (16.2)	90 (13.0)	440 (14.8)
	R103	322 (45.5)	348 (48.7)	278 (43.0)	309 (46.6)	327 (43.7)	320 (46.3)	1,354 (45.6)
	R104	119 (16.8)	122 (17.1)	122 (18.9)	113 (17.0)	126 (16.8)	116 (16.8)	513 (17.3)
	R105	61 (8.6)	65 (9.1)	59 (9.1)	80 (12.1)	72 (9.6)	85 (12.3)	309 (10.4)
R2	n	398	403	355	338	376	398	1,657
	R201	205 (51.5)	220 (54.6)	185 (52.1)	189 (55.9)	206 (54.8)	204 (51.3)	901 (54.4)
	R202	193 (48.5)	183 (45.4)	170 (47.9)	149 (44.1)	170 (45.2)	194 (48.7)	756 (45.6)
R3	n	2,605	2,513	2,162	2,115	2,420	2,251	10,595
	R301	76 (2.9)	93 (3.7)	76 (3.5)	89 (4.2)	91 (3.8)	87 (3.9)	390 (3.7)
	R302	71 (2.7)	79 (3.1)	57 (2.6)	68 (3.2)	77 (3.2)	74 (3.3)	327 (3.1)
	R303	144 (5.5)	144 (5.7)	136 (6.3)	124 (5.9)	172 (7.1)	140 (6.2)	625 (5.9)
	R304	61 (2.3)	64 (2.5)	45 (2.1)	44 (2.1)	44 (1.8)	43 (1.9)	243 (2.3)
	R305	167 (6.4)	153 (6.1)	124 (5.7)	127 (6.0)	137 (5.7)	120 (5.3)	635 (6.0)
	R306	157 (6.0)	158 (6.3)	122 (5.6)	124 (5.9)	137 (5.7)	142 (6.3)	607 (5.7)
	R307	90 (3.5)	83 (3.3)	71 (3.3)	66 (3.1)	78 (3.2)	70 (3.1)	377 (3.6)
	R308	171 (6.6)	169 (6.7)	134 (6.2)	105 (5.0)	131 (5.4)	119 (5.3)	616 (5.8)
	R309	122 (4.7)	122 (4.9)	101 (4.7)	92 (4.3)	112 (4.6)	93 (4.1)	498 (4.7)
	R310	204 (7.8)	179 (7.1)	171 (7.9)	154 (7.3)	141 (5.8)	162 (7.2)	742 (7.0)
	R311	138 (5.3)	166 (6.6)	121 (5.6)	109 (5.2)	149 (6.2)	95 (4.2)	585 (5.5)
	R312	84 (3.2)	85 (3.4)	67 (3.1)	59 (2.8)	49 (2.0)	59 (2.6)	319 (3.0)
	R313	236 (9.1)	207 (8.2)	167 (7.7)	152 (7.2)	178 (7.4)	175 (7.8)	858 (8.1)
	R314	164 (6.3)	139 (5.5)	95 (4.4)	123 (5.8)	140 (5.8)	124 (5.5)	615 (5.8)
	R315	79 (3.0)	59 (2.3)	70 (3.2)	54 (2.6)	83 (3.4)	84 (3.7)	335 (3.2)
	R320	109 (4.2)	112 (4.5)	98 (4.5)	91 (4.3)	112 (4.6)	110 (4.9)	489 (4.6)
	R321	240 (9.2)	228 (9.1)	225 (10.4)	255 (12.1)	296 (12.2)	270 (12.0)	1,111 (10.5)
	R322	80 (3.1)	100 (4.0)	78 (3.6)	90 (4.3)	86 (3.6)	87 (3.9)	365 (3.4)
	R323	212 (8.1)	173 (6.9)	204 (9.4)	189 (8.9)	207 (8.6)	197 (8.8)	858 (8.1)
R4	n	1,592	1,557	1,479	1,263	1,514	1,595	6,215
	R401	165 (10.4)	161 (10.3)	153 (10.3)	124 (9.8)	152 (10.0)	141 (8.8)	584 (9.4)
	R402	59 (3.7)	70 (4.5)	49 (3.3)	53 (4.2)	56 (3.7)	61 (3.8)	249 (4.0)
	R403	312 (19.6)	196 (12.6)	183 (12.4)	159 (12.6)	203 (13.4)	197 (12.4)	902 (14.5)
	R404	81 (5.1)	83 (5.3)	70 (4.7)	57 (4.5)	71 (4.7)	78 (4.9)	311 (5.0)
	R405	146 (9.2)	161 (10.3)	173 (11.7)	158 (12.5)	145 (9.6)	169 (10.6)	615 (9.9)
	R406	507 (31.8)	542 (34.8)	515 (34.8)	440 (34.8)	540 (35.7)	564 (35.4)	2,156 (34.7)
	R407	88 (5.5)	77 (4.9)	92 (6.2)	77 (6.1)	78 (5.2)	97 (6.1)	354 (5.7)
	R408	174 (10.9)	200 (12.8)	166 (11.2)	145 (11.5)	204 (13.5)	218 (13.7)	756 (12.2)
	R409	60 (3.8)	67 (4.3)	78 (5.3)	50 (4.0)	65 (4.3)	70 (4.4)	288 (4.6)

Continued on next page

TABLE E.8 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05	All
R5	n	622	570	533	456	550	515	2,325
	R501	259 (41.6)	246 (43.2)	225 (42.2)	173 (37.9)	197 (35.8)	198 (38.4)	899 (38.7)
	R502	55 (8.8)	57 (10.0)	62 (11.6)	55 (12.1)	90 (16.4)	71 (13.8)	301 (12.9)
	R503	73 (11.7)	80 (14.0)	53 (9.9)	57 (12.5)	72 (13.1)	62 (12.0)	287 (12.3)
	R504	131 (21.1)	115 (20.2)	102 (19.1)	89 (19.5)	86 (15.6)	88 (17.1)	437 (18.8)
	R505	104 (16.7)	72 (12.6)	91 (17.1)	82 (18.0)	105 (19.1)	96 (18.6)	401 (17.2)
R6	n	3,314	3,305	3,159	2,969	3,221	3,057	13,495
	R601	186 (5.6)	158 (4.8)	149 (4.7)	154 (5.2)	151 (4.7)	166 (5.4)	708 (5.2)
	R602	108 (3.3)	100 (3.0)	100 (3.2)	104 (3.5)	117 (3.6)	134 (4.4)	478 (3.5)
	R603	364 (11.0)	306 (9.3)	330 (10.4)	283 (9.5)	282 (8.8)	268 (8.8)	1,281 (9.5)
	R604	328 (9.9)	331 (10.0)	302 (9.6)	280 (9.4)	291 (9.0)	273 (8.9)	1,204 (8.9)
	R605	194 (5.9)	252 (7.6)	234 (7.4)	215 (7.2)	230 (7.1)	204 (6.7)	954 (7.1)
	R606	234 (7.1)	299 (9.0)	280 (8.9)	257 (8.7)	316 (9.8)	302 (9.9)	1,167 (8.6)
	R607	319 (9.6)	282 (8.5)	246 (7.8)	228 (7.7)	236 (7.3)	225 (7.4)	1,110 (8.2)
	R608	271 (8.2)	288 (8.7)	265 (8.4)	269 (9.1)	255 (7.9)	230 (7.5)	1,152 (8.5)
	R609	190 (5.7)	173 (5.2)	187 (5.9)	162 (5.5)	146 (4.5)	153 (5.0)	764 (5.7)
	R612	301 (9.1)	293 (8.9)	290 (9.2)	277 (9.3)	272 (8.4)	235 (7.7)	1,149 (8.5)
	R613	74 (2.2)	85 (2.6)	75 (2.4)	84 (2.8)	83 (2.6)	79 (2.6)	363 (2.7)
	R614	52 (1.6)	51 (1.5)	61 (1.9)	50 (1.7)	60 (1.9)	49 (1.6)	240 (1.8)
	R615	50 (1.5)	52 (1.6)	40 (1.3)	32 (1.1)	57 (1.8)	48 (1.6)	213 (1.6)
	R616	125 (3.8)	158 (4.8)	111 (3.5)	96 (3.2)	141 (4.4)	102 (3.3)	491 (3.6)
	R617	26 (0.8)	16 (0.5)	14 (0.4)	21 (0.7)	28 (0.9)	31 (1.0)	108 (0.8)
	R618	286 (8.6)	296 (9.0)	287 (9.1)	271 (9.1)	339 (10.5)	338 (11.1)	1,303 (9.7)
	R619	138 (4.2)	88 (2.7)	105 (3.3)	109 (3.7)	123 (3.8)	123 (4.0)	482 (3.6)
	R620	68 (2.1)	77 (2.3)	83 (2.6)	77 (2.6)	94 (2.9)	97 (3.2)	328 (2.4)
R7	n	1,085	1,084	983	955	1,007	1,094	4,270
	R701	265 (24.4)	236 (21.8)	227 (23.1)	241 (25.2)	234 (23.2)	252 (23.0)	1,020 (23.9)
	R702	251 (23.1)	265 (24.4)	215 (21.9)	225 (23.6)	206 (20.5)	255 (23.3)	962 (22.5)
	R703	218 (20.1)	226 (20.8)	206 (21.0)	166 (17.4)	178 (17.7)	184 (16.8)	780 (18.3)
	R704	351 (32.4)	357 (32.9)	335 (34.1)	323 (33.8)	389 (38.6)	403 (36.8)	1,508 (35.3)
R8	n	1,355	1,227	1,272	1,106	923	951	4,539
	R801	228 (16.8)	215 (17.5)	238 (18.7)	239 (21.6)	229 (24.8)	251 (26.4)	987 (21.7)
	R802	144 (10.6)	189 (15.4)	197 (15.5)	160 (14.5)	135 (14.6)	159 (16.7)	651 (14.3)
	R803	117 (8.6)	110 (9.0)	107 (8.4)	108 (9.8)	100 (10.8)	136 (14.3)	457 (10.1)
	R804	866 (63.9)	713 (58.1)	730 (57.4)	599 (54.2)	459 (49.7)	405 (42.6)	2,444 (53.8)
R9	n	407	416	406	355	445	429	1,699
	R901	46 (11.3)	33 (7.9)	51 (12.6)	48 (13.5)	53 (11.9)	65 (15.2)	196 (11.5)
	R902	5 (1.2)	4 (1.0)	11 (2.7)	6 (1.7)	13 (2.9)	7 (1.6)	40 (2.4)
	R903	18 (4.4)	30 (7.2)	40 (9.9)	21 (5.9)	28 (6.3)	37 (8.6)	121 (7.1)
	R904	338 (83.0)	349 (83.9)	304 (74.9)	280 (78.9)	351 (78.9)	320 (74.6)	1,342 (79.0)

TABLE E.9: Population by RHA and sRHA of residence for each fiscal year for children.

		99/00	00/01	01/02	02/03	03/04	04/05
R1	n	41,799	41,312	40,765	40,190	40,090	39,775
	R101	3,950 (9.4)	3,790 (9.2)	3,661 (9.0)	3,505 (8.7)	3,387 (8.4)	3,265 (8.2)
	R102	7,615 (18.2)	7,429 (18.0)	7,246 (17.8)	7,021 (17.5)	6,940 (17.3)	6,803 (17.1)
	R103	16,732 (40.0)	16,713 (40.5)	16,599 (40.7)	16,503 (41.1)	16,682 (41.6)	16,664 (41.9)
	R104	8,372 (20.0)	8,282 (20.0)	8,183 (20.1)	8,101 (20.2)	8,009 (20.0)	7,933 (19.9)
	R105	5,130 (12.3)	5,098 (12.3)	5,076 (12.5)	5,060 (12.6)	5,072 (12.7)	5,110 (12.8)
R2	n	24,434	24,355	24,526	24,420	24,480	24,601
	R201	18,219 (74.6)	18,185 (74.7)	18,196 (74.2)	18,125 (74.2)	18,178 (74.3)	18,283 (74.3)
	R202	6,215 (25.4)	6,170 (25.3)	6,330 (25.8)	6,295 (25.8)	6,302 (25.7)	6,318 (25.7)
R3	n	257,350	259,505	263,055	265,046	267,352	269,528
	R301	17,510 (6.8)	18,089 (7.0)	18,870 (7.2)	19,488 (7.4)	19,948 (7.5)	20,323 (7.5)
	R302	13,358 (5.2)	14,185 (5.5)	14,768 (5.6)	15,231 (5.7)	15,856 (5.9)	16,488 (6.1)
	R303	18,782 (7.3)	19,317 (7.4)	20,259 (7.7)	21,041 (7.9)	21,875 (8.2)	22,497 (8.3)
	R304	9,308 (3.6)	9,357 (3.6)	9,674 (3.7)	9,791 (3.7)	9,975 (3.7)	10,194 (3.8)
	R305	16,905 (6.6)	16,399 (6.3)	15,603 (5.9)	15,325 (5.8)	14,874 (5.6)	14,343 (5.3)
	R306	16,240 (6.3)	15,893 (6.1)	15,933 (6.1)	15,642 (5.9)	15,080 (5.6)	14,726 (5.5)
	R307	10,758 (4.2)	11,170 (4.3)	12,009 (4.6)	12,934 (4.9)	14,123 (5.3)	15,433 (5.7)
	R308	11,188 (4.3)	10,884 (4.2)	10,553 (4.0)	10,276 (3.9)	10,035 (3.8)	9,691 (3.6)
	R309	6,126 (2.4)	6,020 (2.3)	5,724 (2.2)	5,626 (2.1)	5,551 (2.1)	5,336 (2.0)
	R310	17,134 (6.7)	16,915 (6.5)	16,597 (6.3)	16,153 (6.1)	15,711 (5.9)	15,095 (5.6)
	R311	10,374 (4.0)	10,421 (4.0)	10,174 (3.9)	9,992 (3.8)	9,784 (3.7)	9,481 (3.5)
	R312	6,928 (2.7)	6,843 (2.6)	6,767 (2.6)	6,729 (2.5)	6,645 (2.5)	6,572 (2.4)
	R313	20,860 (8.1)	20,764 (8.0)	20,401 (7.8)	19,687 (7.4)	19,005 (7.1)	18,181 (6.7)
	R314	21,682 (8.4)	21,462 (8.3)	21,401 (8.1)	21,159 (8.0)	21,091 (7.9)	21,036 (7.8)
	R315	14,176 (5.5)	14,772 (5.7)	15,672 (6.0)	16,188 (6.1)	16,780 (6.3)	17,587 (6.5)
	R320	10,549 (4.1)	10,667 (4.1)	10,544 (4.0)	10,501 (4.0)	10,577 (4.0)	10,545 (3.9)
	R321	19,657 (7.6)	20,312 (7.8)	22,291 (8.5)	23,433 (8.8)	24,471 (9.2)	25,730 (9.5)
	R322	4,077 (1.6)	4,055 (1.6)	3,927 (1.5)	3,915 (1.5)	3,849 (1.4)	3,738 (1.4)
	R323	11,738 (4.6)	11,980 (4.6)	11,888 (4.5)	11,935 (4.5)	12,122 (4.5)	12,532 (4.6)
R4	n	75,834	75,540	75,676	75,441	75,156	74,729
	R401	5,572 (7.3)	5,470 (7.2)	5,448 (7.2)	5,461 (7.2)	5,432 (7.2)	5,392 (7.2)
	R402	4,289 (5.7)	4,201 (5.6)	4,198 (5.5)	4,215 (5.6)	4,187 (5.6)	4,128 (5.5)
	R403	10,854 (14.3)	10,703 (14.2)	10,744 (14.2)	10,729 (14.2)	10,699 (14.2)	10,499 (14.0)
	R404	4,747 (6.3)	4,619 (6.1)	4,583 (6.1)	4,419 (5.9)	4,319 (5.7)	4,198 (5.6)
	R405	7,637 (10.1)	7,865 (10.4)	7,974 (10.5)	7,929 (10.5)	7,871 (10.5)	7,962 (10.7)
	R406	26,955 (35.5)	27,080 (35.8)	27,295 (36.1)	27,499 (36.5)	27,811 (37.0)	27,983 (37.4)
	R407	3,892 (5.1)	3,845 (5.1)	3,840 (5.1)	3,834 (5.1)	3,728 (5.0)	3,742 (5.0)
	R408	7,046 (9.3)	7,003 (9.3)	6,869 (9.1)	6,687 (8.9)	6,493 (8.6)	6,293 (8.4)
	R409	4,842 (6.4)	4,754 (6.3)	4,725 (6.2)	4,668 (6.2)	4,616 (6.1)	4,532 (6.1)
R5	n	28,107	27,911	27,690	27,458	26,804	27,043
	R501	5,284 (18.8)	5,252 (18.8)	5,269 (19.0)	5,196 (18.9)	4,962 (18.5)	5,037 (18.6)
	R502	7,120 (25.3)	7,225 (25.9)	7,279 (26.3)	7,359 (26.8)	7,395 (27.6)	7,558 (27.9)
	R503	4,128 (14.7)	4,099 (14.7)	3,955 (14.3)	3,842 (14.0)	3,732 (13.9)	3,752 (13.9)
	R504	5,397 (19.2)	5,238 (18.8)	5,171 (18.7)	5,052 (18.4)	4,843 (18.1)	4,883 (18.1)
	R505	6,178 (22.0)	6,097 (21.8)	6,016 (21.7)	6,009 (21.9)	5,872 (21.9)	5,813 (21.5)
R6	n	232,036	231,244	231,066	231,324	230,518	229,698
	R601	13,880 (6.0)	13,808 (6.0)	13,891 (6.0)	13,811 (6.0)	13,723 (6.0)	13,612 (5.9)
	R602	11,115 (4.8)	11,020 (4.8)	10,772 (4.7)	10,905 (4.7)	11,132 (4.8)	11,536 (5.0)

Continued on next page

TABLE E.9 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05
	R603	14,508 (6.3)	14,299 (6.2)	14,235 (6.2)	14,084 (6.1)	13,790 (6.0)	13,231 (5.8)
	R604	11,692 (5.0)	11,594 (5.0)	11,436 (4.9)	11,318 (4.9)	11,233 (4.9)	10,622 (4.6)
	R605	15,973 (6.9)	16,083 (7.0)	16,416 (7.1)	16,535 (7.1)	16,722 (7.3)	16,744 (7.3)
	R606	18,814 (8.1)	18,597 (8.0)	18,447 (8.0)	18,532 (8.0)	18,107 (7.9)	17,739 (7.7)
	R607	15,726 (6.8)	15,779 (6.8)	15,510 (6.7)	15,417 (6.7)	14,882 (6.5)	14,444 (6.3)
	R608	23,318 (10.0)	23,359 (10.1)	23,244 (10.1)	23,155 (10.0)	23,194 (10.1)	23,043 (10.0)
	R609	18,664 (8.0)	18,942 (8.2)	19,185 (8.3)	19,564 (8.5)	20,132 (8.7)	20,885 (9.1)
	R612	27,322 (11.8)	26,842 (11.6)	26,702 (11.6)	26,348 (11.4)	26,273 (11.4)	26,280 (11.4)
	R613	12,296 (5.3)	12,456 (5.4)	12,852 (5.6)	13,143 (5.7)	13,369 (5.8)	13,518 (5.9)
	R614	7,048 (3.0)	7,010 (3.0)	6,957 (3.0)	6,866 (3.0)	6,719 (2.9)	6,589 (2.9)
	R615	2,198 (0.9)	2,250 (1.0)	2,244 (1.0)	2,233 (1.0)	2,202 (1.0)	2,132 (0.9)
	R616	4,882 (2.1)	4,778 (2.1)	4,708 (2.0)	4,756 (2.1)	4,678 (2.0)	4,762 (2.1)
	R617	3,392 (1.5)	3,422 (1.5)	3,409 (1.5)	3,381 (1.5)	3,297 (1.4)	3,373 (1.5)
	R618	17,946 (7.7)	17,931 (7.8)	18,031 (7.8)	18,280 (7.9)	18,539 (8.0)	18,625 (8.1)
	R619	9,661 (4.2)	9,544 (4.1)	9,488 (4.1)	9,362 (4.0)	8,913 (3.9)	8,996 (3.9)
	R620	3,601 (1.6)	3,530 (1.5)	3,539 (1.5)	3,634 (1.6)	3,613 (1.6)	3,567 (1.6)
R7	n	52,346	51,929	51,642	50,998	49,288	49,152
	R701	11,819 (22.6)	11,558 (22.3)	11,501 (22.3)	11,341 (22.2)	11,151 (22.6)	11,054 (22.5)
	R702	10,751 (20.5)	10,655 (20.5)	10,477 (20.3)	10,301 (20.2)	10,120 (20.5)	9,971 (20.3)
	R703	12,258 (23.4)	12,209 (23.5)	12,208 (23.6)	12,205 (23.9)	11,604 (23.5)	11,585 (23.6)
	R704	17,518 (33.5)	17,507 (33.7)	17,456 (33.8)	17,151 (33.6)	16,413 (33.3)	16,542 (33.7)
R8	n	37,824	37,401	37,462	37,338	37,306	37,239
	R801	7,456 (19.7)	7,250 (19.4)	7,185 (19.2)	7,078 (19.0)	6,943 (18.6)	6,853 (18.4)
	R802	4,421 (11.7)	4,263 (11.4)	4,226 (11.3)	4,171 (11.2)	4,110 (11.0)	4,009 (10.8)
	R803	7,095 (18.8)	7,047 (18.8)	6,926 (18.5)	6,865 (18.4)	6,847 (18.4)	6,595 (17.7)
	R804	18,852 (49.8)	18,841 (50.4)	19,125 (51.1)	19,224 (51.5)	19,406 (52.0)	19,782 (53.1)
R9	n	20,788	20,886	21,373	21,843	22,230	22,572
	R901	2,773 (13.3)	2,742 (13.1)	2,702 (12.6)	2,710 (12.4)	2,666 (12.0)	2,636 (11.7)
	R902	2,695 (13.0)	2,748 (13.2)	2,963 (13.9)	3,140 (14.4)	3,227 (14.5)	3,272 (14.5)
	R903	3,708 (17.8)	3,728 (17.8)	3,763 (17.6)	3,679 (16.8)	3,744 (16.8)	3,796 (16.8)
	R904	11,612 (55.9)	11,668 (55.9)	11,945 (55.9)	12,314 (56.4)	12,593 (56.6)	12,868 (57.0)

TABLE E.10: ED visits by RHA and sRHA of residence for each fiscal year and all years combined for children.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	1,288	1,071	1,087	1,231	1,143	1,121	6,941
	R101	119 (9.2)	110 (10.3)	98 (9.0)	101 (8.2)	95 (8.3)	111 (9.9)	634 (9.1)
	R102	254 (19.7)	182 (17.0)	235 (21.6)	205 (16.7)	206 (18.0)	226 (20.2)	1,308 (18.8)
	R103	430 (33.4)	382 (35.7)	342 (31.5)	434 (35.3)	431 (37.7)	374 (33.4)	2,393 (34.5)
	R104	338 (26.2)	235 (21.9)	264 (24.3)	321 (26.1)	260 (22.7)	281 (25.1)	1,699 (24.5)
	R105	147 (11.4)	162 (15.1)	148 (13.6)	170 (13.8)	151 (13.2)	129 (11.5)	907 (13.1)
R2	n	511	420	383	436	422	451	2,623
	R201	250 (48.9)	241 (57.4)	179 (46.7)	218 (50.0)	192 (45.5)	204 (45.2)	1,284 (49.0)
	R202	261 (51.1)	179 (42.6)	204 (53.3)	218 (50.0)	230 (54.5)	247 (54.8)	1,339 (51.0)
R3	n	4,306	4,867	4,529	4,673	5,089	4,524	27,988
	R301	242 (5.6)	296 (6.1)	256 (5.7)	218 (4.7)	298 (5.9)	255 (5.6)	1,565 (5.6)
	R302	196 (4.6)	255 (5.2)	281 (6.2)	259 (5.5)	264 (5.2)	265 (5.9)	1,520 (5.4)
	R303	314 (7.3)	388 (8.0)	374 (8.3)	392 (8.4)	514 (10.1)	379 (8.4)	2,361 (8.4)
	R304	116 (2.7)	154 (3.2)	112 (2.5)	145 (3.1)	155 (3.0)	151 (3.3)	833 (3.0)
	R305	278 (6.5)	259 (5.3)	271 (6.0)	282 (6.0)	254 (5.0)	216 (4.8)	1,560 (5.6)
	R306	294 (6.8)	301 (6.2)	259 (5.7)	261 (5.6)	247 (4.9)	252 (5.6)	1,614 (5.8)
	R307	186 (4.3)	211 (4.3)	261 (5.8)	240 (5.1)	258 (5.1)	272 (6.0)	1,428 (5.1)
	R308	217 (5.0)	234 (4.8)	254 (5.6)	225 (4.8)	213 (4.2)	191 (4.2)	1,334 (4.8)
	R309	139 (3.2)	103 (2.1)	99 (2.2)	106 (2.3)	128 (2.5)	104 (2.3)	679 (2.4)
	R310	375 (8.7)	396 (8.1)	316 (7.0)	292 (6.2)	317 (6.2)	294 (6.5)	1,990 (7.1)
	R311	242 (5.6)	281 (5.8)	210 (4.6)	218 (4.7)	213 (4.2)	156 (3.4)	1,320 (4.7)
	R312	79 (1.8)	89 (1.8)	68 (1.5)	90 (1.9)	77 (1.5)	81 (1.8)	484 (1.7)
	R313	377 (8.8)	421 (8.7)	393 (8.7)	417 (8.9)	396 (7.8)	344 (7.6)	2,348 (8.4)
	R314	307 (7.1)	345 (7.1)	281 (6.2)	351 (7.5)	354 (7.0)	332 (7.3)	1,970 (7.0)
	R315	155 (3.6)	193 (4.0)	180 (4.0)	216 (4.6)	256 (5.0)	183 (4.0)	1,183 (4.2)
	R320	153 (3.6)	177 (3.6)	175 (3.9)	181 (3.9)	192 (3.8)	147 (3.2)	1,025 (3.7)
	R321	359 (8.3)	417 (8.6)	359 (7.9)	452 (9.7)	505 (9.9)	503 (11.1)	2,595 (9.3)
	R322	80 (1.9)	102 (2.1)	106 (2.3)	86 (1.8)	117 (2.3)	78 (1.7)	569 (2.0)
	R323	197 (4.6)	245 (5.0)	274 (6.0)	242 (5.2)	331 (6.5)	321 (7.1)	1,610 (5.8)
R4	n	2,538	2,052	2,050	1,822	2,110	2,098	12,670
	R401	282 (11.1)	231 (11.3)	261 (12.7)	267 (14.7)	243 (11.5)	199 (9.5)	1,483 (11.7)
	R402	62 (2.4)	71 (3.5)	58 (2.8)	41 (2.3)	66 (3.1)	61 (2.9)	359 (2.8)
	R403	490 (19.3)	296 (14.4)	266 (13.0)	229 (12.6)	329 (15.6)	354 (16.9)	1,964 (15.5)
	R404	92 (3.6)	92 (4.5)	83 (4.0)	76 (4.2)	115 (5.5)	121 (5.8)	579 (4.6)
	R405	392 (15.4)	311 (15.2)	318 (15.5)	284 (15.6)	271 (12.8)	285 (13.6)	1,861 (14.7)
	R406	731 (28.8)	663 (32.3)	665 (32.4)	530 (29.1)	647 (30.7)	538 (25.6)	3,774 (29.8)
	R407	101 (4.0)	73 (3.6)	74 (3.6)	84 (4.6)	93 (4.4)	87 (4.1)	512 (4.0)
	R408	231 (9.1)	208 (10.1)	195 (9.5)	187 (10.3)	226 (10.7)	297 (14.2)	1,344 (10.6)
	R409	157 (6.2)	107 (5.2)	130 (6.3)	124 (6.8)	120 (5.7)	156 (7.4)	794 (6.3)

Continued on next page

TABLE E.10 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05	All
R5	n	766	866	727	543	622	650	4,174
	R501	311 (40.6)	349 (40.3)	313 (43.1)	191 (35.2)	173 (27.8)	193 (29.7)	1,530 (36.7)
	R502	123 (16.1)	109 (12.6)	118 (16.2)	64 (11.8)	99 (15.9)	100 (15.4)	613 (14.7)
	R503	72 (9.4)	87 (10.0)	61 (8.4)	56 (10.3)	88 (14.1)	98 (15.1)	462 (11.1)
	R504	161 (21.0)	225 (26.0)	127 (17.5)	129 (23.8)	122 (19.6)	131 (20.2)	895 (21.4)
	R505	99 (12.9)	96 (11.1)	108 (14.9)	103 (19.0)	140 (22.5)	128 (19.7)	674 (16.1)
R6	n	3,288	3,716	3,464	3,380	3,659	3,554	21,061
	R601	247 (7.5)	236 (6.4)	240 (6.9)	208 (6.2)	253 (6.9)	228 (6.4)	1,412 (6.7)
	R602	152 (4.6)	173 (4.7)	152 (4.4)	183 (5.4)	172 (4.7)	163 (4.6)	995 (4.7)
	R603	194 (5.9)	218 (5.9)	199 (5.7)	255 (7.5)	232 (6.3)	199 (5.6)	1,297 (6.2)
	R604	152 (4.6)	180 (4.8)	186 (5.4)	191 (5.7)	179 (4.9)	162 (4.6)	1,050 (5.0)
	R605	201 (6.1)	244 (6.6)	257 (7.4)	249 (7.4)	277 (7.6)	311 (8.8)	1,539 (7.3)
	R606	229 (7.0)	345 (9.3)	360 (10.4)	339 (10.0)	366 (10.0)	378 (10.6)	2,017 (9.6)
	R607	204 (6.2)	215 (5.8)	152 (4.4)	143 (4.2)	172 (4.7)	187 (5.3)	1,073 (5.1)
	R608	246 (7.5)	315 (8.5)	282 (8.1)	246 (7.3)	265 (7.2)	240 (6.8)	1,594 (7.6)
	R609	191 (5.8)	198 (5.3)	163 (4.7)	161 (4.8)	191 (5.2)	206 (5.8)	1,110 (5.3)
	R612	479 (14.6)	476 (12.8)	397 (11.5)	382 (11.3)	410 (11.2)	392 (11.0)	2,536 (12.0)
	R613	112 (3.4)	112 (3.0)	95 (2.7)	124 (3.7)	123 (3.4)	118 (3.3)	684 (3.2)
	R614	73 (2.2)	87 (2.3)	94 (2.7)	43 (1.3)	66 (1.8)	54 (1.5)	417 (2.0)
	R615	40 (1.2)	48 (1.3)	42 (1.2)	40 (1.2)	34 (0.9)	53 (1.5)	257 (1.2)
	R616	118 (3.6)	178 (4.8)	147 (4.2)	128 (3.8)	176 (4.8)	126 (3.5)	873 (4.1)
	R617	55 (1.7)	43 (1.2)	45 (1.3)	44 (1.3)	44 (1.2)	39 (1.1)	270 (1.3)
	R618	229 (7.0)	275 (7.4)	368 (10.6)	372 (11.0)	334 (9.1)	336 (9.5)	1,914 (9.1)
	R619	180 (5.5)	168 (4.5)	157 (4.5)	161 (4.8)	196 (5.4)	184 (5.2)	1,046 (5.0)
	R620	186 (5.7)	205 (5.5)	128 (3.7)	111 (3.3)	169 (4.6)	178 (5.0)	977 (4.6)
R7	n	1,439	1,458	1,256	1,368	1,364	1,374	8,259
	R701	320 (22.2)	339 (23.3)	298 (23.7)	327 (23.9)	306 (22.4)	361 (26.3)	1,951 (23.6)
	R702	224 (15.6)	246 (16.9)	210 (16.7)	265 (19.4)	243 (17.8)	233 (17.0)	1,421 (17.2)
	R703	254 (17.7)	221 (15.2)	252 (20.1)	309 (22.6)	292 (21.4)	258 (18.8)	1,586 (19.2)
	R704	641 (44.5)	652 (44.7)	496 (39.5)	467 (34.1)	523 (38.3)	522 (38.0)	3,301 (40.0)
R8	n	1,701	1,411	1,519	1,251	1,129	1,084	8,095
	R801	313 (18.4)	258 (18.3)	290 (19.1)	243 (19.4)	271 (24.0)	240 (22.1)	1,615 (20.0)
	R802	170 (10.0)	203 (14.4)	231 (15.2)	172 (13.7)	156 (13.8)	180 (16.6)	1,112 (13.7)
	R803	140 (8.2)	150 (10.6)	137 (9.0)	149 (11.9)	151 (13.4)	182 (16.8)	909 (11.2)
	R804	1,078 (63.4)	800 (56.7)	861 (56.7)	687 (54.9)	551 (48.8)	482 (44.5)	4,459 (55.1)
R9	n	388	408	393	363	417	399	2,368
	R901	65 (16.8)	60 (14.7)	94 (23.9)	78 (21.5)	82 (19.7)	65 (16.3)	444 (18.8)
	R902	8 (2.1)	10 (2.5)	18 (4.6)	6 (1.7)	14 (3.4)	14 (3.5)	70 (3.0)
	R903	30 (7.7)	32 (7.8)	41 (10.4)	25 (6.9)	30 (7.2)	18 (4.5)	176 (7.4)
	R904	285 (73.5)	306 (75.0)	240 (61.1)	254 (70.0)	291 (69.8)	302 (75.7)	1,678 (70.9)

TABLE E.11: Distinct individuals visiting EDs for asthma by RHA and sRHA of residence for each fiscal year and all years combined for children.

		99/00	00/01	01/02	02/03	03/04	04/05	All
R1	n	704	692	629	736	703	694	2,862
	R101	81 (11.5)	74 (10.7)	62 (9.9)	76 (10.3)	68 (9.7)	75 (10.8)	293 (10.2)
	R102	158 (22.4)	141 (20.4)	139 (22.1)	116 (15.8)	129 (18.3)	130 (18.7)	561 (19.6)
	R103	260 (36.9)	264 (38.2)	245 (39.0)	283 (38.5)	283 (40.3)	266 (38.3)	1,083 (37.8)
	R104	125 (17.8)	124 (17.9)	101 (16.1)	147 (20.0)	124 (17.6)	137 (19.7)	551 (19.3)
	R105	80 (11.4)	89 (12.9)	82 (13.0)	114 (15.5)	99 (14.1)	86 (12.4)	374 (13.1)
R2	n	336	294	285	301	319	334	1,341
	R201	186 (55.4)	175 (59.5)	139 (48.8)	161 (53.5)	158 (49.5)	156 (46.7)	738 (55.0)
	R202	150 (44.6)	119 (40.5)	146 (51.2)	140 (46.5)	161 (50.5)	178 (53.3)	603 (45.0)
R3	n	3,080	3,411	3,313	3,342	3,629	3,307	14,108
	R301	183 (5.9)	214 (6.3)	201 (6.1)	165 (4.9)	218 (6.0)	185 (5.6)	823 (5.8)
	R302	145 (4.7)	189 (5.5)	199 (6.0)	186 (5.6)	193 (5.3)	190 (5.7)	740 (5.2)
	R303	219 (7.1)	265 (7.8)	269 (8.1)	286 (8.6)	336 (9.3)	280 (8.5)	1,102 (7.8)
	R304	84 (2.7)	113 (3.3)	82 (2.5)	107 (3.2)	107 (2.9)	115 (3.5)	424 (3.0)
	R305	198 (6.4)	197 (5.8)	193 (5.8)	181 (5.4)	180 (5.0)	173 (5.2)	790 (5.6)
	R306	219 (7.1)	201 (5.9)	192 (5.8)	192 (5.7)	194 (5.3)	168 (5.1)	836 (5.9)
	R307	130 (4.2)	144 (4.2)	187 (5.6)	170 (5.1)	198 (5.5)	197 (6.0)	703 (5.0)
	R308	153 (5.0)	156 (4.6)	164 (5.0)	145 (4.3)	146 (4.0)	139 (4.2)	639 (4.5)
	R309	101 (3.3)	88 (2.6)	69 (2.1)	83 (2.5)	92 (2.5)	76 (2.3)	375 (2.7)
	R310	253 (8.2)	272 (8.0)	222 (6.7)	208 (6.2)	247 (6.8)	210 (6.4)	986 (7.0)
	R311	164 (5.3)	181 (5.3)	151 (4.6)	161 (4.8)	142 (3.9)	112 (3.4)	648 (4.6)
	R312	59 (1.9)	70 (2.1)	58 (1.8)	72 (2.2)	60 (1.7)	63 (1.9)	289 (2.0)
	R313	277 (9.0)	303 (8.9)	293 (8.8)	288 (8.6)	271 (7.5)	245 (7.4)	1,174 (8.3)
	R314	221 (7.2)	252 (7.4)	218 (6.6)	259 (7.7)	250 (6.9)	241 (7.3)	1,034 (7.3)
	R315	119 (3.9)	156 (4.6)	143 (4.3)	163 (4.9)	185 (5.1)	154 (4.7)	653 (4.6)
	R320	113 (3.7)	133 (3.9)	145 (4.4)	121 (3.6)	146 (4.0)	102 (3.1)	541 (3.8)
	R321	247 (8.0)	251 (7.4)	274 (8.3)	312 (9.3)	343 (9.5)	366 (11.1)	1,258 (8.9)
	R322	57 (1.9)	64 (1.9)	65 (2.0)	58 (1.7)	79 (2.2)	57 (1.7)	277 (2.0)
	R323	138 (4.5)	162 (4.7)	188 (5.7)	185 (5.5)	242 (6.7)	234 (7.1)	816 (5.8)
R4	n	1,417	1,283	1,276	1,202	1,386	1,394	5,560
	R401	145 (10.2)	130 (10.1)	150 (11.8)	152 (12.6)	156 (11.3)	123 (8.8)	580 (10.4)
	R402	50 (3.5)	58 (4.5)	47 (3.7)	30 (2.5)	38 (2.7)	39 (2.8)	183 (3.3)
	R403	350 (24.7)	209 (16.3)	203 (15.9)	188 (15.6)	254 (18.3)	284 (20.4)	1,126 (20.3)
	R404	60 (4.2)	63 (4.9)	50 (3.9)	43 (3.6)	68 (4.9)	65 (4.7)	252 (4.5)
	R405	150 (10.6)	160 (12.5)	155 (12.1)	170 (14.1)	169 (12.2)	157 (11.3)	635 (11.4)
	R406	389 (27.5)	410 (32.0)	424 (33.2)	354 (29.5)	418 (30.2)	382 (27.4)	1,598 (28.7)
	R407	55 (3.9)	51 (4.0)	56 (4.4)	67 (5.6)	70 (5.1)	62 (4.4)	265 (4.8)
	R408	145 (10.2)	125 (9.7)	129 (10.1)	130 (10.8)	145 (10.5)	198 (14.2)	615 (11.1)
	R409	73 (5.2)	77 (6.0)	62 (4.9)	68 (5.7)	68 (4.9)	84 (6.0)	306 (5.5)

Continued on next page

TABLE E.11 continued from previous page

		99/00	00/01	01/02	02/03	03/04	04/05	All
R5	n	399	434	399	345	417	423	1,677
	R501	130 (32.6)	158 (36.4)	146 (36.6)	114 (33.0)	127 (30.5)	123 (29.1)	547 (32.6)
	R502	68 (17.0)	55 (12.7)	62 (15.5)	40 (11.6)	58 (13.9)	56 (13.2)	245 (14.6)
	R503	42 (10.5)	46 (10.6)	38 (9.5)	39 (11.3)	56 (13.4)	62 (14.7)	217 (12.9)
	R504	86 (21.6)	101 (23.3)	77 (19.3)	83 (24.1)	80 (19.2)	85 (20.1)	333 (19.9)
	R505	73 (18.3)	74 (17.1)	76 (19.0)	69 (20.0)	96 (23.0)	97 (22.9)	335 (20.0)
R6	n	2,365	2,638	2,583	2,497	2,636	2,577	10,926
	R601	179 (7.6)	184 (7.0)	175 (6.8)	152 (6.1)	191 (7.2)	166 (6.4)	746 (6.8)
	R602	100 (4.2)	136 (5.2)	120 (4.6)	134 (5.4)	137 (5.2)	118 (4.6)	509 (4.7)
	R603	151 (6.4)	168 (6.4)	147 (5.7)	189 (7.6)	171 (6.5)	147 (5.7)	716 (6.6)
	R604	122 (5.2)	131 (5.0)	138 (5.3)	143 (5.7)	132 (5.0)	121 (4.7)	556 (5.1)
	R605	149 (6.3)	187 (7.1)	191 (7.4)	180 (7.2)	199 (7.5)	215 (8.3)	808 (7.4)
	R606	158 (6.7)	238 (9.0)	267 (10.3)	260 (10.4)	259 (9.8)	269 (10.4)	991 (9.1)
	R607	155 (6.6)	159 (6.0)	124 (4.8)	117 (4.7)	133 (5.0)	137 (5.3)	619 (5.7)
	R608	203 (8.6)	234 (8.9)	217 (8.4)	189 (7.6)	207 (7.9)	182 (7.1)	896 (8.2)
	R609	155 (6.6)	141 (5.3)	131 (5.1)	126 (5.0)	141 (5.3)	157 (6.1)	631 (5.8)
	R612	353 (14.9)	325 (12.3)	306 (11.8)	276 (11.1)	305 (11.6)	295 (11.4)	1,305 (11.9)
	R613	85 (3.6)	86 (3.3)	79 (3.1)	98 (3.9)	86 (3.3)	89 (3.5)	392 (3.6)
	R614	50 (2.1)	51 (1.9)	59 (2.3)	35 (1.4)	47 (1.8)	44 (1.7)	215 (2.0)
	R615	24 (1.0)	35 (1.3)	39 (1.5)	33 (1.3)	29 (1.1)	36 (1.4)	138 (1.3)
	R616	80 (3.4)	113 (4.3)	104 (4.0)	92 (3.7)	122 (4.6)	98 (3.8)	416 (3.8)
	R617	32 (1.4)	32 (1.2)	37 (1.4)	34 (1.4)	29 (1.1)	32 (1.2)	145 (1.3)
	R618	183 (7.7)	222 (8.4)	275 (10.6)	263 (10.5)	256 (9.7)	257 (10.0)	1,052 (9.6)
	R619	121 (5.1)	122 (4.6)	121 (4.7)	112 (4.5)	130 (4.9)	137 (5.3)	519 (4.8)
	R620	65 (2.7)	74 (2.8)	53 (2.1)	64 (2.6)	62 (2.4)	77 (3.0)	272 (2.5)
R7	n	902	932	858	883	932	911	3,823
	R701	215 (23.8)	218 (23.4)	186 (21.7)	206 (23.3)	213 (22.9)	191 (21.0)	858 (22.4)
	R702	153 (17.0)	166 (17.8)	153 (17.8)	142 (16.1)	158 (17.0)	172 (18.9)	676 (17.7)
	R703	174 (19.3)	152 (16.3)	173 (20.2)	196 (22.2)	181 (19.4)	171 (18.8)	751 (19.6)
	R704	360 (39.9)	396 (42.5)	346 (40.3)	339 (38.4)	380 (40.8)	377 (41.4)	1,538 (40.2)
R8	n	1,091	981	1,035	890	752	785	3,793
	R801	184 (16.9)	162 (16.5)	194 (18.7)	166 (18.7)	181 (24.1)	184 (23.4)	755 (19.9)
	R802	114 (10.4)	147 (15.0)	169 (16.3)	126 (14.2)	97 (12.9)	135 (17.2)	560 (14.8)
	R803	100 (9.2)	110 (11.2)	92 (8.9)	92 (10.3)	102 (13.6)	122 (15.5)	448 (11.8)
	R804	693 (63.5)	562 (57.3)	580 (56.0)	506 (56.9)	372 (49.5)	344 (43.8)	2,030 (53.5)
R9	n	288	314	290	267	307	294	1,291
	R901	43 (14.9)	44 (14.0)	63 (21.7)	49 (18.4)	53 (17.3)	46 (15.6)	198 (15.3)
	R902	3 (1.0)	4 (1.3)	15 (5.2)	5 (1.9)	12 (3.9)	11 (3.7)	41 (3.2)
	R903	25 (8.7)	25 (8.0)	36 (12.4)	20 (7.5)	24 (7.8)	15 (5.1)	127 (9.8)
	R904	217 (75.3)	241 (76.8)	176 (60.7)	193 (72.3)	218 (71.0)	222 (75.5)	925 (71.6)

F Follow-up Visits After ED Visit End Date

TABLE F.1: Total follow-up visits, ED visits, and individuals in the reduced data set.

	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits	111,686	167,375	269,680	571,413	1,572,657
ED Visits	60,151	74,460	91,993	115,268	130,254
Individuals	39,809	47,938	56,942	69,106	78,799

TABLE F.2: Follow-up visits and individuals by age category.

	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	111,686	167,375	269,680	571,413	1,572,657
Adults	65,512 (58.7)	102,117 (61.0)	169,643 (62.9)	370,425 (64.8)	1,047,871 (66.6)
Children	46,174 (41.3)	65,258 (39.0)	100,037 (37.1)	200,988 (35.2)	524,786 (33.4)
Distinct Individuals					
n	39,809	47,938	56,942	69,106	78,799
Adults	20,466 (51.4)	24,890 (51.9)	29,697 (52.2)	35,906 (52.0)	40,595 (51.5)
Children	19,343 (48.6)	23,048 (48.1)	27,245 (47.8)	33,200 (48.0)	38,204 (48.5)

TABLE F.3: Follow-up visits and individuals by gender.

	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	111,686	167,375	269,680	571,413	1,572,657
F	63,268 (56.6)	96,029 (57.4)	156,636 (58.1)	340,291 (59.6)	952,279 (60.6)
M	48,407 (43.3)	71,323 (42.6)	113,004 (41.9)	231,023 (40.4)	620,097 (39.4)
U	11 (0.0)	23 (0.0)	40 (0.0)	99 (0.0)	281 (0.0)
Distinct Individuals					
n	39,809	47,938	56,942	69,106	78,799
F	21,184 (53.2)	25,559 (53.3)	30,231 (53.1)	36,092 (52.2)	40,166 (51.0)
M	18,621 (46.8)	22,373 (46.7)	26,705 (46.9)	33,008 (47.8)	38,626 (49.0)
U	4 (0.0)	6 (0.0)	6 (0.0)	6 (0.0)	7 (0.0)

TABLE F.4: Follow-up visits and individuals by pSES (age less than 65 years).

	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	99,531	148,403	238,372	504,982	1,386,598
A	8,160 (8.2)	12,345 (8.3)	20,901 (8.8)	48,015 (9.5)	135,655 (9.8)
O	65,152 (65.5)	95,683 (64.5)	150,458 (63.1)	312,694 (61.9)	862,016 (62.2)
S	14,688 (14.8)	21,955 (14.8)	35,342 (14.8)	74,437 (14.7)	203,058 (14.6)
W	11,531 (11.6)	18,420 (12.4)	31,671 (13.3)	69,836 (13.8)	185,869 (13.4)
Distinct Individuals					
n	37,359	45,363	54,443	67,065	77,174
A	2,799 (7.5)	3,444 (7.6)	4,195 (7.7)	5,206 (7.8)	5,866 (7.6)
O	26,196 (70.1)	31,771 (70.0)	38,104 (70.0)	47,154 (70.3)	54,808 (71.0)
S	5,543 (14.8)	6,755 (14.9)	8,170 (15.0)	10,101 (15.1)	11,497 (14.9)
W	2,821 (7.6)	3,393 (7.5)	3,974 (7.3)	4,604 (6.9)	5,003 (6.5)

TABLE F.5: Follow-up visits and individuals by diagnosis.

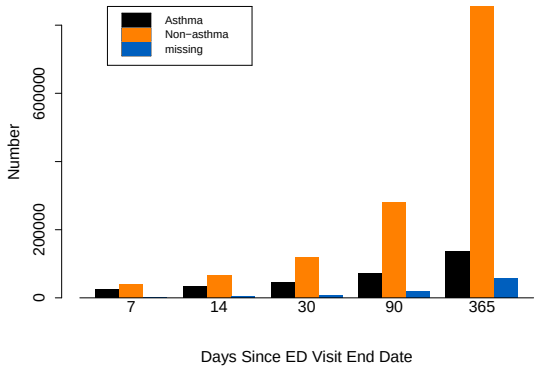
	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	111,686	167,375	269,680	571,413	1,572,657
Asthma	49,384 (44.2)	64,577 (38.6)	87,577 (32.5)	139,732 (24.5)	266,425 (16.9)
Non-asthma	59,643 (53.4)	97,973 (58.5)	172,896 (64.1)	408,883 (71.6)	1,234,890 (78.5)
missing	2,659 (2.4)	4,825 (2.9)	9,207 (3.4)	22,798 (4.0)	71,342 (4.5)
Individuals					
Asthma	21,761	25,383	29,598	36,387	47,810
Non-asthma	26,876	35,595	46,451	62,580	76,897
missing	1,839	3,093	5,217	10,209	22,241

TABLE F.6: Follow-up visits and individuals by diagnosis for adults and children.

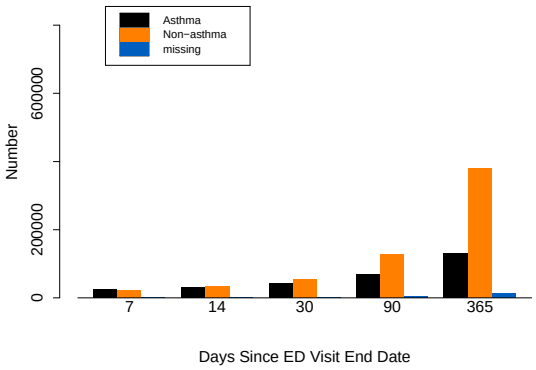
		Days Since ED Visit End Date				
		7	14	30	90	365
Follow-up Visits						
Adults	n	65,512	102,117	169,643	370,425	1,047,871
	Asthma	24,781 (37.8)	33,058 (32.4)	45,306 (26.7)	72,309 (19.5)	135,289 (12.9)
	Non-asthma	38,880 (59.3)	65,574 (64.2)	117,485 (69.3)	280,329 (75.7)	854,970 (81.6)
	missing	1,851 (2.8)	3,485 (3.4)	6,852 (4.0)	17,787 (4.8)	57,612 (5.5)
Children	n	46,174	65,258	100,037	200,988	524,786
	Asthma	24,603 (53.3)	31,519 (48.3)	42,271 (42.3)	67,423 (33.5)	131,136 (25.0)
	Non-asthma	20,763 (45.0)	32,399 (49.6)	55,411 (55.4)	128,554 (64.0)	379,920 (72.4)
	missing	808 (1.7)	1,340 (2.1)	2,355 (2.4)	5,011 (2.5)	13,730 (2.6)
Individuals						
Adults	Asthma	9,955	11,698	13,760	17,120	22,928
	Non-asthma	15,150	19,957	25,523	33,262	39,735
	missing	1,243	2,172	3,758	7,511	15,980
Children	Asthma	11,806	13,685	15,838	19,267	24,882
	Non-asthma	11,726	15,638	20,928	29,318	37,162
	missing	596	921	1,459	2,698	6,261

FIGURE F.1: Follow-up visits and individuals by diagnosis for adults and children.

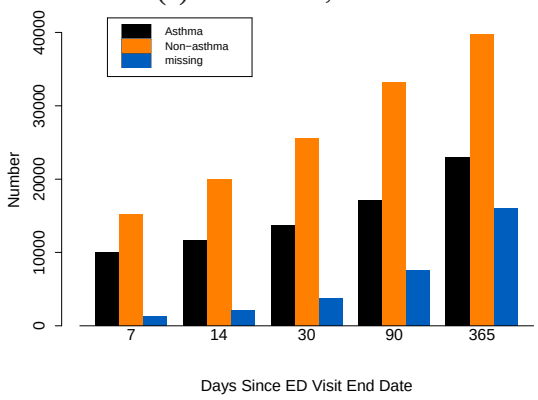
(a) Follow-up Visits, Adults



(b) Follow-up Visits, Children



(c) Individuals, Adults



(d) Individuals, Children

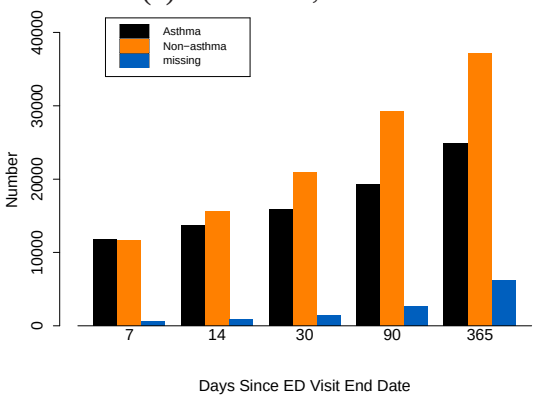


TABLE F.7: Follow-up visits and individuals by physician type.

	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	111,686	167,375	269,680	571,413	1,572,657
CARD	642 (0.6)	1,069 (0.6)	1,704 (0.6)	3,807 (0.7)	10,319 (0.7)
EMSP	1,547 (1.4)	2,301 (1.4)	3,668 (1.4)	7,502 (1.3)	19,252 (1.2)
FTER	3,343 (3.0)	5,040 (3.0)	8,096 (3.0)	17,215 (3.0)	48,682 (3.1)
GAST	176 (0.2)	309 (0.2)	536 (0.2)	1,223 (0.2)	3,819 (0.2)
GP	70,330 (63.0)	104,594 (62.5)	166,642 (61.8)	353,442 (61.9)	989,512 (62.9)
IDIS	49 (0.0)	82 (0.0)	120 (0.0)	274 (0.0)	735 (0.0)
INMD	8,287 (7.4)	12,325 (7.4)	19,528 (7.2)	37,854 (6.6)	84,345 (5.4)
PED	15,020 (13.4)	20,278 (12.1)	29,168 (10.8)	51,907 (9.1)	111,859 (7.1)
RSMD	2,149 (1.9)	3,321 (2.0)	5,594 (2.1)	10,724 (1.9)	22,355 (1.4)
THOR	16 (0.0)	46 (0.0)	98 (0.0)	213 (0.0)	505 (0.0)
Other	10,127 (9.1)	18,010 (10.8)	34,526 (12.8)	87,252 (15.3)	281,274 (17.9)
Individuals					
CARD	268	398	628	1,172	2,463
EMSP	1,192	1,631	2,419	4,452	9,474
FTER	2,174	2,951	4,253	7,514	15,768
GAST	106	169	279	563	1,393
GP	32,500	40,413	49,644	63,437	76,305
IDIS	38	54	67	124	308
INMD	2,948	3,767	5,104	8,068	13,833
PED	7,035	8,356	10,204	13,565	18,764
RSMD	826	1,099	1,569	2,425	3,692
THOR	12	28	48	88	162
Other	4,690	7,393	11,832	20,978	38,188

TABLE F.8: Follow-up visits and individuals by physician type for adults and children.

		Days Since ED Visit End Date				
		7	14	30	90	365
Follow-up Visits						
Adults	n	65,512	102,117	169,643	370,425	1,047,871
	CARD	633 (1.0)	1,053 (1.0)	1,656 (1.0)	3,700 (1.0)	9,997 (1.0)
	EMSP	910 (1.4)	1,442 (1.4)	2,286 (1.3)	4,533 (1.2)	11,401 (1.1)
	FTER	2,387 (3.6)	3,660 (3.6)	5,773 (3.4)	11,908 (3.2)	32,674 (3.1)
	GAST	165 (0.3)	295 (0.3)	504 (0.3)	1,135 (0.3)	3,582 (0.3)
	GP	44,027 (67.2)	67,164 (65.8)	109,195 (64.4)	234,879 (63.4)	664,122 (63.4)
	IDIS	42 (0.1)	71 (0.1)	99 (0.1)	224 (0.1)	617 (0.1)
	INMD	7,827 (11.9)	11,572 (11.3)	18,202 (10.7)	34,961 (9.4)	77,575 (7.4)
	PED	142 (0.2)	269 (0.3)	506 (0.3)	1,234 (0.3)	3,025 (0.3)
	RSMD	1,836 (2.8)	2,840 (2.8)	4,750 (2.8)	9,110 (2.5)	19,210 (1.8)
	THOR	15 (0.0)	43 (0.0)	95 (0.1)	208 (0.1)	492 (0.0)
	Other	7,528 (11.5)	13,708 (13.4)	26,577 (15.7)	68,533 (18.5)	225,176 (21.5)
Children	n	46,174	65,258	100,037	200,988	524,786
	CARD	9 (0.0)	16 (0.0)	48 (0.0)	107 (0.1)	322 (0.1)
	EMSP	637 (1.4)	859 (1.3)	1,382 (1.4)	2,969 (1.5)	7,851 (1.5)
	FTER	956 (2.1)	1,380 (2.1)	2,323 (2.3)	5,307 (2.6)	16,008 (3.1)
	GAST	11 (0.0)	14 (0.0)	32 (0.0)	88 (0.0)	237 (0.0)
	GP	26,303 (57.0)	37,430 (57.4)	57,447 (57.4)	118,563 (59.0)	325,390 (62.0)
	IDIS	7 (0.0)	11 (0.0)	21 (0.0)	50 (0.0)	118 (0.0)
	INMD	460 (1.0)	753 (1.2)	1,326 (1.3)	2,893 (1.4)	6,770 (1.3)
	PED	14,878 (32.2)	20,009 (30.7)	28,662 (28.7)	50,673 (25.2)	108,834 (20.7)
	RSMD	313 (0.7)	481 (0.7)	844 (0.8)	1,614 (0.8)	3,145 (0.6)
	THOR	1 (0.0)	3 (0.0)	3 (0.0)	5 (0.0)	13 (0.0)
	Other	2,599 (5.6)	4,302 (6.6)	7,949 (7.9)	18,719 (9.3)	56,098 (10.7)
Individuals						
Adults	CARD	259	387	602	1,106	2,319
	EMSP	641	914	1,323	2,338	4,846
	FTER	1,409	1,920	2,677	4,480	9,083
	GAST	97	158	261	524	1,301
	GP	18,295	22,726	27,739	34,598	40,147
	IDIS	32	47	58	106	267
	INMD	2,715	3,423	4,554	6,947	11,340
	PED	86	151	256	552	1,212
	RSMD	693	918	1,308	2,015	3,078
	THOR	11	26	46	85	154
	Other	3,304	5,232	8,270	14,346	25,045
Children	CARD	9	11	26	66	144
	EMSP	551	717	1,096	2,114	4,628
	FTER	765	1,031	1,576	3,034	6,685
	GAST	9	11	18	39	92
	GP	14,205	17,687	21,905	28,839	36,158
	IDIS	6	7	9	18	41
	INMD	233	344	550	1,121	2,493
	PED	6,949	8,205	9,948	13,013	17,552
	RSMD	133	181	261	410	614
	THOR	1	2	2	3	8
	Other	1,386	2,161	3,562	6,632	13,143

TABLE F.9: Follow-up visits and individuals by facility type.

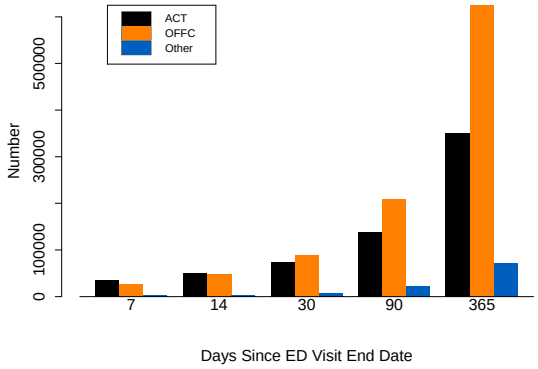
	Days Since ED Visit End Date				
	7	14	30	90	365
Follow-up Visits					
n	111,686	167,375	269,680	571,413	1,572,657
ACT	60,341 (54.0)	79,270 (47.4)	113,500 (42.1)	211,193 (37.0)	520,500 (33.1)
OFFC	48,504 (43.4)	82,905 (49.5)	146,054 (54.2)	334,074 (58.5)	967,025 (61.5)
Other	2,841 (2.5)	5,200 (3.1)	10,126 (3.8)	26,146 (4.6)	85,132 (5.4)
Individuals					
ACT	21,404	24,639	29,800	40,718	59,453
OFFC	28,167	38,466	49,253	63,470	76,051
Other	1,916	3,151	5,193	10,183	22,002

TABLE F.10: Follow-up visits and individuals by facility type for adults and children.

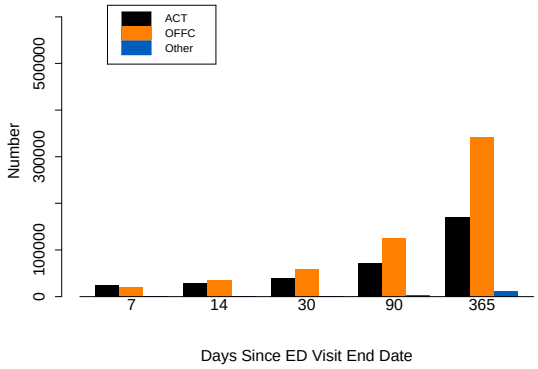
		Days Since ED Visit End Date				
		7	14	30	90	365
Follow-up Visits						
Adults	n	65,512	102,117	169,643	370,425	1,047,871
	ACT	36,288 (55.4)	50,058 (49.0)	73,350 (43.2)	138,928 (37.5)	350,880 (33.5)
	OFFC	27,035 (41.3)	47,937 (46.9)	88,028 (51.9)	209,591 (56.6)	624,687 (59.6)
	Other	2,189 (3.3)	4,122 (4.0)	8,265 (4.9)	21,906 (5.9)	72,304 (6.9)
Children	n	46,174	65,258	100,037	200,988	524,786
	ACT	24,053 (52.1)	29,212 (44.8)	40,150 (40.1)	72,265 (36.0)	169,620 (32.3)
	OFFC	21,469 (46.5)	34,968 (53.6)	58,026 (58.0)	124,483 (61.9)	342,338 (65.2)
	Other	652 (1.4)	1,078 (1.7)	1,861 (1.9)	4,240 (2.1)	12,828 (2.4)
Individuals						
Adults	ACT	11,099	12,951	15,620	21,102	30,714
	OFFC	14,310	19,871	25,834	33,277	39,290
	Other	1,421	2,385	4,004	7,892	16,601
Children	ACT	10,305	11,688	14,180	19,616	28,739
	OFFC	13,857	18,595	23,419	30,193	36,761
	Other	495	766	1,189	2,291	5,401

FIGURE F.2: Follow-up visits and individuals by facility type for adults and children.

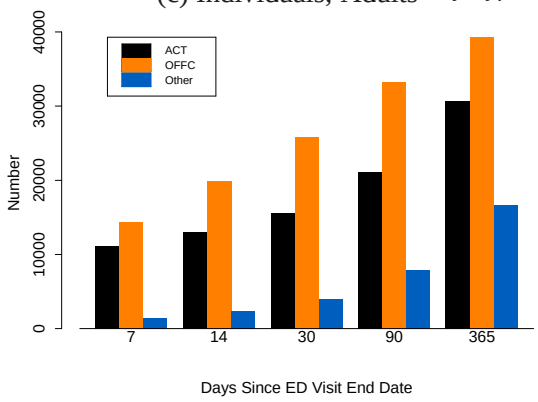
(a) Follow-up Visits, Adults



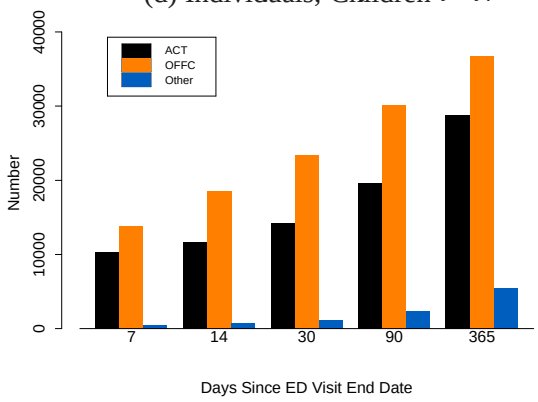
(b) Follow-up Visits, Children



(c) Individuals, Adults



(d) Individuals, Children



References

[1] BR Holroyd, BH Rowe, and D Sinclair. Current political issues facing emergency medicine in Canada. *Emergency Medicine Australasia*, 16:190–194, 2004.

[2] National Asthma Education and Program (NAEPP). *Expert Panel Report II: Guidelines for the Diagnosis and Management of Asthma*. National Institutes of Health, Bethesda, MD, 1997.

[3] L-P Boulet, A Becker, D Berube, RC Beveridge, P Ernst, on behalf of the Canadian Asthma Consensus Group. Canadian asthma consensus report, 1999. *Canadian Medical Association Journal*, 161:S1–S61, 1999.

[4] DM Mannino, DM Homa, CA Pertowski, A Ashizawa, LL Nixon, CA Johnson, LB Ball, E Jack, and DS Kang. Surveillance for asthma–United States, 1960-1995. *Morbidity & Mortality Weekly Report*, 47(1):1–28, 1998.

[5] Canadian Institute of Child Health. *The Health of Canada's Children, 3rd edition*. Ottawa, 2000.

[6] M Lin, Y Chen, PJ Villeneuve, RT Burnett, L Lemyre, C Hertzman, KM McGrail, and D Krewski. Gaseous air pollutants and asthma hospitalization of children with low household income in Vancouver, British Columbia, Canada. *American Journal of Epidemiology*, 159:294–303, 2004.

[7] RE Dale, S Cakmak, S Judek, T Dann, F Coates, JR Brook, and Burnett RT. Influence of outdoor aeroallergends on hospitalizations for asthma in Canada. *Journal of Allergy and Clinical Immunology*, 113:303–306, 2004.

[8] F Mo, C Robinson, BC Choi, and FC Li. Analysis of prevalence, triggers, risk factors and the related socioeconomic effects of childhood asthma in the Student Lung Health Survey (SLHS) database, Canada 1996. *International Journal of Adolescent Medicine and Health*, 15:349–358, 2003.

[9] DD Sin, S Spier, LW Svenson, DP Schopflocher, A Senthilselvan, RL Cowie, and SF Man. The relationship between birth weight and childhood asthma: a population-based cohort study. *Archives of Pedatrics and Adolescent Medicine*, 158:60–64, 2004.

[10] AL Kozyrskyj and GE Hidles-Ripstein. Assessing health status in Manitoba children: acute and chronic conditions. *Canadian Journal of Public Health*, 93:S44–S49, 2002.

[11] DD Sin, LW Svenson, RL Cowie, and SF Man. Can universal access to health care eliminate health inequities between children of poor and nonpoor families?: A case study of childhood asthma in Alberta. *Chest*, 124:51–56, 2003.

[12] A Becker, W Watson, A Fergusson, H Dimich-Ward, and M Chan-Yeung. The Canadian asthma primary prevention study: outcomes at 2 years of age. *Journal of Allergy and Clinical Immunology*, 113:650–656, 2004.

[13] KB Weiss, PJ Gergen, and TA Hodgson. An economic evaluation of asthma in the United States. *New England Journal of Medicine*, 326:862–866, 1992.

[14] MD Krahn, C Berka, P Langlois, and AS Detsky. Direct and indirect costs of asthma in Canada. *Canadian Medical Association Journal*, 154:821–831, 1996.

[15] Practice Management Information Corporation. *International Classification of Diseases, 9th revision, 3rd edn, Clinical Modification*. Los Angeles, 1989.

[16] DC Voaklander, KD Kelly, N Sukrani, A Sher, and BH Rowe. Sledding injuries presenting to the emergency department in a northern city. *Academic Emergency Medicine*, 8:629–635, 2001.

[17] KD Kelly, BH Rowe, H Lissel, J Vincenten, and DC Voaklander. Sports and recreation head injury treated in the emergency department. *Clinical Journal of Sports Medicine*, 11:77–81, 2001.

[18] I Colman, DM Dryden, AH Thompson, AM Chahal, K Borden, BH Rowe, and DC Voaklander. Utilization of the emergency department after self-inflicted injury. *Academic Emergency Medicine*, 11:136–142, 2004.

[19] Canadian Insitute for Health Information. *ICD-10-CA/CCI Fiscal 2005 Conversion Tables*. Ottawa, 2006.

[20] EA Ellehoj and D Schopflocher. Calculating small area analysis: Definition of sub-regional geographic units in Alberta, 2003.

[21] Indian and Northern Affairs Canada. Terminology. Available at http://www.ainc-inac.gc.ca/pr/info/tln_e.html. Accessed May 2007.

[22] KC Carriere and LL Roos. Comparing standardized rates of events. *American Journal of Epidemiology*, 140(5):472–482, 1994.

[23] SAS Institute Inc. SAS Version 9.1, 2003.

[24] Insightful Corporation. S-PLUS Version 7.0, 2005.

[25] BH Rowe, K Bond, M Ospina, S Blitz, M Afilalo, S Campbell, and M Schull. Frequency, determinants, and impact of overcrowding in emergency departments in Canada: A national survey of emergency department directors [Technology report no 67.3]. Ottawa: Canadian Agency for Drugs and Technologies in Health, 2006.

[26] CA Mustard, P Kaufert, A Kozyrskyj, and T Mayer. Sex differences in the use of health care services. *New England Journal of Medicine*, 338:1678–1683, 1998.

[27] BR Holroyd, M Bullard, W Craig, T Klassen, D Johnson, N Yiannakoulias, CH Spooner, RJ Rosychuk, L Svenson, D Schopflocher, and BH Rowe. The epidemiology of emergency department presentations in Alberta. *Canadian Journal of Emergency Medicine*, 3:121–122, 2001.

[28] DD Sin, H Wells, LW Svenson, and P Man. Asthma and COPD among Aboriginals in Alberta, Canada. *Chest*, 121:1841–1846, 2002.

[29] C Lemière, T Bai, M Balter, et al, on behalf of the Canadian Adult Consensus Group of the Canadian Thoracic Society. Adult Asthma Consensus Guidelines Update 2003. *Canadian Respiratory Journal*, 11(Suppl A):9A–18A, 2004.