

1996

# Utilization of Indian Health Service and tribal direct and contract facilities by patients under the age of 5 years old for respiratory system diseases: fiscal year 1996.

SF Kaufman

Follow this and additional works at: <https://digitalrepository.unm.edu/nhd>

---

## Recommended Citation

Kaufman SF. Utilization of Indian Health Service and tribal direct and contract facilities by patients under the age of 5 years old for respiratory system diseases: fiscal year 1996. Indian Health Service, Staff Office of Planning, Evaluation and Research, Rockville, MD 20857. 1996

This Article is brought to you for free and open access by the Health Sciences Center Archives and Special Collections at UNM Digital Repository. It has been accepted for inclusion in Native Health Database Full Text by an authorized administrator of UNM Digital Repository. For more information, please contact [disc@unm.edu](mailto:disc@unm.edu).

9702310



UTILIZATION OF  
INDIAN HEALTH SERVICE AND TRIBAL  
DIRECT AND CONTRACT FACILITIES  
BY PATIENTS UNDER 5 YEARS OLD  
FOR RESPIRATORY SYSTEM DISEASES  
FISCAL YEAR 1996

U.S. Department of Health and Human Services  
Indian Health Service  
Office of Public Health  
Division of Community and Environmental Health  
Program Statistics Team  
Patient Care Statistics Team

12300 Twinbrook Parkway, Suite 450  
Rockville, Maryland 20852  
(301) 443-1180

**Indian Health Service**

**Michael H. Trujillo, M.D., M.P.H., M.S.**  
Director

**Office of Public Health**

**Gary J. Hartz, P.E.**  
Acting Director

**Division of Community and Environmental Health**

**Mary Beth Skupien, Ph.D., M.S., R.N.**  
Director

**Program Statistics Team**

**Anthony J. D'Angelo, Principal Statistician**

**Patient Care Statistics Team**

**Stephen F. Kaufman, Senior Statistician**  
**Bonnie M. Matheson, Computer Assistant**

**UTILIZATION OF INDIAN HEALTH SERVICE  
AND TRIBAL DIRECT AND CONTRACT FACILITIES  
BY PATIENTS UNDER 5 YEARS OLD  
FOR RESPIRATORY SYSTEM DISEASES  
FISCAL YEAR 1996**

Written by Stephen F. Kaufman

Figures and Tables Produced by Priscilla Sandoval

## TABLE OF CONTENTS

INTRODUCTION.....	1
PATIENTS UNDER 5 YEARS OLD.....	2
Overall Leading Diagnostic Categories.....	2
Specific Respiratory System Diseases .....	2
Specific Respiratory System Diseases by Sex.....	3
PATIENTS UNDER 1 YEAR OLD .....	4
Overall Leading Diagnostic Categories.....	4
Specific Respiratory System Diseases .....	4
Specific Respiratory System Diseases by Sex.....	5
PATIENTS 1-4 YEARS OLD .....	5
Overall Leading Diagnostic Categories.....	5
Specific Respiratory System Diseases .....	6
Specific Respiratory System Diseases by Sex.....	6
 FIGURES:	
1. Number of Inpatient Discharges and Ambulatory Clinical Impressions IHS and Tribal Direct and Contract Facilities, FY 1996 Patients Under 5 Years Old .....	8
2. Number of Inpatient Discharges and Ambulatory Clinical Impressions IHS and Tribal Direct and Contract Facilities, FY 1996 Patients Under 1 Year Old.....	9
3. Number of Inpatient Discharges and Ambulatory Clinical Impressions IHS and Tribal Direct and Contract Facilities, FY 1996 Patients 1-4 Years Old.....	11
 TABLES:	
1. FY 1996 IHS and Tribal Direct and Contract Hospital Inpatient Discharges for Diseases of the Respiratory System For Patients Under 5 Years Old.....	12
2. FY 1996 IHS and Tribal Direct and Contract Ambulatory Clinical Impressions for Diseases of the Respiratory System For Patients Under 5 Years Old.....	13

## INTRODUCTION

This report presents the distribution of ambulatory medical care visits and inpatient hospital stays relating to respiratory system diseases for patients under 5 years old treated at Indian Health Service (IHS) and tribal direct and contract facilities in fiscal year (FY) 1996. The respiratory system disease category was the leading cause of inpatient stays and ambulatory care visits for children under 5 years old.

IHS direct facilities are those operated by IHS. Tribal direct facilities are those operated by the tribes. Contract health services are medical services provided at the expense of IHS or the tribes at public or private medical facilities other than those operated by IHS or the tribes. Medical care is generally available to persons of Indian descent who reside on or near the reservation of their federally-recognized tribe, or on or near a reservation where social and economic ties are closely maintained.

The ambulatory care direct facility source documents are the Ambulatory Patient Care Report (IHS-406) and the Patient Care Component Ambulatory Encounter Record (IHS-803). For contract care, the ambulatory care source document is the Purchase/Delivery Order for Contract Health Services for Other than Hospital Inpatient or Dental (IHS-64). One of the above-mentioned forms is completed for every ambulatory medical care visit made to a direct or contract facility. The data shown in this report are combined totals from the computer-generated Ambulatory Patient Care (APC) System Report 1C and the Contract Health Services (CHS) System Report 3A.

Hospital inpatient data are derived from the medical records of patients discharged from IHS and tribal direct and contract hospitals. The source documents are the Clinical Record Brief (Form IHS-44-1) and the CHS Purchase Order for Hospital Services Rendered (Form IHS-43-1A). These forms are received from direct and contract hospitals, respectively.

Data from the Clinical Record Brief and the Ambulatory Encounter Record are entered into the Admission/Discharge Transfer package, which is linked to the Patient Care Component (PCC) of the Resource and Patient Management System (RPMS). RPMS is an integrated group of automated data systems designed to operate on mini-computers located in IHS and tribal health facilities.

The export process begins at the facility. An export file is electronically transmitted from the facility to the IHS Area Office. The data are converted and merged at the Area Office and then transmitted to the IHS Division of Information Resources (DIR) for editing, collating, and processing.

Data from the CHS form are entered into the CHS package which is also linked to the PCC. A separate export is done for the CHS package and the data are sent to the IHS Area Office. At the Area Office the data are merged from the facilities and sent to the CHS fiscal intermediary where the statistical data are edited and extracted.

Subsequently, the data are sent to DIR for further editing, collating, and processing. Tribal contract data are processed by the IHS Areas and submitted to DIR.

This report discusses the distribution of inpatient discharges and ambulatory care clinical impressions as recorded by physicians and other providers of health care for patients at IHS and tribal direct and contract facilities located throughout the 12 IHS Areas. It should be noted that the number of discharges and clinical impressions at tribally-operated facilities and those contracted for by tribally-run CHS programs are not complete. This is because some tribes do not report through the IHS computer data systems; however the number of missing visits is thought to be small (i.e., less than 5 percent of the grand total).

The data in this report are tabulated by the patient's age (under 5 years, under 1 year, 1-4 years old) and sex. The inpatient discharges were selected based on the principal diagnosis, the main reason after study the person was admitted to the hospital. All ambulatory clinical impressions for respiratory system diseases were selected, because the order of the impressions in the visit record is not important.

## **PATIENTS UNDER 5 YEARS OLD**

### **Overall Leading Diagnostic Categories**

For patients under 5 years old, respiratory system diseases was the leading major diagnostic category for both inpatient discharges and ambulatory clinical impressions at direct and contract facilities in FY 1996. They accounted for 4,629 discharges and 233,568 clinical impressions. This represented 51.6 percent of the discharges and 20.1 percent of clinical impressions for this age group.

Among discharges, other leading categories for under 5 year olds were symptoms, signs, and ill-defined conditions (7.9 percent), conditions originating in the perinatal period (7.3 percent), and digestive system diseases (7.1 percent).

Other categories with a large percentage of ambulatory clinical impressions for this age group were the supplementary classification (e.g., well child care, other preventive health services) (18.7 percent), nervous system and sense organ diseases (e.g., otitis media) (17.7 percent), and immunizations (8.5 percent).

### **Specific Respiratory System Diseases**

Two in five respiratory system disease discharges for patients under 5 years old had a principal diagnosis of pneumonia (1,872 discharges, 40.4 percent). Most (72 percent) of the cases were diagnosed as "pneumonia, organism unspecified," but 20 percent of the pneumonia cases were for viral pneumonia.

An additional nearly one-third of the discharges (1,474, 31.8) were for acute bronchiolitis and nearly one in seven (631, 13.6) were for asthma. The leading causes of hospitalization for this age group are shown in Table 1 and Figure 1.

Patients under 5 years old accounted for virtually all (99.3 percent) of the discharges for all ages for acute bronchiolitis. They also accounted for 39.1 of all the discharges for asthma and 38.0 percent of the total discharges for pneumonia.

In the IHS Ambulatory Patient Care Data System, 7 specific causes, plus "other diseases of the upper respiratory tract" and "all other respiratory system diseases," are defined within the respiratory system disease category. The distribution of the clinical impressions for the leading specific respiratory system diseases for under 5 year olds is shown in Table 2 and graphically in Figure 1.

Upper respiratory infection including common cold had by far the largest number of impressions (117,221), representing 50.2 percent of all the respiratory system disease impressions for under 5 year olds. Patients under 5 years old accounted for nearly two-fifths (39.0 percent) of the total impressions for all ages for upper respiratory infection.

Four specific causes had between 10,000 and 25,000 impressions--pharyngitis and tonsillitis (non-strep) (22,282, 9.5 percent), respiratory allergy, asthma, and hay fever (20,531, 8.8), acute bronchitis, bronchiolitis (17,191, 7.4), and pneumonia (14,674, 6.3). The two remaining specific causes were influenza (2,252, 1.0) and chronic bronchitis, emphysema (197, 0.1).

Patients under 5 years old accounted for 43.7 percent of the total impressions for all ages for acute bronchitis, bronchiolitis, and 39.2 percent of all the impressions for pneumonia.

#### Specific Respiratory System Diseases by Sex

Males accounted for 55.1 percent of the inpatient discharges and 52.6 percent of the clinical impressions for respiratory system diseases for under 5 year olds in FY 1996, while females accounted for 44.9 and 47.4 percent, respectively.<sup>1</sup>

Discharges for males under 5 years old outnumbered those for females for all of the leading inpatient specific causes; males accounted for 53.5 percent of the discharges for pneumonia, 55.0 percent of the acute bronchiolitis discharges, and 58.6 percent of the discharges for asthma. The specific counts are shown in Table 1.

As shown in Table 2, ambulatory care impressions for males outnumbered those for

---

<sup>1</sup> Females had a higher number of impressions than males for respiratory system diseases in each of the other (older) age groups. There were more than twice as many female impressions as male impressions in the 25-44 and 45-64 year old age groups.



females in all of the specific causes except influenza (females accounted for 50.9 percent). Males accounted for between 50 and 55 percent for most of the causes. For two causes, males had more than 55 percent of the impressions--chronic bronchitis, emphysema (65.0) and respiratory allergy, asthma, hay fever (60.2).

Male patients under 5 years old accounted for nearly one-half (47.8 percent) of the total impressions for males of all ages for upper respiratory infection. For females, the percentage accounted for by under 5 year olds was 32.7.

## **PATIENTS UNDER 1 YEAR OLD**

### **Overall Leading Diagnostic Categories**

For patients under 1 year old, respiratory system diseases was the leading major diagnostic category for inpatient discharges in FY 1996. This category accounted for 2,406 discharges, which were one-half (49.7 percent) of the total for this age group. Other leading inpatient categories were conditions originating in the perinatal period (13.5 percent), and symptoms, signs, and ill-defined conditions (9.0 percent).

The supplementary classification was the leading ambulatory care major category for patients under 1 year old in FY 1996, accounting for 22.2 percent of the clinical impressions; well child care was responsible for 61 percent of those impressions.

Respiratory system diseases, with 70,367 impressions (18.0 percent), was the second leading major category. Other categories with a large percentage of ambulatory clinical impressions for under 1 year olds were nervous system and sense organ diseases (e.g., otitis media) (16.7 percent) and immunizations (12.1 percent).

### **Specific Respiratory System Diseases**

Nearly one-half (1,109, 46.1 percent) of the respiratory system discharges for patients under 1 year old had a principal diagnosis of acute bronchiolitis. In fact, this one specific cause accounted for nearly one-quarter (22.9 percent) of all the discharges for patients under 1 year old.

Patients under 1 year old accounted for three-quarters (74.7 percent) of the discharges for all ages for acute bronchiolitis.

Pneumonia (809, 33.6 percent) and asthma (183, 7.6 percent) accounted for most of the rest of the respiratory system disease discharges for this age group. Of the pneumonia cases, most (64 percent) were diagnosed as "pneumonia, organism unspecified"; however, 28 percent were listed as viral pneumonia. Data for the leading causes are shown in Table 1 and graphically in Figure 2.

Upper respiratory infection including common cold had by far the largest number of ambulatory care impressions (37,405); this represented 53.2 percent of the all respiratory system disease impressions for under 1 year olds. Acute bronchitis, bronchiolitis (9,376, 13.3 percent) was the second leading specific cause. Each of the remaining specific causes had less than 7 percent of the respiratory system disease impressions. The distribution of the FY 1996 clinical impressions for the leading specific respiratory system diseases for under 1 year olds is shown in Table 2 and graphically in Figure 2.

### Specific Respiratory System Diseases by Sex

Males accounted for 56.0 percent of the inpatient discharges and 53.9 percent of the clinical impressions for respiratory system diseases for under 1 year olds in FY 1996, while females accounted for 44.0 and 46.1 percent, respectively.

Discharges for males outnumbered those for females for all of the leading specific causes; males accounted for 55.8 percent of the acute bronchiolitis discharges, 54.5 percent of the discharges for pneumonia, and 65.0 percent of those for asthma. The counts are shown in Table 1.

Ambulatory care impressions for males under 1 year old outnumbered those for females in all of the specific causes, as shown in Table 2. Males accounted for between 50 and 55 percent for most of the causes. For three causes, males had more than 55 percent of the impressions--respiratory allergy, asthma, hay fever (63.5), pneumonia (57.0), and acute bronchitis, emphysema (56.8).

## PATIENTS 1-4 YEARS OLD

### Overall Leading Diagnostic Categories

For patients 1-4 years old, respiratory system diseases was the leading major diagnostic category for both inpatient discharges and ambulatory clinical impressions in FY 1996. The 2,223 discharges for respiratory system diseases accounted for 53.8 percent of the total discharges, and the 163,201 clinical impressions represented 21.2 percent of the total clinical impressions for this age group.

Other leading inpatient major categories were injury and poisoning (9.0 percent), digestive system diseases (8.3 percent), and symptoms, signs, and ill-defined conditions (6.7 percent).

Other categories with a large percentage of ambulatory clinical impressions for 1-4 year olds were nervous system and sense organ diseases (e.g., otitis media) (18.3 percent) and the supplementary classification (e.g., well child care, other preventive

health services) (16.9 percent).

### Specific Respiratory System Diseases

Nearly one-half (1,063, 47.8 percent) of the discharges for respiratory system diseases for 1-4 year olds had a principal diagnosis of pneumonia. Pneumonia accounted for one-quarter (25.7 percent) of all the discharges for patients 1-4 years old. Nearly 4 out of 5 (79 percent) of the pneumonia cases were diagnosed as "pneumonia, organism unspecified," but 13 percent were listed as viral pneumonia.

An additional one-fifth (448, 20.2 percent) of the discharges were for asthma and one-sixth (365, 16.4) were for acute bronchiolitis. Croup (120) accounted for another 5.4 percent. The details are shown in Table 1 and the leading causes are shown graphically in Figure 3.

In ambulatory care, upper respiratory infection including common cold accounted for nearly one-half (79,816, 48.9 percent) of the respiratory system disease clinical impressions for this age group.

Other leading specific causes of respiratory system disease clinical impressions were pharyngitis and tonsillitis (non-strep) (19,377, 11.9 percent) and respiratory allergy, asthma, and hay fever (16,013, 9.8 percent). The distribution of the clinical impressions for the specific respiratory system diseases for 1-4 year olds is shown in Table 2 and graphically in Figure 3.

### Specific Respiratory System Diseases by Sex

Males accounted for 54.1 percent of the inpatient discharges and 52.0 percent of the clinical impressions for respiratory system diseases for 1-4 year olds in FY 1996, while females accounted for 45.9 and 48.0 percent, respectively.

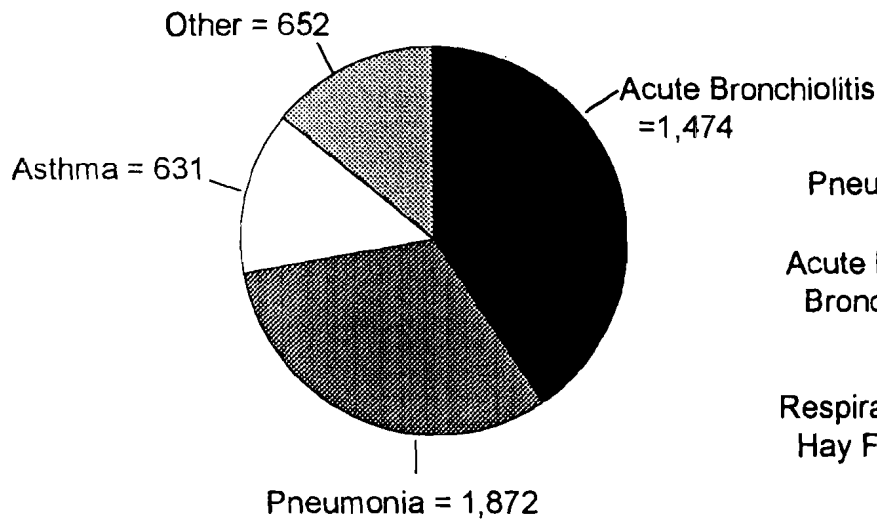
As shown in Table 1, discharges for males outnumbered those for females for all of the leading inpatient specific causes; males accounted for 53.5 percent of the discharges for pneumonia, 56.0 percent of those for asthma, 52.6 percent of the acute bronchiolitis discharges, and 66.7 percent of the discharges for croup.

Ambulatory care impressions for males outnumbered those for females in all of the specific causes except influenza (females accounted for 51.8 percent). Males accounted for between 50 and 55 percent for most of the causes. For two causes, males had more than 55 percent of the impressions--chronic bronchitis, emphysema (69.3) and respiratory allergy, asthma, hay fever (59.3). The data are shown in Table 2.

## FIGURES AND TABLES

Figure 1. Number of Inpatient Discharges and Ambulatory Clinical Impressions IHS and Tribal Direct and Contract Facilities, FY 1996 Patients Under 5 Years Old

Inpatient Discharges



Ambulatory Clinical Impressions

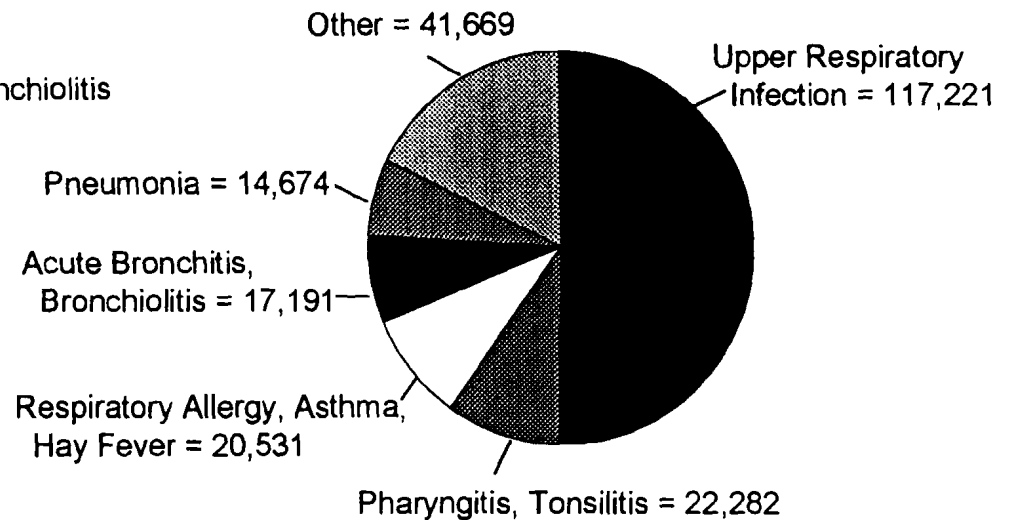
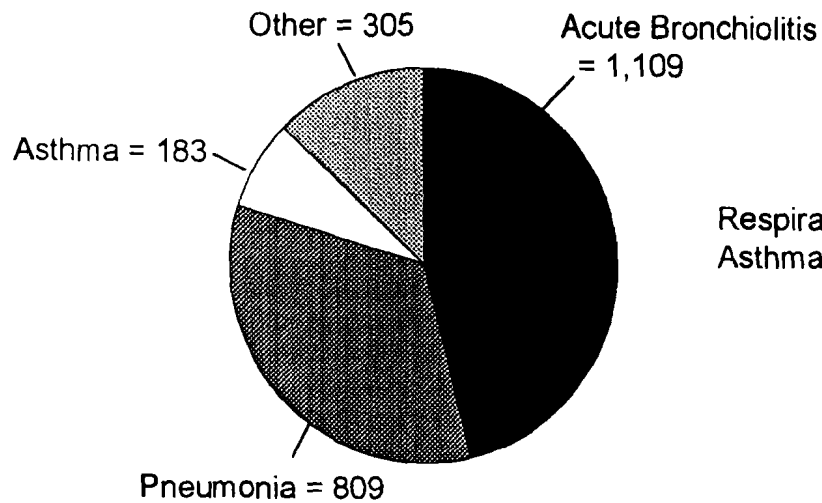


Figure 2. Number of Inpatient Discharges and Ambulatory Clinical Impressions  
 IHS and Tribal Direct and Contract Facilities, FY 1996  
 Patients Under 1 Year Old

Inpatient Discharges



Ambulatory Clinical Impressions

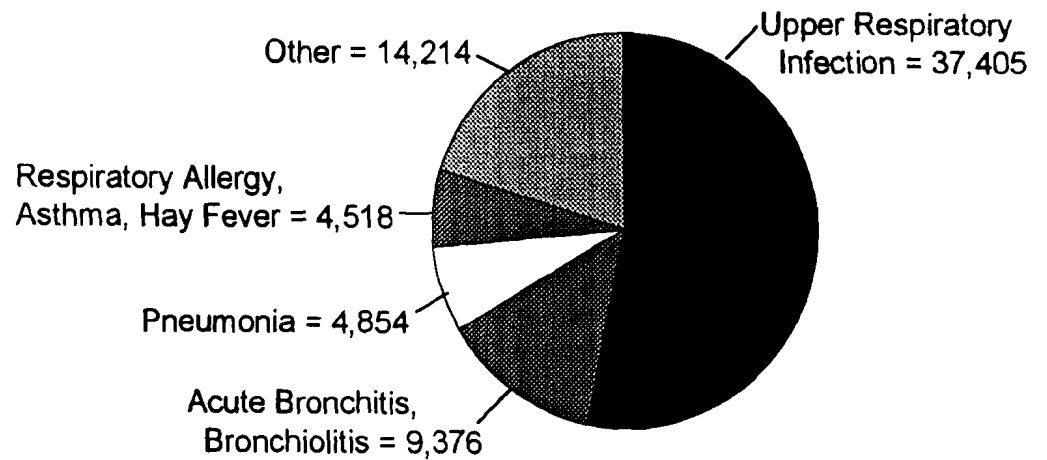
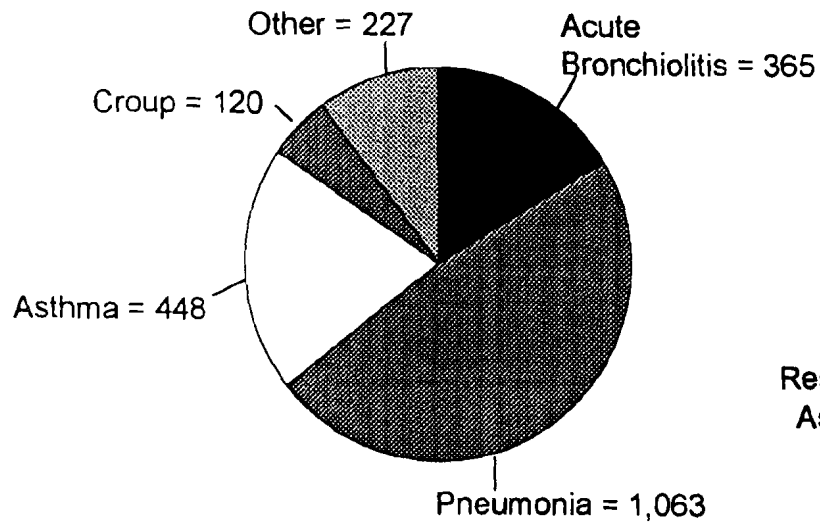




Figure 3. Number of Inpatient Discharges and Ambulatory Clinical Impressions IHS and Tribal Direct and Contract Facilities, FY 1996 Patients 1-4 Years Old

Inpatient Discharges



Ambulatory Clinical Impressions

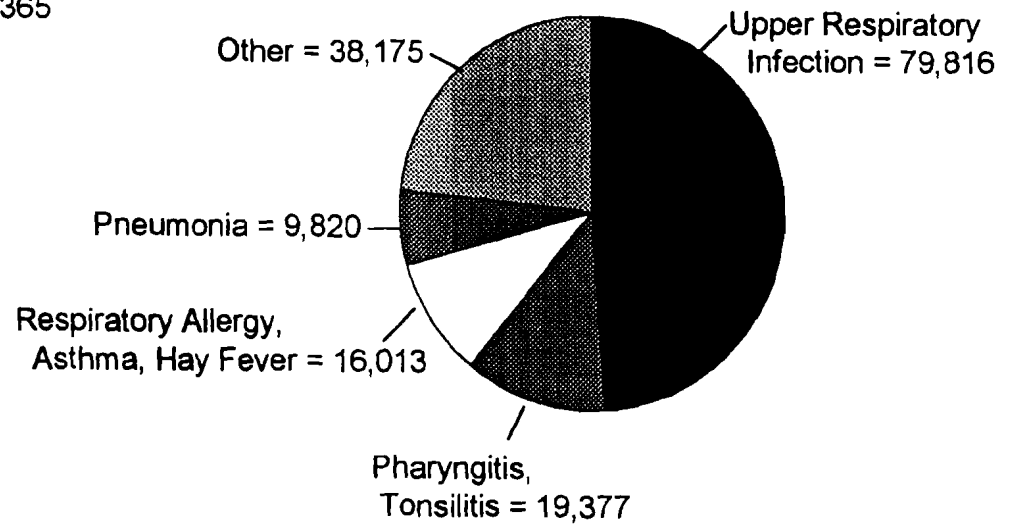




TABLE 1. FY 1996 IHS AND TRIBAL DIRECT AND CONTRACT HOSPITAL INPATIENT DISCHARGES FOR DISEASES OF THE RESPIRATORY SYSTEM FOR PATIENTS UNDER 5 YEARS OLD

ICD-9-CM CODE	AGE <5		AGE <1		AGE 1-4	
	Number	Percent	Number	Percent	Number	Percent
464	Croup					
MALE	117	65.4	37	62.7	80	66.7
FEMALE	62	34.6	22	37.3	40	33.3
TOTAL	179	100.0	59	100.0	120	100.0
466	Acute Bronchiolitis					
MALE	811	55.0	619	55.8	192	52.6
FEMALE	663	45.0	490	44.2	173	47.4
TOTAL	1,474	100.0	1,109	100.0	365	100.0
460-466	Acute Respiratory Infections, excluding Croup and Bronchiolitis					
MALE	102	50.7	66	50.0	36	52.2
FEMALE	99	49.3	66	50.0	33	47.8
TOTAL	201	100.0	132	100.0	69	100.0
480	Viral Pneumonia					
MALE	181	49.3	113	49.8	68	48.6
FEMALE	186	50.7	114	50.2	72	51.4
TOTAL	367	100.0	227	100.0	140	100.0
481-485	Other Specified Pneumonia					
MALE	78	52.7	32	50.8	46	54.1
FEMALE	70	47.3	31	49.2	39	45.9
TOTAL	148	100.0	63	100.0	85	100.0
486	Pneumonia, Organism Unspecified					
MALE	742	54.7	296	57.0	446	53.2
FEMALE	615	45.3	223	43.0	392	46.8
TOTAL	1,357	100.0	519	100.0	838	100.0
493	Asthma					
MALE	370	58.6	119	65.0	251	56.0
FEMALE	261	41.4	64	35.0	197	44.0
TOTAL	631	100.0	183	100.0	448	100.0
	Other Diseases of the Respiratory System					
MALE	149	54.8	66	57.9	83	52.5
FEMALE	123	45.2	48	42.1	75	47.5
TOTAL	272	100.0	114	100.0	158	100.0
TOTAL	All Respiratory System Diseases					
MALE	2,550	55.1	1,348	56.0	1,202	54.1
FEMALE	2,079	44.9	1,058	44.0	1,021	45.9
TOTAL	4,629	100.0	2,406	100.0	2,223	100.0

TABLE 2. FY 1996 IHS AND TRIBAL DIRECT AND CONTRACT  
 AMBULATORY CLINICAL IMPRESSIONS  
 FOR DISEASES OF THE RESPIRATORY SYSTEM  
 FOR PATIENTS UNDER 5 YEARS OLD

IHS CODE	AGE <5		AGE <1		AGE 1-4	
	Number	Percent	Number	Percent	Number	Percent
300	Upper resp infect, incl common cold					
MALE	59,444	50.7	19,145	51.2	40,299	50.5
FEMALE	57,777	49.3	18,260	48.8	39,517	49.5
TOTAL	117,221	100.0	37,405	100.0	79,816	100.0
301	Pharyngitis, tonsillitis (non-strep)					
MALE	11,292	50.7	1,515	52.2	9,777	50.5
FEMALE	10,990	49.3	1,390	47.8	9,600	49.5
TOTAL	22,282	100.0	2,905	100.0	19,377	100.0
302	Other diseases of the upper resp tract					
MALE	8,110	52.2	2,253	52.3	5,857	52.1
FEMALE	7,440	47.8	2,056	47.7	5,384	47.9
TOTAL	15,550	100.0	4,309	100.0	11,241	100.0
303	Influenza					
MALE	1,106	49.1	175	54.7	931	48.2
FEMALE	1,146	50.9	145	45.3	1,001	51.8
TOTAL	2,252	100.0	320	100.0	1,932	100.0
304	Acute bronchitis, bronchiolitis					
MALE	9,489	55.2	5,330	56.8	4,159	53.2
FEMALE	7,702	44.8	4,046	43.2	3,656	46.8
TOTAL	17,191	100.0	9,376	100.0	7,815	100.0
305	Resp allergy, asthma, hay fever					
MALE	12,368	60.2	2,871	63.5	9,497	59.3
FEMALE	8,163	39.8	1,647	36.5	6,516	40.7
TOTAL	20,531	100.0	4,518	100.0	16,013	100.0
306	Pneumonia					
MALE	7,900	53.8	2,766	57.0	5,134	52.3
FEMALE	6,774	46.2	2,088	43.0	4,686	47.7
TOTAL	14,674	100.0	4,854	100.0	9,820	100.0
307	Chronic bronchitis, emphysema					
MALE	128	65.0	31	54.4	97	69.3
FEMALE	69	35.0	26	45.6	43	30.7
TOTAL	197	100.0	57	100.0	140	100.0
310	All other resp diseases					
MALE	12,986	54.9	3,830	57.8	9,156	53.7
FEMALE	10,684	45.1	2,793	42.2	7,891	46.3
TOTAL	23,670	100.0	6,623	100.0	17,047	100.0
TOTAL	All resp diseases					
MALE	122,823	52.6	37,916	53.9	84,907	52.0
FEMALE	110,745	47.4	32,451	46.1	78,294	48.0
TOTAL	233,568	100.0	70,367	100.0	163,201	100.0

