FLORIDA DEPARTMENT OF HEALTH

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Miami-Dade County HEALTH DEPARTMENT

South Miami –Dade Asthma Incidence Surveillance Project

Martin P., Estevez L., Trepka MJ.

The South Miami-Dade Asthma Incidence Surveillance Project is one of two Centers for Disease Control and Prevention funded - asthma incidence surveillance projects in the country. The other project is being conducted by Kaiser Permanent, Portland, Oregon.

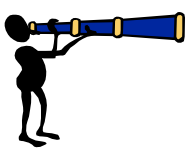
1. BACKGROUND

The limited prevalence data available indicate that asthma is a relatively common condition among Miami-Dade County residents, affecting an estimated 5-7% of the population. Our study area, southern Miami-Dade County, defined as the area of the county south of Flagler Street, has a population of 956,834. In this area, during 1999, there were 1604 hospitalizations with a primary diagnosis of asthma, which represent 37.9% of all asthma hospitalizations in the county. This area was chosen because its population is served by a limited number of hospitals, is ethnically diverse, and lives in urban and rural areas.

There remains a need for asthma surveillance in Miami-Dade County to establish its incidence and prevalence, better document asthma morbidity, determine the impact of ongoing interventions, identify areas in the community where prevention may be needed, educate the community, improve medical practices in physicians offices and hospitals, design prevention programs, and develop resources that may not be currently available for asthma and its associated health problems.

2. PURPOSE OF THE STUDY

- Develop a workable asthma incidence surveillance system for new cases of asthma.
- Describe the impact of asthma in the population in order to prevent and/or better manage asthma
  - ➢ estimate the number of cases of asthma in southern Miami-Dade County,



Inside this issue:

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- describe demographic and risk factors, medication, health care utilization patterns, etc. in patients diagnosed with asthma, and

- disseminate results to health care providers and the community.

3. STUDY POPULATION

- Patients presenting history or symptoms of asthma:

  - Wheezing
  - Chronic cough for at least 3 weeks.
  - Nocturnal awakening with dyspnea, cough, wheezing.

- Southern Miami-Dade County.

- 2-64 years old; not institutionalized population.

The study is being currently conducted at two Emergency Rooms (Baptist Hospital and Miami Children's Hospital) and several sentinel outpatient clinics (Helen B. Bentley Community Clinic, Community Health Initiative (CHI) clinics, Pediatric Associates of Homestead, Miami Children's Mobile Clinic, Asthma Center, and Pediatric Pulmonary Center).

4. OUTLINE OF THE SYSTEM

- Identification of patients: Patients with symptoms suggestive of asthma are identified at emergency departments and outpatient sites.

- Enrollment of candidates: Patients who want to participate sign informed consents and complete screening questionnaire. It is a voluntary system. Participating patients receive health education information by phone and mail.

- Description of asthma surveillance process: staff for asthma project will interview patients by phone using surveillance questionnaire which includes issues on symptomatology, severity, risk factors, medication, family history and utilization of health care services. The collected information regarding asthma will be expanded with additional information data from abstracted medical records.

- Validation of case definition: pulmonologist will review pulmonary function tests (PFT) results, questionaries data and abstracted medical records data on a sample of incident case.

- Analysis of data: evaluate the project and disseminate results.

5. DATA ANALYSIS

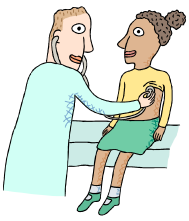
We will determine:

- Incidence and prevalence rate estimates. We will estimate incidence and prevalence rates for adult and pediatric asthma in South Miami-Dade County based on all cases that meet the incident and prevalent asthma case definitions.

- Sample size estimate. We will calculate the sample size needed in an ongoing surveillance system to accurately calculate the incidence/ prevalence of asthma in southern Miami-Dade County.

- Epidemiologic description. Data gathered through the questionnaires and medical record review will be analyzed regarding demographics, severity of disease, health care use, asthma management and risk factors.

- Validity of case defintion.



7. PROGRESS TO DATE

The system was implemented in July 2002. To date, more than 200 people have been enrolled. Of these, 30 have incident asthma.

We have made several changes to the protocol as we have learned about barriers to enrollment. After completing the project, we will be able to provide recommendations for future surveillance efforts.

We would like to acknowledge the hard work and enthusiasm of our many partners:

1. Baptist Hospital:

- **Denise Harris,** RN, MSN, MBA, CNAA
  Director of Patient Care for Baptist Children's Hospital
- **Christine Jerez,** RN, BAN
  Director of Nursing Emergency Services
- **David Wagner,** BS, RRT
  Director Respiratory Care Services
- **Lisa B. Colsky**, BA, RRT
  Performance Improvement / Education Coordi nator / Respiratory Care
- **Erin Sewell**, RRT
  NICU/Pediatric Respiratory Supervisor

2. Community Health of South Dade, Inc. (CHI):

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  Vice President for Nursing Services

3. Helen B. Bentley:

- **St. Anthony Amofah**, M.D.
  Medical Director
- **Cynthia Carrington**, R.N. MS
  Clinical Manager
- **James Gilligan,** LCSW
  Asthma Counselor

4. Miami Children Hospital:

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- **Gloria Riefkohl,** M.D.
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- **Marcia Prieto**, RN
  Clinical Coordinator
- **Patricia Catone**, LPN
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To report diseases or for information:

Office of Epidemiology and Disease Control
Childhood Lead Poisoning Prevention Program (305) 623-3565
Hepatitis (305) 324-2490
Other diseases and outbreaks (305) 324-2413

HIV/AIDS Program (305) 324-2459
STD Program (305) 325-3242
Tuberculosis Program (305) 324-2470
Special Immunization Program (305) 376-1976
Nights, weekends, and holidays (305) 377-6751

Preliminary Clinical Description of Severe Acute Respiratory Syndrome

[The following article was published on MMWR, a weekly publication by CDC [March 28, 2003 /vol. 52 / No. 12]. The full article can be downloaded from www.cdc.gov/mmwr/preview/mmwrhtml/mm5212a5.htm]

Mike Cassese / Reuters

Severe acute respiratory syndrome (SARS) is a condition of unknown etiology that has been described in patients in Asia, North America, and Europe. This report summarizes the clinical description of patients with SARS based on information collected since mid-February 2003 by the World Health Organization (WHO), Health Canada, and CDC in collaboration with health authorities and clinicians in Hong Kong, Taiwan, Bangkok, Singapore, the United Kingdom, Slovenia, Canada, and the United States. This information is preliminary and limited by the broad and necessarily nonspecific case definition.

As of March 21, 2003, the majority of patients identified as having SARS have been adults aged 25--70 years who were previously healthy. Few suspected cases of SARS have been reported among children aged ≤15 years.

The incubation period for SARS is typically 2--7 days; however, isolated reports have suggested an incubation period as long as 10 days. The illness begins generally with a prodrome of fever (>100.4°F [>38.0°C]). Fever often is high, sometimes is associated with chills and rigors, and might be accompanied by other symptoms, including headache, malaise, and myalgia. At the onset of illness, some persons have mild respiratory symptoms. Typically, rash and neurologic or gastrointestinal findings are absent; however, some patients have reported diarrhea during the febrile prodrome.

After 3--7 days, a lower respiratory phase begins with the onset of a dry, nonproductive cough or dyspnea, which might be accompanied by or progress to hypoxemia. In 10%--20% of cases, the respiratory illness is severe enough to require intubation and mechanical ventilation. The case-fatality rate among persons with illness meeting the current WHO case definition of SARS is approximately 3%.

Chest radiographs might be normal during the febrile prodrome and throughout the course of illness. However, in a substantial proportion of patients, the respiratory phase is characterized by early focal interstitial infiltrates progressing to more generalized, patchy, interstitial infiltrates. Some chest radiographs from patients in the late stages of SARS also have shown areas of consolidation.

Early in the course of disease, the absolute lymphocyte count is often decreased. Overall white blood cell counts have generally been normal or decreased. At the peak of the respiratory illness, approximately 50% of patients have leukopenia and thrombocytopenia or low-normal platelet counts (50,000--150,000/µL). Early in the respiratory phase, elevated creatine phosphokinase levels (as high as 3,000 IU/L) and hepatic transaminases (two to six times the upper limits of normal) have been noted. In the majority of patients, renal function has remained normal.

The severity of illness might be highly variable, ranging from mild illness to death. Although a few close contacts of patients with SARS have developed a similar illness, the majority have remained well. Some close contacts have reported a mild, febrile illness without respiratory signs or symptoms, suggesting the illness might not always

progress to the respiratory phase.

Treatment regimens have included several antibiotics to presumptively treat known bacterial agents of atypical pneumonia. In several locations, therapy also has included antiviral agents such as oseltamivir or ribavirin. Steroids have also been administered orally or intravenously to patients in combination with ribavirin and other antimicrobials. At present, the most efficacious treatment regimen, if any, is unknown.

In the United States, clinicians who suspect cases of SARS are requested to report such cases to their state health departments. CDC requests that reports of suspected cases from state health departments, international airlines, cruise ships, or cargo carriers be directed to the SARS Investigative Team at the CDC Emergency Operations Center, telephone 770-488-7100. Outside the United States, clinicians who suspect cases of SARS are requested to report such cases to their local public health authorities. Additional information about SARS (e.g., infection control guidance and procedures for reporting suspected cases) is available at http://www.cdc.gov/ncidod/sars. Global case counts are available at http://www.who.int.

***Reported by**: World Health Organization, Geneva, Switzerland. Immunization and Respiratory Infections Div, Centre for Infectious Disease Prevention and Control, Health Canada, Ottawa, Canada. CDC SARS Investigation Team; TA Clark, MD, and B Park, MD, EIS officers, CDC*

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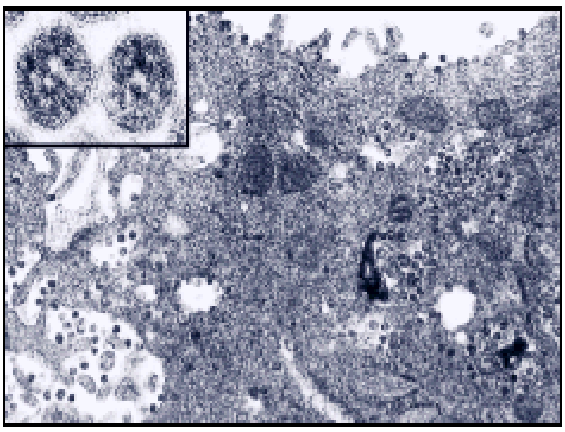
Update: Outbreak of Severe Acute Respiratory Syndrome -- Worldwide, 2003

[The following article was selected from CDC MMWR . **March 28, 2003/52(12);241-248.** The full article can be downloaded from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5212a1.htm]

United States. As of March 26, CDC has received 51 reports of suspected SARS cases from 21 states (Table), identified using the CDC updated interim case definition (Box). The first suspected case was identified on March 15, in a man aged 53 years who traveled to Singapore and became ill on March 10. Four clusters of suspected cases have been identified, three of which involved a traveler who had visited Southeast Asia (including Guangdong province, Hong Kong, or Vietnam) and a single family contact. One of these clusters involved suspected cases in patients L and M who had stayed together at hotel M during March 1-6, when other hotel guests were symptomatic. Patient L became sick on March 13 after returning to the United States. His wife, patient M, became ill several days after the onset of her husband's symptoms, suggesting secondary transmission. Three patients in the United States with suspected SARS (patients I, L, and M) reported staying at hotel M when other persons staying in the hotel were symptomatic. The fourth cluster began with a suspected case in a person who traveled in Guangdong province and Hong Kong. Two HCWs subsequently became ill at the U.S. hospital where this patient was admitted.

Laboratory investigations. On March 24, CDC announced that laboratory analysis had identified a previously unrecognized coronavirus in patients with suspected or probable SARS. The new coronavirus was isolated in Vero E6 cells from clinical specimens of two patients in Thailand and with suspected SARS. The isolate was identified initially as a coronavirusby electron microscopy (EM) (Figure 3). The identity was corroborated by results of immunostaining, indirect immunofluorescence antibody (IFA) assays, and reverse transcriptase-polymerase chain reaction (RT-PCR) with sequencing of a segment of the polymerase gene. IFA testing of sera and RT-PCR analysis of clinical specimens from six other SARS cases were positive for the new coronavirus. Coronavirus particles also were identified by EM in cells obtained by bronchial lavage from a patient with SARS. Sequence analysis suggests that this new agent is distinct from other known coronaviruses. Other laboratories collaborating in the WHO-led investigation have found similar results and also have isolated a different virus, human metapneumovirus, from some patients with suspected SARS. Information is insufficient to determine what roles these two viruses might play in the etiology of SARS.

FIGURE 3. Thin section electron micrograph of infected Vero E6 cell, showing coronavirus particles within cytoplasmic membrane-bound vacuoles and the cisternae of the rough endoplasmic reticulum. Extracellular particles accumulate in large clusters, and are frequently seen lining the surface of the plasma membrane. Inset, higher magnification of coronavirus particles.



Photo/CDC

Reported by:

T Tsang, T Lai-Yin, L Pak-Yin, M Lee, Dept of Health, Hong Kong. J-S Wu, Y-C Wu, I-H Chiang, K-T Chen, K-H Hsu, T-J Chen, Taiwan Center for Disease Control; L-T Lee, S-J Twu, Taiwan Dept of Health, Taiwan. S Chunsuttiwat, P Sawanpanyalert, K Ungchusak, A Chaovavanich, Ministry of Public Health, Thailand. Ministry of Health of Vietnam, WHO SARS Investigative Team, Vietnam. CDC SARS Investigative Team, SL Roy, MD, EIS Officer, CDC

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TABLE. Exposure category, clinical features, and demographics of reported severe acute respiratory syndrome (SARS) cases* — selected locations, 2003

Category	Hong Kong No.	Hong Kong (%)	Vietnam No.	Vietnam (%)	Thailand No.	Thailand (%)	Taiwan No.	Taiwan (%)	United States No.	United States (%)
Total cases†	**290§** (As of 3/25/03–S/P)	**(100)**	**59** (As of 3/24/03–P)	**(100)**	**4** (As of 3/23/03–S/P)	**(100)**	**6** (As of 3/25/03–P)	**(100)**	**51§** (As of 3/26/03–S)	**(100)**
Exposure										
Health-care worker	134	(46)	37	(63)	1	(25)	0		2	(4)
Close contact¶	156	**	NA††		0		2	(33)	5	(10)
Clinical features										
Ever hospitalized	290	(100)§	59	(100)	4	(100)	6	(100)	20§	(39)
Pneumonia	286	(99)	NA		3	(75)	6	(100)	14	(27)
Ever ventilated	NA		5	(9)	1	(25)	2	(33)	1	(2)
Dead	10	(4)§	2	(3)	0		0		0§	
Demographics										
Age	NA		Median: 38 yrs		Median: 38 yrs		Median: 53 yrs		Median: 42 yrs	
	NA		(range: 18–66 yrs)		(range: 1–49 yrs)		(range: 25–64 yrs)		(range: 8 mos–78 yrs)	
Sex§§										
Female	Approximately 50%		37	(63)	1	(25)	3	(50)	26	(51)
Male	Approximately 50%		22	(37)	3	(75)	3	(50)	25	(49)

* Locations used different SARS case definitions.
† S = Suspected case; P = Probable case; U = Unknown.
§ One U.S. resident (Patient B) was hospitalized in Vietnam and died in Hong Kong before he could return to the United States. He is counted as a Hong Kong case.
¶ Person having cared for, lived with, or had direct contact with respiratory secretions and body fluids of a person with SARS.
** Of the 290 SARS patients in Hong Kong, most of the remaining 156 patients are believed to be close contacts.
†† Not Available.
§§ Only percentages were reported for sex data.

[The following article was selected from CDC **March 28, 2003** The full article can be downloaded from http://www.cdc.gov/ncidod/sars/casedefinition.htm]

UPDATED INTERIM U.S. SARS CASE DEFINTION

MARCH 29, 2003

The previous CDC SARS case definition (published March 22, 2003) has been updated as follows:

- Areas with documented or suspected community transmission of SARS have been expanded to include all of mainland China in addition to areas previously listed.

Suspected Case:

Respiratory illness of unknown etiology with onset since February 1, 2003, and the following criteria:

- Measured temperature ≥ 100.5 °F (>38° C) AND
- One or more clinical findings of respiratory illness (e.g. cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of either pneumonia or acute respiratory distress syndrome) AND
- Travel within 10 days of onset of symptoms to an area with documented or suspected community transmission of SARS (see list below; excludes areas with secondary cases limited to healthcare workers or direct household contacts) OR

  Close contact* within 10 days of onset of symptoms with either a person with a respiratory illness who traveled to a SARS area or a person known to be a suspect SARS case.

* **Close contact** is defined as having cared for, having lived with, or having direct contact with respiratory secretions and/or body fluids of a patient known to be suspect SARS case.

Areas with documented or suspected community transmission of SARS: Peoples' Republic of China (i.e., mainland China and Hong Kong Special Administrative Region); Hanoi, Vietnam; and Singapore

Note: Suspect cases with either radiographic evidence of pneumonia or respiratory distress syndrome; or evidence of unexplained respiratory distress syndrome by autopsy are designated "probable" cases by the WHO case definition.

If you have any patients that you think may meet the case definition, please notify the Office of Epidemiology and Disease Control Program:

- during working hours (305)-324-1413
- after hours, weekends, and holidays (305)-377-6751

Frequently Asked Questions
Download PDF version formatted for print
http://www.cdc.gov/ncidod/sars/faq.htm
March 28, 2003

Monthly Report
Selected Reportable Diseases/Conditions in Miami-Dade County, February 2003

Diseases/Conditions	2003 this Month	2003 Year to Date	2002 Year to Date	2001 Year to Date	2000 Year to Date	1999 Year to Date
AIDS *Provisional	80	193	202	250	267	272
Campylobacteriosis	11	17	11	15	1	2
Chancroid	0	0	0	0	0	0
Chlamydia trachomatis	166	431	745	469	462	725
Ciguatera Poisoning	0	0	0	0	0	0
Cryptosporidiosis	0	2	1	4	0	0
Cyclosporosis	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
E. coli, O157:H7	0	0	0	0	0	0
E. coli, Other	0	0	0	0	0	0
Encephalitis	0	0	0	0	0	0
Giardiasis, Acute	14	15	15	21	0	3
Gonorrhea	94	230	379	227	357	505
Granuloma Inguinale	0	0	0	0	0	0
Haemophilus influenzae B (invasive)	0	0	0	0	0	0
Hepatitis A	2	2	10	24	0	3
Hepatitis B	2	2	2	2	0	6
HIV *Provisional	155	279	295	228	245	242
Lead Poisoning	16	19	30	29	55	36
Legionnaire's Disease	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0
Lyme disease	0	0	0	0	0	0
Lymphogranuloma Venereum	0	0	0	0	0	0
Malaria	2	2	1	5	0	2
Measles	0	0	0	0	0	0
Meningitis (except aseptic)	0	0	1	2	0	0
Meningococcal Disease	1	2	2	4	5	1
Mumps	0	0	0	0	0	1
Pertussis	0	0	0	0	0	2
Polio	0	0	0	0	0	0
Rabies, Animal	0	0	0	0	0	0
Rubella	0	0	0	0	0	0
Salmonellosis	24	36	30	18	8	13
Shigellosis	23	36	23	8	3	16
Streptococcus pneumoniae, Drug Resistant	6	10	14	17	11	2
Syphilis, Infectious	11	32	33	23	25	12
Syphilis, Other	91	178	184	65	135	188
Tetanus	0	0	0	0	0	0
Toxoplasmosis	1	1	0	0	0	0
Tuberculosis *Provisional	7	31	36	25	28	10

* Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.
** Data on tuberculosis are provisional at the county level.