# COMMUNITY-ACQUIRED DISEASE OUTBREAKS

## ABSTRACT


- In 2005, 122 community-acquired disease outbreaks accounted for 1,383 cases of illness (Figure 1).
- Schools were the most common setting of community-acquired outbreaks (60%).
- The number of reported outbreaks in 2005 decreased after reaching a eight year high in 2004; a 40% swing back down to the 2003 level—the lowest mark in the same 8 year time frame.


## DATA

Disease outbreaks are defined as clusters of illness that occur in a similar time or place, or unusual numbers of disease cases above baseline in a specified area. Depending on the nature of the outbreak, investigation responsibility is maintained by either ACDC or Community Health Services with ACDC providing consultation as needed. The outbreaks reported in this section do not include outbreaks associated with food (see Foodborne Outbreaks section) or facilities where medical care is provided (see Healthcare Associated Outbreaks section).

Most reported community-acquired outbreaks in LAC were due to varicella followed by ectoparasites (scabies and pediculosis)—comprising 37% and 20% of all community-acquired outbreaks, respectively. Third most common was gastroenteritis (GE) outbreaks of various causes, accounting for 18% of all outbreaks. Collectively these disease categories accounted for 75% of all community-acquired outbreaks (Figure 2, Table 1). In 2004 for comparison, these categories accounted for 72% of all outbreaks—with similar overall rankings.

The outbreaks with the most incident specific cases were due to the four norovirus outbreaks reported in 2005, with a mean size of 18 cases per outbreak—most likely reflecting how easily this agent can be transmitted from person-to-person. The largest community-acquired outbreak was a GE outbreak of unknown etiology with 83 cases reported (Table 1).

The most common settings for illness transmission were schools (elementary schools, middle schools, and high schools) accounting for 60% of all outbreaks. Settings with young children in daycare or pre-school accounted for an additional 20%. Group and retirement home settings were the third most common site of the community-acquired outbreaks reported in 2005 with 12% (Figure 3). Even with the decrease in overall

Figure 1
Community Acquired Outbreaks
Number of Persons Affected
LAC, 1998–2005

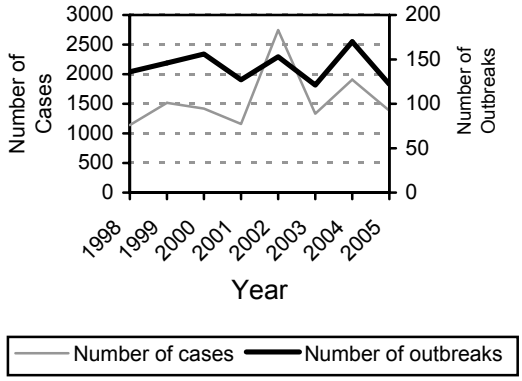
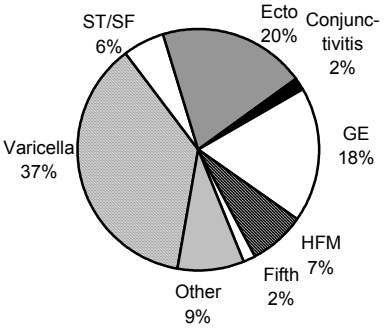
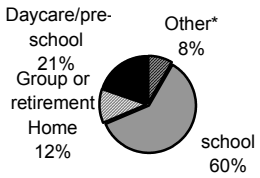



Figure 2
Community-Acquired Outbreaks by Type of Disease*
LAC, 2005 (N=122)




* ST/SF=strep throat/scarlet fever; Ecto=ectoparasites; HFM=Hand, foot & mouth; GE = Gastroentestinal; Other= MRSA, pertussis, ringworm , typhus, unknown resp., viral

Figure 3
Community Outbreaks by Setting
LAC, 2005 (N=122)




*Other includes: household/neighborhood (4), juve camp (1) , worksite (1), church (1), lunch programs (2) and a gym (1)

frequency of outbreaks in 2005—down from 170 in 2004—the percentage breakdown by setting remained similar to past years.

**Table 1. Community-Acquired Outbreaks by Disease— LAC, 2005**

| Disease | No. of outbreaks | No. of cases | Cases per outbreak (average) | Cases per outbreak (range) |
|---|---|---|---|---|
| Varicella | 45 | 518 | 12 | 5-40 |
| Scarlet fever/strep throat | 7 | 55 | 8 | 2-15 |
| Scabies | 7 | 28 | 4 | 2-6 |
| Hand, foot & mouth disease | 9 | 86 | 10 | 3-26 |
| Pediculosis | 17 | 222 | 13 | 3-34 |
| GE illness - Norovirus | 4 | 70 | 18 | 6-29 |
| GE illness - Shigella | 1 | 3 | 3 | 3 |
| GE illness - Salmonella | 2 | 12 | 6 | 3-9 |
| GE illness - Giardia | 1 | 41 | 41 | 41 |
| GE illness - Unknown | 14 | 232 | 17 | 3-83 |
| Fifth disease | 2 | 12 | 6 | 5-7 |
| Conjunctivitis | 2 | 13 | 7 | 2-11 |
| Other* | 11 | 91 | 8 | 2-17 |
| **Total** | **122** | **1,383** | **11** | **2–83** |

* Includes: MRSA, pertussis, ringworm, typhus, unknown respiratory, viral meningitis,

**Table 2. Community-Acquired Outbreaks by Disease and Setting — LAC, 2005**

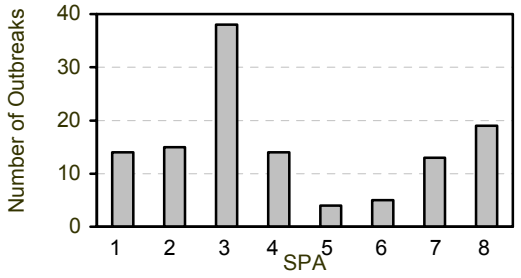
| Disease | Group Home[a] | School[b] | Preschool or Daycare | Other[c] | TOTAL |
|---|---|---|---|---|---|
| Varicella | 0 | 45 | 0 | 0 | **45** |
| Scarlet fever/strep throat | 0 | 5 | 1 | 1 | **7** |
| Scabies | 6 | 0 | 1 | 0 | **7** |
| Hand, foot & mouth disease | 0 | 0 | 9 | 0 | **9** |
| Pediculosis | 3 | 11 | 3 | 0 | **17** |
| GE illness - Norovirus | 2 | 0 | 1 | 1 | **4** |
| GE illness - Shigella | 0 | 0 | 0 | 1 | **1** |
| GE illness - Salmonella | 0 | 0 | 2 | 0 | **2** |
| GE illness - Giardia | 0 | 0 | 0 | 1 | **1** |
| GE illness - Unknown | 3 | 6 | 3 | 2 | **14** |
| Fifth disease (Parvovirus) | 0 | 0 | 2 | 0 | **2** |
| Conjunctivitis | 0 | 0 | 2 | 0 | **2** |
| Other | 0 | 6 | 1 | 4 | **11** |
| **Total** | **14** | **73** | **25** | **10** | **122** |

[a] Includes centers for retirement, assisted living, rehabilitation, and shelter.
[b] Includes elementary (n=59), middle (n=13) and high schools (n=1).
[c] Includes juvenile hall, workplaces, neighborhoods, and extended families.

## COMMENTS

The number of reported outbreaks in 2005 decreased after reaching a eight year high in 2004; a 40% swing back down to the 2003 level—the lowest mark in the same 8 year time frame. Varicella remained the most common cause of community-acquired outbreaks in LAC since 1999 (see summary of the Varicella Project in the Special Reports section). In 2005, eight varicella outbreaks were identified in the Antelope Valley Health District (SPA 1), where the LACDHS Varicella Surveillance Project is in place, but most outbreaks of varicella was identified in SPA 3 (n=18).

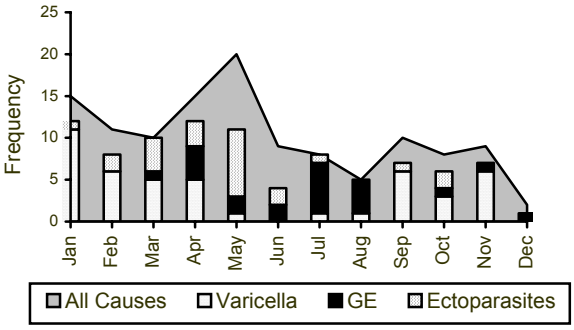
Figure 4
Community Outbreaks by SPA
LAC, 2005 (N=122)




Outbreaks were reported from all 8 SPAs (Figure 4). SPA 3, in the San Gabriel Valley, clearly had the most outbreaks for 2005.

The chart of community-acquired outbreaks by onset month (Figure 5) shows a peak in the distribution in May. Varicella outbreaks tended to show a bimodal seasonality with reports occurring during the traditional school year and low numbers during the summer and winter break. GE tended towards the warmer months with outbreaks focused in the spring and summer months.

Figure 5
Community Outbreaks by Selected Diseases and Onset Month
LAC, 2005 (N=122)




Community-acquired outbreaks tended to occur in settings associated with two age-specific groups. The clear majority of outbreaks (80%) were in school and pre-school settings among children. Varicella, HFM, and pediculosis (head lice) were most common in this young group. The second age group affected by outbreaks is in the older population associated with group-home settings. In this age category, scabies and gastroenteritis are the most common causes (Table 2).

In addition to the site-specific outbreaks reported in this section, a community-wide case increase was observed for hepatitis A (see the 2005 Special Reports).