

FACTS & FIGURES

Tickled pink

**Viral marketing:
Spreading the word
of a new threat**

A hundred years ago, a devastating illness—polio—swept the world. It could invade the central nervous system (CNS), paralyzing and even killing some victims. Thanks to vaccines developed in the 1950s, polio has now been nearly wiped out. But another equally devastating virus may be taking its place. Enterovirus 71 has polio's knack for attacking the CNS. And there have been several outbreaks, including some in the U.S.

Threat: Health officials need to prepare for this emerging threat, warns DMS's Dr. John Modlin, an international expert in enteroviruses and infectious diseases. The former chair of the national Advisory Committee on Immunization Practices, he spelled out the situation in a recent article in the *New England Journal of Medicine*.

"I'm one of a handful of people who are concerned about it," says Modlin. "Until we see larger outbreaks closer to our home soil, I doubt that we're going to interest a large number of people [in] looking at this virus."

Enteroviruses are almost as common as rhinoviruses, which cause the common cold. More than 90 types have been identified, including polioviruses, coxsackieviruses, and echoviruses. Since enteroviruses are excreted in stool, fecal contamination is the major way they're transmitted. They can also be spread by person-to-person contact within



46,000

Number of volunteer hours recorded at DHMC in 2006

500

Number of currently active volunteers at DHMC

50

Number of volunteers who help run DHMC's Pink Smock Gift Shop

37

Number of years the Pink Smock Shop has been in operation

350

Number of square feet the shop occupied at the old DHMC in Hanover

1,862

Number of square feet the shop currently occupies in Lebanon

\$141,000

Sales of greeting cards alone at the Pink Smock Shop in FY06

\$315,875

Net receipts generated by the Pink Smock Shop in FY06

100%

Percentage of net receipts from the Pink Smock Shop that go to the DHMC Auxiliary and to patient care

SOURCES: DARTMOUTH-HITCHECOCK MEDICAL CENTER, PINK SMOCK GIFT SHOP

households. Most infected people do not become ill, and those who do usually develop only mild upper-respiratory symptoms, a flu-like illness with fever and muscle aches, or a rash.

Scary: "You can kind of look at these viruses as summer flu," according to Modlin. "Only a minority of those who are infected have any symptoms, and only a minority of those will have serious neurologic disease." Poliovirus and enterovirus 71 are the only enteroviruses known to attack the CNS. And the scary thing is that when enterovirus 71 does trigger neurologic symptoms, says Modlin, they can be worse than in polio and are more likely to be fatal.

Enterovirus 71 was first isolated in California in 1969. Since then, it has caused epidemics in Eastern Europe in 1975 and 1978 and in Southeast Asia between 1997 and 2000. "The most recent focus of increased incidence in the U.S. was in the Denver area a couple of years ago, where there were five or six cases of serious disease," says Modlin.

Outbreaks: What has him most concerned are some large outbreaks, such as one in 1998 in Taiwan; at least 130,000 people there were infected, 405 were hospitalized for CNS symptoms, and 78 died. "These outbreaks looked very much epidemiologically and clinically like the large outbreaks of polio that we saw 100 years ago in New York and Boston," says Modlin.

Early symptoms of poliovirus include sore throat and fever. If the CNS is affected, a stiff neck