



**MENINGITIS INFORMATION FOR
HIGH SCHOOL AND COLLEGE
STUDENTS**

**House Bill 4562 (Substitute H-2)
First Analysis (5-23-01)**

**Sponsor: Rep. Lauren Hager
Committee: Health Policy**

THE APPARENT PROBLEM:

Meningococcal disease is a potentially life-threatening infection caused by a virus or by bacteria, though viral meningitis generally is less severe than bacterial meningitis. The infection may occur in the fluid of the spinal cord and around the brain, inflaming the membranes surrounding the brain and spinal cord. Symptoms of the disease usually are sudden and initially are like flu symptoms: fever, feeling generally unwell, headache, vomiting, and in some cases a stiff neck. The infection also can occur in the blood stream, where, if not treated promptly, it can progress rapidly and result in death, often only hours after symptoms appear. The disease is spread by direct contact with secretions from the nose and throat, such as by kissing, coughing, sneezing, and sharing of cigarettes, drinks, and food.

Four of the five major strains of the bacteria cause about 64 percent of the 3,000 cases a year of the disease in the United States, and can be prevented by a single (“quadrivalent”) vaccine that is effective 85-95 percent of the time. Once a person is infected, antibiotics are used to treat the infection, with different antibiotics being more effective depending on the strain of the bacteria involved. The use of antibiotics has decreased the mortality rates from 60 percent in the 1930s to 10-15 percent today, which means about 300 people die from the disease in the United States each year. Of people who recover, ten percent have permanent hearing loss, kidney failure, permanent brain injury, and other serious impairments, including loss of limbs due to gangrene.

From the post-World War II era until recently, rates of meningococcal disease remained stable or declined, with an annual incidence of one to two cases per 100,000 population. But that has changed in recent years. Although the disease still is relatively rare, given the size of the population in the United States, the number of cases has been increasing, from 2,152 in 1991 to 3,318 in 1997. Two age groups are at increased risk: Children under four years old have

the highest incidence of the disease, but in recent years there has been an increase in the rate of occurrence of the disease among adolescents and young adults aged 15 to 24 years old.

Although anyone can come into contact with the bacteria that causes meningococcal disease, there is evidence that common lifestyle behaviors put people at increased risk for the disease. Household or intimate contact (such as kissing) with an infected person increases risk 500 to 800 times, while dormitory living has been found to increase risk 11-fold. In addition, certain lifestyle behaviors, often associated with, though not exclusive to, college life also increase the risk of infection: exposure to active or passive smoking (an 8-fold increase in risk), bar patronage (a 17-fold increase), and alcohol consumption in excess of 15 drinks a week. Finally, according to a June 2000 report by the federal Centers for Disease Control and Prevention (CDC), there is a modestly increased risk for meningococcal disease among college freshmen, particularly those who live in crowded living conditions, such as dormitories or residence halls. In 1998, U.S. surveillance for meningococcal disease in college students was done for the first time. From September 1998 to August 1999, 90 cases were reported to the CDC, of whom eight students died. All but three of the 90 cases occurred in undergraduate students, and almost half of these occurred in first year undergraduates. Out of the 2.7 million freshmen students entering college, approximately 590,000 freshmen lived in dormitories. Thus the rate of meningococcal disease was 4.6 per 100,000, which is higher than any other age group in the population other than children less than two years old. This rate still is lower than the threshold of 10 per 100,000 that the CDC recommends for initiating meningococcal vaccination campaigns.

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Legislation has been introduced to address the issue of the increased risk for meningococcal disease among adolescents and college students.

THE CONTENT OF THE BILL:

The bill would add a new section to the Public Health Code to require the Department of Community Health to promote the dissemination of certain information on meningococcal disease (and other immunizable diseases) to high schools and institutions of higher education (public or private colleges or universities, junior colleges, and community colleges) in the state.

More specifically, the bill would require the department to do all of the following:

- Identify materials that contained certain information on meningococcal disease (both the risks associated with the disease and the availability, effectiveness, and potential risks of immunization for the disease) and other immunizable diseases (“diseases about which the department may recommend immunization or immunization information”);
- Post these materials on the department’s web site;
- Notify each high school and institution of higher education in the state of the availability of the materials; and
- Encourage high schools, junior or community colleges, colleges, and universities to provide or make information on the risks of meningococcal disease (and the availability, effectiveness, and potential risks of immunization for the disease, as well as other immunizable diseases) available to students and to the parents of high school students.

MCL 333.9205a

FISCAL IMPLICATIONS:

Fiscal information is not available.

ARGUMENTS:

For:

The bill would implement some of the recommendations of the Advisory Committee on Immunization Practices (ACIP) of the federal Centers for Disease Control and Prevention (CDC), which notes that the risk for meningococcal disease among college students is low, even if the risks to incoming

freshmen living in dormitories or residential halls is higher than that of the general population (including that of college students in general). The rate of even college freshmen living in dorms, at 4.6 per 100,000, still is less than half of the threshold of 10 per 100,000 that the CDC recommends for initiation of meningococcal vaccination campaigns. Moreover, while vaccination with the current vaccine for four of the five most common strains of meningococcal disease will decrease the risk for the disease, it does not eliminate the risk because the vaccine is not 100 percent effective and because it only protects against about two-thirds of the cases of the disease in the United States (since about a third of the cases are caused by a bacterial strain that the vaccine does not protect against). Although vaccination of all college freshmen living in dorms is not likely to be cost effective for society as a whole, there are other prevention measures that ACIP does recommend. These include having providers of medical care to incoming and current college freshmen – particularly those who plan to, or already live in, dormitories or residence halls – inform these students and their parents, during routine medical care of the student, about meningococcal disease and the benefits of vaccination. ACIP also recommends that college freshmen who want to reduce their risk for meningococcal disease should either get vaccinated (by a doctor’s office or student health service) or be directed to a place where the vaccine were available. Colleges themselves should inform incoming and current freshmen (again, particularly those who live in dormitories) about the disease and the availability of a safe and effective vaccine, while public health agencies should provide colleges and health care providers with information about the disease and vaccine, as well as information about how to get vaccinated. The bill would implement these educational recommendations.

Against:

The bill does not go far enough. All entering college freshmen who live in dormitories or residential halls should be required to be vaccinated against meningococcal disease. In moving testimony before the House Committee on Health Policy, the father of a 14-year-old son who died of meningococcal disease and a college student who had survived the disease but had had multiple amputations of his fingers and toes, urged this course of action. While rare, meningococcal disease has a high mortality rate (10-15 percent) even when prompt and appropriate medical care is given, and even when young people stricken with the disease survive, they often pay a terrible price. In addition to the 10-15 percent mortality rate, ten percent of the survivors of the

disease are left with serious impairments, including brain damage, hearing loss, kidney failure, and loss of limbs. With a disease like this, that potentially leaves one out of every four of its victims dead or seriously and permanently injured, surely every reasonable step should be taken to ensure that it be prevented whenever possible. Since vaccinations protect people from nearly two-thirds of the cases of the disease, it seems only prudent to require universal vaccination for those young people most at risk for the disease, namely, college freshmen living in the crowded conditions of dormitories or residence halls. The bill should require vaccination for this population in addition to the information campaign proposed in the bill.

Response:

As the Centers for Disease Prevention and Control (CDC) point out, for society as a whole, the economic costs and benefits of vaccinating even only the nearly 600,000 college freshmen who live in dormitories would not be cost effective. In the first place, vaccination is only 85 to 95 percent effective, which means that five to fifteen of every one hundred people vaccinated still get the disease. Secondly, however, the current vaccine is effective only against four of the five major strains of the bacteria causing meningococcal disease, and only about two-thirds of the cases in this country are caused by the bacteria for which the vaccine is protective. This means that even with 100 percent vaccination rates, about a third of the people vaccinated would become infected by the bacteria strain not covered by the vaccine (in addition to the five to ten percent of the people who would get the disease from one of the other four strains because the vaccine is not totally effective). And finally, the CDC estimates that vaccination of freshmen who live in dormitories would require administering approximately 300,000 to 500,000 doses of the vaccine each year, at a cost ranging from \$54 to \$88 per dose, to prevent 15 to 30 cases of meningococcal disease and one to three deaths each year. The cost to prevent each of the 15 to 30 cases of the disease would range from \$600,000 to \$1.8 million per case, while the cost to prevent each of the one to three deaths would be a staggering \$7 million to \$20 million. While the death of a child is always an incalculable tragedy for the family, deaths from meningococcal disease are not entirely preventable, and it seems questionable whether society should foot multi-million dollar bills to prevent a single death. The bill would take the more sensible preventive approach of making information about the disease and the vaccination available to students and their parents, and leaving the decision up to them whether or not to invest in the cost of a vaccination for the student. Moreover, colleges and universities already

have been conducting their own educational campaigns. According to the CDC, before the 1999 fall semester, many colleges and universities mailed information packets to incoming freshmen, while testimony by a representative from Michigan State University detailed MSU's comprehensive educational program regarding meningococcal disease aimed at incoming and current students. The bill would compliment the existing educational efforts of colleges and universities in the state.

POSITIONS:

The Department of Community Health supports the bill. (5-22-01)

A representative from the Presidents Council, State Universities of Michigan testified in support of the bill. (5-22-01)

The Association of Secondary School Principals indicated support for the bill. (5-22-01)

Analyst: S. Ekstrom

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.