A few weeks after the Food and Drug Administration approved the Gardasil vaccine, legislators in 21 states began drafting bills to make human papillomavirus (HPV) immunization of 11- and 12-year-old girls a requirement for school entry.

This rush to mandate immunization, however well meaning, goes against the grain of some established decision-making processes. Typically, mandated vaccinations are approved after years of scientific study, activism and negotiation. Mandating a vaccine is a big, and in this case expensive, public health step that requires thoughtful discourse.

Those who propose mandates offer compelling evidence in their favor:

- HPV infections are common. By the time an American woman turns 50, there's an 80 percent chance she has, or has had, an HPV infection.
- Treating HPV-associated diseases is expensive. An estimated $3.4 billion is spent annually in the United States on screening and treating cervical cancers and pre-cancers; another $200 million is spent on treating genital warts.
- Cervical cancers kill. The American Cancer Society estimates that 11,150 new cases of cervical cancer will appear this year, and 3,670 women will die of the disease. The emotional cost of HPV-associated diseases is also high.
- Finally, if the vaccine is given prior to exposure to HPVs (i.e., prior to the onset of sexual activity) there is justifiable hope that, with sufficiently high rates of immunization, herd immunity will confer protection even to the unimmunized.

Given these arguments, mandatory immunization presents itself as a no-brainer. Of course we should require girls to get the vaccine to stay in school. Maybe even immunize the boys while we're at it.

But maybe not so fast. Before we go committing large sums of public money, we should look at reasons not to mandate HPV immunization.

Perhaps the greatest barrier is cost. The acquisition cost (the price paid by your doctor) is $120 per dose. Give three doses to a girl, and add $30 per dose to cover administration costs, and you've spent $450. Multiply this by the 90,000 girls who will turn 11 this year in Illinois and you'll spend more than $40 million—at a time when Cook County is closing half of its health clinics for lack of funding, making it harder for the poor to get any kind of medical care.

Central to any decision to mandate a vaccine should be an analysis of costs and benefits. Simply put, will the money spent paying for and administering the HPV vaccine reduce the future costs extended for the care of women with HPV-related diseases?

Currently, 90 percent of the cost of prevention and treatment of HPV disease is Pap screening. Because the HPV vaccine prevents only 70 percent of high-grade cervical dysplasias and cervical cancers, immunization does not excuse us from continuing
screening programs. The vaccine will suspend only a small portion of the cost of preventing and treating HPV-related diseases.

Immunization mandates for school attendance raise other questions. Are we mandating the vaccine for the right reasons? In contrast to polio, measles, mumps and pertussis transmission, transmission of HPV is anything but casual. Is it right to require for school attendance immunization against a disease not acquired at school?

Mandated immunization to prevent polio, measles, mumps and pertussis was readily accepted in part because disease morbidity was high, mortality was significant, and there were no treatments that changed the course of these life-threatening infections. In contrast, HPV-related morbidity is low, and appropriate treatment of a woman’s cervical dysplasia almost eliminates the likelihood of her developing cervical cancer. Because of present-day screening, progression to cervical cancer is becoming increasingly rare; cervical cancer rates are dropping about 4.5 percent each year.

In opposition to mandatory HPV immunization, some cite safety concerns. To date, about 10,000 girls and women have received the HPV vaccine in monitored clinical trials. Fewer than 1,200 have been under age 16. That’s not a lot when you are looking for adverse effects of a vaccine.

Some object to promotion of the HPV vaccine on moral and religious grounds. Many argue that immunizing adolescents against a sexually transmitted infection gives tacit permission for premarital sexual activity. Others argue that the reduction of cervical cancer risk removes cancer as a potential penalty for premarital sex.

Medical ethicists have other questions: Do immunization mandates intrude on parental rights? If so, do the individual and societal benefits of immunization warrant overriding parental autonomy?

With all the arguments for and against mandatory immunization, where is the wheat, and where is the chaff? Here are my views:

Is this a good vaccine? Yes. It has the potential to prevent a significant amount of human misery and a relatively small number of deaths. Following lengthy discussions with each of them, my teenaged daughters both have received their first dose of the vaccine and are scheduled for their first booster. They also got flu shots. The HPV vaccine has led to a lot of open, honest discussion between our daughters and my wife and me.

Is the vaccine safe enough to allow mandatory immunization? A mandated vaccine should have a strong safety record prior to enforcement of the mandate. For the HPV vaccine, we don’t yet have years of data. Still, experiences with similar vaccines suggest that the HPV vaccine will be very safe.

Can cervical cancer be prevented in less expensive ways? Pap screening may still be less expensive and every bit as effective for cancer prevention as mandated vaccination; we don’t know yet.

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Can cervical cancer be prevented in ways that are less intrusive? Abstinence programs aren’t as effective as advocates would have you believe. Compared with inflicted mortality, immunization will be a lot less painful, and will work a whole lot better.

Will immunization promote premarital sex? This is a new verse to an old song. Similar charges have been leveled against the introduction of oral contraceptives, the proposed use of an HIV vaccine, the use of the morning after pill, and the appearance of Elvis Presley on the Ed Sullivan Show. My reading of the medical literature leads me to believe that none of these has led to increases in sexual activity. The HPV vaccine won’t either.

How available is the HPV vaccine? Most vaccine-eligible girls and women can get it right now. In Illinois, it is available several ways:

Parents can buy the vaccine outright. Most health insurance covers it. Children covered under state Medicaid and KidCare programs can receive the vaccine without charge.

Should we mandate the HPV vaccine as a school requirement? There is no doubt that this is a good vaccine capable of preventing cervical cancer. What remains unsettled is whether mandating immunization is the best use of our precious health care dollars.

Before we mandate HPV immunization, we need to have more discussion to make sure that our priorities are in order. In the bigger picture of life for American women, cervical cancer is an uncommon cause of death; Pap smears have seen to that. Instead, accidents, homicides and suicides rank among the leading preventable causes of death among young women.

We live in a world of limited budgets. However well intentioned, our immediate desire to prevent cervical cancer with a vaccine may not be good public policy. Before we leap into mandating HPV immunization, we should first assure ourselves that we are getting the maximum benefit from the dollars we spend. To do this, we must have time to deliberate.

Are we assured of that now? No, not yet.

Kenneth Alexander is an associate professor of pediatrics and section chief of pediatric infectious disease at the University of Chicago. His research involves the human papillomavirus transcription control, DNA replication, innate immune responses and antiviral therapy.

Photo by Dan Dry