EPI CONNECTIONS

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A Classic Case: Individual Freedom v. Public Safety

2005 marks the 100th year since the U.S. Supreme Court decision (7-2) that favored the State of Massachusetts in the case of *Jacobson v. Massachusetts* [1]. The case set the legal stage for much of public health practice in this country in the 20th century, and now the 21st century, because it involved the question of how to balance individual civil liberty vs. common good. The facts of the case were about mandatory smallpox immunization, but the precedent set by this decision has been cited in many decisions involving personal health and state interests. For those interested in detailed analyses, several extensive reviews of the case were published in 2005 to mark its centenary[2-5].

The case arose from a smallpox outbreak in Massachusetts from 1900-1902: there were 100 cases in 1900, 773 cases in 1901, and 2314 cases and 284 deaths in 1902. In response, the Board of Health in Cambridge ordered all adults to be vaccinated based on a state statute granting city boards of health the authority to require vaccination when necessary for public health or safety. The penalty for refusing vaccination was a fine of $5 (equivalent to about $100 today). While there was widespread support for smallpox vaccination in the medical community in 1902, there was also a strong anti-vaccination movement, and Rev. Henning Jacobson, a Swedish immigrant, practiced a form of religion that probably influenced his resistance to vaccination. Claiming bad reactions to earlier vaccinations, he refused to follow the order, and with his lawyers argued the case before the State Supreme Court, and ultimately the U.S. Supreme Court. The question was whether the state had overstepped its authority, and whether personal liberty protected by the Due Process Clause of the 14th Amendment included the right to refuse vaccination. The more specific question was whether the safety of the public justified this particular restriction of personal liberty.

The U.S. Supreme Court answered "yes" to the specific question, and Justice John Harlan wrote in the majority opinion that liberty is not "*an absolute right in each person to be, in all times and in all circumstances, wholly free from restraint…it is equally true that in every well-ordered society charged with the duty of conserving the safety of its members, the rights of the individual in respect of his liberty may at times, under the pressure of great dangers, be subjected to such restraint, to be enforced by reasonable regulations, as the safety of the general public may demand.*"

By one author's count[4], this case has been subsequently cited in 69 Supreme Court cases—most in support of the state's power to protect the health, safety, and welfare of the public, with a minority supporting individual freedom. In the only other Supreme Court decision addressing immunizations (*Zucht v King* decided in 1922), the court upheld a city ordinance that prohibited anyone from attending school without a certificate of smallpox vaccination. However, in this case the court did not mention whether smallpox posed an imminent danger, but rather that states can grant cities broad authority to decide when and how to impose health regulations.

Modern constitutional law recognizes that individuals are protected against an abuse of state and federal power; the court has generally recognized that individuals have the right to make decisions about medical treatments, including the right to refuse life-saving treatments.

One author speculates that it is likely that today *Jacobson v Massachusetts* would be decided in the same way that it was in 1905, because it was a reasonable formulation of the balancing of a person's liberty against state interests[4], while another argues that in order to persuade the public to take reasonable precautions during an emergency, public officials need trust, and people are more likely to trust officials who respect personal liberty[5].

References

1. U.S. Supreme Court. Jacobson v. Com. of Massachusetts, 197 U.S. 11 (1905). Available from URL: http://caselaw.lp.findlaw.com/scripts/printer_friendly.pl?page=us/197/11.html

2.Parmet WE et al. Individual versus public health rights—100 years after Jacobson v. Massachusetts. NEJM 2005; 352: 652-4.

3. Colgrove J and Bayer R. Manifold restraints: liberty, public health, and the legacy of Jacobson v. Massachusetts. AJPH 2005; 95: 571-6.

4. Gostin LO. Jacobson v. Massachusetts at 100 years: police power and civil liberties in tension. AJPH 2005; 95: 576-581.

5. Mariner WK, et al. Jacobson v Massachusetts: It's not your great-great-grandfather's public health law. AJPH 2005; 95: 581-590.

To Prescribe or Not to Prescribe: Guidance for Physicians on Prescribing Oseltamivir (Tamiflu)

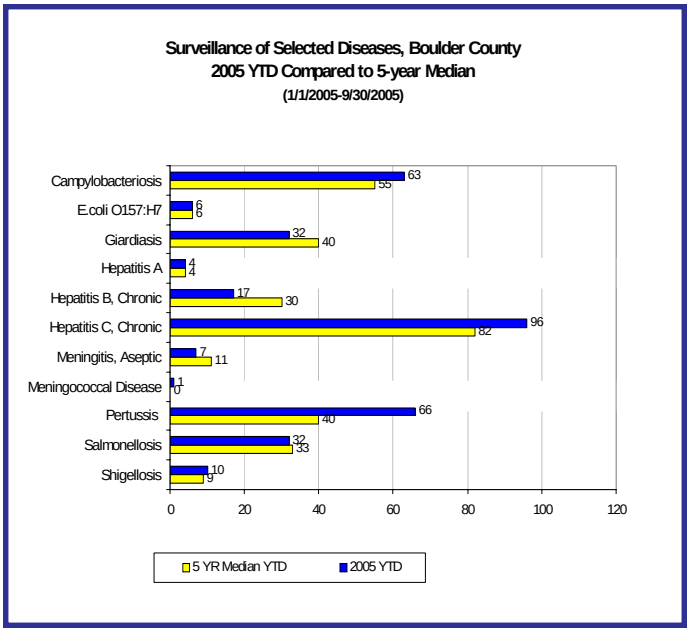
As media attention to a possible pandemic caused by the H5N1 influenza A (avian flu) virus has increased, so has the public's demand for prescriptions of oseltamivir (Tamiflu). Citizens are seeking Tamiflu prescriptions to have on hand in the event of an influenza pandemic. Tamiflu may be used for both the treatment (5 days) and prophylaxis (potentially 6-8 weeks) of influenza A or B, as was described in the December 2004 issue of ***Epi Connections***.

Boulder County Public Health (BCPH) has engaged in discussions regarding this issue, because according to news reports, national governments across the globe are now attempting to stockpile oseltamivir. The drug, however, has never been used for the widespread control of epidemics of influenza. **BCPH is NOT encouraging the practice of writing prescriptions for patient-directed treatment, and we are discouraging prescriptions of oseltamivir to be used for patient-directed prophylaxis.**

It is, however, understandable that health care providers may wish to consider the special circumstances of individual patients when making a decision about whether to prescribe the medicine at this time. After reviewing the few public health guidelines that are currently available, BCPH offers the following considerations regarding the advantages and disadvantages of such prescribing.

Considerations prior to prescribing oseltamivir:

- *Effective against more than one type of influenza*—Oseltamivir is presently active against all types (A and B) of human influenza.
- *Benefits of treating patients*—Oseltamivir has been shown in one study to shorten the duration of disease by approximately 30%, the severity of symptoms by 40%, and to effect a resolution of symptoms and fever within 24 hours in some patients; however, these results were dependent on the speed of initiation of therapy (see Moscona A; Neuraminidase inhibitors; NEJM 2005; 353: 1363-73).
- *Timing is critical when used as therapy*—Oseltamivir should be administered within two days of illness onset (the earlier the better) in order to have greatest effect on clinical course; this requires rapid and accurate diagnosis.
- *Prevention of immunity*—The development of immunity to influenza following administration of oseltamivir is unclear; there may be sub-clinical or aborted infection when taking oseltamivir. If a person were to take a 5-day course of therapy early in a pandemic, they may be subsequently re-exposed and could still be susceptible.
- *There appears to be in-vitro effectiveness against avian (H5N1 strain) influenza*—With widespread use of the drug, however, resistance may develop. The H5N1 influenza strain now appears to be resistant to the antiviral medications amantidine and rimantidine.



- *Uncertain clinical effectiveness against avian influenza*—It is not clear how clinically effective oseltamivir is against human avian influenza infection. Many of the Southeast Asian patients who died of avian influenza H5N1 were taking oseltamivir.
- *Government stockpiles are limited*—There is now a worldwide shortage of oseltamivir, and the production capability of the single licensed manufacturer, Roche Laboratories, does not appear to be sufficient to meet the large demand at this time. Although government agencies are trying to acquire stockpiles of this medication, supplies would not be sufficient for the entire population, especially if a pandemic were to occur within the next 12 months. A list of priority groups has not been released in the U.S., although health care providers are expected to be at or near the top of the list.
- *Oseltamivir is expensive*—It would be expensive to buy treatment courses for all members of a family, and insurance may not cover a prescription with no current or immediate clinical indication. Personal stockpiling as a strategy raises equity issues—at approximately $5 per pill, not everyone will be able to afford a personal stockpile; some will not even have access to a physician to get a prescription.
- *Personal stockpiles may get lost*—People may not track where they store the oseltamivir, once again making it unavailable when needed.
- *Limited shelf life*—Oseltamivir has a limited shelf life even if properly stored at room temperature. It is not known when a pandemic will begin, and stockpiled drugs may pass their expiration dates before a pandemic starts.
- *Absence of general consumer guidance*—Consumers will need to rely on their prescribing physician for directions about when to initiate administering the drug to themselves or their families.

References include the Centers for Disease Control and Prevention (CDC) website (www.cdc.gov/flu/avian) and two unpublished documents from different state health departments.