

REGULATION ON REPORTING OF INFLUENZA VACCINATION RATES

**BALTIMORE CITY HEALTH DEPARTMENT
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TABLE OF CONTENTS

I.	LEGAL AUTHORITY.....	1
II.	BACKGROUND	1
	A. Influenza is deadly and can be spread by health care workers	1
	B. Vaccination of health care workers against influenza saves patient lives	2
	C. Maryland Influenza Vaccination Laws and Regulations	3
III.	NEED FOR REPORTING OF HEALTH CARE WORKER VACCINATION RATES.....	4
	A. Under existing practices, there may be risk to patients from health care workers who have not been vaccinated against influenza	4
	B. Reporting health care worker influenza vaccination rates is an important part of an effective vaccination policy.....	5
IV.	EXPLANATION OF PROPOSED ACTION.....	5
V.	PUBLIC COMMENT	5
VI.	PROPOSED REGULATION.....	8
	A. Definitions	8
	B. Annual Required Information.....	8
VII.	NOTES	10

I. LEGAL AUTHORITY

Baltimore City Health Code Section 2-104 tasks the Health Commissioner with “the ... prevention of disease ... affecting the public health” as well as “establishing and implementing policies ... preventing physical illnesses.” In addition, Section 2-105 requires the Commissioner “to investigate and report all cases of communicable disease and take immediate action to stop their spread.” A “communicable disease” is defined in Section 4-401 as “any contagious, infectious, or communicable disease or condition that the Commissioner specifies by rule or regulation...” Pursuant to Section 4-404, when a communicable disease is identified, “the Commissioner may take all possible action to prevent the disease from spreading.” Influenza is clearly a communicable disease because it “spread[s] from person to person.”¹ Moreover, the transmission of influenza between healthcare workers and patients presents a public health threat that influenza vaccination can combat.² Generally, Section 2-106 grants the Commissioner the power to “adopt and enforce rules and regulations” necessary for the fulfillment of his responsibilities.

II. BACKGROUND

A. Influenza is deadly and can be spread by health care workers

Influenza, a commonly transmitted respiratory virus, is deadly and costly. This preventable illness is responsible for more than 200,000 hospitalizations and 36,000 deaths in the United States every year.³ Annually, influenza kills nearly as many Americans as breast cancer and three times as many as HIV/AIDS.⁴

In Baltimore City, during the peak influenza season of 2007-2008, 11-13% of visits to providers were due to influenza-like illness. Pneumonia or influenza was listed as the underlying or contributing cause of death in 9% of all deaths in Baltimore.⁵

Nationally, the total economic burden of annual influenza epidemics in the United States (including hospitalizations, life lost, productivity and earnings lost) has been estimated at over \$87.1 billion, with direct medical costs of over \$10 billion.⁶

Rates of serious illness and death are highest among those over age 65, children under the age of 2, and people of any age with medical conditions that place them at increased risk for complications from influenza. The spread of influenza is of particular concern in healthcare settings where patients are particularly vulnerable.

Health care workers are frequently infected with influenza and may contribute to the spread of nosocomial influenza in hospitals and long term care settings.⁷ According to the Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices, influenza outbreaks in hospitals and long-term-care facilities have been associated with low vaccination rates among health care providers.⁸

Both symptomatic and asymptomatic health care workers can transmit the virus. Multiple studies have documented that many health care workers continue to work despite being symptomatic with influenza.⁹ Additionally, infections without symptoms occur in 25-59% of influenza cases.¹⁰

B. Vaccination of health care workers against influenza saves patient lives

According to the Centers for Disease Control, the most effective strategy to reduce the burden of influenza is vaccination.¹¹ When well matched to circulating strains, influenza vaccination prevents laboratory-confirmed influenza illness in 70-90% of adults and children. In addition to a decrease in laboratory-confirmed illness, influenza vaccination is also associated with a decrease in pneumonia and otitis media in children as well as decreased work absenteeism and decreased hospitalizations attributable to respiratory infections or cardiopulmonary disease in adults.¹²

Despite its effectiveness, influenza vaccination in the general population is relatively low. The most recent reported levels of vaccination coverage showed Maryland at about the national average:

- 27.9% of high-risk persons aged 18-49 reported receiving influenza vaccine
- 22% of others age 18-49 reported receiving influenza vaccine
- 40.6% of all persons age 50-64 reported receiving influenza vaccine
- 68.3% of persons age 65 and over reported receiving influenza vaccine.

Persons who have not been vaccinated encounter an increased risk of contracting influenza when another illness brings them to clinics, hospitals, related institutions,¹³ or physician's offices. Providing an effective vaccine to health care workers decreases the rate of transmission of influenza from health care workers to their vulnerable patients, thereby decreasing morbidity and mortality.

A recent randomized-controlled study in Scotland compared mortality rates between long term care hospitals that offered influenza immunization to health care workers (where 51% of health care workers were vaccinated) to hospitals that did not (where 5% of health care workers were vaccinated) and demonstrated a 40% reduction in all-cause mortality.¹⁴ Notably, an additional benefit was observed: the vaccination rate for patients at these institutions also increased. Proposed mechanisms for the secondary improved patient vaccination rate includes increased awareness of the importance of influenza vaccination on the part of the medical staff.

Additionally, in a 12-year study at a tertiary care center in Virginia, when vaccination rates among health care workers increased from 4% to 67%, the rate of hospital-acquired influenza among patients decreased from 32% to 0% during the same time period.¹⁵

Multiple professional organizations recommend increased or universal influenza vaccination for health care workers:

- The Centers for Disease Control and Prevention (CDC) recommends influenza immunization for all health care workers with direct patient contact since 1984 and for all health care workers since 1993.¹⁶

- The National Foundation for Infectious Disease issued a Call to Action in 2003 to improve influenza immunization rates for Health Care workers.¹⁷
- The Society for Healthcare Epidemiology of America (SHEA) issued a position paper in 2005 recommending a comprehensive strategy to improve health care worker vaccination rates.
- In the 2005-2006 Influenza Season, the American Nurses Association launched its *Everyone Deserves a Shot at Fighting Flu* campaign to support the resolution that all nurses should be vaccinated against influenza.¹⁸
- The Minnesota Department of Health issued a statement in 2007 stating that it supported the use of a mandatory ‘informed declination program’ in tracking immunization rates, identifying reasons for non-participation, and achieving a long-term goal of 90% health care provider influenza vaccination rate.¹⁹
- The American College of Physicians (ACP) Board of Regents unanimously approved a policy recommendation to require annual influenza vaccine for all health care workers with direct patient contact activities unless medical contraindication exists, a religious objection to immunization exists, or informed declination is signed by the health care worker.²⁰
- The Infectious Disease Society of America favors mandatory annual flu shots for all health care workers who are in direct contact with patients.²¹
- The Joint Commission on Accreditation of Healthcare Organizations requires accredited institutions including hospitals and long term care facilities to “offer influenza vaccinations to staff, which includes volunteers, and licensed independent practitioners with close patient contact.”²²

C. Maryland Influenza Vaccination Laws and Regulations

In Maryland, hospitals²³ must offer influenza vaccine to “staff and licensed independent practitioners” and document “reasons for refusal of the influenza vaccine by an employee.”²⁴ As part of their overall infection control effort, hospitals “shall develop and implement interventions to address identified problems and monitor the effectiveness of interventions to control and prevent infections.”²⁵

Maryland law requires related institutions to “immunize employees against the influenza virus” each year with written consent from the employee. Facilities must also document either the immunization or refusal of immunization and the reason for the refusal. An employee is not required to receive a vaccine if (1) the vaccine is medically contraindicated, (2) the vaccine is against the employee’s religious beliefs, or (3) after being fully informed by the related institution of the health risks associated with not receiving the vaccine, the employee refuses the vaccine.²⁶ In addition, State law requires related institutions to “urge that volunteers, defined as individuals who spend an average of 8 hours per week or more in the institution patient care areas and who receive no pay or benefits, accept annual influenza vaccination.” Also, facilities “shall maintain documentation of the discussion between the facility and the volunteer concerning influenza vaccine.”²⁷

The Maryland Health Care Commission is moving towards a system of reporting influenza vaccination rates for acute care facilities. This will be based on a component of the National Healthcare Safety Network that is under development.

III. NEED FOR REPORTING OF HEALTH CARE WORKER VACCINATION RATES

A. Under existing practices, there may be risk to patients from health care workers who have not been vaccinated against influenza

The CDC recommends a target rate of 80% health care worker compliance with influenza vaccination to provide herd immunity and thereby prevent transmission of influenza from health care workers to patients.²⁸ Despite a national trend towards laws such as Maryland's, recent data shows an average of only 36-40% of US health employees receiving the vaccine annually.²⁹

Despite educational programs, many employees forgo influenza vaccination due to factors such as fear of side effects, perceived ineffectiveness of the vaccine, and perceived likelihood of contracting influenza from the vaccine.³⁰ For example, a recent survey at the Mayo Clinic, where there is an extensive educational program about influenza immunization, showed only 64.5% of Registered Nurses (RNs) intending to receive the influenza vaccine.³¹ The authors of this article suggest that the results of this survey provide evidence that education alone is not sufficient to increase healthcare worker influenza vaccination rates.

The Cleveland Clinic Foundation, which recently instituted a mandatory internet education program on influenza vaccination for employees, increased its rate of employee influenza vaccination from 38-55% between 2004-2005.³² While the increase is admirable, this is still below ideal rates of healthcare worker vaccination.

Maryland does not mandate reporting of healthcare worker influenza vaccination rates. However, the state does collect information on health care worker immunizations rates as they relate to outbreak data reported for influenza, pneumonia and influenza like illnesses. According to outbreak data for long term care facilities in Baltimore City, from January 1, 2006 through July 14, 2008, there were 15 outbreaks reported of which 13 were completed. Only 7 reported vaccination rates among health care workers. Rates ranged from 27% to 100% with a mean of 60% and a median of 61.5%. The remaining six facilities reported coverage rates as "unknown."

Additionally, in Baltimore City, we recently surveyed infection control representatives from five hospitals regarding the level of influenza vaccination coverage of employees. Vaccination rates ranged from 35% to 71%, with no institution achieving the CDC recommendation of 80% for herd immunity. In a sample of nursing home infection control representatives in Baltimore reported that only one-third to one-half of employees received influenza vaccination, with the remainder signing informed declination forms.

B. Reporting health care worker influenza vaccination rates is an important part of an effective vaccination policy

Critical to ensuring the impact of a policy is a system for documenting and evaluating implementation. The Council of State Governments Healthy States Initiative, a group composed of state legislators, officials from the CDC, state health department officials, and public health experts recommends requiring healthcare facilities to report flu vaccination rates as part of data requirements for licensing and as part of state quality programs for health care organizations. This group also recommends directing state immunization registries to collect data on health care worker immunizations.³³ The Healthcare Infection Control Practices Advisory Committee, a federal advisory committee established in 1991 to provide advice and guidance to the CDC regarding surveillance, prevention, and control of hospital associated infections/events recommends that employee influenza vaccination rates be included in public reporting systems.³⁴ At least five states require health care facilities to report health care worker vaccination rates.³⁵

IV. EXPLANATION OF PROPOSED ACTION

Requiring Baltimore City hospitals and nursing homes to report health care worker vaccination rates to the Baltimore City Health Department is compatible with both State and local law and is an important step towards improving patient safety.

Of particular importance in protecting patients is determining the number of “hands on” health care workers who receive the influenza vaccine. While an institution overall may have a high vaccination rate, if the majority of those vaccinated are administrative or clerical employees with little patient contact, then the risk for patients contracting influenza from health care workers remains high. JCAHO, three states, and Washington, D.C., require either the offer or reporting of influenza vaccinations only to direct care personnel.³⁶

This proposal, by requiring hospitals and nursing homes to provide the Health Department with health care worker vaccination rates at the end of each flu season, will allow citywide influenza prevention planning. Public disclosure will permit comparison by health care facilities and the public. Identifying model institutions and those with higher risk for spreading influenza to patients through health care workers provides a necessary framework for improving prevention efforts.

When the Maryland Health Care Commission’s policy for public reporting of influenza vaccination rates for health care workers becomes active, it is the intent of the Health Department to defer to this program for acute care facilities in the city.

V. PUBLIC COMMENT

The Health Department received public comment on the proposed regulation through September 24, 2008.

Responses were received from MedStar Health, a non-profit healthcare organization that includes eight community hospitals and other healthcare services in the Baltimore/ Washington region. Comments were also received from Med Chi, the Baltimore City Medical Society, and several private physicians’ practices.

Comment: Medstar recommended deleting the reference to Maryland law requiring immunization of employees by December 1, because CDC recommends vaccination during the entire flu season, which ends March 31.

Response: We have deleted December 1 from this section. While we still encourage vaccination as early in the season as possible, the recommendation will be consistent with the CDC and is defined in the definitions section under “influenza season.”

Comment: Medstar asked whether hospitals were included in the definition of “related institutions”.

Response: No. We have deleted the term “related institution” and specified nursing homes. Hospitals are covered by the regulation directly.

Comment: Medstar asked about language stating that facilities should document the discussion between the facility and the volunteer concerning the influenza vaccine, stating that the statement needs clarification on what this actually means. For example, is it each person or the program?

Response: This definition is directly from COMAR 10.07.02.21-3. For the purposes of this regulation, the documentation should be for each person.

Comment: Medstar noted that on page three of the draft regulation, the proposed regulation indicates that the influenza vaccination included “is only the killed virus.” Some sites might offer the live virus vaccine and it would not be appropriate to exclude that from the information since it is also a method of vaccination.

Response: We agree and have included live attenuated in the definition for “influenza vaccination.”

Comment: Medstar noted that since sections II and III consistently refer to “healthcare workers” it would seem that this is the population to be defined for vaccination rather than “clinical staff”

Response: We agree and have changed “clinical staff” to “health care worker” as well as provided a definition.

Comment: Medstar asked how are contractual health care workers and non-staff physicians included? Will they be included in the numbers for the private practices and the contracting service, or are the hospitals and long-term care facilities expected to include them in their numbers?

Response: For this regulation, the hospitals and nursing homes are expected to include them in their numbers, as these are healthcare workers in their institutions.

Comment: Medstar asked: Is the Baltimore City Health Department able to identify all “related institutions” and physician’s offices? In addition, do these facilities have access to the Influenza Vaccine?

Response: We are able to identify “related institutions” but do not yet have a denominator for physician’s offices. For this and other reasons, physician’s offices will not be included in this year’s reporting requirements. The regulation will only cover hospitals and nursing homes. Instead, we are asking for volunteer providers to participate. We do not expect any vaccine shortages this flu season. There are currently multiple manufacturers producing influenza vaccine with a projected 146 million doses available this flu season

Comment: Medstar asked: How is the number of eligible staff to be determined? Is staff in which the vaccine is contraindicated, due to medical or religious reasons, to be considered eligible even when they clearly will not be vaccinated? How are new staff members to be included in this number? Will they need to be on board by a given date, to be included in the count?

Response: In this regulation, the term “eligible” means that they are “eligible” health care workers employed during the influenza season, not that they are eligible for the vaccine. So all health care workers should be included in the “eligible” total. Reporting entities will provide the aggregate reasons for non-vaccination. New staff hired during the “influenza season” should be included in this number.

Comment: The Baltimore Medical Society and Med Chi requested that private practitioners offices be excluded due to the inability to identify which private practitioners were responsible for reporting and concerns over access to flu vaccine.

Response: We agree and will use the 2008-2009 season to identify the total number of providers in Baltimore City who would be affected by the regulation as well as work with vaccine suppliers and DHMH to assure vaccine availability for next year’s season. We are requesting private practitioners to report voluntarily the rate of vaccination. Volunteer practices should contact Mary Grace Munoz, BCHD’s director of Acute Communicable Diseases to sign up. She is can be reached phone: 410-396-4436 or by email: marygrace.Munoz@baltimorecity.gov.

Comment: Private providers indicated that last year, they were told in November and December to hold off on vaccinating low risk people because there may be a shortage of vaccine, and in February to vaccinate anyone who will take the vaccine. The message must be consistent for people to comply.

Response: Our recommendation will be consistent with the CDC and is defined in the definitions section under “influenza season.” Healthcare worker vaccination is consistently a top priority.

Comment: Private providers asked if we were sure that they will be able to get the vaccine. Two years ago I was unable to compete with Target, CVS, Wal Mart and other big businesses in purchasing the vaccine. Will it be the responsibility of medical offices to close down and walk on down to a retailer to get health care?

Response: We do not expect any vaccine shortage this flu season. There are currently multiple manufacturers producing influenza vaccine with a projected 146 million doses available this flu season. With the knowledge gained from practices that voluntarily report this flu season, we will be able to assess logistical obstacles to their inclusion under the regulation. .

VI. PROPOSED REGULATION

A. Definitions

1. “Health care worker” means any person employed in a hospital or long term care facility, who has or may have direct patient contact. This term includes a physician, dentist, nurse, optometrist, podiatrist, physical therapist, social worker, psychologist, or student in one of these fields, receptionist, dietary staff, housekeeping staff, security personnel.

“Health care worker” also means those non-employee staff, such as volunteers, who have direct patient contact.

2. “Employed” means an individual employed full-time or part-time directly, through contract with another entity, or as an independent contractor, by a hospital or long term care facility.
3. “Eligible” means health care workers employed during the influenza season.
4. “Influenza Season” means October 1 to March 31.
5. “Influenza vaccination” means inactivated (killed vaccine) or live attenuated vaccine

B. Annual Required Information

Commencing on May 1, 2009, by May 1 of each year, each hospital and nursing home located within Baltimore City shall document and report to the Baltimore City Health Department for the preceding influenza season:

1. The number of health care workers who were eligible for influenza vaccination.
2. The number of health care workers who accepted influenza vaccination.
3. The number of health care workers who declined influenza vaccination, and the aggregate numbers for each of three reasons for declination: (1) the vaccine is medically contraindicated, (2) the vaccine is against the employee’s religious beliefs, or (3) after being fully informed by the related institution of the health risks associated with not receiving the vaccine, the employee refuses the vaccine.

The reporting shall be on a simple form made available by the Health Department.

VII. NOTES

1. See [CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices \(ACIP\), MMWR 2007;56 \(No. RR-6\): 4.](http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf)
<http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf>
2. See CDC. Influenza Vaccination of Health-Care Personnel: Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55 (No. RR-2): 1-2.
<http://www.cdc.gov/mmwr/pdf/rr/rr5502.pdf>
3. Fiore, A. E., Shay, D. K., Haber, P., Iskander, J. K., Uyeki, T. M., Mootrey, G., et al. (2007). Prevention and control of influenza. recommendations of the advisory committee on immunization practices (ACIP), 2007. *MMWR.Recommendations and Reports : Morbidity and Mortality Weekly Report.Recommendations and Reports / Centers for Disease Control*, 56(RR-6), 1-54.
4. Poland, G. A., Tosh, P., & Jacobson, R. M. (2005). Requiring influenza vaccination for health care workers: Seven truths we must accept. *Vaccine*, 23(17-18), 2251-2255.
5. Baltimore City Seasonal Influenza Summary Report. Baltimore City Health Department. May 2008. Accessed 5/19/08 at
http://www.baltimorehealth.org/info/2008_05_19.SeasonalInfluenza.pdf. Accessed 5/19/08
6. Molinari, N. A., Ortega-Sanchez, I. R., Messonnier, M. L., Thompson, W. W., Wortley, P. M., Weintraub, E., et al. (2007). The annual impact of seasonal influenza in the US: Measuring disease burden and costs. *Vaccine*, 25(27), 5086-5096.
7. See CDC. Influenza Vaccination of Health-Care Personnel: Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55 (No. RR-2): 1-2.
<http://www.cdc.gov/mmwr/pdf/rr/rr5502.pdf>
8. Pearson, M. L., Bridges, C. B., Harper, S. A., Healthcare Infection Control Practices Advisory Committee (HICPAC), & Advisory Committee on Immunization Practices (ACIP). (2006). Influenza vaccination of health-care personnel: Recommendations of the healthcare infection control practices advisory committee (HICPAC) and the advisory committee on immunization practices (ACIP). *MMWR.Recommendations and Reports : Morbidity and Mortality Weekly Report.Recommendations and Reports / Centers for Disease Control*, 55(RR-2), 1-16.
9. Wilde, J. A., McMillan, J. A., Serwint, J., Butta, J., O'Riordan, M. A., & Steinhoff, M. C. (1999). Effectiveness of influenza vaccine in health care professionals: A randomized trial. *JAMA : The Journal of the American Medical Association*, 281(10), 908-913.
10. Steckel, C. M. (2007). Mandatory influenza immunization for health care workers--an ethical discussion. *AAOHN Journal : Official Journal of the American Association of Occupational Health Nurses*, 55(1), 34-39 (Steckel CM 2007)

11. See [CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices \(ACIP\), MMWR 2007;56 \(No. RR-6\): 4. http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf](http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf)
12. See [CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices \(ACIP\), MMWR 2007;56 \(No. RR-6\): 4. http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf](http://www.cdc.gov/MMWR/PDF/rr/rr5606.pdf) There are currently two forms of influenza vaccine: live attenuated influenza vaccine (LAIV) and trivalent inactivated vaccine (TIV). The inactivated vaccine is preferred for women who will be pregnant during the influenza season, children 6 months to 4 years of age, those with chronic pulmonary disease or other illness putting them at higher risk from severe complications from influenza and those caring for immunocompromised patients due to theoretical risk of transmission of live virus. Both vaccines have demonstrated effectiveness in preventing laboratory-confirmed influenza illness in both adults and children in randomized-controlled trials
13. A “related institution” is defined in Section 19-301(o) of the Health General Article as:
 - (1) “Related Institution” means an organized institution, environment, or home that:
 - (i) Maintains conditions or facilities and equipment to provide domiciliary, personal, or nursing care for 2 or more unrelated individuals who are dependent on the administrator, operator, or proprietor for nursing care or the subsistence of daily living in a safe, sanitary, and healthful environment; and
 - (ii) Admits or retains individuals for overnight care.”
 - (2) “Related institution” does not include a nursing facility or visiting nurse service that is conducted only by or for adherents of a bona fide church or religious organization, in accordance with tenets and practices that include reliance on treatment by spiritual means alone for healing.
14. Carman, W. F., Elder, A. G., Wallace, L. A., McAulay, K., Walker, A., Murray, G. D., et al. (2000). Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: A randomised controlled trial. *Lancet*, 355(9198), 93-97.
15. Salgado, C. D., Giannetta, E. T., Hayden, F. G., & Farr, B. M. (2004). Preventing nosocomial influenza by improving the vaccine acceptance rate of clinicians. *Infection Control and Hospital Epidemiology : The Official Journal of the Society of Hospital Epidemiologists of America*, 25(11), 923-928.
16. Talbot TR, Bradley SF, Cosgrove SE, Ruef C, Siegel J, Weber DJ. SHEA position paper: Influenza vaccination of healthcare workers and vaccine allocation for healthcare workers during vaccine shortages. *Infect Control Hosp Epidemiol*, 2005;26:882-90.
17. National Foundation for Infectious Diseases. Influenza Immuniation Among Health care workers: A Call To Action. 2004. Accessed 5/19 at <http://www.nfid.org/pdf/publications/calltoaction.pdf>.
18. American Nurses Association Nursing World Website. Description of ”Everyone Deserves A Shot at Fighting Flu” Campaign. Accessed 5/19/08 at: <http://nursingworld.org/MainMenuCategories/OccupationalandEnvironmental/occupationalth/Influenza.aspx>

19. Minnesota Department of Health. Bulletin to All Minnesota Health Care Organization Managers: MDH Formally Recommends Influenza Vaccination for all Health Care Personell. July 3, 2007. Accessed 5/19/08 at <http://www.health.state.mn.us/divs/idepc/diseases/flu/hcp/hcprec.pdf>
20. American College of Physicians Website. ACP Board of Regents Endorses Health care worker Vaccination. July 2007. Accessed 5/19/08 at: http://www.acponline.org/running_practice/quality_improvement/projects/adult_immunization/acp_vaccination.pdf
21. Infectious Diseases Society of America. Pandemic and Seasonal Influenza: Principles for U.S. Action. January 2007 Accessed 5/19/08 at: <http://www.idsociety.org/WorkArea/showcontent.aspx?id=5728>
22. Joint Commission on Accreditation of Healthcare Organizations News Release: "Joint Commission Establishes Infection Control Standard to Address Influenza Vaccines for Staff," June 13, 2006. See http://www.ama-assn.org/ama/pub/upload/mm/36/jcaho_standard.pdf To meet the Joint Commission standard, organizations must:
 - (a) Establish an annual influenza vaccination program that includes at least staff and licensed independent practitioners;
 - (b) Provide access to influenza vaccinations on-site;
 - (c) Educate staff and licensed independent practitioners about flu vaccination; non-vaccine control measures (such as the use of appropriate precautions); and diagnosis, transmission and potential impact of influenza;
 - (d) Annually evaluate vaccination rates and reasons for non-participation in the organization's immunization program; and
 - (e) Implement enhancements to the program to increase participation.
23. COMAR §10.07.01.34 (F)(5)(2008). As defined in Title 10.07.01.01(13) of the Code of Maryland Regulations, "Hospital" means an institution that:
 - (a) Has a group of at least five physicians who are organized as a medical staff for the institution;
 - (b) Maintains facilities to provide, under the supervision of the medical staff, diagnostic and treatment services for two or more unrelated individuals; and
 - (c) Admits or retains the individuals for overnight care.
24. COMAR 10.07.01.34 (F)(5) (2008)
25. COMAR 10.07.01..34(G)(2)(2008).
26. MD. CODE ANN, HEALTH-GEN. § 18-404 (West 2008).
27. COMAR § 10.07.02.21-3 (2008)(The required documentation does not include whether the volunteers actually receive vaccinations).
28. Centers for Disease Control and Prevention. Recommendations for prevention and control of influenza: recommendations of the Immunization Practices Advisory Committee. Ann Intern Med 1986 105:399-404.

29. Wilde, J. A., McMillan, J. A., Serwint, J., Butta, J., O'Riordan, M. A., & Steinhoff, M. C. (1999). Effectiveness of influenza vaccine in health care professionals: A randomized trial. *JAMA : The Journal of the American Medical Association*, 281(10), 908-913.
30. Wilde, J. A., McMillan, J. A., Serwint, J., Butta, J., O'Riordan, M. A., & Steinhoff, M. C. (1999). Effectiveness of influenza vaccine in health care professionals: A randomized trial. *JAMA : The Journal of the American Medical Association*, 281(10), 908-913.
31. Ofstead CL et al. Influenza Vaccination Among Registered Nurses: Information Receipt, Knowledge, and Decision-Making at an Institution with a Multifaceted Education Program. *Infection Control and Hospital Epidemiology* 2008. 19(2):99-105
32. Gordon, S. M. (2006). Health care worker, vaccinate thyself: Toward better compliance with influenza vaccination. *Cleveland Clinic Journal of Medicine*, 73(11), 965-966.
33. Council of State Governments' Healthy States Initiative Brochure: Vaccinating Health care workers to Control Flu Outbreaks: Legislator Policy Brief. May 2007. Accessed 5/22/08 at: <http://www.healthystates.csg.org/NR/rdonlyres/6EA1D511-C6F4-4257-B34A-56529FDE4309/0/vaccinations.pdf>
34. McKibben, L., Horan, T. C., Tokars, J. I., Fowler, G., Cardo, D. M., Pearson, M. L., et al. (2005). Guidance on public reporting of healthcare-associated infections: Recommendations of the healthcare infection control practices advisory committee. *Infection Control and Hospital Epidemiology : The Official Journal of the Society of Hospital Epidemiologists of America*, 26(6), 580-587.
35. Arkansas (Ark.Code Ann. §§ 20-10-1304(b)(3)(2006)); New Hampshire (N.H.Rev. Stat. § 151:33 (II)(b)(3)); New York (N.Y. Public Health Law §2196); Rhode Island (RI ADC 14 000 028.6.3, RI ST § 23-17.19-7(c)); and Utah (UT ADC R386-705-3 (2), UT ADC R386-705-25)
36. *see* http://www.ama-assn.org/ama1/pub/upload/mm/36/jcaho_standard.pdf; 22 DC ADC § 2103.4; ME ST T. 22 § 802, ME ADC 10-144 Ch. 264, § 2; RI ADC 14 000 028, RI ADC 14 000 028.6.3, RI ADC 14 000 028.1.7; UT ADC R386-705-3 (2), UT ADC R386-705-2 (6)