
**Thomas P. DiNapoli
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**OFFICE OF THE
NEW YORK STATE COMPTROLLER**

**DIVISION OF STATE
GOVERNMENT ACCOUNTABILITY**

**NEW YORK CITY
DEPARTMENT OF HEALTH
AND MENTAL HYGIENE**

**IMMUNIZATION PROGRAM
FOR PUBLIC SCHOOL
CHILDREN**

Report 2007-N-6

AUDIT OBJECTIVE

Our objective was to determine whether the New York City Department of Health and Mental Hygiene's immunization program provided reasonable assurance that public school children are immunized against communicable diseases as required by law.

AUDIT RESULTS - SUMMARY

The New York City Department of Health and Mental Hygiene (Department) is responsible for ensuring school children are immunized against communicable diseases. The communicable diseases include Diphtheria, Haemophilus Influenzae Type B, Hepatitis B, Measles, Mumps, Polio, Rubella and Chicken Pox. The Department's Bureau of Immunization (Bureau) oversees the immunization program.

The New York City Department of Education's Automated Tracking System (ATS) database, tracks immunization compliance information for all New York City public schools. As of June 30, 2006 (the end of the 2005-2006 school year), ATS listed 1,019,361 students enrolled in 1,554 public schools in New York City. According to ATS, 97.6 percent of the students received their required immunizations. To determine if this information was accurate, we selected a statistical random sample of 49 students who were required to receive 553 immunization shots and reviewed their ATS database information and health records in the school files. [Page 4]

When we reviewed the students' health records at the schools, we found that for 4 of the 49 students, there was no documentation to support some of the required immunizations. Subsequent to our review, the Bureau obtained from the parents documentation that 3 of these students had

received the required immunizations. Based on statistical projections of our sampling results, we conclude that ATS accurately reflected the number of students who have received their required immunizations. [Pages 3-4]

During the 2005-2006 school year, the Bureau followed up with schools using letters and site visits where, according to ATS, less than 90 percent of the students received the required immunizations. Generally, these procedures were effective in promoting compliance. However, the Bureau relies on manually sending a large number of letters by certified mail to these targeted schools. We recommend that, instead, the Bureau send electronic reports to all schools that have students who have not received the required immunizations. [Pages 5-6]

Each year, private and public schools, as well as child care centers in New York City, must complete an immunization survey of their new entering students. The Law mandates that an audit validation of these surveys be done at 35 randomly selected entities annually. During the 2005-2006 school year, 37 such audits were conducted by the Bureau; 12 of which occurred at schools where less than 90 percent of its students did not have the required immunizations. [Page 6]

Our audit report contains four recommendations.

This report dated June 23, 2008, is available on our website at: <http://www.osc.state.ny.us>. Add or update your mailing list address by contacting us at: (518) 474-3271 or Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, NY 12236

BACKGROUND

Immunizations are widely considered one of the leading public health achievements of the 20th century. Mandatory immunization programs have eradicated Polio and Smallpox in the United States and reduced the number of deaths from several childhood diseases, such as Measles, to near zero.

Title VI, Section 2164 of New York State's Public Health Law (Law), requires every parent or guardian to have his or her child, between the ages of two months and 18 years, receive immunizations against certain communicable diseases specified in the Law, unless the parent or guardian holds religious beliefs that are contrary to immunization, or a physician attests to the need for an exemption on medical grounds. The communicable diseases include Diphtheria, Haemophilus Influenzae Type B, Hepatitis B, Measles, Mumps, Polio, Rubella and Chickenpox. The Law further states that no owner or person in charge of a school shall permit any child to attend that institution in excess of 14 days (or, in certain circumstances, 30 days), without acceptable evidence of the child's immunization against these diseases, a religious waiver signed by the child's parent or guardian, or a medical waiver signed by a physician.

The New York City Department of Health and Mental Hygiene (Department) is responsible for monitoring school immunization compliance. Its mission is to prevent the occurrence and transmission of diseases through its immunization program and services. The Department's Bureau of Immunization (Bureau) oversees the immunization program. To implement the program, the Bureau uses a publication issued by the Department, "Immunization Requirements for All Students," that lists the specific immunization doses mandated by

Law and states that children must be excluded from school if they do not meet the requirements.

The Bureau also receives bi-weekly reports from the New York City Department of Education's Automated Tracking System (ATS) database, which tracks immunization compliance information for all New York City public schools. When a student is immunized, school staff enters the date of the immunization into ATS based on information from the child's physician. Based on the bi-weekly reports, the Bureau identifies schools where there are students who have not received the required immunizations and follows up with them via letters and visits. Letters are also sent to New York City Department of Education's Regional Health Directors informing them of the non-compliant schools in their area. Regional Health Directors are responsible for assuring compliance with school health policy mandates, including immunization requirements, for the Department of Education.

As of June 30, 2006 (the end of the 2005-2006 school year, and the latest full year's data available at the start of our audit), ATS listed 1,019,361 students enrolled in 1,554 public schools in New York City.

AUDIT FINDINGS AND RECOMMENDATIONS

Documentation of Compliance with Immunization Requirements

The Law requires schools to maintain evidence of immunization (e.g., documentation from a physician). Without it, school officials cannot be assured that children are immunized in accordance with the Law. This documentation should agree with information in ATS since the

Department uses ATS to verify that all students are immunized. We reviewed the ATS database as of June 30, 2006, since it was the end of the school year and there would have been enough time for immunization information to be updated.

According to ATS as of June 30, 2006, 97.6 percent of the 1,019,361 New York City public school students received their required immunizations. To determine if this information was accurate, we selected a statistical random sample of 49 students who were required to receive 553 immunization shots and reviewed their ATS database information and health records in the school files.

When we reviewed the students' health records at the schools, we found that for 4 of the 49 students, there was no documentation to support that these students received all of their required immunizations. Subsequent to our review, the Bureau obtained from the parents documentation that 3 of these students had received the required immunizations. Therefore, of the 49 students we tested, there was no documentation that 1 student received all of the required immunizations.

Based on our sample results, we calculated an error rate of 2.04 percent. Based on a 90 percent confidence level, we project that the range of errors falls between 0 percent and 5.36 percent of the population. Since ATS' reported error rate of 2.4 percent (100 percent - 97.6 percent) falls between the projected range of errors, we conclude that ATS accurately reflects the number of students who have received their required immunizations.

Recommendation

1. Take appropriate actions to ensure that all students' required immunization shots are documented in the school files.

Department Monitoring Efforts to Promote Compliance

The Bureau is responsible for monitoring school immunization compliance for the Department. We found that the Bureau's monitoring efforts were effective. However, we did note several improvement opportunities.

During the 2005-2006 school year, the Bureau followed up with schools where, according to ATS, less than 90 percent of the students had the required immunizations. To monitor school compliance, the Bureau uses information in ATS to determine the schools where less than 90 percent of its students received the required immunizations, and then sends letters during the first half of the school year to the principals of these schools. These letters remind them that (1) they must ensure that students meet the immunization requirements, (2) students must provide their vaccination records, and, (3) students who do not comply must not be allowed in school. A second mailing is done in the second half of the school year to the Department of Education's Regional Health Directors. This letter reminds them that principals at schools where students do not have proper immunization documentation or the appropriate waivers, should exclude these students from school.

On October 28, 2005, the ATS bi-weekly report showed 519 schools where less than 90 percent of its students did not receive their required immunizations. We selected a sample of 135 of the 519 schools on ATS and found that 14 were not sent letters. As a

result, these schools were not alerted that follow-up action was needed.

On February 17, 2006, the ATS bi-weekly report showed that the number of non-compliant schools had been reduced to 120 schools, a reduction of 399 schools since October 2005. The Bureau sent letters to the Regional Health Directors on February 22, 2006, to follow up on the remaining non-compliant schools.

At the end of the school year, the ATS bi-weekly report on June 26, 2006 only listed 35 schools that had less than 90 percent of its students who did not receive their required immunizations, a significant improvement from the 519 listed the previous October.

The Bureau relies on manually sending a large number of letters by certified mail to a list of schools limited by the 90 percent threshold. We recommend that, instead, it sends electronic reports to all schools that have any students who have not received the required immunizations. This approach would be less time-consuming and less costly. Department officials indicated that they were thinking about ways other than mail to contact more schools.

Each year, private and public schools, as well as child care centers in New York City, must complete an immunization survey of their new entering students. The Law mandates that an audit validation of these surveys be done at 35 randomly selected entities annually. During the 2005-2006 school year, 37 such audits were conducted by the Bureau; 12 of which occurred at schools that had less than 90 percent of their students immunized. Bureau officials told us they use their discretion to select additional schools to visit beyond those mandated for auditing purposes. We suggest that the Bureau develop a risk-

based approach when selecting additional schools to visit in the future.

Recommendations

2. Continue to follow up on schools that have not achieved the 90 percent immunization compliance rate.
3. Develop and implement a plan to send periodic electronic reports to schools that have students who have not received the required immunizations.
4. Recommendation deleted.
5. Perform a risk-based analysis to select additional schools for follow-up visits.

AUDIT SCOPE AND METHODOLOGY

We conducted our audit in accordance with generally accepted government auditing standards. The audit determined whether the Department's immunization program provided reasonable assurance that public school children were immunized against communicable diseases, as required by Law. Our audit covered the period September 2005 through July 30, 2007. To accomplish our audit objective, we reviewed applicable laws, rules, regulations, policies and procedures. We reviewed Department records and interviewed Department officials. We also interviewed school and New York City Department of Education officials, and reviewed selected student health records.

Based on a 90 percent confidence level and an expected error rate of 10 percent, we selected a statistical random sample of 49 out of 1,019,361 New York City public school students listed in ATS as of June 30, 2006 and reviewed their ATS database information and school health records to verify whether they received immunization shots as required by

Law and described in the Department's publication, "Immunization Requirements for All Students." We verified whether all immunizations recorded in ATS were supported by documentation in the school files and if information in the school files had been entered into ATS. To assess the Department's monitoring efforts, we obtained bi-weekly reports from ATS used to identify schools that required letters and compared them to documentation of letters sent, as well as those receiving Bureau visits. To determine if letters were sent to the 519 non-compliant schools in November 2005, we sampled 135 schools to determine if they were on the Bureau's mailing list.

As is our practice, we notify agency officials at the outset of each audit that we will be requesting a representation letter in which agency management provides assurances, to the best of their knowledge, concerning the relevance, accuracy and competence of the evidence provided to the auditors during the course of the audit. The representation letter is intended to confirm oral representations made to the auditors and to reduce the likelihood of misunderstandings. In the representation letter, agency officials assert that, to the best of their knowledge, all relevant financial and programmatic records and related data have been provided to the auditors. Agency officials further affirm that either the agency has complied with all laws, rules, and regulations applicable to its operations that would have a significant effect on the operating practices being audited, or that any exceptions have been disclosed to the auditors. However, officials at the New York City Mayor's Office of Operations have informed us that, as a matter of policy, mayoral agency officials do not provide representation letters in connection with our audits. As a result, we lack assurance from agency officials that all relevant information was provided to us during the audit.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

AUTHORITY

The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

REPORTING REQUIREMENTS

A draft copy of this report was provided to Department officials for their review and comment. Their comments were considered in preparing this report, and are included as Appendix A.

The Department generally agreed with our recommendations but expressed reservations with one of them. Based on additional information and clarification provided by the Department, we deleted this recommendation in our report.

Appendix B contains State Comptroller comments addressing certain matters in the Department's response.

Within 90 days of the final release of this report, we request the Commissioner of the Department to report to the State Comptroller advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

CONTRIBUTORS TO THE REPORT

Major contributors to this report include William Challice, Albert Kee, Todd Seeberger, Peter Blanchett, John Ames, Unal Sumerkan, Mike D'Amico, Kamal Elsayed, W Sage Hopmeier, and Sue Gold.

APPENDIX A - AUDITEE RESPONSE

THE CITY OF NEW YORK
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
OFFICE OF THE COMMISSIONER



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May 22, 2008

Mr. Albert Kee
Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, New York 12236

Dear Mr. Kee:

Thank you for your letter of April 22, 2008, and the opportunity to respond to your Draft Report 2007-N-6, titled: New York City Department of Health and Mental Hygiene, Immunization Program for Public School Children. We appreciate your office's thorough examination of immunization compliance activities in New York City by the Bureau of Immunization and your finding that monitoring efforts by the Bureau of Immunization are effective and that the Automated Tracking System (ATS) accurately reflects the number of students who have received their immunizations.

We also appreciate the five recommendations contained in the report. Please see our response below to each recommendation.

1. *Take appropriate action to ensure that all students' required immunizations shots are documented in the school files.*

As was pointed out numerous times during the course of the audit, in accordance with New York State Public Health Law 2164, the responsibility for maintaining immunization records in a child's file lies with the Department of Education. The Bureau of Immunization (BOI) will continue to conduct random sampling validations of proper immunization documentation in school files and provide appropriate support to school's administrative staff.
2. *Continue to follow up on schools that have not achieved the 90 percent immunization compliance rate.*

BOI will continue to strengthen its yearly calendar of compliance activities including working with all schools to achieve at least 98.5% of fully immunized students.

- 3. *Develop and implement a plan to send periodic electronic reports to schools that have students who have not received the required immunizations.*

BOI has planned an IT and communications analysis of all BOI activities that will examine the most efficient and effective methods of providing updates and support to delinquent schools.

- 4. *Send letters to students who are not in regular classroom settings and who have not received the required immunizations.*

This recommendation is not feasible. BOI does not have access to contact information for students not enrolled in regular classroom settings, e.g. juvenile detention facilities, inpatient medical and psychiatric facilities, home schools, etc. BOI does maintain close communication with the coordinator of Region 75 in NYC's Department of Education which includes all non-traditional schools. Low performing schools in Region 75 are identified by BOI through ATS and referred to the regional coordinator for direct follow up.

**Comment
1**

- 5. *Perform a risk-based analysis to select additional schools for follow-up visits.*

Commencing in school year 2007-2008, progressively stringent criteria were used to determine which schools received warning letters, audits and follow up. Risk indicators for low immunization compliance were utilized to identify schools through ATS data for appropriate compliance intervention: percentage of students fully immunized, size of the school, proportion of students with invalid or no data, number and proportion of students in excludable status, and progress made over the monitoring period.

In addition, we have comments in response to the body of the report. Despite repeated correction, the audit report persists in stating that the NYC DOHMH is responsible for ensuring that school children are immunized against communicable diseases. As per Public Health Law 2164, this responsibility is clearly placed on the principal and the Department of Education (DOE). DOHMH monitors DOE's compliance and takes necessary action for enforcement when necessary. On page 2, 2nd column, 4th paragraph, last sentence: there is an error: "During the 2005-2006 school year... where at least 90% of its students did not have the required immunizations." This should read "where less than 90% of its students ..."

**Comment
2**

**Comment
2**

Again, thank you for the time and effort of your staff in producing this useful report. If you need further information, please contact Thomas Hardiman, Director for Internal-External Audits, 212-219-5285, thardima@health.nyc.gov.

Sincerely,



Thomas R. Frieden, M.D., M.P.H.
Commissioner

TRF/th

cc: Dr. Jane Zucker, Assistant Commissioner - Bureau of Immunization
Dr. Roger Platt, Assistant Commissioner - School Health
Julia Sykes, Liaison - NYC Department of Education

APPENDIX B – STATE COMPTROLLER COMMENTS ON AUDITEE RESPONSE

1. We agree with the Department's position. Additional information and clarification provided by the Department indicated that students who are not in regular classroom settings and who have not received the required immunizations, are monitored through ATS along with the students in the regular public schools. Based on this information, we deleted this recommendation and revised our report accordingly.
2. We agree with the Department's comments and have revised our report accordingly.