

CHANGE REQUEST for FY 08-09 BUDGET REQUEST CYCLE

Department:	Colorado Department of Public Health and Environment
Priority Number:	2
Change Request Title:	Operation and expansion of the Colorado Immunization Information System (CIIS)

SELECT ONE (click on box):

- Decision Item FY 08-09
- Base Reduction Item FY 08-09
- Supplemental Request FY 07-08
- Budget Request Amendment FY 08-09

SELECT ONE (click on box):

Supplemental or Budget Request Amendment Criterion:

- Not a Supplemental or Budget Request Amendment
- An emergency
- A technical error which has a substantial effect on the operation of the program
- New data resulting in substantial changes in funding needs
- Unforeseen contingency such as a significant workload change

Short Summary of Request:

This is a request for an increase of \$669,112 in the Immunization Program of the Disease Control & Environmental Epidemiology Division, as follows:

- \$669,112 in the General Fund appropriation, to fund the Colorado Immunization Information System (CIIS), 10.1 FTE (including the transfer of the current six University of Colorado at Denver and Health Sciences Center employees and five new FTE) to operate and expand CIIS within the Department of Public Health & Environment.

Background and Appropriation History:

The Colorado Department of Public Health and Environment (CDPHE) has contracted with the University of Colorado at Denver and Health Sciences Center (UCDHSC) since 2002 to operate an immunization tracking system. Funding for the operation of CIIS has been provided by a pass-through of Federal 317 funds from the annual grant from the Centers for Disease Control and Prevention (CDC) to CDPHE, State General Funds, private foundation grants, and in-kind donations from UCDHSC. CDPHE is transitioning the operations for CIIS from UCDHSC internally to CDPHE through a 1 to 3 year

transition plan. This transition plan includes the transfer of the UCHDSC employees to classified CDPHE employees.

UCDHSC has operated CIIS on behalf of CDPHE for six years, with “in-kind” support provided for staff offices, grants and contracts, human resources, and server space and support. UCDHSC will no longer provide this in-kind support as of December 31, 2008, so the CDPHE is seeking to cover the costs of maintaining and expanding the program.

CIIS is the cornerstone of an efficient and effective State immunization program. CIIS is a confidential, population-based, computerized information system that collects and disseminates consolidated immunization information for all Coloradans.

CIIS enables any immunization provider in Colorado to electronically track the shots an individual has received, thereby maintaining an ongoing and complete record to ensure that the individual receives all recommended immunizations in a timely manner and is not over-immunized. CIIS is endorsed by the Colorado Children’s Immunization Coalition and the Colorado Chapter of the American Academy of Pediatrics as the statewide immunization information system in Colorado

An immunization information system is an important tool to increase and sustain high immunization coverage by consolidating immunization records of individuals from multiple providers, allowing providers to generate recall notices for individuals who are not up-to-date, and producing official school forms. CDC has guidelines for immunization information system functionality. These guidelines were used to develop the CIIS.

In the 2006 legislative session, HB 1347 was passed authorizing CIIS to expand the registry across all ages and to allow provider access to newborn screening test results through CIIS.

The primary sources of funding for the development and operation of CIIS have been federal (the annual CDC317 grant), grants from private foundations and in-kind

contributions from UCDHSC. The Colorado Legislature appropriated \$250,000 in 2005-06, \$386,400 in 2006-07 and \$386,400 in 2007-08 of General Fund and \$100,000 of Tobacco Settlement funding (via the Colorado Immunization Fund) to support limited expansion of CIIS to additional providers and limited expansion of efforts to recall children who have not received recommended immunizations. An additional \$668,742. of General Fund (in addition to the current allocation of \$486,400) is required to fully fund the operations of CIIS.

General Description of Request:

This Decision Item furthers the development and assures the operational sustainability for CIIS. CIIS allows providers to: 1) immediately access a complete immunization history for all children; 2) screen children at all visits for immunization status; 3) identify and recall children who are not up-to-date on recommended immunizations. CIIS also allows CDPHE to identify and target “pockets of need” where individuals are not fully immunized and recall children who are not fully immunized. Since its inception in 1996, CIIS has systematically rolled out operations across the state to meet its goal of regular reporting by all providers of childhood immunizations and complete immunization records for all children under the age of six in Colorado.

According to statistics collected by the CDC National Immunization Survey¹ Colorado ranks 30th among the 50 states for immunization of two years olds. Only 75.9% of all Colorado two year olds are fully immunized against vaccine preventable diseases. The greatest risk for many of these diseases is still in young infants and children under two years of age. For pertussis, varicella, influenza, viral gastroenteritis, Streptococcus pneumoniae, and Haemophilus influenzae, there were still over \$25 million of hospital charges for severe disease associated with these infections in Colorado children in 2005, with significant impact in both the public and private sectors. The odds of getting a vaccine-preventable disease are 3.6 times more for children in Colorado who have either no coverage or are covered by Medicaid/State Children’s Health Insurance Program (SCHIP) than for children with private insurance. Further, vaccine-preventable disease rates are increased in counties with a high percentage of children who live in households with income less than two times the Federal Poverty

Level. Implementing systems that assure timely access to vaccines for all children will be critically important, especially during the first 2 years of life, when children are at the highest risk of these diseases.² CIIS is an important element in ensuring the appropriate vaccination against and prevention of, vaccine preventable diseases for Colorado's children. CIIS receives weekly downloads of all Colorado births from CDPHE Vital Statistics. In October 2007, CIIS had at least two immunization records for 75% of all Colorado children aged 0-6 years, and over 490 health care provider sites participated in CIIS.

However, these records are not, in all cases, complete because CIIS has not had sufficient funding to be implemented in all provider offices. In October 2007, 99% of public clinics, 89% of community health centers, 64% of pediatric practices, and 18% of family practices that provide immunization reported regularly to CIIS. In addition, CIIS receives immunization data from Kaiser Permanente, Rocky Mountain Health Plans, Anthem Blue Cross and Blue Shield and United Health Plans.

CIIS expansion will provide support to enroll additional providers and to integrate additional vaccination records. CIIS functionality is dependent on the accuracy and completeness of the vaccination records. Using the recall functionality that is an integral part of CIIS has resulted in an increase in immunization rates of between 9% and 14%. In one randomized trial, CIIS recall significantly raised influenza immunization rates in four private pediatric practices—from 25% in the control group to 42% in the recall group.³ Results from a regional recall effort in the San Luis Valley shows a similar increase of 14% in immunization rates after a recall effort. (CIIS internal report, 2006) Site-based CIIS recall in several provider sites in Montezuma County showed increases of 9% to 11% in immunization rates after CIIS recall.

National efforts to promote immunizations against vaccine preventable diseases among children began with the appropriation of federal funds for polio in 1955. Since then, federal, state, and local governments, along with private and public health care providers, have collaborated to develop and maintain efficient (no waste of vaccines, vaccinations occurring per medically prescribed schedule) and effective (decrease in incidence of

vaccine-preventable diseases) immunization programs throughout the country. Though vaccines have made remarkable progress in attaining the goal of decreasing the incidence of several vaccine-preventable diseases, the infrastructure of the system has not kept pace with the increasing complexity of vaccination schedules, the growing population of the states and especially the tracking of children who move from provider to provider for immunizations because of changes in insurance status. In short, the goal of efficiency as expressed by vaccinations on time according to medically prescribed vaccination schedules and no waste of vaccines (over-immunization) has not been met.

Vaccines have reduced the incidence of many common and often fatal childhood infections by >99% in the United States². Similarly, the introduction of vaccines in Colorado has had a dramatic effect on reducing vaccine-preventable diseases such as diphtheria, tetanus, polio, measles, mumps, rubella, smallpox, and *Haemophilus influenzae* meningitis. Dramatic declines in morbidity have been reported for the nine vaccine-preventable diseases for which vaccination was universally recommended for use in children before 1990 (excluding hepatitis B, rotavirus, and varicella). Morbidity associated with smallpox and polio caused by wild-type viruses has declined 100% and nearly 100% for each of the other seven diseases.

Vaccines are one of the greatest achievements of biomedical science and public health. Despite remarkable progress, several challenges face the U.S. vaccine-delivery system. The infrastructure of the system must be capable of successfully implementing an increasingly complex vaccination schedule. An estimated 194 children are born each day in Colorado, each requiring 15-19 doses of vaccine by age 18 months to be protected against 11 childhood diseases.⁴ In addition, licensure of new vaccines is anticipated against pneumococcal and meningococcal infections, influenza, parainfluenza, respiratory syncytial virus (RSV), and against chronic diseases (e.g., gastric ulcers, cancer caused by *Helicobacter pylori*, cervical cancer caused by human papilloma virus, and rheumatic heart disease that occurs as a sequela of group A streptococcal infection). For some diseases, current vaccination rates in Colorado are not sufficient to prevent increasing rates of disease.

In Colorado in 2006, 70,737 (CDPHE Vital Statistics) children were born (194 per day). For these children to be fully immunized by age 18 months, up to 1,485,477 (70,737 X 21 immunizations, assuming an average of 21 vaccines to fully vaccinate a child) vaccinations need to be administered and documented. Each year, more children are born, additional vaccines are added and this number quickly escalates further into the millions thus compounding the need for thorough, consistent and automated recordkeeping. In addition to tracking the number of vaccines, providers must track the minimum and maximum ages for administration of each vaccine and minimum time intervals between administrations making the job of tracking even more complex.

Research using CIIS data show that over 30% of children see more than one immunization provider by age two.³ Seeing more than one provider results in fragmented documentation and the risk of both over- and under-immunization. The same study showed that health care providers do not have complete documentation of immunizations. Simply aggregating public health data with private records increased immunization rates by 12%.³ The improved documentation assures a complete record and therefore avoiding over vaccinating of children due to lack of complete record at a single site.

Consequences if Not Funded:

If this Decision Item is not funded, CIIS would not be fully populated, functional or utilized. There would be significant gaps in CIIS and it would not be possible to institute recall efforts across the State.

If there were no immunization tracking system the savings for children currently participating in CIIS would be lost. Pulling, checking, copying and sending records for school, camp, etc. has been estimated to cost medical offices \$14.50/record pull. Accessing the same record electronically would cost less per pull, estimated to equal \$.75/record pull. The cost savings per record pull is approximately \$13.75. CIIS has immunization records for 156,236 children aged 0-2 years. Savings lost would therefore be \$2,148,245 (156,236 x \$13.75).

If there was no immunization tracking system, the over immunization currently prevented by CIIS would be lost. According to the 1997 National Immunization Survey, an

estimated 21% of U.S. children (or 1 in 5 children) were over-immunized for at least one vaccine. The Survey states that the national cost of over-immunization is \$29.45 per child (vaccine costs and administration costs) or a total cost of \$26,500,000 annually. CIIS currently contains immunization records for 75% of Colorado children; therefore, the cost of over-immunization lost would be \$401,638. This is calculated at: 86,532 children in Colorado age 0-2 cohort * 21% of the total cohort that is over immunized (=18,172 children potentially over immunized) * \$29.45 per child for the cost of over immunization = \$535,158 * .75 (the percentage of Colorado children in the registry – where over immunization can be avoided).⁵

Direct medical costs can be expected if the number of unimmunized and underimmunized children is not reduced through the use of the recall function associated with CIIS. The Centers for Disease Control and Prevention have estimated the direct medical savings realized per dollar invested in vaccines (see Table 1). However, since we cannot accurately estimate the savings predicted in our mixed population of unimmunized and underimmunized children by vaccine, direct medical cost savings cannot be included in the calculation.

Table 1

Benefit-Cost Analysis of Commonly Used Vaccines (Savings per Dollar Invested) {Source: Centers for Disease Control and Prevention}	
Vaccine	Direct Medical Savings per one dollar invested (Net)
Diphtheria Tetanus Pertussis	\$6.00
Measles Mumps Rubella	\$10.30
Oral Polio Vaccine	\$3.40
H. influenzae type b	\$1.40
Hepatitis B	\$0.50
Varicella	\$0.90
Total Savings All Vaccines per Child	\$22.50
Average Vaccine Savings per Child	\$3.75

Studies by the Centers for Disease Control and Prevention have clarified why immunization coverage is difficult to attain. First, parents frequently believe their children have been properly immunized when they transfer that responsibility to a health care provider, yet with the complexity of the immunization schedule the provider may not be up-to-date on the requirements for that child. Second, many health care providers believe the immunization levels of children in their practices are higher than they actually are--sometimes 40% higher than actual figures.⁶ Studies by both the Centers for Disease Control and Prevention and All Kids Count have also shown that introducing a tracking system not only saves money for providers, but also saves money for the population as whole. Children are not the only persons affected by vaccine preventable diseases, persons in the population that are immuno-suppressed and are exposed to under-immunized children also suffer from an increased incidence of these diseases.

Other non-quantifiable benefits of the CIIS include the following:

- Clinic Assessment – CIIS allows immunization providers to assess their clinic activities by providing immunization coverage rates for selected populations.
- School Certification – CIIS provides access to an immunization record of students to verify status for certification in seconds.
- Parental Record keeping - CIIS provides parents with a definitive, centralized record of their child's immunizations. This record helps ensure accurate vaccine administration and ease the record keeping responsibilities.
- CDPHE Program Planning - CIIS assists CDPHE in program planning by identifying areas with low coverage rates for intervention. CIIS also will be the central data-gathering site for reporting on program activities to CDC, CDPHE senior staff and the Colorado Legislature.
- Integration in Vaccines for Children (VFC) program – The National Immunization Program has transitioned to a single vendor for vaccine ordering and distribution. In this new system it will be necessary for providers to report data including doses of vaccine administered, doses of vaccine on hand and additional vaccine administration details. CIIS provides the platform for providers to report this data electronically without additional effort or time expended.

- Outbreak and Disease Control – CIIS will assist disease control efforts by providing immediate access to records of persons exposed to vaccine preventable diseases to determine susceptibility. CIIS will also allow for immediate notification of persons who have received a particular vaccine or vaccine lot during a recall based upon an adverse event.

Calculations for Request:

Summary of Request FY 08-09	Total Funds	General Fund	Cash Funds	Cash Funds Exempt	Federal Funds	FTE
Total Request	\$669,112	\$669,112	\$0	\$0	\$0	10.1
Current General Fund Appropriation	(\$386,400)	(\$386,400)	\$0	\$0	\$0	0.0
Current Colo. Imm. Fund Appropriation	(\$100,000)	\$0	\$0	(\$100,000)	\$0	0.0
Personal Services	\$779,886	\$779,886	\$0	\$0	\$0	0.0
General Operating	\$5,500	\$5,500	\$0	\$0	\$0	0.0
Capital Outlay	\$10,600	\$10,600	\$0	\$0	\$0	0.0
IT Equipment Support and licensing	\$94,000	\$94,000	\$0	\$0	\$0	0.0
Marketing	\$10,000	\$10,000	\$0	\$0	\$0	0.0
Contracts	\$216,593	\$116,593	\$0	\$100,000	\$0	0.0
Travel	\$38,933	\$38,933	\$0	\$0	\$0	0.0

Summary of Request FY 09-10	Total Funds	General Fund	Cash Funds	Cash Funds Exempt	Federal Funds	FTE
Total Request	\$662,856	\$662,856	\$0	\$0	\$0	11.0

STATE OF COLORADO FY 08-09 BUDGET REQUEST CYCLE: Colorado Department of Public Health and Environment

Summary of Request FY 09-10	Total Funds	General Fund	Cash Funds	Cash Funds Exempt	Federal Funds	FTE
Current General Fund Appropriation	(\$386,400)	(\$386,400)	\$0	\$0	\$0	0.0
Current Colo. Imm. Fund Appropriation	(\$100,000)		\$0	(\$100,000)	\$0	0.0
Personal Services	\$784,230	\$784,230	\$0	\$0	\$0	0.0
General Operating	\$5,500	\$5,500	\$0	\$0	\$0	0.0
IT Equipment and licensing	\$94,000	\$94,000	\$0	\$0	\$0	0.0
Marketing	\$10,000	\$10,000	\$0	\$0	\$0	0.0
Contracts	\$216,593	\$116,593	\$0	\$100,000	\$0	0.0
Travel	\$38,933	\$38,933	\$0	\$0	\$0	0.0

TABLE 1. CALCULATIONS TO EXPAND AND OPERATE THE COLORADO IMMUNIZATION INFORMATION SYSTEM

COST COMPONENT								
PERSONAL SERVICE	Monthly Salary	FTE	Annual Salary	PERA	Medicare	AED	SAED	TOTAL
TITLE				10.15%	1.45%	1.60%	0.50%	
MD POLICY OVERSIGHT	\$12,500	0.1	\$15,000	\$1,523	\$218	\$240	\$75	\$17,055
GPV PROJECT MGR	\$7,564	0.9	\$90,768	\$9,213	\$1,316	\$1,452	\$454	\$103,203
PHN-CLINICAL MGR	\$5,811	0.9	\$69,732	\$7,078	\$1,011	\$1,116	\$349	\$79,285
HPII IMMUNIZATION COORDINATORS	\$4,583	6.0	\$357,474	\$36,284	\$5,183	\$5,720	\$1,787	\$406,448
1.0 FTE for reference - non add	\$4,583	1.0	\$54,996	\$5,582	\$797	\$880	\$275	\$62,530
ITII CUSTOMER SUPPORT	\$3,568	0.9	\$42,816	\$4,346	\$621	\$685	\$214	\$48,682
ITIV DATA ANALYSIS	\$6,729	1.1	\$96,898	\$9,835	\$1,405	\$1,550	\$484	\$110,173
GPIII MARKETING	\$5,376	0.2	\$12,902	\$1,310	\$187	\$206	\$65	\$14,670
TOTAL PERSONAL SERVICE	\$57,133	10.1	\$685,590	\$69,587	\$9,941	\$10,969	\$3,428	\$779,516

Assumptions for Calculations:

Personal services calculations use transfer level of current CHS salaries effective on July 1, 2007 and benefits rates as shown in the table.

Please note the table above shows 10.1 FTE, which accounts for the pay date shift. The actual FTE needed for a full year is 11.0.

Table 2. Operating Travel Costs

OPERATING AND TRAVEL	AMOUNT	FTE/#	TOTAL
GENERAL OPERATING	\$500	11.0	\$5,500
COMPUTERS			
DESKTOPS NEW/REPLACEMENTS	\$900	5	\$4,500
LAPTOPS NEW/REPLACEMENTS	\$1,200	3	\$3,600
PROJECTORS FOR TRAINING	\$1,250	2	\$2,500
TELECOM CHARGES	\$2,000		\$2,000
SOFTWARE LICENSES	\$60,000		\$60,000
HOSTING CHARGES (DOIT)	\$8,000 per quarter		\$32,000
MARKETING MATERIALS	\$10,000		\$10,000
CONTRACTS			
THE CHILDREN'S HOSPITAL	\$72,593		\$72,593
INTEGRATIVE SOLUTIONS, LLC	\$84,000		\$84,000
STELZER ASSOCIATES	\$60,000		\$60,000
TRAVEL			
IN-STATE	\$27,573		\$27,573
OUT-STATE	\$11,360		\$11,360
TOTAL OPERATING AND TRAVEL			\$375,626
TOTAL REQUEST			\$1,155,142

Table 3. Travel Costs

STATE OF COLORADO FY 08-09 BUDGET REQUEST CYCLE: Colorado Department of Public Health and Environment

Travel Cost Component	Rates	Duration Out of Town			Total
		1 night	2 nights	3 nights	
IN-STATE TRIPS					
Lodging	\$85/night	\$85	\$170	\$255	
1 day per diem	\$39/day	\$39	\$78	\$117	
Mileage	\$0.39/mile	\$78	\$156	\$234	
Cost per trip		\$202	\$404	\$606	
times number of trips		32.5	32.5	13	78.0
Sub-Total		\$6,565	\$13,130	\$7,878	\$27,573
OUT-STATE CONFERENCE					
Airfare	\$600/ea staff				\$4,800
Lodging	\$200/day			\$600	\$4,800
Per diem	\$55/day			\$220	\$1,760
Sub-Total				\$820	\$11,360
TOTAL TRAVEL					\$38,933

Assumptions for Calculations:

Travel costs are based on details in Table 3.

Assumptions regarding the frequency and duration of travel are shown within the table, include Coordinator In-State expenses for training and 6 coordinators & Project Manager & Clinical Manager to attend the yearly Out of State National Registry Conference. The number of in state trips is based on current practice of registry employees. The nightly hotel rate is estimated using Division experience; the daily per diem rate is the current minimum per the State Fiscal Rules; the mileage rate is the current for non-four-wheel drive vehicles per State Fiscal Rules.

Total Cost of CIIS:

\$1,155,512

Current General Fund Support for CIIS:	\$386,400
Current Colorado Immunization Fund Support for CIIS:	<u>\$100,000</u>
Balance necessary to fully fund CIIS:	\$669,112

Assumptions for Calculations:

1. Number of children in Colorado aged 0-6 is estimated to be 498,489.
2. Data collected by CDC are accurate representations of the immunization rates for Colorado children.
3. It is assumed that Colorado's population is 1.66% of the total United States population, based on the 2000 Census.

Impact on Other Government Agencies:

There is an opportunity to implement a process that would require collaboration with Medicaid staff to partially fund CIIS using Medicaid funding. This would cover some operational costs focused on children enrolled in Medicaid. There is a Centers for Medicare and Medicaid Services program that matches 50/50 for operation of an immunization tracking system. The Department of Health Care Policy and Finance (HCPF) could apply for matching federal funding to support the operational costs for Medicaid enrolled children only. There has been no attempt in the past to apply for the federally matching funding. A workgroup with HCPF and CIIS staff are currently working on a plan to pursue this opportunity in the future.

Cost Benefit Analysis: BENEFITS-COST RATIO ASSESSMENT

	Expand CIIS to include all Coloradoans
TOTAL COST REQUEST PER YEAR	\$1,155,512
TOTAL COSTS (Years 1-5)	\$5,777,560
TOTAL BENEFIT/LOSS PER YEAR	\$2,149,482*
TOTAL BENEFIT/LOSS (Years 1-5)	\$10,747,410
BENEFIT/COST RATIO	1.86:1

Benefit calculated for the savings in pulling records (1 record request per year, per child) for the medical providers. See the section “Consequences if not Funded” for details) \$13.75 savings per year per child, X 156,326 = \$2,149,482 per year. No direct medical cost savings are included.

Implementation Schedule:

Task	Month/Year
Technical Server Move Planning	December 2007
Research and Planning	January 2008 – July 2009
Technical Server Move Testing	January 2008 – March 2008
Technical Server Active	April 2008
FTE Authorization	July 2008
FTE Transfer from UCHSC negotiations	July 2008 – August 2008
Space allocation at CDPHE	July – August 2008
FTE Hiring	September – December 2008

Statutory and Federal Authority: All citations are from the 2006 C.R.S.

25-2-122. Heirloom birth and marriage certificates - funds created - report - rules - definitions.

(1) As used in this section, unless the context otherwise requires:

(a) "Heirloom birth certificate" means a birth certificate that is suitable for display and may bear the seal of the state and be signed by the governor.

(c) The fee established pursuant to paragraph (a) of this subsection (2) shall be sufficient to cover the direct and indirect costs of producing and issuing the heirloom birth certificate, plus an additional ten dollars. The state registrar shall transmit moneys generated pursuant to this subsection (2), along with an explanation of the number of heirloom birth certificate sales that correspond to such moneys, to the state treasurer, who shall credit:

(I) For each sale of an heirloom birth certificate, ten dollars to the immunization fund created in section [25-4-1708](#); and

(II) The remainder of such moneys to the vital statistics records cash fund created in section [25-2-121](#).

Source: L. 2006: Entire section added, p. 943, § 1, effective August 7. **L. 2007:** (2)(c)(I) amended, p. 654, § 1, effective April 26.

[25-4-2402. Legislative declaration.](#)

(1) The general assembly hereby finds and declares that:

(a) Immunization is one of the most important ways to protect individuals and communities against serious infectious diseases and their consequences, and widespread immunization has virtually eliminated many serious diseases that were once responsible for millions of infections and thousands of deaths each year.

(b) Although immunization rates of infants, children, adolescents, and adults in Colorado have improved over the last several years, there is a need to continue to improve the rates so that fewer individuals are put at risk from vaccine-preventable diseases.

(c) Timely vaccination of children, adolescents, and adults not only protects them against common, sometimes serious, and potentially fatal diseases, but also serves the community as one of the most successful and cost-effective public health tools available

for the prevention and spread of these infections, and the vaccines are safe and highly protective, particularly when administered according to recommended schedules.

(d) More than twenty percent of preschool-aged children in Colorado are not fully vaccinated and are at increased risk of contracting and spreading vaccine-preventable diseases.

(e) It is unnecessary for children, adolescents, and adults to be subjected to suffering or death from diseases that are immunization preventable.

(f) In 2005, hospital charges for the care of children with vaccine-preventable diseases exceeded twenty-five million dollars. Additionally, tens of millions of dollars were spent on the costs of the outpatient care of affected children, in addition to the costs of the loss of productivity and absences from work for caregivers due to the absences of children from school.

(g) Over the past three decades, the recommended vaccination schedules for children and adults have become increasingly more complex as vaccines have been combined, new vaccines have been added, and the delivery system has incorporated more manufacturers, distributors, and providers. Additionally, local and national vaccine shortages and distribution errors have resulted in compromised vaccination initiatives.

(h) For Colorado to be consistent with the healthy people 2010 initiative and reach the goal of immunizing ninety percent of all children in the state in a timely and expeditious manner, the Colorado immunization information system must be funded and sustained. The Colorado immunization information system may also provide a secure method for authorized individuals and entities to access information collected by public agencies.

(2) Therefore, the general assembly supports the expansion of the Colorado immunization registry and supports increased access to immunizations for persons in Colorado.

Source: L. 2007: Entire part added, p. 659, § 6, effective April 26.

25-4-1702. Legislative declaration.

(1) The general assembly hereby finds, determines, and declares that vaccine preventable diseases represent a serious public health threat to the people of this state. It has been well documented that vaccines are an effective way to save lives and prevent debilitating disease. Vaccines are among the most cost-effective components of preventive medical care because for every dollar spent on immunization, ten dollars are saved in later medical expenses.

(2) The general assembly further finds, determines, and declares that the rate of routine immunization among preschool children appears to be falling steadily. Therefore, it is the purpose of this part 17 to fully immunize all infants, subject to available appropriations, at a level that is age-appropriate as determined by the board of health.

(3) The general assembly further finds, determines, and declares that the inability of some parents to personally take their children to health care professionals for the purpose of immunization contributes to the significant number of children who have not been immunized on a timely basis in accordance with this part 17. Therefore, it is the further purpose of this part 17 to provide an alternative method by which such children may be immunized without circumventing parental authority and control.

Source: L. 92: Entire part added, p. 1307, § 1, effective July 1. **L. 96:** (3) added, p. 583, § 1, effective July 1.

25-4-1703. Definitions.

As used in this part 17, unless the context otherwise requires:

- (1) "Board of health" means the state board of health.
- (2) "Department" means the state department of public health and environment.

(3) "Infant" means any child up to twenty-four months of age or any child eligible for vaccination and enrolled under the "Colorado Medical Assistance Act", articles 4, 5, and 6 of title [25.5](#), C.R.S.

(3.5) "Minor" means any child under eighteen years of age.

(4) "Practitioner" means a duly licensed physician or other person who is permitted and otherwise qualified to administer vaccines under the laws of this state.

(5) "Vaccine" means such vaccines as are determined by the board of health to be necessary to conform to recognized standard medical practices. Such term includes, but is not limited to, the following vaccines:

(a) Diphtheria-tetanus-pertussis (DTP);

(b) Polio: Oral polio vaccine (OPV) or inactivated polio vaccine (IPV);

(c) Measles-mumps-rubella (MMR);

(d) Haemophilus influenzae type B conjugate vaccines (HIB).

Source: L. 92: Entire part added, p. 1308, § 1, effective July 1. **L. 94:** (2) amended, p. 2776, § 474, effective July 1. **L. 96:** (3.5) added, p. 583, § 2, effective July 1. **L. 2006:** (3) amended, p. 2015, § 90, effective July 1.

[25-4-1704. Infant immunization program - delegation of authority to immunize minor.](#)

(1) There is hereby created in the department an infant immunization program which is established to immunize infants against vaccine preventable disease. Such program shall be implemented on and after January 1, 1993.

(2) Every parent, legal guardian, or person vested with legal custody or decision-making responsibility for the medical care of a minor, or person otherwise responsible for the care of an infant residing in this state, shall be responsible for having such infant vaccinated in compliance with the schedule of immunization established by the board of

health; except that, failure to vaccinate a child in accordance with this subsection (2) shall not constitute sufficient grounds for any insurance company to deny a claim submitted on behalf of a child who develops a vaccine preventable disease.

(2.5) (a) Subject to the provisions of this subsection (2.5), a parent, legal guardian, person vested with legal custody of a minor or decision-making responsibility for the medical care of a minor, or such other adult person responsible for the care of a minor in this state, other than any employee of a licensed child care center in which the minor is enrolled, may delegate, verbally or in writing, that person's authority to consent to the immunization of a minor to a stepparent, an adult relative of first or second degree of kinship, or an adult child care provider who has care and control of the minor. Any immunization administered pursuant to a delegation of authority under this subsection (2.5) shall be administered only at a health care clinic, hospital, office of a private practitioner, or county public health clinic.

(b) If a parent, legal guardian, person vested with legal custody of a minor or decision-making responsibility for the medical care of a minor, or other adult person responsible for the care of a minor in this state verbally delegates his or her authority to consent to the immunization of a minor under this subsection (2.5), the person to whom such authority is thereby delegated shall confirm the verbal delegation in writing and shall verbally relay any relevant health history to the administering practitioner. The practitioner administering the vaccination shall include the written confirmation in the minor's medical record. If a parent, legal guardian, person vested with legal custody of a minor or decision-making responsibility for the medical care of a minor, or other adult person responsible for the care of a minor in this state delegates his or her authority to consent to the immunization of a minor under this subsection (2.5) in writing, such writing shall include the relevant health history, and the practitioner administering the vaccination shall include a copy of the written delegation of authority in the minor's medical record.

(c) A person who consents to the immunization of a minor pursuant to a delegation of authority under this subsection (2.5) shall provide the practitioner with sufficient and accurate health information about the minor for whom the consent is given and, if necessary, sufficient and accurate health information about the minor's family to enable

the practitioner to assess adequately the risks and benefits inherent in the proposed immunization and to determine whether the immunization is advisable.

(d) A person may not consent to the immunization of a minor pursuant to this subsection (2.5) if:

(I) The person has actual knowledge that the parent, legal guardian, person vested with legal custody of a minor or decision-making responsibility for the medical care of a minor, or other adult person responsible for the care of a minor in this state has expressly refused to give consent to the immunization; or

(II) The parent, legal guardian, person vested with legal custody of a minor or decision-making responsibility for the medical care of a minor, or other adult person responsible for the care of a minor in this state has told the person that the person may not consent to the immunization of the minor or, in the case of a written authorization, has withdrawn the authorization in writing.

(3) In addition to the immunization obligations set forth in section [25-4-905](#), relating to the immunization of indigent children, and except as provided in subsection (4) of this section, the department shall provide at public expense, subject to available appropriations, systematic immunizations to those infants that are not exempt from such immunization pursuant to paragraph (a) or (b) of subsection (4) of this section. The manner and frequency of vaccine administration shall conform to recognized standards of medical practice which are necessary for the protection of public health.

(4) An infant shall be exempted from receiving the required immunizations:

(a) Upon submitting certification from a licensed physician that the physical condition of the infant is such that one or more specified immunizations would endanger the infant's life or health; or

(b) Upon submitting a statement signed by one parent or guardian that such parent or guardian adheres to a religious belief whose teachings are opposed to immunizations, or that such parent or guardian has a personal belief that is opposed to immunization.

Source: L. 92: Entire part added, p. 1308, § 1, effective July 1. **L. 96:** (2.5) added, p. 583, § 3, effective July 1. **L. 98:** (2), (2.5)(a), (2.5)(b), and (2.5)(d) amended, p. 1412, § 79, effective February 1, 1999.

25-4-1705. Department of public health and environment - powers and duties - rules.

(1) The department shall negotiate for the purchase of and shall purchase vaccines to achieve the purposes of this part 17.

(2) The department shall secure and maintain such facilities as may be necessary for the safe and adequate preservation and storage of such vaccines.

(3) The department shall distribute such vaccines, in accordance with rules promulgated by the board of health, without purchase, shipping, handling, or other charges to practitioners who agree not to impose a charge for such vaccine on the infant recipient, the child's parent or guardian, third-party payor, or any other person; except that a practitioner may charge a reasonable administrative fee in connection with the administration of a vaccine. The board of health shall determine the amount of such administrative fee that a practitioner may charge.

(4) The department shall collect epidemiological information and shall establish a system for recording such information pursuant to rules and regulations adopted by the board of health.

(5) The board of health, in consultation with the medical services board in the state department of health care policy and financing, and such other persons, agencies, or organizations that the board of health deems advisable, shall formulate, adopt, and promulgate rules governing the implementation and operation of the infant immunization program. Such rules shall address the following:

(a) The purchase, storage, and distribution of the vaccines by the department;

- (b) Requirements that providers, hospitals, and health care clinics must meet before entering into a contract with the department, making such provider, hospital, or clinic an agent of the department for the purposes of the infant immunization program;
 - (c) Which vaccines shall be required to be administered;
 - (d) The route and frequency of the vaccine's administration;
 - (e) (Deleted by amendment, L. 2007, p. 655, § 3, effective April 26, 2007.)
 - (f) The issuance of immunization records to parents or guardians;
 - (g) The assessment of the vaccination status of infants;
 - (h) The dissemination of information about the operation of the infant immunization program, including the requirement that such information be distributed by hospitals to parents of newborns.
- (6) The department is authorized to accept any gifts or grants or awards of funds from the federal government or private sources for the implementation and operation of the infant immunization program.
- (7) The department is authorized to enter into contracts which are necessary for the implementation and operation of the infant immunization program.
- (8) Local health departments and the department shall use the birth certificate of any infant to enroll such infant in an immunization tracking system established in section [25-4-2403](#). Such use of the infant's birth certificate shall be considered an official duty of local health departments and the department.
- (9) (a) (Deleted by amendment, L. 2003, p. 2198, § 1, effective August 6, 2003.)
- (b) The department or any person who contracts with the department pursuant to subsection (7) of this section shall not establish a universal purchase system for the procurement of vaccines for privately insured persons under federal government contracts.

(10) Physicians, licensed health care practitioners, clinics, schools, licensed child care providers, hospitals, managed care organizations or health insurers in which a student, as defined in section [25-4-901](#) (3), or an infant is enrolled as a member or insured, persons that have contracted with the department pursuant to subsection (7) of this section, and public health officials may release any immunization records in their possession, whether or not such records are in the immunization tracking system established in section [25-4-2403](#), to the persons or entities specified in section [25-4-2403](#) (1) to provide an accurate and complete immunization record for the child in order to verify compliance with state immunization law.

Source: **L. 92:** Entire part added, p. 1309, § 1, effective July 1. **L. 94:** IP(5), (5)(b), and (5)(e)(IV) amended, p. 2776, § 475, effective July 1. **L. 98:** (5)(e) amended, p. 20, § 3, effective August 5. **L. 2001:** IP(5) and (5)(e) amended and (9) and (10) added, p. 825, § 4, effective August 8. **L. 2002:** (5)(e)(III)(A) and (5)(e)(III)(B) amended, p. 1536, § 266, effective October 1. **L. 2003:** (5)(e)(II)(D) and (5)(e)(IV) amended, p. 710, § 42, effective July 1; (9) amended, p. 2198, § 1, effective August 6. **L. 2005:** (5)(e)(IV) and (5)(e)(V) amended and (5)(e)(VI) added, p. 419, § 1, effective April 29. **L. 2007:** (5)(e), (8), and (10) amended, p. 655, § 3, effective April 26.

Cross references: For the legislative declaration contained in the 2002 act amending this section, see section 1 of chapter 318, Session Laws of Colorado 2002.

[25-4-1706. Infant immunization program - eligibility.](#)

Any infant shall be eligible for participation in the infant immunization program; except that, for fiscal year 1992-93, only infants born on or after January 1, 1993, shall be eligible for participation in the infant immunization tracking program.

Source: **L. 92:** Entire part added, p. 1311, § 1, effective July 1.

[25-4-1707. Moneys targeted for medical assistance for infants - reimbursement.](#)

The state department of health care policy and financing shall reimburse the department of public health and environment for the costs of vaccinating infants under the infant

immunization program who are medicaid eligible pursuant to the "Colorado Medical Assistance Act", articles 4, 5, and 6 of title [25.5](#), C.R.S. Such moneys received from the state department of health care policy and financing shall be credited to the immunization fund.

Source: L. 92: Entire part added, p. 1311, § 1, effective July 1. **L. 94:** Entire section amended, p. 2624, § 44, effective July 1. **L. 2006:** Entire section amended, p. 2015, § 91, effective July 1. **L. 2007:** Entire section amended, p. 658, § 4, effective April 26.

[25-4-1708. Fund created.](#)

(1) There is hereby established in the state treasury a fund to be known as the immunization fund, which fund shall be subject to annual appropriation to the department of public health and environment by the general assembly for the purposes of purchasing vaccines, assisting users of the immunization tracking system established in section [25-4-2403](#) to connect to the system, utilizing the reminder and recall process of the immunization tracking system, and implementing, developing, and operating immunization programs. The fund shall be credited with such appropriations as the general assembly may make from the general fund for immunization programs, any gifts, grants, or awards received pursuant to sections [25-4-1705](#) (6) and 25-4-2403, and moneys received from the state department of health care policy and financing as reimbursement pursuant to section [25-4-1707](#). All income from the investment of moneys in the fund shall be credited to the fund.

(2) If federal funds are not received to implement and operate the immunization programs created in this part 17 and part 24 of this article, no additional general fund moneys shall be appropriated for such purposes.

(3) All moneys credited to the immunization fund that are not expended during the fiscal year shall be retained in the fund for its future use and shall not be credited or transferred to the general fund or any other fund.

(4) (Deleted by amendment, L. 2007, p. 658, § 5, effective April 26, 2007.)

Source: L. 92: Entire part added, p. 1311, § 1, effective July 1. **L. 94:** (1) amended, p. 2776, § 476, effective July 1. **L. 2003:** (4) added, p. 1543, § 3, effective May 1. **L. 2005:** (1) amended, p. 1239, § 1, effective June 3. **L. 2007:** Entire section amended, p. 658, § 5, effective April 26.

25-4-1709. Limitations on liability.

(1) No person who administers a vaccine required under the provisions of this part 17 shall be held liable for injuries sustained pursuant to such vaccine if:

(a) The vaccine was administered according to the schedule of immunization established by the board of health;

(b) There were no medical contraindications for administering such vaccine; and

(c) The vaccine was administered using generally accepted clinical methods.

(2) An action shall not be maintained for a vaccine-related injury or death until action for compensation for such alleged injury has been exhausted under the terms of the federal "National Childhood Vaccine Injury Act of 1986", 42 U.S.C. secs. 300aa-10 to 300aa-33, as such law is from time to time amended, provided the federal "National Childhood Vaccine Injury Act of 1986" applies to the particular vaccine administered.

(3) If the injury or death which is sustained does not fall within the parameters of the vaccine injury table as defined in 42 U.S.C. sec. 300aa-14, as enacted on November 14, 1986, a rebuttable presumption is established that the injury sustained or the death was not due to the administration of the vaccine. Such presumption shall be overcome by a preponderance of the evidence.

(4) Where a claim against a hospital, clinic, or provider arises from injuries resulting from the handling, storage, or distribution of vaccines required by this part 17, such hospital, clinic, or provider shall not be liable unless such injuries are the result of the negligent failure of an employee of such hospital, clinic, or provider to conform to recognized standards of practice which are necessary for the protection of public health.

(5) A practitioner licensed to practice medicine pursuant to article [36](#) of title [12](#), C.R.S., or nursing pursuant to article [38](#) of title [12](#), C.R.S., or the health care clinic, hospital, office of a private practitioner, or county public health clinic at which the immunization was administered that relies on the health history and other information given by a person who has been delegated the authority to consent to the immunization of a minor pursuant to section [25-4-1704](#) (2.5) is not liable for damages related to an immunization resulting from factual errors in the health history or information given to the practitioner or the health care clinic, hospital, office of a private practitioner, or county public health clinic at which the immunization was administered by the person when such practitioner or health care clinic, hospital, office of a private practitioner, or county public health clinic reasonably relies upon the health history information given and exercises reasonable and prudent care in administering the immunization.

Source: L. 92: Entire part added, p. 1312, § 1, effective July 1. **L. 96:** (5) added, p. 585, § 4, effective July 1

[25-4-2403. Department of public health and environment - powers and duties - immunization tracking system.](#)

(1) In order to expand the immunization registry and increase access to immunizations, the department of public health and environment may address:

(a) Mechanisms for maximizing federal funds to purchase, distribute, and deliver vaccines for individuals in Colorado, including, but not limited to, participation in a state purchasing and distribution cooperative and the mechanisms for statewide purchase, distribution, and prioritization to include, but not be limited to, the seasonal influenza vaccine;

(b) Methods to reduce the administrative burden of providing immunizations to individuals in Colorado by reviewing current immunization activities and strategies and epidemiological data related to vaccine-preventable diseases and identifying opportunities to implement best practices for immunizations throughout Colorado using innovative strategies that are population-specific, culturally sensitive, and inclusive; address safety issues; and enhance current services;

(c) Options for Colorado to more effectively purchase, distribute, and deliver vaccines to underinsured and uninsured individuals;

(d) The pursuit of private and public partnerships for funding for the immunization registry infrastructure;

(e) Options for the most effective and cost-effective use of funds that may be available to the department of public health and environment to address vaccine delivery in the state; and

(f) Methods for implementing the findings addressed in paragraphs (a) to (d) of this subsection (1).

(2) To enable the gathering of epidemiological information and investigation and control of communicable diseases, the department of public health and environment may establish a comprehensive immunization tracking system with immunization information gathered by state and local health officials from the following sources:

(a) Practitioners;

(b) Clinics;

(c) Schools;

(d) Parents, legal guardians, or persons authorized to consent to immunization pursuant to section [25-4-1704](#);

(e) Individuals;

(f) Managed care organizations or health insurance plans in which an individual is enrolled as a member or insured, if such managed care organization or health insurer reimburses or otherwise financially provides coverage for immunizations;

(g) Hospitals;

(h) The department of health care policy and financing with respect to individuals who are eligible for coverage under the "Colorado Medical Assistance Act", articles 4, 5, and 6 of title [25.5](#), C.R.S.; and

(i) Persons and entities that have contracted with the state pursuant to paragraph (d) of subsection (9) of this section.

(3) Records in the immunization tracking system shall be strictly confidential and shall not be released, shared with any agency or institution, or made public upon subpoena, search warrant, discovery proceedings, or otherwise, except under the following circumstances:

(a) Medical and epidemiological information may be released in a manner such that no individual person can be identified.

(b) Immunization records and epidemiological information may be released to the extent necessary for the treatment, control, investigation, and prevention of vaccine-preventable diseases; except that every effort shall be made to limit disclosure of personal identifying information to the minimum amount necessary to accomplish the public health purpose.

(c) Immunization records and epidemiological information may be released to the individual who is the subject of the record, to a parent of a minor individual, to a guardian or person authorized to consent to immunization under section [25-4-1704](#), to the physician, clinic, hospital, or licensed health care practitioner treating the person who is the subject of an immunization record, to a school in which such person is enrolled, or any entity or person described in paragraph (f), (h), or (i) of subsection (2) of this section.

(4) An officer, employee, or agent of the department of public health and environment or a local department of health shall not be examined in any judicial, executive, legislative, or other proceeding as to the existence or content of any individual's report obtained by such department without consent of the individual or the individual's parent or guardian. However, this subsection (4) shall not apply to individuals who are under isolation, quarantine, or other restrictive action taken pursuant to section [25-1.5-102](#) (1) (c).

(5) (a) An officer, employee, or agent of the department of public health and environment or any other person who violates this section by releasing or making public confidential immunization records or epidemiological information in the immunization tracking system or by otherwise breaching the confidentiality requirements of this section or releasing such information without authorization commits a class 1 misdemeanor and, upon conviction thereof, shall be punished as provided in section [18-1.3-501](#) (1), C.R.S. The unauthorized release of each record shall constitute a separate offense.

(b) A natural person who, in exchange for money or any other thing of value, violates this section by wrongfully releasing or making public confidential immunization records or epidemiological information in the immunization tracking system or by otherwise breaching the confidentiality requirements of this section or releasing such information without authorization commits a class 1 misdemeanor and, upon conviction thereof, shall be punished as provided in section [18-1.3-501](#) (1), C.R.S.

(c) A business entity who, in exchange for money or any other thing of value, violates this section by wrongfully releasing or making public confidential immunization records or epidemiological information in the immunization tracking system or by otherwise breaching the confidentiality requirements of this section or releasing such information without authorization shall be assessed a civil penalty of ten thousand dollars per sale of information per subject of such information.

(6) (a) The department of public health and environment or the department's contractor may directly contact the individual who is the subject of immunization records or the individual's parent or legal guardian for the purpose of notifying the individual, parent, or legal guardian if immunizations are due or overdue as indicated by the advisory committee on immunization practices of the United States department of health and human services or the American academy of pediatrics. The department or the department's contractor shall contact the individual, parent, or legal guardian if it is necessary to control an outbreak of or prevent the spread of a vaccine-preventable disease pursuant to section [25-1.5-102](#) (1) (a) or 25-4-908.

(b) A notice given to an individual or a parent or legal guardian of an individual under eighteen years of age pursuant to this subsection (6) shall also inform the individual,

parent, or legal guardian of the option to refuse an immunization on the grounds of medical, religious, or personal belief considerations pursuant to section [25-4-903](#).

(7) An individual or a parent or legal guardian who consents to the immunization of an infant, child, or student pursuant to part 9 or 17 of this article or this part 24 may exclude immunization information from the immunization tracking system. The individual, parent, or legal guardian may remove such immunization information from the immunization tracking system at any time. The department of public health and environment shall ensure that the process to exclude immunization information from the system is readily available and not burdensome. The physician, licensed health care practitioner, clinic, hospital, or local health department shall inform the individual, parent, or legal guardian of the option to exclude such information from such system and the potential benefits of inclusion in such system. In addition, the physician, licensed health care practitioner, clinic, hospital, or local health department shall inform such parent or legal guardian of a minor individual of the option to refuse an immunization on the grounds of medical, religious, or personal belief considerations pursuant to section [25-4-903](#). Neither refusing an immunization on the grounds of medical, religious, or personal belief considerations pursuant to section [25-4-903](#) nor opting to exclude immunization notification information from the immunization tracking system shall, by itself, constitute child abuse or neglect by a parent or legal guardian.

(8) A person licensed to practice medicine pursuant to article [36](#) of title [12](#), C.R.S.; a person licensed to practice nursing pursuant to article [38](#) of title [12](#), C.R.S.; any other licensed health care practitioner as defined in section [25-4-1703](#); providers of county nursing services; staff members of health care clinics, hospitals, and offices of private practitioners; county, district, and regional health departments; and all persons and entities listed in subsection (2) of this section are authorized to report to the immunization tracking system and to use the reminder and recall process established by the immunization tracking system.

(9) The department of public health and environment may:

(a) Issue immunization records to individuals, parents, or guardians authorized to consent to immunizations;

(b) Assess the vaccination status of individuals;

(c) Accept any gifts or grants or awards of funds from the federal government or private sources for the implementation and operation of the immunization tracking system, which shall be credited to the immunization fund created in section [25-4-1708](#); and

(d) Enter into contracts that are necessary for the implementation and operation of the immunization tracking system. A person who enters into a contract pursuant to this paragraph (d) shall only use the information gathered from the immunization tracking system in accordance with this part 24 and shall be subject to all applicable state and federal laws regarding the confidentiality of information.

(10) Local health departments and the department of public health and environment shall use the birth certificate of any person to enroll the person in an immunization tracking system. The use of the birth certificate shall be considered an official duty of local health departments and the department of public health and environment.

(11) Physicians, licensed health care practitioners, clinics, schools, licensed child care providers, hospitals, managed care organizations or health insurance plans in which an individual is enrolled as a member or insured, persons that have contracted with the department of public health and environment pursuant to paragraph (d) of subsection (9) of this section, and public health officials may release any immunization records in their possession, whether or not such records are in the immunization tracking system, to the persons or entities specified in subsection (2) of this section to provide treatment for such individual or to provide an accurate and complete immunization record for the individual.

(12) The department of public health and environment shall disseminate information about the immunization tracking system, including providing notification pursuant to subsection (7) of this section to birthing hospitals. The hospitals shall provide the notices to the parents of newborns.

Source: L. 2007: Entire part added, p. 660, § 6, effective April 26.

Performance Measures:

STATE OF COLORADO FY 08-09 BUDGET REQUEST CYCLE: Colorado Department of Public Health and Environment

Disease Control and Environmental Epidemiology					
Performance Measure	Outcome	FY 05-06 Actual	FY 06-07 Actual	FY 07-08 Approp.	FY 08-09 Request
Immunization rates for Coloradans, as measured by: National Immunization Survey (up to date 19-35 mo olds) CDPHE School Survey (kindergartners up to date at school entry) Behavioral Risk Factor Surveillance Survey (65 years of age or older with flu shot)	Benchmark	80%	80%	80%	80%
		80%	80%	80%	80%
		80%	80%	80%	80%
	Actual	76.2%	Not avail		
		80.4%	76.9%		
		74.2%	75.9%		

Performance Measure: Immunization rates for Coloradans, as measured by: National Immunization Survey (up to date 19-35 mo olds) CDPHE School Survey (kindergartners up to date at school entry) Behavioral Risk Factor Surveillance Survey (65 years of age or older with flu shot)					
Workload Indicators		FY 05-06 Actual	FY 06-07 Actual	FY 07-08 Approp.	FY 08-09 Request
Number of doses of vaccine distributed		872,621	921,246	971,915	1,025,370

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⁴Achievements in Public Health, 1900-1999 Impact of Vaccines Universally Recommended for Children -- United States, 1990-1998, MMWR, April 2, 1999/48(12): 243-248

⁵Pisani, A., For Fast Relief, Try Immunization Registries! Every Child by Two. 2003 National Association of School Nurses Newsletter. (<http://www.ecbt.org/news/archive/RegiRelief.html>).

⁶1997 American Journal of Preventive Medicine. *Developing Immunization Registries: Experiences from the All Kids Count Program* supplement Vol. 13, No.2.

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