# VACCINE MANAGEMENT BUSINESS IMPROVEMENT PROJECT
# WHAT IS THE PUBLIC HEALTH ISSUE?

The National Center for Immunization and Respiratory Diseases (NCIRD) along with state and local immunization projects are responsible for managing more than half of the nation's pediatric vaccine supply, representing nearly $3 billion in annual vaccine purchases from the Vaccines for Children (VFC) program, Section 317 immunization program purchases, and state purchases off of the federal vaccine contracts. In late 2003, CDC established a team to conduct a comprehensive review of the vaccine management activities at the federal, state, and local levels, and to identify opportunities to improve efficiency, accountability, and our ability to respond to public health crises.

Vaccine management and accountability needs have grown dramatically since the inception of the Vaccines for Children (VFC) program in 1994. Many vaccine management and accountability processes are still conducted using methods and technology established more than a decade ago. The processes in place consist of a patchwork of stand-alone computer applications and manual paper-based systems that are operated by CDC and state and local immunization programs. These processes are cumbersome, expensive, and do not provide visibility of vaccine supply and demand at the national, state, or local levels. These processes also produce inconsistent levels of accountability at the individual immunization provider level.

## *WHAT HAS CDC ACCOMPLISHED?*

Through the Vaccine Management Business Improvement Project (VMBIP), CDC expects to lay a foundation that will support the long-term requirements of the program. The first phase of the project was to conduct a comprehensive review of the existing system by gathering information across all parts of the vaccine supply chain, including vaccine manufacturers, third-party vaccine distributors, state and local health departments, and medical providers. Following this review, a number of work teams were established to address specific details of each priority area identified within the proposed operating model. These teams included funds management, vaccine distribution, provider ordering, inventory management, and the operation of the national pediatric stockpile.

To date, several milestones have occurred in the funds management and distribution work areas. CDC has streamlined the vaccine purchase process by obligating funds centrally to vaccine manufacturer contracts from which grantees purchase vaccines. CDC has signed a contract for the centralized distribution of vaccines, and the first four pilots (California, Washington State, Maryland and the City of Chicago) will begin purchasing and receiving vaccines through this system in February 2007.

All phases of the project have and will continue to involve significant coordination with members of the Association of Immunization Managers (AIM). AIM members represent the "front line" of the nation's vaccine program; addressing their needs during the development of the model is critical for the successful implementation and launch of new processes. AIM participation is designed to communicate these needs to CDC. To date, this group has provided valuable input into the design of the new operating model through their participation in the project.

Proposed Operating Model

The proposed operating model is a significant departure from the current state and is currently being implemented in stages. It includes the following:

- Funds Management – CDC would establish a single account for VFC funds and one for 317 funds to purchase vaccine at the federal level. It would replace individual vaccine Direct Assistance (DA) grants with expected targets for vaccine usage (to ship directly to providers of each grantee). Grantee target vaccine usage levels would be agreed to in advance and reconciled monthly to the exact amount of vaccine shipped to their providers. Grantees would continue to use state funds to purchase vaccine as well. Actual provider vaccine usage would be tracked against each project's spending plan.

- Distribution – Vaccine would be distributed via commercial distributors with vaccine storage and distribution from at least two hubs. Contracts with these third-party distributors would be negotiated and managed by CDC, and the federal government would continue to fund distribution costs for federally-purchased vaccine.

- Inventory Management – Inventory would be consolidated into a single stock at each distributor location (i.e., there would no longer need to be individually segregated stocks of vaccine for each state). Using guidelines provided by CDC, distributors would manage day-to-day replenishment and inventory rotation at their locations using a "first-expired/first-out" (FEFO) model across all the vaccines. Provider inventory accountability would continue to be the responsibility of grantees.

- Provider Ordering and Approval – Providers would order via phone, fax, internet, or via their immunization information system. Orders would be screened using a set of business rules, established jointly by the grantees and CDC. The rules would be used to screen each order for approval or place it on hold for further review by the grantee. Provider shipment history and inventory data would be maintained in a central "data warehouse" that could be accessed by grantee health departments for real-time tracking and analysis. Also, providers would be supplied with guidelines for their ordering practices based on efficient order frequency and sizes given their annual vaccine usage.

Full implementation of this new operating model is anticipated to generate cost savings and gain efficiencies by consolidating distribution and ordering processes, switching to commercial distributors, reducing vaccine wastage, and reducing inventory holding costs.

## *WHAT ARE THE NEXT STEPS*

*Implementation Timeline and Pilot Program*
Currently, work has focused on preparation of VMBIP pilots for centralized distribution following contract award, development of funds management standard operating procedures, and finalization of systems requirements for the new Vaccine Ordering and Distribution System (VODS).

Implementation will begin in February 2007 with a focused pilot program for centralized distribution. This conservative approach, including the pilot, is designed to ensure that operational process issues are resolved prior to expanding the model to a large number of providers. A phased roll-out approach will be utilized to implement the remaining projects to the centralized distribution format. Roll out is expected to be completed by March 2008.

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