

ELECTRONIC TOOLS AND RESOURCES: ORION@MSH

Problem: Resource-limited countries often lack the necessary means to effectively manage pharmaceutical procurement, inventory, and distribution. Building this capacity is difficult when ready access to needed resources and management tools is unavailable. Historically, the most commonly used software packages, such as INVEC-2, covered only one or two pharmaceutical management functions. Complete packages on the market were either not specific to pharmaceutical management or were too expensive. There was a need for reasonably priced software based on “best practices” in pharmaceutical management that could be modified as needed to fit a country’s requirements and that would be both technically and economically feasible for adaptation and use in most developing countries.

Strategy for Change: MSH, in collaboration with 3i Infotech, created software to address this gap by adapting 3i Infotech’s ORION software to reflect pharmaceutical management best practices in resource-limited settings. Results from a needs analysis by MSH staff as well as input from users of INVEC-2 and other MSH-created software packages were used to develop the software’s functionality. In addition, MSH negotiated a pricing structure with 3i Infotech to ensure that most institutions in resource-limited environments could afford the new software or that donors could realistically support its installation and use.

After agreeing to the installation of ORION@MSH and signing a memorandum of understanding, the recipient site goes through a three-phase installation process with MSH and 3i. The first phase consists of a two-week pre-installation onsite trip to the site by an MSH and 3i Infotech project team. During this phase, the project team meets with key users to—

- Perform a detailed assessment of the site’s current practices
- Implement required technical assistance (if any)
- Identify hardware/software to be purchased
- Extract data from the client site
- Identify and agree on customizations to the software

The second phase occurs offsite at MSH and 3i and consists of—

- Adapting and uploading the extracted data from the client site
- Customizing the software based on the client’s needs

The final phase is the actual onsite installation, where the project team spends approximately seven to eight weeks—

- Conducting a “walk-through” of each module that explains all of the functionality available
- Training appropriate personnel on each module
- Leading the site in extensive software practice sessions with real data
- Overseeing the “go live” period of the system
- Managing the troubleshooting and transition phase at the end

After installation, MSH encourages the sites to set up follow-up visits two-months on, which are used to help resolve any lingering issues and for additional training. In addition, MSH arranges follow-up calls between the site and 3i Infotech, usually weekly (or more often) at the beginning and tapering off after a couple of months. Help desk support via the Internet is also available; specifically, all sites can log errors or issues directly onto a designated Web site. The support team that manages the Web site tracks the responses and corrective actions for each logged problem and allows for user feedback.

Results: An integrated pharmaceutical management software package for resource-limited environments built on commercial-off-the-shelf software was developed, piloted, and rolled-out. ORION@MSH comprises six interlinked modules: Inventory, Sales, Tender & Procurement, Vehicle & Equipment, Warehouse Management, and Finance Management (Accounts Receivable, Accounts Payable, & General Ledger). The software was piloted at the Pharmaceutical Procurement Service of the Organisation of Eastern Caribbean States (OECS) and St. Lucia’s Central Medical Store in May–June 2004. Over the following nine months, it was rolled out to four other OECS

countries—St. Kitts and Nevis, St. Vincent and the Grenadines, Dominica, and Grenada. ORION@MSH was also installed at the Mission for Essential Medical Supplies of the Evangelical Lutheran Church in Tanzania and at GSMFEL (the CAREshop franchise), GSMF International, and the Catholic mission sector in Ghana.

A survey that MSH conducted with managers and users in the Eastern Caribbean listed the following as strengths and weaknesses of ORION@MSH—

Strengths

- Helps monitor issue by expiry date
- Easily analyzes collected data in Excel or Word
- Able to tailor the software for individual customers

Areas to Address

- Increasing the amount of reporting options available for users
- Simplifying the user interface for quicker interactions

Key Lessons Learned: During the four-year development, testing, and roll-out period, MSH learned a number of key lessons—

- Although collaborating with a commercial software company on the development of reasonably priced software for resource-limited environments is possible, a for-profit entity's good business practices and economic demands often do not easily mesh with the quirks of working with governments and donor organizations on public health needs in underdeveloped, potentially politically unstable, countries. Close monitoring, active dialogue, and flexibility are required.
- Lack of local human resource capacity in pharmaceutical management and information technology and limited availability of computer/communications technologies are key contributors to failed or underperforming installations.
- To get the most out of pharmaceutical management software, good pharmaceutical management practices must be in place prior to software installation.
- Requirements, roles, and expectations of all collaborating partners must be clearly specified in a contract or memorandum of understanding prior to the start of any development or implementation activities.
- No matter how good a basic software package might be, institutional or country adaptation will always be needed in order for the software to be fully accepted and used.
- A relatively complex software, even with the ability to “turn off” unneeded functionality, may not be suitable or acceptable in smaller, resource-limited environments (e.g., small operations, clinics, drug shops). Adapted or alternative software packages that require less sophisticated hardware and communications and that can interface with the more comprehensive software may be needed.
- Adequate training and continuing follow-up with software users are essential to successful implementation and ongoing use.
- Plans for managing changes to the software that arise at each installation must be drafted before going to the field.

Activity Update (December 2008): When MSH's contract with 3i Infotech ended in 2007, the contract was not renewed because many of the client countries had decided to use smaller, less complex software packages, and because CPM had shifted its software development and management paradigm to focus on internally created applications. 3i Infotech retains ownership of ORION@MSH program and is the contact for current program users; MSH no longer offers or supports the program.