ON TRACK

Ghana

How to Cut 100 Steps from Your Contraceptive Supply Chain

In a conference room at a peaceful resort in Sogakope, Ghana, staff members of the Planned Parenthood Association of Ghana (PPAG) kneel, twist, and stretch to place index cards along a gigantic flowchart. Despite all the movement, the staff members are not in an exercise class. They are building a diagram of PPAG's national supply chain, which delivers contraceptives to customers throughout Ghana.

In February 2002, DELIVER, a project funded by the U.S. Agency for International Development and administered by John Snow, Inc., conducted a process mapping workshop with PPAG to analyze its contraceptive logistics system. This workshop was similar to one conducted in November 2001 by DELIVER and the Ghana Ministry of Health (MOH) to assess the MOH's contraceptive logistics system.

Process mapping is a tool that helps organizations improve the efficiency of their systems by examining the steps required to complete particular tasks. PPAG, a nonprofit affiliate of the International Planned Parenthood Federation, collaborates with nongovernmental organizations and government agencies to provide sexual and reproductive health education, services, and commodities. PPAG brings contraceptives to underserved customers in the most remote areas of Ghana for a small fee or free-of-charge when individuals cannot pay.

In Sogakope, the DELIVER workshop facilitator asked teams of participants to write on index cards every action step required for a product to move from the port, which is the top of PPAG's contraceptive logistics system, all the way to the customer. Then he had them tape the cards, in sequential order, onto a long strip of flipchart paper. The participants—PPAG's executive director, program directors, youth peer educators, information systems specialist, warehouse personnel, nurses, and other health workers—agreed upon all the steps in their contraceptive logistics pipeline, and then analyzed the flowchart to find bottlenecks and breakdowns in the system.

Why this unusual and labor intensive approach to improving efficiency? Most organizations rarely, if ever, examine an entire process for accomplishing work services or outputs such as ordering, receiving, and distributing contraceptives. In addition, no one person is knowledgeable about or responsible for the process from beginning to end. As a result, much of how work gets done evolves over time and is not written down and evaluated through job descriptions or other documentation. As much as 80 percent of the actual activity involved in any major work process remains "invisible" unless everyone with responsibility gets involved.

Many private industry experts consider process mapping to be the most important new process improvement tool to come along in more than a decade. Developed at General Electric, process mapping has been used by IBM, NASA, Tandy Electronics, Exxon, and others to reduce the cost of operations by eliminating as much as 50% of the steps in most processes as well as the root causes of systemic quality problems.

The analysis of PPAG's contraceptives pipeline revealed that the current system is complicated and inflexible. Participants discovered that it took approximately 200 steps and 17 months to move a product through all levels in the supply chain, including the port, warehouse, zonal level, project site clinics, and distribution of contraceptives to peer educators and peer agents.

Participants reconfigured the system's flow of work activities and decision making points using established business efficiency principles that focus on customer service. After shuffling, adding, and deleting cards, the group managed to reduce the total number of steps from 200 to 104, and

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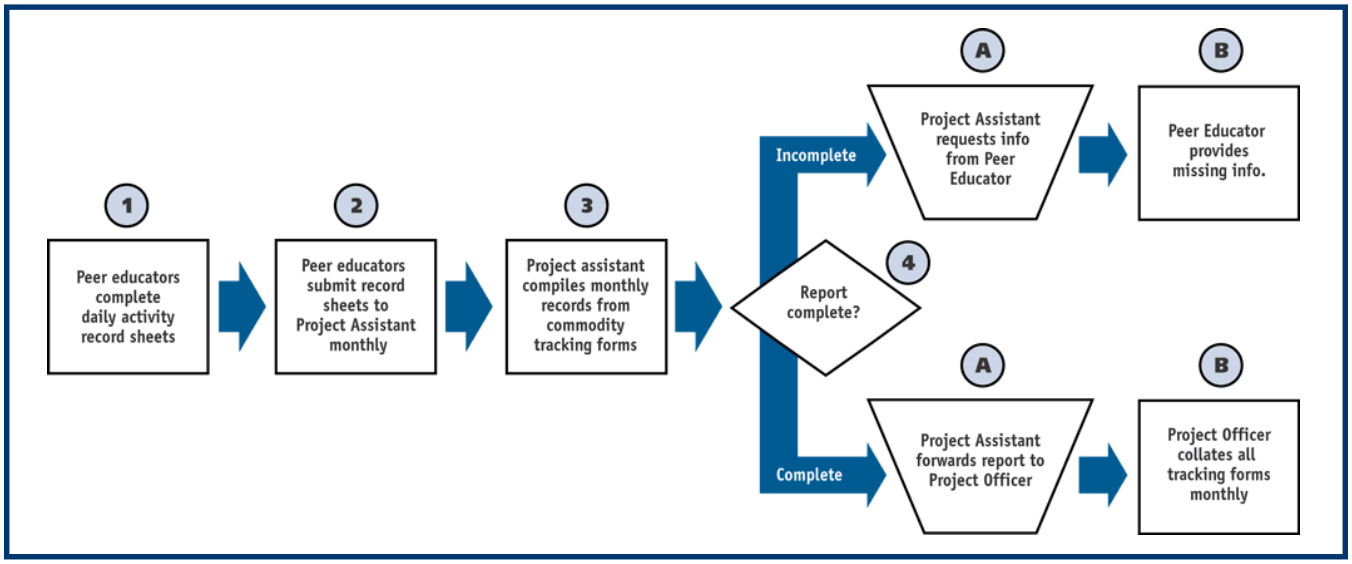

Process mapping involves visualizing and writing every action step in a process to detect system inefficiencies. This diagram shows a small portion of the process map for the contraceptive supply chain of the Planned Parenthood Association of Ghana.

the pipeline length from 17 months to 12 months. Ultimately, they kept in the system only those steps that directly fulfill the needs of contraceptive users at service delivery points, focusing on the availability, high quality, and affordability of contraceptives.

Participants were able to create a map for a more efficient system, in part, by removing the entire zonal store level. PPAG staff agreed that a store at the zonal level was unnecessary because products can be transported easily from the warehouse directly to project clinics. This new configuration also allows the zonal office to focus on gathering and entering data, an important function. PPAG staff realized that, based on the reengineered system, direct cost savings could reach as much as $8,000 or 40 percent of the previous cost to operate the system, a significant sum for any nonprofit.

In addition to the potential for tremendous cost savings for PPAG's logistics system, the process mapping exercise encouraged communication among public health workers and helped colleagues understand their respective roles in the system. As one participant pointed out, process mapping is "team work at its best, resulting in quality output." The Ghana workshop participants also unanimously agreed that process mapping is an excellent tool for empowering staff to analyze and take control of their system.

After the workshop, to keep enthusiasm and momentum high, participants created an implementation plan for strengthening the pipeline, and PPAG's executive director agreed to take action. PPAG will continually assess the reengineering of its contraceptive supply chain by determining constraints, successes, and areas for improvement.

DELIVER is also applying process mapping to improve logistics systems in Malawi and Tanzania. For more information about DELIVER's work with process mapping, please contact Gregory Roche at gregory_roche@jsi.com.

For a free copy of the report, *Ghana: Process Mapping. First Step to Reengineering the Health Supply Chains of the Public Sector System,* contact deliver_pubs@jsi.com or call 703-528-7474.

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March 2003

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