Ensuring access to medicine—defined as having medicines continuously available, affordable, and geographically accessible at health facilities or medicine outlets—is an essential part of healthcare access. Even if patients access good quality services and providers give correct diagnoses, patients may still fail to recover without receiving proper medications.

Unfortunately, ensuring access to medicines and other key health products has proved to be a significant challenge in low- and middle-income countries. For example, a recent survey of 70 facilities in South Africa’s Eastern Cape found that 40% of the facilities had experienced stock-outs of either or both HIV and TB drugs.

As of October 2013, CHMI had 58 supply chain innovations tagged in its database, spread across Latin America, Africa, and Asia. The most common focuses of these programs are family planning and reproductive health (33%), HIV/AIDS (31%), and malaria (28%), likely due to the fact that these three areas all rely heavily on products/medicines: family planning products, anti-retrovirals (ARTs), and artemisinin-based combination therapy (ACTs), respectively.

*Supply Chain Innovations in the CHMI Database by Health Focus

Healthcare supply chains can impact the quality, affordability, and accessibility of a given medication. For this article, we will look at the following four steps that are present in most supply chains: production, procurement, distribution, and delivery.
Production

One key innovation at the production stage is bundling medicines with other pharmaceutical or other key products so that consumers are guaranteed to receive everything that they need. In 2010, AYZH launched a clean birth kit called JANMA which provides women with all the components recommended by the World Health Organization for safe and hygienic birth. Similarly, ColaLife in Zambia produces anti-diarrheal kits called “Kit Yamoyo” that contain oral rehydration salts, zinc tablet, soap, and educational materials.

Procurement

The innovations captured in the CHMI database that focus on procurement consist mostly of purchasing tactics that reduce the cost of medicines and health-related products. For example, starting in 2004 in Tanzania, UNICEF, and the Global Fund began acting as “buyers of last resort” for bed nets, guaranteeing that they would purchase all long-lasting insecticide-treated bed nets, made by A to Z Textile Mills, that did not clear normal channels. This arrangement allowed A to Z to sell the nets to consumers for a lower price. In Bangladesh, Kollyani Clinics partners with GRAUS, a local NGO, to purchase drugs from manufactures at below market rates and provide seed money to clinics to purchase drugs.

Distribution

Organizations are using alternative means of transportation to get medicines to final destinations that are not accessible with existing infrastructure. As of May 2013, World Health Partners in India was employing 50 locals on motorcycles, called “Last Mile Outriders,” to take drugs to rural clinics. In Peru, APECA uses canoes and boats to distribute cofres medicinales, or medical chests with essential medicines, to communities along the Amazon River.

Another distribution solution that seems to be growing in popularity is to use supply chains that are already in existence to bring health products to consumers. ColaLife utilizes Coca-Cola’s established supply chains to bring essential medicines to communities. Clinics4All similarly uses commercial supply chains to increase access to medicines across Africa and Asia, as does PSI Angola, PSI Somaliland, and PSI South Sudan.

Delivery

Bringing essential health products to the consumer’s doorstep provides crucial access to those who may...
be unable to travel to pharmacies and other stores selling health products. **HealthKeepers** in Ghana, **Living Goods** in Uganda, and **Project Shakti** in India use a model based on Avon, a cosmetic company, where local women are employed to sell products to customers in their own community.

### Supply Chain Organization

Additionally, several organizations are implementing technology solutions that allow those at the point of delivery to more effectively communicate up the supply chain about their stock of medicines and health products. In 2009, Novartis began working with Roll Back Malaria, Vodafone, and IBM to implement **SMS for Life** in Tanzania. This initiative uses SMS messages and electronic mapping to track stock of anti-malarial drugs and ensure that necessary replacements are delivered on a weekly basis. Similarly, the **UmeedSey Micro Health Franchise System** in Pakistan uses a mobile application that allows community midwives to request health products as necessary from the franchise network.

A final intervention at the point of delivery is the use of chains or franchises of pharmaceutical outlets to help control the price, quality, and availability of drugs when they reach the consumer. **Botika ng Bayan** in the Philippines, and **Healthy Entrepreneurs** in the Caribbean, South Asia, and Africa both use a franchise model through which they are able to control the prices, types, and availability of drugs that are stocked at pharmacies in their networks. **Farmacias Similares** in Latin America and **MedPlus** in India use a similar chain model in which the outlets are centrally owned.

### Consumer-side Innovations

Even when medicines and products have reached their final consumers, there are additional interventions that can be used to ensure that the supply chain has worked effectively. **Sproxil**, which works in Ghana, Nigeria, Kenya, and India, allows users to scratch off a security label on the packaging of their drugs to reveal a unique code. When this code is texted in to Sproxil’s system, the consumer receives a response verifying if their medication is legitimate or if it is potentially counterfeit. **mPedigree** has a similar model.

### Creating a Comprehensive Solution

Health supply chains are complex systems with the potential for inefficiencies throughout the process, which can result in consumers receiving overpriced...
and low-quality medicines. The innovations above show promise in their ability to fix problems along individual steps. As organizations continue to experiment, they may develop a comprehensive solution to guarantee efficiency, quality, and affordability along every step of the chain, and ultimately ensure that consumers have access to the health products that they need.

Photo at top: Healthkeepers distributing goods, Ghana, photo credit: HealthKeepers