Ensuring universal access to reproductive health and rights, including family planning, is key to achieving global goals to improve women’s and children’s health. Without additional attention and resources, unmet need is projected to grow by 40% over the next 15 years. Universal access to family planning requires implementation of a range of evidence-based practices to increase demand for and access to services. Supply chain management is one of the essential components. Three notable ways to strengthen reproductive health supply chains are: innovative use of technology, improving coordination and leveraging private sector experience in supply chain management. There are now significant opportunities related to initiatives such as Every Woman, Every Child for stakeholders to engage in building demand, strengthening supply chains, and ensuring sustained availability to family planning commodities, information and services.
The challenge

More than 222 million women globally lack access to family planning in 2012.1 Fulfilling this unmet need for family planning in developing countries would prevent 54 million unintended pregnancies, 26 million abortions, 79,000 maternal deaths and 1.1 million newborn deaths. The unmet need for family planning is anticipated to grow by 40% over the next 15 years.2 These statistics, coupled with rapidly approaching deadlines for achieving global targets3 and consensus on essential family planning interventions and related initiatives,4 have injected a renewed urgency to reach reproductive health targets and raised a call to mobilise unprecedented resources. Increasing access to and use of family planning depends on a range of best practices. Notable innovations and resources that have been critically acclaimed for family planning include the cornerstone WHO publication providing guidance on medical eligibility criteria for contraceptive use and the associated wheel that helps family planning providers apply these criteria.5 Here we focus on supply chain management and highlight three best practices in this area:

- Innovations in using technology
- Strengthening coordination mechanisms
- Applying private sector best practices

Access to family planning requires having a well functioning supply chain, hence the adage “no product, no programme”. The conceptual framework (Figure 1) was adapted to the family planning context and incorporates a common refrain heard among logisticians known as the “Six Rights.”

![Figure 1](https://via.placeholder.com/150)

Historically, there were limited supply chain strengthening efforts in developing low-income countries and those that existed focused on strengthening procurement to avoid stockouts at the Central Medical Stores.6 It is increasingly recognised that in order to provide continuously available commodities to end users, the supply chain must be strengthened at all levels—particularly in the last mile of the health system.

What works

**Technology boom**

The health sector remains enchanted by the promise of technology. Expectations are likely to exceed the reality of what technology can do for health systems, outcomes and, more specifically, achievement of reproductive health and rights. However, private sector supply chains rely heavily on technology to provide real-time stock monitoring data, indicating a potential role for their appropriate application in a health system context. Logistic Management Information Systems (LMIS) (Box 1) are the backbone of monitoring supply chain performance, providing critical data for forecasting, quantification, and inventory management. Maximising LMIS potential requires ensuring that the right data are collected, reports are accurate, timely and complete and capacity exists to analyse and use the data. Recently, technology has been incorporated to transition from paper based systems towards electronic Logistic Management Information Systems (eLMIS), which can range from a simple database to web-based platforms.

UNFPA CHANNEL software is currently being piloted in 20 countries to improve commodity management. USAID and other organisations have also supported a number of countries to integrate technology into their LMIS.

**Box 1 – Key Concepts Defined:**

**Logistic Management Information Systems (LMIS)** is a system designed to record, aggregate, analyse and validate supply chain data. Data elements may include stock on hand, wastage, consumption, demand, shipment status, and cost of commodities managed in the system.

**mHealth** is the application of mobile computing and communication technologies in healthcare or public health.

**Quantification and Forecasting** provide estimates on contraceptive commodities needed based on contraceptive prevalence rates, number of contraceptive users and contraceptive method preference trends. Quantification is the process for deriving these estimates.
Bangladesh is at the forefront of eLMIS, implementing a web-based platform for tracking commodities. Logistics support officers use the eLMIS to identify low performing facilities and target them for supportive supervision visits.

Mobile technologies have experienced a meteoric rise, including in low-income countries. As network coverage improves there will be increasing possibilities for “mhealth” (Box 1). Population Services International Tanzania piloted, and is now scaling nationally, a programme tracking condom distribution through scratch cards sent alongside condoms. Retailers SMS the unique code on the scratch card; this allows for tracking condom distribution. In return, retailers receive mobile credit. Similarly, a John Snow Incorporated Dimagi-supported programme in Ghana uses mobile phones to provide an early warning system for stockouts. On a weekly basis, health facilities SMS their stock levels to a toll-free number linked to a database that generates automatic reports alerting the Ministry of Health to impending stockouts. While the evidence base of such interventions remains limited, examples of repositories developed to house such data include: the mHealth Toolkit (http://www.k4health.org/toolkits/mhealth-toolkit) and Health Unbound (HUB) (http://www.healthunbound.org/).

Coordination of Supply Chain Management Processes

A host of interventions and tools have been developed to improve awareness, communication and address coordination of reproductive health commodities at the global and country level.

Globally, UNFPA has tracked donor support for contraceptives and condoms for STI/HIV prevention since 1990 and publishes annual donor support reports. These data help inform advocacy, planning and decision-making for family programs around the world. Lessons learnt from UNFPA’s Global Programme to Enhance Reproductive Health Commodity Security underline the importance of ensuring that coordination mechanisms for reproductive health, including family planning, are well aligned to other aid coordination mechanisms both globally and nationally, and that these coordination mechanisms enable supply chain integration.

The Reproductive Health Supplies Coalition is a public-private partnership dedicated to ensuring access to reproductive health supplies through increasing awareness, resources, strengthening systems and building partnerships. Members are credited with raising awareness of supply chain issues at a pivotal time and conceiving innovations like AccessRH. AccessRH supports RHInterchange (http://rhi.rhsupplies.org), an online database tracking global contraceptive shipments from 140 countries with the goal of improving transparency and reducing delivery times. In the first year this helped reduce lead time for condom orders by 10 weeks. Similarly, the Coordinated Assistance for Reproductive Health Supplies, led by UNFPA, averts stockouts through improved communication and information exchange among global partners who fund and procure contraceptives; this effort averted 43 stockouts from January - October 2010.

If funds do not arrive in a timely manner, contraceptive security can be affected. The ‘Pledge Guarantee for Health’ is an innovative financing mechanism providing bridge financing backed by guarantees from the Bill & Melinda Gates Foundation to grant recipients on the basis of forthcoming aid commitments.
Nationally, contraceptive coordinating committees focus on improving contraceptive commodity security. These committees are typically comprised of ministry of health, NGO, private sector and donor representatives and vary both in terms of mandate and effectiveness. Several Latin American countries have strong committees. Contraceptive security performance gains have been anecdotally attributed to these committees.\textsuperscript{15}

Applications of Private Sector Best Practices

Increasingly the health sector is turning to the private sector to realise efficiencies. Some countries outsource supply chain functions to the private sector; guidance has been developed to inform such decision making.\textsuperscript{16} We have highlighted examples of countries adapting private and commercial sector best practices for reproductive health commodity gains. Zambia conducted operations research to determine the most effective redesign of the supply chain. The study revealed that health facilities directly ordering supplies from the Central Medical Store, supported by logisticians, coupled with central pre-packaging of orders dramatically reduced stockouts for essential medicines. This simplifies the role of the district to delivering facility packages and providing emergency stock.

Critics point to increased cost; proponents counter with estimated lives saved—21\% and 25\% reduction in child and adult mortality due to malaria.\textsuperscript{17} Bangladesh similarly is incorporating this concept of central pre-packaging, or kitting of reproductive health commodities for improving uptake of underused, commodity-intensive methods.

Conclusion

Recently the global community has set ambitious family planning and reproductive health targets. Success will depend on sustaining progress with existing users of contraception. At the forefront of these efforts are initiatives related to the Global Strategy for Women’s and Children’s Health and the Every Woman, Every Child effort,\textsuperscript{18} including the UN Commission on Life-Saving Commodities for Women and Children and the London Family Planning Summit. These initiatives are mobilising unprecedented levels of global political commitments and resources. In allocating those resources to the range of best practices in family planning programming we must remember that a family planning programme cannot succeed without a reliable supply of contraceptives. We have an opportunity to strengthen supply chains to ensure continuous availability to a choice of methods for women and their partners. Examples of integrating technology, improving coordination and building on private sector experience profiled here can be used to help inform global and country decision making processes to chart the way to achieving universal access to reproductive health and rights.

References

2. UNFPA. Reproductive Health: Ensuring that Every Pregnancy is Wanted, 2012. 11/06/2012
   http://www.unfpa.org/hrplanning.htm
3. Targets include those set at the International Conference on Population and Development (ICPD) in Cairo in 1994 and the Millennium Development Goals.
6. National body procuring, storing and distributing commodities to public health facilities.
18/06/2012; available from: http://www.myaccessrh.org/about-accessrh;jsessionid=ICBA63E6A17E56470BED399172CE
15. USAID Health Policy Initiative Task Order I Constella Futures, Contraceptive Security Committees: Their Role in Latin America and the Caribbean, 2007: Washington, D.C.
18. Every Woman Every Child: http://www.everywomaneverychild.org/