Value Statement for an Integrated Health and Supply Chain

In many low and middle income countries (LMIC), the health and supply chain domains have been historically separate, overlapping only in centralized health management information systems where program specific indicator reports provide retroactive trend analysis. The OpenHIE Supply Chain Subcommunity believes that a closer and more effective alignment between supply and demand can lead to **improved health outcome**s and **improved operating efficiency**. Such alignment can be achieved through better connected information systems that support common terminologies, standardized interoperability and shared data to support both planning and operational decision-making. This document defines the value proposition for health and supply chain system integration that will drive the work of the Subcommunity moving forward.

Value 1: Improve Health Outcomes

Improved access to quality medicines and vaccines is key to improving health outcomes. Improved access can be achieved by improving Supply Chain and Health domain alignment.[1] Better alignment between supply and demand will improve availability of essential medicines; reduce stock outs; and help providers better meet the health needs of each patient. These efforts align with the OpenHIE mission and vision to improve the health of the under served.

Value 2: Improve Operating Efficiency

A better aligned supply chain and care delivery ecosystem is able to better match replenishment to consumption. By leveraging **actual** consumption values based on care encounter transactions (e.g. vaccination, medication dispense, etc.), demand uncertainty is reduced. The role of supply chain safety stocks is to forgive uncertainty in the quantity and timing of demand; when uncertainty is reduced, so too can safety stocks be reduced (sometimes by as much as 30%).[2] Inventory and workflow efficiencies within the overall healthcare delivery network create cost savings that can be reinvested to support greater reach of existing scarce resources.

Activities Toward Achievement

The Supply Chain Subcommunity will perform the following activities in order to deliver these values in coordination with Ministries of Health and the global OpenHIE community.

Activity 1: Identify Common Terminology and Interoperability Standards

A common set of core terminology, data mapping and semantic interoperability are needed to align data sharing across the Health Information Exchange. In many cases, a commodity in one area of the HIE has a different definition in the point of service and health management information system. We aim to identify common standards that can be used across health systems and supply chain systems. We will draw from standards bodies in both the health and supply domains including the IHE, GS1 and HL7. This work will drive the process of identifying products, aligning locations and sharing data across actors in a way that leads to improved supply chain efficiency.

Activity 2: Develop Cross-domain Workflows

Cross-domain terminologies, location alignment and interoperability will support new core workflows that will, in turn, support health and operational efficiency value realization. The Subcommunity will define workflows that leverage alignment and interoperability to link the healthcare and supply chain domains.

Activity 3: Develop Key Performance Indicators

Standard measures are critical to identifying the current state and ensuring improvement over time. The Subcommunity will work with organizations to identify, evaluate and recommend Key Performance Indicators (KPIs) that will allow ministries and implementing partners to measure the efficiency of the health care delivery network and track value realization.

Activity 4: Recommend and Support the Development of Reference Software to Deliver Improved Health Outcomes and Supply Chain Efficiency

As is customary with other OpenHIE communities, the supply chain Subcommunity will develop workflows, define requirements, evaluate systems and support the development of open source reference software and configurations that model the implementation of standards across the HIE ecosystem.

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[1] Prashant Yadav (2015) Health Product Supply Chains in Developing Countries: Diagnosis of the Root Causes of Underperformance and an Agenda for Reform, Health Systems & Reform, 1:2, 142-154, DOI: 10.4161/23288604.2014.968005 (Link)

[2] World Health Organization, PATH. Optimize: Albania Report. Seattle: PATH; 2013. (Link)