

Unveiling the Hidden Costs of Vaccine Supply Chains

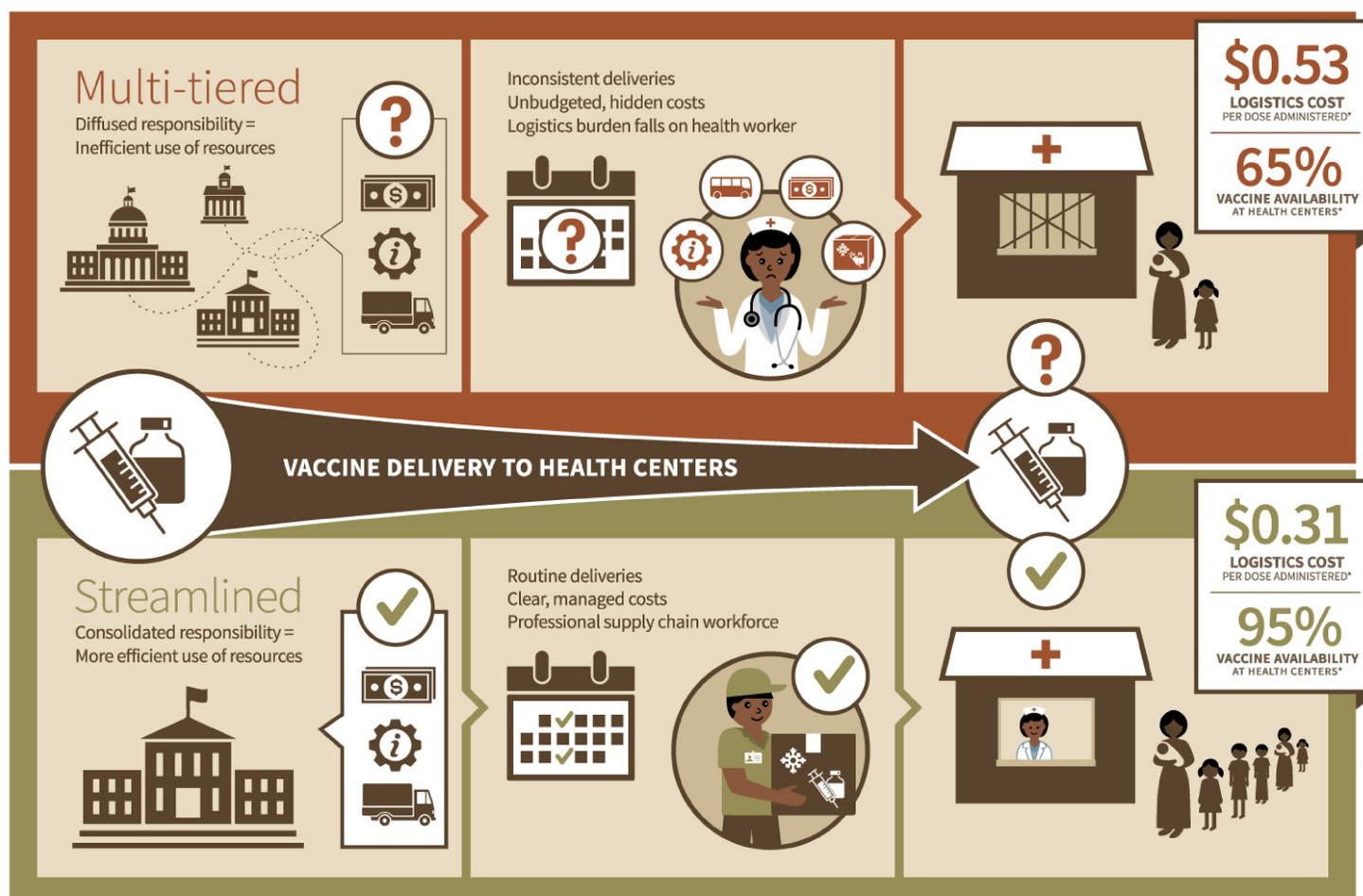
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What are the distinctions between the two vaccine supply chain approaches?

Most developing countries implement a multi-tiered immunization supply chain (iSC) managed by a number of personnel dispersed at multiple administrative tiers of government.

An alternative is the streamlined approach, which is organized to maximize iSC effectiveness by identifying the strongest levels within the government to consolidate funds and personnel. With this system, government personnel have visibility into true total costs because they are collected in one place.

This poster illustrates the true cost differences between the two approaches using data from supply chain modeling.



*Haidari LA, Brown ST, Welling JS, Leonard J, Lee BY. Workshop on HERMES modeling. Maputo, Mozambique. 29 September - 3 October 2014.

How are costs "hidden" in multi-tiered iSC?



It is difficult to calculate the real costs in multi-tiered iSC. Approximately 3% of the total logistics cost in the multi-tiered approach is out-of-pocket expenses borne by a health worker.* This includes the costs of transport and time spent personally picking up vaccines from a district warehouse.

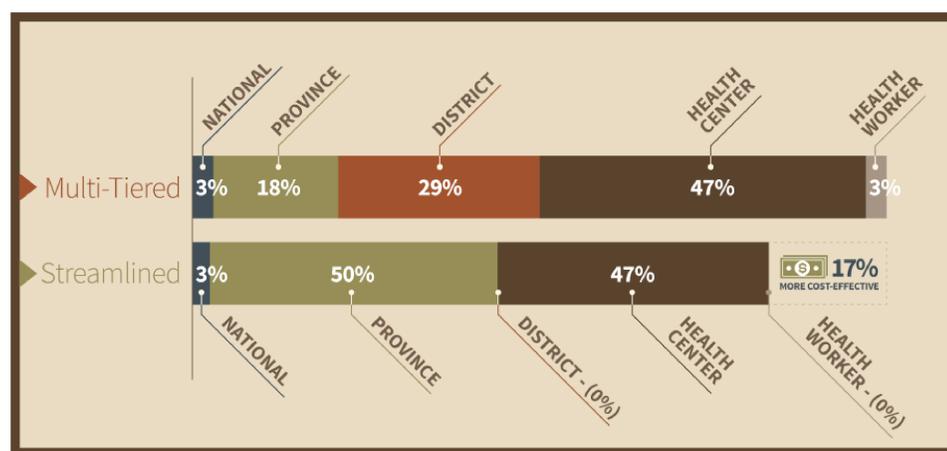


Other expenses are similarly hard to identify when calculating the cost of multi-tiered iSC approaches. Responsibility for funding allocation, information management, and logistics is diffused across government levels with limited visibility, thus creating an inaccurate view of total running costs of the system.

Modeling shows that the cost per dose delivered is 42% less in the streamlined system.*

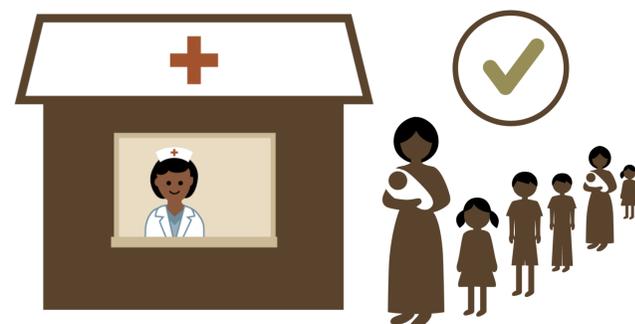
How are costs allocated differently in the two approaches?

In a streamlined system, costs are consolidated where the system is strongest, in this case at the provincial level. No costs are incurred by the district or the health worker.



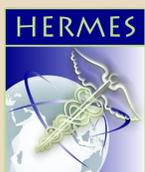
What does this mean for the 20% of children who don't have access to vaccines?

A streamlined system reduces costs and increases vaccine availability to 95%, reaching 30% more children than in the multi-tiered approach. Further, a reliable supply chain builds families' confidence in the health system because health centers are open, staffed, and stocked with necessary supplies when they arrive. As a result, vaccination rates increase and children receive lifesaving protection from preventable infectious diseases.**



*Haidari LA, Brown ST, Welling JS, Leonard J, Lee BY. Workshop on HERMES modeling. Maputo, Mozambique. 29 September - 3 October 2014.

** Kane M. Evaluation of the Project to Support EPI in Northern Mozambique, 2001-2008.



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