# Framework to inform vaccine selection or switch impact assessment

Examples of considerations to assess along six dimensions of impact and implications:

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| **KEY AREAS FOR CONSIDERATION** | **POTENTIAL SWITCH IMPACT TO COUNTRY** | **IMPLICATIONS** |
| ***Ease of use*** *(e.g. single dose, liquid form, oral, shorter dose schedule)* | * Number of doses in the schedule
* Number of steps to prepare the dose to administer (e.g., does or not require dose measurement, does or not require reconstitution)
 | **Training and simple graphic job aid required for HCW** to be familiar with the change in dose schedule and administration processes to **minimize confusion and errors**. |
| ***Cold chain, transport, storage requirements*** | * Cold chain capacity needs
* Type of cold chain needed
* Freeze-thaw flexibility
 | **Planning and procurement required** to accommodate the new vaccine if there is an increase in cold chain volume and type required. |
| ***Efficacy, effectiveness or safety*** | * Clinical profile
* Real-world data
* Country-specific evidence
 | **Training required for HCW** to be familiar with the new vaccine product to **ensure new AEFI are reported and monitored adequately** in their country context. |
| ***Coverage****(acceptability, missed opportunities)* | * Impact on HCW hesitancy to open a vial
* Means of administration (e.g., oral)
 | **Training and simple graphic job aid required for HCW** to be familiar and comfortable with the change in vaccine presentation and administration processes. |
| ***Financial sustainability****(cost, price, wastage)* | * Wastage-adjusted cost to fully immunize a child
* Price per dose
* Wastage rates
* Future price outlook based on tender outcomes
 | **Budget planning** if total **vaccine/supplies cost increases** from the switch; or **allocating cost savings** to other vaccine programmes if total **vaccine/supplies cost decreases** from the switch. |
| ***Supply****(availability, security, locally-made)* | * Current availability and predictability of future availability
* Made locally
* Size of supplier’s capacity
* Lead time for supplier to manufacture
 | **Consider country contexts and needs** to ensure vaccine switch would result in a higher likelihood of **long-term sustainable supply** of vaccines with **less chances of disruptions due to stock-outs**. |

# Examples of Switch Impact Assessment framework

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| **Optimisation strategy** | **Potential impact***Can vary by country context and over time (e.g. price changes, wastage rates, new data)* |
| ***Antigen*** | ***Switch type*** | ***Ease of use*** *(e.g. single dose, liquid form, oral, shorter dose schedule)* | ***Cold chain, transport, storage requirements*** | ***Efficacy, effectiveness or safety*** | ***Coverage*** *(acceptability, missed opportunities)* | ***Financial sustainability*** *(cost, price, wastage)* | ***Supply*** *(availability, security. locally-made)* |
| **Measles** | **Presentation, from 10 dose vial to 5 dose vial** | ***No impact*** | ***Marginally negative:*** 5-dose vial requires ~66-85% more cold chain space per dose compared to the 10-dose vial depending on presentation but expected to be manageable | ***No impact*** | ***Positive:*** up to 5% increase driven by reduction in hesitancy to open larger vials  | ***Net neutral/negative:*** Price per dose higher by 0.20USD but wastage-adjusted price per dose expected to be similar due to lower wastage rate  | ***Marginal impact:*** increased lead time from 6-8 weeks to 12-16 weeks depending on volume |
| **Rota** | **Product, from Rotarix to Rotavac in 10dv frozen** | ***Negative:*** with need for a 3rd dose and potentially also slower administration (MDV with need to count drops vs single dose) | ***Mixed:***more than half cold chain capacity freed up but deep freezers needed at central/ sub-national level with shorter shelf life at refrigerated temperature  | ***No impac***t | ***Potentially negative:*** risk of marginally lower fully vaccinated coverage due to additional dose | ***For countries in Preparatory Transition or Accelerated Transition: positive***, up to 70% lower cost***For countries in Initial Self Financing: possibly negative impact*** driven by higher wastage rate | ***Likely more positive*** |
| **PCV** | **Product, from PCV10 by GSK to PCV10 by SII** | ***Marginal impact:*** doses per vial change from 4 to 5 | ***Negative:*** Additional 42% refrigerated capacity needed | ***No Impact*** unless there is data on local circulating strains and the new vaccine is a better or worse match than the old one | ***No Impact*** | ***For countries in Preparatory Transition or Accelerated Transition: positive***, up to 30% lower cost***For countries in Initial Self Financing: no impact*** (fixed unit price) | ***Likely more positive*** |
| **HPV** | **Schedule, from two doses to one dose** | ***Positive:*** shorter dose schedule.  | ***Positive:*** 50% less refrigeration capacity required | ***No impact*** | ***Positive:*** can increase coverage. | ***Net positive:*** reduction in cost and potentially higher coverage  | ***Likely no impact or positive***, if no supply constraints  |