Economic benefits of integrated molecular testing, evidence-based pricing, and pooled procurement across diseases: *an illustration*

*Roundtable on Access to Multi-disease Molecular Diagnostics*
Presented by David Branigan, Treatment Action Group
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Economic benefits of integrated molecular testing

Siloed testing

Budget for health

TB  HIV  HBV/HCV  HPV  STIs  COVID-19

Integrated testing

Budget for health

TB  HIV  HBV/HCV  HPV  STIs  COVID-19
Overview

- This graph illustrates a hypothetical cost curve for molecular tests, based on data points from the independent cost-of-goods-sold (COGS) analysis of GeneXpert tests commissioned by MSF.

Assumptions:

- MSF-commissioned COGS analysis estimated GeneXpert cartridge COGS to be about $8.82 at volumes of 1M, and $4.64 at volumes of 10M, including IP royalties
- Subsequent volume-based price reductions along the cost curve are based upon conservative estimates
- IP royalties (included in COGS) = 10% of price
- Profit = 20% of price (fixed for the purposes of the model)
Economic benefits of evidence-based pricing

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Model of volume-based variation in evidence-based price, COGS, and profit for molecular tests, based on estimated COGS of GeneXpert tests

GeneXpert test public sector prices in LMICs
- MTB/RIF: $9.98
- SARS CoV-2: $14.90
- HIV: $14.90
- HCV: $14.90
- HBV: $14.90
- HPV: $14.90
- STIs: $16.20

- MTB XDR: $19.80
- Ebola: $19.80
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**Economic benefits of pooled procurement across diseases**

**Model of volume-based variation in evidence-based price, COGS, and profit for molecular tests, based on estimated COGS of GeneXpert tests**

<table>
<thead>
<tr>
<th>Disease 1</th>
<th>Disease 2</th>
<th>Disease 3</th>
<th>Disease 4</th>
<th>Disease 5</th>
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Economic benefits summary

Integrated molecular testing:
- Efficient use of molecular diagnostic instruments across diseases is cost-saving and offers the potential to improve quality of care

Evidence-based pricing:
- Transparent pricing based on COGS with volume-based price reductions, plus a reasonable profit mark-up, enables lowest sustainable pricing and offers the potential to significantly reduce procurement costs

Pooled procurement across diseases:
- Pooling volumes of tests across diseases offers the potential to leverage overall volumes in negotiations with suppliers and reduce procurement costs across diseases