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GENERAL HOSPITAL



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# Identifying cost-effective and affordable diagnostic pathways for HCV

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An online tool: Collaboration with Foundation for Innovative New Diagnostics (FIND)

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# One-size-fits-all approach does not work for HCV testing



**Prevalence can vary substantially by jurisdiction (rural vs. urban, etc.)**



**Differences in population characteristics and opportunities to engage in care**



**Differences in budgets and resources between different settings**

**Cost of screening will be the largest driver of any HCV elimination plan, and therefore we should tailor the diagnostic strategy to each situation. We should use a systematic and WHO-recommended approach to identify cost-effective diagnostic pathways.**

## Why:

- Projects and programs need to make decisions on testing approaches for HCV; which strategies are most cost-effective and feasible varies by setting.

## What:

- An interactive, online tool to evaluate the cost-effectiveness of various testing pathways and identify the most cost-effective strategy.

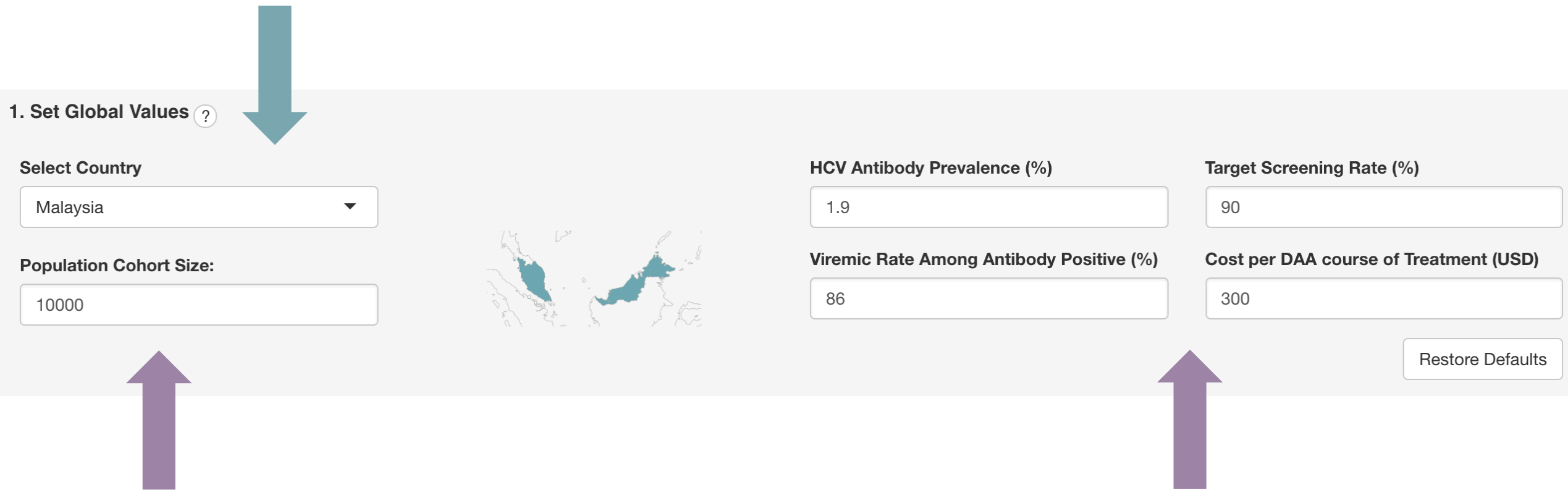
## Where:

- Developed for Georgia, India, Malaysia, Pakistan, and in the process of adding other countries.

## How

- Links HCV testing approaches to natural history of HCV infection and treatment to find the best, most cost-effective, approach.

1. Users can select the country, which changes the underlying disease burden model and default parameters.



The screenshot shows a form titled "1. Set Global Values" with a teal arrow pointing down from the text above. The form includes a "Select Country" dropdown menu with "Malaysia" selected, a "Population Cohort Size" input field with "10000", a map of Malaysia, "HCV Antibody Prevalence (%)" input with "1.9", "Viremic Rate Among Antibody Positive (%)" input with "86", "Target Screening Rate (%)" input with "90", and "Cost per DAA course of Treatment (USD)" input with "300". A "Restore Defaults" button is located at the bottom right. A purple arrow points up from the text below towards the "Population Cohort Size" input field.

1. Set Global Values ?

Select Country

Malaysia

Population Cohort Size:

10000

HCV Antibody Prevalence (%)

1.9

Viremic Rate Among Antibody Positive (%)

86

Target Screening Rate (%)

90

Cost per DAA course of Treatment (USD)

300

Restore Defaults

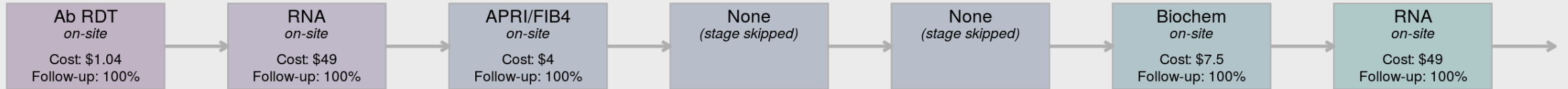
2. Users can then change the cohort size, disease burden, target screening rate, and DAA cost – making this highly customizable for specific settings.

3. Users can then create their own pathways that includes various test types, with customizable costs and follow-up rates (default options can also be used).

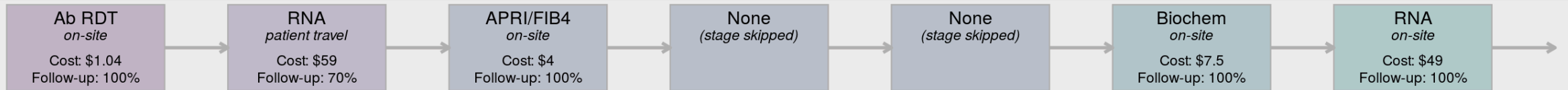
### Pathway Stages



### Pathway 1: Ideal single-site



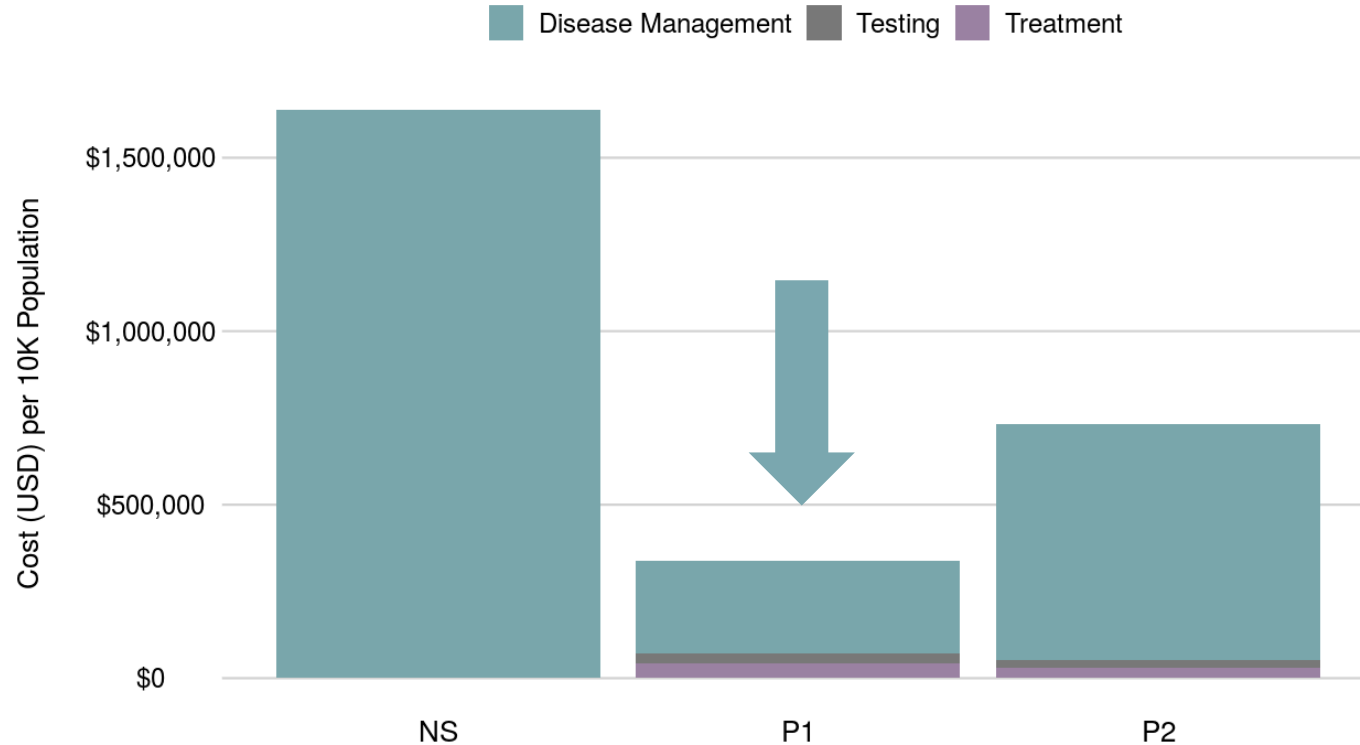
### Pathway 2: Screening camps



## 4. Results are generated. In this case, Pathway 1 is the preferred cost-saving option.

Pathway	Name	Cost	QALYs	ICER	% of Viremic Diagnosed	Cost Per Diagnosis (USD)
P1	Pathway 1 (single-site)	341334.1	2704.94	Cost-Saving	90.00%	173.43
P2	Pathway 2 (screening camps)	734362.8	2602.31	Dominated	63.00%	212.15
NS	No Screening	1638078.9	2362.83	Dominated	0.00%	NA

Total Costs (30 years)



Total costs are the lowest, due to averted disease management costs.

# Summary

- 1 . We have developed an open-source online tool to assist with making decisions on HCV testing strategies in varied settings.
2. This can help programs/projects make informed decisions that improve outcomes and are either cost-effective or cost-saving.
3. We plan to add more countries to the tool. Please reach out to Sonjelle at FIND ([Sonjelle.Shilton@finddx.org](mailto:Sonjelle.Shilton@finddx.org)) if you would like to add a country or have questions.

# Acknowledgements

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