

Cost of Hepatitis C Virus self-testing in Malaysia: A micro-costing study

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Key messages:

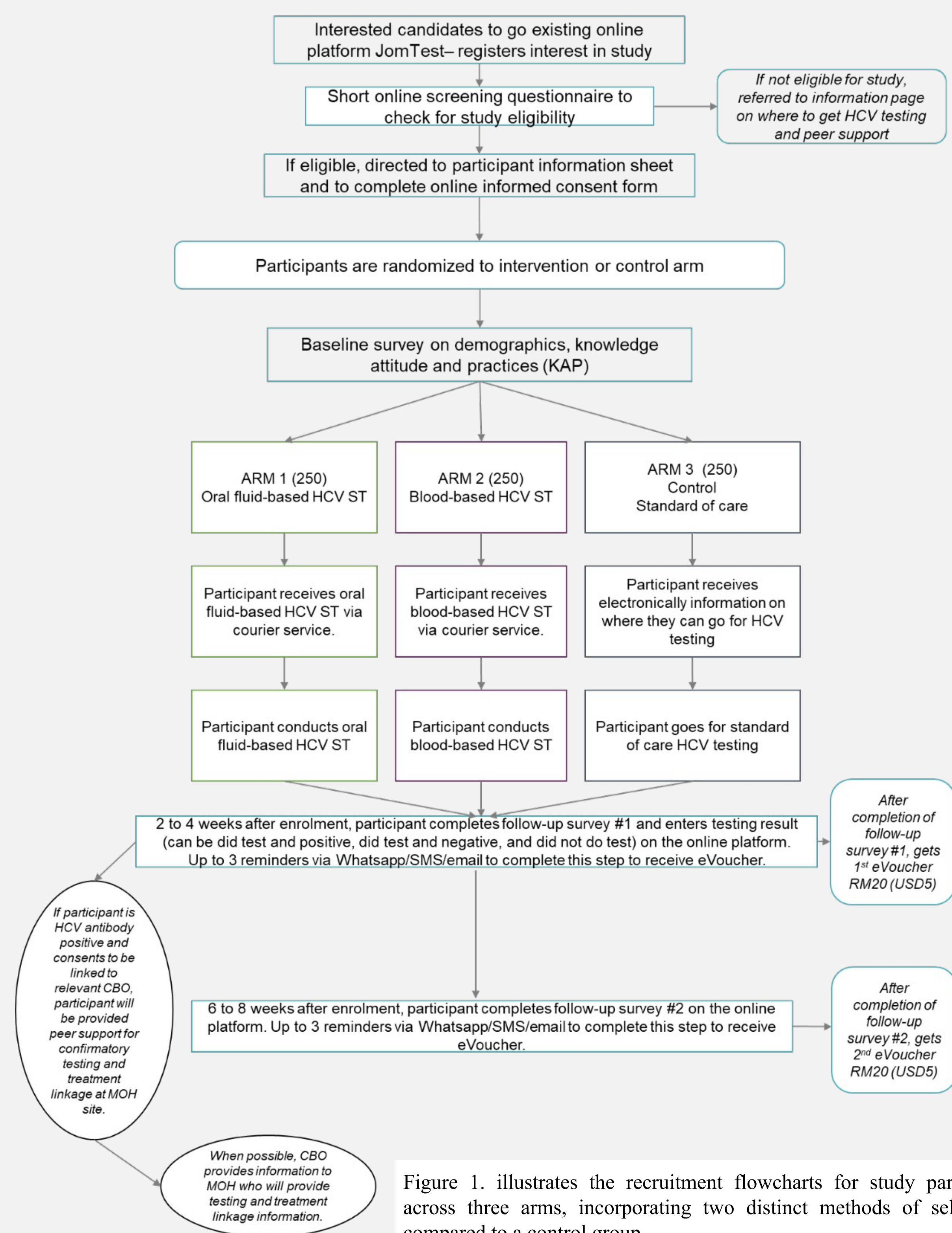
- The study reported an impressive 98% uptake of HCV testing in the HCVST arms compared to only 51% in the control group.
- The oral-based HCVST had a slightly higher mean cost per test compared to the blood-based HCVST, primarily due to marginally higher variable costs in the oral test.

Background:

The seroprevalence of Hepatitis C virus (HCV) is 0.3% to 2.5% in Malaysia's general population, (1) with 4.6% prevalence in men who have sex with men (MSM), and 74% among people who inject drugs (PWID) on methadone maintenance treatment. (2,3) A cohort study led by FIND, Malaysian AIDS Council and Ministry of Health of Malaysia in 2021-2022 provided HCV self-tests (HCVST) through an existing online platform (Jom-Test) first established for HIV self-testing. We calculated the economic cost of HCVST in this study.

Methods:

Participants were randomized to the intervention (249 in the oral-fluid HCVST group, 250 in the blood HCVST group, both of which received HCVST kits and instructions for use delivered by mail) and control groups (250, who received information about routine facility-based HCV testing). (Figure 1) Costs were gathered from program expenditure records in local currency units converted to US Dollars using the average 2021 exchange rate. Research-specific costs were excluded.



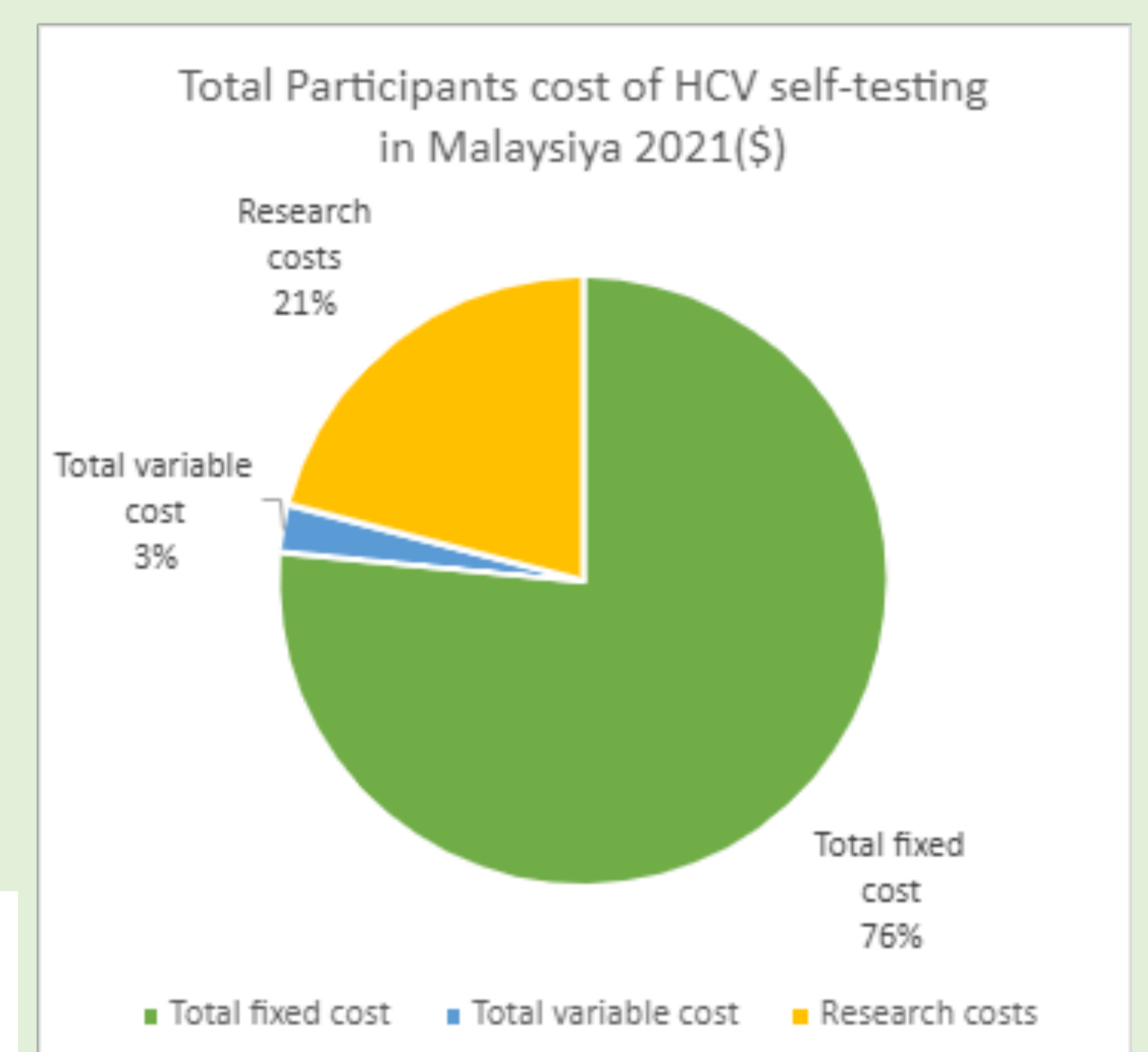
Results:

Most participants (92%) identified as MSM and 1% as PWID. There was 98% uptake of HCV testing in the HCVST arms compared to 51% in the control group. Total fixed costs were \$113,463, with \$4,125 total variable costs. (Figure 2) Fixed costs consisted of 63.4% staff, 1.9% equipment, 19.3% start up, 11.0% recurrent, 1.3% overheads. Variable costs consisted of test kit and delivery cost. Mean self-testing costs per patient were \$165 (oral-fluid; including \$151 fixed cost and \$14 variable cost) and \$154 (blood; including \$151 fixed cost and \$3 variable cost). (Table1)

Table1. Cost categories of two type of HCV self-testing in Malaysia (\$2021)

Cost categories	Total cost (\$2021)	Proportion of total	Cost of Oral-based HCVST (\$2021)	Cost of Blood-based HCVST (\$2021)
Staff - fixed	74322	63%	149	149
Equipment	2180	2%	4	4
Start-up costs	22617	19%	45	45
Recurrent costs	12863	11%	26	26
Overheads	1481	1%	3	3
Test kit & delivery	3761	3%	14	1
Excluded Research costs	31072	-	62	62
Total fixed	113463	97%	151	151
Total variable	3761	3%	14	3

Figure 2. Total participants cost of HCV self testing in Malaysia (\$2021)



Conclusion:

This micro costing approach offers important data for of the cost of self-testing for HCV from the provider perspective in Malaysia. Cost-effectiveness of HCVST will depend on screening yield (prevalence), and numbers reached for testing as variable costs made up only 3.5% of total HCVST cost. Few PWID participated, indicating that reaching this population may require different targeted approaches.

References:

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