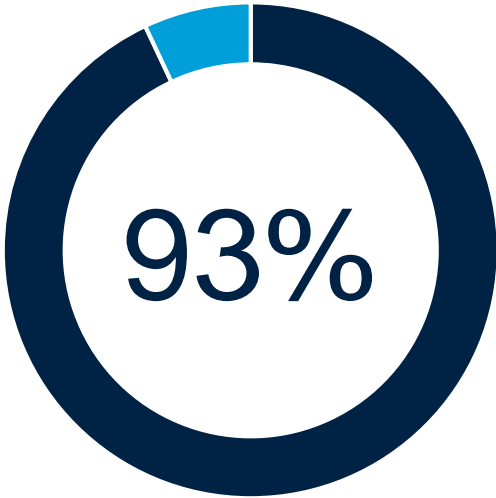


Invitations, incentives and conditions: an RCT of demand-side interventions for health screenings in Armenia

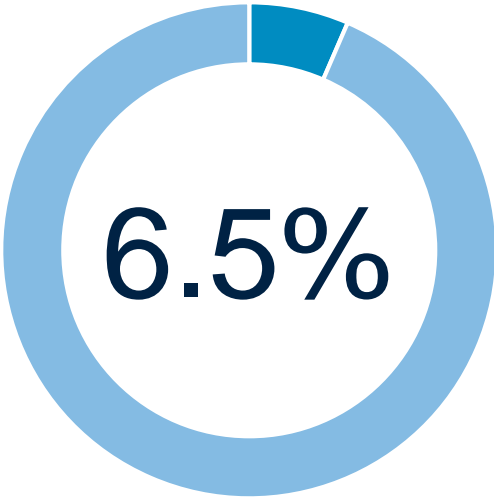
February 11, 2021

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Armenia has a high burden of NCDs



Non-communicable diseases (NCDs) lead to 93% of deaths in Armenia

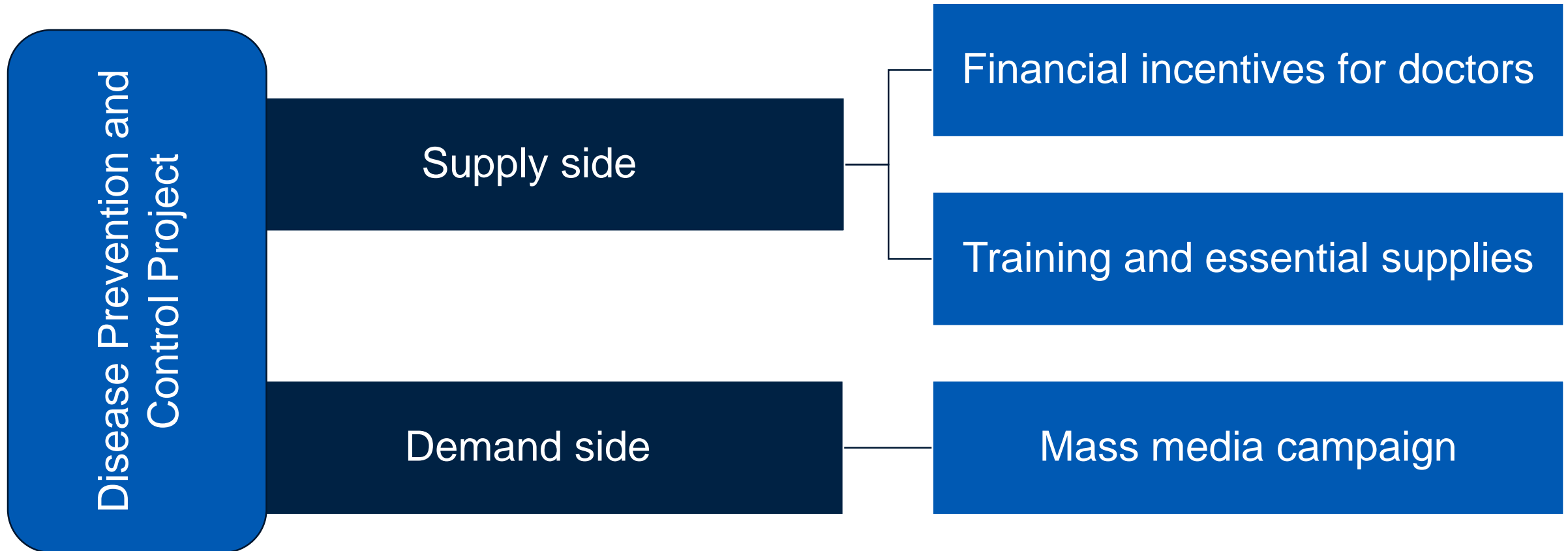


In 2017, the economic cost of NCDs was 6.5% of annual GDP

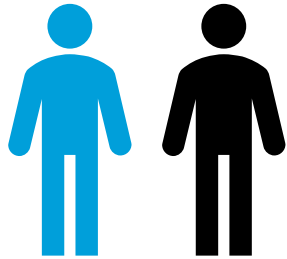


Preventive screenings

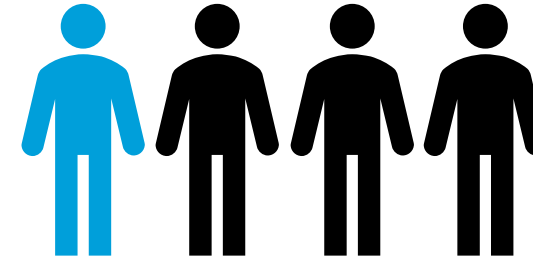
early diagnosis = complication and mortality prevention



Despite interventions, gaps in screening uptake persist



Less than 50% of people above 15 years are screened for hypertension annually



Less than 25% in the same group are screened for diabetes annually

Why is demand for preventive care low?

1. High sensitivity of demand to price and convenience:

Potential large impacts of conditions, financial incentives and reduced “hassle.”

2. Inaccurate beliefs about the benefits and uncertainty over returns:

Potential large impacts of information.

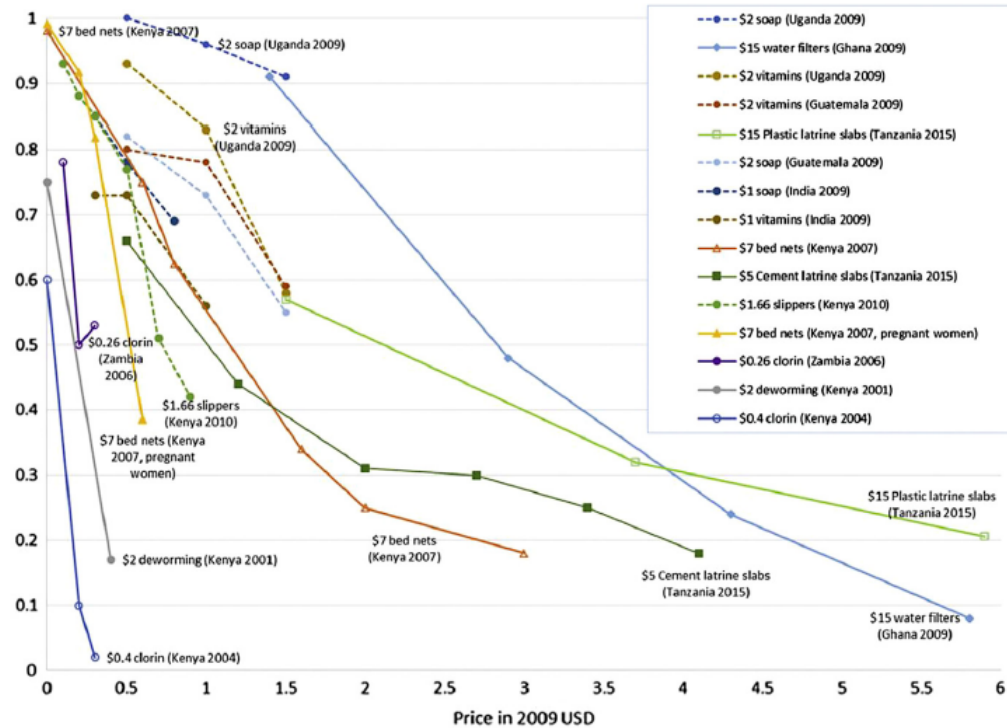


FIGURE 1

Demand for preventative health products. The y-axis plots the share of individuals or households taking up the product.

From Dupas and Miguel (2017).

3. Decisions driven by immediate benefits and costs:

Time-limited incentives and reduced “hassle” may reduce procrastination.

Focus groups on Armenia:

- Do I have to pay?
- Two visits for diabetes!
- Where?
- Why is this useful?
- Will do this later...

Objective:

To examine the impact of *incentives, invitations, and conditions*, on **screening rates for hypertension and diabetes**, among adults aged 35 to 68, who had not been screened in the past year.

Interventions designed with Ministry of Health and its Project Implementation Unit

Intervention group 1	Personal invitation from physician for diabetes and hypertension screening
Intervention group 2	Intervention group 1 plus information on screening among peers
Intervention group 3	Intervention group 1 plus labelled pharmacy voucher incentive (AMD5000 or ~\$10), not conditional on being screened
Intervention group 4	Intervention group 1 plus pharmacy voucher incentive (AMD5000 or ~\$10), conditional on being screened
Control group	No personal invitation for screening or voucher but exposed to national campaign

Dear [Name, Surname],

We cordially invite you to visit [Name of the medical facility] of [Name of the community] at the following address [Address] to be screened for diabetes and hypertension.

According to official records in your personal medical card, in past 12 months you have not been screened for diabetes and hypertension at a medical facility. In terms of prevention and control of diseases, your visit to the medical facility is extremely important to ensure your personal healthcare.

Please, prior to the visit make a call to your doctor for a proper appointment, using the telephone number presented in the bottom of this invitation.

Note: for a credible measurement of diabetes you must visit the doctor fasting since midnight, which means you should not eat or drink anything except water. The screening is free-of-charge, painless and not time-consuming.

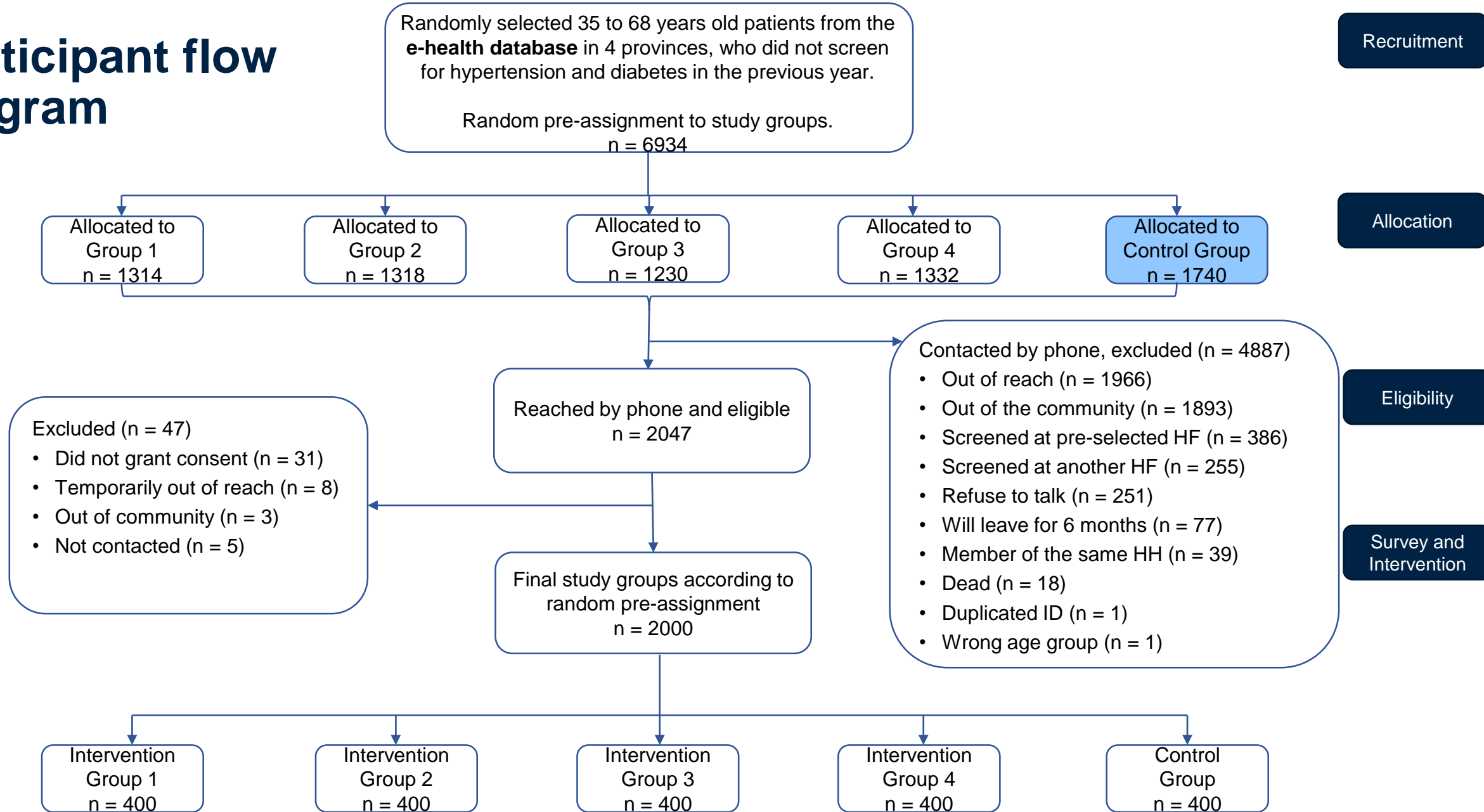
We highly recommend that you visit the medical facility soonest possible and to use the free-of-charge medical services of the primary healthcare facility.

Looking forward to seeing you,

DATE
DOCTOR
SIGNATURE

Intervention group 1: screening is important; signed by doctor; not time-consuming, painless and free; location of clinic; scheduling; pre-screen preparation.

Participant flow diagram



Recruitment

Allocation

Eligibility

Survey and Intervention

Baseline balance

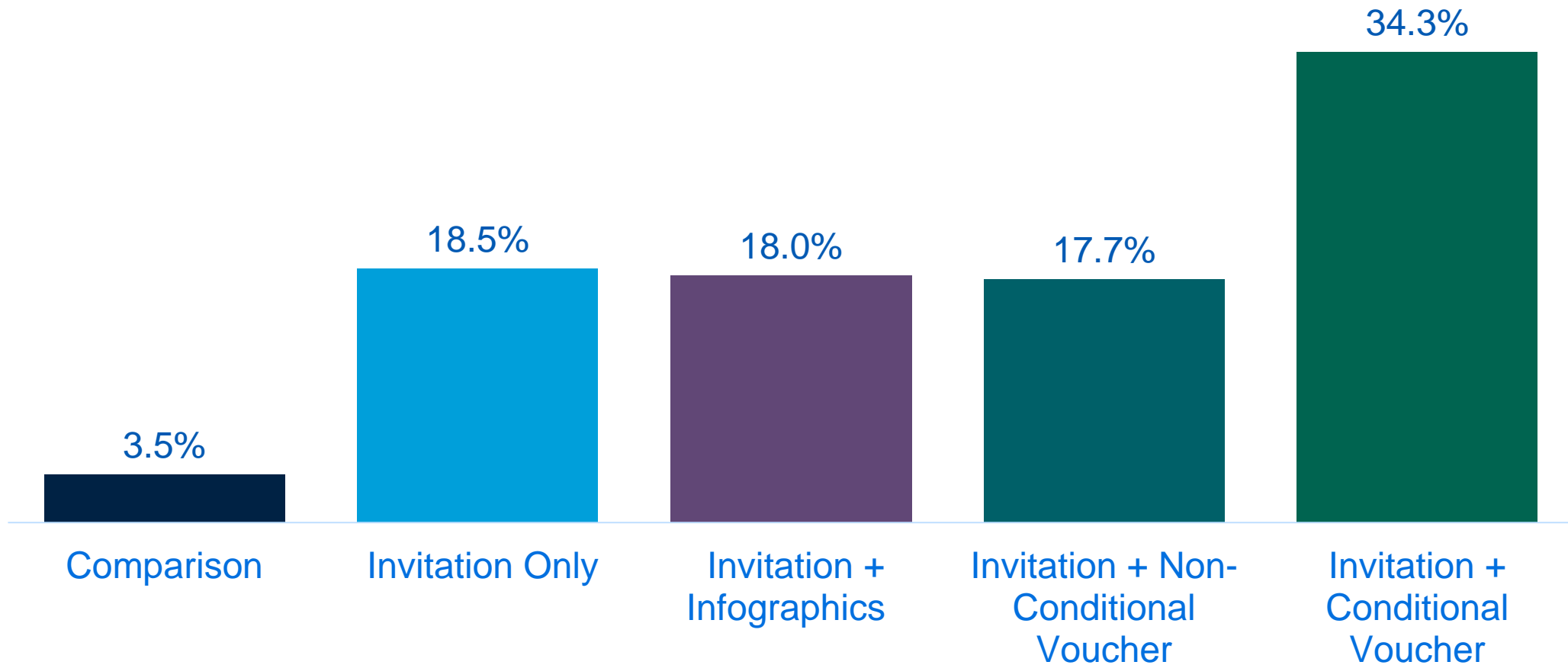
Variable (of 24)	Sample	Group 1	Group 2	Group 3	Group 4	Control
Male	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)
Age (years)	51 (9.6)	51 (9.6)	51 (9.8)	50 (9.5)	51 (9.8)	51 (9.3)
<i>Married</i>	0.9 (0.3)	0.8 (0.4)	0.9 (0.4)	0.9 (0.3)	0.9 (0.3)	0.9 (0.3)
Higher education	0.2 (0.4)	0.1 (0.3)	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)
<i>Subjective welfare*</i>	0.5 (0.5)	0.4 (0.5)	0.5 (0.5)	0.6 (0.5)	0.5 (0.5)	0.6 (0.5)
Household size	4.6 (3.0)	4.6 (2.0)	4.7 (5.1)	4.6 (1.8)	4.6 (2.0)	4.6 (2.1)
<i>Private sector employee</i>	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)	0.2(0.4)	0.2(0.4)	0.2 (0.4)
Small PHC (pop. < 920)	0.1 (0.3)	0.1 (0.3)	0.1 (0.3)	0.1 (0.3)	0.1 (0.3)	0.1 (0.3)
Urban PHC	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)

Sample means with standard deviations in parentheses

*Our income is sufficient for family basic needs, such as food, clothing,, but not enough for big purchases, such as equipment or a car

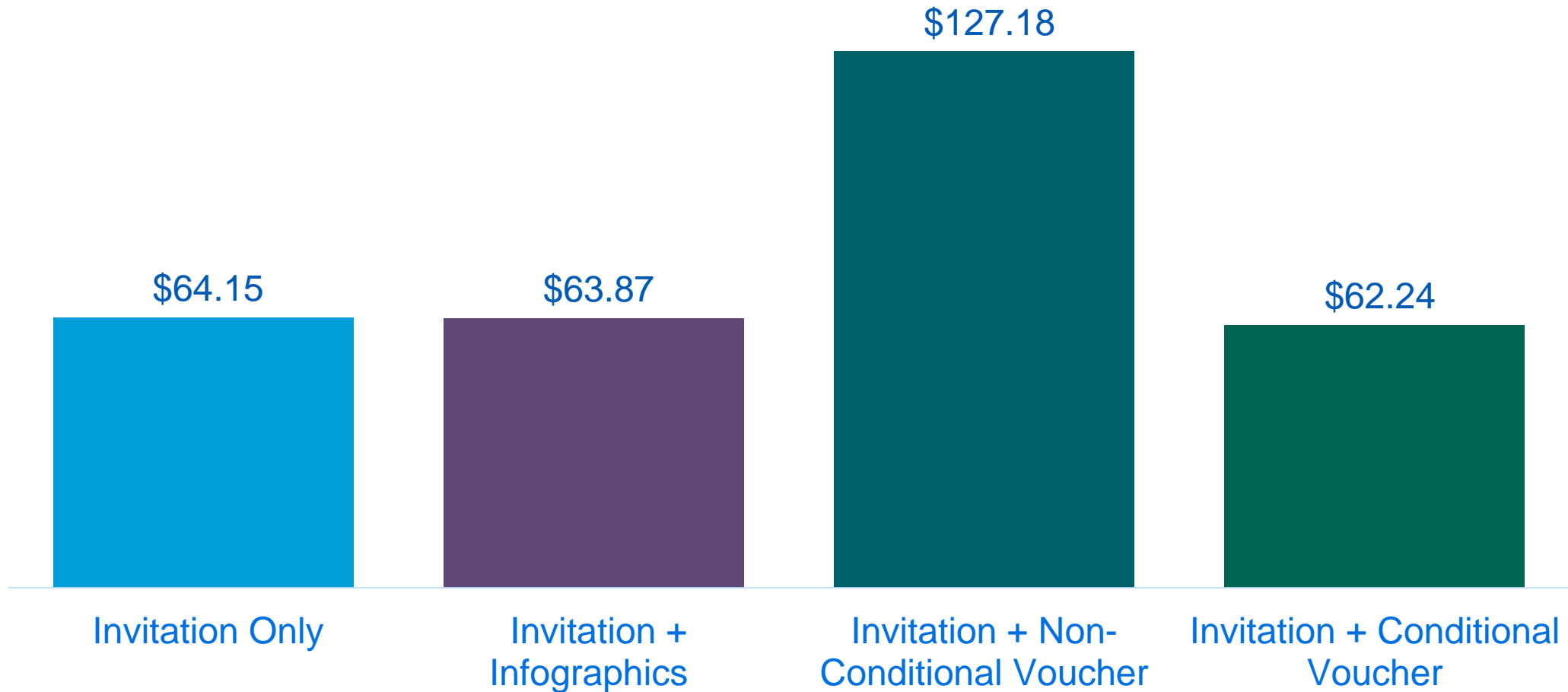
Impact on screening for hypertension and diabetes

From a baseline of no screening, in 6 months ...



Note: OLS regressions controlling for facility and regional fixed effects, age, gender, and other sociodemographic variables

Average cost per person screened (USD)



Limitations

Control group not surveyed at baseline

- Surveyed at endline
- Information at baseline may have influenced participants
- Stable socio-demographic variables
- Survey + intervention effect
- Potentially overestimating impact

Intervention-control differences

- Differences in post-allocation attrition
- Baseline differences on covariates
- Controlled for in regressions

Takeaways

Messages, incentives, and conditions increase screening potentially due to reduced hassle, changed beliefs, time limit, immediate benefits and costs? [TBD]

Messages and conditional incentives were equally cost effective, unconditional incentives less so, because Group 3 was twice as costly as Groups 1 and 2, but equally effective.

Personalized messages to households included under the Project, but unclear if impacts are generalizable to those who have screened before and with a different implementer.

Acknowledgments

- Ministry of Health and Project Implementation Unit
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- Media Model, Armenia
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- The Strategic Impact Evaluation Fund