

# OUTCOME EVALUATION OF AN HIV PREVENTION SOCIAL BEHAVIOR CHANGE COMMUNICATIONS PROGRAM IN ZAMBIA USING PROPENSITY SCORE MATCHING

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## INTRODUCTION

Between 2010 and 2014, the USAID-funded and Chemonics-implemented Zambia Communications Support for Health (CSH) program carried out a series of social and behavior change communications interventions under its Safe Love HIV Prevention campaign to address the key drivers of HIV prevalence. *Safe Love* was a national multi-channel campaign for men and women age 15-49 that included TV and radio drama series, TV and radio advertisements, social media, and interpersonal community-based activities. The demand for evidence led CSH to conduct a rigorous outcome evaluation of the *Safe Love* campaign. The evaluation was designed to assess the effects of the campaign on HIV prevention behaviors and secondary behavioral determinants.

## EVALUATION METHODOLOGY

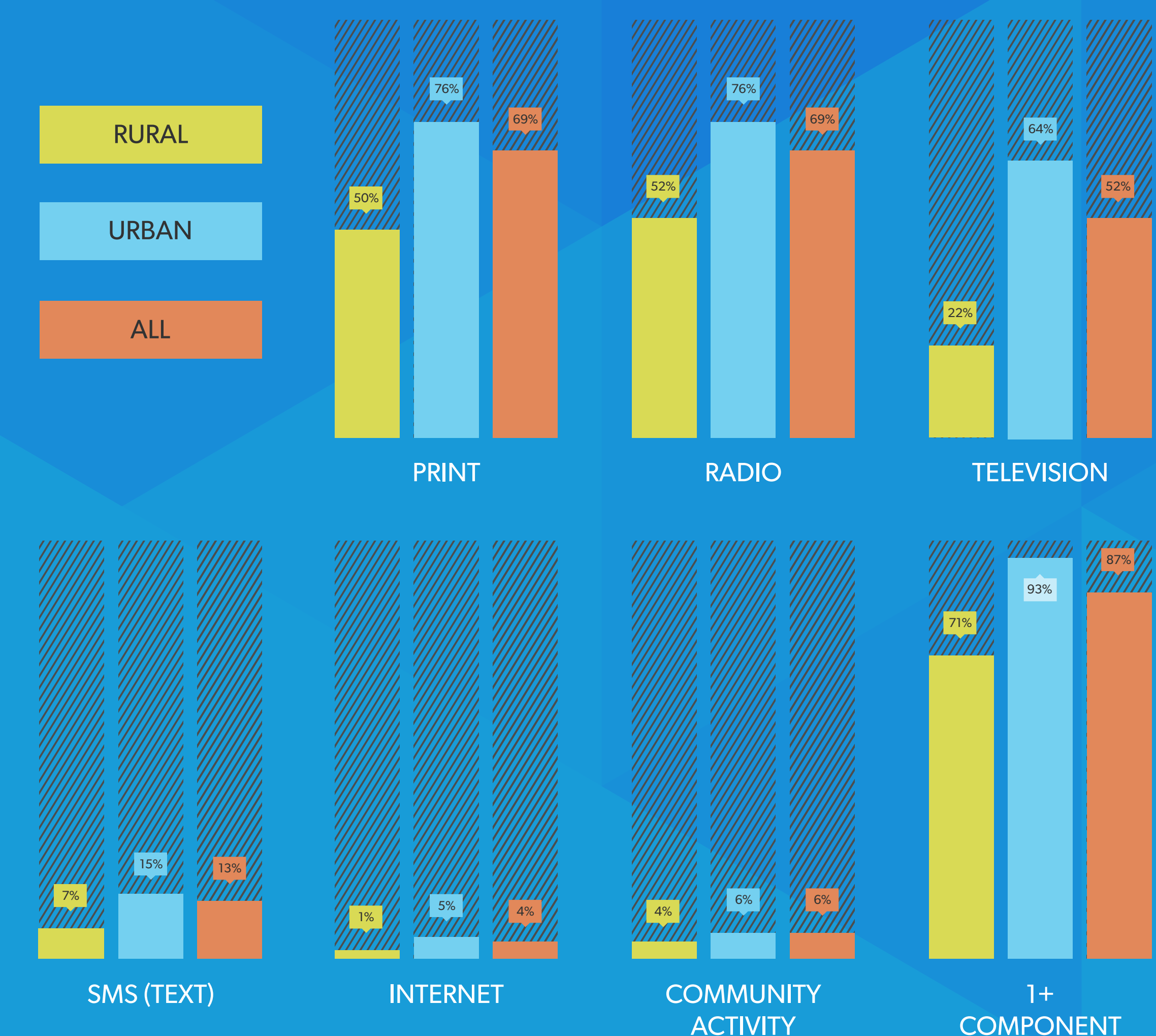
### Design and Survey Implementation

- » The evaluation used a one-group post-test-only evaluation design with propensity score matching.
- » A representative household survey was conducted in the nine districts (Kabwe, Kafue, Kapiri Mposhi, Kawambwa, Luanshya, Lusaka, Mansa, Mkushi, and Samfya) where all components of the campaign were implemented.
- » The survey was completed by **1,993 men and 2,121 women (total n = 4,114)** age 15-49 between June and August 2014.

### Data Analysis

- » Weighted descriptive analysis was conducted for the socio-demographic characteristics and exposure findings.
- » Propensity score matching was conducted to determine the campaign effects on the target audience's behaviors and intermediate outcomes related to four topic areas: condom use, multiple concurrent partnerships, HIV testing, and voluntary medical male circumcision. A total of **103 outcomes** were examined across the four topic areas.
- » Propensity score matching was conducted for the sample as a whole, by area of residence (urban/rural), and sex.
- » Indices of campaign recall were developed for each of the four topic areas by adding spontaneous recall variables together related to each topic. Each index was divided into three groups (no recall, low recall, and high recall).
- » For each outcome, three recall comparisons were conducted using propensity score matching to determine whether higher levels of campaign recall resulted in greater effects: (1) no recall compared to any level of recall (low and high together), (2) no recall compared to low levels of recall, and (3) no recall compared to high levels of recall. Thirteen variables were used to construct the statistically equivalent matched groups, including frequency of media use and exposure to other HIV campaigns.
- » Campaign effects were estimated using different matching algorithms (kernel, nearest neighbor, and radius matching), and the best matching was chosen for the final results.

## EXPOSURE FINDINGS



## RESULTS

**87%** of respondents were exposed to at least one media channel of the campaign

**75%** of respondents owning a radio were exposed to any of the radio programs of the campaign

**69%** of respondents owning a TV were exposed to any of the television programs of the campaign

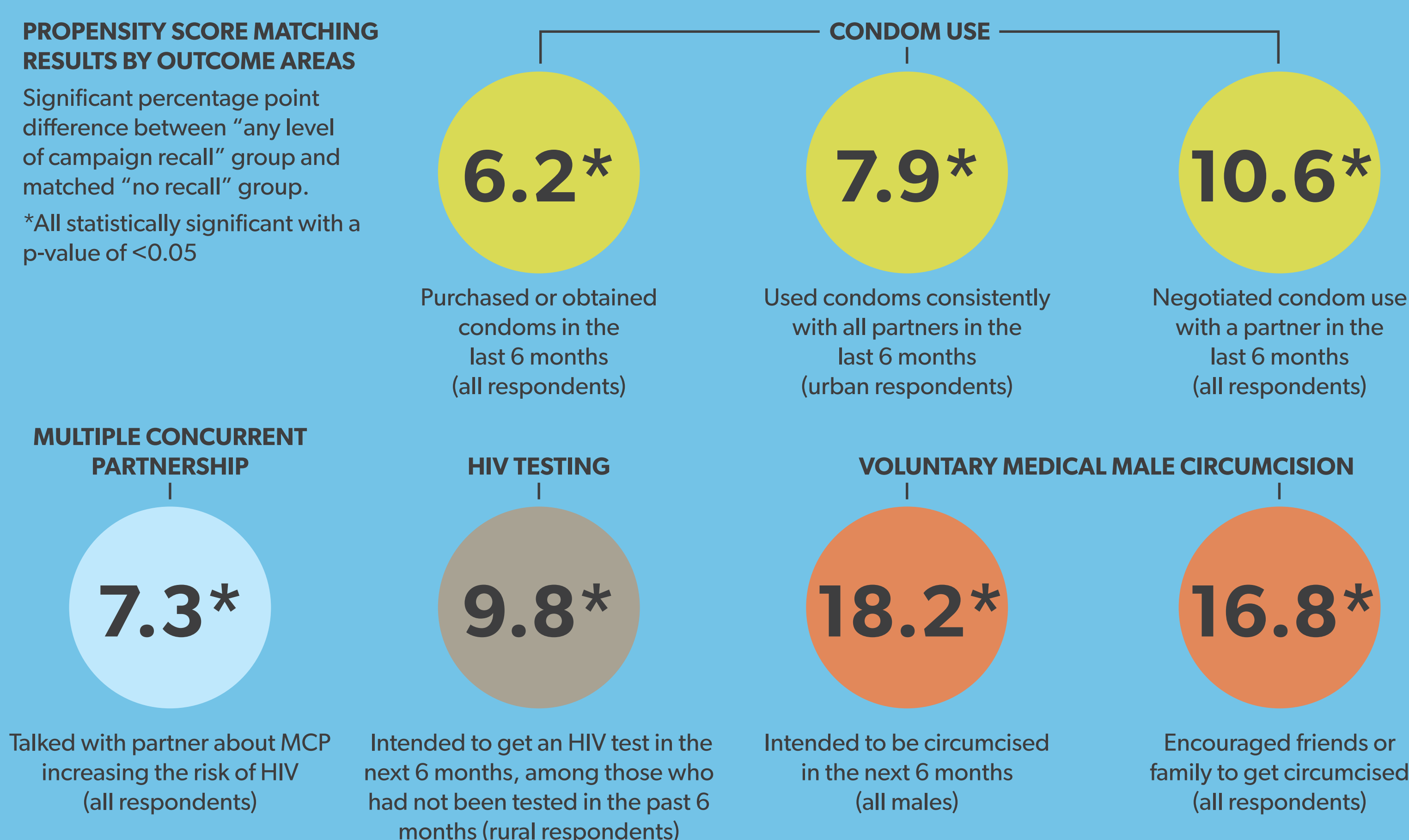
### OVERALL

urban respondents had greater exposure to the campaign than rural respondents

## CAMPAIGN EFFECT FINDINGS

### PROPENSITY SCORE MATCHING RESULTS BY OUTCOME AREAS

Significant percentage point difference between "any level of campaign recall" group and matched "no recall" group.  
\*All statistically significant with a p-value of <0.05



- » For condom use, the campaign had positive effects on all four behavior outcomes examined and on most of the intermediate outcomes. However, most effects were found in urban areas only.
- » For multiple concurrent partnerships, no campaign effects were found on the behavior or intention outcomes, but effects on other intermediate outcomes were found in both areas of residence.
- » For HIV testing, the campaign had an effect on one behavior outcome (partner uptake of HIV testing) and most effects were found in rural areas only.
- » For voluntary medical male circumcision, campaign effects on the behavior outcomes examined were inconclusive due to insufficient sample sizes or power to detect effects, but the campaign had strong effects on all intermediate outcomes examined across most of the five groups (all respondents, females, males, rural, and urban) and levels of recall.
- » Overall, higher levels of recall resulted in greater campaign effects. For a few outcomes examined, significant effects were only found among respondents with higher levels of recall, suggesting there is a threshold of exposure needed before changes in outcomes will occur.

## CONCLUSIONS

The *Safe Love* campaign reached the majority of people age 15-49 in the nine districts surveyed and had an effect on increasing key HIV preventive behaviors, particularly the acquisition and use of condoms in urban areas and HIV testing among partners in rural areas. The campaign also increased many of the outcomes that precede changes in behaviors, including the intention to get an HIV test among rural respondents and males' intention to get circumcised. A fairly low number of respondents had been exposed to any of the community activities of the campaign. Accordingly, most of the effects found are likely due to mass media, but a particular kind of mass media that characterized the *Safe Love* campaign: one that encouraged the audience to engage deeply with the lives of characters and situations, reflect on their own lives, and discuss what they had seen or heard with their partners, family, and peers.

### Citations

Franca-Koh, A.C., Herrera, S., Manda, J., Chilemu, K., Do, M., Elkasabi, M., Zalisk, K., Tamsah, G., Wang, W., Wakefield, C., Chipukuma, A., Maliwa, E., Simbaya, J., Fumpa, H., Nyamazana, M., Sachingogu, N. (2014). *Communications Support for Health Programme: Safe Love Outcome Evaluation Report*. Rockville, Maryland: ICF International, Chemonics International, Manoff Group, the University of Zambia's Institute of Economic and Social Research and Tulane University.

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