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# No Margin, No Mission? Motivating Community-Based Health Service

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# Healthcare human resource crisis



- Dire shortages of health care workers in many developing countries
- 3% of world's health care workers in Africa, but has 24% of disease burden
- Zambia: population of 12 million with 646 doctors
  - For every 100,000 Zambians, 6.9 doctors and 113 nurses
- HCW shortage undermines efforts to combat malaria, HIV/AIDs, and other diseases



# How to Address Health Care Worker Crisis?

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- Train and incentivize individuals embedded in  
Zambian communities to provide health services
- Use new channels:
  - New private sector channels:
    - Do we motivate them using the same incentives as  
standard private sector channels? (Randomized evaluation  
with Society for Family Health Zambia)
  - New public sector channels:
    - How do we select and retain good Community Health  
Workers? How should we remunerate them?



## No Margin, No Mission? (Ashraf, Bandiera and Jack, 2010)

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- In collaboration with Population Services International Zambia (SFH)
  - HIV/AIDs prevalence rate of 14.3 percent in Zambia
  - Female condoms allow women to protect themselves against HIV
  
- Task: distribute female condoms in urban compounds.
  - New /unfamiliar product
  - Follow up likely to improve adoption; targeting of risk important
  
- Agents: hairdressers and barbers
  - Thousands of salons, found in all neighborhoods
  - Good client relationships (key for targeting) and repeated interaction
  - Clients are “captive” while getting hair done – good for information provision





# No Margin, No Mission?

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- Recruit and train hairdressers and barbers across Lusaka to distribute female condoms in urban compounds
  
- Randomize incentives across all hairstylists in four treatment groups:
  - Volunteer
  - Low Financial Incentives
  - High Financial Incentives
  - Status Incentives
  
- Experiment Goals:
  1. Test whether different incentive schemes attract different “types” of agents
  2. Compare the effectiveness of financial vs status incentives
  3. Test whether financial incentives crowd out intrinsic motivation



## Experimental Design: Stages and Data

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- Census: Survey all salons in Lusaka (~2500)
- Randomly assign 1200 salons to four treatments
- Invite to training, collect further information + experimental game to measure “intrinsic motivation”
- Sales and monitoring (restocking data and logbooks): **collect monthly for one year.**
- Customer surveys (~2000 individuals, from 16 marketplaces)
- Endline survey of all salons

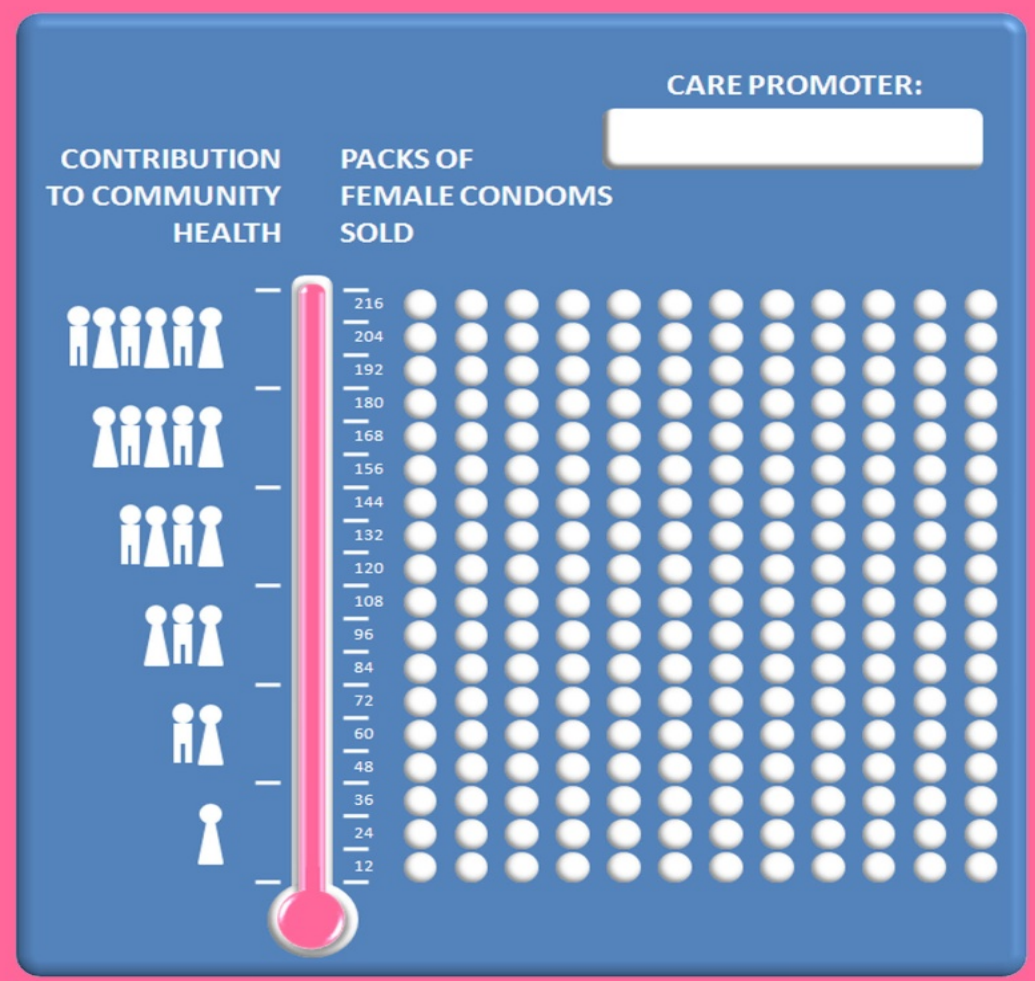
## Experimental design: Incentives

**All stylists sell at same price (K500/pack) , restock product from SFH, each dispenser contains 12 packets of 2 condoms each, incentives calculated monthly for number of dispensers sold**

Pure volunteer treatment (PVT)	No incentive
Low powered financial treatment (LPFT)	K50/pack (10 percent of sales price)
High powered financial treatment (HPFT)	K450/pack (90 percent of sales price)
Status treatment (ST)	Sales chart to be filled with stars – after a threshold, public ceremony

# Experimental design: Status Incentives

For lovers  
who choose to *Care!*



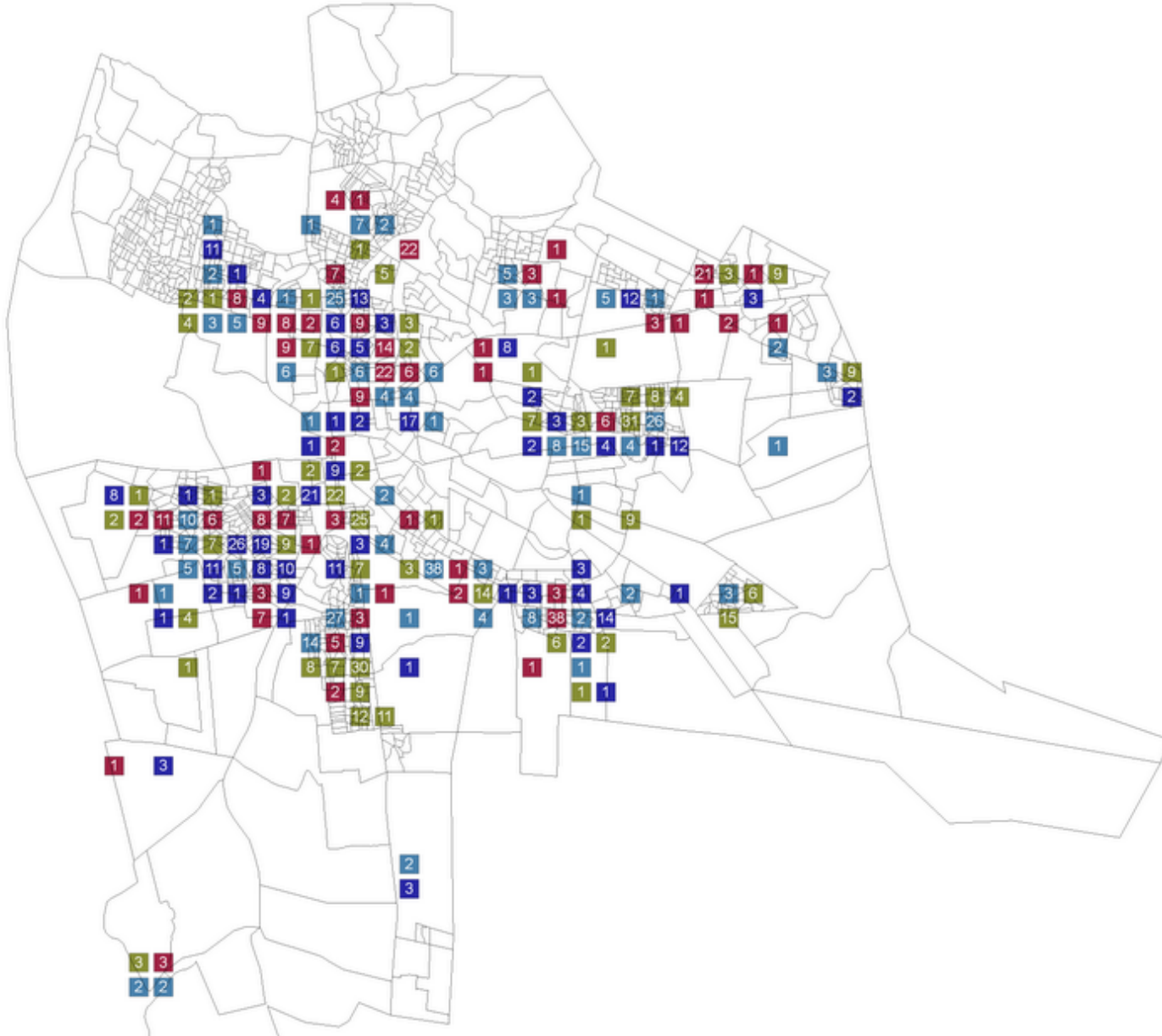




## Experimental Design: Sampling and power

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- Assign treatment based on gridcell location via GPS coordinates of salons
- Buffer between any two salons in different treatments (150m)
- ~200 gridcells with an average of 14 salons/gridcell
- Stratified on type of salon, presence of bar, manager's assets, index of altruism, number of employees in business, number of products sold





## Experimental design: Training and Experimental Game

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- Training was half-day that, through lectures, exercises, videos and role plays, covered:
  - Mission of SFH , HIV/AIDs Transmission and Prevention
  - General condom use as well as female condom characteristics, use, and targeted benefits
  - Business Skills
    - Promotion/Selling
    - Calculating Profit, Saving and record keeping
      - Video
  - Experimental Game
  - Explanation of Incentives
  - Decision to become part of the program through purchasing subsidized dispenser
  
- Consistency across all trainings ensured through facilitation by same trainer, very detailed script, with materials and videos, all trainings monitored.



# Experimental design: Data sources

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- SFH invoice data
  
- Sales Log-Book: Participants asked to record condom sales and customer characteristics in logbooks to provide a proxy measures of the clients' HIV risk profile
  
- Customer Survey
  - 2000 individuals, 16 marketplaces
  - Asked about use of condoms, behaviors and attitudes, and risk profiles (including concurrent partnerships)
  - Measures of knowledge of and exposure to female condoms, and specifically hairstylists' role in this





## Preliminary findings: data sources

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- Salon and agent characteristics: training and census surveys + donation game
- Sales: SFH invoices (agents' purchases from SFH)
- Currently being entered: monthly sales (monitor surveys), logbooks



## Finding 1: No selection effect

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- 97% of agents invited to training joined the program
- Only 5% left during the following year
- Both are equally distributed by treatment
- In this setting, different incentives did not attract different types
- This might be due to the fact that this is not their main occupation – only a small side activity.



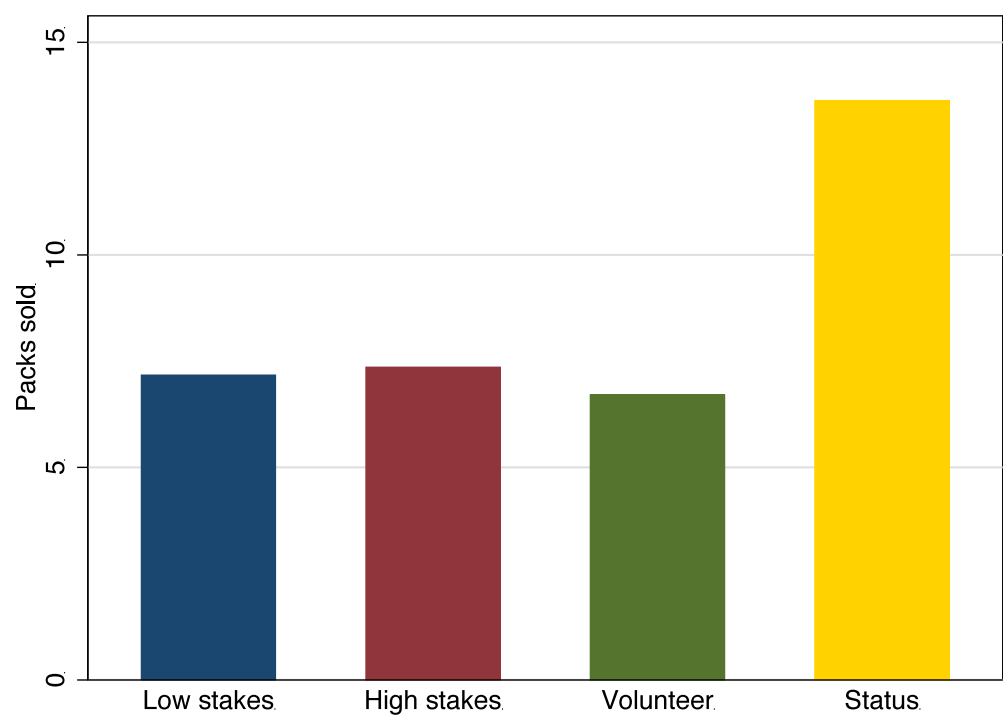
## Finding 2: Status vs. Money

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- Status incentives are more effective than financial incentives- the difference is statistically and economically significant
- Robust to the inclusion of a rich set of salon and agent characteristics
- Driven by variation on the intensive margin, that is on *how much* they restock

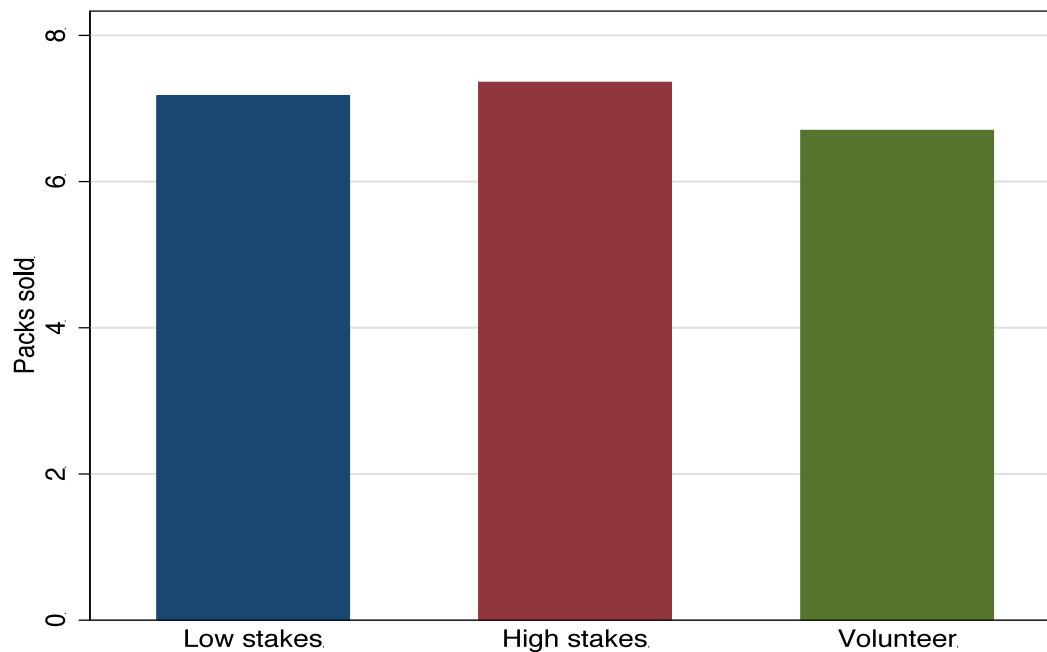
# Finding 2: Agents in status treatment restock twice as many condoms

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## Finding 3: No intrinsic motivation crowding out

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- No evidence that providing financial incentives, no matter how tiny, lowers effort



## Results: Status Treatment: Mechanisms

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- Ruling Out Advertising Effect:
  - Of the 39% who report seeing some form of advertising for female condoms, 91% report some form of poster. When asked to describe the poster, only 2% report a thermometer. Reporting seeing advertising not significantly different across treatments (from Customer Survey)
  - Randomized “placebo” treatment of thermometer in 8<sup>th</sup> monitoring round: data arrival imminent
- Less educated more likely to respond to financial incentives
  - This could be simple thresholds of monetary incentives



## Conclusion and Future Work

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- Find that status incentives can be very effective, with an effect size of twice that of either low or high financial incentives on average
  - Does not appear to be coming from advertising effect
  - Even when financial incentives are as good as status, as for lower educated promoters, status is much more cost-effective
  
- Find no evidence of crowd out of motivation from low powered incentives: they perform just as well as volunteer treatment.
  
- Future Work:
  - Measuring effects on subsequent motivation for health delivery tasks that are uncompensated
  - Evaluating impact on stylists themselves: endline survey



# Conclusion

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- Innovative delivery channels can overcome many of the challenges facing global health, but it is critical to find the appropriate compensation
- Evaluating the effect of compensation should focus both on the types of people being drawn in (*selection*) and the impact on effort on the job
- Status and social recognition is a significant driver of pro-social behavior and can be leveraged (in a cost-effective way!) in a far more systematic way than it has thus far
- And...more to come!