TUPEE461: Demographic reach and costs associated with 3 models of community HIV testing in rural KwaZulu-Natal

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Background

Community HIV testing modalities may offer better access than HTC at health facilities to some difficult-to-reach groups but at additional cost, which requires justification.

Methods

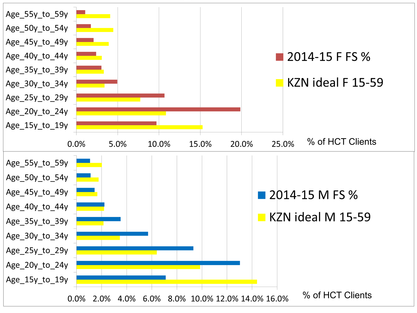
MSF implemented 3 modalities of community testing for HIV in uThungulu District beginning in 2012: Fixed Sites (FS), Mobile Sites (MS) and Door-to-Door (D2D). An ingredients approach was used to analyze costs associated with these testing modalities for 2014/15. Client structures were analyzed for men and women 15-59 years of age for each testing modality, and compared to the predicted distribution of clients (based on a 2013 population-based HIV survey in the catchment area—noted as 'KZN Ideal' on these graphs).

Results: Costs

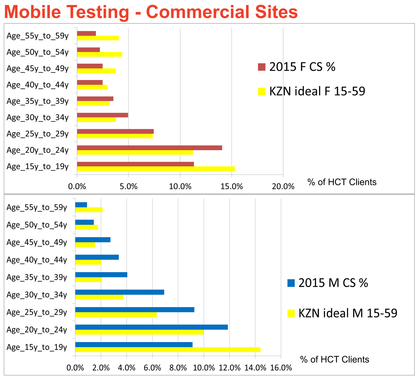
Cost per client tested by ingredient category & status in each model						
	Fixed Testing (2014)		Mobile testing (2014)		Door to door (2015)	
	HIV-	HIV+	HIV-	HIV+	HIV-	HIV+
Total tested	**6613**	**488**	**11182**	**388**	**36256**	**502**
Diagnostics	17.70	36.13	17.70	36.13	17.70	36.13
Staff	85.57	117.84	77.50	111.63	58.54	95.25
Sensitization	1.13	1.13	0.69	0.69	0.22	0.22
Infrastructure	3.55	3.55	-	-	-	-
Transport	-	-	16.99	16.99	-	-
Communication	1.60	1.60	1.32	1.32	3.24	3.24
Equipment	1.18	0.10	1.07	1.07	0.17	0.17
Unit cost per model	**R 110.73**	**R 160.35**	**R 115.27**	**R 167.84**	**R 79.87**	**R 135.01**
Total cost per model	**732 235.84**	**78 776.61**	**1 288 966.97**	**65 120.12**	**2 895 703.09**	**67 579.37**

[All costs in South Africa Rand (31 Dec 2014); 1 USD = 11.54 SAR]
[All subjects have test 1, only HIV+ have test 2]

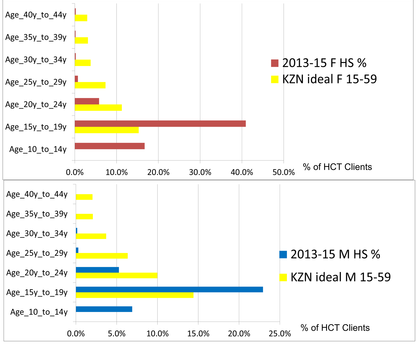
Results: HIV Testing - Fixed Sites



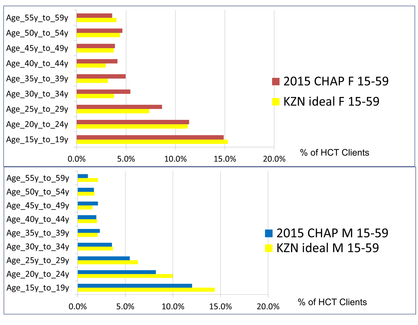
Mobile Testing - Commercial Sites



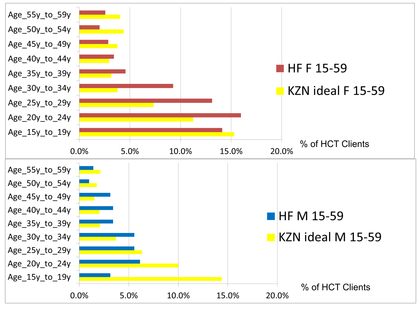
Mobile Testing - High School Sites



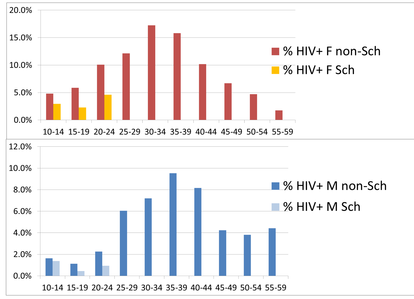
Door-to-Door (=CHAP) Testing



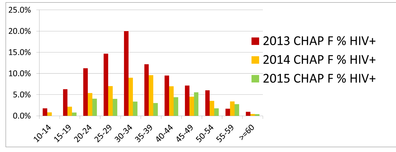
Testing at Health Facilities - Nov 2015



HIV Prevalence: School vs. Non-School-Associated Youth



Evolving HIV prevalence among Door-to-Door testing clients

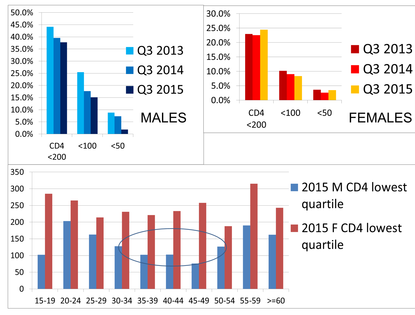


Identification of HIV+ Persons by various modalities of HCT (Sept-Oct-Nov 2015)

	# Tests	# HIV+	HIV Prevalence among tested clients
HF[1]	2121	368	17.4%
HF-*ANC*	551	103	18.7%
FS - Mixed Adults	2361	160	**6.8%**
FS- College	320	11	3.4%
M1SS -CS & similar[2]	1509	88	**5.8%**
M1SS - HS & similar[3]	641	15	2.3%
D2D (CHAP)	11984	103	0.9%
Totals	19487	848	

[1]*Does not include ANC*
[2]*Includes CS (taxi ranks, shopping areas), work sites, farm clinics*
[3]*Includes HS (high schools), other youth-focused events, youth tested at some MMC events*

Immune status (CD4 count) at time of linkage to HIV treatment (proportion of patients with CD4 below threshold indicated):



Conclusions

- **Door-to-Door testing** is the least costly modality for community HIV testing
- **Fixed Sites for HIV testing** cover most sex-age strata— but not enough <20 years of either sex
- **Mobile HIV testing** covers most sex-age strata but client demographics are site-dependent:
  - **Commercial sites** cover most adult sex-age strata—but not enough <20 years
  - **High school sites** reach youth very well
  - **Non-school associated youth** need testing opportunities outside school—they have higher HIV prevalence than school-associated youth.
- **Door-to-Door testing** covers most adult sex-age strata except men 15-29 years; repeated offers of HIV testing leave fewer and fewer undiagnosed HIV+ clients ('saturation of testing').
- **Health Facility testing** does not reach enough men, or youth of either sex well enough
- Among the community HIV testing modalities, **Fixed sites and Mobile testing in commercial areas are most efficient** at finding HIV+ persons among their clients
- **HIV+ men are more likely to be immuno-compromised** when linked to HIV treatment

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