

POPULATION SIZE ESTIMATION OF MSM IN CAMBODIA, 2008

Capture - Recapture Methodology in 6 Cities

Family Health International
Cambodia Office

Rationales for estimating MSM population size

- For policy:
 - To advocate for programs
 - To ensure adequate financial resources
 - To estimate the burden of HIV in the population
- For program planning:
 - To ensure that program planning is scaled to the population needs
 - To provide a denominator for program coverage estimates and other monitoring and evaluation indicators

Objectives

- To estimate the population size of “visible” urban MSM residing in large cities in Cambodia, including:
 - Phnom Penh
 - Battambang
 - Sisophon
 - Siem Reap
 - Kampong Cham
 - Poipet

Population definition

- Biological males who have engaged in oral or anal sex with a man in the past month
- Eligibility:
 - Asian (Westerners were excluded)
 - Biological male (includes both “short hair” and “long hair” MSM)
 - Presented at the selected survey locations
 - Who acknowledged their homosexuality through informal discussion with survey interviewers
 - Who acknowledged having had oral or anal sex with a male partner in the past 30 days

Mapping

- Locations where MSM gathers were mapped by NGOs two weeks prior to survey
- Mapping listed all locations known to be MSM gathering points

	Phnom Penh	Kampong Cham	Battambang	Siem Reap	Bantey Meanchey
Type of location					
Private house	45	22	37	22	34
Park	18		2	5	12
Street	18		2	1	5
River bank	6	3	1		5
Bar/Café	17		1		1
Disco	6		2	2	2
Sports facilities	3				
Schools		1			2
Temples					3
Others	2	2	1	1	7
All type of location	115	28	46	31	71

Survey methodology

- The survey comprised two rounds of enumeration
- Each round of enumeration was conducted for 5 consecutive days including a Friday, a Saturday and a Sunday
- The two rounds of survey were separated by an interval of 14 days
- Parks, river banks, street corners, cafes and discotheques were visited multiple times per round
- Private houses, schools, temples, and sports facilities were visited only once per round

Identifying MSM

- At selected locations, MSM were identified by interviewers through body language
- Potential participants were approached and explained about the survey

Questionnaire

- Personal information collected included:
 - age
 - sexual identity (short-hair versus long-hair MSM)
 - whether they had disclosed homosexuality to persons other than sexual partner or family members
 - whether they had sold sex or purchased sex in the past 30 days
 - whether they had sold sex multiple times in past 30 days
 - whether they had sex with a female in the past 30 days
 - whether they had been reached by prevention intervention programs in the past 30 days.

Methods to control for duplicates

- At the first round, interviewees received a T-shirt at the contact
 - Duplicates were identified by asking participants if they had already received a T-shirt and completed the questionnaire.
- At the second round, participants were given a rubber band bracelet at the contact
 - Duplicates were identified by asking participants if they had already received a bracelet and completed the questionnaire.
 - Those who had participated at the first round were identified by asking if they had previously received a T-shirt and completed the questionnaire.

Data collection team

- Each team consisted of 2 interviewers (1 long-hair & 1 short-hair MSM)
- Each participating NGO had one supervisor in each province where they were involved
- NGOs assisted in data collection:
 - MHSS
 - MHC
 - USG
 - KHEMARA
 - KANHNHA
 - KDFO
- NAA and FHI supervised data collection
- PAO facilitated survey implementation

Calculation of population size estimates

- C1: Number of unique contact with MSM at the first round of survey
- C2: Number of unique contact with MSM at the second round of survey
- R: Number of MSM contacted at both rounds of survey

$$\text{Estimate} = \frac{C1 * C2}{R}$$

RESULTS

Recruitment Process

Round 1
(28 May – 8 June, 2008)

n=7,080



n=6,791



n=6,437



n=5,853

Been Approached

Agreed to Participate

Never Been Interviewed

*Had Sex with a Man
in the Past 30 Days*

Round 2
(13 – 24 June, 2008)

n=7,689



n=7,443

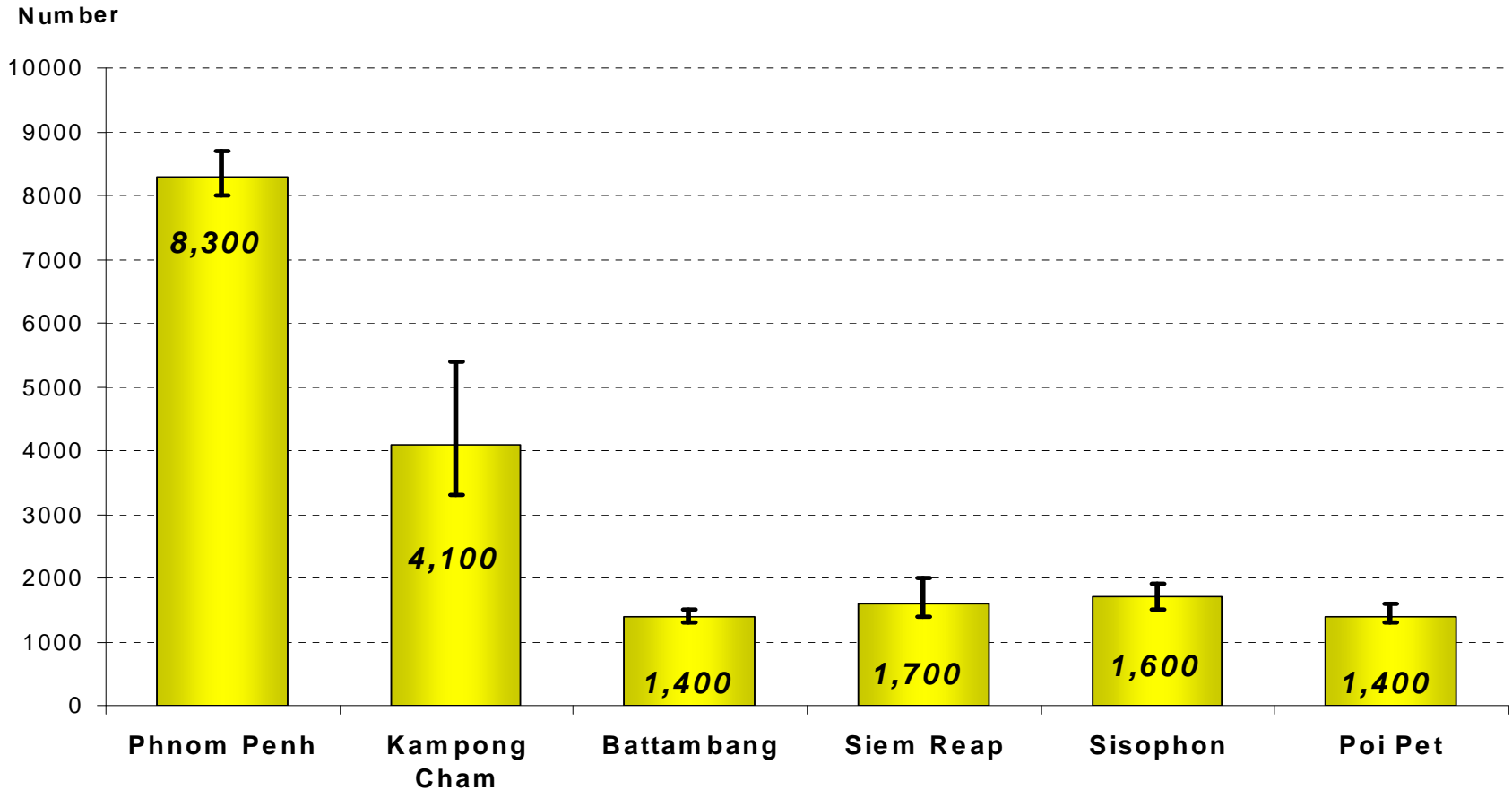


n=6,632

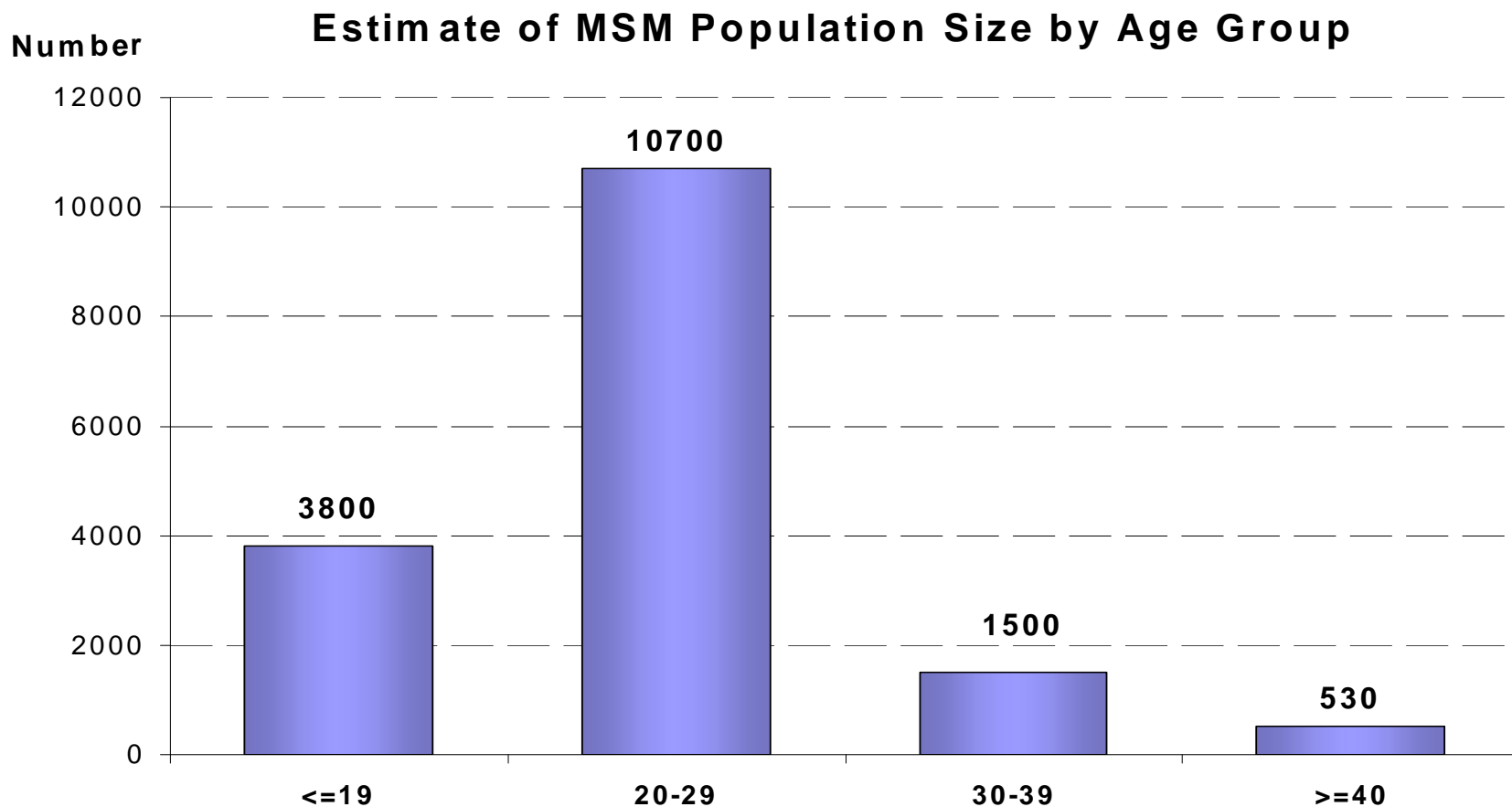


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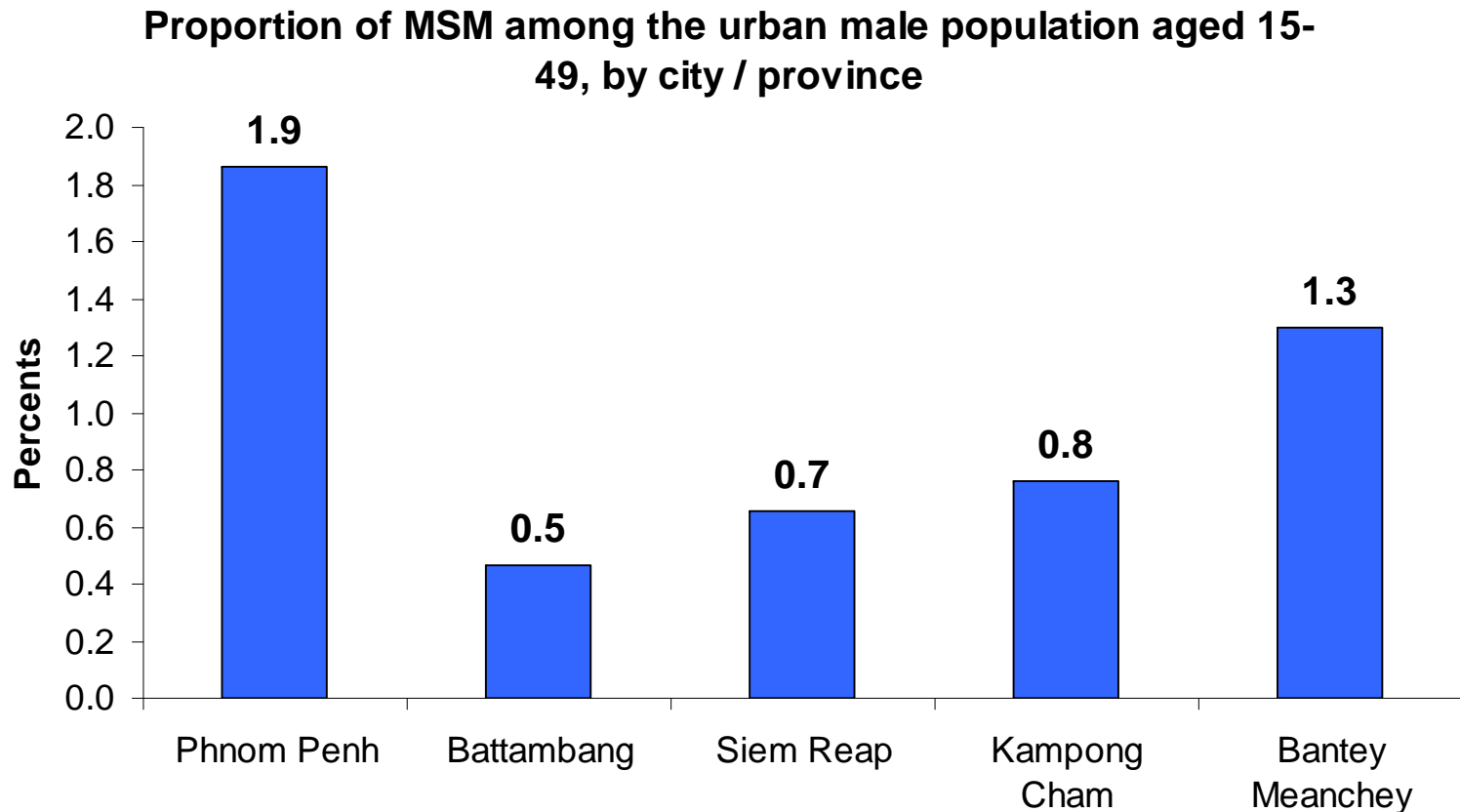
Size estimates by city



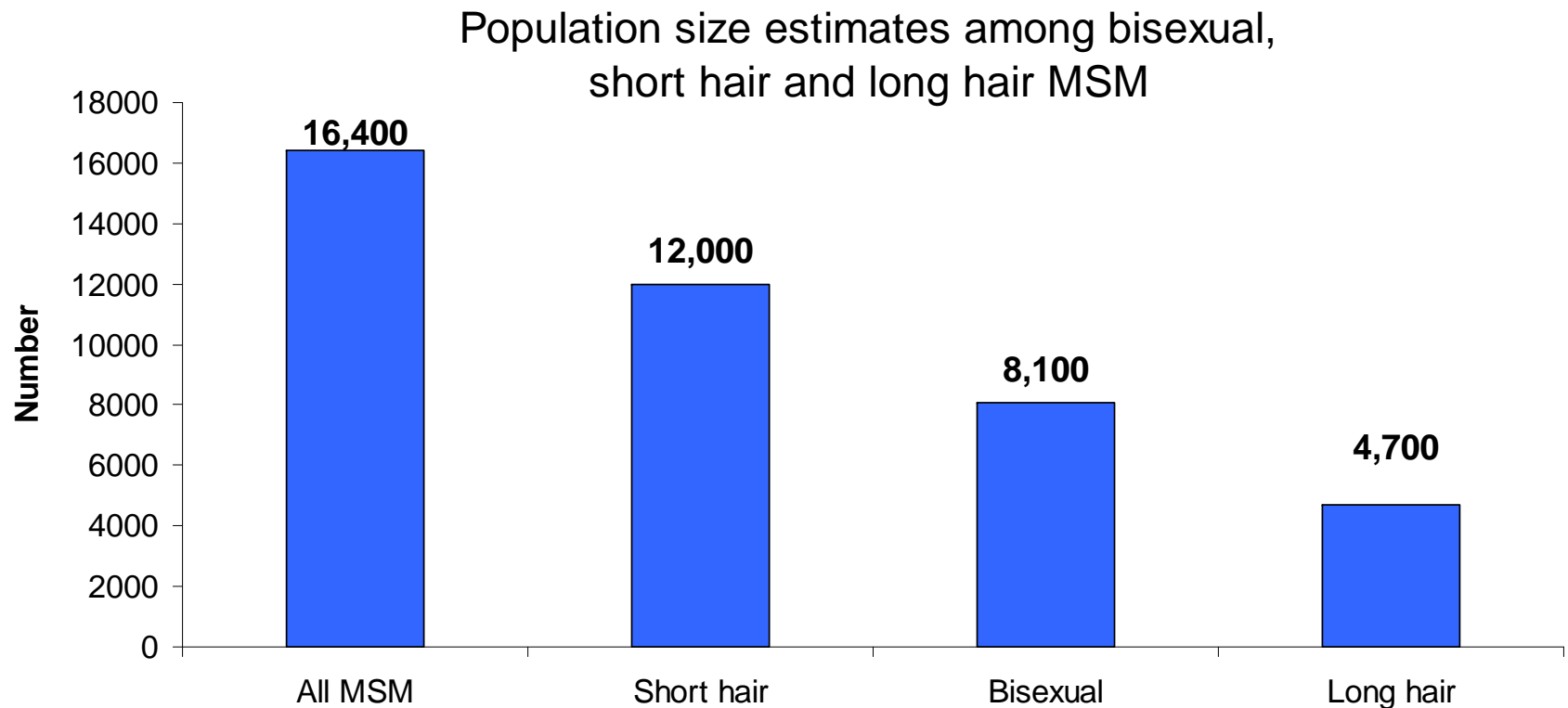
A majority of MSM was youth



'Visible' MSM represents 0.5 - 2% of the urban male population

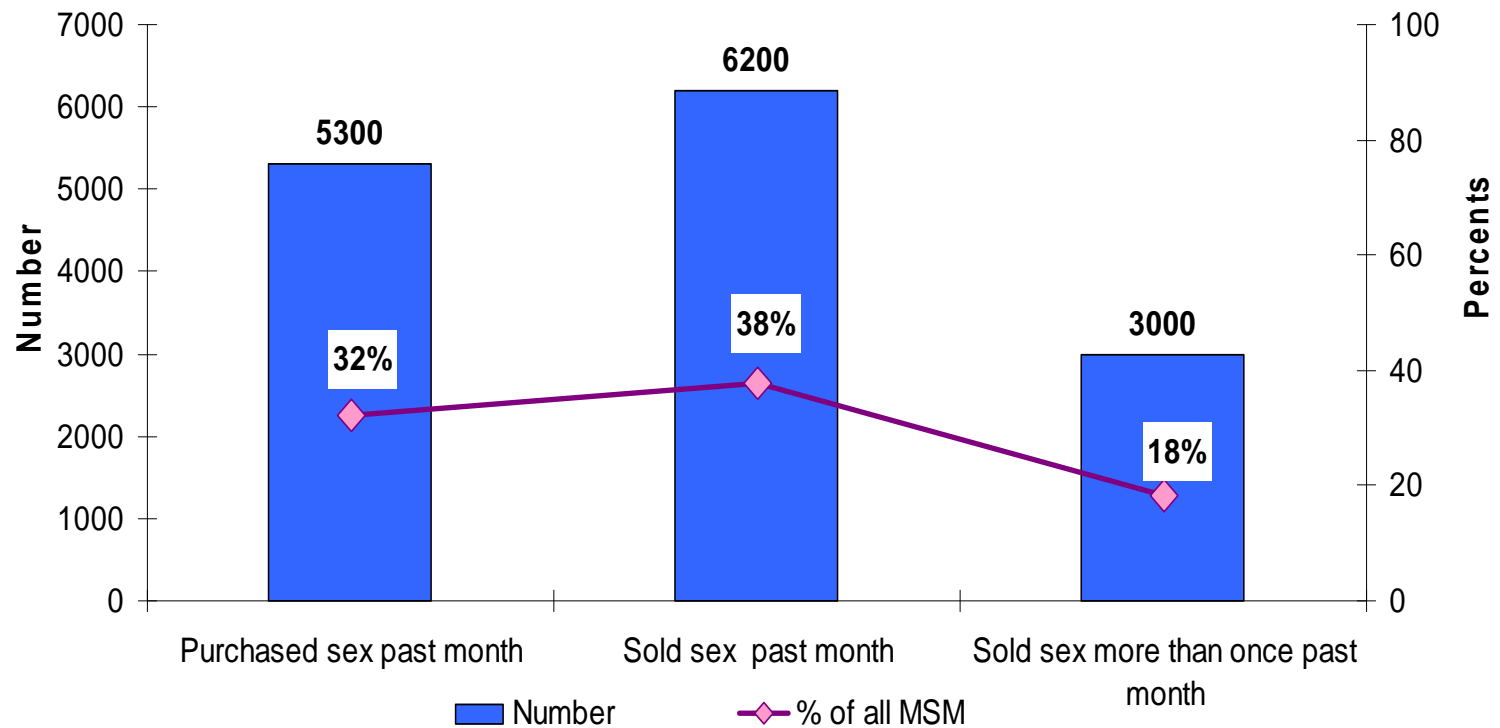


MSM size estimates by sexual identity



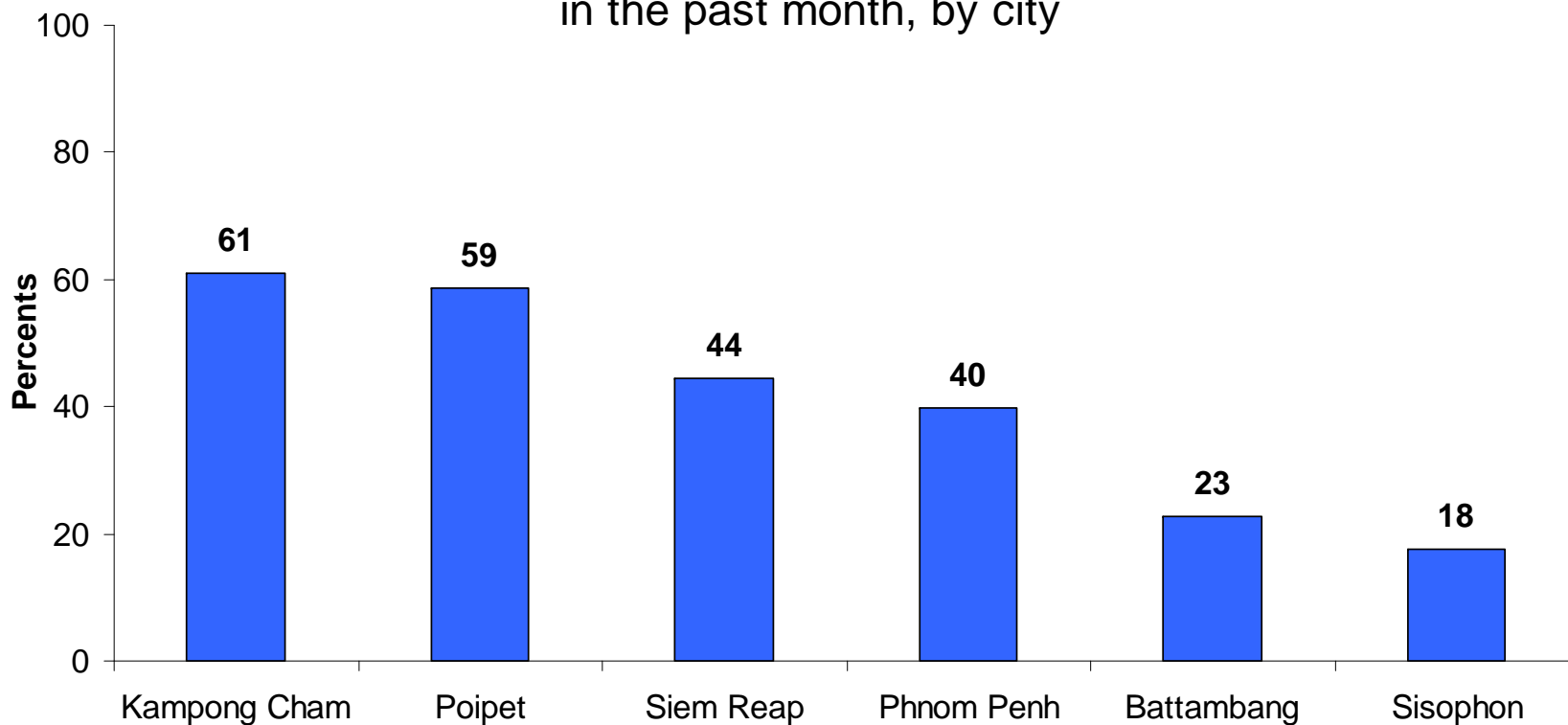
About 1/3 of MSM sold or bought sex in past month

Number and percent of MSM reporting having bought sex, sold sex at least once, or sold sex multiple times last month



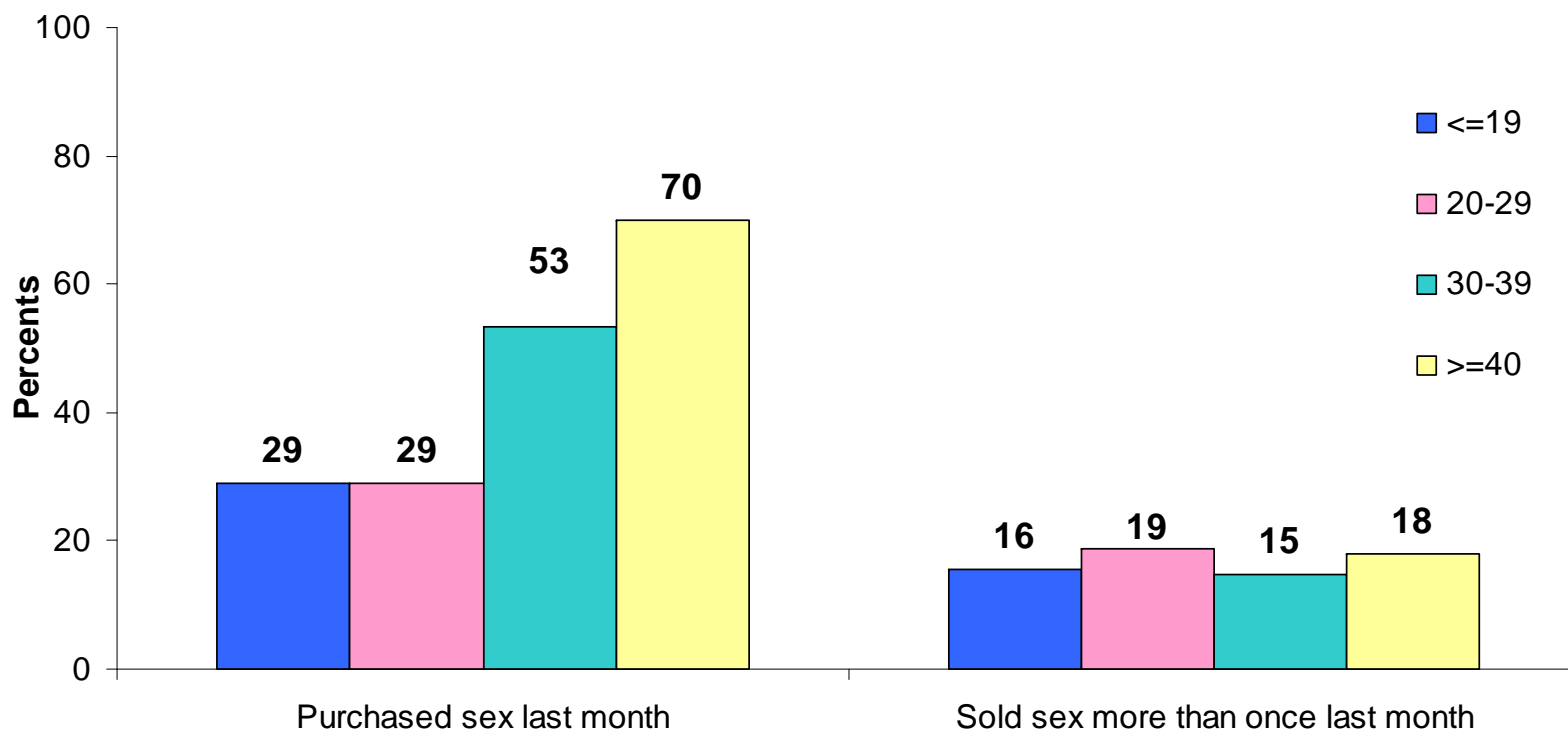
Variation in the proportion of MSM selling sex by city

Proportion of MSM who sold sex at least once
in the past month, by city

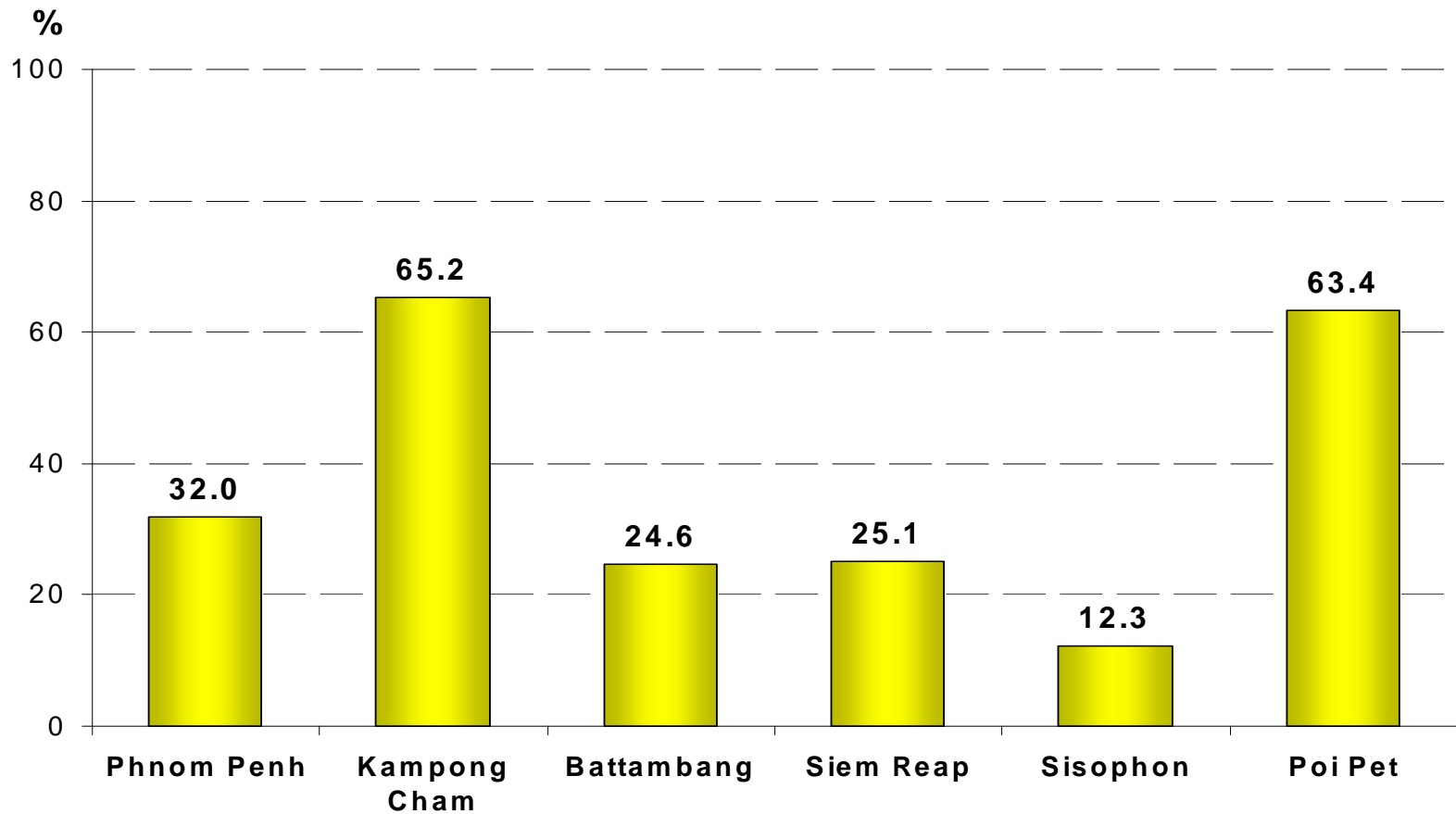


Purchase of sex increase with age, selling sex across all ages

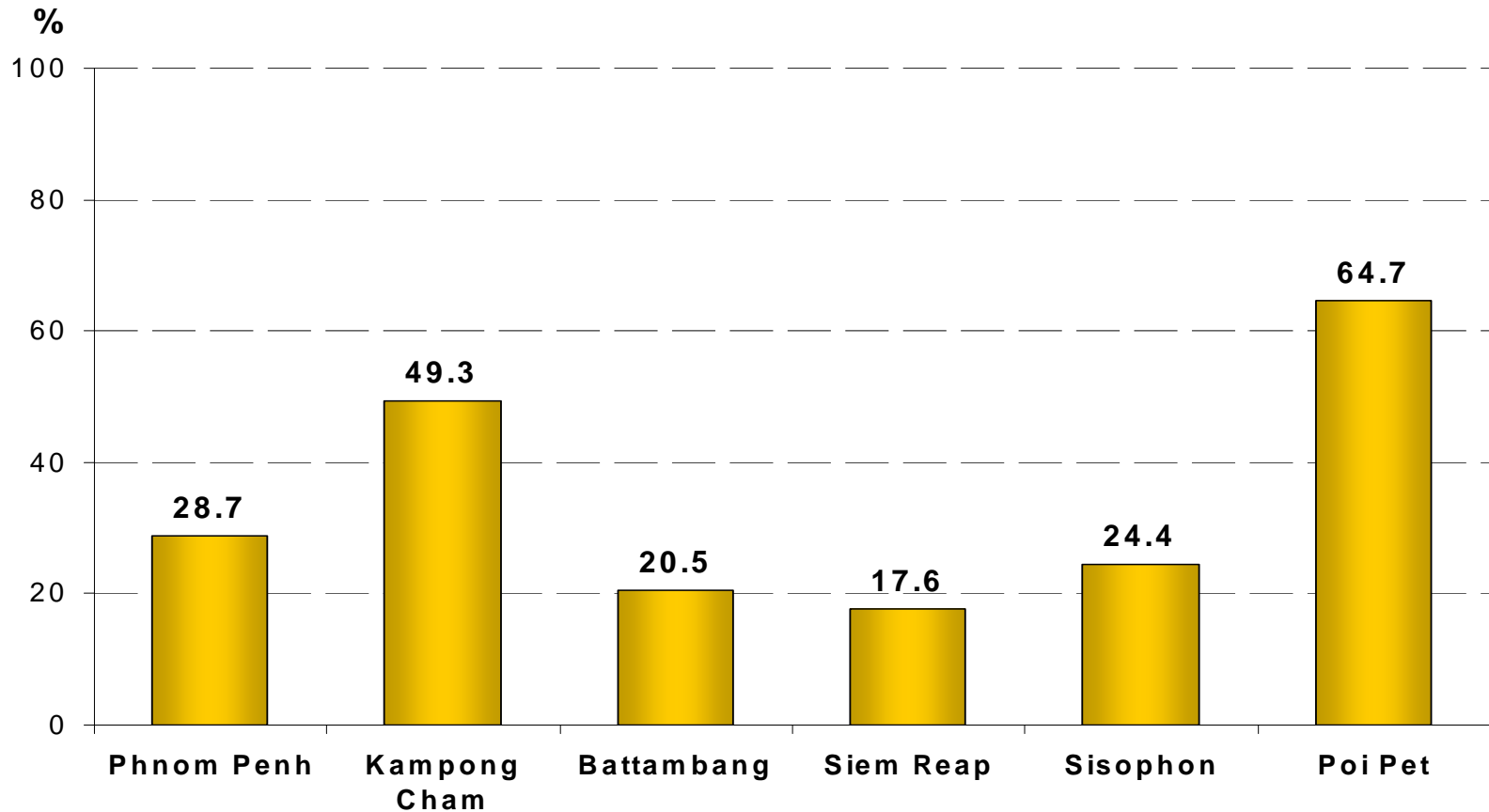
MSM clients and MSW past month, by age group



Estimated proportion of selling sex among bisexual men in the past month, by city

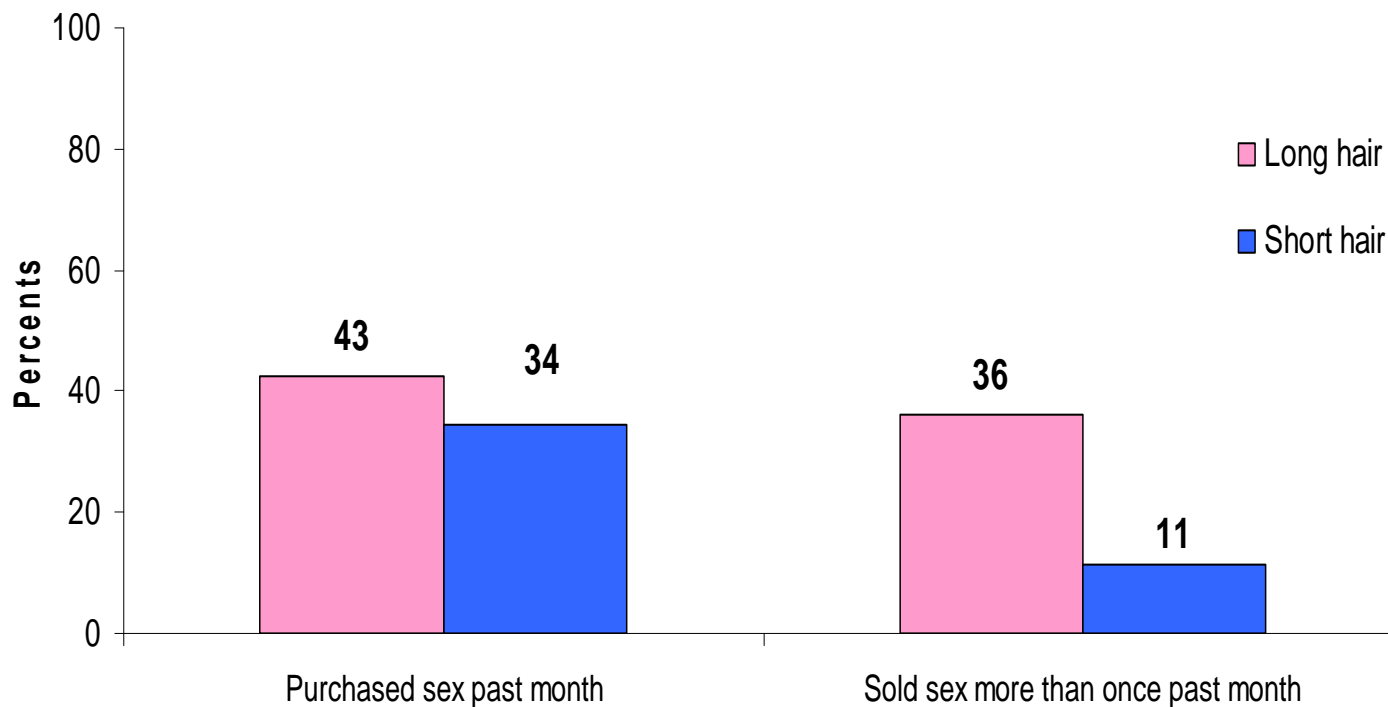


Estimated proportion of buying sex among bisexual men in the past month, by city



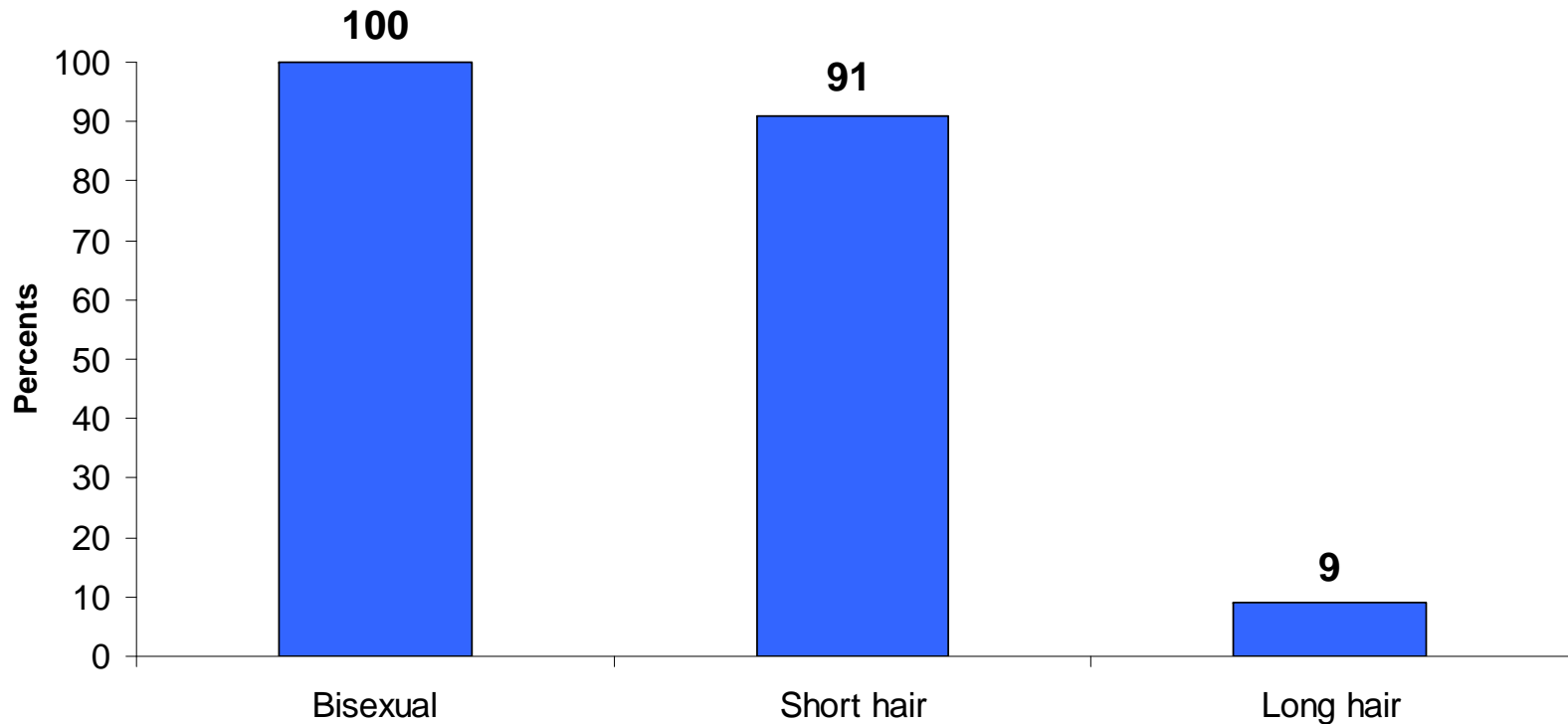
Long-hair MSM were more likely to buy or sell sex

Percent of MSM reporting selling sex or buying sex past month,
by sexual identity



Short-hair and bisexual MSM were not opened about their homosexuality

Non disclosure of homosexuality outside family



Coverage by prevention programs was high in all province

		Received HIV information from outreach worker past month		% covered by prevention programs
		Yes N	No N	%
Province				
	Phnom Penh	7600	1500	84
	Kampong Cham	2800	1100	72
	Battambang	1200	250	83
	Siem Reap	1600	100	94
	Sisophon	1600	410	80
	Poipet	1200	370	76
Age group				
	<=19	3500	710	83
	20-29	9700	2000	83
	30-39	1200	330	78
	>=40	420	110	79
Sexual Identity				
	Short hair	10600	2400	82
	Long hair	4100	770	84

Limitations

- Mapping might be biased by different NGO networks
 - Coverage by prevention program might be overestimated
- Hidden MSM might not be included
- The data collection period of each round of survey was long, therefore it generated a quasi-complete enumeration of the MSM in NGO networks
- Capture-recapture method should be a instantaneous sample. This method may overestimate the population size

Conclusions

- Although imperfect this population size estimation used standard and reproducible methodology
- This numeration exercise represents MSM who came out to public areas but is less likely to include hidden MSM
- The numbers generated are in the plausible range
- These numbers provide a robust basis for program planning and resource allocation

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LIM Kaly
CHENG Tha

MHSS:

SENG Chantha
LEE Kimsras
MEAS Borey
CHHORNhhorn Sona
Dork Pagna

MHC:

SENG Sam Arth
PHOEUT Soriya
CHOEUN Sinoiun
PUM Phearum
KEM Vichet
HORT Bunlim

USG:

CHAN Sophal

PAO:

ROEUN Sothy
NANG Chhara
TA Hear
CHHOEUN Sovanna
NGUON San
CHAY Bunchhiv
YAN Sadin
PEN Sary

KHEMARA:

CHAN Pisey

KDFO:

HENG Nim

KANHNHA:

NOURN Sidara

And all our interviewers....

Thank You