EFFICACY OF A DAILY WEB-ADMINISTERED DIARY AS A TOOL
TO COLLECT INFORMATION ABOUT CONTEXT AND SEXUAL RISK AMONG MSM IN SHANGHAI, CHINA

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Oral 157—Going Global

Research with Real-Life Impact
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Canada-China Project overview

"Prevention, Care and Support for Vulnerable Populations at Risk of HIV/STI in Shanghai, China"

- A collaboration between the Dalla Lana School of Public Health and the Shanghai Centres for Disease Control and Prevention
  - Five research projects:
    - Construction workers
    - Female entertainment workers
    - Men who have sex with men
    - People living with HIV and AIDS
    - Policy review and analysis
  - Training and capacity building

Background –
History of Research Methods

1990

2010
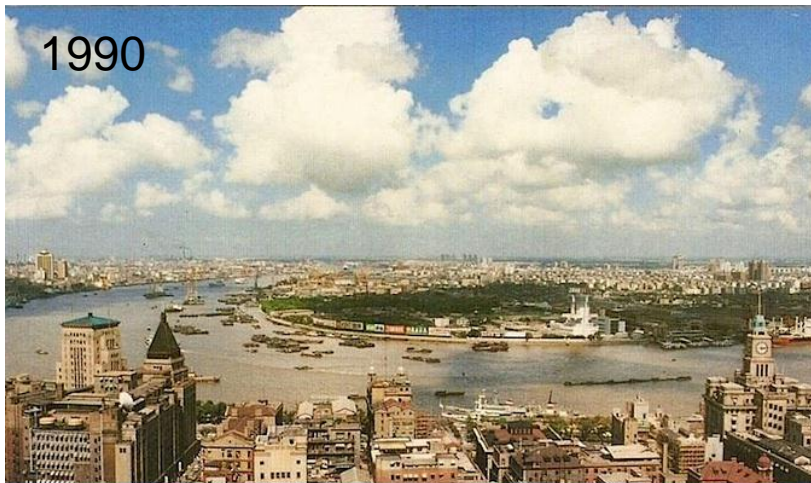
- Focus on individual characteristics and behaviours

- Shift towards contextual and social-structural influences

Terms of self-identification

- Tongzhi (同志)
  - Same will/ Same purpose
  - Comrades
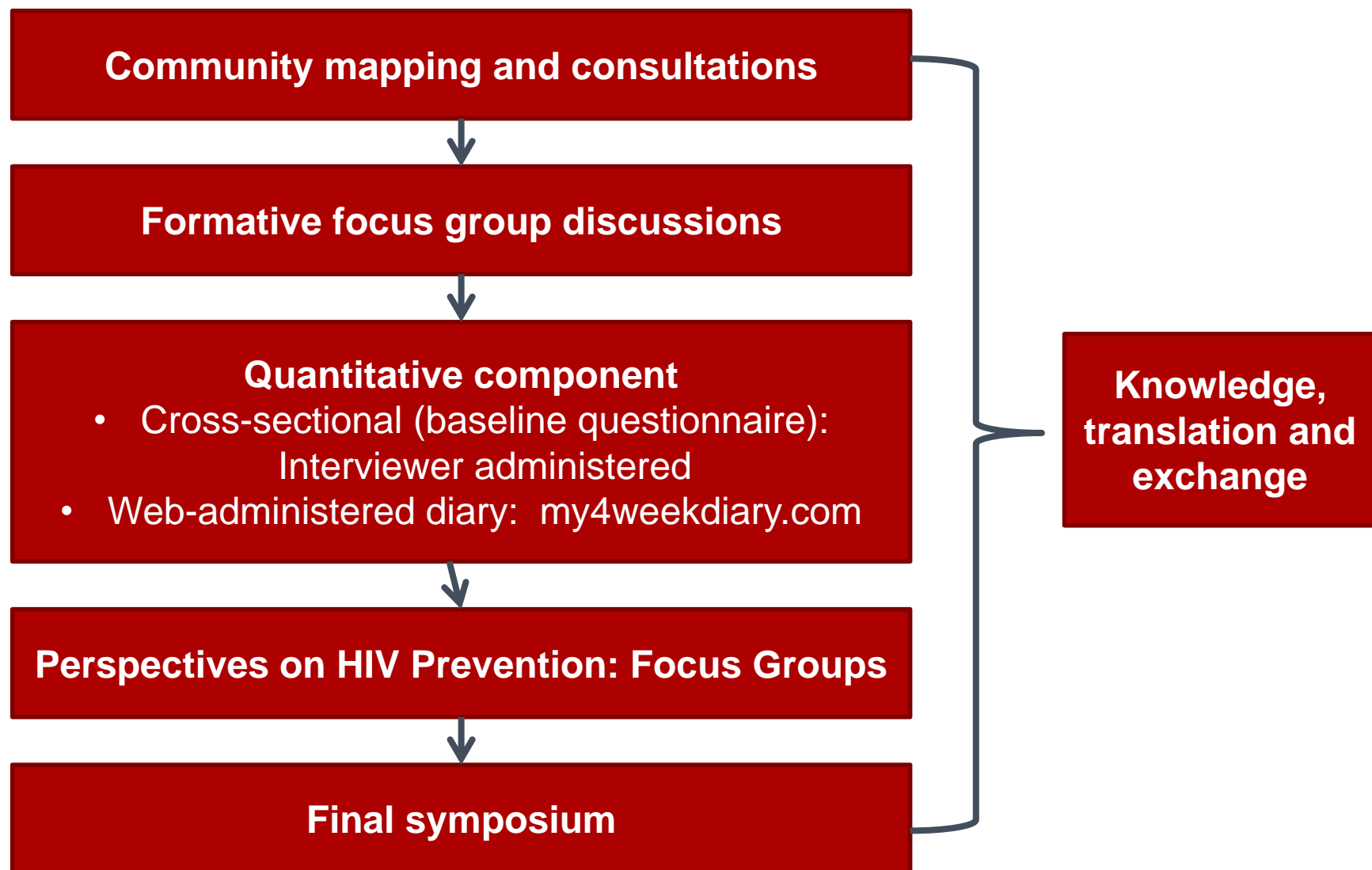 - Gay, bisexual and other MSM

Objective of analysis

- To demonstrate the utility of a longitudinal, event-based web-diary to survey Tongzhi in Shanghai, China

Study overview

Community mapping and consultations

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Formative focus group discussions

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Quantitative component
- Cross-sectional (baseline questionnaire): Interviewer administered
- Web-administered diary: my4weekdiary.com

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Perspectives on HIV Prevention: Focus Groups

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Final symposium

Knowledge, translation and exchange

Methods – Eligibility

- **Cross-sectional survey**:
  - ≥ 16 years of age
  - ≥ 1 male sex partner(s) in the previous 6 months

- **Longitudinal event-based diary survey:**
  - ≥ 2 male sex partners in the previous 6 months
  - ≥ 1 sexual encounter/week in the previous 6 months
  - ≥ 1 sexual encounter in week prior to recruitment
  - Ability to complete a self-administered questionnaire

Methods – Sampling

Cross-sectional sampling

    Stage one: Select districts

    Stage two: Select individuals

- Decentralised
- Iterative
- Population is not homogenous → multiple approaches used

Event-based diary

- Recruitment from among those who completed the cross-sectional (baseline) questionnaire

Methods – Sampling, continued
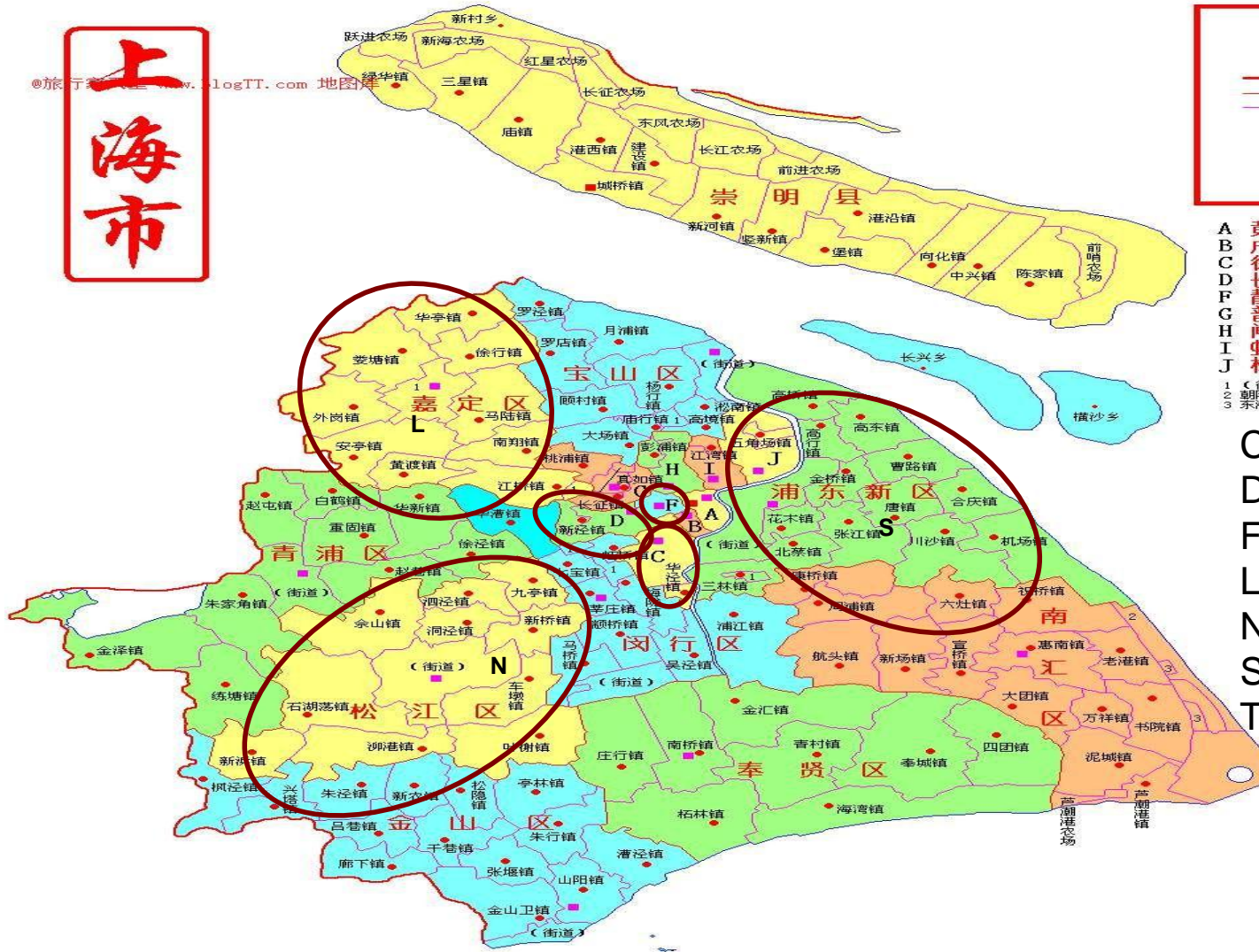
C XuHui
D ChangNing
F Jing'an
L JiaDing
N SongJiang
S PuDong
T ChongMing

Methods – Analysis

- Characteristics of participants completing the web-administered diary compared to those completing only the cross-sectional questionnaire
  - Continuous variables: T-tests
  - Categorical variables: Chi-square tests, Fischer's exact test
  - Ordinal variables: Wilcoxon Rank Sum

RESULTS

Recruitment
n=1012

Ineligible (n=35) or did not consent (n=2)

Complete **cross-sectional questionnaire** (n=975)
July 2010—December 2010

Exit study prior to screening

Screen and recruit for diary (n=472)

Ineligible (n=182) or did not consent (n=111)

Enter diary without cross-sectional questionnaire (n=3)

Participant meets diary eligibility criteria and consents (n =182)

Complete **event-based daily diary** for 28 days (n = 180)
December 2010—March 2011

Exit study

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Results – Socio-demographics

Socio-demographics		Diary participants		Participants completing only the cross-sectional		P-value
		N	%	N	%	
Education	No formal education	0	**0.0**	0	**0.0**	Wilcoxon rank sum p = 0.01
	Less than high school	2	**1.1**	6	**0.8**	
	Some high school or vocational school	42	**23.7**	249	**31.2**	
	Some university or college	107	**60.5**	477	**59.8**	
	Some graduate school	26	**14.7**	66	**8.3**	
Cohabiting with a man	Yes	47	**26.6**	140	**17.5**	Chi-square p=0.006
	No	130	**73.4**	658	**82.5**	
Likelihood of getting married	Very unlikely/ unlikely	72	**44.2**	247	**37.0**	Chi-square p=0.03
	Undecided	61	**37.4**	261	**37.4**	
	Likely/ very likely	30	**18.4**	191	**25.6**	

Results – Sexual identity

Sexual identity		Diary participants		Participants completing only the cross-sectional		P-value
		N	%	N	%	
Sexual identity	Gay/ homosexual	149	**84.2**	580	**72.7**	Chi-square p=0.01
	Straight/ heterosexual	1	**0.6**	4	**0.5**	
	Bisexual	27	**15.3**	211	**26.4**	
	Other, specify	0	**0.0**	0	**0.0**	
	Don't know	0	**0.0**	3	**0.4**	
Kinsey scale (Sexual behaviour in the past 5 years)	Only sex with men	132	**75.0**	525	**66.1**	Chi-square p=0.01 Wilcoxon rank sums test p=0.1
	Mostly sex with men, occasionally with women	32	**18.2**	169	**21.3**	
	Sex about equally with women and men	10	**5.7**	42	**5.3**	
	Mostly sex with women, occasionally with men	2	**1.1**	58	**7.3**	
	Only sex with women	0	**0.0**	0	**0.0**	
	No sex with others	0	**0.0**	0	**0.0**	

Results – Modes of looking for sex

Top five modes of looking for sex	Diary		Participants completing only the cross-sectional		P-value
	N	**%**	**N**	**%**	
Internet	95	**73.1**	389	**69.4**	0.4
Tongzhi bars	32	**24.6**	92	**16.4**	0.03
Private home, party	20	**15.4**	97	**17.3**	0.6
Bathhouse, saunas	16	**12.3**	86	**15.3**	0.4
School, university	12	**9.2**	44	**7.9**	0.6

Results – Sexual behaviours

Sexual behaviours in the previous six months	Diary		Participants completing only the cross-sectional		P-value
	N	%	N	%	
Sex with a female partner	13	**7.3**	111	**13.9**	0.02
*Unprotected vaginal or anal intercourse with a female**	7	**53.8**	58	**52.2**	0.9
Primary male partner	110	**62.1**	465	**58.2**	0.3
*Unprotected anal sex (receptive or insertive) with a primary partner**	50	**45.4**	169	**36.3**	0.08
Regular male partner	107	**60.4**	393	**49.2**	0.007
*Unprotected anal sex (receptive or insertive) with a regular male partner**	38	**35.5**	97	**24.7**	0.03
Casual male partner	109	**61.5**	365	**45.7**	0.0001
*Unprotected anal sex (receptive or insertive) with a casual male partner**	28	**25.6**	83	**22.7**	0.5

*Among participants with that partner type (i.e. denominator consists of participants with that partner type)

Results – Diary data quality

- Participants provided data for all but one diary day
  - Missed by one participant

- The proportion of missing responses < 1.0%

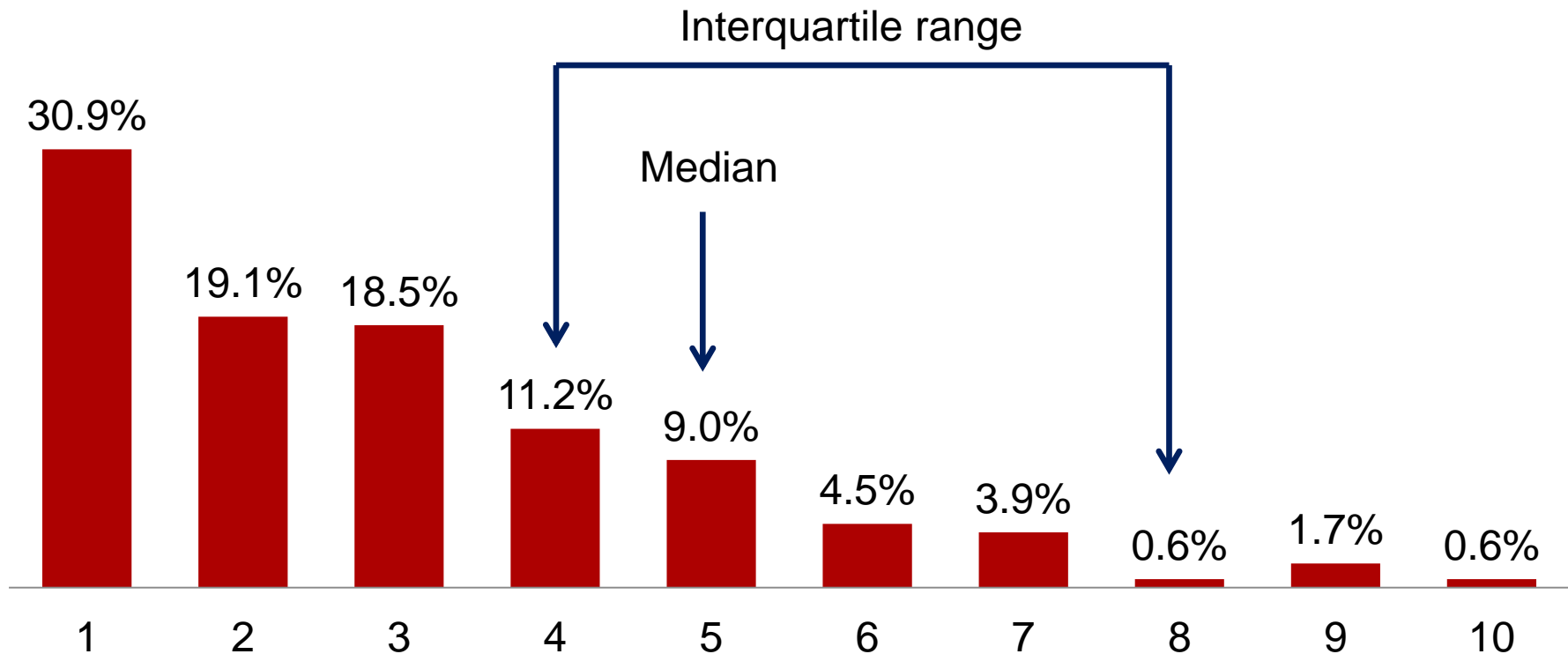# Results – Diary

- 1031 sexual events

Figure 1: Distribution of number of unique partners among diary participants

Conclusions and implications

- A high proportion of men use the internet to look for sex
    - Accustomed and comfortable
    - Interaction and anonymity

- Little missing data and low attrition
    - Diary was acceptable and feasible

- Method has promise in other populations
    - Address gaps in knowledge and advance understanding of contextual variables associated with risk

Innovations

- Web-diary
- Event-level rather than global measures
- Recruitment techniques
- Participatory research practices
  - Community-level
  - Public health practitioner-level

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