Probability Sampling in a Bathhouse Setting: Purpose, Practice and Practicality

presented by
The Venues Team

The Venues Team

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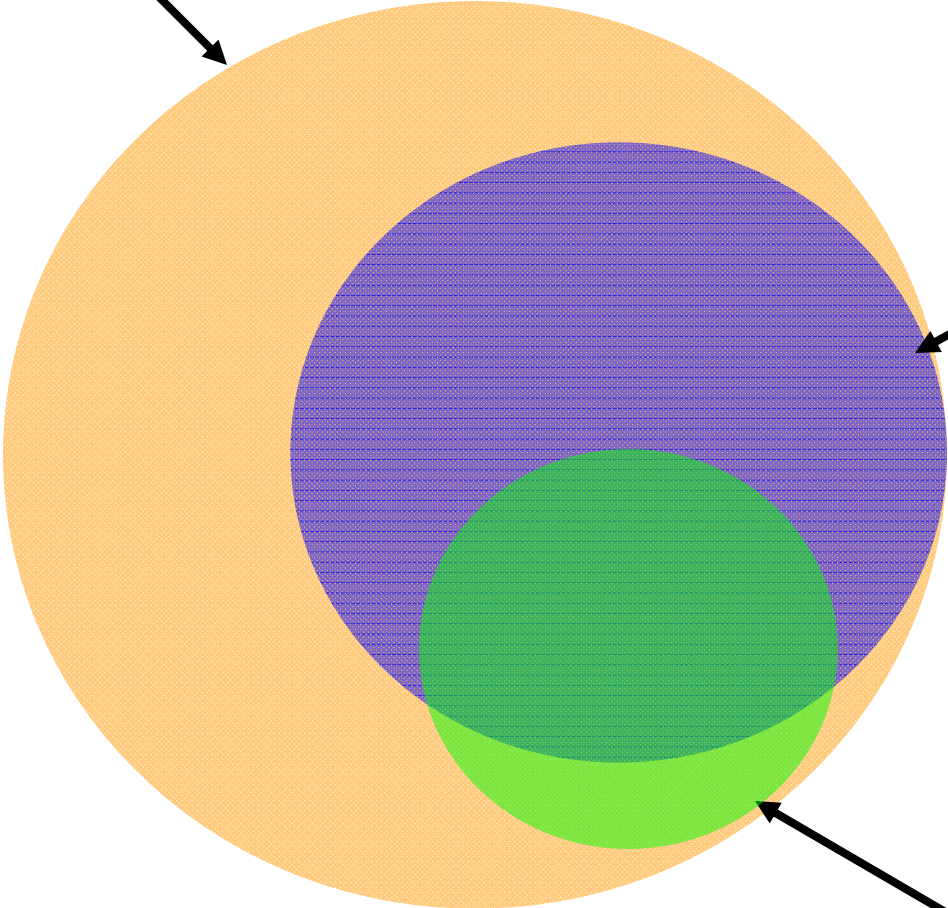Bill Woods
... and all the LMOE I and II teams
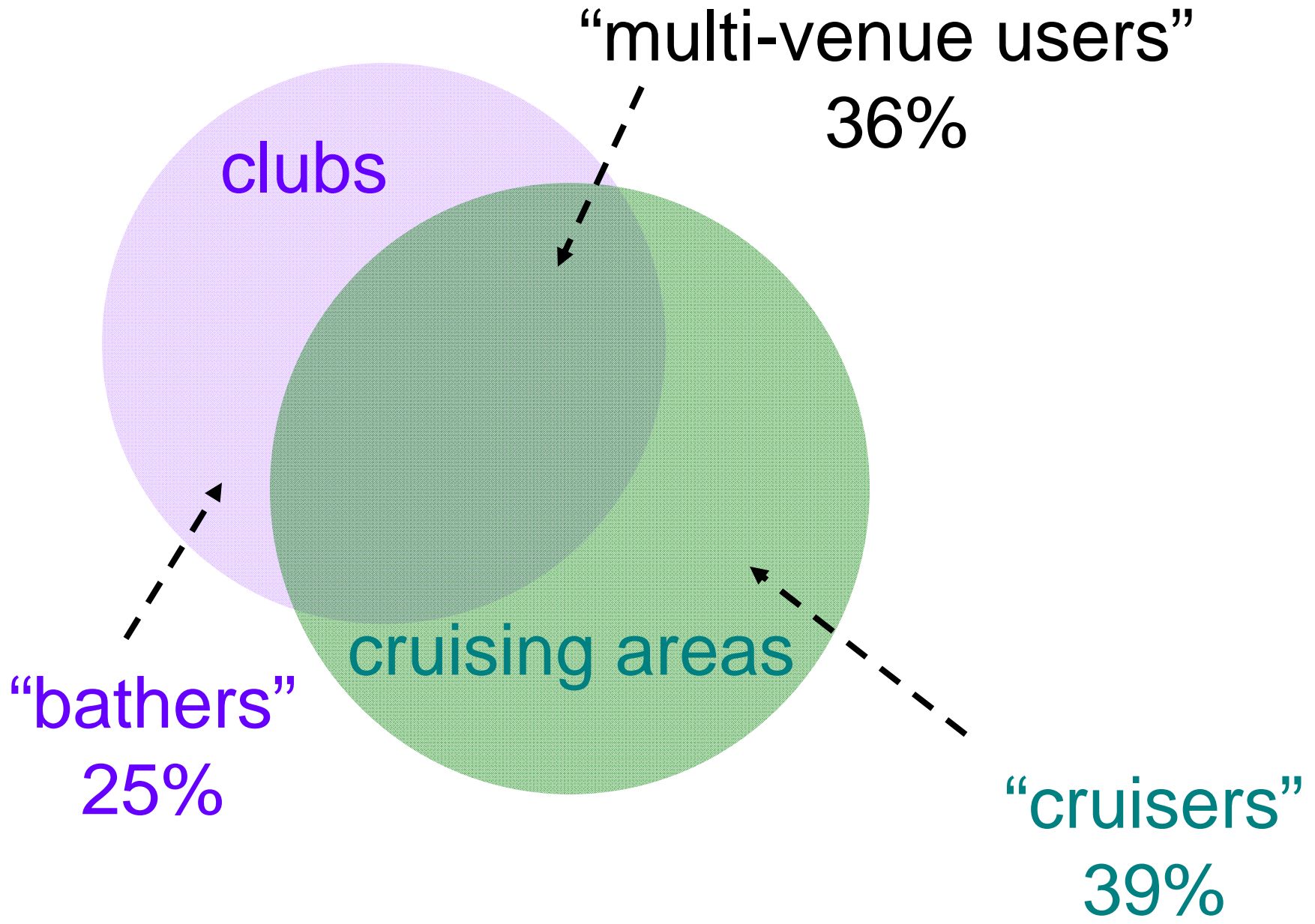
Sex Venues

clubs

cruising areas

MSM Population

sex venue users

engage in risky sex

"multi-venue users"
36%

clubs

"bathers"
25%

cruising areas

"cruisers"
39%

Prevalence of Risky Practices

	Cruisers (n=515) %	Bathers (n=326) %	Multi-Venue Users (n=481) %	Sig.
Sexual Practices				
UAI with non-primary partner	20.0	33.9	50.4	*
UAI in public setting	4.3	10.1	21.6	*
Group Sex	25.3	51.6	69.9	*
UAI in group setting	2.3	9.1	14.5	**
Number of Partners				
26+ partners in last year†	8.1	14.8	33.2	*
21+ one-night stands in last year†	5.7	12.3	30.7	*

*Significant difference (p<.0167) between all groups

**Significant difference (p<.0167) between all groups except bathers & multi -venue users

Multi-venue users are the most risky

Urban Men's Health Study (Binson et al, AJPH, 2001, 91:1482-1486)

But UMHS data can't tell us where risk happens, so…

What goes on in a club?

… to find out

Designed an EXIT survey

Used a probability sample design

Probability Sample Design

Primary goal is
REPRESENTATIVENESS

- Advantage - completely takes any choice out of the *researcher's* hand.

- Confident can generalize findings to the population of interest.

Major Principle of Probability Sampling

- Every member of population of interest must have known and nonzero probability of being selected.

- Key word is "*known*."

Probability sampling
in a bathhouse (LMOE I & II)

- 2-stage time design

    Randomly select time shifts

    Randomly select patrons within shifts

- Bathhouse open – 24 /7

    Constructed 3-hour shifts

    Yields 8 shifts/day & 56 shifts/week

Probability sampling in a bathhouse

- **Shifts randomly selected**

  -based on estimates of flow of patrons exiting each shift

- **Flow of patrons – exit counts**
  -start with relatively inexact counts
  -adjust with actual on-going exit counts

Probability sampling in a bathhouse

Number of shifts/week
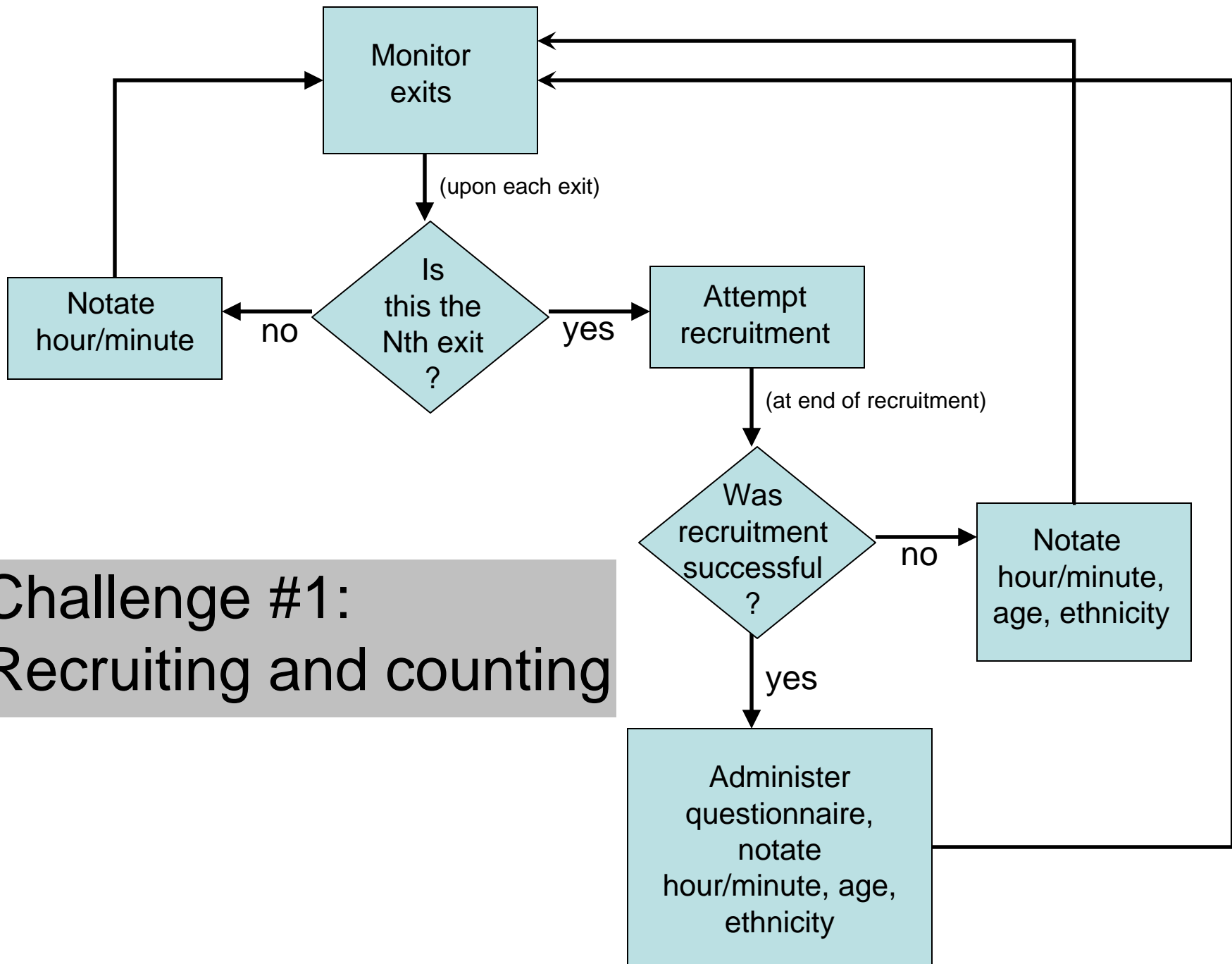- # of interviews want each week
- # of staff can manage

Patrons selected randomly in each shift

Each shift assigned unique
- random start,
- sampling interval

Practice

The Nth exiting patron

Monitor exits

(upon each exit)

Is this the Nth exit ?

no → Notate hour/minute

yes → Attempt recruitment

(at end of recruitment)

Was recruitment successful ?

no → Notate hour/minute, age, ethnicity

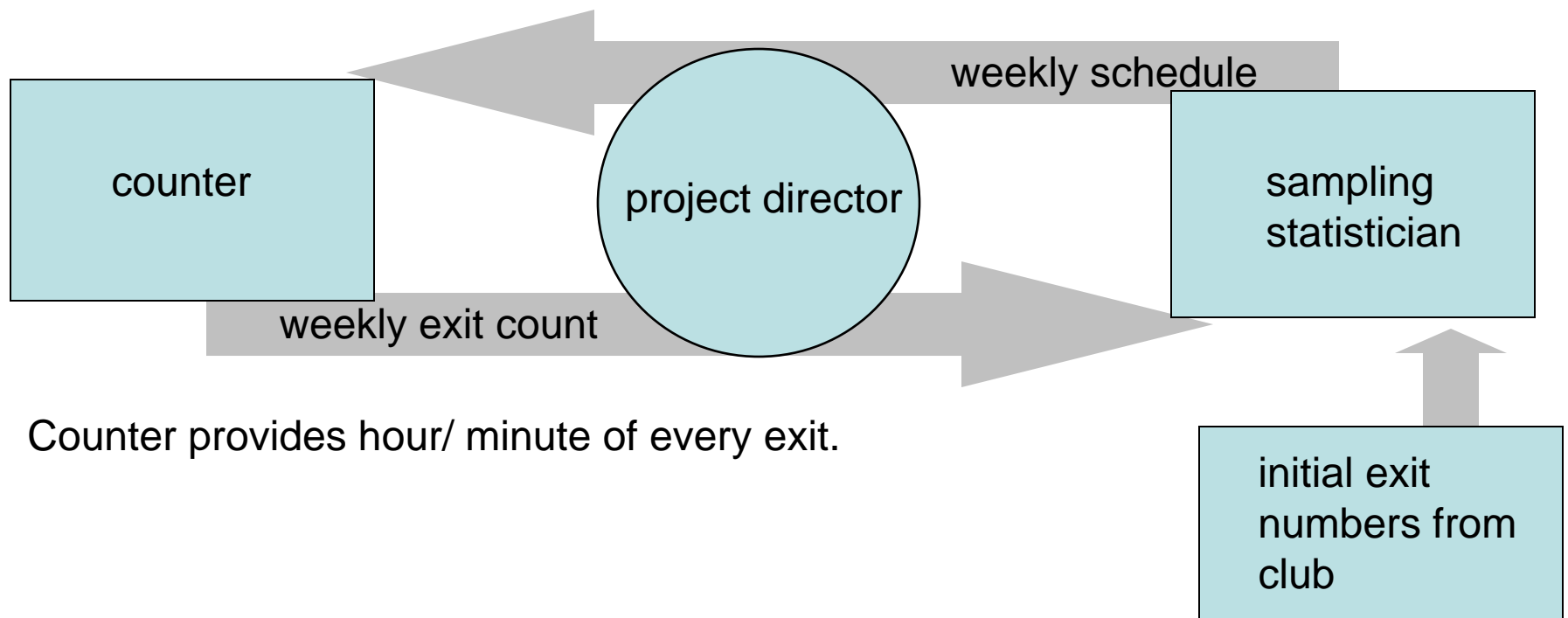yes → Administer questionnaire, notate hour/minute, age, ethnicity

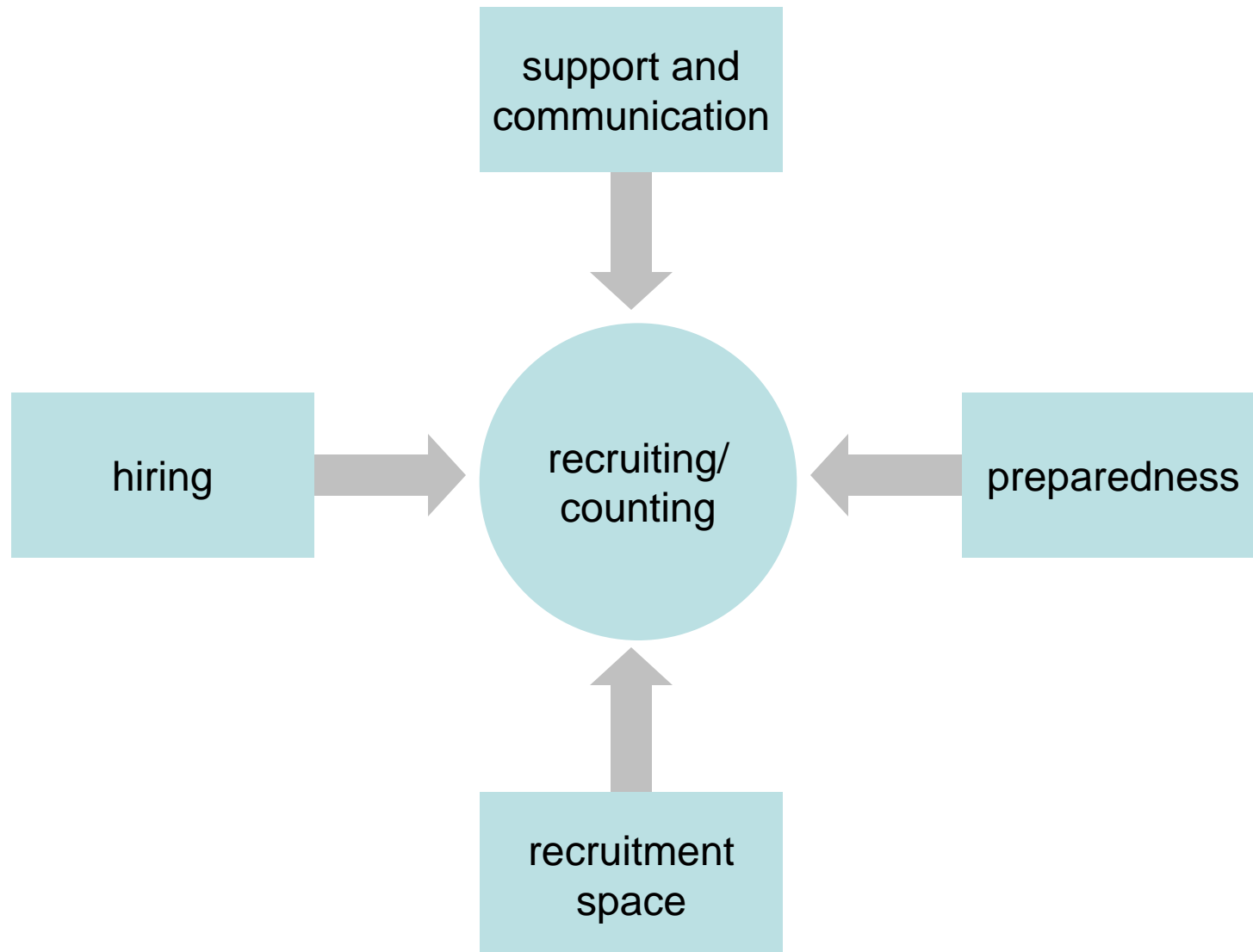Challenge #1: Recruiting and counting

Challenge #2:
A constant flow of data between the sampling statistician and counter

Sampling statistician provides weekly schedule with the number of shifts per week including,
shift date, club, start time, sampling interval or "N" and random start or "R'".

weekly schedule

counter

project director

sampling statistician

weekly exit count

Counter provides hour/ minute of every exit.

initial exit numbers from club

What goes into making it work?

support and communication

hiring

recruiting/counting

preparedness

recruitment space

Practicality

Role-plays:

- Basic counting and recruiting.
- "Why not me?"
- "Not me!"
- Too many men.

Page _____ of _____   Start time: _____ : _____   R = _____

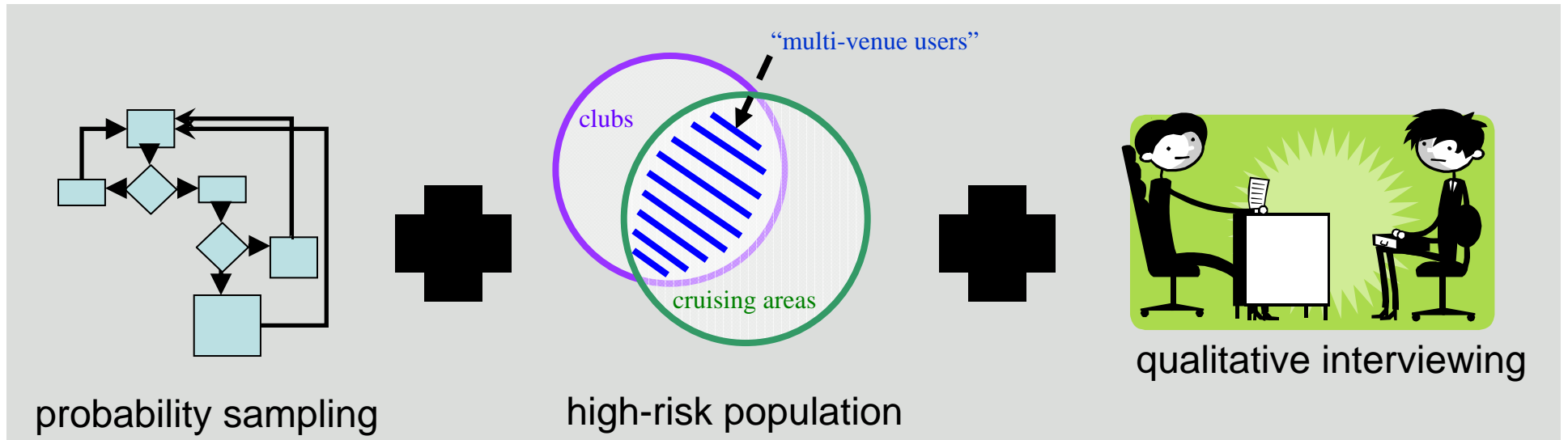Site ID (A) (B)   End time: _____ : _____   N = _____

Shift #_____ _____ _____ Q1: _____   Staff: _____

Date: _____ / _____ / 07 Q2: _____   Staff: _____

☐21500 ____ : ____	☐21501 ____ : ____	☐21502 ____ : ____	☐21503 ____ : ____	☐21504 ____ : ____
Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____
E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**
Age: _____ _____	Age: _____ _____	Age: _____ _____	Age: _____ _____	Age: _____ _____
H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI
W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**
Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9
W G O Y Pass:	W G O Y Pass:	W G O Y Pass:	W G O Y Pass:	W G O Y Pass:
☐21505 ____ : ____	☐21506 ____ : ____	☐21507 ____ : ____	☐21508 ____ : ____	☐21509 ____ : ____
Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____	Initials: _____ _____ _____
E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**	E: 1 2 4 **5 6 8 7**
Age: _____ _____	Age: _____ _____	Age: _____ _____	Age: _____ _____	Age: _____ _____
H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI	H NH A B W NA HPI
W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**	W: 1 2 3 **4 5 9 7**
Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9	Q: 1 2 3 5 6 9
W G O Y Pass:	W G O Y Pass:	W G O Y Pass:	W G O Y Pass:	W G O Y Pass:

Putting it all together: Connections Study

"multi-venue users"

clubs

cruising areas

probability sampling   high-risk population   qualitative interviewing

The Connections Study

Use probability sampling (and really great recruiters) to get men leaving clubs to complete an ACASI exit survey which immediately (and unobtrusively) identifies the high-risk men and then recruit those men into qualitative interviews off-site.

Sounds simple, right?

	LMOE I & II	Connections
Dates	Thanksgiving – New Year's Day (2001 & 2002)	3/3/2007-8/31/2007
Data collection period	5 weeks each	26 weeks (6 months)
Shift length	3 hours	2 hours
Sampling frequency	15-20 shifts/week	4-6 shifts/week
Number of shifts / total	~100	140
Shift logistics	1-4 shifts/day everyday	Up to 2 shifts at same time at different sites
Number of surveys	400	440
Recruiting staff / total	24	12
Recruiting staff per shift	3	2
Clubs	1	2
Times	24 hours, 7 days a week	4 p.m. – 6 a.m. weekdays, 24 hours at weekends
Data collection method	Interviewer-administered survey on paper in a private room	Audio Computer Assisted Self-Interview in the lobby
Unique issue	Conversational interviewing	Recruiting for qualitative interview

Further reading:

Differential HIV Risk in Bathhouses and Public Cruising Areas
Diane Binson; William J Woods; Lance Pollack; Jay Paul; Ron Stall; Joseph A C...*American Journal of Public Health;* Sep 2001; 91, 9; ABI/INFORM Global pg. 1482

Probability Sample Estimates of Bathhouse Sexual Risk Behavior
William J. Woods, PhD,* Diane Binson, PhD,* Johnny Blair, BA,† Lei Han, PhD,* Freya Spielberg, MD,‡ and Lance M. Pollack, PhD*
Acquir Immune Defic Syndr Volume 45, Number 2, June 1, 2007