

The Use of Hand-held Electronic Data Collection in the Assessment of HIV Prevention Needs in Los Angeles County

Mike Janson, MPH

Chief Research Analyst

Los Angeles County Department of Public Health

Office of AIDS Programs and Policy

Planning and Research Division



Los Angeles County

Square Miles: 4,086

Population¹: 10.3 Million

Latino/a 47%

White 28.9%

Asian/PI 12.6%

African-American 9.0%

Native American 0.3%

Proportion of:

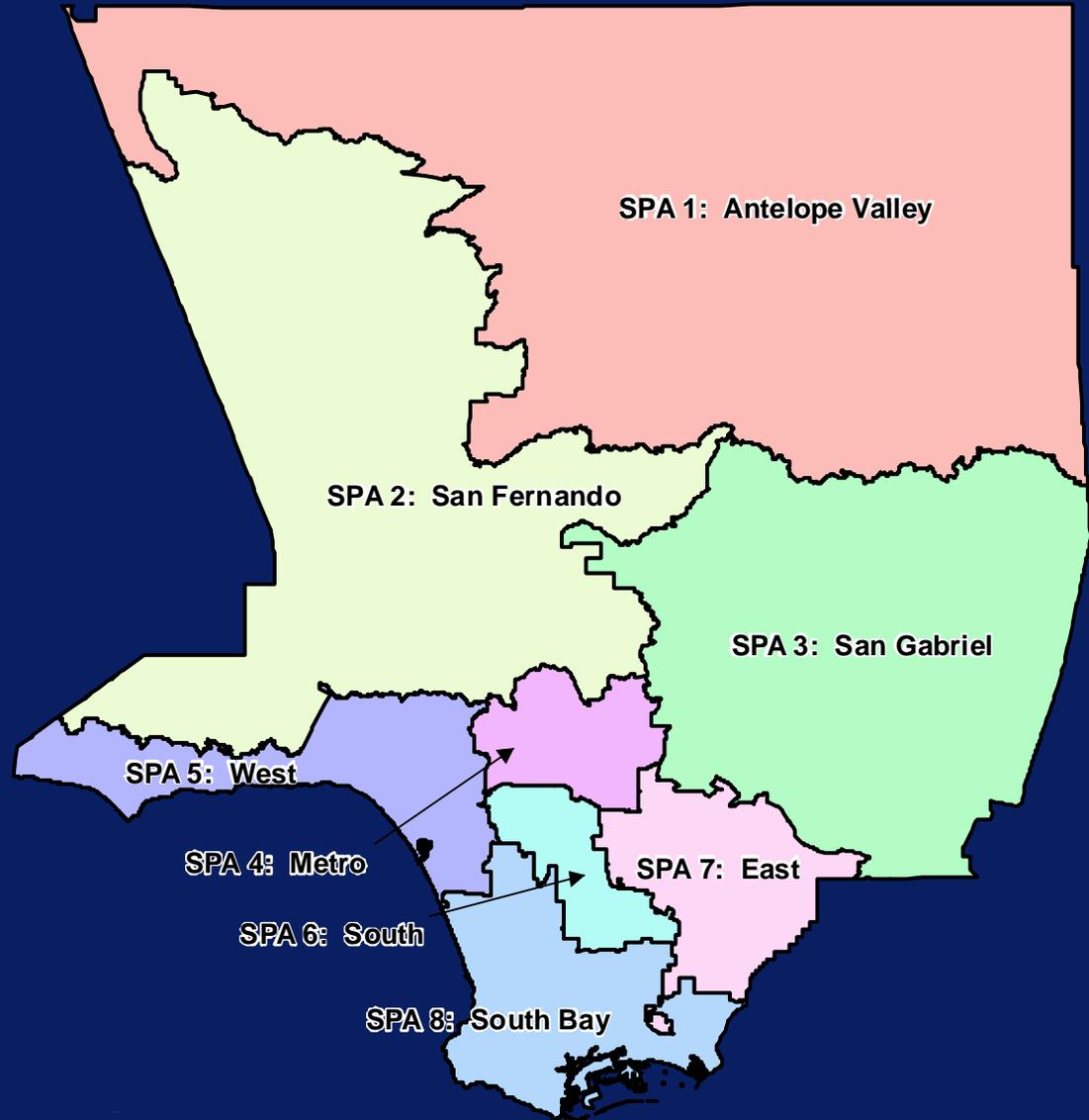
- California Population²: 29%
- California AIDS Cases³: 36%
- U.S. AIDS Cases³: 5%

Living with HIV/AIDS³:
60,000 (Estimated)

¹United Way, Los Angeles (2008)

²U.S. Department of Commerce (2008)

³Los Angeles County HIV Epidemiology Program (2008)



Data Collection Challenges

- HIV Assessment and Evaluation data collection processes
 - Paper-based
 - Required large amounts of staff resources
 - Slow
 - Inaccurate
 - Inefficient



New Technology

- Hardware
 - PDAs, smartphones, tablet PCs, netbooks
- Software
 - Handheld-assisted Personal Interview (HAPI), Nova Research, Bethesda MD
 - Use of existing web-based data collection systems
 - Applications for iPhone

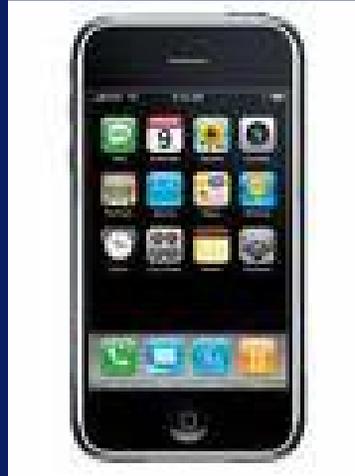


Hand-held Electronic Data Collection

- Allows data collection using various handheld computing devices
- Data transfer through USB sync, bluetooth, or mobile broadband connection
- Data can be instantly uploaded and exported to any type of database ready for analysis



Hand-held Electronic Data Collection Devices



Hand-held Electronic Data Collection Screen

 QDS HAPI ◀ 1:55 ✕

When did you start to experience these symptoms?

Month / Day / Year

.D .R .N 

123	1	2	3	4	5	6	7	8	9	0	-	=	←
Tab	q	w	e	r	t	y	u	i	o	p	[]	
CAP	a	s	d	f	g	h	j	k	l	;	'		
Shift	z	x	c	v	b	n	m	,	.	/			↵
Ctl	á	ü	`	\						↓	↑	←	→

Interview Tools  ◀ ▶ 



Los Angeles Coordinated Needs Assessment

- Annual needs assessment part of Community Services Assessment
- First survey using new hand-held technology in HIV Prevention in Los Angeles
- Conducted 2007 and 2008
- Over 2,600 surveys collected at 91 sites including
 - Medical clinics
 - Bars/clubs
 - Bathhouses
 - Street corners



Los Angeles Coordinated Needs Assessment

- Diverse target populations surveyed
 - Gay and non-gay identified men
 - Transgenders
 - Day laborers
 - Commercial sex workers
 - Homeless
 - Injection drug users
- 152 page survey and 1200 variables with complex skip patterns



LACHNA Recruitment Sites & Participants by SPA

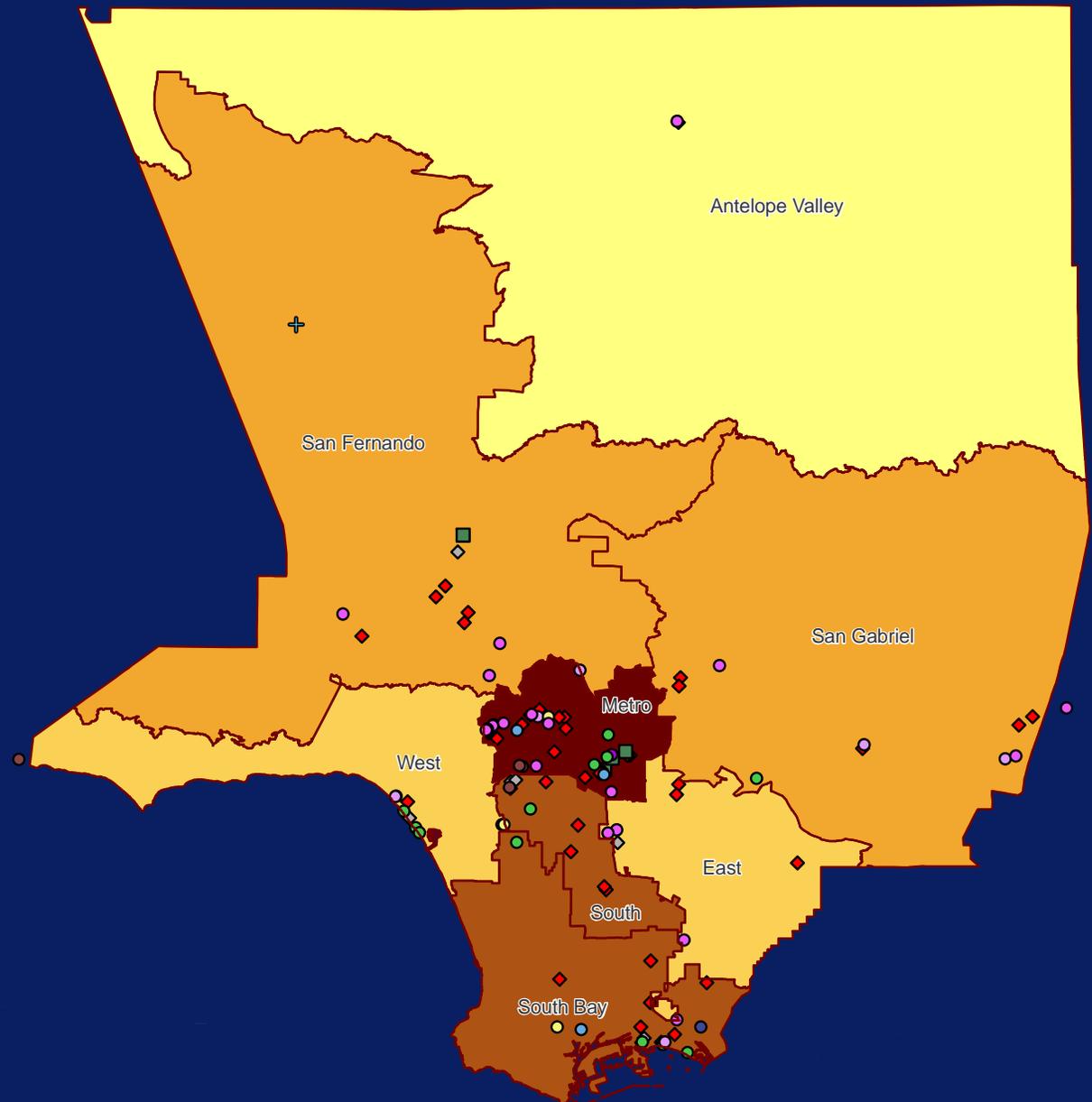
LACHNA Recruitment Sites

- Bar/Club
- ◆ Clinic or CBO
- Commercial Sex Venue
- Day Labor Site
- Needle Exchange
- Non high-risk Venue
- Park or Beach
- Re-entry
- School/University
- Special Event
- ◇ Street
- + Truck Stop

LACHNA Participants

TOTAL

- ≤ 23
- 24 - 153
- 154 - 239
- 240 - 266
- 267 - 521



Comparison of Hand-held vs. Paper-based

LACHNA 2007-08 compared to previous needs assessments 2001-06

	Hand-held	Paper-based
Average paper consumption (reams)	0	350
Average data entry staff hours	0	800
Skip pattern errors	0%	20%
Participation refusal	15%	>25%



Advantages

- No data entry
- No need to maintain paper data collection instruments
- Faster Results
 - Able to analyze full data set after last survey completed
- Increased accuracy
 - Automated skip patterns
 - Cross checking and validation



Advantages (Cont.)

- Lower participation refusal rates
- Increased venue owner/manager cooperation
- Increase in types of venues where survey could be administered
 - Bars/clubs
 - Street corners
- Increased data security
 - Devices password-protected
 - Surveys encrypted and locked-down after completed



Advantages (Cont.)

- Project Cost
 - Purchase of software and hardware equal to the cost of paper and toner
 - Zero staff hours for data entry
 - 45-50% cheaper than previous assessments
- Project Time
 - Data entry savings cut overall project time in half from previous assessments



Lessons Learned

- Startup costs including hardware and software recovered in first year of project
- More work and cost at beginning of project
- Some technical expertise needed
- Devices
 - Durability and dependability varied by device type
 - Battery power always a challenge
 - Devices need to be charged nightly
 - Device/battery life limited (3-5 years)





The Los Angeles Coordinated HIV Needs Assessment was awarded a National Association of Counties (NACO) Achievement Award in 2009 for the use of innovative technology to promote efficiency and improve services.



Office of AIDS Programs and Policy
600 South Commonwealth Avenue, 9th Floor
Los Angeles, California 90005-4001

Phone: (213) 351-8000

Fax: 213-381-8023

E-mail: mjanson@ph.lacounty.gov

This presentation is available at
www.publichealth.lacounty.gov/aids

