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Results from the Post-exposure Prophylaxis Pilot Program (P-QUAD) Demonstration Project in Los Angeles County

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Abstract

Post-exposure prophylaxis (PEP) is a promising but under-utilized strategy for HIV prevention in high-risk populations. Between March 2010 and June 2011, two community-based clinics in Los Angeles County provided PEP in a pilot program to 267 unique individuals. Courses were primarily dispensed to men who have sex with men (84%) and consisted overwhelmingly of a 3-drug ART regimen containing two nucleoside reverse transcriptase inhibitors and either an integrase inhibitor (raltegravir) or a boosted protease inhibitor (lopinavir/ritonavir). Approximately 59% of all PEP courses were followed for at least 12 weeks, and seven individuals seroconverted. Of the seven seroconversions, six had subsequent re-exposure. The low rate of PEP failure calls for expanded funding for PEP in other jurisdictions.

INTRODUCTION

Post-exposure prophylaxis (PEP) is an HIV prevention strategy consisting of antiretroviral medications taken by HIV-uninfected individuals immediately following suspected exposure to HIV-infected blood or infectious body fluids.⁽¹⁾ Although PEP has been in use since the mid-1990s, few studies have evaluated its efficacy. Animal models have demonstrated proof of concept by showing post-exposure efficacy in macaques.^(2–5) The only clinical efficacy

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Conflicts of Interest

The authors have no conflicts of interest to declare.

estimate of PEP in humans derives from a case-control study of occupational post-exposure prophylaxis following needle-stick injury. Cardo et al. demonstrated that PEP decreased the odds of HIV transmission from an HIV exposure by 81% (OR = 0.19; 95% CI: 0.06-0.52), despite a non-uniform protocol for administration and duration of treatment.(6) In response to these results, non-occupational PEP guidelines were developed and have been available since 1998.(7)

Programs offering PEP have been slow to appear in the United States, mainly due to low awareness and/or concerns regarding a) the need for round-the-clock coverage and b) absence of rigorous efficacy data by both consumers and providers. In a study of men who have sex with men (MSM) in the United States between 2012 and 2013, only 28% of individuals were aware of PEP.(8) In a survey of providers in Miami and the District of Columbia, 39.5% and 59.7% of providers, respectively, reported ever prescribing PEP.(9) In a study assessing PEP availability across 117 sites in Los Angeles County, Landovitz et al. found that only 14.5% of sites offered PEP.(10) In addition, an absence of definitive data, details on appropriate candidacy for PEP, optimal treatment regimens, timing, follow-up procedures, and the fact that concomitant services to be offered are largely based on expert recommendation, have cumulatively limited uptake by both consumers and providers.

The HIV prevalence in Los Angeles County is 0.59%, or almost two times the national HIV prevalence of 0.34%.(11) Although rates of HIV have been decreasing across Los Angeles County since 2008,(11) the HIV epidemic is increasingly concentrated in MSM (83%) as well as Black and Latino individuals (69%). In response to the increasing concentration of the epidemic, an effort was launched in 2010 to provide a more comprehensive package of HIV prevention services in Los Angeles County with the goal of gathering definitive data on best practices for PEP programs. The Post-Exposure Prophylaxis Pilot Program (P-QUAD) demonstration project was conducted from March 2010 to June 2011 and provided PEP services to individuals at no cost at two community-based clinics in Los Angeles County.

The primary objective of this study is to report the demographics, reasons for PEP initiation, medication adherence, adverse events, and study retention of participants who enrolled in the P-QUAD demonstration project.

METHODS

The P-QUAD study was conducted at two community-based sites in Los Angeles County: the Los Angeles LGBT Center (LA LGBT Center) and the OASIS Clinic (OASIS). The LA LGBT Center is a comprehensive healthcare facility providing a range of medical, behavioral, and support services and programs to the LGBT community of Los Angeles; OASIS is a County of Los Angeles-operated HIV testing and treatment clinic in South Los Angeles. The first enrollment for the study was in March 2010, and the last enrollment was in June 2011.

Upon presentation at either of these sites, prospective participants were assessed by a dedicated PEP nurse for the following inclusion criteria: 1) at least 18 years of age, 2) able to understand and provide consent, 3) less than or equal to 72 hours since exposure, 4)

sexual partner was a known HIV-positive or a high-risk source, 5) high-risk exposure, 6) was not known to be HIV-positive, and 7) had no contraindicated concomitant medications or allergies. Individuals were also eligible for enrollment if they initiated a PEP starter pack elsewhere.

A high-risk source included men who have sex with men (MSM); men who have sex with men and women (MSM/W); injection drug users (IDU); commercial sex workers (CSW); persons who have a history of incarceration; persons known to be HIV infected; persons from a country with endemic HIV (baseline prevalence >1%); perpetrator of sexual assault and/or sex partners of any of the above categories. A high-risk exposure was defined as condomless insertive anal intercourse (IAI), receptive anal intercourse (RAI), insertive vaginal intercourse (IVI), receptive vaginal intercourse (RVI), and/or receptive oral intercourse with ejaculation (ROIwE), or an instance of any of these activities where a condom was used and either broke or slipped off.

Individuals who met the inclusion criteria were enrolled and provided the first 14 days of medication: Tenofovir+Emtricitabine (TDF+FTC) or Azidothymidine+Lamivudine (AZT+3TC) alone or in combination with Lopinavir/Ritonavir (LPV/r) or Raltegravir (RAL). Regimen choice was made based on the CDC guidance algorithm available at the time.⁽¹²⁾ An initial 14-day regimen was provided instead of the full 28-day course to assess side effects at the 14-day mark. Specifically, AZT-based regimens are more carefully monitored due to their association with anemia and thrombocytopenia. In contrast, current, TDF-based PEP regimens likely oblige limited interim laboratory monitoring for a one-month course.

In addition to medication dispensation, enrolled participants were tested for HIV using a blood-plasma ELISA test. Participants were also tested for gonorrhea (rectal, urethral, pharyngeal), chlamydia (rectal and urethral), and syphilis. Lastly, a blood sample was taken to measure kidney (creatinine clearance) and liver function (LFT). Individuals who did not meet the inclusion criteria were either provided risk reduction counseling if HIV-negative or were referred to HIV care if HIV-positive.

Participants were seen again two weeks after enrollment for adverse event assessment and dispensation of the remaining 14 days of medication. Participants were then assessed 4, 12, and 24 weeks after enrollment for HIV antibodies and adverse events. Medication adherence was assessed at weeks 2 and 4 by both self-report and pill counts. Adverse events were graded according to the Division of AIDS (DAIDS) toxicity table, Version 1.0.⁽¹³⁾ All participants who seroconverted had stored plasma specimens from earlier visits assayed retrospectively for viral RNA to optimally establish time of infection. Data management and analysis was performed with SAS version 9.4 (SAS Institute, Cary, NC).

Ethical Review

This study was approved by the University of California, Los Angeles (IRB#: 10-00028). Both the LA LGBT Center and OASIS relied on UCLA for regulatory oversight. All participants in the P-QUAD study provided written informed consent prior to study participation.

RESULTS

Between March 2010 and June 2011, the P-QUAD program dispensed 282 courses of PEP to 267 unique participants. Seventeen individuals presented for PEP services but did not meet eligibility criteria. Of those who did not qualify, three tested positive for HIV at screening; five did not have a high-risk exposure; two refused to participate in the study; three had the exposure more than 72 hours before screening and four did not have data available on the reason for screen failure. Of the 282 courses of PEP provided, 259 were given to participants at the LA LGBT Center and 23 were given to participants at OASIS. The majority of participants accessed PEP only once during the study period ($n = 254$, 90%), but 11 individuals accessed PEP twice, and 2 individuals accessed PEP on three occasions.

Participants were predominantly male (95%); between the ages of 25-29 (23%), 30-39 (30%), or 40-49 (21%); White (48%) or Hispanic/Latino (35%); gay (77%), and reported some college education or higher (82%) (Table 1). Approximately 70% of participants reported that they had no insurance coverage, and 36% reported that they were unemployed. Two-thirds of participants reported a family income less than or equal to \$30,000 per year.

Most participants reported that the source of exposure was either a known HIV-positive person (55%) or an MSM with an unknown HIV status (38%) (Table 2). The exposure prompting PEP initiation was most commonly reported to be RAI (51%) followed by IAI (28%), and RAI and IAI (11%). Thirty four percent of participants initiated PEP within 24 hours after exposure, 33% accessed PEP between 24 and 48 hours, and 29% accessed PEP between 48 and 72 hours after exposure. The remaining 3% received a starter pack at another facility and thus the time from exposure to first dose was unknown.

Of the 282 courses of PEP dispensed, approximately 19% had either no follow-up visits or only came for the Week 2 follow-up visit (Table 3). Eighty one percent of individuals were retained at Week 4, 64% were retained at Week 12, and 47% were retained at Week 24. Of the 282 courses prescribed, 247 participants returned for the remaining 14 days of drugs at the Week 2 visit. There were no differences between individuals with complete follow-up and incomplete follow-up by gender ($p = 0.42$), age group ($p = 0.56$), race/ethnicity ($p = 0.66$), sexual orientation ($p = 0.78$), education ($p = 0.44$), insurance ($p = 0.72$), or family income ($p = 0.57$). However, there was a difference by employment status with unemployed individuals less likely to be retained than employed individuals ($p = 0.03$).

At the Week 2 and 4 visits, participants were asked to self-report their medication adherence. Fifty three percent of participants reported complete medication adherence whereas 26% reported incomplete medication adherence, and 21% had unknown medication adherence due to missing the Week 4 visit (Table 3). There were no statistically significant differences at the bivariate level between the demographic variables and complete medication adherence.

Sixty-five percent received TDF+FTC and LPV/r; 25% received TDF+FTC and RAL; 6% received AZT+3TC with LPV/r; 0.7% received TDF+FTC only, and 0.4% received AZT +3TC with RAL. The most common adverse events that were reported were diarrhea ($n =$

78) followed by nausea (n = 48), fatigue (n = 39), and mild to moderate abdominal discomfort (n = 24).

Seven participants seroconverted during study follow-up. Five participants tested HIV-positive by antibody test and two tested antibody negative and nucleic acid amplification test (NAAT) positive. Six participants self-reported engaging in RAI and/or IAI after baseline, but one participant reported no subsequent re-exposure. For the six who were sexually active after the baseline visit, three reported intercourse with condoms only and three reported at least one instance of intercourse without condoms. Notably, four of the seven participants who seroconverted initiated PEP more than 48 hours after initial HIV exposure.

DISCUSSION

The P-QUAD program in Los Angeles County successfully administered 282 courses of PEP over the 18-month pilot study. The predominately MSM participants had a diverse racial, ethnic, education, and income profile. In addition, the program had few seroconversions that were attributable to true PEP failure.

There are important limitations to the study that can serve as learning lessons for other jurisdictions or clinics planning to implement PEP services. Although PEP was offered at two locations in Los Angeles County, neither location had weekend hours which could have limited the immediate provision of PEP. Previous studies have shown that efficacy of PEP wanes over the course of the eligibility window,(14–15) and four of seven participants who seroconverted initiated PEP after 48 hours. Clinics seeking to offer PEP services may consider weekend hours to provide PEP as early as possible and maximize the effectiveness of PEP. Alternatively, clinics with limited hours may seek to formalize arrangements with local emergency departments to provide PEP during off hours. A second limitation is that medication adherence was assessed via self-report and pill counts. Objective measures of adherence including electronic pill monitoring and/or biomarkers of adherence would assist in better assessing adherence. Third, although pre-exposure prophylaxis (PrEP) was not available during this pilot program, offering transition services from PEP to PrEP may lessen the cost burden of repeat PEP participation and save PEP funds for individuals who truly have intermittent exposures. Lastly, the distribution of regimens chosen was constrained because of supply. Regimen choice was neither randomized nor blinded.

The P-QUAD project is unique in that it showed that PEP can effectively be deployed in community-based settings. The program utilized a hub-and-spoke model with less specialized clinics providing referrals to the two participating sites. Specifically, outside referrals were provided starter packs via the emergency room at Cedars Sinai Medical Center or the Hollywood Men's Wellness Center of AIDS Healthcare Foundation and received the remainder of the regimen at the two participating clinics in addition to being able to initiate PEP at the two "primary" sites. The success of the P-QUAD pilot program led to the creation of the PEP-LA program at the Los Angeles LGBT Center in May 2011. Between May 2011 and December 2016, the PEP-LA program has provided over 3,800 unique individuals with over 5,000 courses of PEP. The program has also grown steadily from 21 monthly intakes in June 2011 to 97 monthly intakes in December 2016. The number

of seroconversions over this time-period has been low ($n = 9$), further suggesting the effectiveness of PEP as an HIV prevention tool. Furthermore, the P-QUAD project acted as the template for the establishment of a successful County-funded program for pre-exposure prophylaxis (PrEP) at the Los Angeles LGBT Center.

The emergence of PrEP as an HIV prevention tool has renewed interest in biomedical prevention. Although PrEP may be appropriate for individuals in serodiscordant relationships or individuals with ongoing multiple condomless anal sex partners, PEP may be a more appropriate strategy for individuals with more episodic or intermittent risk. The growth of the PEP-LA program over the past five years has shown that PEP is both viable and acceptable as a prevention method and serves as one component of an effective overall HIV prevention strategy. By promoting HIV testing, PEP services, PrEP services, and offering transition services from PEP to PrEP, sexual health clinics can provide a menu of HIV prevention options to clients. As the biomedical prevention era evolves, jurisdictions should consider the specific requirements for providing both PEP and PrEP services including weekend coverage and 24-hour start-up access mechanisms.

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References

1. Centers for Disease Control and Prevention. Announcement: Updated Guidelines for Antiretroviral Postexposure Prophylaxis after Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV - United States, 2016. 2016. [updated May. 2016/05/06:[458]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27149423>
2. Tsai CC, Follis KE, Sabo A, Beck TW, Grant RF, Bischofberger N, et al. PREVENTION OF SIV INFECTION IN MACAQUES BY (R)-9-(2-PHOSPHONYLMETHOXYPROPYL)ADENINE. *Science*. 1995; 270(5239):1197–9. [PubMed: 7502044]
3. Otten RA, Smith DK, Adams DR, Pullium JK, Jackson E, Kim CN, et al. Efficacy of postexposure prophylaxis after intravaginal exposure of pig-tailed macaques to a human-derived retrovirus

- (human immunodeficiency virus type 2). *Journal of Virology*. 2000; 74(20):9771–5. [PubMed: 11000253]
4. Subbarao S, Otten RA, Ramos A, Kim C, Jackson E, Monsour M, et al. Chemoprophylaxis with tenofovir disoproxil fumarate provided partial protection against infection with simian human immunodeficiency virus in macaques given multiple virus challenges. *Journal of Infectious Diseases*. 2006; 194(7):904–11. [PubMed: 16960777]
 5. Bourry O, Brochard P, Souquiere S, Makuwa M, Calvo J, Dereudre-Bosquet N, et al. Prevention of vaginal simian immunodeficiency virus transmission in macaques by postexposure prophylaxis with zidovudine, lamivudine and indinavir. *Aids*. 2009; 23(4):447–54. [PubMed: 19240457]
 6. Cardo DM, Culver DH, Ciesielski CA, Srivastava PU, Marcus R, Abiteboul D, et al. A case-control study of HIV seroconversion in health care workers after percutaneous exposure. *N Engl J Med*. 1997; 337(21):1485–90. [PubMed: 9366579]
 7. Centers for Disease Control and Prevention. Management of possible sexual, injecting-drug-use, or other nonoccupational exposure to HIV, including considerations related to antiretroviral therapy. Public Health Service statement. Centers for Disease Control and Prevention. *MMWR Recomm Rep*. 1998; 47(RR-17):1–14.
 8. Mitchell JW, Sophus AI, Petroll AE. HIV-Negative Partnered Men's Willingness to Use Non-Occupational Post-Exposure Prophylaxis and Associated Factors in a US Sample of HIV-Negative and HIV-Discordant Male Couples. *Lgbt Health*. 2016; 3(2):146–52. [PubMed: 26789400]
 9. Rodriguez AE, Castel AD, Parish CL, Willis S, Feaster DJ, Kharfen M, et al. HIV Medical Providers' Perceptions of the Use of Antiretroviral Therapy as Nonoccupational Postexposure Prophylaxis in 2 Major Metropolitan Areas. *J AIDS-Journal of Acquired Immune Deficiency Syndromes*. 2013; 64:S68–S79.
 10. Landovitz RJ, Combs KB, Currier JS. Availability of HIV Postexposure Prophylaxis Services in Los Angeles County. *Clinical Infectious Diseases*. 2009; 48(11):1624–7. [PubMed: 19400685]
 11. Division of HIV and STD Programs LAC, Department of Public Health. Annual HIV/STD Surveillance Report. 2014
 12. Panlilio AL, Cardo DM, Grohskopf LA, Heneine W, Ross CS, Service USPH. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. *MMWR Recomm Rep*. 2005; 54(RR-9):1–17.
 13. National Institute of Allergy and Infectious Diseases - Division of AIDS. Division of AIDS Table for Grading the Severity of Adult and Pediatric Adverse Events. Aug. 2009 Version 1.0 Updated [Available from: http://rsc.tech-res.com/docs/default-source/safety/table_for_grading_severity_of_adult_pediatric_adverse_events.pdf]
 14. Irvine C, Egan KJ, Shubber Z, Van Rompay KKA, Beanland RL, Ford N. Efficacy of HIV Postexposure Prophylaxis: Systematic Review and Meta-analysis of Nonhuman Primate Studies. *Clinical Infectious Diseases*. 2015; 60:S165–S9. [PubMed: 25972498]
 15. Beymer MR, Weiss RE, Bolan RK, Kofron RM, Flynn RP, Pieribone DL, et al. Differentiating Nonoccupational Postexposure Prophylaxis Seroconverters and Non-Seroconverters in a Community-Based Clinic in Los Angeles, California. *Open Forum Infect Dis*. 2017; 4(2):ofx061. [PubMed: 28596981]

Table 1

Demographics of Unique Clients in the P-QUAD Program, March 2010 - June 2011 (n = 267 participants).*

	n	%
Gender Identity		
Male	253	94.8%
Female	11	4.1%
Trans MTF	3	1.1%
Age at First Visit		
18–24	54	20.2%
25–29	61	22.8%
30–39	81	30.3%
40–49	57	21.3%
50+	14	5.2%
Race/Ethnicity		
White	128	47.9%
Hispanic/Latino	92	34.5%
Black or African American	23	8.6%
Asian/PI	13	4.9%
American Indian or Alaska Native	1	0.4%
Other	10	3.7%
Sexual Orientation		
Gay/Homosexual	205	76.8%
Bisexual	20	7.5%
Heterosexual	25	9.4%
Other	4	1.5%
Missing	13	4.9%
Educational Level		
8th grade or below	8	3.0%
High school graduate/GED	40	15.0%
Some college	96	36.0%
College degree	88	33.0%
Post-graduate study/degree	34	12.7%
Unknown/Unreported	1	0.4%
Insurance Status		
No Coverage	186	69.7%
Private	66	24.7%
MediCal	8	3.0%
MediCare	2	0.7%
Other	3	1.1%
Unknown/Unreported	2	0.7%
Employment Status		
Employed Full-time	95	35.6%

	n	%
Employed Part-time (20 hrs/wk)	62	23.2%
Employed Part-time (<20 hrs/wk)	9	3.4%
Unemployed	98	36.7%
Unknown/Unreported	3	1.1%
Family Income		
\$10,000 or less	84	31.5%
\$10,001 - \$20,000	44	16.5%
\$20,001 - \$30,000	48	18.0%
\$30,001 - \$40,000	26	9.7%
\$40,001 - \$50,000	24	9.0%
\$50,001 - \$75,000	23	8.6%
\$75,001 - \$100,000	12	4.5%
More than \$100,000	2	0.7%
Unknown/Unreported	4	1.5%
Total	267	100.0%

* For repeat PEP clients, the data presented are from their first PEP intake in the study period.

Table 2

Data on the Exposure that Prompted Post-Exposure Prophylaxis for P-QUAD Participants, March 2010 - June 2011 (n = 282 courses).

	n	%
High-Risk Source		
Known HIV+	155	55.0%
Unknown HIV status, MSM	108	38.3%
Unknown HIV Status, MSM/W	4	1.4%
Unknown HIV status, CSQ	3	1.1%
Unknown HIV status, IDU	1	0.4%
Unknown HIV status, partner of one of the above	2	0.7%
Unknown	9	3.2%
High-Risk Exposure		
Receptive Anal Intercourse	143	50.7%
Insertive Anal Intercourse	79	28.0%
Receptive Anal Intercourse; Insertive Anal Intercourse	31	11.0%
Receptive Vaginal Intercourse	9	3.2%
Insertive Vaginal Intercourse	8	2.8%
Receptive Oral Intercourse with Ejaculation	2	0.7%
Insertive Anal Intercourse; Receptive Vaginal Intercourse	1	0.4%
Receptive Anal Intercourse; Insertive Anal Intercourse; Insertive Vaginal Intercourse	1	0.4%
Receptive Anal Intercourse; Receptive Vaginal Intercourse	1	0.4%
Receptive Anal Intercourse; Receptive Vaginal Intercourse; Receptive Oral Intercourse	1	0.4%
Unknown	6	2.1%
Time from Exposure to PEP Initiation		
Less than 2 Hours	3	1.1%
Between 2–8 Hours	15	5.3%
Between 8–24 Hours	79	28.0%
Between 24–48 Hours	94	33.3%
Between 48–72 Hours	82	29.1%
Unknown*	9	3.2%
Course Dispensed		
Truvada and Kaletra (TDF+FTC and LPV/r)	183	64.9%
Truvada and Raltegravir (TDF+FTC and RAL)	71	25.2%
Combivir and Kaletra (AZT+3TC and LPV/r)	17	6.0%
Truvada Only (TDF+FTC only)	2	0.7%
Combivir and Raltegravir (AZT+3TC and RAL)	1	0.4%
Unknown	8	2.8%
Number of Courses of PEP		
1 course	254	90.1%
2 courses	11	3.9%
3 courses	2	0.7%

	n	%
Total	282	100.0%

* These individuals were provided a starter pack at another facility and received the remaining course of PEP at either the Los Angeles LGBT Center or OASIS

Table 3

Follow-Up Data for P-QUAD Participants, March 2010 - June 2011 (n = 282).

	n	%
Self-Reported Medication Adherence		
Incomplete Medication Adherence	74	26.2%
Complete Medication Adherence	149	52.8%
Unknown *	59	20.9%
Course Completion		
Completed	139	49.3%
Refused	1	0.4%
Other	11	3.9%
Unknown	131	46.5%
Last Visit **		
No Follow-Up Visits Attended	24	8.5%
Retained at 2 Weeks	30	10.6%
Retained at 4 Weeks	47	16.7%
Retained at 12 Weeks	49	17.4%
Retained at 24 Weeks	132	46.8%
Seroconversion at Follow-Up ***		
Remained HIV-Negative through Follow-Up	275	97.5%
Tested HIV-Positive at Follow-Up	7	2.5%
Total	282	100.0%

* 53 individuals did not attend the Week 4 follow-up visit where medication adherence was assessed; the other 6 did not report their medication adherence.

** 15 courses were repeat PEP courses and therefore may have been initiated in the middle of the follow-up period for the initial PEP course.

*** Of these seven seroconversions, six reported anal sex at one or more points during the 24 weeks of follow-up.