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### Authors

Schapiro, Naomi A  
Gutierrez, J Raul  
Blackshaw, Amy  
et al.

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Addressing the health and mental health needs of unaccompanied immigrant youth through an innovative school-based health center model: Successes and challenges

Naomi A. Schapiro, RN, PhD, CPNP  
University of California, San Francisco  
naomi.schapiro@ucsf.edu

J. Raul Gutierrez, MD MPH  
La Clinica de la Raza  
University of California, San Francisco  
jrgutierrez@laclinica.org

Amy Blackshaw, MSW  
La Clinica de la Raza  
ablackshaw@laclinica.org

Jyu-Lin Chen, PhD, RN, CNS, FAAN  
University of California, San Francisco  
jyu-lin.chen@ucsf.edu

Corresponding author: Naomi A. Schapiro, [naomi.schapiro@ucsf.edu](mailto:naomi.schapiro@ucsf.edu)

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## 1. Introduction–

Unaccompanied Mexican and Central American youth have crossed the US-Mexico border for many years, reunifying with parents, seeking better opportunities and fleeing violence in their home countries (Schapiro, Kools, Weiss, & Brindis, 2013; Schapiro, Kools, Weiss, & Brindis, 2015). However, in recent years Guatemala, Honduras and El Salvador, known as the Northern Triangle of Central America, have been plagued with increasing gang and cartel violence, declining governmental and educational infrastructures and increased corruption among law enforcement (Restrepo & Garcia, 2014). Currently their homicide rates are among the highest in the world (Gagne, 2017; UNODC Statistics and Surveys Section, 2014). Children and adolescents are often deliberate targets, particularly if they decline gang recruitment efforts (Jones & Podkul, 2012). In response to these rising levels of violence, migration out of these countries dramatically increased starting in 2014 (Schmidt & Somers, 2014), and over 120,000 unaccompanied immigrant youth (UIY) and another 120,000 family units with young children have come to the United States (US) from Central America since then (Restrepo & Mathema, 2016). This article describes a coordinated plan to increase access to health care for UIY through population-level screening for health and mental health needs in a school-based setting, a stepwise approach to referral for medical, dental, mental health and legal assistance, and a summary of the health needs of this population gathered through a retrospective chart review covering the 2015-2016 school year.

### 1.1 *Crossing the Border and Detention*

Once they leave for the United States, Mexico or other countries in Central America, youth face a dangerous journey, including violence and extortion from both gangs and law enforcement officials (Infante, Idrovo, Sanchez-Dominguez, Vinhas, & Gonzalez-Vazquez, 2012;

United Nations Children's Fund (UNICEF), 2016). Mexican youths who are apprehended at the US-Mexican Border are usually sent back to Mexico, while most children from Central America who are apprehended are transferred to the custody of the Office of Refugee Resettlement (ORR), placed in the least restrictive environment possible, including sponsors or family, and are given a court date for a deportation or asylum hearing (Byrne & Miller, 2012). This transfer is meant to provide children with more appropriate housing and access to pro bono lawyers, but can also involve moves to a distant geographic location and the involvement of multiple agencies (Byrne & Miller, 2012). Over 60,000 Central American youths were detained at the US border in Fiscal Year (FY) 2014, with a gradual decline to almost 39,000 in FY 2017 (Office of Refugee Resettlement, 2017). Youth who have been detained at the border and released with a court date are officially defined as unaccompanied alien children (Byrne & Miller, 2012), however advocacy groups prefer to use the term unaccompanied immigrant youth (UIY), to refer to both minors and young adults (Alvarez & Alegria, 2016; Schmidt & Somers, 2014).

Prior to 2017, over 70% of youths who had legal representation at the time of their hearing were allowed to stay in the US (TRAC immigration, 2014), with some regional variation. Since January 2017, the Federal government has taken a harsher approach to UIY, denying bond hearings for some youths in ORR detention centers, and planning to prosecute parents who have paid a guide to bring their child across the border. This policy change may result in children refusing to name their parents, thereby prolonging detention and family separation (Dickerson, 2017; Jordan, 2017). It is not known how many youths who were escaping the same conditions crossed the border without being apprehended, and have become part of the general newcomer pool in educational and health care settings.

### *1.2 Resettlement with parents or sponsors*

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In FYs 2016 and 2017, California had the largest number of UIY released to sponsors in the US, and Alameda County, in the San Francisco Bay Area, has had the second largest concentration of these youth in California after Los Angeles (Office of Refugee Resettlement, 2016, 2017). In one Alameda County community with a large immigrant population, the School District counted 2,200 newcomer students in the 2016-2017 academic year, of whom 366 are official refugees, 269 have received asylum, and 480 are unaccompanied minors (Oakland Unified School District, 2016b). Definitions of and services for UIY, families detained at the border, refugees and asylees, and other newcomer youth differ by agency and have changed over time even in one agency. For the purposes of this paper, we use the definitions of the School District and time period in which the study was set, the 2015-2016 academic year (See Box 1). Of note is that UIY and Children of Migrant families, in which a child and a related adult were apprehended together, were allocated similar services. As of February 2016, 49% of UIY in the District were from Guatemala, 33% were from El Salvador, and 18% from Honduras (ELLMA, 2016). Indigenous languages, such as Mam, were the second largest language group in the School District, after Spanish, a dramatic increase from prior years.

### **Box 1 Definition of terms**

Newcomer	student who has been in the US less than 3 years and speaks a language other than English at home
Unaccompanied Minors/Immigrant Youth (UIY)	crossed the border without documents and without a parent, apprehended and then released
Children of Migrant Families	apprehended at the border with an adult family member, grouped with UIY as they receive the same services and go through similar legal proceedings
Refugee/Asylee	forced to flee their home countries because of war, violence or natural disasters. Refugees usually enter with special visas;

	asylees apply after entry.
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From English Language Learner and Multilingual Achievement (ELLMA) Office, 2016

### *1.3 Health care needs and utilization*

Health outcomes in poor Latinx immigrant families have been hampered by poverty, lower health literacy among parents, and inequities in access to health insurance (Mendoza, 2009). Research with earlier cohorts of undocumented immigrant youth show that many forego health care, even when offered at low cost safety net providers, for fear of incurring debts that might trigger deportation (Raymond-Flesch, Siemons, Pourat, Jacobs, & Brindis, 2014). Clinical experience and research with immigrant youth migrating alone before 2012 revealed significant exposure to trauma before and during migration (Schapiro, 2012; Schapiro et al., 2015). A study of first generation immigrant youth in North Carolina found that 7% were symptomatic for depression and 29% were symptomatic for anxiety. Migration stressors were associated with increased risks for mental health symptoms (Potochnick & Perreira, 2010). Undocumented status in itself has been shown to increase fear and isolation, and negatively affect mental health (Abrego, 2011).

Interviews with young adults who had received Deferred Action for Childhood Arrivals (DACA), indicated that the largest unmet need was for mental health services (Raymond-Flesch et al., 2014). Even though a change in the law had not yet been finalized at the time of the intervention described below, there were strong indications that California's public insurance plan, Medi-Cal, would be extended to all immigrant youth through age 18 within months (Lara, 2015). Although there was limited knowledge about the specific needs of the current influx of UIY and other newcomers who were fleeing gang-related violence, this background knowledge and a history of cross-institutional and community-academic collaboration in this receiving County made it possible to implement a systematic approach to the care of UIY (See Figure 1).

## 2. Theory

Financial access to care for undocumented immigrants has been limited in both Northern Europe and North America (Ruiz-Casares, Rousseau, Derluyn, Watters, & Crepeau, 2010), and immigrant families may limit their own use of health care, as noted above, even when offered in a low cost setting. Furthermore, fear of deportation may prevent families from enrolling in and using available services, even when they possess valid immigration documents, especially in areas with increased proportions of deportations (Watson, 2010). Families may be reluctant to enter their own information into health center records, even if their children are US-born, for fear of having this information shared with law enforcement agencies (Page & Polk, 2017). In addition to fear, isolation and lack of awareness may limit access to health care, as has been noted even in long-time Guatemalan immigrants (Zhen-Duang, Jacquez, & Vaughn, 2017). Given the increased mental health burden of undocumented status and fear of deportation, as well as lack of trust in health care services, an effective system of care for immigrants might combine medical and legal services in one location.

The concept of access to health care was defined by Penchansky and Thomas (1981, p. 128) as the “degree of ‘fit’ between the clients and the system” of health care, and suggested five dimensions of access: availability, accessibility, accommodation, affordability and acceptability. They noted that satisfaction with care, although difficult to measure, could be a significant element in patient decisions about health care. Saurman (2016), has recently suggested adding awareness as a sixth dimension to the definition of access, relying on effective means of informing potential clients of the need and availability of services.

School-based settings are traditionally seen as accessible and trusted health care sites for uninsured youth and families (Keeton, Soleimanpour, & Brindis, 2012), and have been shown to

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be a good fit on the dimensions of access described above. They are typically available three to five days a week, offer some walk-in services, eliminate transportation barriers, and often deliver services free of charge. In 2013-14, there were 2,315 school-based health centers (SBHCs) nationwide, providing care to traditional public, alternative and private schools (School Based Health Alliance, n.d.). Over 77% of the SBHC serve Title I schools, or those schools with over 40% low income students. SBHCs provide primary care services, including immunizations, vision and oral health screenings, and psychosocial screenings, including depression and substance use. Over 75% provide individual behavioral health counseling, and the majority provides group behavioral health treatment. A mixed methods study in Southwestern SBHC serving primarily Latino families found that both Spanish- and English-speaking parents saw their SBHC as convenient, accessible, trustworthy and family-centered (Albright et al, 2016). Parents appreciated their children being able to access primary care services without parents taking time off work or children missing most of a day of school. Adolescents have rated SBHCs highly for delivering needed care and advice, although immigrant and sexual minority youth were more likely to note some unmet anticipatory guidance needs, particularly in growth and development and emotional health (Ramos, Sebastian, Stumbo, McGrath, & Fairbrother, 2017).

Alameda County has a high proportion of immigrant youth, and its Center for Healthy Schools and Communities supports a network of SBHCs with supplemental funding and technical assistance for the delivery of integrated primary and behavioral health care. The Center has helped coordinate dedicated case management and behavioral health services for UIY (Alameda County Center for Healthy Schools and Communities, 2015). The County SBHCs have consistently received high degrees of satisfaction in client surveys, with up to 94% feeling that they could go to the health center for information, 89% feeling that school health center staff



were easier to talk to than other doctors and nurses, and 80% stating they had received services they would not get otherwise (Soleimanpour, Geierstanger, Kaller, McCarter, & Brindis, 2010).

### *2.1 The present study*

The present study is part of a larger evaluation of the impact of an academic-community partnership to increase access to health care in SBHC through population-level screens, including oral health, psychosocial screens and STI testing. Retrospective chart reviews were conducted of various screening outcomes and follow-up of those with identified health needs. Retrospective chart reviews are a well-accepted form of research for clinical investigations, quality improvement, epidemiologic investigations, and evaluation of health science professional training, (Gearing, Mian, Barber, & Ickowicz, 2006). Retrospective reviews have found that mental health screening increases referral to, but not necessarily usage of mental health services (Hacker et al., 2014). In SBHC, retrospective chart reviews have been used to track the impact of a SBHC on emergency room use (Young, D'Angelo, & Davis, 2001), risk and protective factors related to sexually transmitted infections in middle school youth (Woodhead, Chung, & Joffe, 2009), and utilization patterns in an elementary school center over a five-year period (Johnson & Hutcherson, 2006). As a retrospective study, results can be de-identified, and as a review of health care that has already been delivered, additional consents are generally not needed. However, in-depth chart reviews can be very labor intensive, and the researcher generally does not have control over the ways that data were collected and documented during the health care visit.

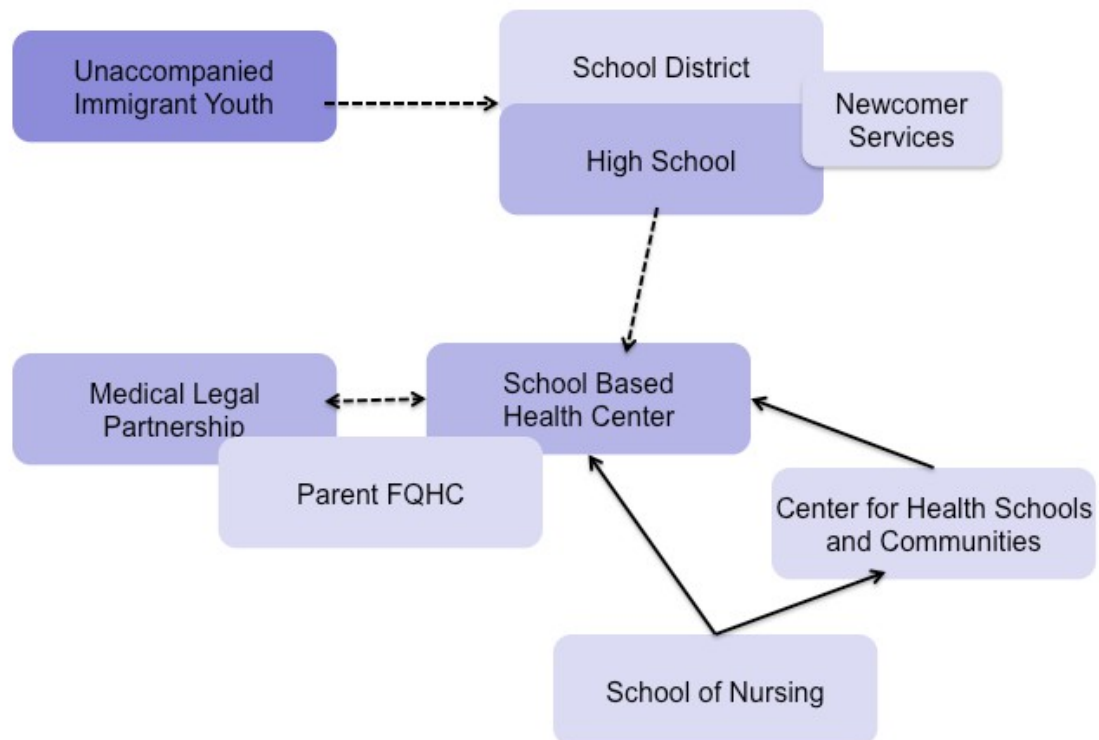
These were the first retrospective chart reviews conducted in Alameda County SBHC after the conversion to electronic medical records (EMR). For the screening of newcomer youth analyzed here, researchers, clinicians and nurse practitioner students from the University of

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California, San Francisco (UCSF) partnered with community clinicians and staff to screen newcomers from Level 1 English Learner Classes, including UIY, in one SBHC.

As an exploratory study, the primary aim was to determine the health needs and strengths of high school students who were UIY and other new immigrants, and to determine whether these needs were met within 6 months after the screening. The secondary aim was to do a preliminary evaluation of a classroom-based screening model and stepwise integration into health care services, by noting successes and challenges. Questions, challenges and next steps will be discussed. A comparison of retrospective chart reviews with other SBHC evaluation mechanisms will be addressed in a future article.

Figure 1 Community partners and relationships



Dotted arrows represent pathway for UIY & other newcomers; solid arrows represent institutional support

### **3. Material and Methods**

#### *3.1 Setting and Elements of the partnership*

The intervention was set in a County in northern California, one of the most diverse in the US, with many services in place for vulnerable youth by 2014: over 25 SBHCs supported by 6 Federally Qualified Health Centers (FQHCs) with behavioral health (BH) support, and an array of additional public and nonprofit BH providers (Center for Healthy Schools and Communities, n.d.). See Figure 1 for institutional relationships. In response to the influx of UIY, and the potential difficulty of reimbursement for youth of indeterminate legal and guardian status, the County assigned \$2.5 million in funding, including the equivalent of Medicaid reimbursement to youth who would otherwise qualify for Early and Periodic Screening, Diagnostic and Treatment (EPSDT) services. The Center for Healthy School and Communities placed dedicated clinicians and case managers in high needs portions of the County (Warhuus & Gonzalez, 2015).

The intervention was set in SBHC A in High School A (name changed to protect confidentiality). High School A is part of a district with over 49,000 students in the 2015-2016 academic year (Oakland Unified School District, 2016a) and one of 14 District Schools with Newcomer programs. High School A was also assigned a dedicated UIY case manager and conducted monthly meetings with school, health and community partners. In the 2015-2016 academic year, High School A had 773 registered students, of whom 43% were Newcomers (CDE, Data Quest Home, n.d.). The FQHC that manages SBHC A has 8 school-based and school-linked HCs in the County (La Clínica de la Raza, 2017). The FQHC has developed an innovative medical-legal partnership with a local nonprofit law center to provide no cost assistance with housing, health insurance, employment and immigration issues (Thorpe, Cartwright-Smith, Gray, & Mongeon, 2017), which includes on site meetings at community

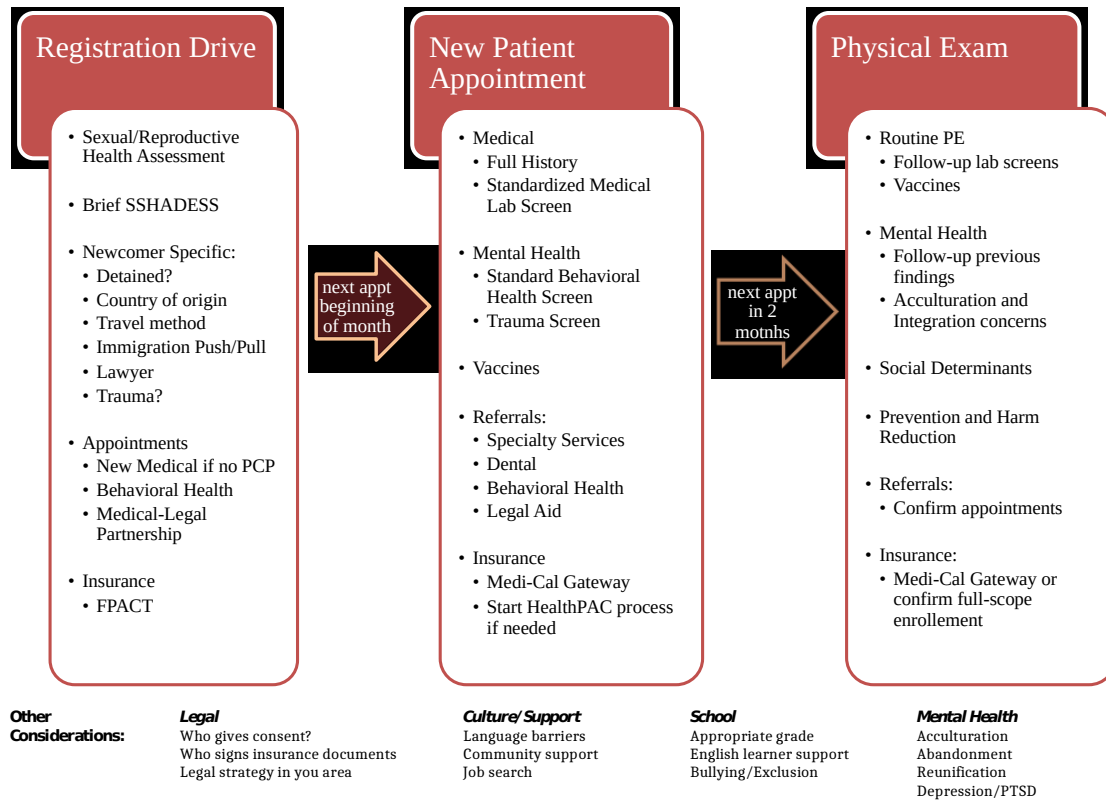
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clinics and SBHC with high legal needs. The law center has expertise in immigration cases, and also accepts direct calls from youth and families. School-based providers meet monthly for quality improvement and sharing best practices.

The UCSF Department of Family Health Care Nursing was funded by the Atlantic Philanthropies as part of the Oakland Elev8 project from 2011-2016 to support the sustainability of new Oakland SBHC through nursing faculty practice, focused student service-learning projects and technical assistance to SBHC providers and staff (Schapiro, Rose & Franck, 2014). Faculty and providers at SBHCs developed procedures for population-level screenings in schools, bringing in extra staff and health science student volunteers to increase capacity (Schapiro, Green, Keeton, & Gutierrez, 2016). This model was adapted by SBHC staff for use in newcomer screenings (Gutierrez, Schapiro, & Blackshaw, 2015). The UCSF Elev8 project also funded the chart review study described below.

Figure 2

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In order to increase awareness of clinic services, (Saurman, 2016), SBHC A and its parent FQHC have developed a number of outreach strategies to bring students into the clinic for initial screenings and clinic orientation (Schapiro et al., 2016), including targeted screenings for newcomers (See Appendix A). In addition to finding and serving youth in need of health care, the outreach strategy facilitates future access by streamlining the registration process. Even more important, the clinic is presented as a youth-friendly, newcomer-friendly environment on campus with multi-lingual staff and multiple services. Classroom presentations by SBHC staff in the common preferred language of the class, before the screening day, define and explain confidential services.

On the day of the screening reviewed by the study, youth were interviewed by clinic staff and nurse practitioner student volunteers guided by a SSHADESS model, a strength-based psychosocial screen widely used by pediatric clinicians in adolescent medical visits, briefly asking about the assets, risks, supports and interests of the adolescent (Ginsburg, 2003; Hagan, Shaw, & Duncan, 2017). Students were not asked their documentation status, nor were they asked in depth questions about their migration experience or reasons for migration. Travel method, whether accompanied by an adult, and whether they experienced stressful situations were elicited in order to get a general sense of possible traumatic experiences. Knowing that UIY are released with a court date (Byrne & Miller, 2012), youth were asked if they were detained at the border and about their current need for legal representation, so that legal referrals could be prioritized. Virtually all staff interviewed youth in Spanish. At the time, interviewers remarked that some Guatemalan youth spoke little Spanish; this limitation is addressed below in Discussion. Strategic follow-up appointments were made based on their needs to continue care and provide continued assessments (See Figure 2).



California has extensive minor consent and confidentiality protections, as well as easily accessible confidential services that are funded for all residents of reproductive age, regardless of documentation status (Family PACT, 2017; Guttmacher Institute, 2017). A reproductive health screening was chosen as the first portal of entry to the school health center as: 1) all youth were eligible for this funding; 2) UIY who were not living with legal guardians as well as youth living with parents could self-register, and 3) it was important to determine their reproductive health needs and to let all youth know about the availability of confidential services.

All needed follow-up appointments in the clinic were scheduled in the next few days and weeks, prioritized by urgency. These appointment types included medical appointments for vaccines, physicals, and sexual health services, including testing, birth control initiation and follow-up, and other medical concerns. Referrals were also made with the Spanish-speaking behavioral health counselor for mental health support and case management. Health education (HE) appointments were also made for students related to sexual health and nutrition. Identified legal issues were directly referred to an attorney through the Medical Legal Partnership (Thorpe et al., 2017).

### *3.2 Participants*

As a retrospective chart review of usual care, with de-identified results, no additional permissions were required by either the UCSF Institutional Review Board (IRB) or the Quality Assurance Committee of the managing FQHC of SBHC A. In order to maximize data collection during the screening visits and allow for 6 months of follow-up data within an academic year, the newcomer screenings done from July 1 through October 2, 2015, were selected for review, with the majority of youth screened between September 24 and October 2. The PI and research assistants reviewed clinic schedules for the screening dates within this time frame and selected

all scheduled clients who came to their appointments and whose visit reason stated “Reg Drive.” UCSF and the FQHCs Quality Assurance Board approved the retrospective chart review within the dates July 1, 2013 through June 30, 2016.

In order to fulfill the mission of SBHC A to be available and accessible to all registered students of High School A and to increase access to the clinic for all immigrant youth, all newcomers attending English Learner Level 1 (least proficient) classes were invited to be screened and could sign clinic registration forms during classroom presentations. The four Level 1 English classes contained 96 students in Fall 2015. Once they entered school, UIY were not distinguished in classroom placement from other newcomers, nor were they highlighted on clinic registration. In addition to newcomers from Mexico and Central America, there are typically newcomers from China and Yemen in the school. For the screening analyzed in this study, only one student came from Yemen, and the rest from Mexico and Central America. Numbers and countries of origin are detailed in the results section below.

### *3.3 Measures*

A paper screening form was developed by Clinic A and used by the clinic providers and staff during the registration drive screening, and later scanned into the electronic health record. Following best practices from Vassar & Holzmann (2013), the PI and research associate of the chart review study drew up a manual for data extraction from the screening form and from the electronic records, in consultation with a SBHC clinic manager from the same FQHC as Clinic A. Clinic staff were used to extract data from the electronic records currently used by the FQHC. Questions from the newcomer screen were entered into an Excel spread sheet, with forced choice answers to limit response variation. For clients who returned to the clinic within 6 months of the screen the extractors entered any test results from the screen, follow-up depression (Kroenke,

Spitzer & Williams, 2003) and Substance Use screens (Levy & Kokotailo, 2011), Body Mass Index, the number of follow-up medical, dental, behavioral health and health education visits, number of immunizations given, type of contraception if any, and ICD-10 diagnosis codes.

For quality control, data extractors were compared on their results from five charts, with retraining and a second comparison until they had over 90% agreement on data extraction. The PI, co-PI and research associate reached agreement and instructed data extractors on handling missing data on the initial screening form.

### *3.4 Analytic procedures*

To determine the health needs and strengths of newcomer high school students who were UIY and other new immigrants, descriptive statistics with mean, standard deviation and frequency were performed for study variables. T-tests and Chi-Square tests were used to examine any differences in health needs and health usage between adolescents who migrated with and without parents, and also between adolescents who were detained at the border and those who were not. Chi square tests are appropriate when comparing categorical data between two groups. Due to the overall low numbers, multiple categories, and missing data from the screening questionnaires, it was not possible to make statistical comparisons of UIY with Children of Migrant Families – those who were detained with and without parents. All analyses were performed in SPSS 25.0, with 0.05 set as the level of significance. Review of ICD-10 Codes was completed to assess types of diagnoses given to the adolescents.

The secondary aim, evaluation of the model, will be addressed in the Discussion section, with a comparison of clinic usage by screened newcomers with overall usage from SBHC A, derived from the County's standard evaluations of their supported SBHC. A more thorough evaluation will be addressed in another paper.

#### 4. Results (See Table 1)

Demographic information: Of the 62 adolescents who were screened in clinic, 5 were determined on chart review to already be clients of SBHC A from the prior academic year, and were excluded from analysis. The one student from Yemen was also excluded, as statistical comparisons would not be possible in a group of one, leaving a sample of 56. The possible explanations for the missing English Learner 1 students (32.6%) will be discussed below. Of the 56 students whose screening forms were reviewed, 36 came to the clinic for a follow up visit. The mean age for the sample was 15.5 years ( $SD = 1.4$  years). The majority identify as Latinx (98%), of whom 33 came from Guatemala (58.9%), 11 from El Salvador (19.6%), 6 from Honduras, and 5 from Mexico. Thirty adolescents migrated to the US without parents, and 16 came with a parent; 10 had missing data (declined to state or traveled alone with documents). Over 70% of adolescents had been detained at the US-Mexican border, some alone and some with family members. Sixteen adolescents stated they had a lawyer, 7 stated they needed a lawyer, and 44 stated “not applicable,” with 5 missing responses.

##### 4.1 *Primary care and dental screening and follow-up:*

Although these screening visits were the first visit at SBHC A, 48% of the screened youth had been to another site in the same FQHC before the screening date. Although 66% of participants reported having a Primary Care Provider (PCP), only 16.7% had completed their immunizations, and 37% had seen a dentist since arrival in the US and before the screening date (See Table 1).

Thirty-six students had follow-up medical visits at SBHC A. The average number of vaccines given to youth in 6 months of follow-up visits was .6 ( $SD = .88$ ), with a range from 1 to 4 vaccines. Medical visits ranged between 0 and 9, with an average of 3 visits ( $SD 2.2$ ). Dental

visits also ranged from 0 to 9, with an average of 1.7 visits (SD 2.3), and some diagnosis codes indicated severe decay and periodontal disease.

#### *4.2 Confidential family planning needs and services:*

Approximately 24% of participants (n=13) had engaged in sexual activity at the time of screening, with 11 of them reporting condom use. Seventeen participants agreed to HIV testing, 11 had gonorrhea and chlamydia testing, and all sexually transmitted infection (STI) tests were negative. At the time of screening or follow-up, 15 youths received condoms. Follow-up within six months indicated that some of the medical and HE visits had a reproductive health component, as 10 different contraceptive diagnosis codes were used in follow-up billing.

#### *4.3 Behavioral health needs and services:*

At least 25 participants (44% of total) were referred, to behavioral health (BH) with an average of 1.7 visits (SD = 2.2) and a range of 0 to 8 visits in a 6-month period. Although the screening providers were instructed to avoid detailed questions about traumatic experiences, with more detailed history-taking reserved for youth who returned for BH services, a few screening forms noted that an adolescent had been sexually assaulted, threatened or witnessed a murder of a close family member. All youth who disclosed trauma or stated that they would like to talk more with someone at the clinic were referred to a Spanish-speaking social worker.

The FQHC policy is to screen every adolescent yearly for depression, using the two-step PHQ-2 and PHQ-9 (Kroenke et al., 2003), if the PHQ-2 score is over 3. Adolescents are also screened yearly for substance use with a questionnaire validated for adolescents, the CRAFFT (Levy & Kokotailo, 2011), with possible scores from 0-6. Of those screened for depression, 10 participants had a high enough score on the PHQ-2 to go on to the full PHQ-9, with a mean score of 4.0 (SD 4.64) for PHQ9, most below the threshold for mild depression. Nineteen participants

had a mean score of .32 (SD .67) for substance use. A review of the primary ICD-10 diagnosis codes used for behavioral health found that major diagnoses included adjustment disorder, depressive mood, anxiety or both. BH providers also noted stressors related to lack of support, current social environment and past histories of abuse.

### *4.4 Differences among groups of newcomer youth*

The newcomers who were screened at SBHC A were in one of four groups: UIY, detained crossing the border alone; Children of Migrant Families, detained crossing the border with an adult family member; youth crossing the border alone without detention; youth crossing the border with parents, without detention. In our review of the screening data, 16 youth had some missing or unclassifiable responses, making the determination of exactly how many youth were in each category difficult. For example, 38 youth (over 70% of the sample) stated they were detained at the border, however 23 of these clients stated they crossed without an adult, and 8 stated they crossed with an adult, leaving 7 who declined to state. Screeners were told that the two most important goals of screening were to introduce the clinic as a trustworthy place to receive health care, and to connect youth in need with effective legal services, rather than collecting the most complete information possible, which may account for some missing data. These will be discussed further below.

There is no statistical difference in health needs between youth who arrived without a parent and those who came with parents. About 82% of youth known to be migrating alone were detained at the border (UIY) compared to 50% of youths known to be migrating with parents; however, the difference in detention rates was not statistically significant. Youths who came to the US alone and with parents received similar primary care and dental care services, confidential family planning services and BH services (Table 2). The mean number of medical

visits was 3.05 (SD 2.30) for all youth migrating alone compared to 3 (SD 2.66) for youths migrating with parents (See Table 3). Similar health needs were found between youths migrating alone and youths migrating with parents.

However, there were three differences for youths who were detained at the border, with or without parents: youths detained at the border were more likely to have a lawyer ( $X^2 = 18.62$ ,  $p = .001$ ), to not have a primary care provider ( $X^2 = 12.63$ ,  $p = .01$ ), and to not have had a HE visit ( $X^2 = 7.53$ ,  $p = .02$ ) compared to those who were not detained at the border.

### *4.5 Self-reported strengths of the participants*

Using a strength-based approach to adolescent care (Hagan et al., 2017), all youth were asked about what they were good at and what was helping them to adapt. A total of 28 adolescents (50%) indicated academics as an asset, 15 adolescents (26.8%) indicated sports, 14 (25%) indicated good family relationships, and 10 (17.9%) indicated their good personality or feeling happy as their strength. These answers were drawn from the SSHADESS assessment on the screening intake form. At the time of the visit, 39 (69.9%) stated they were living with parents, and 17 (30.1%) with older siblings or other relatives, indicating that some adolescents who had migrated alone reunited with parents in the US.

Table 1 Frequency of health needs and services

Variable	Yes n (%)	No n (%)	N/A n (%)
Demographic			
Came with parent	16 (30.2%)	30 (56.6%)	7 (13.2%)
Detained at border	38 (70.4%)	8 (16.7%)	7 (13%)
Primary care and dental services			
Have PCP	37 (66.1%)	16 (28.6%)	3 (5.4%)
Medical visit	36 (83.7%)	7 (16.3%)	
Dental visit	20 (28.8%)	21 (51.2%)	
Health Education (HE) visit	14 (38.9%)	22 (61.1%)	
Need optical	7 (12.7%)	11 (20%)	37 (67.3%)
IZ UTD	9 (16.7%)	36 (66.7%)	9 (16.7%)
Confidential family planning needs			
Sexual activity	13 (24.1%)	39 (72.2%)	2 (3.7%)
Condom at LSI	11 (20.4%)	3 (5.6%)	40 (74.1%)
Behavioral health (BH) needs and services			
BH referral	25 (62.5%)	15 (37.9%)	

Note: Table included only available data and missing data from the screening sheets were not included in analysis. Percentages vary due to different denominators with missing data



Table 2. Difference among health needs between youth migrating alone and with parents

Variable	Migrating alone N= 30	Migrating with parent N=16	X <sup>2</sup> (p)
Demographic			
Detained at border (yes)	23 (82.1%)	8 (50%)	5.39 (.07)
Have lawyer (yes)	20 (69%)	6 (40%)	5.94 (.051)
Primary care and dental services (Yes)			
Have PCP (yes)	19 (63.3%)	12 (75%)	.98 (.61)
Medical visit(yes)	17 (77.3%)	11 (91.7%)	1.11 (.29)
Dental visit (yes)	12 (57.1%)	7 (58.3%)	.004 (.62)
HE visit (yes)	6 (33.3%)	4 (36.4%)	.03 (.59)
Need optical (yes)	5 (16.7%)	2 (13.3%)	3.73 (.16)
IZ UTD (yes)	4 (13.8%)	4 (26.7%)	1.86 (.40)
Confidential family planning services			
Sexual activity (yes)	10 (33.3%)	1 (6.7%)	5.38 (.07)
Condom at LSI (yes)	9 (30%)	0 (0%)	2.03 (.36)
HIV test (yes)	10 (38.5%)	4 (28.6%)	.3.12 (.21)
Behavioral health (BH) needs and services			
BH referral (yes)	16 (76.2%)	7 (63.6%)	.56 (.36)

Table 3. Mean difference in follow up visit between youths migrating alone and with parents  
Mean (SD)

Variable	Migrating alone	Migrating with parents	<i>t</i> (p)
Number of medical visits	3.05 (2.30)	3 (2.66)	.05 (.96)
Number of dental visits	1.9 (2.07)	2.17 (3.16)	-.29 (.78)
Number of HE visits	1 (1.34)	1.09 (1.81_	-.16 (.87)
Number of BH visits	1.70 (2.07)	2.27 (2.69)	-.69 (.50)
PHQ2	.69 (1.03)	0 (0)	1.31 (.21)
PHQ9	3.25 (3.24)	7 (9.89)	-.53 (.69)
SUD/CRAFT score	.43 (.76)	0 (0)	1.11 (.28)

## 5. Discussion

In this group of 56 newcomer immigrant youths, a brief 15-minute screening visit uncovered a number of health needs, including unmet primary care, dental care, reproductive health and behavioral health concerns, and unmet needs for legal representation. Levels of sexual activity (24%) were lower than comparative national figures for high school students (42.1%) (Kann et al., 2016). Although our primary population of interest in our study of health needs were the UIY, we found that UIY and other adolescent immigrant newcomers fleeing Central America had similar mental health needs and utilization, even if they had not been detained at the border. There were no statistical differences in health needs or utilization between youth migrating with and without parents. The two areas in which detained youth differed from those who were not detained at the border, with or without parents, were the urgent need for legal assistance and the lack of prior health care visits before our screening.

### 5.1 Behavioral health needs

The results of our small pilot study in one school are largely consistent with the research literature, in which histories of stress and trauma and ongoing mental and behavioral health issues have been identified among newcomers (Alvarez & Alegria, 2016; Potochnik & Perreira, 2010). However, our results differ from earlier reports about the current stream of youth fleeing Central America, suggesting that those migrating without a parent had experienced more pre-migration trauma than those migrating with a parent (Alexis & Alegria, 2016).

Most of our participants had experienced separation from at least one parent, even those who were documented immigrants, and only 25% of these newcomers named their families as sources of support in adjusting to life in the US. This figure is consistent with reports in the

literature about adolescent adaptation to migration and family reunification (Hernandez, 2013; Schapiro et al., 2013). A recent participatory youth action study found that UIY felt isolated and lacked adult support (Fordham University & VERA Institute, 2015). Earlier research, including a longitudinal study of immigrant children reuniting with parents, noted that family relationships improved and mental health issues resolved over time (Artico, 2003; C. Suarez-Orozco, M. Suarez-Orozco, & Todorova, 2008). Longitudinal studies of UIY and other newcomers migrating under present-day conditions are needed in order to provide effective services supporting adaptation to this vulnerable group.

### *5.2 Supports for resilience*

In community surveys of adolescents, those exposed to multiple forms of trauma are most likely to have higher levels of symptoms (Turner, Shattuck, Finkelhor, & Hamby, 2015). For adolescents who have voluntarily undertaken exposure to hazardous and violent conditions, such as those who flee their home countries, the act of taking this step may in itself be protective (Masten & Narayan, 2012). The protective nature of agency in the migration decision has also been endorsed by research specifically about Latinx immigrant youth (Hernandez, 2013; Potochnik & Perreira, 2010).

Resilience literature also focuses on protective factors, such as high levels of parental and community support (Ozer, Lavi, Douglas, & Wolf, 2015), which may not be readily available to new immigrant youth, as noted above. A recent meta-ethnography of qualitative research conducted among refugee youth found common sources of strength across studies: social support, acculturation strategies, education, religion, avoidance and hope (Sleijpen, Boeije, Kleber, & Mooren, 2016). Many of the youth screened in SBHC A noted an optimistic outlook and positive views of their own academic strengths, support from teachers and opportunities for

sports participation. However, it is possible that the screening tools and chart extraction procedures are under-counting the impact of trauma experienced by UIY and other newcomer youth, as clinicians working with this population, including the authors, have noted an initial “honeymoon” period after migration, with higher symptom levels and a need for increased support over time. Longitudinal studies and periodic screenings of immigrant youth in higher level English Learner classes might uncover increased or different BH needs over time.

### *5.3 Increased health care access through population-level screening by a SBHC*

Using a coordinated approach with the school, and a stepped approach to integrating youth into clinic services, the majority of screened youth, over 64%, were successfully seen on site for all but dental services, for which students were given direct off- site appointments. Of note is that 17 of the newcomers screened were already being seen at a different branch of the managing FQHC, and some continued their care at the original location. The primary data extractor remarked that youth who sought confidential reproductive or BH services tended to switch to SBHC A for their ongoing care, however the data extraction tool was not designed to measure factors that would lead youth to switch site of care.

Alameda County SBHCs are evaluated yearly by a team from the Institute of Health Policy Studies at UCSF, and usage of the SBHC by youth in our sample were compared with usage statistics of SBHC A collected by the evaluators. During the 2015-16 school year, 33% of youth attending SBHC A were referred to BH during another type service, in contrast with at least 44% of youths seen during the Newcomer Screen (Geierstanger, Ng, Kaller, Soleimanpour & Brindis, 2017). Of the 3,278 total visits to SBHC A during 2015-16, 37% of the visits were for BH; figures for unduplicated visits were not available and presumably fewer than 37% of the clients used BH, with multiple visits from some (Geierstanger et al., 2017). In contrast, 44% of

the screened Newcomers received some BH services. The mean number of BH visits from screened Newcomers was 2, and those with formal depression and substance use screens on follow-up had low to moderate scores. The number of screened youth who were referred to more intensive therapy with other school providers is unknown. Levels of depressive symptoms were lower in our sample than in national surveys of Latinx youth (Kann et al., 2016). Other researchers have found higher rates of anxiety than depression in immigrant youth (Potochnick & Pereira, 2010), yet there are currently no national recommendations for anxiety screening in primary care settings. A noticeable contribution of our study is a finding that a brief screen with general questions about migration stressors and simply asking if the youth was interested in talking with a BH provider, resulted in higher referral rates than the usual clinic visit, which included formal depression screening. Whether this was due to higher need among the newcomers than among the general population or the effectiveness of the brief screen is unknown, but BH service use after the newcomer screen is an indication that the screen increased access to care in this area. The benefit of initiating services to newcomers with population-level screening is consistent with emerging research about UIY, who have indicated that they appreciate having a trusted organization reach out to them and ask them about needed services (Fordham University & VERA Institute, 2015), and also consistent with literature on increasing access to care through increased awareness (Saurman, 2016).

### *5.4 Legal Services*

UIY and Children of Migrant Families are released with a legal deadline, which is both an opportunity and an extreme stress: they have the chance to qualify for asylum or some other relief, or face deportation. Those who were not detained at the border or were traveling with temporary documents, such as tourist visas, had no deadline for deportation, but also less chance

of legal remediation of their status. Use of legal services in our sample was not documented in medical charts. Youth who responded “not applicable” to the question about having a lawyer stated that they came with documents, had already been through the asylum process, or had not been detained. Much remains to be learned about the particular trajectory of UIY and other detained youth, on arrival and after determination of their legal status, and recent government policies that increase family separation at the moment of detention and the length of detention may increase the trauma and stress of UIY. A lack of transparency about the numbers affected may increase research and service difficulties in the future (Galacatos, Shapiro & Stark, 2018).

### *5.5 Increasing access to SBHC through population-level screening*

SBHC A had 600 registered clients and 3,278 client visits in the 2015-2016 academic year, including all youth in our sample. Of these visits 37% were medical visits, or approximately 2 visits per client (Geierstanger et al. 2017). Our sample had a mean of 3 visits per client (See Table 3), indicating, in rough estimates, somewhat higher usage than average for the SBHC. Our usage figures show that UIY and other immigrant youth found the services at SBHA to be acceptable and accessible. There was no comparison group of immigrant youth who were not screened, however usage of services in general at SBHC A increased dramatically from 2,204 visits in 2014-15 to 3,278 visits in 2015-16 without a major increase in registered clients. SBHC A staff, including the authors, noted that newcomers came in groups to make clinic appointments during the school year, suggesting that screened youth might have been introducing the clinic to other newcomers, or that newcomer classroom presentations increased awareness of the clinic, even for those youth who did not participate in the clinic screening. Next steps are to explore possibilities for expanding the client evaluation and satisfaction surveys

administered by the IHPS evaluation team to include screening activities, and to explore a more robust method of comparing screening results with overall clinic usage statistics.

### *5.6 Study limitations*

The gap between the 96 youth in English Learner 1 courses and the 67 youth screened may be due to reclassification of youth to another English Learner Level, absences from school, or youth changing schools or leaving the area. Schools (FERPA) and SBHCs (HIPAA), have different confidentiality protections, that usually prohibit data sharing of the trajectories of individual youth. It was not possible to track the utilization of legal services after screening, due to attorney-client confidentiality. Missing data from screened youth was primarily a result of blanks on the screening forms, which may have been a function of language barriers for Guatemalan youth, a lack of understanding of the questions, and inconsistencies or skipped questions on the part of screeners, particularly if they noted any reluctance by youth. The analyzed sample (N= 56) was small relative to the number of variables, so inferential statistics were not possible (Vassar & Holzmann, 2013). Future chart reviews should narrow the number of questions asked in order to increase power of the sample and also in order to facilitate a more extensive chart review. Although analysis of screening forms enabled a more detailed review of outcomes, data sources such as diagnosis or procedural billing codes might provide more consistent and more efficiently extracted comparison data. Screening outcomes should be compared to a similar population that did not receive the screening intervention.

Many of the Guatemalan youth screened spoke an indigenous Mayan language, Mam, and limited Spanish, and there was and still is a shortage of Mam interpreters in the community; both linguistic and cultural barriers may impede effective services for this group. At the time of the screening, the increased percentage of Guatemalan youth over the prior year and their



language needs were not yet known to clinic staff, and support from the available translation phone service was inadequate. One benefit of the screening was to highlight this language need, and to prompt a search for Mam-speaking clinic staff. In the 2016-2017 school year, SBHC A and its parent FQHC noted that up to 50% of Guatemalan patients spoke Mam (personal communication, A. Ranger, 2/4/17), and responded to this language gap by hiring a part-time Mam interpreter.

### **6. Implications and conclusion**

Our pilot study in a SBHC of a population-based outreach to newcomer immigrant youth indicated the benefits of a rapid screening visit in discovering unmet needs, in a known vulnerable population, that may otherwise have gone unaddressed. A coordinated, interdisciplinary approach with the school and other agencies allowed for a youth based, patient centered approach with access to multiple services within the school setting. An additional contribution to the literature showed that exposure to trauma, family separation, lack of parental support, and health care needs of UIY were similar to other newcomer groups in our sample. Furthermore, the need for urgent legal representation is not limited to UIY.

It is important to elicit the voices of UIY and other immigrant youth themselves, using qualitative methods, and to follow youth outcomes over time. A qualitative study using a Mam-speaking research assistant has received University funding, and is in the planning stages. Nevertheless, classroom-level screening and follow-up in a SBHC seem to be effective methods at serving the health care needs of this population in settings that offer some paths to reimbursement for their care. These approaches could be adapted for states with different reimbursement systems, and are particularly useful for those states and clinics that have a reimbursement stream for confidential services.

The wellbeing of immigrant children, particularly UIY and undocumented youth, is at the mercy of policies that inform institutional and systemic structural barriers to health care and integration into US societies. Given shifting political climates, including more restrictive detention and separation of immigrant families, health care and other systems must be diligent in aiming for equity of services, like health care access, that are thought to be basic human rights. Further studies and continued advocacy are warranted to understand the benefits of this coordinated approach and how to best build these program to improve outcomes and offer supportive systems and acculturation experiences that promote resilience, positive identity formation, pathways to citizenship, and healthy integration into US communities.

## Appendix A – Screening Timeline

<b>Action</b>	<b>Timeframe</b>
Partner with school administration and Newcomer Coordinator to schedule classroom introductory visits	Start of school year
Brief classroom visits and presentations from clinic staff to ESL classrooms: Spanish language explanations of minor consent, confidentiality and clinic registration	3-4 weeks before screening
Recruit additional staff and/or volunteers to assist with pre-program preparation, and/or day-of support	3-4 weeks before screening
Process registration forms from classroom visits and determine eligibility for Medicaid, supplemental family planning or other payer of last resort insurance (Family PACT in California)	2-3 weeks before screening; insurance activated in time for screening, as indicated, forms readied for screening day
Preparing snacks, beverages, and gift bags for screening days	1 week before screening
Staff assigned to following roles: <ul style="list-style-type: none"> <li>• Runner – escorts students up to 5 at a time to clinic waiting area, returns student groups back to classroom after screening</li> <li>• Extra providers (NP, MD, PA), behavioral health (BH) clinicians, health educators, health science graduate students or other volunteers – for a brief one to one screen using pre-printed form</li> <li>• Medical and BH providers available for emergent youth concerns, e.g. suicidal, need for emergency contraception or pregnancy test, urgent medical symptoms</li> </ul>	Day of screening
Follow-up: referral appointments for medical, BH, health education, dental, optometry as indicated	After screening

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