**“Assessing School-Centered HIV/STD Prevention Efforts in a Local Education Agency”**

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Supporting Statement Part B

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**Section B: Collections of Information Employing Statistical Methods**

# B.1 Respondent Universe and Sampling Methods

The respondent universe for the data collection will consist of public school students in grades 9, 10, 11, and 12 in 7 high schools in Broward County Public Schools (BCPS) in Broward County, Florida that are participating in strategy 4 of PS13-1308. As described in Supporting Statement A, only 7 schools are participating in the cooperative agreement program activities, and all 7 of these schools are included in the proposed data collection. (Schools agreed to participation in evaluation activities as a part of agreeing to participate in the programmatic work.) A statistical sampling methodology is not needed for selecting respondents because all students in the seven high schools, approximately 16,500 students, will be invited to participate. A variety of sampling options were explored in the development of the evaluation, but none generated sufficient power to detect key outcomes among the primary student population of interest, young men who have sex with men (YMSM). Therefore, we propose a full census of all 7 participating schools in order to generate appropriate estimates for YMSM and to detect changes in outcomes among this priority population for this program.

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| --- | --- |
| Respondents Types | Number of Respondents |
| High school students in 7 participating schools | 16,500 |
| **Total respondent universe** | **16,500** |

Although the program activities and related evaluation are designed to reach all students, YMSM are the subgroup of interest. Our initial estimates (in the prior OMB approval) of the YMSM population were based on findings from 10 districts from the Youth Risk Behavior Surveillance System (YRBSS) between 2009 and 2011.1 The low estimate includes only male students who indicated they were gay or bisexual. The high estimate also includes male students who responded that they were unsure of their sexual identity. These estimates indicated a range of 2.65-4.11 of all students would be classified as YMSM, yielding a sample of 437-679 YMSM if 16,500 students participated. Baseline data were collected from 11,681 students, a 79.5% response rate among all students enrolled in participating schools on the day of the survey (n~14700). A total of 301 YMSM were identified, representing 2.6% of the respondents. Using baseline data as a guide, we would anticipated approximately the same number of YMSM. When the rate of 2.6% of the sample being classified as YMSM is applied to our estimated census number (16,500 estimated as a high end for burden purposes, 11,000 estimated as a lower number based on previous data collections), we estimate a projected sample size of 286 to 429 YMSM if between 11,000 and 16,500 students complete the questionnaire. In section B.2 we present power using a high and low questionnaire response rate to demonstrate possible YMSM sample sizes and corresponding power estimates.

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| --- | --- |
| Estimated Sample Size | Estimated Sample Size of YMSM Participants  (assuming 2.6% of the sample is classified as YMSM) |
| Low (n=11,000) | 286 |
| High (n=16,500) | 429 |

# B.2 Procedures for the Collection of Information

This information collection consists of a paper-and-pencil questionnaire. The questionnaire was administered in December 2014 and December 2016, and will be administered again in the middle of the 2017-2018 school year pending approval of this ICR. These dates coincide with approximately the beginning, middle, and end of program activities. However, the samples will be treated independently; the study is not longitudinal.

Questionnaires will be completed in scannable Scantron questionnaire booklets. The time during the school day in which the questionnaire is administered varies by school but the administration period will be very proximal for all 7 schools. The decision about specific administration dates and times is made in coordination with each school to ensure that the type of class or period of the day selected results in the least burden/highest possible acceptability for the school.

Study booklets will be distributed by trained teacher proctors who will use a standardized script, and will follow proscribed procedures for collecting questionnaires. Questionnaires will be collected by members of the evaluation team and shipped to the data processing center for scanning. Data will be scanned by data management staff in batches by classrooms within schools into a secure network location. During the scanning process, data will be stored on the network as flat ASCII files. Files will be named using a combination of school ID, along with a randomly generated non-linking ID. Once scanning is complete, each ASCII file will be converted to an SAS file format and then combined to create one large comprehensive database file. The data file will be used by the evaluation analytic team to conduct analyses.

Power Analysis

The overall student population based on beginning of school year enrollment numbers for the 7 participating schools is 16,112, however we are using 16,500 for our burden estimate to ensure our estimates are on the high end.

In our initial preparations for this study (under the previous OMB approval), we calculated power based on the assumption of a student population of 16,500. About 49% of students were male (based on enrollment numbers), so we expected to have approximately 8085 male students. To calculate the overall YMSM rate, we used the average percentage of males in the schools and multiplied this by the percentage identifying as YMSM in other similar types of data collections. As described above, the 2009 - 2011 weighted percent of males indicated gay or bisexual identity at a rate of 5.4% as “low YMSM rate,” and when combined with percent indicating they are not sure about their sexual identity, the rate is 8.4%, our “high YMSM rate.” Using these rates we estimated the number of YMSM that we expected to be part of the sample each study year (samples are independent and two questionnaire administrations were represented for the power analyses below).

We powered the study to detect change in the most important outcome of the program, change in HIV testing rates among YMSM. According to the 2011 YRBS, 13% of 9th–12th grade students had ever been tested for HIV.2 Therefore, we assumed a baseline rate of HIV testing of 13% and hypothesized that the intervention would result in at least a 10% change in testing rates in the YMSM population (see table and figure below). Other outcomes of interest were expected to demonstrate greater effect sizes, and therefore, we powered the study on HIV testing rates with the confidence that we would have even greater power to detect changes in other outcomes of interest.

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| --- | --- | --- |
| **Total student population: 16,500**  **Total male student population: 8,085** | **High YMSM Rate (8.4% of male student population=679)** | **Low YMSM Rate (5.4% of male student population=437)** |
| **School Response Rate 90%** | N= 1,222 (611 per administration)  Power = 0.99 | N=786 (393 per administration)  Power = 0.95 |
| **School Response Rate 70%** | N=950 (475 per administration)  Power = 0.98 | N=612 (306 per administration)  Power = 0.88 |
| **Notes**:  Questionnaire maximum sample 16,500 students; assumed base rate of HIV testing is 13%  Power assumes detection of 10% difference, two tailed test | | |

**Figure 1. Power estimates for detecting a 10% difference in testing rates among our YMSM sample (two tailed test).**



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# B.3 Methods to Maximize Response Rates and Deal with No Response

The study was designed to minimize multiple foreseeable threats to participation: commitment from school administrators, teachers’ willingness to proctor the questionnaire, students’ concerns about confidentiality, and students’ perception that the study and their participation is unimportant.

Participating schools have signed letters of agreement to participate in the HIV/STD prevention project and related evaluation activities, including the Youth Health and School Climate Questionnaire. CDC/DASH’s school district contact for this project has worked with school administrators’ designated contacts to fine-tune details about questionnaire administration to minimize disruptions to normal school operations, including scheduling teacher orientation and choosing a day and class period for the school-wide questionnaire to take place. This is unlike the process for administering the YRBSS that involves selected grades and classrooms, and therefore we expect that teachers will be more attuned to the date and time of questionnaire administration because it is taking place in all classrooms simultaneously.

Teachers receive a brief training on proctoring the questionnaire. During the training, the importance of the questionnaire and securing a robust response rate is emphasized. Teachers are also be instructed in strategies to emphasize the importance of the questionnaire to the students. These points are included in the training materials and scripts that teachers use when distributing consent forms and questionnaire booklets. Teachers are also be instructed in the proper protocol to protect students’ responses and how to emphasize them to encourage participation. Teachers are be invited to ask questions and voice concerns in advance of questionnaire administration to allow DASH’s evaluation contractor to address concerns and minimize barriers to participation.

The importance of the questionnaire and the steps taken to protect students’ responses are reiterated in the consent statement at the beginning of the questionnaire (**Attachment 3**).

Two rounds of data have been collected. The first round of data collection (baseline) had a 79.5% response rate among all students enrolled on the day of the survey. Since the initial data collection, we have attempted to work even more closely with schools to ensure survey schedules avoid conflicts such as planned field trips, senior skip days, and days with shortened schedules (which often have higher absentee rates). The second round of data is currently undergoing processing, and securing date-specific enrollment numbers is a lengthy process, so we do not have a response rate estimate for that data collection yet.

# B.4 Tests of Procedures or Methods to be Undertaken

The questionnaire was developed collaboratively by CDC/DASH, DASH’s evaluation contractor, and BCPS staff who have experience designing and fielding instruments in their schools. The questionnaire was piloted internally by fewer than 10 evaluation contractor staff to estimate the time required to complete the questionnaire. The questionnaire format and administration have been designed to closely mirror those procedures designed and approved for school-based student data collection through the National Youth Risk Behavior Survey in Florida schools. When possible, items on this questionnaire were pulled from other existing data collection systems. Several demographic and risk behavior questions on this questionnaire came from the Youth Risk Behavior Survey (YRBS), and the school climate and school connectedness questions came from National School Climate Survey conducted by the Gay, Lesbian, and Straight Education Network (GLSEN) and the National Longitudinal Study of Adolescent Health. Of these, only the YRBS is a federally-sponsored data collection, and its current OMB approval number is 0920-0493 with an expiration date of September 30, 2015.

Furthermore, the questionnaire has now been administered successfully on 2 occasions, and the minimal revisions proposed in this ICR should not have a negative impact on its administration. Protocols for administration remain the same, and most school staff are now experienced at this process.

# B.5 Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

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[2] CDC. Youth risk behavior surveillance—United States, 2011. MMWR 2012;61(SS-4).