2017

ALL 4 HARDIN COUNTY FRESHMAN!

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CAPSTONE PROJECT PAPER

A paper submitted in partial fulfillment of the
requirements for the degree of
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in the
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ABSTRACT
Within this application for funding the Lincoln Trail Health Department proposes an evidenced based intervention for implementation into two high schools in the Hardin County with the long term goals of decreasing the rate of sexually transmitted infections in the county. The LTHD based in Elizabethtown, Kentucky services six counties in central Kentucky. The community health needs assessment and community health improvement plans for the county highlighted the problem of sexually transmitted infections in the community. The Centers for Disease Control also produces data about the higher rate of STIs in Hardin county in respect to Kentucky and the US overall and the age at highest risk for STIs in the nation (those aged 15-24). The LTHD will implement the program ALL4YOU2! Into freshman Health/PE classes at the schools identified. ALL4YOU2! uses a variety of interacting and engaging strategies to deliver an evidence based program aimed at reducing rates of STIs and unintended pregnancy by reducing the number of students who have unprotected sex in addition to changing attitudes, beliefs, and perceived norms around sexual risk takings. Implementing the program in the freshman class will hit those at highest risk for STIs in a setting where they are easy to access. Short term goals of the program will be related to lesson content and will be reducing frequency of unprotected intercourse, increasing knowledge of correct condom use, knowledge and risk perceptions about STIs, and communication skills among participants. Nancy Turner, MPH and director of the LTHD will act as program director, Cortney Gandy, MPH and director of community health services at the LTHD will lead the rest of the program staff in the 6-month planning period, implementation, data collection, and evaluation of the program.

TARGET POPULATION AND NEED

In the United States, the most recent data estimates there are 110,197,000 sexually transmitted infections (STIs) nationwide; including both the curable such as Syphilis, Gonorrhea, and Chlamydia and the incurable such as Human Immunodeficiency Virus (HIV) and Herpes Simplex Virus (HSV1,2) (Centers for Disease Control and Prevention, 2013). Also included in this figure is Human Papillomavirus (HPV), the most common STI with close to 80 million individuals affected. Most sexually active men and women will be infected with HPV at some point in their lives. Most individuals will clear HPV without any knowledge of the infection; however, serious consequences can occur from harboring the virus such as cervical cancer and genital warts. HPV is not treatable but like other STIs is preventable through a vaccine that is available for prevention (Centers for Disease Control and Prevention, 2013). The large burden of STIs represents an important and ongoing public health challenge, particularly as the rate of new infections continues to increase.

Annually an estimated 20 million new STIs are diagnosed (Centers for Disease Control and Prevention, 2013). Examining data on all reportable STIs from the year 2014 to 2015 showed continued increases in the number of new infections including a 6% increase in Chlamydia, a 13% increase in Gonorrhea, and a 19% increase in Syphilis (primary and secondary(Centers for Disease Control and Prevention, 2015). 15-24 year olds account for half of these newly diagnosed cases, representing a clear burden of disease in this age group (Centers for Disease Control and Prevention, 2013). Despite accounting for half of these newly diagnosed STIs this age group only accounts for 13.8 % of the total US population (United Stated Census Bureau, 2008). The disproportionate rate of STIs for this age group has been recognized by several governing organizations in the area of preventable diseases, in fact in 2014 the United

States Preventive Service Task Force updated STI recommendations to state that sexually active females aged ≤ 24 years should be screened for both chlamydia and gonorrhea (LeFevre, 2014).

In the most recent reported STI data (years 2013-2015) Kentucky has ranked below the national rate in both Chlamydia and Gonorrhea rates as seen in Table 1 below(Centers for Disease Control and Prevention, 2017). However, this figure masks areas of Kentucky that are well above national rates for these infections. In 2013 and 2015 as well as years prior to 2013 not listed in Table 1, Hardin County has been above both state and national rate for Chlamydia and even though Gonorrhea rates appear to be decreasing in the county, the national rate is increasing representing the presence it still has in the US (Centers for Disease Control and Prevention, 2017). Figure 1 shows further information on the disparity that exist in Hardin County Kentucky and those aged 15 to 24 years old. The black arrow points to Hardin County and the coloration designates the rate per 100,000 for Chlamydia, Gonorrhea, and Primary and Secondary Syphilis in the county; the table illustrates the rates and cases of these infections in Kentucky compared to the rest of the US.

Table 1. Data on Sexually Transmitted Infections, in the United States, Kentucky, and Hardin County (Centers for Disease Control and Prevention, 2017)

Rates all listed as rate per 100,000

2013

	US	Kentucky	Hardin County
Chlamydia	443.5	389.8	**485.3**
Gonorrhea	105.3	98.2	**130.3**

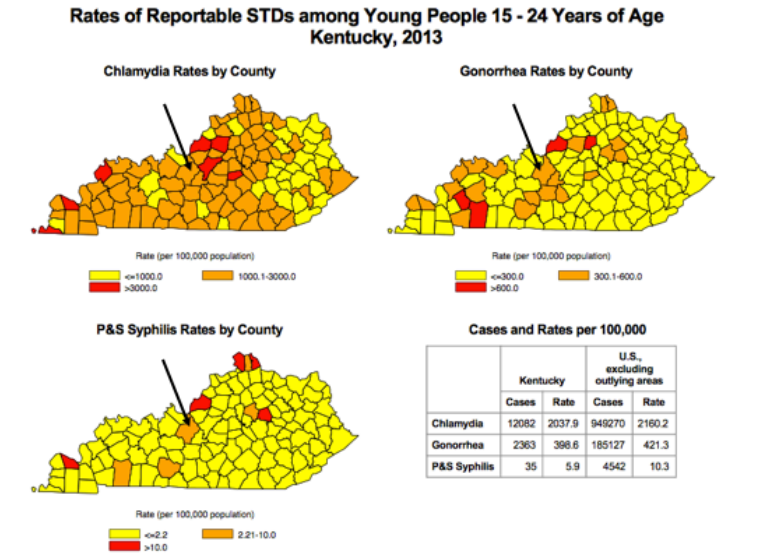
2014

	US	Kentucky	Hardin County
Chlamydia	452.2	400.2	405.5
Gonorrhea	109.8	98.6	99.8

2015

	US	Kentucky	Hardin County
Chlamydia	478.8	395.2	**520**
Gonorrhea	123.9	106	91.4

Figure 1



In addition to this information about STIs the CDC also reports data about sexually activity in high school students by state. Kentucky is above the national average for both students who have had sexual intercourse with more than 4 people and students who report being currently sexually active(Centers for Disease Control and Prevention, 2016b). Kentucky students who report having had sexual intercourse with at least 4 people is 10.4 % compared to the national average of 10%(Centers for Disease Control and Prevention, 2016b). Kentucky students who report being currently sexually active is 30.3% compared to the national average of 28.5%(Centers for Disease Control and Prevention, 2016b).

Hardin County has a total population of 106,439 contained in 623.28 square miles and is located in central Kentucky (United States Census Bureau, 2015). Some major cities in the county include Elizabethtown (population 29,678), Radcliff (population 22,387), and Fort Knox (population 10,124) (United States Census Bureau, 2015). Others who live in this county are found in other smaller communities and outlying rural areas. Of the 106,439 people that live in

the county, 14,689 (13.8%) are between the ages of 15-24, the group identified as being the highest contributors to newly diagnosed STIs.

The Lincoln Trail Health Department (LTHD) encompasses Hardin County and addressed this issue in their 2013-2017 Community Health Needs Assessment and Community Health Improvement Plan. In this assessment "Risky sexual behavior – early teenage pregnancy, STD's, abortion rates" was listed as a "risk" for Hardin County (Lincoln Trail District Health Department, 2013). In the same document it was stated that community members identified low STD rates in their vision of a healthier Hardin County. While the overall consensus of the community health assessment for the entire LTHD was that effort needed to be placed into obesity prevention and reduction, sexually transmitted diseases are still a large and growing issue that needs to be addressed. In addition, obesity prevention and reduction already has a lot of resources in the county focused towards it including the building of a new sport's park, creation of walking trails, promotion of scheduled farmer's markets, and several other events aimed at increasing awareness of the problem, while there is minimal effort in the county aimed towards STI prevention/reduction(Lincoln Trail District Health Department, 2013).

Current Education and Resources:

Hardin County is currently a sub-grantee of the Title V Abstinence Education Grant Program that promotes abstinence from sexual activity; the LTHD received grant money from this for the 6 counties they serve (Sexuality Information and Education Council of the United States, 2011). This Title V program does not prevent teaching other information on sexual activity and sexual health, as long as abstinence is included in the classroom instruction. Hardin County middle and high schools currently teach a program that encourages abstinence and teaches about the benefits of marriage(Choosing the Best, 2017; Lincoln Trail District Health

Department, 2014b). In addition to the lack of STI prevention and education in the school system, there is no organization in the county solely focused on STI prevention and education (Sexuality Information and Education Council of the United States, 2011). This leaves the adolescents in the community without a resource to turn to for information and guidance on STIs and sexual health. There are two smaller organizations in the community that focus on pregnancy prevention and education but do have some information available on STIs which are "Clarity" and "Crossway Pregnancy Resource Center" which will both be utilized as partners (Lincoln Trail District Health Department, 2013).

Hardin County has a wide variety of other resources that will be useful in the implementation of an intervention. In the county there is one major hospital, many urgent care centers, general family practice offices, and specialized practitioner offices. The hospital is located in the middle of the city of Elizabethtown, is not-for-profit, and accessible to everyone in the community. These are all primarily located around the larger cities in the central and northern parts of the county. There are limited resources such as these in the southern and western part of the county where the area is more rural. Finally, there are many health-promoting events in the community including Farmer's Markets in the spring/summer, recreational areas such as tennis courts and a new sports park, free walking areas, and smoke free ordinances (Lincoln Trail District Health Department, 2013).

Targeting those in the age group of 15-24 or those prior to entrance into this age group is the best use of funds for a program focused on sexually transmitted infections and prevention since this group encompass the majority of the newly diagnosed infections. The best way to access the age group in Hardin County will be through the county school system. Kentucky high school students are required to complete ½ credit of "health" in order to graduate. This is further

outlined in the Kentucky core academic standards, and includes, as examples, students being able to: “explain the benefits (preventing pregnancy, preventing HIV/STDs, maintaining self-esteem) and strategies (e.g., using refusal skills, talking with parents, doctors, counselors) of abstaining from sexual activity” and “explain how decision-making related to responsible sexual behavior (e.g., abstinence, preventing pregnancy, preventing HIV/STDs) impacts physical, mental and social well-being of an individual” along with many other requirements (Kentucky Department of Education, 2013)

High School Implementation:

The program ALL4YOU2!, described in the Program Approach section below, will be implemented in Central Hardin High School located in Cecilia, Kentucky and John Hardin High School located in Elizabethtown, Kentucky. The program will be incorporated into the curriculum of the freshman health classes at these schools since that is when students at these high schools complete their health requirement. It is important to note that the health education class at both high schools is facilitated as a yearlong class that is split for students between in classroom work on health education and gym/outdoor time as physical education, the program will be implemented during the in class time spent on health education during the Fall semester each year. These high schools were chosen out of the 5 in the county due to their locations on opposite ends of the county and the diversity in student populations they serve, allowing the program to be tested in a variety of students. Central Hardin High School is in the more rural southern portion of the county and hosts a large number of students from farming families. The students of this school’s district have less access to the previously mentioned resources that are located in the center and north end of the county. There are 1,854 students enrolled at the school, of which 38% are considered economically disadvantaged; in addition, students graduate with

only a 7.3 on the college readiness index (U.S. News and World Report, 2016). John Hardin High School, which is located more northerly and is in Elizabethtown, boasts students with more access to resources. John Hardin High School serves students in more suburban and urban settings, including some students from the local army base. There are 979 students enrolled here with 42% of those being considered economically disadvantaged and graduate with a 14.6 on the college readiness index (U.S. News and World Report, 2016). While there are several schools located in Elizabethtown, John Hardin High School was chosen due to their history of openness with program implementation aimed at benefiting students as observed by the daycare the school houses. The daycare at the school is used for students who have children while in school as a place to bring the children during class time so that the students have the opportunity to continue to attend class while having reliable childcare.

The two locations where the program will be implemented will provide an estimated 567 students reached each year of the program. This is based off the fact that 25% of the student population at each school will be freshman and assuming an 80% participation rate in the program.

PROGRAM APPROACH

ALL4YOU2! was originally designed to reduce the risk of pregnancy and STIs, including HIV, by reducing the number of students who have unprotected sexual intercourse (either by increasing use of effective birth control and/or condom use or reducing the frequency of sexual intercourse). The program also aims to change key determinants related to sexual risk taking such as attitudes, beliefs and perceived norms. The program is based off the social cognitive theory and the theory of planned behavior to reduce unprotected sexual intercourse. The theory-

based determinants of perceived self- efficacy, attitudes, and perceived normative beliefs are also included in the content(ETR, 2016b).

The ALL4YOU2! program consists of 12.5 hours of work and a total of 15 sessions ranging from 15 to 50 minutes each (ETR, 2016b). The program is designed to be delivered by trained professionals using a variety of interactive strategies such as stories, brainstorming, games, small-group work, advice columns, role playing, and videos. The role playing and interactive aspect of this content is what has the largest effect towards the theory behind the program and what will lead to increased self-efficacy and produce the short term and long term outcomes we hope to see from the program. These lessons will be integrated into regularly scheduled student class time since none exceed the regularly scheduled 50-minute class time. Since there are 15 sessions it will be important to achieve an average of one session weekly; however, the final determination on when exactly the sessions will be taught will be up to the teacher and their class schedule. It is recommended to deliver 1 to 3 lessons weekly to keep a good momentum with the program, which will fit with our current plan to deliver the full program in the fall semester(ETR, 2016a). A sample schedule (Appendix A) will be given to the teachers if they wish to follow it. Otherwise, the teachers at each school will be asked to provide their schedule for when each lesson will be covered. The 15 lessons of the program are listed: Pre-Lesson: Setting the Stage (for students to read on their own); Lesson 1: Sexually Transmitted Infections (STIs); Lesson 2: HIV and Teens; Lesson 3: Reasons for Not Having Sex; Lesson 4: What's the Risk?; Lesson 5: Examining the Risk; Lesson 6: Negotiation and Refusal Skills; Lesson 7: More Skills; Lesson 8: Handling Risky Situations; Lesson 9: Teens and Relationships; Lesson 10: Ending Relationships in Healthy Ways; Lesson 11: Reduce Your Risk

Lesson 12: It's All About Condoms; Lesson 13: Talking about Condoms; Lesson 14: Testing and Resources; Lesson 15: Staying Safe.

The program was developed for use in youth ages 14 to 18 in alternative school settings due to the relationship present between youth attending these schools and the likelihood of engaging in risky sexually behaviors, and increased prevalence of STIs than youth in mainstream settings (Coyle et al., 2013). Even though both high schools which will receive the program are considered mainstream school settings the rate of STIs in the county puts the students at the schools at increased risk, making them excellent candidates to receive this intervention despite the fact it was not originally tested in this population. Furthermore, the program developers emphasize that ALL4YOU2! could be successful in a community setting if retention can be maintained and by implementing this program in a school setting, with integration into a required course, retention should remain high.

The ALL4YOU2! program was first tested in a randomized four arm design involving 47 classrooms from continuation high schools in northern California (Coyle et al., 2013). The four arms included an HIV/STI/pregnancy prevention curriculum only (ALL4YOU2!), service learning only, HIV/STI/pregnancy prevention curriculum plus service learning (ALL4YOU!), and an attention control curriculum (control curriculum) (Coyle et al., 2013). The students that participated completed three surveys over a period of 18 months (baseline, 6-months, and 18 months). Multilevel analysis was used to adjust for the correlation among students within the same classroom and school, and the correlation among the repeated measurements. The study had no statistically significant differences among the 4 arms in terms of gender, race/ethnicity, and sexual behavior(Coyle et al., 2013).

The study's main purpose was to assess the short and long term impact of skill-based HIV/STI/pregnancy prevention, service learning, and combination through a survey assessing demographic characteristics, sexual risk behaviors, theory based antecedents, and questions about volunteering (Coyle et al., 2013).

In terms of behavioral outcomes at 6 month follow up vs the control, students who participated in ALL4YOU2! were less likely to have intercourse without a condom in the 3 months prior to the survey ($p=.04$) (Coyle et al., 2013). Students also reported higher levels of refusal self-efficacy than the control condition ($p=0.06$) (Coyle et al., 2013). These students also reported having sexual intercourse fewer times than youth in the control condition at the 6- and 18- month follow ups (this did not meet statistical significance $p=0.09$ and $p=0.07$, respectively) (Coyle et al., 2013). Finally, at 18 month follow up students who received ALL4YOU2! were less likely to place themselves in risky situations than the control condition students ($p=0.03$) (Coyle et al., 2013).The articles conclusion was that the ALL4YOU2! curriculum reduced selected sexual risk behaviors and exposure to risk situations among youth in the continuation school setting and thereby reducing these youth's risk for HIV, other STI, and unintended pregnancy (Coyle et al., 2013). The ALL4YOU2! curriculum does not contain the service learning component that was seen in other arms of the original study, another program available from the same organization does include this component. The available data doesn't show an additional effect when adding the service learning component to the ALL4YOU2! Curriculum. At this time, it would also be logistically unfeasible to have the schools not only add the current ALL4YOU2! curriculum and time for students to complete service learning. However, as the program develops in the schools it may be added in the future.

The study did have limitations, the first being the potential for response bias which is a limitation of concern in any study. The next and largest is generalizability, as stated the program was originally tested in northern California and the demographics of the population that received the ALL4YOU2! were 26.9% Black or African American and 41% were Hispanic or Latino/Latina (Coyle et al., 2013). In Hardin County in 2015 African Americans and Latino/Latina's only accounted for 12.7% and 5.5% of the population respectively (United States Census Bureau, 2015).

In consideration of limitations listed above, we will form a community advisory group (CAG) to review the materials and curriculum of ALL4YOU2! in the Hardin County School System to ensure they are culturally appropriate and educationally sound prior to full implementation. This will be done during the planning phase prior to the materials being used for the first year of students. The CAG will be comprised of members of the community who will not directly be involved in the project but would have knowledge of the subject material and students in the schools. The CAG members will be representative of a larger population of people with interest in this project. Having this advisory group is necessary for having input from the community and keeping other community members engaged in the project. The CAG will meet 3 times (every two months during the planning period) since these meetings will be heavier in agenda items and will meet twice yearly thereafter to discuss the program progress and keep engagement from the community. The following is a list of probable community advisory group members from the community.

Members (number for each category)	Description
School nurses from one of the schools involved in the program. (1)	A school nurse will not only have information of sexually transmitted infections but also have an insight on the students at the schools were the program is being implemented, feeder schools, and other high

	schools in the county. We will recruit by advertising the program through email to the nurses.
One student from each school involved in the program. (2)	These students will be freshman that are at the school the year prior to starting the program so even though they will receive information about the program they will never actually participate in the program themselves. Recruiting them as freshman will help with longevity of their involvement through the grant funded period in the CAG. These students will provide an insight to the dynamics at the school and will be able to assess the information that will be provided and ensure it is appropriate for their school and their peers. These students will be recruited through the schools and marketed as a type of community service activity/involvement in your community activity.
OB/GYN in the county (1-2)	This physician will have information about age groups that are most affected by the STI/STD problems, and may have insight into contributing factors. They will be able to assess to the accuracy of the information being presented. The OB/GYN in the county will be recruited by setting up meetings with them to discuss the program and then asking for their support by joining the CAG.
School board officials (1-2)	This member will have in depth knowledge about the schools in the county. These officials will be recruited in the same way as the OB\GYNs.
County Government members (1)	This representative may have influence if a proposed intervention involves a policy change in the county if needed. This individual will also be able to identify if events are going on in the community that could be confounding to the intervention. They will have a better understanding of the county and its overall issues and not just health needs of the community. This member will be recruited by talking to these individuals at a regularly scheduled county meeting.
Parents of school student (1-2)	Parents will be recruited to be on the CAG, we will target at recruiting parents that are active not only in the community but also at the school in terms of being on the PTA or participating in school booster events or sports through their children. These individuals will be recruited by first asking the school board officials who active parents in the school are and then contacting them by phone.
Teachers (non-health education) (1-2)	Teachers will be recruited at the schools by advertising the program in an email to teachers. These teachers will have a unique perspective on the happens at the school that the school administrators do not.

An adaptation made from the original program will be in the parental consent forms, the original study used an opt-in consent form. The adaptation we will make will be to give an opt-out form to parents and student, this form will also have more information about the program. During the freshman orientation session for both schools during the summer prior to the start of

school Ms. Gandy and Jake Gourd or Vicki Thompson will attend and hand out the opt-out forms to parents, this will also be an opportunity for them to answer any questions or concerns the parents or students may have. All parents per school policy are required to attend these information sessions, for parents that did not attend the opt-out paperwork for the program will be given with rest of the paperwork the parent will receive on the students first day of school. The opt-out option was chosen to increase participation rates in the program. Students who choose to opt-out or are opted-out by their parents will be given an alternative assignment dealing with the regularly scheduled class materials during this time and will be allowed to complete this in the school's library. The parents or students will have 1 week from the start of school to return the opt-out form to the school prior to the first program lesson. These forms will be collected and sent to the office where they will be picked up daily and accounted for by the technical assistant. Of note we will allow parents and students the option to opt-out at any point after the program has started if they choose to by contacting the technical assistant via email or whose information will be provided on the initial opt-out/information form. The technical assistant will be responsible for maintaining an updated list of students and reporting it to the appropriate program staff member who will ensure it makes it to the correct teacher.

Due to the nature of the program and to help with fidelity there will be a teacher training session held for all the teachers participating in the program. It will be an all-day teaching and learning session held on a day prior to the start of the school year every year. The organization that offers ALL4YOU2! provides a training program for program facilitators that consist of a 3-day training, if fidelity is identified as a limitation this may be an added to the program. At this point we believe that the teachers at the school have a solid foundational base of the material and are motivated to teach the program and this three-day training will not be necessary. The training

day will be led by Mrs. Turner and Ms. Gandy. It will be attended by all program teachers and all main staff of the program (excluding the biostatistician). The purpose will be to ensure that all the educators are on the same level in terms of education and understanding of the material to be presented along with the overall goals of implementing this program. All the lessons will be reviewed in detail and each teacher will be required to perform a peer to peer teaching session of one of the lessons to ensure mastery. This will be held before the start of the fall semester every year to account for teachers being replaced, new hires, and as a general refresher. Having all teachers attend will allow for teachers who have taught the program to give first-hand experience and lessons learned to new teachers of the program. Currently at the schools some of the teacher teach both physical education and health, this is another reason this training session is critical to ensure all educators are on the same level. At the end of these training sessions teachers will take a survey related to knowledge, attitudes, intentions, and social norms related to the content, more information about this survey can be found in the process evaluation section below. At these training sessions since they will be all day breakfast, lunch, and dinner or an afternoon snack will be provided to everyone that attends.

During implementation, fidelity will be monitored by having Ms. Gandy the program coordinator sit in on at least two lessons for every class throughout the semester. This will allow us to ensure all teachers are teaching sessions as outlined in the program curriculum. These drop-ins will be random since teachers will be required to give the project staff their teaching schedule in advance. This will be done through an email (or preferred communication method) sent to teachers every two weeks other aspects on this email are discussed further in the Process Evaluation subsection below. Any necessary feedback or additional training will then be provided to the project team and teachers as seen fit by Mrs. Turner or Ms. Gandy. A final way

program monitoring will be through teacher focus group led by Ms. Gandy after completion of the program at all locations. It will cover the same material covered in the biweekly email questionnaire but will be an opportunity for further discussion and development to the program and teacher training sessions.

With any program set to happen in the school setting there is bound to be possible outside forces that can bias the results due to the non-isolated environment. Even though there is little we as a project team can do to prevent these there are ways to monitor them so we can decide if our results may be biased. Ways we plan on doing this are further discussed in the Process Evaluation subsection below but include check-in with other Health Department members, conference calls with other local schools, and comparing baseline data year to year and school to school.

Incentives will be given to both teachers and students for participation in the in the program such as Walmart gift cards for teachers and restaurant/ food certificates for students. We also plan on leaving the pencils used for the surveys with the teachers an extra gift to them. A more detailed layout of incentives and supplies can be found in Appendix E

A part of having a successful program is keeping the Community Advisory Group and other partners/stakeholders interested and updated in the program and its progress. To do this we will have three CAG meetings during the planning period and twice yearly thereafter with food provided to members. Also, there will be a monthly letter or email (will be decided later based on preferences of the members) sent to the CAG members. To format this letter, we will employee a graphic design student from a local high school or college. This will be sent out and cover any updates between the CAG meetings on progress, preliminary results, and will include facts about the program objectives. Throughout the year there will also be “teacher spotlight”

section on each of the program teachers so the CAG and stakeholders can learn more about the people involved and feel more connected to the program. More information about goals and the timeline for the three-year project can be found in Appendix B, which contains the work plan, and Appendix C which contains the program logic model. Communication between the program staff will be key to successful implementation and will be accomplished through short weekly meetings of all project staff on a day determined best by all members. During this meeting progress, fidelity, problems, and any other topics that have arrived in the past week will be discussed. These meetings will keep all members updated on progress of others in areas of the program they may not be directly involved in.

Sustainability after grant funding has ended will hopefully be possibly for several reasons. First the infrastructure of trained educators will always be in place and the educators will be comfortable teaching the program and be able to train any new employees to be capable to do so. Secondly the student workbooks required for the program are relatively inexpensive at just $3 per student, in further years it may also be an option to reuse student workbook instead of allowing students to keep them and write in them. Lastly this program will cover the requirements in terms of sexual education component of a Kentucky high school student's health education credit.

PERFORMANCE MEASURES AND EVALUATION

Given the focus of ALL4YOU2!, short term goals include reducing the frequency of unprotected intercourse, increasing knowledge of correct condom usage among participants, increasing knowledge and risk perceptions about STIs, and increasing communication skills among program participants. A long-term goal is to reduce the rates of STIs in the community which will be used by monitoring Chlamydia rates.

Performance Measures:

The framework of evaluation is to have students take a pre-test on the first day of class or the first day of the program, depending on what the teacher of the class decides which will work best with the class schedule. During this demographic data will also be collected. This will be collected by a pen and paper survey, due to the technology constraints at these schools and these students being used to completed test and other assignments on paper at the school. Performance measures, including the race/ethnicity and gender of all participants, will be collected on the pre-test survey.

Process Evaluation:

Process evaluation will be conducted to help assess the implementation of the ALL4YOU2! As previously mentioned the teachers at the schools may teach both physical education and health education and not be trained solely in health education content. To ensure the teacher training session is effective and to examine the teacher's attitudes, intentions, and subjective norms towards teaching STI information a teacher survey will be given(Powell, 2010). This is important to assess for fidelity since if a teacher does not believe this information should be taught or does not feel comfortable teaching this sensitive material they may not perform to their best teaching ability. Even though it may be hard to change the beliefs of these teachers it will be helpful having this information when assessing outcomes if varying outcomes are seen between classes. The program team will give this survey every year at the end of the teacher training session. Below is more information about the constructs that will be found on this teacher survey.

Construct	Details about the construct	Cronbach's Alpha
Knowledge	35 Likert type scale and true false questions pertaining to STIs.	0.74 (Powell, 2010)

Attitudes	25 Likert type scale questions regarding attitudes towards teaching STI information and attitudes about people with STIs primarily AIDS/HIV	0.8 (Powell, 2010)
Intention	Likert scale questions about how likely teachers are to teach information about STIs	.98 (Powell, 2010)
Subjective Norms	13 Likert type scale questions about how different people in the community would feel about them teaching STI content	0.901 (Powell, 2010)

Second, an email (or preferred communication that will be established prior to program initiation) will be sent to the teachers of the program at the two high schools every 2 weeks. The email will be formatted as seen below:

Hello Mr./Mrs._____

Once again the from the whole project team thank you for your time and effort with the implementation of the ALL4YOU2! program at _____ high school. This email is to serve as an opportunity for feedback on your experience with the program and its implementation to your class. Please be honest with your feedback and as always if any major problems arise please feel welcome to call _____ to reach a project team member to address your concerns. Note these questions refer to the last 2 weeks of program course work.

- Which of the program sessions did you complete in the last 2 weeks?
- With each session identified above were there any time concerns with completing the session in the class time allotted?
- With each of the sessions identified did there appear to be any issues with course material comprehension in the class?
- Are there any concerns from your point of view that have not been addressed above?
- What sessions on what days do you plan to cover in the next 2 weeks?

This is clearly a very subjective and quick survey but will allow the project team to check in with each of the teachers along the way to see if there are any issues that need to be addressed and corrected while the program is still going on.

Second, Ms. Gandy will sit in on sessions throughout the program at both schools in all classes at least twice. These will be random drop-ins and will be planned per the information gained in the email questionnaire seen above. Ms. Gandy the program coordinator and the

technical assistant will attend these class sessions that will allow the program team to ensure all the different teachers are teaching the sessions as outlined in the program curriculum and there is fidelity throughout the program. Necessary feedback from these evaluations will be distributed to the project staff and teachers and any necessary interventions will be made with educations sessions for the teachers. The data found from the baseline information will be disseminated to the members of the community advisory group through a letter or email (whichever is determined to be the best contact method).

After the completion of the program at both schools there will be a focus group session with the all teachers where the applicable above questions are addressed once again to harbor discussion between the teaching staff. This will be led by Cortney Gandy the program coordinator and assistance will be from the technical assistant. Information elicited from this session will guide training for future teachers of the program, implementation for the next year, and any further adaptations to the program that need to be made before the next round of students receives it.

There is a chance with any program in this population that there can be contamination by outside sources that would skew the outcomes. We have limited ability to prevent outside interference for a program in a community setting such as a school but we will track and monitor the population in order to be informed about outside influences that may affect the program and its outcomes.

One monitoring tactic will be communicating with other departments at the LTHD through monthly emails to see if any new programs related to STI prevention, behavior change, or knowledge have been implemented elsewhere in the area that would affect constructs found on the evaluation tool. This task will be handled by the technical assistant.

For monitoring activity in the school system the school administrators and teachers will be utilized from all area high schools and feeder schools. It will be important to gather this information from all area high schools since schools are not isolated environments and students from different schools do interact. Scheduled monthly meeting will be made with school administrators to discuss any possible happenings in the school that could influence the data these meetings will be made with regards to administrator schedule and can be made via conference call or in person if need be. We do anticipate some difficult gaining the trust of school administrators not involved in the program to participate but we plan on being flexible enough to meet their schedules and needs.

A final way we will monitor outside influence will be by comparing baseline data from the different school year implementations. Theoretically baseline data from incoming freshman who will be the participants in the program coming out of middle school into high school from the same feeder middle schools with no changes to programming at those school should have the same or very similar baseline. If changes in baseline are seen from year to year of program implementation further investigation will be needed into the cause of the variance in the incoming freshman. Some allowance in variation must be accepted due to possible contamination from those who have already received the program.

Outcome Evaluation:

The project team has selected to use a pre/post-test study design format for the evaluation of the proposed program. The decision that this design will work best was made because the goal of the program is not only to see a decrease in the overall county statistics for the rates of STI/STDs but also to see individual knowledge, behavior, and perception change in the participants (students) of the program that will lead to the long-term county wide goal. Using the

participants as their own controls will allow for better assessment of change and the use of this program in the two different high schools will also allow for comparison of the program in culturally different settings due to the wide diversity and differences in the two schools chosen to house the program. This series of testing will repeat throughout and after the program.

Data will be collected at 4 times during the evaluation process; this includes baseline, at the end of the program, 12 weeks post program, and 1-year post program. We believe this is reasonable follow up for this grant period due to the nature of the students and they may have to move schools, follow-up beyond this period would be hard to gather however extended follow up may be assessed in further grants. Information gathered in these surveys will include demographic information, condom knowledge, perceived self-efficacy, attitudes and beliefs toward condoms, communication skills, refusal strategy skills, STI knowledge survey, and a series of open ended questions about actions associated to the material they have been presented in the programs. This will be collected by a pen and paper survey due to the technology constraints at these schools and these students being used to completed test and other assignments on paper at the school. As an incentive for students, they will receive gift cards for restaurants/food with completion of surveys. Data will later have to be entered into a database by the technical assistant. This will be a challenge and somewhat time consuming but the use of computerized data collection in this area is not feasible due to limited computer access at the schools in this rural area. The measures to be included in the survey will be as follows:

Construct	Details about construct	Cronbach's alpha
Condom Knowledge (Psychosocial)	4 item true/false format scale looking at knowledge of correct condom use. (Coyle et al., 2013)	
Perceived self-efficacy (condoms)	4 item 4 response Likert type scale with questions about if the program participant feels they could make a correct decision regarding condom usage in tougher situations.	0.8(Coyle et al., 2013)

Attitudes and Beliefs (General attitudes toward condoms)	15 item scale with 5 point Likert type scoring system. Scale items include questions about condom usage in different situations and attaching an attitude or belief to the questions and having participants respond with answers from strongly disagree to strongly agree.	0.8(Coyle et al., 2013)
Communication skills	5 item scale with 4 response Likert type scale. Scale includes questions not specifically related to sexual health or STI but about general strength of communication skills.	0.65 (Coyle et al., 2013)
Skill (refusal strategies)	5 item scale with 4 Likert type responses regarding number of times something has occurred. Questions include different aspects of sexual behavior and unprotected sex.	0.8 (Coyle et al., 2013)
STI Knowledge survey	10 items, true/false or yes/no questions. Used to test general knowledge and available through the ALL4YOU! Program as a recommended assessment of the program	0.57, 0.59 (Coyle et al., 2006)
Specific questions on topics related to program information (open ended)	Open ended questions to that will elicit a numeric value to actions that are associated with the information presented in the ALL4YOU2! Program. These questions will be: How many sexual partners have you had during your lifetime? How many different sexual partners have you had during the past 30 days? How many times in the past 30 days did you engage in unprotected intercourse (not using a condom)? How many times in the past 30 days did you engage in protected intercourse (using a condom)?	
Demographic Information	Gender, race/ethnicity, and age.	

The survey with the measures as described above will be collected at multiple times before and after the program to ensure program effectiveness and information retention. The schedule for the program length is not yet set due to the variability we expect in school schedule and ability for the program to have a flexible schedule while still completing the material in preparation to work the program into the current class schedule. However, we expect data to be collected at baseline (prior to program start), last day of program, 12 weeks post program, and 1-year post program. This schedule of surveying will not only test for immediate change from the program but also will look at retention of knowledge by testing 12 weeks and 1 year out.

Below is a list of outcome goals for the program in terms of time frame and how these will be measured. Short term goals will each be looked at after the scheduled pen and paper surveys given after the last program session, 12 weeks post program, and 1-year post program. The long-term goal as stated below will be longitudinal in nature and will be expressive of the furthering reach of the program year after year.

Short Term Goals	
Goals	Measurement strategy
Reduce frequency of unprotected intercourse	Will be gauged by open ended survey given to participants where they can write this value in this values as number of times in the last 30 days. Success will be an overall decrease by 30% from baseline at the end of the program, 12-weeks post program, and 1-year post program.
Increase knowledge of correct condom usage among participants	Will be measured by the construct of attitudes and beliefs towards condoms as listed above. Success will be measured by an increase in scores form baseline by 30% measured at the end of the program, 12-weeks post program, and 1-year post program Will be measured by the condom knowledge survey, success will be measured by a 20% increase from baseline scores measured at the end of the program, 12-weeks post program, and 1-year post program.
Increase knowledge and risk perceptions about STIs	Will be measured by the STI knowledge survey listed above. Success will be measured as increase from baseline score of at least 40% from baseline at the end of the program, 12-weeks post program, and 1-year post program.
Increase communication skills among program participants	By using the communication skills and skills refusal strategy measure above it will be possible to measure an increase in communication by 20% from baseline at the end of the program, 12-weeks post program, and 1-year post program.
Long term goals	
Reduce chlamydia rates (surrogate marker for STIs) in the community	This is a longer longitudinal goal that will be looked at over years and we do not expect to see any significant effect within the first 3 years of the program. This will be monitored by data reported to National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) and will be successful if a 10% decrease is seen within the first 10 years of the program. (Centers for Disease Control and Prevention, 2016a)

Due to the set-up of the program there are some foreseeable challenges that will be faced. A challenge that must be anticipated due to the time series study design has to do with bias the participants may have since the will see the same survey four times and may remember the questions. This may lead to falsification of answers since they know what to expect and may think of it more as a test in which they have to have a "right answer". Another area of concern that goes hand in hand with this is with topic the program is addressing. Since STI/STDs and associated acts can be a taboo topic social desirability bias is a serious concern, meaning participants will answer the way they believe is most favorable instead of truthfully.

Another challenge we must anticipate is potential drop out from the program and study due to the study population. There is a reasonable expectation that people will move, students will be absent, or parents will opt out of their students participating in the study. All of these possibilities will affect study results and follow up since this is an expected issue we will be able to monitor it and ensure it does not affect implementation or outcomes. To monitor this the teachers of the program will be required to take an attendance at the beginning of each Lesson session they teach and give this information to either Mrs. Thompson or Mr. Gourd depending on their school.

A final anticipated challenge is the possibility of extraneous sources influencing behavior change. The participants for the study will be teens and as such can be influenced by a number of sources outside the program due to this all other extraneous sources found during the study need to be evaluated for impact on behavior and considered as alternative explanations. More information on ways to monitor outside influences for their impact on both process and outcomes is discussed above in Process Evaluation.

CAPACITY AND EXPERIENCE OF THE APPLICANT ORGANIZATION

The Lincoln Trail Health Department (LTHD) operates six health centers throughout the district with a central office in Elizabethtown, KY located in Hardin County. The other counties the department serves are Larue, Marion, Meade, Nelson, and Washington. The mission of the health department is "to assure the public's health and safety through assessment, intervention, education, and preparedness." The department is led by Mrs. Nancy Turner, Director of the LTHD. She supports the 5 directors below her and all the staff at all the offices encompassed by the LTHD. A more detailed Organization Chart of the LTHD directors and their responsibilities can be found in Appendix D. The implementation of ALL4YOU2! at two of the area high schools aligns with the mission of the department and its leaders and is another addition to the growing list of programs the department is building in the community.

An example of one of these programs is the Million Heart Initiative supported by the Bless Your Heart grant obtained first in October 2014 and then again in February 2015 and the Care Collaborative grant awarded in July 2014 and then again in July 2015(Lincoln Trail District Health Department, July 2015). The Bless Your Heart Program is a faith-focused aspect of the national Million Hearts Initiative's tool kit designed to help church ministries encourage and provide support to its members in order to live a heart-healthy life(Kentucky Cabinet for Health and Family Services, March 2016). Many of the LTHD directors and other employees have worked to implement and grow this program in the community by working with local churches. Once these churches get their programs running they can become more self-sufficient and the LTHD can focus on its efforts on other churches without the program. The grant funding is well used as seen by the number of churches in the community with program uptake and as evidenced by the renewal of grants from the same and similar sponsors.

At the LTHD, all staff are dedicated to the health and well-being of all ages of individuals in the community. Although the department has never implemented a program like what is proposed for ALL4YOU2! using a school as the only implementation site, LTHD has had successful collaborations with the county school system in the past. Other programs that have worked with the school system to provide necessary health services and information to children while at school. An example of one of these in our Smile Travelers programs, which is headed by our Director of Outreach Services. The Smile Travelers program strives at reducing the number of children in our area who have untreated tooth decay with a mobile dental unit(Lincoln Trail District Health Department, 2017). Our team of licensed hygienists, dental assistants, and health educators uses the portable equipment to provide cleanings, fluoride treatments, dental sealant, and education for children at schools, preschools and childcare facilities throughout the LTHD. The program is an efficient and effective way to overcome barriers and reach children who do not have regular dental care. Since its start in January 2015 the program has conducted over 1,200 treatments on the children at these various locations.

The well-trained staff at the LTHD have strong connections in the tight knit communities in which they serve which allows for strong bonds with the locations and people in the community who support programs and open lines of communications to a variety of resources in the area. This is well illustrated by the by the 2013-2017 Community Health Needs Assessment and Community Health Improvement Plan which sites these strong relationships as strengths and positive forces of change for each of the counties included in the LTHD(Lincoln Trail District Health Department, 2013). This Community Needs Assessment also identifies which areas in the community require a higher which is a key to determining resource and program distribution.

Another key to success in the funding the LTDH receives from state, federal, local, service fees, and grants (Lincoln Trail District Health Department, 2014a).

PARTNERSHIPS AND COLLABORATIONS

The implementation of ALL4YOU2! would not be possible without the daily communications and support of those who have and will be working with the LTHD directly. The collaborators for this project broadly include John Hardin High School, Central Hardin High School, and the Hardin County School Board. The administrators at these two schools have allowed us to implement this program into the school system and provided us with the classroom space, meeting space, access to the school, and their time while keeping the school functioning as normal. The school nurses at these schools will provide back up on medical information if needed while providing needed health care to students. The school board and its members oversee the county school system in its entirety, which includes permission to implement this program at two of their schools. Lastly, the teachers who have agreed to teach the program at the school were willing to exchange some of their previously planned lessons to implement the program, in addition to being willing to attend trainings.

The program has many partners that participate in some way to influence ALL4YOU2!'s success in the school system. These partners are not contacted on a regularly scheduled basis like collaborators but are available for consultation or help in needed. They are listed below with a description of their involvement:

Clarity Solutions For Women: Clarity is an organization in the community that offers several services that intertwine with the components of ALL4YOU2!. These include free pregnancy test, ultrasound exams, information on pregnancy options, nurse consultation, and STI/STD information(Lincoln Trail District Health Department, 2014a). Clarity will be used as

option for students with questions or needs involving pregnancy that are outside the scope of the program and the school.

Crossway Pregnancy Resource: Like Clarity this organization provides guidance for expecting mothers and fathers, they also offer limited free supplies to new mothers that have been donated to the organization(Crossway Pregnancy Resource Center, 2013). This will be another option for students with questions or needs involving pregnancy that are outside the scope of the program and the school.

Obstetricians/Gynecologists (OB/GYN): Staff at the OB/GYN offices may be used for their expertise on the subject area in the program if questions arise and for their services for students who may need a referral to a gynecologist or obstetrician.

Other area high schools and feeder schools: These schools will be needed to collect information throughout the program and if the program is to spread into other schools in coming years it will be important to keep these lines of communication open as a way to build a relationship with these schools.

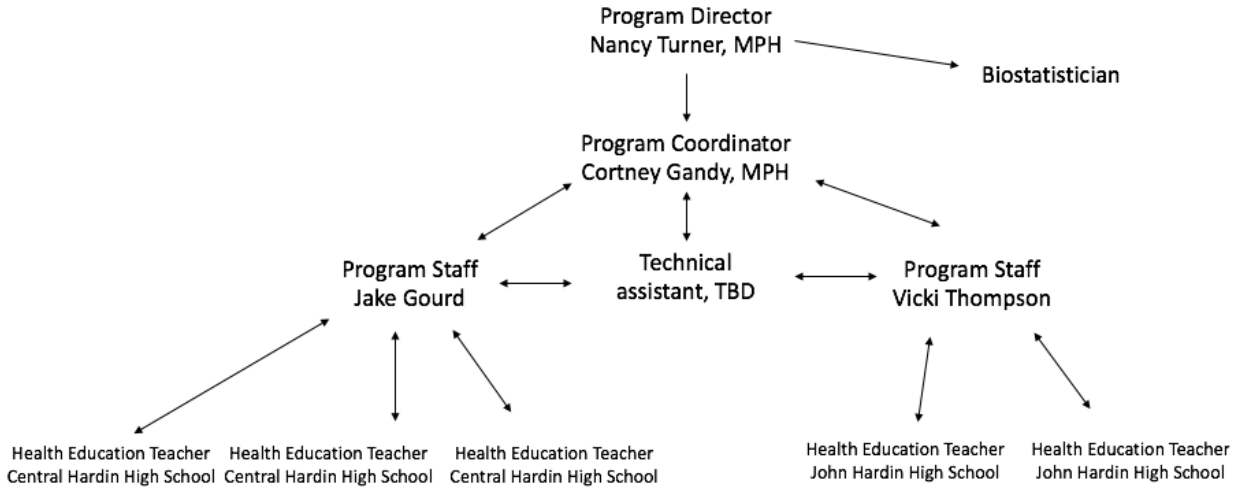
The Education, Training, and Research (ETR) Program Success Center for Sexual and Reproductive Health: This is the organization from which the ALL4YOU2! program material was purchased from. In addition, they maintain a helpful site full of information on science-based health and education products and programs including those for sexual health, mental health and wellness, substance use and addiction, etc. (ETR, 2016a). They are an excellent partner to have for program support and any problems that may arise with the materials itself to be able to report back to them.

Other more indirect partners whose partnership will be utilized less frequently then those listed above Fort Knox Army Base and Elizabethtown Community and Technical College. Fort

Knox provides the area with large influxes of people in the target population age range that can have effects not only on the students but also have an impact on them. The same theory holds true behind college students coming in from outside areas to attend the community college in town.

PROJECT MANAGEMENT

Below is the organizational structure that will be utilized for the implementation of ALL4YOU2! in Central Hardin and John Hardin High Schools in Hardin County Kentucky through the LTHD.



ALL4YOU2! will be implemented by the high school health education teachers, three teachers at Central Hardin High School and two teachers at John Hardin High School. The Staff at the LTHD will assist in the implementation of the program at both high schools. Below you will find information about the each of the program staff. All staff as seen above apart from the health education teachers at all schools will be based out of the Hardin County office of the LTHD.

Nancy Turner, MPH: Nancy Turner is the director of the Lincoln Trail Health Department which encompasses Meade, Hardin, Larue, Nelson, Washington, and Marion

Counties in Kentucky. Mrs. Turner works out of the main LTHD office located in Elizabethtown. She has worked for the LTHD in a variety of capacities for the past 7 years. Prior to her current position she was the clinic director at the Hardin County Health Center for 5 years and her primary focus there was to continue the center's work providing affordable STI testing to members of the community.

Mrs. Turner graduated from the University of Louisville College of Public Health. During her time there, she volunteered extensively with the Planned Parenthood-Louisville Health Center and Project Compassion. During her time spent working with Planned Parenthood she volunteered her time educating members of the community on Planned Parenthood services and sexually transmitted infections. Project Compassion is a group located out of Redeemer Lutheran Church in Louisville and offers a food pantry service along with HIV testing. Mrs. Turner worked with this project every month while in college participating in both the food pantry and offering education to those seeking HIV testing through the service.

Cortney Gandy, MPH: Ms. Gandy has been working at the LTHD for 4 years in the Hardin County office with a focus on sexually transmitted infection, HIV, and school nursing. In 2014 Ms. Gandy secured the funding for school health services to have a lower student-to-nurse ration and have one full-time nurse per school at three of the high schools in the county. During her time at the LTHD she has been able to build a strong relationship with Clarity, an organization in the community that provides prenatal and postnatal education to new mothers along with some sexual education. Recently Ms. Gandy has been working on furthering the community's access to sexual health education and services and creating a "sexually transmitted infections clinical services" department to the LTHD.

Jake Gourd: Mr. Gourd has been a loyal staff member at the LTHD in Hardin County for the last 15 years. Mr. Gourd is a well-known member of the community and has worked extensively to establish easily accessible pre-natal care services in the community over the years. He works one-on-one with expecting mothers to obtain them insurance and reliable and affordable pre-natal care. In his work he has also built a strong relationship with Clarity and local OB/GYN's and has seen first-hand the sexually transmitted infection problem in the community.

Vicki Thompson: Mrs. Thompson is a staffer for the LTHD in Meade County where she has been for 20 years. She has held many jobs at the health department office due to its small physical size and staff and has recently expressed interest to Ms. Gandy and Mrs. Turner about getting more experience and education about sexually transmitted infections and pregnancy prevention due to the rising number of calls she has been receiving in her county about both problems.

Technical Assistant (TBD): The position will be held by a student from the University of Louisville College of Public Health who wants experience implementing a program in a rural community and who has an interest in sexual health. The person who is hired for this position will oversee data entry and correspondences with several parties along with aiding Ms. Gandy in the completion of focus groups, training sessions, and session sit-ins throughout the program.

Biostatistician (TBD): The biostatistician hired for the program will be from the University of Louisville and will serve as a consultant to deal with the complex nature of the data being gathered.

Appendices

Appendix A:

Sample Teacher Schedule

August 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10 Start of School	11	12	13
14	15	16	17	18 Take 1st survey (baseline)	19	20
21	22	23	24	25 Perform Lesson 1	26	27
28	29	30	31			

September 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Perform Lesson 2	2	3
4	5	6	7	8 Perform Lesson 3	9	10
11 Fall Break	12 Fall Break	13 Fall Break	14 Fall Break	15 Fall Break	16 Fall Break	17 Fall Break
18	19	20	21	22 Perform Lesson 4	23	24
25	26	27	28	29 Perform Lesson 5	30	

October 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 Perform Lesson 6	5	6 Perform Lesson 7	7	8
9	10	11 Perform Lesson 8	12	13 Perform Lesson 9	14	15
16	17	18 Perform Lesson 10	19	20 Perform Lesson 11	21	22
23	24	25	26	27 Perform Lesson 12	28	29
30	31					

November 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3 Perform Lesson 13	4	5
6	7	8	9	10 Perform Lesson 14	11	12
13	14	15	16	17 Perform Lesson 15	18 Have students take post program evaluation.	19
20	21	22	23 Thanksgiving Break	24 Thanksgiving Break	25 Thanksgiving Break	26
27	28	29	30			

Appendix B:

Three-year Work Plan

Work Plan for short term goals

Short Term Goals			
1.) Reduce frequency of unprotected intercourse 2.) Increase knowledge of correct condom usage among participants 3.) Increase knowledge and risk perceptions about STIs 4.) Increase communication skills among program participants			
Objectives to accomplish these short term goals			
1.) Comprise a community advisory group and have 3 meetings prior to the start of the program and then every 6 months after the programs start. 2.) Train 5 health education teachers at 2 schools to effectively and confidently teach the program to their students prior to the start of the program in the fall semester and complete survey of teachers on knowledge, attitudes, intentions, and subjective norms regarding STIs 3.) Implementation of the 15 session ALL4YOU2! In both settings successfully all 3 years of the grant period. 4.) Collect baseline, end of program, 12-week post, and 1-year post program data for all 2 years of implementation during grant funding and continue to collect data for the third year of implementation after grant funding has ended. 5.) Collection of fidelity information throughout all classes all 3 years of grant funding through class sit-ins, email communication, and focus groups. 6.) Monitoring of external contaminant throughout all 3 years of grant funding.			
Activities for each objective	Person responsible	Timeline	Measure of success

Objective 1 a) Recruitment of individuals will occur as specifically stated in the Program approach section of this grant application. Potential CAG members will be contacted once and have a two-week period to respond with interest, after this the members will have a follow up contact. b) Emails and or scripted dialog will be developed for this recruitment and contact with potential CAG members. This will contain the program information, goals of the program, research behind the program, and why the project team would like their help specifically, and contact information for project team members. There will also be a deadline to contact if they would like to be involved with the program. c) Meetings for community advisory group members will be set up to happen every 2 months during the planning period and then every 6 months, along with this will	a) Ms. Gandy will be responsible for contacting these individuals with help as needed from the technical assistant. b) Ms. Gandy and the technical assistant will work together to perfect these emails and/or dialog to best get the message of the program across and best gain their support. The technical assistant will oversee monitoring and keeping track of responses. Ms. Gandy will oversee follow up calls if needed. c) The technical assistant will oversee setting a time and area at one of the schools where this meeting can take place and sending out reminders. This individual will also oversee ensuring food is available to the members at this meeting.	Recruitment will begin 6 months prior to the start of the fall semester. Follow up emails will be sent 2 weeks after this time. The first three meetings will all take place prior to the start of the fall semester. Thereafter the meetings will take place every 6 months. The school must be contacted about reserving a space for these at least 3 months prior to the date of the proposed meeting (except for the first 3 meetings). An invitation to attend will be sent to the CAG members 2 months prior to the date and a reminder will be sent out 2 weeks prior to the date. Monthly emails or letters will be sent to all stakeholders and CAG members by at the 25th of the month prior to the month of the	Completion of 3 CAG meetings prior to the start of the fall semester the first year of grant funding. Completion of planning and any further necessary adaptations to the program. Completion of CAG meetings every 6 months for the full 3-year grant period. Reminders and updates must be sent by the time specified. Finally, 80% attendance must be had at all CAG meetings.

be a courtesy reminder to members about the meeting (either by phone or email, preferred method of contact for each person) d) Sending monthly emails or letters (depending on preference) to CAG members about updates, data, facts about the program, and teacher spotlights.	d) The technical assistant will be responsible for monthly emails or letters sent to stakeholders and CAG members.	newsletter (i.e. the newsletter for April must be sent by the 25th of March)	
Objective 2 a) Scheduling and attending an all-day event for all project staff and all teachers. b) Performing and mastering a peer-to-peer teaching example of one of the sessions to be taught and feeling comfortable with all material. c) Successfully feeding all attendees. d) Teacher participation in the teacher survey given at the end of the training day.	a) Scheduling of this event will be handled by Mrs. Thompson and Mr. Gourd for their respective teachers in accordance with the rest of the program staff to find a time that fits everyone's schedules. They will also be responsible for informing their teachers and the program staff of the date that has been chosen. b) Ms. Gandy will be responsible for the training that occurs and ensuring the teaching staff are comfortable	The training session must have a scheduled date at least 30 days prior to the start of school with the event at least 15 days prior to the start of the semester. All attendees must be notified of the day and location of the event at least 14 days prior to the event itself. The location and food must be confirmed at least 14 days prior to the event occurring.	Success will be defined as all teachers successfully mastering the peer- to- peer teaching exercise and confirming their comfort with the program material. Also all deadlines must be set in the time stated in the previous column. Having 100% participation in the survey given to teachers assessing knowledge, attitudes, intentions, and subjective norms. Perform this activity every year prior to the fall semester as a refresher for current teachers and a teaching sessions for new teachers.

	with the material they are teaching. c) The technical assistant will be in charge of securing the school location for the event and securing food for the full day event. d) The technical assistant will be in charge of printing off the surveys for teachers		
Objective 3 a) Securing all program materials for the students and teachers. b) Opt-out consent/information forms completed. c) Emails to teachers about progress and program schedule sent to teachers every 2 weeks for the semester the program is occurring in.	a) Ms. Gandy will be responsible for securing all the program material required for teachers and students. She will then give this material to Mr. Gourd and Mrs. Thompson to ensure this makes it to the teachers and students. b) Consent forms will be printed by the technical assistant and taken to freshman orientation by Ms. Gandy and Mr. Gourd or Mrs. Thompson. c) Progress and schedule emails will be sent by Mr. Gourd and Mrs. Thompson to their	Program materials must be acquired at least 2 months prior to the start of the program. Teachers must have their guides prior to the training session and students must get theirs prior to the beginning of the program. Consent forms must be distributed to teacher prior to the start of the semester. These forms must be given to students/parents at freshman orientation or with the rest of the "first day forms" if freshman orientation is not attended. Students	Success will be measured by completion of all 15 program sessions in all classes by all 5 teachers. Also, successfully sending consent forms out on time and the every two-week progress emails. This will need to occur every year of the program

	respective teachers. Ms. Gandy will be responsible for necessary follow up from these and intervention or further education if needed.	and parents will be given one week to opt out prior to the program start. Progress emails will be sent every 2 weeks exactly and follow up will be handled in a timely manner as seen fit by Ms. Gandy. Teachers will have 3 days to respond and if there is no response seen in this time a follow up email will be sent by Mr. Gourd or Mrs. Thompson. All these activities and deadlines must be met for all three years of the program.	
Objective 4 a) Survey must be printed for each survey time. b) Survey reminders sent out to teachers prior to when surveys are due. c) Administration of the survey by a program staff member. d) Data entry of the survey into excel and/or data analysis software.	a) Survey will be printed by the technical assistant b) Survey reminders will be sent out by Mr. Gourd and Mrs. Thompson to their respective teachers. c) Mr. Gourd and Mrs. Thompson will administer each survey	Surveys must be printed 1 day prior to the scheduled date of administration. Survey reminders must be sent to teachers 1 week prior to the scheduled survey date. Data entry after survey completion must be completed within 2	Success will be determined by completed successful and on time completion of all four surveys for all 3 years of the grant period.

e) Gift card distribution to survey takers after completion of surveys.	with the help of the technical assistant. d) The technical assistant will be responsible for all data entry. e) The technical assistant will be responsible for obtaining and distributing the gift cards for the survey takers.	weeks after the survey was administered. Gift cards must be obtained at least 1 day prior to the survey and administered to students after they complete the survey. All these activities and deadlines must be met for all three years of the program.	
Objective 5 a) Completion of two random drop-ins per class to monitor session delivery. b) Emails to teachers about progress and program schedule sent to teachers every 2 weeks for the semester the program is occurring in. c) Completion of a focus group with participation of all teachers.	a) Sit-ins/Drop-ins will be done by Ms. Gandy, any necessary interventions or education will be performed by Ms. Gandy, Mr. Gourd, or Mrs. Thompson. b) Progress and schedule emails will be sent by Mr. Gourd and Mrs. Thompson to their respective teachers. Ms. Gandy will be responsible for necessary follow up from these and intervention or further education if needed. c) Focus group will be completed by Ms.	Progress emails will be sent every 2 weeks exactly and follow up will be handled in a timely manner as seen fit by Ms. Gandy. Teachers will have 3 days to respond and if there is no response seen in this time a follow up email will be sent by Mr. Gourd or Mrs. Thompson Focus group will be completed after all programs are completed, it must be completed by the end of February following	Success will be if Ms. Gandy is able to complete 2 drop-ins in every class each year for all 3 years of the program during grant funding. Successfully complete focus groups after each program year with all program teachers. Have responses from each teacher for all of the 2-week emails throughout all 3 years of the grant period.

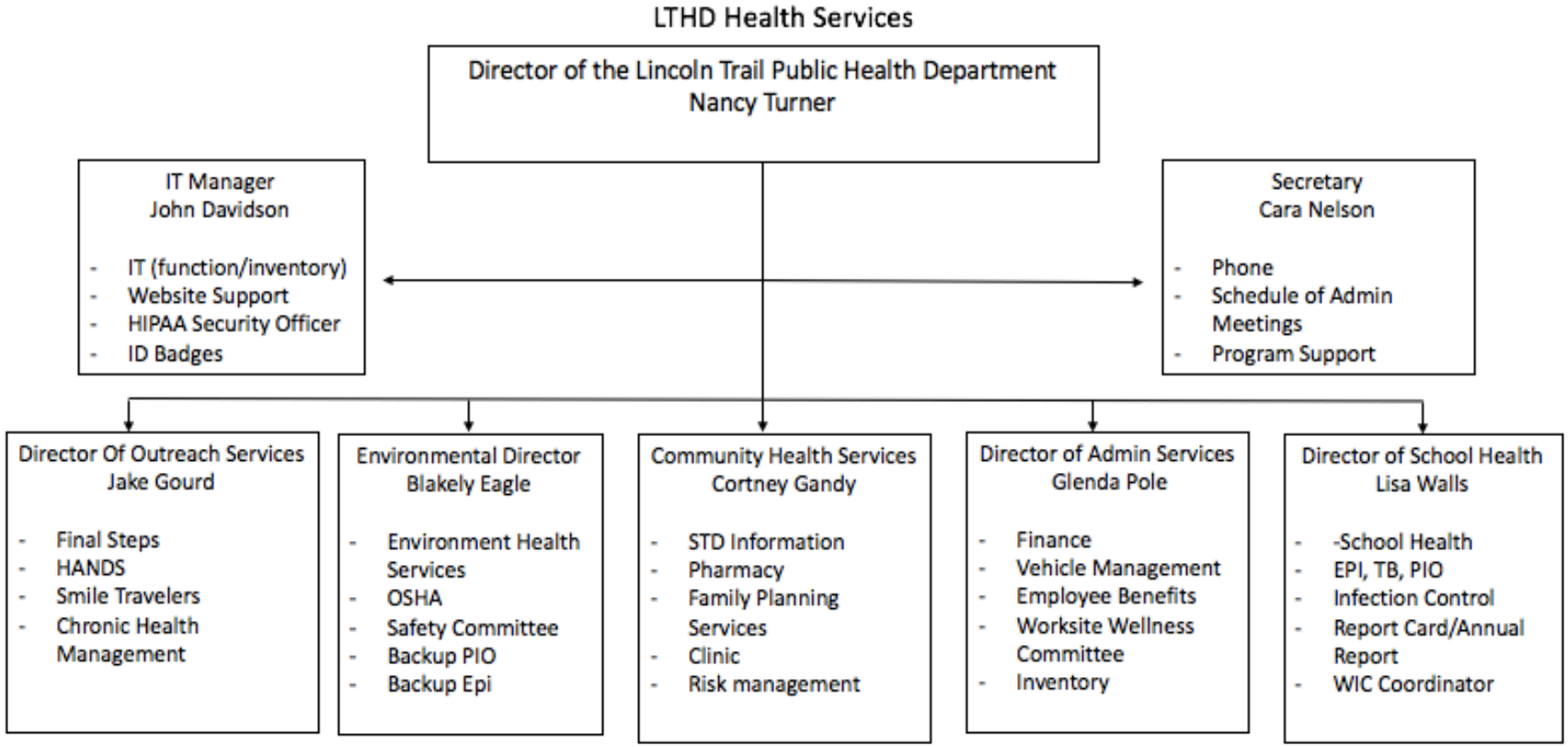
	Gandy and the technical assistant. The focus group will be scheduled by the technical assistant after the completion of the program in all classes, theoretically this will be right after winter break.	the fall semester completion and winter break.	
Objective 6 a) Emailing other LTHD departments to check in on any other projects/activities occurring that could bias results b) Completion of check-ins with school officials at all area high schools to see if any other projects/activities are occurring that could bias results c) Completion of baseline monitoring from year to year to ensure similar baseline results between incoming freshman classes.	a) The technical assistant will be responsible for sending emails to other departments in the LTHD and sending any relevant information received to Ms. Gandy. b) Mr. Gourd and Mrs. Thompson will be responsible for the check-ins with school administrators at their designated high schools and feeder schools. c) Baseline data collection will be done by Mr. Gourd and Mrs. Thompson as stated above. The technical assistant will be responsible for data entry. Finally, the biostatistician will be responsible for	Emails to other departments in the health department must be sent by the 5th of every month. Check-ins with school officials must be completed by the 10th of every month. The biostatistician will be required to perform this data analysis 1-month post receiving the data.	Success will be measured by following the time schedule and successfully monitoring external sources of bias for the full 3 years of the grant.

	performing the data analysis.		

Appendix C: Logic Model

Inputs	**Activities**	**Intended outputs**	**Short-term outcomes**	**Long-term outcomes**
Support from schools – including school nurses, teachers, administration, and students Funding for program supplies and program incentives Support from OB/GYNs in the county Support of the public health officials Invested health education teachers at two high schools in the county Workbooks for students and teachers and other necessary supplies	Trained professionals delivering a wide variety of interactive and engaging lessons Teacher training session each summer Data collection Fidelity monitoring activities Teacher focus groups at the end of each fall semester CAG meetings Using a survey to assess teachers' knowledge attitudes, intentions, and subjective norms	Having 2 freshman classes at 2 area high schools participate with 80% participation each year Having 90% attendance at all CAG meetings Active buy-in to the program from both participants and teachers Support and feedback from community advisory group members Teachers trained in teaching an evidence based program	Reduction in the frequency of unprotected intercourse by 30% from baseline at the end of the program, 12-weeks post program, and 1-year post program. Increased knowledge of correct condom usage among participants. Measured by an increase in correct scores by 30% from baseline at the end of the program, 12-weeks post program, and 1-year post program. Increase in knowledge and risk perceptions about STIs by 40% from baseline at the end of the program, 12-weeks post program, and 1-year post program. Increase in communication skills among program participants by 20% from baseline at the end of the program, 12-weeks post program, and 1-year post program.	Reduced chlamydia rates (surrogate marker for STIs) in the community by 10% within 10 years of program implementation.

Appendix D: Organization Chart



Appendix E: Budget and Justifications:

A: Staff

Below are the totals for Year 1 of the Project, Health Insurance and Fringe Benefits were based off current estimates for Kentucky. All employees of the LTHD will receive a family insurance with the employer contribution being $12,462/ year. The portion received from the grant per year is based off their %FTE. The technical assistant will be counted as a single person and receive a total of $3,200/ year for health insurance. Since the biostatistician will be a consultant they will not receive any health insurance through the grant. Fringe benefits for employees of the LTHD will be 22% of the salary requested on the grant and 9% for both the technical assistant and biostatistician consultant. Fringe benefits include FICA, life insurance, and retirement/401K contributions. The next table had a total year to year breakdown of staffing cost based on the 3% salary and health insurance escalation each year of the grant.

Year 1 Projections							
Position Title and Name	Annual Salary	Calendar Months	%FTE	Salary requested	Fringe Requested	Health insurance Requested	Total Requested: Year 1
Nancy Turner Program Director	$85,000	2	10%	$8,500	$1,870	$1,246	$11,552
Cortney Gandy Program Coordinator	$65,000	8	60%	$39,000	$8,580	$7,477	$54,765
Jake Gourd Program Staff	$50,000	8	35%	$17,500	$3,850	$4,362	$25,633
Vicki Thompson Program Staff	$52,000	8	35%	$18,200	$4,004	$4,362	$26,484
Technical Assistant	$15,000	12	100%	$15,000	$1,350	$3,200	$19,550
Biostatistician	$72,000	1	5%	$3,600	$324		$3,924
							$142,425

Breakdown of Yearly Totals				
	Year 1	Year 2	Year 3	Total
Salary	$101,800	$104,854	$108,000	$314,654
Fringe Benefits	$19,978	$20,578	$21,196	$61,752
Health Insurance	$20,647	$21,265	$21,902	$63,814
Total	$142,425	$146,697	$151,098	$440,220

Nancy Turner, MPH (2 months, 10% FTE):

During the program implementation process Mrs. Turner will serve as Program Director her duties will be serving as coordinator with the schools to get the program running. She will also be responsible for financial records, IRB approval, and working with the biostatistician for the project.

Cortney Gandy, MPH (8 months, 60% FTE):

Ms. Gandy will be responsible for the day to day activities of the program, program evaluation, outcome evaluation, and ensuring fidelity. Ms. Gandy will be responsible for obtaining all needed program materials and distrusting them to Mr. Gourd and Mrs. Thompson to further distribute. She will also lead focus groups conducted at the end of each program with the health education teachers and program staff members. Ms. Gandy will be responsible for recruiting members for the community advisory group with the help of the technical assistant. Finally, Ms. Gandy will be the team member assigned to attend class sessions during each of the classes to ensure fidelity throughout the program.

Jake Gourd (8 months, 35% FTE)

Mr. Gourd will be responsible for ensuring that the teachers at their assigned school are properly educated and have all the necessary material needed to complete the program. During the summers Mr. Gourd will attend the Freshman orientation session for Central Hardin High School with Ms. Gandy to hand the opt-out/program information forms out. Mr. Gourd will also be responsible for keeping class attendance records sent by the teachers at Central Hardin High School. Mr. Gourd will also be responsible for administering the surveys to students as described in the Performance Measures and Evaluation section. Mr. Gourd will be responsible for conducting any necessary education interventions as determined from fidelity monitoring and every 2-week email check-ins with the teachers. Finally, he will be responsible for meeting with school administrators and teachers for monitoring activity that could influence outcomes once monthly at Central Hardin High School,1 other high school in the county (Elizabethtown High School), and the feeder schools to those high schools (West Hardin Middle School, East Hardin Middle School, St. James Middle School, T.K. Stone Middle School).

Vicki Thompson (8 months, 35% FTE)

Mrs. Thompson will be responsible for ensuring that the teachers at their assigned school are properly educated and have all the necessary material needed to complete the program. During the summers Mrs. Thompson will attend the Freshman orientation session for John Hardin High School with Ms. Gandy to hand the opt-out/program information forms out. Mrs. Thompson will also be responsible for keeping class attendance records sent by the teachers at John Hardin High School. Mrs. Thompson will also be responsible for sending teachers survey reminders and then administering the surveys to students as described in the Performance Measures and Evaluation

section. Mrs. Thompson will be responsible for conducting any necessary education interventions as determined from fidelity monitoring and every 2-week email check-ins with the teachers. Finally, she will be responsible for meeting with school administrators and teachers for monitoring activity that could influence outcomes once monthly at John Hardin High School, 2 other high school in the county (North Hardin High School and Fort Knox High School), and the feeder schools to all 3 high schools (North Middle School, J.T. Alton Middle School, Bluegrass Middle School, and Fort Knox Middle School) .

Technical Assistant (12 months, 100% FTE)

The technical assistant will be responsible for data input throughout and assistant Mr. Gourd and Mrs. Thompson in survey administration. There will be clerical work associated with the position such as being responsible for printing and delivering program materials to all staff members. The individual hired for this position will also be responsible for sending monthly emails within the Lincoln Trail Health Department checking on other programs/activities occurring that could bias the results. Other job activities include sitting in on focus groups and recording data, helping Ms. Gandy with recruitment of community advisory group members, obtaining and handing out incentives to the appropriate parties, scheduling meetings for community advisory board, focus groups, project team, and training sessions. Will also be responsible for sending out reminders for meetings, and ensuring food is supplied at the meetings in which it has been promised. Finally, they will be responsible for completing and sending out monthly newsletters on progress to stakeholders and community advisory group members.

Biostatistician (1 month, 5% FTE)

The biostatistician will be based out of the University of Louisville and will work with all the program team to complete data analysis as described in the Performance Measures and Evaluation section.

The total cost for Personnel over the 3-year grant period will be: $440,220.

B: Supplies

Item	Number Needed	Unit Cost	Year 1 Amount requested	Year 2 Amount Requested	Year 3 Amount Requested
ALL4YOU2! Materials for each teacher	5	$599.99	$2,999.95	$599.99	$599.99
ALL4YOU2! Student material	14 packets of 30- year 1 18 packets of 30 – year 2 and 3	$90 for each packet	$1,260	$1,620	$1,620
Paper cost/printing for printing surveys and consent forms	2 pages front and back per survey + consent forms x2 for each student (one for parent and one for student)	$0.05/page	$284	$284	$284
Pencils for use at schools	2,268/ year	$12.99 per pack (72 pencils/pack)	$415.68	$415.68	$415.68
Dissemination and Publication Cost			$1000	$1000	$1000
Food- CAG meetings	17 attendees (including program staff)/ meeting	$10/ person	$680	$340	$340

Food – Teachers	See below explanation	$10/ person	$370	$370	$370
Laptop for Technical Assistant			$700		
Totals:			$7,709.63	$4,629.67	$4,629.67
Total for all 3 years:					$16,968.97

Each ALL4YOU2! teacher material guide contains the materials needed for that teacher and 30 student workbooks. At the beginning of the program there will need to be 5 teacher's guides purchased however these guides will be reused year after year. The program team understands that sometimes books get worn down and expect that 1 new guide will need to be purchased each year after the first.

There are a projected 567 students that will participate during each year of the program. Due to this there will not be enough student workbooks included with the teacher guides to give out to every student. An additional 30 student workbooks can be purchased for $90. The guides purchased for the teachers will contain 150 of the needed student workbooks leaving an additional 417 workbooks or 14 additional sets of 30 workbooks for the first year. The next two years only one teachers guide will be purchased contributing 30 student workbooks leaving a need for 537 student workbooks or 18 packets of 30 workbooks.

The cost of paper and printing has been determined based off the number of surveys needed and the cost of producing a 2-page front and back printed survey for the students to fill out at 4 times during the evaluation process for each class that completes the program. From the Program Measures and Evaluation sections above students in each class will be projected to complete 4 surveys total; one at baseline (prior to program start), one on the last day of program,

one at 12 weeks post program, and one at 1-year post program. In addition to this we will supply each student with an opt-out consent form/ informational document and at this time the schools primarily use paper for all other forms sent home to parents or handed out at the freshman orientation session, each student will need two of the opt-out consent forms one for themselves and one for their parents. For black and white printing, it is estimated it will cost $0.05 per page for ink and paper (will use printers already located at the LTHD Hardin County office). For the cost of each year the project team estimated the cost of producing 4 surveys (baseline, last day, 12 weeks, and 1 year) and two consent forms per student.

Pencils will be purchased and left with teachers after the completion of all surveys (even those which will be after they have left that teachers class). The project team believes the teachers will appreciate this since generally teachers are in need of supplies.

Dissemination is planned to be by letter or email and will be decided later in the evaluation process by preferred method of contact from stake holders and community advisory group members. An estimated $1000 each year should cover all cost that may be needed to format an easily readable design to send out via mail or email and cost needed to cover printing and mailing materials if mail is determined to be the preferred route of contact. The project team anticipates hiring a graphic design student from a local high school or college to work on the dissemination materials as a project consultant.

Food will be purchased at several events throughout the program. First the program team will provide food at each CAG meeting including the 3 in the planning phase. In total there will be 8 meetings. At each meeting there will be project team members including the program director, program coordinator, the program staff, and the technical assistant along with the 12

CAG members. The team anticipates spending around $10 per person on food at these meetings. Leading to a total cost for all 3 years of $1360.

The team will also provide food for teachers. First, breakfast, lunch, and dinner will be provided during the one training day each year they participate in before the start of the fall semester. The cost of food was determined by $10 per meal per person who attends the training sessions which would include all 5 health education teachers, the program director, program coordinator, the program staff, and the technical assistant. We will also provide a meal at the focus group session at the end of each program period, this will include feeding all 5 educators the program director and the technical assistant at the same price of food as determined above

Finally, the project team believes due to the amount of computer work and data entry the technical assistant will have it will be important that they have a dedicated computer for this. Therefore, a laptop will be purchased for them to work on and take with them to the many events they will have to attend. We would like to purchase something good for travel such as a Microsoft surface that can be used as a tablet or laptop. The cost for these are currently around $700.

The total cost of supplies for the 3 years of the program will be: $16,968.97

C. Travel

Annual Project Director Meeting:

The program coordinator will be expected to attend this meeting yearly, cost estimates are based off if the meeting were held in Washington D.C with flying as the travel method. Travel cost were based off hotel and flight prices around and December 10th, 2016.

Applicable item	Fee
Hotel (@ $120/night x 3 nights)	$360
Travel (airfare)	$350

Registration Fee	$300
Provided meals	$100
Total/ year	$1,110
Total x3 years	$3,330

Regional Training:

The program staff members, Mr. Gourd and Mrs. Thompson, will be expected to attend this meeting in years 2 and 3 of program implementation, cost estimates are based off if the meeting were held in Washington D.C with flying as the travel method. Travel cost were based off hotel and flight prices around and December 10th, 2016.

Applicable item	Fee
Hotel (@ $120/night x 3 nights)	$360
Travel (airfare)	$700
Registration Fee	$600
Provided meals	$200
Total /year	$1,860
Total x 2 years	$3,720

Other travel to and from schools in the community is considered part of the daily duties of the program staff and will therefore not be reimbursed since it is all within Hardin County.

Total travel cost for the 3 years: $7,050

D. Others

Meeting Space:

The space for all CAG meetings, focus groups, and training sessions will be space at one of the local schools and will be provided free of charge to the program. Meetings of the program staff will be at the LTHD and be free of charge.

Incentives:

Incentives with be given to both teachers and the students who complete the program.

The 5 teachers who participate will be given a $50 gift card to Walmart at the end of each year of the program.

Incentive	Cost year 1	Cost year 2	Cost year 3
Walmart gift certificate - teacher	$250	$250	$250
Student incentives- gift certificates	$5,670	$5,670	$5,670
Totals:	$5,920	$5,920	$5,920
		Total x 3 years:	$19,925

The students who complete the initial and end of program surveys will receive a $5 gift certificate to be used at a local restaurant of their choice; options will include Subway, Zaxby's, Arby's, or a $5 credit to use at the school's cafeteria. For completion of the additional 12-week survey and 1-year survey they will receive an additional $5 gift card. We expect around 567 students to complete the program each year.

The expected total for incentives is: $19,925

E. Indirect Cost:

Indirect cost or the facilities and administrative cost will be calculated at a rate of 50.5%.

The end direct cost have been calculated per year below.

	Year 1	Year 2	Year 3
Total indirect cost	$79,368	$80,910	$83,132
		Total for all 3 years	$243,410

E. Grand Total

Item	Cost

Salary	$314,654
Fringe benefits	$61,752
Health Insurance	$63,814
Supplies	$16,970
Travel	$7,050
Incentives	$19,935
Indirect cost	$243,410
Total	$725,410

The total cost of program implementation for all 3 years is $725,410.

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