Master of Public Health

Integrative Learning Experience Report

SEXUAL EDUCATION IN RILEY COUNTY KANSAS

by

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submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

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Abstract

Project 1: Democratic Republic of the Congo

As of January 2018 there has been no Hepatitis B prevalence study conducted across the Democratic Republic of the Congo (DRC), however, it is said to be highly endemic in the country (Shindano, Kabinda , & Horsmans , 2018). In June 2019, I traveled with Dr. Carole McArthur to the DRC for the purpose of working with her research team from the Université Protestante au Congo (UPC) Medical School to finalize the protocol for peripheral blood membrane cell (PBMC) freezing. This protocol would be utilized for blood samples collected from individuals who have chronic hepatitis B and are HIV and hepatitis C negative. The goal is to send these blood samples back to the United States in order to conduct laboratory assays on the peripheral blood mononuclear cells and serum as well as determine detailed phenotype of T and B lymphocytes in the Hepatitis B samples.

Project 2: Riley County Health Department

From July to September of 2019, I served as a clinical intern at the Riley County Health Department (RCHD) studying sexual health education in Manhattan and Riley County. In Riley County, sexually transmitted infections specifically chlamydia, gonorrhea, and syphilis have been on the rise from 2013-2017. Chlamydia rates per 100,000 were around 500 in 2013 compared to 2018 when they rose to just over 800. The Kansas Department of Health and Environment (KDHE) reports the rates of chlamydia from 2013-2017 being higher in Riley County than in the whole state of Kansas (Riley County Ks , n.d.). In 2013 Gonorrhea cases in Riley County were recorded just above 80 per 100,000, and in 2018 this number climbed to 120, these numbers were lower than the Kansas rates where overall the state reached just under 160 in 2017 (Riley County Ks , n.d.). The focus of my project was education in the school systems, because RCHD is seeing higher rates of sexually transmitted infections in the younger population. I examined the current K-12 programs were currently teaching, researched what other states were teaching, and explored national sexual education programs offered. After three months of engaging school nurses, community programs, and program officials, I was able to provide the county commissioners my recommendations on what changes need to be made moving forward with sexual health education in Manhattan and Riley County Kansas.

Subject Keywords: Peripheral blood mononuclear cell (PBMC) freezing, Hepatitis B, Sexually transmitted infections, sexual education/health, clinical intern, Riley County Health Department

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Chapter 1 - Literature Review

In the article, “The state of sex education in the United States” (Hall, Sales , Komro , & Santelli , 2016) discusses the concerns of rising sexually transmitted infections and rising adolescent pregnancy over the last four decades. The authors talk in detail about the how the United States has adopted an abstinence only until marriage (AOUM) approach to sexual health and education (Hall, Sales , Komro , & Santelli , 2016). This program has continued to be funded by the U.S. Congress with millions of dollars despite research and concerns about the AOUM program; this type of curriculum neglects other forms of contraception such as condoms, leads to gender stereotyping, does not consider nontraditional sexual identities, and promotes religion (Hall, Sales , Komro , & Santelli , 2016).

The authors aim to evaluate the reception of sex education among adolescents and where the future of this education should be headed. They gathered their information based on other research articles and studies done to compile a clear vision of where the education is now and steps that need to be taken to make overall improvements. Currently, there is no standard across the country what schools must follow regarding sexual health. Each state, district, or school board is able to determine what policies to utilize. Schools feel pressure due to limited time in the classroom and resources leaving sex education low among the priorities.

According to the authors between the years 2006-2010 and 2011-2013 there has been a decline in formal sex education that matches the declines that were also seen from 1995-2002 and 2006-2008. When there was sex education being presented, there has been higher reports of abstinence-only education being taught and a decrease in information regarding birth control being circulated. There are also growing concerns about the age at which information is being presented and the gaps in information that are critical to control sexual encounters and their possible outcomes, such as information about birth control, and how to utilize condoms. There has been research to show that from 2007-2014, there has been a decline in youth childbirth and a higher rate of contraceptive use, which leads researchers to believe that sex education is coming from location such as the internet.

As the internet has grown in popularity, the age at which adolescents have access to it has decreased, as well as the age they are able to get cell phones. This presents a unique challenge, now children are able to gain information about sexual health from the internet and those who do

not have internet are learning from their peers. This information may be inaccurate, presented in a scary manner, or not age appropriate, leading to circulation of fear and misinformation. With this information, the authors see there being a chance to change sexual education in the school systems. There are unmet needs; including "comprehensive sexual and reproductive health care, including the full range of contraceptive methods and STI testing and treatment services" (Hall, Sales , Komro , & Santelli , 2016). There is a need for positive, youth centered, age appropriate information available to adolescents, and it can be presented in the school systems in an effort to relay adequate information, instead of needing to rely on the internet.

Moving forward, the best way to do this according to the Hall et. al, is by implementing modern strategies while using contemporary methods of communication including tools such as "peers, digital and social media, and gaming to fully engage young people" (Hall, Sales , Komro , & Santelli , 2016). Through use of technology and updated approach to sexual health, the hope is to improve the state of sexual education, have an impact on policies, and improve the outcomes of reproductive and sexual health for youth in the United States.

"Adolescents have the highest age-specific risk for many STIs, and the highest age-specific proportion of unintended pregnancy in the Unites States" with the United States leading the developed world in rates of adolescent pregnancy (Santelli, et al., 2006). This article by Santelli *et. al* focuses on abstinence only programs and the impact that these programs are having on specific populations such as youth who are sexually active. Policies such as the Adolescent Family Life Act and Section 510 for the Social Security Act, both established in 1996 promote or require teaching abstinence only education to adolescents. Section 510 required programs must solely focus on promoting AOUM, and contraceptive methods outside of abstinence can only be mentioned when emphasizing their failure rates.

Researchers found that after reviewing 28 studies, comprehensive sexual education promotes healthy sexual behaviors such as contraceptive use but also promotes abstinence. Comprehensive education was seen to delay the onset of having sexual intercourse in nine of the 28 studies. A series of abstinence only programs were reviewed, and it was seen that these reviews are less rigorously evaluated compared to comprehensive sexual education programs. Regardless, abstinence only curricula provided no scientific evidence of efficacy in delaying sexual intercourse. The staff of the Committee on Government Reform of the U.S. House Representatives found that 11 of 13 commonly used abstinence-only curricula contained

medically inaccurate, misleading, and falsified information regarding reproductive health and the effectiveness of contraceptives (Santelli, et al., 2006). The Presidents Emergency Plan for AID Relief (PEPFAR), serves 15 counties in parts of Africa, the Caribbean, and Asia, where the population has been severely impacted by AIDS. In order to receive aid from PEPFARE at least 33% of spending on prevention must be on abstinence-until-marriage programs. Human rights groups are seeing an increase in misinformation and censorship and a decrease in the availability of condoms and access to accurate HIV/AIDS information in these countries.

The article "Consequences of Sex Education on Teen and Young Adult Sexual Behaviors and Outcomes (Lindberg & Maddow-Zimet , 2012) focuses on formal sexual education and how abstinence and methods of birth control combine can improve the health of adolescents and young adults. The researchers conducted surveys, face-to-face interviews, and computer questionnaires of respondents 15-24 years old. From this information the study showed receiving formal sexual education before their first experience having sexual intercourse, that contained information on delaying sexual activity and methods of birth control lead to healthier outcomes for adolescents compared to receiving no instruction in either topic. The researchers found that it was important for adolescents to receive some form of sexual health education prior to their first sexual encounter, regardless of the type of education. This study found several gaps in the literature including sociodemographic disparities of sexual education availability and receipt, as well as the medical accuracy of the curriculum being taught of abstinence focused and comprehensive education. Moving forward the researchers suggest focusing the sociodemographic disparities and how to provide age appropriate sexual health education before adolescents first sexual encounter.

Project 1: Democratic Republic of the Congo

In Kinshasa, the capital city in the Democratic Republic of the Congo (see Figure 1.1), I served as a member of a research team focused on revising the protocol for a Hepatitis B study, as well as learning how public health is distributed in this country compared to the United States. The study was being conducted on the hypothesis that Hepatitis B is associated with immune dysfunction. According to a study conducted in 2018 and published in the Journal of Public Health 154,926 samples of blood were collected and Hepatitis B was estimated to have a 4.9% prevalence rate suggesting the DRC can be characterized by an intermediate level of Hepatitis B

infection rate (Shindano T. A., Kabinda , Mitashi , & Horsmans , 2018). I observed and worked in a laboratory on the Université Protestante au Congo (UPC) campus alongside my mentor, the project coordinator, two doctors, and a lab technician. While there, I was able to learn about a mother to child HIV transmission project that the team was working on, how obtaining funding for a research project begins, and the work that goes into obtaining a grant. I also learned how medical school functions differently outside of the United States, visited the School of Public Health at the University of Kinshasa, and learned about mental health in adolescents from the Centre Neuro-Psycho Psychiatrique de Kinshasa (CNPP).

According to the latest United Nations data, Kinshasa is a city that holds 89,099,722 individuals, ranking 16th in the world by population size, this demographic is the equivalent of 1.15% of the world population (DR Congo Population , 2020). The majority of the time was spent in one of the labs at UPC which is a private institution that has a coeducation student population range from 7,000-7,999 (Université Protestante du Congo, n.d.). The University offers many programs including business administration and economic sciences, theology, law, medicine, and computer sciences (The Faculties, 2018). For our studies, we utilized one of the labs in the medical school.

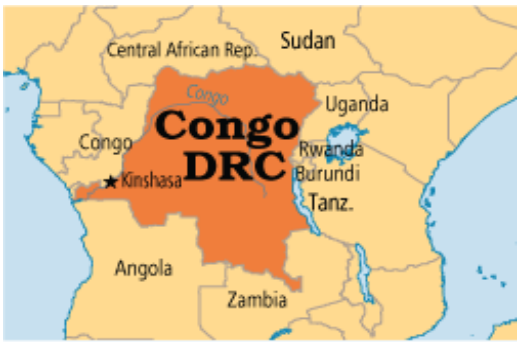

Figure 1-1 Map of the Democratic Republic of the Congo

While in the DRC, I worked alongside Dr. Carole McArthur from the University of Missouri-Kansas City (UMKC) School of Dentistry. Dr. McArthur obtained a Ph.D. in immunology with a minor in biochemistry from the University of Otago, and received her M.D. degree from UMKC as a clinical and anatomical pathologist (Caole McArthur , 2020). Dr. McArthur has spent over twenty years studying and researching HIV/AIDS, as well as drug resistant tuberculosis and fungi in Africa, with her work being focused mainly in Cameroon and moving into the DRC. Linda James is the project coordinator, who has lived and worked in Kinshasa for nearly ten years. Linda is currently working on her Master of Public Health at the

London School of Hygiene and Tropical Medicine. She is an employee at UPC, and she also coordinates with Dr. McArthur and the team in Kinshasa ensuring the research is running smoothly and data is being collected while Dr. McArthur is in Kansas City. Jeansy Mavinga is a lab technician at UPC who collects all the chemical compounds, creates the reagents required, and runs the lab equipment required for experiments, he also helps with sample collection around the DRC. Finally, on the research team are Dr. Gaetan Bondo and Dr. Yves Tsgangala who just competed medical school in May and are now moving into their research studies, Gaetan has applied and been accepted to the School of Public Health at the University of Kinshasa, and Yves plans to study mental health in adolescents through his work at CNPP.

My role on the research team was to help edit the protocol for peripheral blood mononuclear cells (PBMC) freezing, in order to be usable for the team in Kinshasa. The original protocol comes from the University of Maryland and UMKC where they have state of the art resources and access to all reagents required for the study. In the lab, the team attempted to replicate the protocol and quickly learned the needed chemicals and reagents were not available in the DRC. Jeansy was instrumental in obtaining and making the required compounds in order for the protocol to run properly. The team had to learn what setting on the centrifuge was appropriate to obtain the desired results of plasma on top, the buffy coat in the middle, and red blood cells at the bottom of the test tube. There was also a need to determine the amount of washes required to ensure as many red blood cells were out of the sample, we needed more than the protocol due to the slight variation in compounds. Once we had a better understanding of the protocol, we replicated the steps several times. I was able to learn sterile lab technique, and learn from the team how to remove layers in a sample without disturbing or collecting the wrong sample.

My primary focus in Kinshasa was to help revise the protocol for PBMC in a way that could be utilized for the team and to learn about public health in another country. I was able to observe and question the team, as well as others we met throughout the trip. I was able to gain a clearer picture of the struggles associated with public health on a global scale.

Project 2: Riley County Health Department

My role as an intern at the Riley County Health Department was to review the current education plan in Riley County for sexual education, evaluate the legislation in Kansas, and find

what the state requires to be taught in the school systems and compare that to what is being presented to students. I conducted interviews with nursing staff at an elementary school, and via email with the high school nurse who was also able to report on the middle schools. More information was gathered from Relate 360 and Positive Connections; which are outreach programs that serve Riley County and the surrounding areas. Once I was confident with Manhattan's curriculum, I researched other states and national programs that are in place across the country. This information provided me with the tools necessary to relay my suggestions to the county commissioners.

The Riley County Health Department (RCHD) serves 74,232 individuals as of July 2019 (QuickFacts Riley County, Kansas , 2019), including Manhattan, Fort Riley, Leonardville, Randolph, and Riley. Figure 1.2 provides the structure of the Riley county health department.

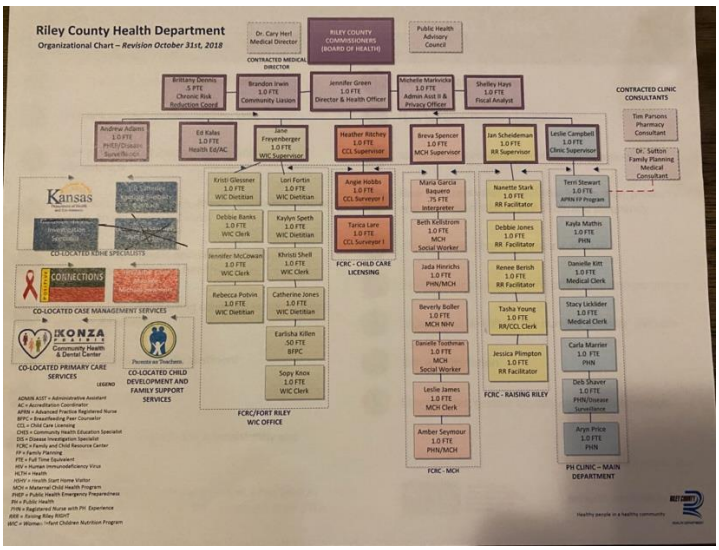

Figure 1-2 Riley County Health Department: Organizational Chart

I worked with Leslie Campbell the clinical director and a registered nurse, and Aryn Price a registered nurse focused on public health who is responsible for STI testing within the clinic. I reported on the project to the entire clinical staff; which includes four nurses, the clinical director, and two secretaries. Aryn was my daily contact point and the head of the project, she assisted with my trainings, and went to Relate 360 meetings with me.

For my clinical internship project, I gathered information regarding STI rates in Riley County as well as information about the current curriculum being taught. This information was

gathered via email communication, in person interviews, and research on the internet. This information was crucial to understand what is and is not working in the education of students regarding sexual health. According to the Riley County health page, STI rates specifically gonorrhea, chlamydia, and syphilis have been on the rise over the past five years (Riley County Ks , n.d.), and this information is consistent with information that was gathered during interviews with the school nurses. One thing that can help increase information and decrease the rates of STI's among youth is improving the education they are getting regarding sexual health and responsibilities. Currently, the schools in Riley County teach an abstinence only curriculum if anything is being taught at all, which has been researched and proven over many years to be an ineffective way to "delay sexual initiation, reduce sexual risk behaviors, or improve reproductive health outcomes" (Hall, Sales , Komro , & Santelli , 2016). The primary concern raised by Aryn, and the school nurses that was brought up is that the abstinence only education is outdated, and the students are receiving a disservice by not having the best information.

My primary focus for this project was to evaluate sexual education programs being offered on a national level, evaluate these programs, and pick the top three which will then be narrowed down to one. This recommendation would be presented to the city commissioners to share why change needs to be made, and how I would move forward to make positive changes in the curriculum for sexual health.

Chapter 2 - Learning Objectives and Project Description

Project 1: Democratic Republic of the Congo

Learning objectives from my time with Dr. McArthur in Kinshasa, DRC include: Collecting samples from Hepatitis B positive patients to examine if the disease is associated with immune cell dysfunction, Revising the protocol for PBMC, meeting with program directors to gain access to needed supplies such as liquid nitrogen and a biohazard hood to conduct the protocol, working with the lab team in order to learn proper technique to ensure the best samples for shipping and further research back to the United States.

I had the opportunity to participate and attend many activities throughout my time as a member of the lab team in Kinshasa. I toured the Institut National De Recherche Bio-Medical (INRB) where we had a meeting with the Director, Muyembe Tamfum, and following this we met with Steve Ahuka. Professor Muyembe Tamfum has his M.D. as well as his Ph.D., he has been instrumental in the fight against ebola. Professor Muyembe was a member of the research team who investigated the first known outbreak of Ebola (Fleck, 2018) and continues his research of Ebola. Steve Ahuka has his MD, MTM, and Ph.D., he is the chief of the virology department at the INRB and he works on all major diseases such as yellow fever, ebola, polio, measles, rubella, etc. Most of the labs in use were being used to study polio. The purpose of this meeting was to try and obtain a source of liquid nitrogen for shipping the PBMC samples to the United States for further research. We were also hoping to secure the use of a bio-hazard hood, the protocol is meant to be conducted under the hood in order to ensure sterile conditions and limit contamination during the protocol. From this meeting we were able to secure the use of nitrogen for a cost as well as a bio-hazard hood with lab access during hours that do not interfere with the work being done by those at the INRB.

We had the opportunity to tour the Kinshasa School of Public Health where we met with the director Mashinda Kulimba Désiré who has his MD, MPH, and Ph.D. We met with Dr. Mashinda in an effort to explain the Hepatitis B study, Dr. McArthur was working to get funding and approval for. Dr. Mashinda then gave us a tour of the School of Public Health where we saw the lab facilities, classrooms, and dormitories students stay in. The school has five main areas of focus for their public health students including; public health, field epidemiology, nutritional epidemiology, health economics, and health environment. While talking with Dr. Mashinda, I

learned that the curriculum the students in Kinshasa experience is very similar to what I have been learning at Kansas State University, and they also conduct a type of field project before the students graduate as well.

Our final tour in Kinshasa was at the CNPP in Kinshasa where we had the opportunity to learn about their services from Dr. Ouragan Mayemba who is an assistant doctor in neuropsychiatry. Dr. Ouragan explained to us that mental health is taboo in not only the DRC but Africa as a whole. CNPP focuses on adolescents who are afflicted with mental illness or brain deficiencies. It was explained to us that these children are often abandoned by their families or treated differently because of the illness. CNPP aims to give these youths structure and help them learn to live and handle their condition. Some of the clients stay on the CNPP campus full time while others have guardians who drop them off in the morning and pick them up later in the afternoon. This facility has a small dorm area for both boys and girls, there are sensory rooms, a garden area to walk around, classroom areas for learning, and toys for the children to play with. Dr. Ouragan said that CNPP is meant to be a safe space for these youth to grow, learn, and develop so they can learn to work and live with the condition they have.

When we were not touring facilities and seeking resources, the team was in the lab working on the protocol for PBMC freezing. We worked through the procedure step by step making sure the lab had access to all the required reagents, the centrifuge was being run at the right speed and for the proper length of time, and that all members of the team understood and could properly extract the plasma for freezing, and obtain the buffy coat to process further for suspension and shipment. For this experiment we were looking for surface antigen Hepatitis B positive patients, a blood sample would be collected and taken back to the lab. Once the sample is at the lab, Gaetan, Yves, and Jeansy, would use the protocol to obtain a clean buffy coat that can be shipped to the United States for marker testing and *in-vitro* studies.

Project 2: Riley County Health Department

Learning objectives at RCHD with Leslie and Aryn include: review current sexual health and education plans in Riley County, evaluate legislation in Kansas regarding sexual education, learn what national recommendations there are for sexual education in schools, interview and perform outreach to learn about sexual education, and finally to make a recommendation to the county commissioners on how to help Riley County improve sexual health education. My

project at the RCHD allowed for trainings, appointment shadowing, meetings, and emails. When I first started at the health department, I was required to complete a series of trainings including HIPAA Training; HIPAA awareness-module 1, HIPAA allowable disclosures and safeguards-module 2, and HIPAA right to access and documentation-module 3. Other trainings that I was required to complete included: bloodborne pathogen training, title X family planning and orientation; family planning basics, quality family planning services; putting QFP into practice series, and counseling adolescents about sexual coercion and abuse. These trainings helped set the foundation for my work as an intern, HIPAA was very beneficial in order to learn how to protect patients and their privacy.

Every morning the clinical staff would meet, myself included, to cover events that happened the day before, what was upcoming, and if there was anything the team needed to work though together. Once a month we would open the clinic an hour later to hold a formal clinic meeting with an agenda allowing for updates, things that were coming up, and how event planning was going for the many projects the health department is in charge of, such as everybody counts, and Okt-FLU-ber fest. During these meetings, I would update the clinical team on my work and upcoming meetings regarding sexual health.

I had the opportunity to meet with Susanne Renberg the director of Relate 360, which is a program that "takes a wholesome and comprehensive approach to relationships and human sexuality" (About Us , n.d.). During our meetings with Susanne we hoped to establish an open dialogue about the current state of sex education in Manhattan, learn what Relate 360 was currently doing in the community, and where we could collaborate in order to implement change that we all saw as required and necessary to help the youth in our community. Susanne informed us that she was only able to get into some schools because of personal connections, she was not able to gain access to all classrooms or even schools in USD 383. It was also learned that Relate 360 is a religious based curriculum and is not strictly abstinence only but heavily emphasizes this strategy. From this meeting we created an action plan which included the desire to meet with school nurses, meet with physical education/health teachers, research dropout rates, STI rates, and pregnancy rates in the school system, and look into the possibility of starting workshops on the weekend that Susanne could lead and the health department could promote and assist however necessary.

Another resource I was able to connect with was Positive Connections located in Topeka, Kansas but extends far beyond the capital city with its outreach programs. This is a "community based organization that advocates for people living in Northeast Kansas and provides comprehensive services to individuals who are impacted by HIV/AIDS, sexually transmitted infections and Hepatitis C" (Our Mission , n.d.). I had the opportunity to have a phone call with Dustin Pfafatter who is currently the assistant director, but at the time was the outreach coordinator. During our conversation; I told Dustin my goal is to learn about programs in Kansas that teach sexual education and health which is what lead me to Positive Connections. Dustin said his focus as the outreach coordinator is to make the information as personable as possible. Dustin states that statistics are not effective in his experience, however, being charismatic and being honest with people has shown to be the most successful in his work. Dustin helps run pop-up testing clinics in bars, including the ones in Manhattan, juvenile detention centers, Geary county jail, and even his car, if it is easiest for the individuals needing tested. I had the opportunity to observe Dustin's presentation at the Geary county jail to a group of twenty inmates. He presented the information in a conversational manner with real life scenarios relating the information to their wives or girlfriends on the outside, and about the inmates once they are released. At the end of his conversation, he presented the inmates with a sexually transmitted infections awareness post-test (Appendix 1). The assessment was taken as a group and when content was unclear, they were able to ask questions, which they did, and it created a comfortable learning environment.

The school nurses at USD 383 school district were very helpful during my research of the education in the school systems. I had an email conversation with Robin Mall who is the head nurse at the high school, and she reported that in the 2018-2019 school year she had the most pregnancies she has seen in her time at the high school. Robin also reported higher number of STIs, but only on suspicion, not actual numbers because she stated students are not likely to ask for help if they think they have an STI due to the potential of parents or guardians finding out and the repercussions from this. When looking at the data from the Kansas Department of Health and Environment (KDHE) however, the rate of teen pregnancies has remained consistent from 2016-2018 with 7, 6, and, 7 pregnancies in these respective years (Vital and Health Statistics Information, 2018). Since students do not confide in nurses, family members, or friends, when STI or pregnancies occur this leaves them feeling isolated. Currently, there are no

resources in USD 383 for students to seek help. The RCHD is an organization that contains the resources and training to assist teens with STI and pregnancy education. I learned that sexual education and health is not a required part of teachings in the high school besides half a semester at the 9th grade level. This course is usually taught by the physical education teacher who is not properly prepared or trained to teach the course. Heather Kypta is the school nurse at Bergman elementary school, and we were able to set up a meeting to discuss sexual health and education in the elementary schools. Heather said courses start at 4th grade all the way to 6th grade, boys and girls have separate courses, and all the USD 383 elementary school use the P&G program (Our Programs , 2020). From her opinion, she feels that the material is outdated, and after getting the chance to watch the videos for the boys' and girls' programs at the 4th-6th grade level, I agree with her. This material is outdated, due to filming in the 90's and actors being dressed in 90s clothing, and the material is presented by the actors in a way that could be seen as comical. This material creates an environment for student to disregard the information and not absorb the material that is important. I knew from my talk with Heather and watching the videos that it would be important to implement a program for all school ages.

The majority of my time at the health department was spent researching what policies and requirements there are in Kansas regarding sexual education and finding programs across the nation regarding sexual health and education. The purpose of this work was to learn if the requirements were being met in Kansas, and what other states were doing; that could potentially improve the education for adolescents in Riley County. This led to emailing organizations including the Rhode Island Department of Education, Selina Vickers of West Virginia, and Chancellor Dr. Lewis Ferebee from the District of Columbia, Our Whole Lives (OWL), and Advocates for Youth. I heard back from some of these organizations and individuals but not all of them, however, I was still able to learn a great deal of information from their websites. With this information I was able to compile my research into a presentation for the county commissioners and provide a recommendation on where Riley County should go from here.

Chapter 3 - Results

Project 1: Democratic Republic of the Congo

My time in Kinshasa assisted in having a finalized protocol that could be utilized and performed by the lab team once samples of Hepatitis B surface antigen positive patients had been collected (Appendix 2). This study has not yet begun due to a lack of funding. Dr. McArthur and Linda have been working to find the funding through grant applications and partnerships with other Universities around the Unites States. Once funding is obtained, the team in Kinshasa will be able to collect sample and preform the PBMC freezing protocol in order to have samples that can be shipped back to the United States for further studies.

Project 2: Riley County Health Department

My study focus for the Riley County Health Department was the USD 383 school district as it houses all Manhattan schools and encompasses the largest portion of the population in Riley County. The State of Kansas was another major focal point in order to learn about policies and legislation in place for the state, and if they were being met in the curriculum for Riley County. Finally, other states and national programs were needed to learn what could be done better and provide a platform for me to make my recommendations to the county commissioners.

To begin this project I focused on STI rates in Riley County and compared them to the state of Kansas. The results of the findings are provided in the maps below that focus on chlamydia, gonorrhea, primary and secondary syphilis, as well as early latent syphilis.

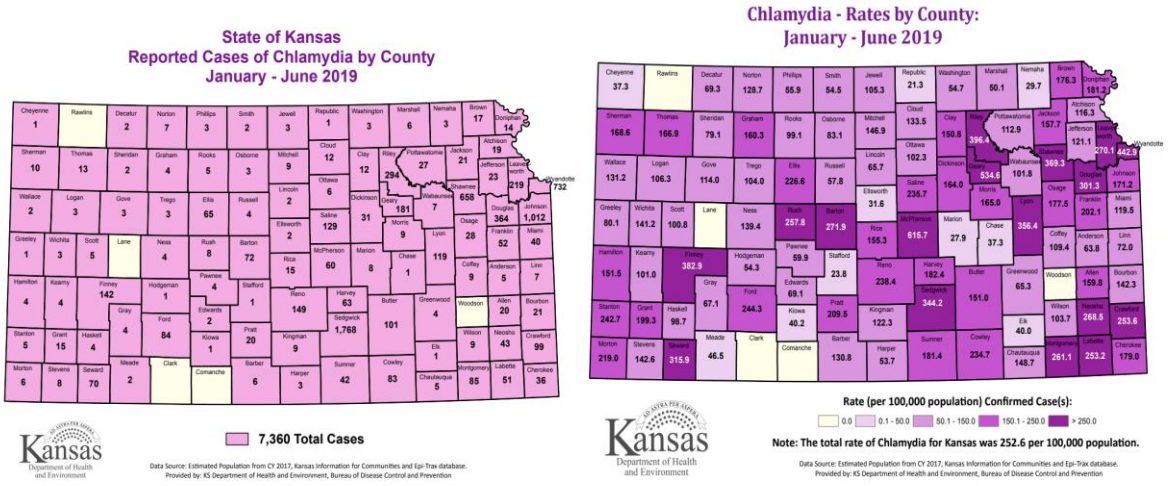

Figure 3-1 Chlamydia Rates by County

Kansas has 105 counties in total, looking at the map on the left you can see that Riley County has 294 cases of chlamydia from January to June of 2019, ranking 6th highest in Kansas. On the right is the same map but looking at the counties per 100,000 people. Riley County is ranked 4th out of 104 as it has 396.4 per 100,000 individuals which is significantly higher than the total rate of chlamydia for Kansas which is 252.6 per 100,000 population.

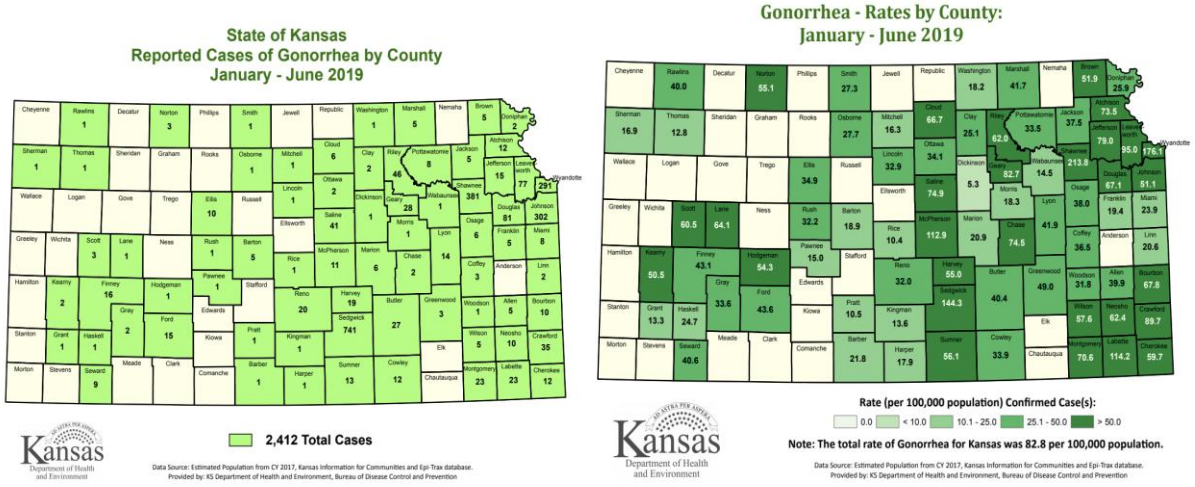

Figure 3-2 Gonorrhea Rates by County

The maps above look at the rates of gonorrhea, on the left Riley County ranks 7th out of 105 counties with 46 cases. On the right is a map looking at gonorrhea per 100,000 population. Kansas has a total rate of 82.2 per 100,000 people while Riley County has a rate of 62.0 per 100,000. This ranks Riley county as 18th out of 105 total counties in Kansas.

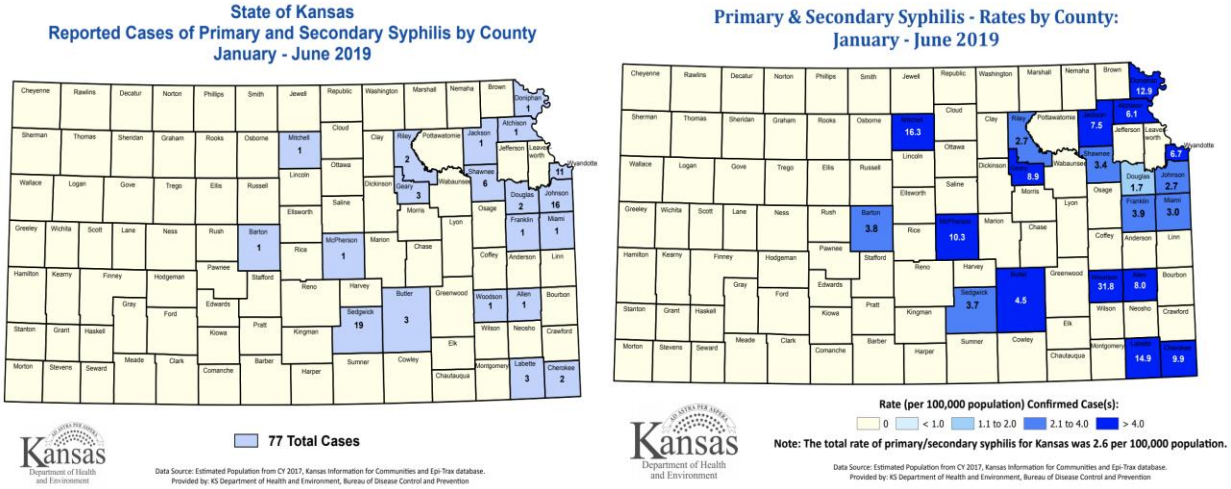

Figure 3-3 Primary & Secondary Syphilis

There are four stages of syphilis including primary, secondary, latent, and tertiary. Latent can be divided into early latent meaning the infection occurred in the last 12 months and late latent phases meaning the infection has passed 12 months. Without treatment, syphilis continues to progress from primary, to secondary, and onward. The KDHE provides information on primary, secondary, and early latent syphilis.

Primary and secondary syphilis is present in 20 counties of the 105 in Kansas, on the left it can be seen that Riley County has two cases. On the right is the per 100,000 map and Riley County has a rate of 2.7 per 100,000 while the total rate of primary and secondary syphilis in Kanas is 2.6 per 100,000 population.

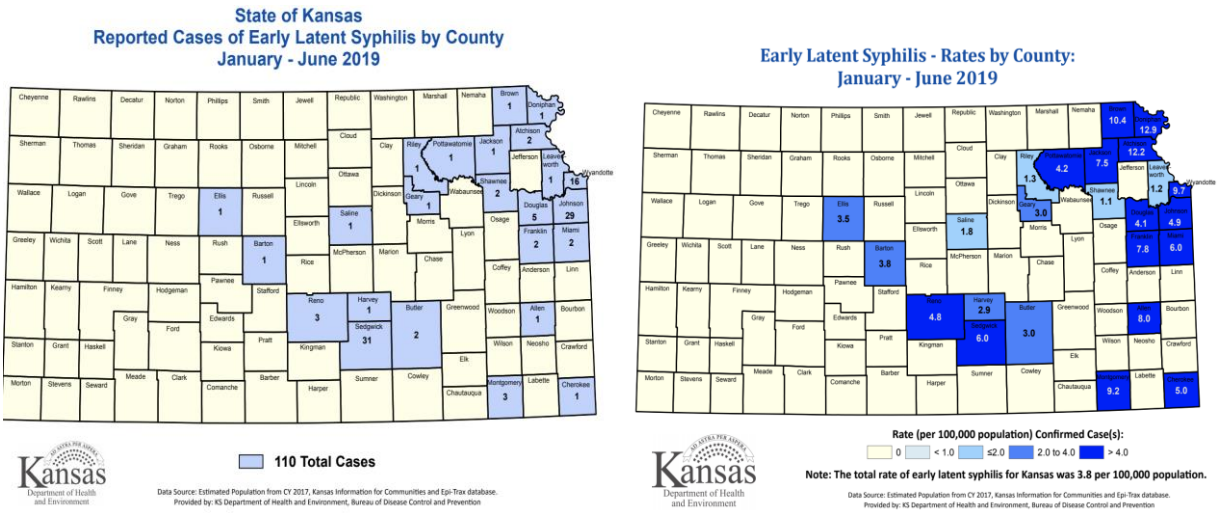

Figure 3-4 Early Latent Syphilis

Early latent syphilis occurs within 12 months of the initial infection. Riley County has one reported case of early latent syphilis which is seen on the map above on the left. On the right Kansas has a total rate of early latent syphilis of 3.8 per 100,000, and Riley County is significantly below this with a rate of 1.3 per 100,000 persons.

According to the Sexuality Information and Education Council of the United States (SIECUS) “Kansas standards for health education include instruction on puberty, abstinence, STIs, and law associated with sexual behavior. Curriculum is not required to be comprehensive and schools are not required to include instruction on sexual orientation, gender identity, healthy relationships, or affirmative consent” (State Profiles , 2020). Listed in Table 3.1 is the current state standards that are basic competency requirements for public schools. These standards have

been enhanced since 2018 where the only requirement from 9th grade to graduation was to know the importance and benefits of abstinent behavior and risk reducing strategies.

Table 3-1 Kansas Standards for Sexual Health

Kansas Standards for Sexual Education	
End of 4th Grade	Family life and sexuality
End of 8th Grade	Describe ways to reduce risk related to adolescent growth and development Development of male and female reproductive organs Risks and preventions of sexually transmitted infections
High School	Adapting to changes associated with puberty Adapting to change within the family Changing responsibilities from adolescence to adulthood Responsible behaviors within relationships Potential outcomes of sexual activity Impact of media and technology on sexual behaviors Laws associated with sexual behaviors Differences between individual family, community, and global values.

The Centers for Disease Control and Prevention (CDC) has identified 19 sexual health education topics that are considered to be critical to ensure a young person's sexual health (Appendix 3). In 2017-2018 the CDC conducted a self-report study regarding the health policies and practices of schools in each state and the extent at which they are meeting the 19 critical sexual health education topics. These results of this study are included below in Table 3.2. The CDC cautions that the data was collected from self-administered questionnaires completed by schools' principals and lead health education teachers. The CDC notes that one limitation of the school health profiles is bias toward the reporting of more positive policies and practices. These statistics showed the importance of improving sexual health education in Kansas and pursuing a more holistic education plan in Riley County.

Table 3-2 Kansas School Health Profile 2017-2018

Kansas School Health Profile		
	% Achieved in Grade 6-8	% Achieved in Grade 9-12
Taught all 20 sexual health education topics	14.3%	24.4%
Benefits of sexual abstinence	73.3%	88.5%
How to access valid and reliable information, products, and services for HIV, STI, and pregnancy	57.4%	81.3%
Create and sustain health and respectful relationships	68.9%	87.8%
Preventative care necessary to maintain reproductive and sexual health	51.4%	74.5%
How to correctly use a condom	22.9%	43.9%
Teaching methods other than condoms	46.2%	69.1%
Teaching about sexual orientation	27.9%	40.9%
Teaching about gender roles, gender identity, or gender expression	30.7%	44.2%

Once I had a better understanding on the curriculum in Kansas, I was then able to look at sexual education on a national level. Of the 50 states, 27 states require both HIV and sex education, Two states mandate sex education, and 10 states only mandate HIV education, only 17 states require the information to be medically accurate, and nine states require the information to be unbiased against race, sex, or ethnicity (Sex and HIV Education , 2020). Rhode Island and the District of Columbia were good models in my opinion for sexual health education and declared clear and detailed state standards on sexual health (Shapiro & Brown , 2018). The department of education for Rhode Island says “school health starts with partnerships at the state, school, and community levels-involving families and other stakeholders” (Health and Saftey , n.d.). Rhode Island has four broad cores of learning including communication, problem-solving, body of knowledge, and responsibilities, there are seven standards that fit among the cores (Other Subjects , 2015). These cores are mandated across the state of Rhode Island and it is the standard to have them in the school systems. They also utilize a program called thrive that coordinates school health programs focusing on comprehensive sexuality programs, the LGBTQ

community, and teen pregnancy (Sexuality Education, 2016). The District of Columbia has implemented a peer education program called Wrap M.C. which allows students to educate their peers on condom use as well as distribute them, they have school based health centers, STI screenings once a year in the high schools, and have condoms available to the students (About Us , 2020). Advocates for Youth has become a mandated part of the curriculum in the District of Columbia, there are modules being taught kindergarten through 12th grade (Student sexual health curriculum overview , 2019). Rhode Island and the District of Columbia offer comprehensive sexual education including focuses on a wide range of contraceptive methods, creating an inclusive education program for varying races, gender, and sexual identities. This puts these two states ahead of Kansas due to their organized level of curriculum across the state and a cohesive program for the adolescents.

There are many programs that are being used on a national level including; Our Whole Lives, FLASH, Advocates for Youth, Teaching Sexual Health, Get Real, and Choosing the Best. Our Whole Lives is a program that covers kindergarten-12th grade, as well as young adults and adults, it is founded in faith and focuses on self-worth, sexual health, responsibility, justice, and inclusivity (Our Whole Lives: Lifespan Sexuality Education , 2020). This is a program that costs money for each program, as well as training books for each module. FLASH is a "widely used comprehensive sexuality education curriculum…designed to prevent teen pregnancy, STD's and sexual violence (FLASH , n.d.). The curriculum is for 4th grade through 12th grade, requiring binder with the curriculum. The cost of the program is $76 dollars for the elementary school binder, and $100 for the middle and high school binders. Advocates for Youth is a free curriculum for kindergarten through 12th grade students. This organization focuses on advocacy for youth programs seeing value in adolescents "rights to honest sexual health information; accessible, confidential, and affordable sexual health services" (About 3Rs, 2020). Teaching Sexual Health is a program for classes 4-12th grade that is free to the public. This program offers multiple languages, ability levels, and gender considerations. Get Real: Comprehensive sex education that works is made for 6th-9th grade students focusing on "social and emotional skills as a key component of healthy relationships and responsible decision making (Why Get Real? , 2014), this program is quite expensive costing over $600. Finally, Choosing the Best is "the leader in abstinence-centered sexual risk avoidance curricula, training, and resources" (About Us , 2019) and is for grades 6-12.

Table 3-3 National Sexual Health Education Programs

National Programs	
Our Whole Lives	-K-12th grade, young adults, adults -Founded in faith -Focus on self-worth, sexual health, responsibility, justice, inclusivity -Cost for each school grade and module
FLASH	-4th-12th grade -Focuses on preventing teen pregnancy, STIs, and sexual violence -$76 for elementary binders, $100 for middle and high school binders
Advocates for Youth	-K-12th grade -Focuses on advocacy for youth, rights to honest sexual health information, accessible, confidential, and affordable sexual health services -Free curriculum
Teaching Sexual Health	-4th-12th grade -Offered in multiple languages, ability levels, and gender considerations -Free curriculum
Get Real	-6th-9th grade -Focuses on social and emotional skills for healthy relationships and decision making -Cost over $600
Choosing the best	-6th-12th grade -Leaders in abstinence-centered sexual avoidance curricula, training, and resources -Cost for each grade level

Based on the curriculum of each program, I was able to narrow the field of five down to three, Our Whole Lives, FLASH, and Advocates for Youth. Each of these programs has elementary education all the way through high school. They cover extensive topics (Appendix 4a,b,c) and help meet the needs of the Riley County community by advancing the sexual health education for adolescents. I compiled the information regarding the statistics listed in table 3.2, as well as information about the three above programs in a presentation. This presentation is meant to be used by the next clinical intern to continue educating the public, as well as for my presentation to the county commissioners.

From this field of three, I was able to select the best program for Riley County, Advocates for Youth is my suggestion for Riley county to adopt and implement in the USD 383 school district. This program offers the most comprehensive coverage for all ages, there are 17 focal areas that are taught throughout the whole program. Some of these focal points include condoms and birth control, decision-making, families, gender identity, puberty, and relationships (About 3Rs, 2020). This material is able to reach all portions of the student body including LGBTQ, provide information on abstinence as well as other forms of birth control. It teaches about healthy relationships and families. The sessions are 40 minutes at the K-5th grade level, and 50 minutes from 6th-12th grade, and also has family homework activities for K-9th grade.

Chapter 4 - Discussion

Project 1: Democratic Republic of the Congo

My experience in the DRC in Kinshasa gave me a small look into public health on a global scale. I was able to see how politics, lack of resources, and poverty have an impact on how public health can function in a country. I learned the troubles with not having access to required reagents and how this can delay experiments or how an unreliable source to ensure the proper compounds in a reagent can ruin a trial. Grant approval and funding is key to research as well as approval for international shipments of samples, and Dr. McArthur taught me about the process and the work she was doing when not in the lab to find funding for the Hepatitis B project. Through this work, I learned it is important to know what resources are available to you, cultural norms, and having a team in the country you are working in is vital asset.

When we arrived in the DRC, the team knew that the project did not have funding, but was hopeful about some communications previously in the works. Everyone felt that the project was important, and the results of learning of a potential connection between Hepatitis B and immune dysfunction could advance information about the virus. The team worked diligently to learn the protocol and perform it with precision to get the best results. Unfortunately, as of today, there has still not been any funding for the project so there are no results for the project and the success of the protocol we revised. Dr. McArthur is still working to get funding through grants and collaborations with other universities and hopes that as soon as funding is obtained the study can begin.

Project 2: Riley County Health Department

I found valuable information while researching sexual health education in Riley County and across the nation. During this process, I utilized the internet, email communication, meetings, and phone calls, to obtain information required for the internship.

If I was able to continue as a clinical intern, I would have liked to collaborate with the local schools and also take my presentation to the school board in the hopes of implementing the new curriculum in the coming school year. When I left the health department, they were hoping to fill my position with a health policy liaison intern. This was to be a funded position through the Sunflower Foundation grant to address social determinants of health and social needs. The

goal is to create a relationship between the schools and the health department in order to improve sexual health education for adolescents. Unfortunately, there has not been an intern to take over the project and I was unable to continue on the project. I hope that this summer, I can potentially continue my work at the health department in order to get a stronger more comprehensive curriculum in place.

One of the concerns working on this project was the topic, sexual health education tends to be a hot topic where people have extreme views on what they are and are not okay with being implemented in their children's lives. "Advocates have faced an uphill battle to advance sex education in Kansas" (State Profiles , 2020), because it is a conservative state and people are comfortable with an abstinence centered education which has proven to be ineffective in many research studies including the one by Hall *et. al*. There was a need for caution when approaching varying audiences with a sensitive topic, it was important to lead with facts and numbers in the hope of showing the deficits in the current curriculum. From facts, I could move into what can be done and the potential of implementing a new program.

When selecting a new program, I was looking for something that was inclusive of all genders, sex orientations, ethnic backgrounds, and race to ensure as many students as possible would be reached by the information and feel that the content could apply or relate to them. The most comprehensive and inclusive program I found was Advocates for Youth. This program teaches age appropriate information staring at kindergarten through 12th grade ranging from a variety of topics and lessons. The education for kindergarteners is simple, beginning with "different kinds of families, understanding our bodies: the basics, and my space your space" (About 3Rs, 2020). The programs grow as the students do moving to cover topics on relationships, bullying, decision-making, STI/HIV, consent, abstinence, gender identity, accessing information support/resources, advocacy, anatomy and reproduction, and condoms and birth control. These topics help students think deeper about the content and tend to be more inclusive than other programs, touching on gender, abstinence, and other forms of birth control.

Many states including Kansas have an opt-in or an opt-out rule. Opt-in means parents have to sign a permission slip to allow their students to participate in sexual health education. Opt-out is when parents have to sign a paper for their children to not be involved in course material. Advocates for Youth works to encompass not only the children but also the parents. With each lesson from kindergarten through 9th grade there is family homework. This aims to

include individuals at home, so they can feel comfortable with the material being presented to their children and can also answer any questions that their children may have on the material. This allows parents or guardians to be a part of the message their children are receiving and input what they feel is necessary.

Advocates for Youth, is a free program that has all of the required resources online, including PDF files, worksheets, and instructions on each module. I thought this was a benefit in picking Advocates for Youth, because at no cost the schools may be more interested in implementing the curriculum. This free curriculum lowers the risk involved with trying something new, especially since schools tend to be tight on budgets. It would be ideal to implement this program for one full academic year at all age levels. At the end of the year, the students could take a survey and provide feedback on their thoughts about the program. After two years we could begin to collect data on STI rates, teen pregnancies, and use of birth control of sexually active. At the end of each year there could be a survey to ensure each grade level is benefiting from the topics being presented, and that it is effective in reducing the rates of STI's, and teen pregnancies while increasing the rate of contraceptive use for those who are sexually active. This course could be taught by core room teachers, or potentially physical education teachers as the website has resources and online support for individuals reaching the courses.

When this information was presented to the county commissioners, they were surprised to learn about the high rates of STI's and teen pregnancies in Riley County compared to the state of Kansas. It was also a shock for them, as it was for me, to learn that Kansas schools are not meeting the essential 19 sexual health education topics by a large deficit. After my presentation, they asked questions such as "What next?" and "Why do you think these rates are so high?" showing a great level of interest in the topic. The hope following this presentation was to share this presentation with USD 383, which the county commissioners were in favor of, they saw a need for change as well. This not only gave me confidence but also the clinical team that we were onto something and maybe now is the right time and people are more open to making improvements regarding sexual health education.

To conclude, my research into sexual health education and recommendation to the county commissioners the topic to gain some light and get people thinking about what can be done to make the curriculum better for adolescents. I was able to recommend a program that is comprehensive, inclusive, age appropriate, and feasible for the community to implement. I was

able to present this information and raise awareness on a need for updated sexual health education. Through both of my field experiences, I gained an array of knowledge and experiences. I have learned how to adapt to new situations, communicate, collect information, and serve the community in the hopes to make advancements for those I serve. I am grateful for my mentors and those I was able to meet along the way; they have made me eager to begin working in the field of public health.

Chapter 5 - Competencies

Student Attainment of MPH Foundational Competencies

Competency 6*:* Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Project 1: Democratic Republic of the Congo

Before my trip to Kinshasa in the Democratic Republic of the Congo (DRC) I knew that I was about to experience and see things that I had never encountered before. There are approximately 80 million individuals living in the DRC and 73% of those are living in extreme poverty meaning they live on less than $1.90 a day (The World Bank in DRC, 2019). Dr. McArthur was an effective and experienced mentor since she was an experienced traveler to Africa and the DRC. Dr. McArthur explained that the country has been at war essentially since 1996 starting with the First Congo war (Eastern Congo Initiative , n.d.). The government and organizations associated with them are corrupt, for example the police may accept bribes, low level officials demand bribes in order to make a living, there is high job insecurity, and leaders tend to change officials often to ensure they do not obtain too much power (Transparency Int'l , 2019). The government invests money in personal relations to win popularity instead of investing in social programs which would gain support from the majority of the population. "The DRC's government structure has had a tumultuous relationship with their population, engaging in genocidal violence during internal conflict, and an unstable kleptocratic government system post-conflict" (Keysa, 2018). The Congolese people also have to use bribes in order to access public services such as services from the justice department and healthcare workers. I had a feeling this would impact our work, but I did not know how much until we were in the country and I experienced first-hand how things worked. We were not able to go many places due to a lack of trust of "outsiders" and also the misconception that white individuals have money. This along with the political unrest made it unsafe for us to go much farther than our hostel and the lab at Université Protestante au Congo. "One-third of the DRC's population has been internally displaced as a result of the country's long history of political instability and violence" (Keysa,

2018). The DRC is considered a level 3, meaning reconsider travel due to crime, civil unrest, and Ebola, according to the state travel pages. "Demonstrations are common in many cities and some have turned violent. Police have at times responded with heavy-handed tactics that resulted in civilian casualties and arrests" (Democratic Republic of the Congo Travel Advisory, 2020). As we walked out of the airport in Kinshasa, there was a large crowd of people, some asking for money, some trying to take our bags hoping for money for assisting us, some were shouting. While driving through the city of Kinshasa we had to utilize a local driver from UPC, and even with his presence we were stopped daily with people knocking on the windows asking for money, or children laying in front of our car hoping for money or food. This had a huge impact on our ability to serve the community, so the team of doctors and the lab technician we were working with had to do all of the tasks for us such as going to clinics around Kinshasa in order to retrieve blood samples from the patients, and going to get reagents needed to perform the peripheral blood mononuclear cell freezing procedure.

Course Work

In the course Social and Behavioral Bases of public health (MPH 818) helped me attain skills and knowledge of the social determinants of health, and how societal structures have an impact on health. Social determinants of health include the social environment such as income level, discrimination, and education level, the physical environment including place of residence and transportation, and finally health services including the access and quality of care (NCHHSTP Social Determinants of Health, 2019). We learned that family, economy, and class are all components so social structure and can have a positive or negative impact social, psychological, economic, and environmental factors. In the DRC social class has a large impact on health inequity and one's ability to feel secure in every way of living. MPH 818 gave me a foundation of knowledge to be more culturally aware of social structures in various populations.

Competency 7*:* Assess population needs, assets and capacities that affect communities' health

Project 1: Democratic Republic of the Congo

Dr. Carole McArthur was able to help me understand and identify the lack of medical care and access to resources such as medicine, food, and clean water present in the DRC by

evaluating the population and diseases, such as HIV, Hepatitis B, and Ebola, that have such a large impact on the country. While in Kinshasa, we were able to visit the School of Public Health at the University of Kinshasa, as well as the CNPP, which is an organization that supports youth with mental illness. From these experiences, we were able to assess the population and learn that diseases, such as the ones mentioned above have a heavy impact on communities' health. It was also determined through information and discussions at the CNPP that discussion of mental health is a social taboo, and children are often abandoned if they are determined to have a mental illness. This is seen on a global scale, not just in Kinshasa and the DRC. "Structural discrimination of the mentally ill is still pervasive, whether in legislation or in rehabilitation efforts" (Rössler, 2016). These cultural influences impact the community and the needs of the citizens.

Course Work

An introductory course in epidemiology, MPH 754, helped me prepare for how disease affects population through an epidemiology focus (see Table 2.2). Epidemiology helped me gain confidence in looking at disease trends, and how they can impact a population. In the DRC we focused on HIV and how it is transmitted during pregnancy, as well as immune cell phenotypes and functions in individuals with chronic hepatitis B individuals.

Project 2: Riley County Health Department

At the RCHD I created a spreadsheet that included current USD 383 curricula for elementary, middle, and secondary health and sexual education classes, as well as the policy in Kansas regarding this area of education. I was able to gather this information by contacting schools, meeting with a school nurses, and email conversation with another nurse. I communicated with one of the elementary school nurses and she informed me that all elementary schools teach the same information, and the email conversation was with the lead nurse for the middle schools, and east and west campus high schools. I also reached out to organizations including Relate 360 and Positive Connections in the area working to promote sexual health in order to determine the audience they are engaging and what material they are presenting. From this I was able to identify multiple partners working in the area of sexual education in Riley County.

Course Work

When working at the RCHD, I worked to gain an understanding of how current institutions work to teach sexual education to the youth of Riley county. In MPH 720, administration of health care organizations, I learned how social and legal issues could have an impact on changing the education program for sexual health in the school systems (see Table 2.2).

Competency 9: Design a population-based policy, program, project or intervention

Project 2: Riley County Health Department

The main goals of my internship at the health department were (a) to create a plan and (b) be able to advise the city commissioners if there was an issue with the sexual education program in Riley County, which we believed there was, and if there was one, what the best plan of action moving forward would be.

The first step I took was looking at what the school systems already have in place, this was done by contacting school nurses at the elementary, middle, and high schools. From this I learned that in elementary school the nurses are responsible for education and it is outdated; in middle school there is a health teacher but information is limited; and in high school usually the physical education teachers are teaching health class for a semester and they are not trained how to teach sexual education material. Once I learned that there was a need for change, I began looking at other organizations outside of the school system that teach sex education in Manhattan, like Relate 360. After meeting with Susanne, the Relate 360 director, I learned that her team has access USD 383 schools but only because she knows some of the teachers and principals, so they can teach in some classrooms.

From here, I began to review programs at a national level, and identified that Rhode Island has Health Education Standards that all students must meet by the time they graduate from high school; and the District of Columbia has an advanced system of sexual health education and care within the schools. One example of this is a school-based health center which provides medical, sexual, oral, social, and mental health services for the students. I identified programs such as Get Real, Our Whole Lives, Advocates for Youth, Teaching Sexual Health and Choosing

the Best that were in consideration to implement in Manhattan and Riley County. From this group I narrowed the programs down to three; Our Whole Lives, FLASH, and Advocates for Youth. When presenting to the county commissioners, my suggestion was to implement Advocates for Youth into the school systems, because it was free meaning low risk due to a lack of financial obligation to the school system, and it was well rounded focusing on not just physical health but mental health that comes with relationships.

Course Work

In order to gather the information above in a logical manner I relied on my introduction to epidemiology course MPH 754. This course helped me to learn how to see an issue and work logically start to finish to gain information on an issue. Sexually transmitted diseases on the rise were the driving factor, this disease vector was used to stimulate the process used above.

Competency 19: Communicate audience-appropriate public health content, both in writing and through oral presentation

Project 2: Riley County Health Department

It was really important to make sure the information I was gathering and would be presenting would be comprehensible to those familiar with public health and the importance of sexual education, as well as those who were unfamiliar. This is a key competency because the information being presented should be understood by all in the audience. I was able to successfully present information in a manner that was explained in an audience- appropriate manner to the clinic staff at our weekly staff meetings, who was familiar with the project I was working on, and it was used when reaching out to school nurses and other community organizations who did not know my project but were familiar with sexual education. Finally, this was most utilized when I presented to the county commissioners, who came from various backgrounds in the community, most were very unfamiliar with the significant need for change when it came to sexual education in the county.

Course Work

Administration of health care organizations MPH 720 gave me confidence to portray information at an audience appropriate level. This course required us to conduct an interview with a health care professional and present the information to the course. MPH 802, environmental health, provided skills of audience appropriate presentations when we were asked to investigate a topic regarding a pathogen or toxin and how it can impact health (see Table 2.2). We then presented this information to the class sharing it as if none of our peers were familiar with the topic.

Competency 21: Perform effectively on interprofessional teams

Project 2: Riley County Health Department

During my time at the health department I learned how to interact with a variety of staff, from nurses to administrators and outside of the health department with schools and directors from Relate 360 and Positive Connections. This helped me gain experience with inter-professional teams and how to work towards a common goal. At the health department, I worked with the clinic staff daily. I reached out and began meeting with the executive director of Relate 360, Susanne Renberg to work on collaborating and bringing better education to the youth of Riley County. I reached out to Dustin Pfamatter the assistant director of Positive Connections in Topeka, Kansas to learn about their outreach and how it works. We were able to meet at an outreach site; the Geary County Jail and I was able to learn first-hand how he helps teach sexual education to inmates. The nurses in the USD 383 school system were able to provide information on what role they have in teaching sexual education and what they see in their schools. These and other inter-professional teams including Dr. Lewis Ferbee the Chancellor of DC public schools, and Rosemary Reilly-Chammat from the Rhode Island department of education, were able to guide me in learning about Riley County and the work we needed to do to make things better.

Course Work

During my coursework, administration of health care organizations, MPH 720, prepared me to work with interprofessional teams when we were asked to conduct an interview with a

health care professional. During this process I worked with a physician assistant in rural Kansas as well as my professor to create dialogue that could be shared with the class as well as a paper.

Table 5-1 Summary of MPH Foundational Competencies

Number and Competency		Description
6	Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels	While working in the DRC we had to be aware of cultural norms, being a part of the minority population and how this impacted our ability to interact with the community. Also, while working, we were very aware of the socioeconomic situation and extreme poverty in the country.
7	Assess population needs, assets and capacities that affect communities' health	This was done in the DRC by investigating mother to child HIV transmission as well as working to start the Hepatitis B project, since there are high rates of both. For the RCHD I did this by investigating what was lacking from the current education and what was needed.
9	Design a population-based policy, program, project or intervention	I developed a plan that if they chose to; the health department could work with the school and after school programs to implement and work at giving a better more whole picture of sexual health and education.
19	Communicate audience-appropriate public health content, both in writing and through oral presentation	Creating an excel spreadsheet that had all of the major programs laid out and turning this information and statistics into a power point that was able to convey the needs to a wide audience.
21	Perform effectively on interprofessional teams	At the RCHD I worked with the clinical team including the clinical supervisor and nurses, the director of the health department, school nurses and community organizations in order to gather information and best practices to provide sexual education.

Table 5-2 MPH Foundational Competencies and Course Taught In

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
22. Apply systems thinking tools to a public health issue			x	x	

Student Attainment of MPH Emphasis Area Competencies

Table 5-3 Summary of MPH Emphasis Area Competencies

MPH Emphasis Area:		
Number and Competency		**Description**
1	Pathogens/pathogenic mechanisms	Sexually transmitted infections are on the rise in Riley county in part due to proper sexual health education curriculum. Courses: BIOL 530
2	Host response to pathogens/immunology	Investigate the host response to infection Courses: DMP 850
3	Environmental/ecological influences	Poverty and unsanitary living conditions have a large impact on diseases. Courses: DMP 710, MPH 802
4	Disease surveillance	Selecting the adolescent population to implement comprehensive sexual health education due to high rates of STIs allows for surveillance data to be collected. Courses: DMP 710, MPH 754
5	Disease vectors	Investigate the role of vectors, toxic plants and other toxins in infectious diseases. Courses: DMP 710, BIOL 530

Competency 1: Pathogens/pathogenic mechanism

Project 2: Riley County Health Department

After researching sexual health education in Riley County, it was determined that updates to the program from kindergarten through 12th grade were required. Implementing a new curriculum that is successful in the USD 383 school district will lower the rates of positive STI tests and teen pregnancies. Having access to current inclusive information will eliminate the need for youth to use the internet to gain potential harmful information.

Pathogenic microbiology (BIOL 530) provided me with background knowledge and a foundation of pathogens, how they are transmitted, how they can be treated, and how they can spread. This was an asset when learning about sexually transmitted infections in Riley County.

Competency 2: Host response to pathogens/immunology

Course Work

Immunology of Domestic Animals (DMP 850) explained how innate and immune responses are triggered in animals, and how the body responds to various antagonist. This course gave the introduction to immunology and an in depth look at the immune response to various triggers in the environment.

Competency 3: Environmental/ecological influences

Project 1: Democratic Republic of the Congo

Environmental influences were seen in Kinshasa with high rates of disease spread among the community. This can be attributed to poor living conditions, contaminated water sources, and an unstable supply of food.

Project 2: Riley County Health Department

In Kansas, as a conservative state there has been an emphasis on abstinence education leading to omission of important protective measures to reduce teen pregnancy and STI rates. With a more comprehensive education plan students can be more informed when they chose to be sexually active and will know how to protect themselves from STIs and teen pregnancy.

Course Work

Environmental health (MPH 802) showcased the impact the environment has on ones' health. This course looked at a wide range of conditions such as poverty, lack of resources, poor water, etc. and how individuals' lives are impacted by these environmental factors.

Competency 4: Disease Surveillance

Project 1: Democratic Republic of the Congo

Hepatitis B was seen as a disease on the rise in the DRC by Dr. Carole McArthur, therefore we revised a protocol to process blood samples to be shipped to the United States for gene marker testing and in-vitro studies. I will not know the results for many years as funding is still required, gathering samples takes time, and processing in the United States is also timely.

Project 2: Riley County Health Department

Looking at the rates of STI and teen pregnancy rates in Kansas and Riley County lead to concern for the youth in the community. With this concern I researched potential options for new sexual health education plans to implement in the USD 383 school district. The results of this study are unknown at this point since the work has temporarily stopped while the health department looks for a new intern.

Course Work

Introduction to Epidemiology (MPH 754) taught the foundations of epidemiology and part of this was surveillance. Surveillance involves continuous evaluation of a population in order to see trends in public health such as disease outbreak or see a rise in STI numbers. MPH 754 explained how to detect these trends and to be proactive as variables change.

Competency 5: Disease vectors

Course Work

Pathogenic microbiology (BIOL 530) showcased vectors and toxins in infectious diseases through lab work. Throughout the semester we had unknown causative agents creating ill patients and we had to find the cause of the illness. This course allowed for problem solving and an understanding of varying disease-causing agents.

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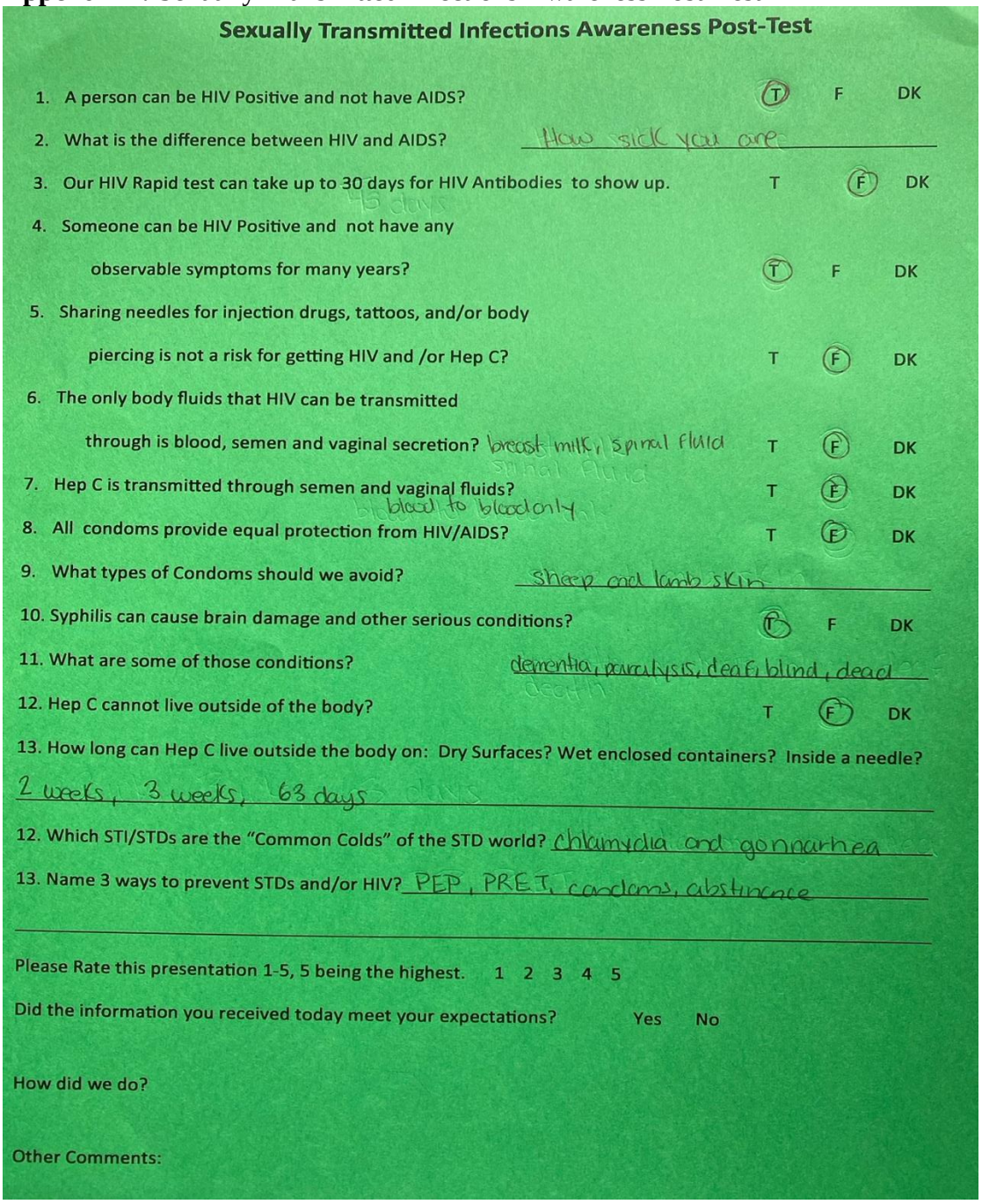
Appendix

Appendix 1: Sexually Transmitted Infections Awareness Post-Test



Sexually Transmitted Infections Awareness Post-Test

1. A person can be HIV Positive and not have AIDS? (T) F DK
2. What is the difference between HIV and AIDS? How sick you are
3. Our HIV Rapid test can take up to 30 days for HIV Antibodies to show up. T (F) DK
4. Someone can be HIV Positive and not have any observable symptoms for many years? (T) F DK
5. Sharing needles for injection drugs, tattoos, and/or body piercing is not a risk for getting HIV and /or Hep C? T (F) DK
6. The only body fluids that HIV can be transmitted through is blood, semen and vaginal secretion? breast milk, spinal fluid T (F) DK
7. Hep C is transmitted through semen and vaginal fluids? T (F) DK
8. All condoms provide equal protection from HIV/AIDS? T (F) DK
9. What types of Condoms should we avoid? Sheep and lamb skin
10. Syphilis can cause brain damage and other serious conditions? (T) F DK
11. What are some of those conditions? dementia, paralysis, deaf, blind, dead
12. Hep C cannot live outside of the body? T (F) DK
13. How long can Hep C live outside the body on: Dry Surfaces? Wet enclosed containers? Inside a needle? 2 weeks, 3 weeks, 63 days

12. Which STI/STDs are the "Common Colds" of the STD world? chlamydia and gonnarhea
13. Name 3 ways to prevent STDs and/or HIV? PEP, PREP, condoms, abstinence

Please Rate this presentation 1-5, 5 being the highest. 1 2 3 4 5

Did the information you received today meet your expectations? Yes No

How did we do?

Other Comments:

(KS STI Statistics , 2019)**Appendix 2:** Revised Protocol for Peripheral Blood Mononuclear Cells (PBMC) freezing

Steps to be followed before beginning isolation of PBMCs

Pre-chill the cryo freezing container (Nalgene) in -20 C freezer

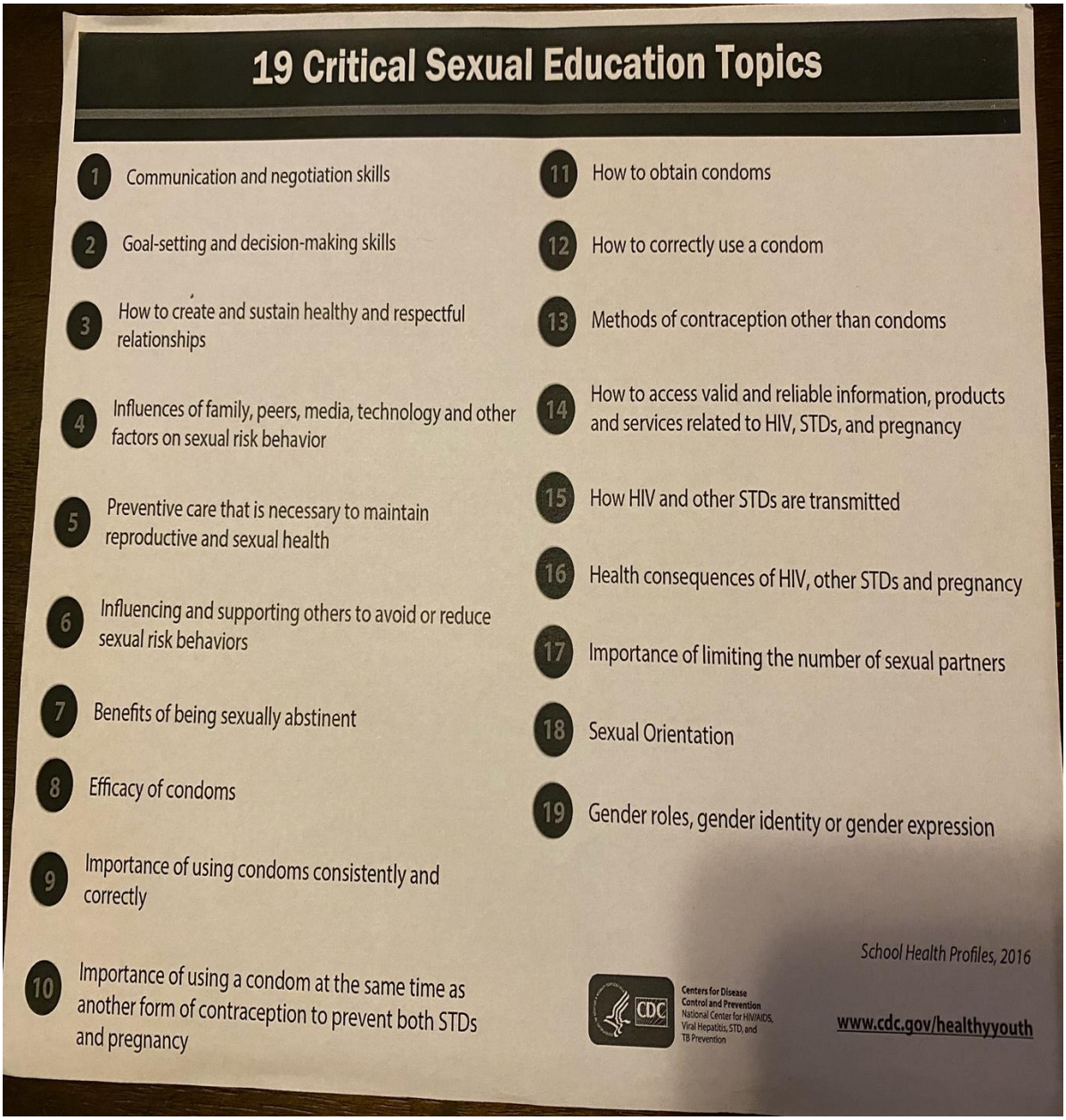
Thaw the chill freezing medium and keep in 4 C until use

Considering whole blood collected in 3 green top heparinized vacutainer tube (20-30ml blood)

1. Centrifuge the tubes at setting 33g for 10 min at room temperature
2. Mark the total blood volume at the meniscus then transfer the plasma to a 15ml centrifuge tube
    a. Aliquot the plasma in 1.8ml cryovial, 1.5ml each
3. Add sufficient quantity of PBS to bring the blood volume back to its original whole blood volume, mix gently and proceed to next step
4. Transfer whole blood to a sterile 50ml conical centrifuge tube and dilute with PBS (mix gently) to bring the volume to 35ml
5. Carefully and slowly add 4ml Ficoll-Paque at the bottom of the blood by 10ml sterile pipette. (Blood and ficoll should form distinct gradient)
6. Centrifuge at setting 18g for 30 min at room temperature with brake off
7. At the end of the centrifuge the buffy coat will be visible between the gradient. Collect the buffy coat very carefully by sterile pipette and take in a fresh 15ml conical centrifuge tube.
    a. Avoid collecting the Ficoll-Paque or cells from the Ficoll-Paque layer as much as possible
8. Bring the volume to 14ml with PBS and mix gently
9. Centrifuge at setting 33g for 10 min at room temperature
10. Discard supernatant and break the pellet by tapping the tube gently
11. Add 1-2ml (depending on the pellet) PBS slowly to re-suspend the cell pellet
12. Transfer the cells to a 15ml conical centrifuge tube and bring the volume to 10ml by adding PBS
13. Mix well and take 10 micro liters for cell count
14. Centrifuge at setting of 33g for 10 min at room temperature
15. Discard the supernatant and break the pellet by taping the tube gently
16. Add enough volume (to make the concentration of 10^7 cells/ml) of cold freezing medium to re-suspend the cells and aliquot in cryovials (1ml/vial)
    a. Freezing medium should be added drop by drop very slowly to avoid cell clumping
17. Put the cryovials in a pre-chilled cryo freezing container and transfer to -80 C freezer
18. Next day transfer to vials to Liquid Nitrogen tank

PBS: Phosphate Buffer Saline (w/o Ca2 and Mg2, cell culture grade, sterile)
Ficoll-Paque: Ficoll-Paque Plus
Freezing Memory: Recovery cell culture freezing medium

Appendix 3: 19 Critical Sexual Education Topics



19 Critical Sexual Education Topics

1. Communication and negotiation skills
2. Goal-setting and decision-making skills
3. How to create and sustain healthy and respectful relationships
4. Influences of family, peers, media, technology and other factors on sexual risk behavior
5. Preventive care that is necessary to maintain reproductive and sexual health
6. Influencing and supporting others to avoid or reduce sexual risk behaviors
7. Benefits of being sexually abstinent
8. Efficacy of condoms
9. Importance of using condoms consistently and correctly
10. Importance of using a condom at the same time as another form of contraception to prevent both STDs and pregnancy
11. How to obtain condoms
12. How to correctly use a condom
13. Methods of contraception other than condoms
14. How to access valid and reliable information, products and services related to HIV, STDs, and pregnancy
15. How HIV and other STDs are transmitted
16. Health consequences of HIV, other STDs and pregnancy
17. Importance of limiting the number of sexual partners
18. Sexual Orientation
19. Gender roles, gender identity or gender expression

School Health Profiles, 2016

CDC Centers for Disease Control and Prevention National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

www.cdc.gov/healthyyouth

Appendix 4a: Our whole lives program plan

Our Whole Lives (OWL)

	K-1		4th-6th		7th-9th
1	Our Wonderful Bodies Part 1	1	Sexuality and values	1	What is Sexuality?
2	Our Wonderful Bodies Parft 2	2	Images in Popular Culture	2	Examinng Values
3	Healthy Bodies, Safe Bodies	3	Body Images	3	The Language of Sexualtiy
4	Families	4	Changes in puberty	4	You, As a Sexual Being
5	Families and Feelings	5	Gender	5	Anatomy and Physiology
6	Babies and Families	6	Feelings and Attractions	6	Personal Concerns about Puberty
7	Birth of a Baby	7	Reproduction and Staying Healthy	7	Body Image
8	Celebrations	8	Decisions and Attractions	8	Gender Identity
		9	Reproduction and Staying Healthy	9	Sexual orientation
		10	Decisions and Actions	10	Guest Panel
		11	Consent and Peer Pressure	11	Sexuality and Disability
		12	Healthy Relationships and Celebration	12	Healthy Relationships
				13	Relationship Skills
				14	Sexiality Social Media and the Internet
				15	Bullying and Bystander Responsibilites
				16	Redefining Abstinence
				17	Lovemaking
				18	Consent Education
				19	Sexually Transmitted Infections
				20	Pregnancy, Parenting, and Teen Parenting
				21	Unintended Pregnancy Options
				22	Contraception and Safer Sex
				23	Sexiual Decision Making
				24	Communicating with a Sexual partner
				25	Self Care, Celebration, and Closure

	10th-12th		Young Adult		Adults
1	Sexual Health-Learning About our Bodies	1	Young Adults and Sexualtiy	1	Sexulaity and Values
2	Sexual Health-Taking care of our Sexual Selv	2	Mind and Body	2	Sexuality and Communication
3	Sexual Health-Makingf Safer Choices	3	Sexual Pleasure	3	Sexuality and Spirituality
4	Lifespan Sexuality-Exploring our Sexual Dev	4	Keeping your Body Healthy	4	Discovering the Sexual Self
5	Lifespan Sexuality-Becoming a Parent	5	Exploring Gender	5	Experiencing the Sexual Other
6	Lifespan Sexulaity-Expression of Sexuality	6	Sexual orientation	6	Sexual Attraction and Ealry Relationships
7	Building Healthy Sexual Reslationships-Com	7	Communitcation Worshops 8 and 9: Rela	7	Sexuality and Developing Relationships
8	Building Healthy Sexual Reslationships-Intir	8	Boundaries and Boundary Violations	8	Sexuality and Committed Relationships
9	Building Healthy Sexual Reslationships-Recc	9	Family Matters	9	Sexual Diversity
10	Sexuality and Social Issues-Reproductive Rig	10	Sexual Fantasy and Varaition	10	Sexuality and Family
11	Sexuality and Social Issues-Power and Contr	11	Advocacy and Education	11	Sexuality and Aging
12	Sexuality and Social Issues-Equality	12	Closing	12	Sexual Health

Appendix 4b: Flash Program Plan

FLASH

Grades 4-6	
Lesson 1	Introduction
Lesson 2	Family
Lesson 3	Self-Esteem
Lesson 4	Gender Roles
Lesson 5	Friendship
Lesson 6	Decision-Making
Lesson 7	Sexual Exploration Day 1
Lesson 8	Sexual Exploration Day 2
Lesson 9	Puberty Day 1
Lesson 10	Puberty Day 2
Lesson 11	Reproductive System Day 1
Lesson 12	Reproductive System Day 2
Lesson 13	Pregnancy Day 1
Lesson 14	Pregnancy Day 2
Lesson 15	HIV/AIDS Year 1 Day 1
Lesson 16	HIV/AIDS Year 1 Day 2
Lesson 17	HIV/AIDS Year 2 Day 1
Lesson 18	Review and Resources

Grades 6-8	
Lesson 1	Reproductive System and Pregnancy
Lesson 2	Sexual Orientation and Gender Identity
Lesson 3	Rules of Dating
Lesson 4	Saying No
Lesson 5	Preventing STDs
Lesson 6	Condoms to Prevent HIV and Other STDs
Lesson 7	Birth Control Methods

5 Main Goals of FLASH
1. Prevent Pregnancy
2. Prevent HIV and other STDs
3. Prevent Sexual Violence
4. Improve Family Communication
5. Improve Knowledge of Sexual and Reproductive Health

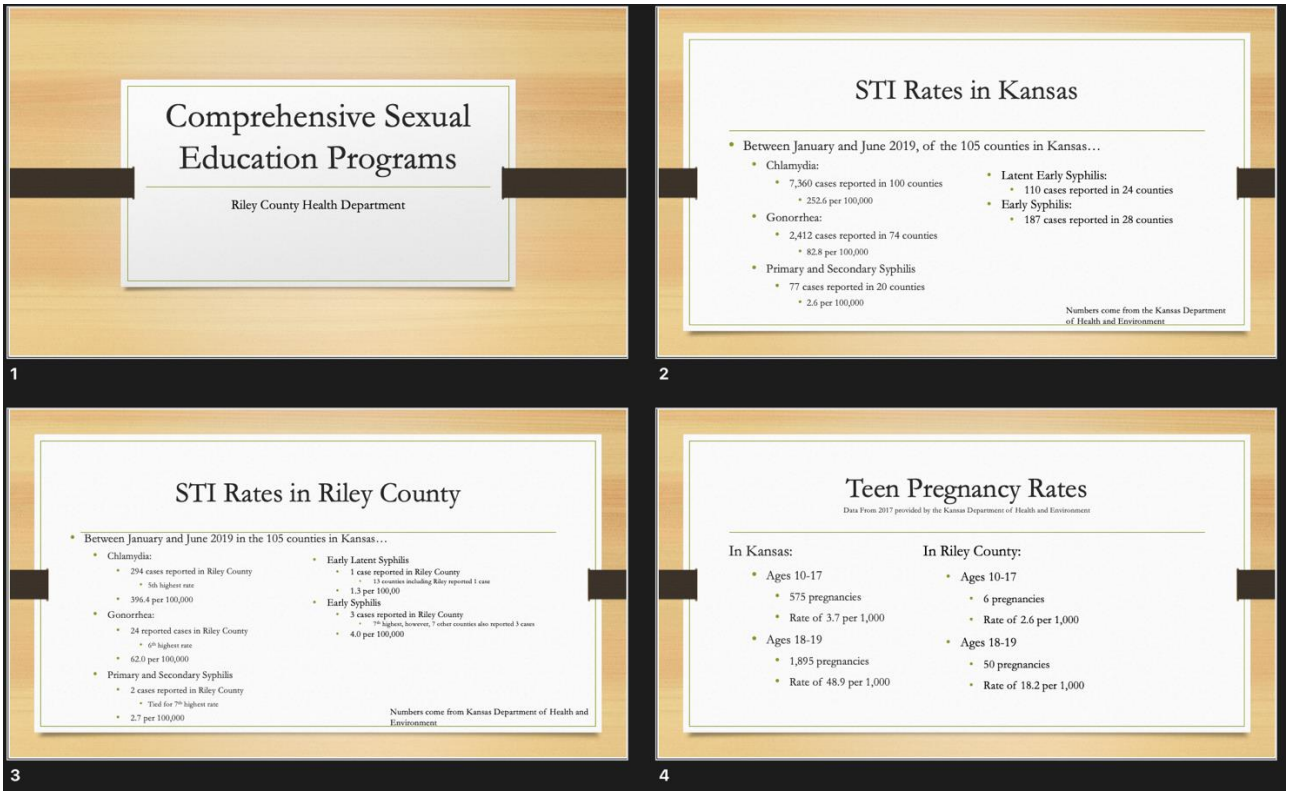
Grades 9-12	
Lesson 1	Climate Setting
Lesson 2	Reproductive System
Lesson 3	Pregnancy
Lesson 4	Sexual Orientation and Gender Identity
Lesson 5	Undoing Gender Stereotypes
Lesson 6	Healthy Relationships
Lesson 7	Coercion and Consent
Lesson 8	Online Saftey
Lesson 9	Abstinence
Lesson 10	Birth Control Methods
Lesson 11	Preventing HIV and Other STDs
Lesson 12	Condoms to Prevent Pregnancy, HIV and others STDs
Lesson 13	Testing for HIV and Other STDs
Lesson 14	Communication and Decision Making
Lesson 15	Improving School Health

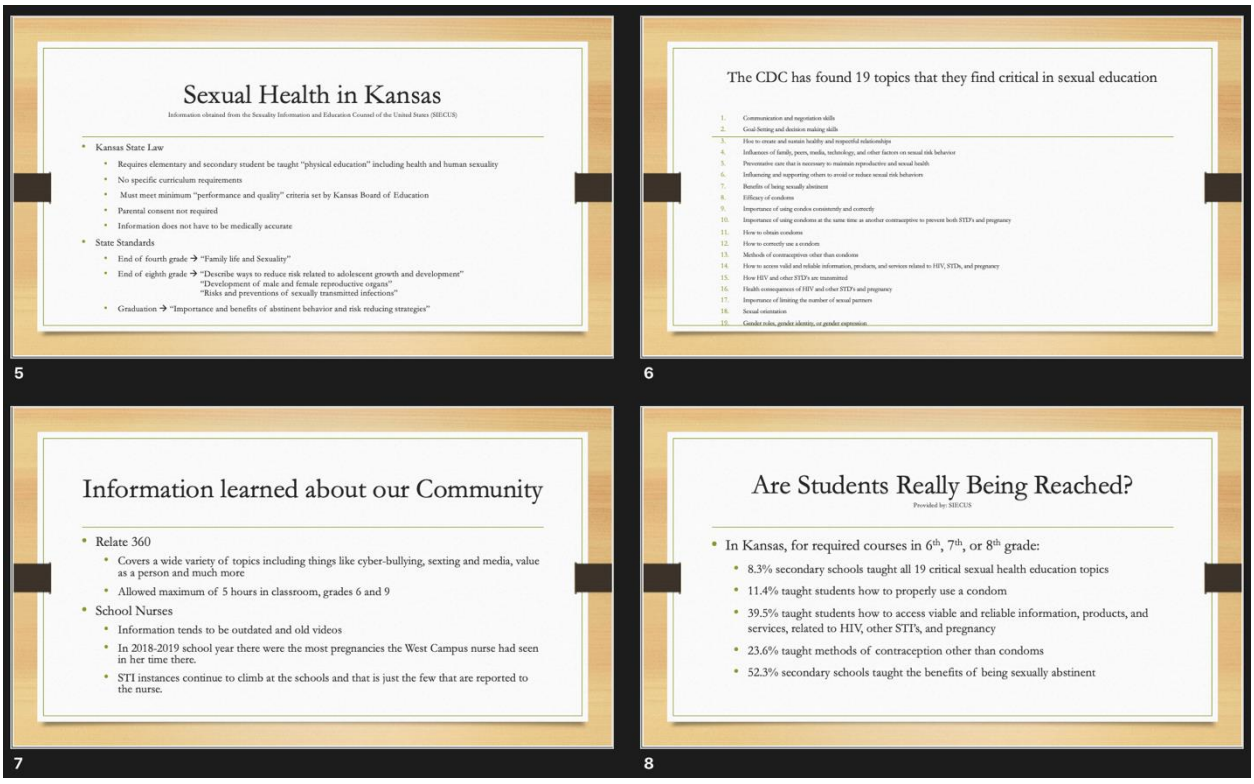
Pricing	
Online Subscription: 49.99/year/license per teacher	
Print Binders	
High School and Middle School	
	0-5 Binders 99.99 each
	6-10 Binders 94.99 each
	11+ Binders 89.99 each
K-4, Elementary and Special Ed	
	0-5 Binders 75.99 each
	6-10 Binders 71.99 each
	11+ Binders 67.99 each
Set of All Grade Level Binders	
	374.99

Appendix 4c: Advocates for Youth: Program Plan

Advocates for Youth: 3Rs					
Kindergarden			**8th Grade**		
Lesson 1:	Different kinds of families	families	Lesson 1:	Creating a safe School	accessing inormation support/resources
Lesson 2:	Understnding our bodies the basics	anatomy and reproduction	Lesson 2:	The world around me	accessing inormation support/resources
Lesson 3:	My space your space	consent	Lesson 3:	Healthy and unhealthy relationships	Lesson using the amaze videos
1st Grade			Lesson 4:	Choose your words carefully	Decision making
Lesson 1:	Friendship	relationships	Lesson 5:	We need to talk	Anstinence
Lesson 2:	Gender roles	gender/gender roles	Lesson 6:	Talking without talking	Relationships
Lesson 3:	The circle of life	anatomy and reproduction	Lesson 7:	Warning signs	accessing inormation support/resources
2nd Grade			Lesson 8:	Birth control basics	abstinence
Lesson 1:	Understanding our bodies	anatmoy and reproduction	Lesson 9:	Using condoms effectively	condoms and birth control
Lesson 2:	Bullying is never ok	accessing information/support/resources	Lesson 10:	STD basics	abstinence
Lesson 3:	Cut it out making bullying and teasing stop	accessing information/support/resources	Lesson 11:	Lets talk about sex	abstinence
Lesson 4:	Seeking help	accessing information/support/resources			
3rd Grade			**9th Grade**		
Lesson 1:	Respect for all	relationships	Lesson 1:	They love me they love me not	Relationships
Lesson 2:	Teasing harassment bullying	bullying	Lesson 2:	How well do I communicate	abstinence
Lesson 3:	Feeling Safe	accessing information/support/resources	Lesson 3:	It wasn't my fault	consent
4th Grade			Lesson 4:	Orientation behavior and identity	gender identity/transgender
Lesson 1:	Making sense of puberty	accessing information/support/resources	Lesson 5:	Understanding gender	gender identity/transgender
Lesson 2:	Figuiring out friendship	accessing information/support/resources	Lesson 6:	Decisions decisions	abstinence
Lesson 3:	Your body your rights	accessing information/support/resources	Lesson 7:	Sexual decision making	abstinence
Lesson 4:	Taking a stand against bullying	accessing information/support/resources	Lesson 8:	Planning and protection	abstinence
5th Grade			Lesson 9:	What if	decision-making
Lesson 1:	Sexual and reproductive anatomy	anatomy and reproduction	Lesson 10:	STD smart	abstinence
Lesson 2:	Puberty and reproduction	anatomy and reproduction	Lesson 11:	Creating condom confidence	condoms and birth control
Lesson 3:	Learning about HIV	decision-making			
Lesson 4:	What is love anyway	decision-making	**High School**		
Lesson 5:	Being clear with your friends	decision-making	Lesson 1:	Rights respect responsibility	consent
6th Grade			Lesson 2:	Know your options	abstinence
Lesson 1:	Change is good	accessing information/support/resources	Lesson 3:	We all have rights	accessing information support/resources
Lesson 2: Gender roles gender expectations		gender identity/transgender	Lesson 4:	Let me tell you	decision-making
Lesson 3:	Understanding boundaries	understanding boundaries	Lesson 5:	Using technology respectfully and responsibly	bullying
Lesson 4:	Communicating about a sensetive topic	abstinence	Lesson 6:	Our space safe space	accessing information support/resources
Lesson 5:	More than friends	relationships	Lesson 7:	Trust it or trash it	accessing information support/resources
Lesson 6: Liking and Loving		abstinence			
Lesson 7:	3rs being a sex ed sleuth	accessing information/support/resources	Lesson 1:	How do you see me	Relationships
7th Grade			Lesson 2:	My boundaries	Relationships
Lesson 1:	Everybody got body parts, part 1	anatomy and reproduction	Lesson 3:	Is it abuse if	accessing information support/resources
Lesson 2:	Everybody got body parts, part 2	anatomy and reproduction	Lesson 4:	Wanted qualified parent	pregnancy
Lesson 3:	Reproductive basics	accessing information support/resources	Lesson 5:	Gender and sexual orientation	gender identity/transgender
Lesson 4:	Great ecpectations	anatomy and reproduction			
Lesson 5:	Protecting your health	abstinence	Lesson 1:	What are my reproductive rights	Accessing information/resources
Lesson 6:	I am who I am	gender identity/transgender	Lesson 2:	My life my decisions	decision-making
Lesson 7:	Blue is for boys pink is for girls	gender/gender roles	Lesson 3:	Sexual rights who decides	bullying
Lesson 8:	Making SMART choices	decsion-making	Lesson 4:	Getting savvy about STD testing	STD/HIV
Lesson 9:	Let's talk about sex	abstinence	Lesson 5:	Fantasy or reality	relationships
Lesson 10:	Being the change	advocacy			
Lesson 11:	Being smart staying safe online	accessing information support/resources			

Appendix 5: Presentation for County Commissioners





Our Whole Lives Curriculum

7th-9th Grade

1. What is sexuality?
2. Examining values
3. The language of sexuality
4. You, as a sexual being
5. Anatomy and physiology
6. Personal concerns about puberty
7. Body image
8. Gender identity
9. Sexual orientation
10. Guest panel
11. Sexuality and disability
12. Healthy relationships

7th-9th Grade Cont.

13. Relationship skills
14. Sexuality and social media and the internet
15. Bullying and by-standard responsibilities
16. redefining abstinence
17. Lovemaking
18. Consent education
19. Sexually transmitted infections
20. Pregnancy, parenting, and teen parenting
21. Unintended pregnancy options
22. Contraception and safer sex
23. Sexual decision making
24. Communicating with a sexual partner
25. Self care, celebration, and closure

13

Curriculum Cost

	Kindergarten- 1st Grade	4th – 6th Grade	7th – 9th Grade	10th - 12th Grade
Purchase 1 to 9 Books	$40.00	$40.00	$75.00	$60.00
Purchase 10 to 19 Books	Save 10%	Save 10%	Save 10%	Save 10%
Purchase 20+ Books	Save 20%	Save 20%	Save 20%	Save 20%

*There are curriculum and books available for young adults ($40.00) as well as adults ($60.00).

14

FLASH

- Developed by Public Health- Seattle and King County
- Adheres to the characteristics of an effective health education curriculum
- Science based
- Aligns with: CDC national health education standards for sexual health and the national sexuality educational standards
- Meant for the classroom, no training required, teacher support provided
- Reflects the theory of planned behaviors, the social ecological model, and the confluence model of sexual aggression

15

Five Main Goals of FLASH

1. Prevent Pregnancy
2. Prevent HIV and other STD's
3. Prevent Sexual Violence
4. Improve Family Communication
5. Improve Knowledge of Sexual and Reproductive Health

16

Are Students Really Being Reached? Cont.

Provided by: SIECUS

- In Kansas, for required courses in 9th, 10th, or 11th and 12th grade:
  - 33.2% secondary schools taught all 19 critical sexual health education topics
  - 45.0% taught students how to properly use a condom
  - 65.5% taught methods of contraception other than condoms
  - 80.8% taught students how to access viable and reliable information, products, and services, related to HIV, other STI's, and pregnancy
  - 93.3% secondary schools taught the benefits of being sexually abstinent

9

Education Curriculum

- After researching and learning about curriculum options and contacting other organizations and individuals I have narrowed the field down to three potential options to implement in Riley County
  1. Our Whole Lives
  2. F.L.A.S.H.
  3. 3 R's

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Our Whole Lives

- Created by two religious organizations but has no religious content in teachings
- Curriculum based on guidelines for comprehensive sexuality education produced by the national guidelines task force assembled by SIECUS
- Meets or exceeds the National Standards for Sexuality Education core curriculum K-12
- Used in faith communities, public, charter, and private schools, and an array of other settings
- Six clusters of age groups spanning kindergarten through adulthood

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Our Whole Lives Curriculum

Kindergarten – 1st Grade

1. Our wonderful bodies Part I
2. Our wonderful bodies Part II
3. Healthy bodies, safe bodies
4. Families
5. Families and feelings
6. Babies and families
7. Birth of a baby
8. Celebration

4th – 6th Grade

1. Sexuality and values
2. Images in popular culture
3. Body images
4. Changes in puberty
5. Gender
6. Feelings and attractions
7. Reproduction and staying healthy
8. Decisions and actions
9. Consent and peer pressure
10. Healthy relationships and celebration

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FLASH Curriculum

4th – 6th Grade

1. Introduction
2. Family
3. Self-esteem
4. Gender roles
5. Friendships
6. Decision making
7. Sexual exploration Day I
8. Sexual exploration Day II

4th – 6th Grade Cont.

9. Puberty Day I
10. Puberty Day II
11. Reproductive system Day I
12. Reproductive system Day II
13. Pregnancy Day I
14. Pregnancy Day II
15. HIV/AIDS Year 1 Day I
16. HIV/AIDS Year 1 Day II
17. HIV/AIDS Year 2 Day I
18. Review and resources

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FLASH Curriculum Cont.

6th – 8th Grade

1. Reproductive system and pregnancy
2. Sexual orientation and gender identity
3. Rules and dating
4. Saying no
5. Preventing STD's
6. Condoms to prevent HIV and other STD's
7. Birth control methods

9th – 12th Grade

1. Climate setting
2. Reproductive system
3. Pregnancy
4. Sexual orientation and gender identity
5. Undoing gender stereotypes
6. Healthy relationships
7. Coercion and consent
8. Online safety
9. Abstinence
10. Birth control methods
11. Preventing HIV and other STD's
12. Condoms to prevent pregnancy, HIV, and other STD's
13. Testing for HIV and other STD's
14. Communication and decision making
15. Improving school health

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Curriculum Cost

	High School and Middle School	K-4, Elementary School, and Special Education
Purchase 0-5 Binders	$99.99 each	$75.99 each
Purchase 6-10 Binders	$94.99 each	$71.99 each
Purchase 11+ Binders	$89.99 each	$67.99 each

*A set of all binders (high, middle, and elementary school, special education, and all about life can be purchased for $374.99

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3R's: Advocates for Youth

- Fully meets the National Sexuality Education Standards K-12 programs
- Inclusive of all genders and sexual orientations
- Reflects the social learning theory, social cognitive theory, and the social ecological model of prevention.
- SHECAT (sexual health education curriculum analysis tool) reviewed
- Covers all 19 topics recommended by the CDC
- Involves families with family homework activities

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3R's Curriculum

Kindergarten

1. Different Kind of families → Families
2. Understanding our bodies, the basics → anatomy and reproduction
3. My space your space → consent

1st Grade

1. Friendship → relationships
2. Gender roles → gender/gender roles
3. The circle of life → anatomy and reproduction

2nd Grade

1. Understanding our bodies → anatomy and reproduction
2. Bullying is never ok → accessing information/support/resources
3. Cut it out, making bullying and teasing stop → acceding information./support/resources
4. Seeking help → accessing information/support/resources

3rd Grade

1. Respect for all → relationships
2. Teasing, harassment, bullying → bullying
3. Feeling Safe → accessing information/support/ resources

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3R's Curriculum Cont.

4th Grade

1. Making sense of puberty → accessing information/support/resources
2. Figuring our friendship → accessing information/support/resources
3. Your body, your rights → accessing information/support/resources
4. Taking a stand against bullying → accessing information/support/resources

5th Grade

1. Sexual and reproductive anatomy → anatomy and reproduction
2. Puberty and reproduction → anatomy and reproduction
3. Learning about HIV → decision-making
4. What is love anyway → decision-making
5. Being clear with your friends → decision- making

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3R's Curriculum Cont.

6th Grade

1. Change is good → accessing information/support/resources
2. Gender roles, gender expectations → gender identity/transgender
3. Understanding boundaries → understanding boundaries
4. Communicating about a sensitive topic → abstinence
5. More than friends → relationships
6. Liking and loving → abstinence
7. 3r's being a sexual ed sleuth → accessing information/support/resources

7th Grade

1. Everybody's got body parts, part I → anatomy and reproduction
2. Everybody's got body parts, part II → anatomy and reproduction
3. Reproductive basics → accessing information/support/resources
4. Great expectations → anatomy and reproduction
5. Protecting your health → abstinence
6. I am who I am → gender identity/transgender
7. Blue is for boys pinks Is for girls → gender/gender roles
8. Making SMART choices → decision-making
9. Let's talk about sex → abstinence
10. Being the change → Advocacy
11. Being smart, staying safe online → accessing information/support/resources

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3R's Curriculum Cont.

8th Grade

1. Creating a safe school
2. The world around me
3. Healthy and unhealthy relationships
4. Choose your words carefully
5. We need to talk
6. Talking without talking
7. Warning signs
8. Birth control basics
9. Using condoms effectively
10. STD basics
11. Lets talk about sex

9th Grade

1. They love me they love me not
2. How well do I communicate
3. It wasn't my fault
4. Orientation behavior and identity
5. Understanding gender
6. Decisions decisions
7. Sexual decision making
8. Planning and protection
9. What if
10. STD smart
11. Creating condom confidence

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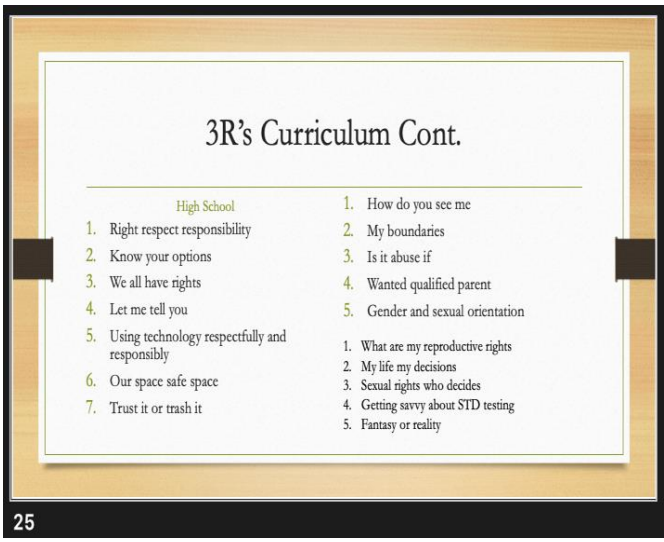
3R's Curriculum Cont.
High School
1. Right respect responsibility
2. Know your options
3. We all have rights
4. Let me tell you
5. Using technology respectfully and responsibly
6. Our space safe space
7. Trust it or trash it
1. How do you see me
2. My boundaries
3. Is it abuse if
4. Wanted qualified parent
5. Gender and sexual orientation
1. What are my reproductive rights
2. My life my decisions
3. Sexual rights who decides
4. Getting savvy about STD testing
5. Fantasy or reality
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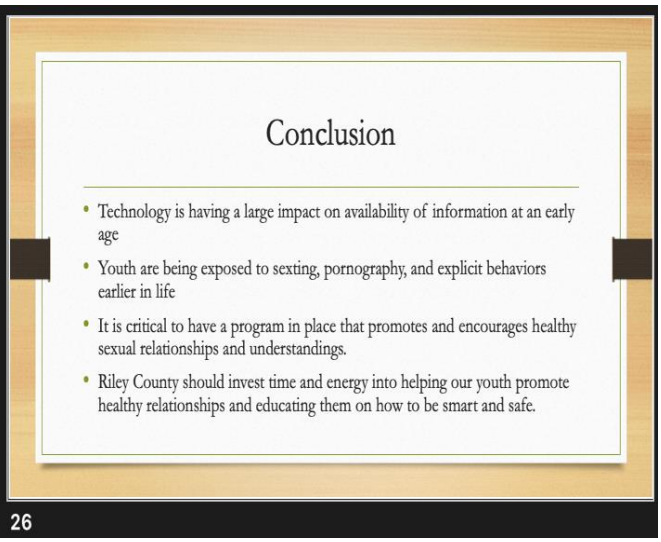
Conclusion
• Technology is having a large impact on availability of information at an early age
• Youth are being exposed to sexting, pornography, and explicit behaviors earlier in life
• It is critical to have a program in place that promotes and encourages healthy sexual relationships and understandings.
• Riley County should invest time and energy into helping our youth promote healthy relationships and educating them on how to be smart and safe.
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