Increasing Sexually Transmitted Disease Education for Adolescents with Social Media

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Table of Contents

Abstract ...............................................................................................................................................v

List of Tables .....................................................................................................................................vi

List of Figures ....................................................................................................................................vii

List of Abbreviations ..........................................................................................................................viii

Chapter 1: Statement of Problem ........................................................................................................1

Introduction and Background: Adolescents: A Time of Transitions .............................................. 1

Problem Statement ...............................................................................................................................2

Specific Aim and Objectives: .............................................................................................................3

Chapter 2: Review of Literature and Theoretical Underpinnings .......................................................5

A Review of Sexually Transmitted Diseases in United States and Hawai`i Adolescents ............. 5

National STD Statistics. .......................................................................................................................5

Hawai`i’s STD Statistics. ......................................................................................................................6

Theoretical underpinnings: Urie Bronfenbrenner’s Ecological Systems Theory ....................... 8

The Microsystem and Mesosystem .................................................................................................10

The Exosystem .................................................................................................................................10

The Macrosystem ............................................................................................................................10

The Chronosystem ..........................................................................................................................11

Caring for Kaua`i’s Adolescents .......................................................................................................12

Adolescents and Media ......................................................................................................................14

Review of Literature of Influences on Sexual Health of Adolescents ........................................... 14

Chronosystem Issues: The Millennial Adolescent and Digital Technology ................................... 15

Macrosocial Issues: Race/Ethnicity, Culture, and Socioeconomic Factors ..................................... 17

Ethnic Groups. ..................................................................................................................................18

Use of Social Media in Health Organizations ...............................................................................19

Gaps in Literature and Need for Future Research ......................................................................23

Generalization of Findings ..............................................................................................................23

Limitations .......................................................................................................................................24

Summary of literature review and direction for PIP ......................................................................24
Chapter 3: Project Design and Evaluation Plan ................................................................. 26

Methods................................................................................................................................. 26
  Project design. ......................................................................................................................... 26
  Participants. ............................................................................................................................ 26
  Setting.................................................................................................................................. 27
  Instruments. ............................................................................................................................ 27
Procedure.................................................................................................................................. 28
Data collection.......................................................................................................................... 30
Data analysis............................................................................................................................. 30
Human Subjects........................................................................................................................ 31
  Social media policy. ................................................................................................................ 32

Chapter 4: Results and Findings ............................................................................................ 34

Objective 1. Survey and Assess Adolescents at the CWC Regarding Their Current Use of
Social Media Site Facebook and Awareness of CWC Facebook site. ........................................ 34

Objective 2. Create Chlamydia Education to be Designed on Facebook to Pilot an STD
Educational Platform Targeted at the Adolescent (ages 14-17) at the CWC ......................... 37

Objective 3. Pilot Chlamydia Education on CWC Facebook Site with Post-Survey to Assess if
Teens Use Facebook, Find Site Accessible, Confidential, and Helpful, and Would Recommend
Site to a Friend. ......................................................................................................................... 38

Chapter 5 – Discussion of Findings and Implications for Practice ........................................ 44

Objective 1: Survey and Assess Adolescents at the CWC regarding their current use of social
media site Facebook and awareness of CWC Facebook site. ................................................. 44
  Discussion ................................................................................................................................. 44

Objective 2: Create Chlamydia Education to be Designed on Facebook to Pilot a STD
Educational Platform Targeted at the Adolescent (Ages 14-17) at the CWC ......................... 45
  Discussion ................................................................................................................................. 46

Objective #3: Pilot Chlamydia Education on CWC Facebook Site with Post-Survey to Access
if Teens use Facebook, Find the Site Accessible, Confidential, and Helpful, and Would
Recommend Site to a Friend. ..................................................................................................... 47
  Discussion ................................................................................................................................. 47

Objective 4: Review, analyze, and evaluation of Pre-Test and Post-Test Data and Facebook
views and “likes” Over a One-Month Period .......................................................................... 49
  Strengths ................................................................................................................................. 50
Weaknesses .................................................................................................................. 51
Generalization .................................................................................................................. 51
Reliability and Validity ...................................................................................................... 51
Limitations .......................................................................................................................... 52
Implications for Practice ................................................................................................... 53
Conclusion .......................................................................................................................... 55

References ......................................................................................................................... 56

Appendices

APPENDIX A .................................................................................................................. 60
APPENDIX B .................................................................................................................... 62
APPENDIX C .................................................................................................................... 64
APPENDIX D .................................................................................................................... 65
APPENDIX E .................................................................................................................... 66
APPENDIX F .................................................................................................................... 67
APPENDIX G .................................................................................................................... 68
APPENDIX H .................................................................................................................... 69
APPENDIX I .................................................................................................................... 75
APPENDIX J .................................................................................................................... 76
APPENDIX K .................................................................................................................... 78
APPENDIX L .................................................................................................................... 79
Abstract

At the turn of the century, the millennium adolescent was immersed into a digitally-saturated world. Digital media and social networking sites have been both instrumental and influential to an adolescent’s development. During this time of adolescent development and transitions to adulthood, reproductive health issues become a major health concern. National, state and local statistics continue to demonstrate that adolescents aged 15 to 24 years of age account for 10 million new sexually transmitted diseases in the United States each year. The Kaua`i Community College Campus Wellness Center has been providing family planning services for adolescents for nearly a decade. Incorporating Urie Bronfenbrenner’s Ecological Systems Theory as an assessment framework, the Campus Wellness Center assesses both microsystems and macrosystems influences on adolescents and plans implementation strategies aimed at increasing reproductive health and decreasing disparities amongst its adolescent clientele. This Practice Inquiry Project focused on developing a pilot project aimed at utilizing aspects of the adolescents’ chronosystem and influence of the digital era. In partnership with the Campus Wellness Center, a Teen Health Educational website that highlighted the sexually transmitted disease, Chlamydia, was developed and linked to the Campus Wellness Center Facebook Website. Adolescents reviewed the Teen Health site and completed surveys and questions related to access, confidentiality, likability, and knowledge. This Practice Inquiry Project reviews the creation and development of the project, data collected during a one-month period, and the analysis of its results and recommendations with implications for practice.
# List of Tables

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 4.1: Social Media Use Survey Responses</td>
<td>35</td>
</tr>
<tr>
<td>Table 4.2: Teen Health Education Survey Responses Questions 1-6</td>
<td>39</td>
</tr>
<tr>
<td>Table 4.3: Teen Health Survey Qualitative Comments for Question #7</td>
<td>40</td>
</tr>
<tr>
<td>Table 4.4: Pre-test and Post-test Question Responses</td>
<td>41</td>
</tr>
</tbody>
</table>
List of Figures

Title

Figure 1: The Adolescent and Urie Bronfenbrenner’s Ecological Systems Theory…………9
Figure 4.1: Social Media Use Among Pilot Group………………………………………….36
Figure 4.2: Number of SNS Sites Used by Adolescents in Pilot Group……………………37
Figure 4.3: Percentage of Correct Responses of Pre-test and Post-test Answers…………..42
Figure 4.4: Number of Incorrect Responses of Pre-Test and Post-Test Answers………….. 43
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>API</td>
<td>Asian or Hawaiian/Other Pacific Islander</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control</td>
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<tr>
<td>CWC</td>
<td>Campus Wellness Center</td>
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<tr>
<td>HIPPA</td>
<td>Health Insurance Portability and Accountability Act</td>
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<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
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<tr>
<td>KCC</td>
<td>Kaua`i Community College</td>
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<tr>
<td>NCHS</td>
<td>National Center for Health Statistics</td>
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<tr>
<td>NP</td>
<td>Nurse Practitioner</td>
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<tr>
<td>PID</td>
<td>Pelvic Inflammatory Disease</td>
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<tr>
<td>PIP</td>
<td>Practice Inquiry Project</td>
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<tr>
<td>SNS</td>
<td>Social Networking Sites</td>
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<td>STD</td>
<td>Sexually Transmitted Disease</td>
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<tr>
<td>UHCC</td>
<td>University of Hawai`i Community College</td>
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<td>UHCCP</td>
<td>University of Hawai`i Community College Policy</td>
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<tr>
<td>YRBS</td>
<td>Youth Risk Behavior Surveillance</td>
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</tbody>
</table>
Chapter 1: Statement of Problem

Introduction and Background: Adolescents: A Time of Transitions

Throughout the life course, people go through many transitions, but those that occur during adolescence may be the most significant (Hendriksz, 2013). Adolescence is a time of passage that refers to the physical, psychosocial, emotional, cognitive, and moral transitions from childhood to young adulthood (Driessnack, 2010; London, Ladewig, Ball, Bindler, and Cowen, 2011). During this transitional period of adolescence (ages 12 to 21), the adolescent progresses through early (12-14 years of age), middle (15-17 years of age), and late adolescents (18-21 years of age) and critical developmental considerations embedded in these stages include: self esteem, mood, body image, cognitive development, family relationships, interactions at school and with peers, and participation in health-risk behaviors (London et al., 2011). Although adolescents may have diverse behaviors and accomplishments, the normative transitions that adolescents go through assist in working through their Erikson’s psychosocial tasks of Identity versus Role Confusion and forming their self-identity (Boyce, 2005; London et al., 2011). Thus, transitions that occur during adolescence can be swift and challenging changes that may alter experiences of self, life circumstances, or future possibilities and expectations (Boyce, 2005).

During this pivotal developmental period of adolescence, pediatric and adult health care providers have unique opportunities for providing health promotion, preventative, and reproductive health services to adolescents and young adults (Driessnack, 2010). Both negative and positive influences are linked to eco-social systems that include: 1) interpersonal factors, 2) intrapersonal process and cultural groups, 3) institutional factors, as well as 4) community and global factors (MacDonald et al., 2011). Understanding these ecosocial factors enables pediatric and adult health providers to move towards macrosocial approaches to the provision of care for adolescents and young adults (Kralik, Vistentin, and Van Loon, 2006).
It is during a time of adolescent transitions to adulthood that reproductive issues become a major health concern (Kaestly and Waller, 2011). The staggering national, state and local statistics of sexually transmitted disease (STD) prevalence among adolescents demonstrate a need to improve education and access for STD screening and management. Within the last few decades, social media has been an important component of an adolescent’s ecosocial system. Since media, digital technology and social media are engrained and an influential component of adolescents’ lives, its use in disseminating sexual health education may prove effective in increasing access to and education on sexual health issues. With increased educational access, STD screening rates and treatment management may increase.

**Problem Statement**

According to Healthy People 2020 (2014), STD objectives are to promote healthy sexual behaviors, strengthen community capacity, and increase access to quality services to prevent STDs and their complications. By reviewing the current sexual risk-behaviors and STD statistics within the nation and state, Hawai`i’s adolescents have high rates of STDs (Bridges 2008). Of particular concern is that Center of Disease Control (CDC) surveillance data continues to show that numbers of reported Chlamydia and Gonorrhea cases are highest in youths ages 15-24 (CDC, 2013). The higher prevalence of reproductive health disparities among adolescents reflects multiple barriers to accessing quality reproductive health services (CDC, 2012). Lack of quality access to reproductive health services can lead to undetected STDs and higher prevalence of re-infection rates among adolescents (CDC, 2013; Geisler, 2011). Although both adolescent males and females are heavily affected, young females suffer the most serious long-term consequences and if left untreated, these STDs can result in pelvic inflammatory diseases (PID) and infertility later in life (CDC, 2013). Re-infection rates are also increased in the adolescent
population (Geisler, 2011), thus it is imperative interventions to improve STD screening also seek to improve effective treatment of adolescents and their sexual partners.

The purpose of this Practice Inquiry Project (PIP) was to pilot the use of social media as a sexual health education platform for adolescent clients as a means to increase education on sexual health issues, increase screening and management of STDs, and decrease STD health disparities among adolescents on Kaua`i. Through this project, the Kaua`i Community College (KCC), Campus Wellness Center (CWC) was the primary site for the implementation of the use of social media as a health education platform and communication tool for adolescents. The new social media communication and educational tool was developed and implemented with the objective to increase access to information on sexual health issues and services. In addition, this project provided opportunities and direction for future research of social media influences on increasing the rates of STD screening and effective treatment of adolescents. In accordance with the Healthy People 2020 (2014) objectives, this PIP proposal aimed to achieve the following goals and objectives.

Specific Aim and Objectives:

- **GOAL:** Increase access to Chlamydia education for Kaua`i’s adolescents with the use of Social Media platform Facebook.
  - Objective #1: Survey and assess adolescents at the CWC regarding their current use of social media site Facebook and awareness of CWC Facebook site.
  - Objective #2: Create Chlamydia education to be designed on Facebook to pilot an STD educational platform targeted at the CWC adolescent (ages 14-17) clients.
  - Objective #3: Pilot Chlamydia education on CWC Facebook site with post-survey to assess if teens use Facebook, find site accessible, confidential, and helpful, and would recommend site to a friend.
Objective #4: Review, analyze, and evaluate pre-test and post-test data and Facebook views and “likes” over a one-month period.
Chapter 2: Review of Literature and Theoretical Underpinnings

This literature review begins with a review of the sexually transmitted disease statistics amongst adolescents within the nation and state of Hawai`i. With such concerns of reproductive health issues amongst adolescents, the theoretical underpinnings of Urie Bronfenbrenner are also reviewed. By utilizing principles of Urie Bronfenbrenner’s Ecological Systems Theory, assessments and influences of the adolescents’ microsystems and macrosystems are discussed. The primary focus of the review of literature is aimed at influences of media on adolescent sexual health as well as identifying current literature, gaps in literature, and future research needed.

A Review of Sexually Transmitted Diseases in United States and Hawai`i Adolescents

National STD Statistics.

Adolescents’ and young adults’ reproductive health outcomes and health behaviors are shaped by risk behaviors (Scott, Wildsmith, Welti, Ryan, Schelar, and Steward-Streng, 2011). Compared with older adults, sexually active adolescents are especially vulnerable and at higher risks of acquiring STDs as they undergo rapid physical, developmental, emotional, behavioral, and psychosocial changes (CDC, 2012; Divecha, Divney, Ickovics, and Kershaw, 2012; Hendriksz, 2013). In addition, the higher prevalence of reproductive health disparities among adolescents may also reflect multiple barriers to accessing quality reproductive health services such as a lack of health insurance or income to pay, lack of transportation, discomfort with adult-designed facilities, and concerns about confidentiality (CDC, 2012).

High-risk sexual behaviors and STDs continue to be a significant health issue among adolescents in the United States (US) and Hawai`i (Bridges, 2008; CDC, 2013; Sasaki and Kameoka, 2009). Complications associated with STDs may compromise an adolescent’s health and quality of life in adulthood (Sasaki and Kameoka, 2009). The CDC estimates that there are
approximately 20 million new diagnoses of STDs every year and although STDs affect individuals of all ages, STDs are particularly of concern with adolescents and young adults (CDC, 2013). The most recent statistical data from CDC (2013), estimates that individuals ages 15-24 years of age account for half (10 million) of the new STDs in the United States each year.

**Hawaiʻi’s STD Statistics.**

Chlamydia and Gonorrhea are two common and prevalent STD infections affecting Hawaiʻi’s youth. According to the Hawaiʻi State Department of Health (2013), approximately 5,000-6,000 cases of Chlamydia were reported annually during a 10 year period (2003-2012). The highest reported case of 6,340 was noted in year 2012 (Hawaiʻi State Department of Health, 2013). Gonorrhea rates in Hawaiʻi have significantly decreased since 2003 and within the 10-year period (2003-2012), annual rates of Gonorrhea varied between 600-1,260 cases (Hawaiʻi State Department of Health, 2013). Of these cases in Hawaiʻi, Kauaʻi County reported an annual Chlamydia rate between 105-144 cases and annual Gonorrhea rate between 12-50 cases (Hawaiʻi State Department of Health, 2013). Although these numbers on Kauaʻi are relatively low it is important to note that the population of Kauaʻi within this 10 year period ranged from 60,194 to 68,434 and there has been an increase in Chlamydia rates since 2003 (Hawaiʻi State Department of Health, 2013). In 2003, Kauaʻi reported the lowest cases of Chlamydia at 105 cases and in 2004 the rates increased to 130 cases (Hawaiʻi State Department of Health, 2013). A decline occurred in 2007 and 2008 with 116 and 115 cases and the largest increase within this 10 year period of 145 cases occurred in 2009 (Hawaiʻi State Department of Health, 2013). Rates continued to decline to 129 and 114 cases in 2010 and 2011 and the second highest reported rate of 144 occurred in 2012 (Hawaiʻi State Department of Health, 2013). Thus, Kauaʻi statistics demonstrate Chlamydia rates are increasing and consistent with increases reported in State and National data.
Hawai‘i’s STD cases are most severe among young people, especially young women (Bridges, 2008). According to the 2011 National Center for Health Statistics (NCHS), the Hawai‘i adolescent population for ages 15-19 is approximately 85,000 with majority of adolescents represented in the Asian or Hawaiian/Other Pacific Islander (API) ethnicity, followed by Non-Hispanic Whites, Hispanics, and Non-Hispanic Blacks. Thus, Hawai‘i is a diverse state with thousands of youth in need of reproductive health care (Bridges, 2008).

According to the Youth Risk Behavior Surveillance (YRBS), sexual risk behaviors in Hawai‘i adolescents’ indicators have risen (Bridges, 2008). The YRBS depicting risk behavior indicators in Hawai‘i’s High School students has shown that: 36% report never having had sex, 24% are currently sexually active, and 54% (the lowest percentage of any state in the nation) reported using a condom at last intercourse (Bridges, 2008). Hawai‘i has the 6th worse Chlamydia rate in the nation with 63% of Hawai‘i’s Chlamydia rates among the age group 15-24 (Bridges, 2008). In addition, young people ages 15-24 experienced 50% of Hawai‘i Gonorrhea cases and adolescents and young women ages 15-24 experienced 78% of dual diagnosis of both Chlamydia and Gonorrhea (Bridges, 2008). Unfortunately, this alarming statistical data only represents the reported cases, as there are many cases of STDs (Chlamydia, Gonorrhea, and Syphilis) that continue to go undiagnosed and unreported (CDC, 2013). In addition, STDs are a significant health care cost in the nation with approximately $16 billion in health care costs each year (CDC, 2013). Thus, these unsettling statistics of risk behavior and STD infection continue to demonstrate a need to increase education, access to STD screening, and management for adolescents.
Theoretical underpinnings: Urie Bronfenbrenner’s Ecological Systems Theory

The factors influencing the health of the adolescent today can be further explained, assessed, and researched with the theoretical framework of Bronfenbrenner’s Ecological Systems Theory (See Figure 1). Urie Bronfenbrenner developed the ecological systems theory to explain how a child is nurture, grows, and develops and is influenced by five levels of the environment (Bronfenbrenner, 2005; London et al., 2011). By envisioning the adolescent at the center of the model (See Figure 1), the impact of biophysical, psychosocial, community, society, political, and chronological time can be illustrated. The issues depicted in Bronfenbrenner’s ecological model’s microsystem, mesosystem, macrosystem, exosystem, and chronosystem are closely related to the transitional issues impacting adolescents. Within the ecological model, Bronfenbrenner emphasizes the interactions between the child and these various settings or systems and focuses on the interplay between both research and policy on child development (Bronfenbrenner, 2005; London et al., 2011).

Bronfenbrenner’s socio-ecological framework and theoretical underpinnings are used to assist in the understanding of the developmental, community, society, culture, legal, and time period of adolescence. By understanding how each level interacts and influences each other as well as directly and indirectly influences an adolescent, aids in developing effective strategies to increase screening and treatment in this particular population. Bronfenbrenner’s model (see Figure 1) depicts the interrelations of the microsystem, mesosystem, exosystem, macrosystem and chronosystem and the issues and challenges adolescents in the 21st century face.
Figure 1: The Adolescent and Urie Bronfenbrenner’s Ecological Systems Theory

Bronfenbrenner’s ecologic theory is utilized as a framework that views the adolescent as interacting within five levels or systems. The Microsystem is defined as the adolescents’ daily, consistent, close relationships such as home, school, friends, and neighbors. The Mesosystem includes relationship of Microsystems with one another. The Exosystem is composed of those settings that influence the adolescent even though the adolescent is not in close daily contact with the system, such as media, and legal and social services. The macrosystem includes the beliefs, values, and behaviors expressed in the adolescent’s environment, such as culture and politics. The chronosystem is the outermost layer that brings the perspective of time and historical aspects such as the current digital era.
The Microsystem and Mesosystem

The microsystems refers to the environment in which an individual lives and is the setting in which adolescents have direct social interactions with these social agents (Bronfenbrenner, 2005). This system includes family members, peers, religious communities, schools and neighborhoods (Bronfenbrenner, 2005). It is within this system that the individual encounters the most social interactions (Bronfenbrenner, 2005). This level is defined as the daily, consistent, close relationships in which the adolescent both influences and is influenced by reciprocal interactions of settings within the microsystem (London et al., 2011). The mesosystem depicts the relationships between the microsystems in one’s life and is described as the interactions between the microsystems (Bronfenbrenner, 2005).

The Exosystem

The exosystem is the setting that links the context where the person does not have any active role, yet the context where they are actively participating (Bronfenbrenner, 2005). As with the Macrosystem, one of the major issues of the exosystem is the political and legal issues of a society. Although in the exosystem, the individual plays no role in the construction of experiences, these experiences have a direct impact on the microsystems of the individual (Bronfenbrenner, 2005). Within this level of the ecological model, legal and political health policies have the largest impact on health of individuals.

The Macrosystem

The macrosystem level is the actual culture of an individual. The cultural context involves the socioeconomic status of the person and/or family, ethnicity and race. Thus, the macrosystem is influenced greatly by the culture and society in which a person lives. The belief
STD EDUCATION AND SOCIAL MEDIA

systems and ideology of the individual’s culture influence the person directly; however, the individual does not necessarily have as much freedom in determining his or her surroundings such as with political or religious norms of the culture (Bronfenbrenner, 2005).

The Chronosystem

The chronosystem is the outer most layer of the five systems of Bronfenbrenner’s Ecological Systems Theory (see Figure 1). The chronosystem refers to the patterning of the environmental events and transitions and shifts in one’s lifespan, and socio-historical circumstances. The socio-historical aspect of the digital era is represented in the chronosystem of the millennium adolescent and brings the perspective of time and its influences (London, et al., 2011).

The ecological system model can be used as an assessment tool to assist in understanding the various issues influencing adolescent health. Thus, an ecological assessment can provide direction towards implementing interventions aimed at increasing screening and treatment of STDs in adolescents. Pediatric health care providers have utilized Bronfenbrenner’s ecological theory to assess aspects of the microsystem and macrosystem to effectively approach patients. The CWC has created their “Teen Clinic” around common adolescent concerns regarding access, confidentiality, privacy, and approachability. These issues are important aspects of the adolescent’s most intimate ecosocial system within their microsystems and macrosystems. The more intimate systems are important in affecting individuals, whereas the outer systems are targeting systems, such as the legal, political, and environment, in which changes can affect populations. The CWC Teen Clinic is effective in caring for adolescents on an individual basis and effectively assesses the microsystem and macrosystem issues of Kaua`i’s adolescents. With this in mind, the CWC implements strategies to approach care and provide preventative health
care to adolescents. The CWC is seeking approaches to target a larger adolescent population on Kaua`i by assessing issues of the adolescents’ chronosystem and macrosystem and planning strategies to affect not only a clinical system change but change to improve the health of Kaua`i’s adolescent population. The ecological model can assist healthcare professionals caring for adolescents by assessing the issues within this transitional process, and planning appropriate strategies within all the ecological systems.

The Bronfenbrenner Ecological Systems Theory provides a framework to access multiple factors that influence social media, sexuality and STDs on Kaua`i’s adolescents. The CWC has provided interventions that are geared at the microsystem and macrosystem levels by providing access to contraceptive services and reproductive health services with respect to confidentiality, legal issues, and adolescent cultures among Kaua`i. Concepts from within an adolescent’s chronosystem and macrosystem provide the direction for the proposed social media based intervention planned for pilot implementation at the CWC.

**Caring for Kaua`i’s Adolescents**

The CWC was established as a unit of the KCC in 1997 as an academic, nurse-managed health care centered staffed by the KCC Nursing Program nurse practitioner (NP) faculty. Since being established, the CWC has maintained comprehensive ongoing family planning services as a part of the Department of Health Office of Family Planning. The CWC began “Teen Clinic” to address the family planning needs of adolescents, 14 years of age and older, by providing a teen-friendly, confidential atmosphere geared towards adolescents. Since 1998, the CWC has been providing family planning services to adolescents on the island of Kaua`i through a Title X Family Planning Grant.

To create the “Teen Clinic” the CWC NPs conducted adolescent focus groups in 2000 that addressed macrosocial issues surrounding local adolescent culture, ideologies and
perspectives on sexuality. The CWC addressed access, legal, and confidentiality issues that appeared to be the major barrier in accessing Title X family planning providers on the island. Since adolescent reproductive services were started, the adolescent clientele continues to be the largest population that the CWC serves with majority of services for contraceptives prescriptions (birth control pills, progestin injections, Nexplanon insertions, vaginal rings, and Emergency Contraceptives), followed by pregnancy and STD screening services, STD treatment and management, and pregnancy counseling services. Despite these services, adolescents on the Westside of Kaua`i (Waimea County) had one of the highest teen pregnancy rates and second highest Chlamydia rates within the State of Hawai`i (Hawai`i PRAMS, 2011). Thus, access to and barriers of effective STD screening and management of adolescents continue to exist within Kaua`i County.

The CWC has done an initial assessment of both microsystems and macrosystems affecting and influencing local adolescents’ perspectives on sexuality. The ecosocial system assessment revealed barriers to access to teen reproductive health services as well as concerns about privacy and confidential care. Through the use of Title X funds, the accessible and confidential Teen Clinic provided an option that Kaua`i teens did not have. One of the ecosocial system assessments to sexual health that has yet to be studied, researched or implemented in the CWC family planning services is part of the ecosocial level of the Chronosystem. The Chronosystem is the outer most ecosocial system of the five systems of Bronfenbrenner’s Ecological Systems Theory (See Figure 1). The chronosystem refers to the patterning of the environmental events and transitions over the life course, as well as socio-historical circumstances. In addition, the chronosystem includes the transitions and shifts in one’s lifespan, such as experienced during adolescents. This outer most ecosocial level brings the perspective of
time and its influences (London et al., 2011) and has both indirect and direct influences on the inner ecosocial levels of the macrosystem, exosystem, and microsystem (See Figure 1).

Adolescents and Media

In the first decade of the new millennium, adolescents became immersed in an age of digital revolution, live in media-saturated worlds, and thus have unprecedented access to the larger world (Brown and Bobkowski, 2011). In the past twenty years, one of the major changes in society has been the adoption of information communication technologies by a large percentage of youth with technology having a significant influence on the lives of adolescents (Brown and Bobkowski, 2011; CDC, 2013). Today’s generation of adolescents use social media to aid in the important social and developmental tasks of incorporating sexuality into a sense of self and relationships (CDC, 2013; Hua, 2012; Mesch, 2012). Adolescents’ media use is often a part of their personal identity as well as motivated by what is happening in their families, peer networks, and schools (Brown and Bobkowski, 2011). The immediate access to information and to social connections can be beneficial and dangerous for adolescents and while technology has changed the way in which adolescents interact and access information, they remain a vulnerable population when it comes to sexual risk (CDC, 2013; Hua, 2012; Mesch, 2012).

Review of Literature of Influences on Sexual Health of Adolescents

Throughout the academic year 2014-2015, a comprehensive review of the literature was conducted to review the evidence regarding the use of social networking sites (SNS) as effective tools for health education in adolescents. A systematic review of published researched articles focused on use of media/digital technology and health education for adolescents. Databases such as EBSCO Academic Premier, Medline, CDC, and Cochrane Reviews were searched with key words: social media, adolescents, digital technology, and sexual health. The search was limited
to full-text and scholarly peer-reviewed journals. Given that social media use is relatively new, the search strategy was limited to published dates from 2003 to 2015. The initial search resulted in 984 articles that matched the search key words and parameters. The criteria for inclusion to this review of literature were articles related to adolescent health, particularly sexual health, and the use of media, digital technology and social media. In addition, articles that informed providers on constructing and creating social media use within their health care organizations were also reviewed. Reference lists from all retrieved articles were also reviewed for potentially relevant studies. Of the 984 articles that were identified, 17 articles met the PIP criterion and are included in the review of literature.

**Chronosystem Issues: The Millennial Adolescent and Digital Technology**

The millennial adolescent obtains, disseminates, socializes and communicates to a large extent virtually through social media and digital technology (Divecha et al, 2012; Mesch, 2012; Landry, Gonzales, Wood, and Vyas, 2013). The Pew Research Center (2011) estimates that 95%-97% of both adolescents and young adults are online on a daily basis (Park and Calamaro, 2013). For adolescents, these media technologies are ingrained in everyday living and have become an important and valued tool for entertainment, socializing with friends, as well as receiving information on various health-related issues (Kachur et al., 2013; Park and Calamaro, 2013). Thus, digital and media technologies have become embedded in the lives of adolescents and can influence the process of identity, relationship formations, information-gathering, and decision-making (Kachur et al., 2013).

As part of their chronosystem, the use of social media and digital technology aids in the important social and emotional developmental tasks of incorporating sexuality into their self-identity formation as well as with relationships (Hua, 2012; Mesch, 2012). These new media technologies are especially well suited to young people for several reasons: 1) adolescents are
frequent and early adopters of new technologies, 2) media use provides an anonymous avenue for seeking health information, and 3) the immediate access to information and to social connections can be beneficial in providing social support and accessing knowledge about sexual and general health issues (Divecha et al., 2012; Hua, 2012; Kachur et al., 2013; Park and Calamaro, 2013).

Media influences in general have been well studied in the adolescent population. Issues that media portrays in regards to violence and aggression, romance and sexual relationships, body image, and alcohol, tobacco, and substance use have been linked to negative effects of aggressive behavior, cyber-bullying, sexual risk-behaviors, eating disorders, obesity, and use of alcohol, tobacco, and illicit drugs (Brown and Bobkowski, 2011; Landry et al., 2013; O’Keefe and Clarke-Pearson, 2011). Despite these dangerous and negative outcomes, many researchers believe that media can have a strong and equally positive influence on adolescents (Landry et al., 2013).

The Internet, cell phones, and social media are agents of social change that rapidly diffuse information, create and maintain social networks, and promote the process of Erikson’s stages of autonomy and formation of self-identity (Mesch, 2012). Online communication has become an integral and influential part of youth culture and has become the primary venue that adolescents use to interact with family and friends (Mesch, 2012). Several groups, including the Kaiser Foundation and Pew Research Center, track media consumption among adolescents. Media consumption statistics among 12-17-year-olds reveal that 75%-77% own mobile phones; 93% use the internet of which, 73%-79% have used SNS (Facebook, MySpace, Twitter) with 81% of users reporting having a profile on at least one SNS; 50% use short messaging services daily of which, 69% had sent a text message, 56% sent instant messages, and 44% had sent emails (Divecha et al., 2012; Mesch, 2012; Kachur et al., 2013; Landry et al., 2013). Thus,
researchers and healthcare organizations are utilizing these communication technologies to directly reach adolescents (Divecha et al., 2012). In addition, the use of new media technology among adolescents has added to the responsibilities of pediatric providers who must now keep abreast of these new developments in social media, as well as current trends in adolescent sexual behavior and integrate technology into their practices (Hua, 2012). Through social media research, findings have demonstrated some effectiveness on how education can be in decreasing sexually risk behavior on social media (Hua, 2012).

**Macrosocial Issues: Race/Ethnicity, Culture, and Socioeconomic Factors**

The emergence of new media and its rapid adoption by adolescents from diverse cultures and backgrounds demonstrates a need to understand cultural aspects of sexuality among adolescents (Landry et al., 2013). Socioeconomic factors such as race/ethnicity, geographic location, and family income have been shown to influence access to and use of digital technology among adolescents (Kachur et al., 2013). Studies with different racial/ethnic groups and socioeconomic factors of adolescents and media technology use have also been explored. Sasaki and Kameoka (2009) discussed the ethnic and cultural differences on sexuality within Asian Pacific Islander (API) adolescents in Hawai`i. Results from this study showed there are differences in cultural beliefs and values surrounding the issues of sexuality among Filipinos, Japanese, and Native Hawaiian cultures (Sasaki and Kameoka, 2009). It is difficult to study variables of API subgroups when these different cultures are all categorized as API (Sasaki and Kameoka, 2009). Thus, Sasaki and Kameoka (2009) suggested future studies disaggregate API into subgroups to understand the unique differences found among API races, cultures and ethnicities.
Most adolescents, regardless of race/ethnicity or socioeconomic factors are online at least once a day (Kachur et al., 2013). Although, studies have also shown that SNS platforms may decrease socioeconomic and racial stigmatization by providing access for adolescents regardless of racial/ethnic backgrounds and socioeconomic levels, access to digital information can be affected by socioeconomic status (Kachur et al., 2013; Landry et al., 2013). Kachur et al., (2013) found no significant difference in mobile phone ownership across race/ethnicity and gender; however, adolescents from lower income families are less likely to have a mobile phone. Thus, low income and minority teens are more likely to report accessing the internet through other media means (computer access in schools or libraries) versus their high income and white counterparts who have access to mobile devices (Kachur et al., 2013). In addition, Lariscy, Reber and Paek (2010) argue that there is a knowledge gap among different socioeconomic and racial/ethnic groups that also results in decrease use of SNS. When researching differences between adolescents in urban versus rural settings, Lariscy et al. (2010), demonstrated that rural adolescents reported seeking and learning significantly more than urban adolescents through SNS media. Consequently, SNS may help bridge an information gap between rural and urban adolescents, but providing access to digital information between socioeconomic levels may be more challenging.

**Ethnic Groups.**

Divecha et al., (2012) examined willingness to communicate through social media technologies among different ethnic groups. Their study demonstrated that black adolescents were the largest population willing to share sexual information within SNS channels and Hispanics/Latinos were the least willing to share (Divecha et al., 2012; Landry et al., 2013). These issues are generally related to different cultural perspectives on sexuality as well as
differing degrees of acculturation among immigrant populations (Divecha et al., 2012; Landry et al., 2013). Similar to findings from Sasaki and Kameoka (2009) on API ethnicities, other studies on specific racial/ethnic and socioeconomic groups have been conducted with limited generalizability to the general adolescent population. Although generalization is limited in these minority studies, understanding differences in ethnicity subgroups can provide insight into variables that impact and influence media and digital use among adolescents.

In comparison to national studies, international studies of SNS use for sexual health in adolescents have shown more effective outcomes. Studies in Norway and Canada suggest that that use of SNS and media technologies were convenient, private and provided access to STD testing and counseling that transform targeted, routine, and consumer-controlled STD testing as well as partner intervention (Swenderman and Rotherman-Borus, 2011; Shoveller, Knight, Davis, Gilbert, and Ogilive, 2012). In general, other countries such as Canada and Norway have a much more liberal view on adolescent sexuality and thus less stigmatization and shame are perceived from engaging in sexual conversations and discussions. These findings are consistent with different cultural norms and perspectives of sexuality that differs from variables related to stigmatization and general views of adolescent sexuality in the US.

Use of Social Media in Health Organizations

Media, digital technologies, and social networking have been used to promote healthy behavior for many decades (Brown and Bobkowski, 2011). Today, online social media developments have radically altered the way adolescents’ access, receive, and learn important health information (Lariscy et al., 2010). In relation to health, 75% of 12-17-year-olds own mobile phones, 42% of 18-29-year-olds have used their mobile phones to research health or medical information, and 15% have a mobile health application designed to track or manage
their health (Divecha et al., 2012; Kachur et al., 2013). Currently, attention has been focused on using social media to promote adolescents’ health, evaluate effectiveness of efforts, and develop guidelines to assist health campaigns in effectively disseminating health initiatives and information (Brown and Bobkowski, 2011).

Due to these potential benefits of increasing access to information and promising behavior change, health care organizations have begun to use newer media channels such as mobile phones and SNS to promote education about sexual health and to conduct health campaigns and interventions (Divecha et al., 2012). Due to the widespread use of digital media among the general population, many health organizations are turning to new media technologies to disseminate information and stimulate conversations about health topics (Divecha, et al., 2012). The use of social media has been researched in chronic health conditions such as Type I: Diabetes (Nordfeldt, Angelne-Lindberg, Nordwall, Ekberg, and Betero, 2013), as well as with sexual behavior and STDs (Divecha et al., 2012; Kachur et al., 2013: Landry et al., 2013). Health campaigns that are promoted on media channels such as anti-smoking and reducing drug and risky sexual behavior, have shown promising results in reducing and decreasing use of tobacco, drugs, and risky-sexual behavior (Brown and Bobkowski, 2011; Miller, Burgoon, Grandpre, and Alvaro, 2006; Noar, 2006; Pechman, Zhao, Goldberg, and Reibling, 2003). Brown and Bobkowski (2011) analyzed the results of two meta-analyses of media campaigns for health and found that on average, 4%-8% of people exposed to such campaigns will change their health-related behaviors. The 4%-8% may not seem like a large percentage, but when distributed across large audiences that media can reach the impact may be sizable (Brown and Bobkowski, 2011).

Health organizations have begun to use mobile phones, text messaging, and SNS to promote education about sexual health and to conduct health campaigns and interventions (Divecha et al., 2012). Examples of use of text messaging and SNS in health include: reminding
STD patients about appointments, increasing adherence to medication and treatment regimens, educating people about general health issues, promoting preventive behaviors and conducting partner notification regarding STD testing (Divecha et al., 2012). The San Francisco Department of Public Health partnered with a text messaging service named Sexuality Information Services. Together they successfully reached their target audience by creating a text message service that promoted awareness of Gonorrhea among black adolescents who opted in via text messaging to receive information about sexual topics such as pregnancy, Human Immunodeficiency Virus (HIV), and the decision to have sex (Divecha et al., 2012). Thus, the use of SNS for educating about sexual health is not only informative but can also change related norms, stigmas and beliefs as they rely on peer-to-peer networking and promote behavioral change similarly to traditional face-to-face peer networks (Divecha et al., 2012).

Although there are numerous research studies conducted on how media technologies and SNS improve access to health education for adolescents, currently there are limited research studies that examine how adolescents use media technologies to communicate about sexual health with peers (Divecha et al., 2012; Landry et al., 2013). Divecha et al., (2012) were among the first researchers to examine communication of sexual issues using media technologies. Divecha et al., (2012) conducted a small sample of 94 low-income, Hispanic parenting adolescents and young adults in Connecticut that included a self-interview about their use of media technologies, communication with friends about sexual health and willingness to use media technologies for such communication. Divecha and associates (2012) reported SNS use among young urban parents in Connecticut may not aid in improving STD interventions. The young urban parents being studied reported that they preferred private forms of communication for conversations about sexual health rather than through SNS. The study is very limited in its generalizability among the adolescent population. More research is needed on how adolescent
media use and sexual health are perceived within other cultures, geographic areas, and among peer groups.

Due to the potential impact on use of SNS with adolescents, creative and innovative approaches to health information dissemination has the potential to reach large audiences. As discussed, influences from health campaigns, media portrayals, and health information sites have both negative and positive outcomes. To understand further the need to create effective media-based tools, Nordfeldt and associates (2013) conducted a study to explore adolescent information-seeking behaviors, Internet use and SNS of adolescents with Type I Diabetes. Nordfeldt and associates (2013) felt that to create an effective media platform, it was important to analyze the perspectives of young people’s use of these new communication practices. Their findings suggest that adolescent diabetics visit various online forums for social support, information, advice, and to share experiences (Nordfeldt et al., 2013). In addition, Nordfeldt and associates (2013) found that effective use of SNS related to the sites included: trustworthiness, reliability, currency and relevance, straightforwardness, readability, and ease of understanding. In addition, adolescents stated that layout, content, and congeniality were also important (Nordfeldt et al., 2013). Lariscy et al., (2010) discussed confidentiality and anonymity as important aspects of a SNS, especially when discussing a range of sensitive health issues. These findings demonstrate a need to create effective media-based interventions that are tailored to adolescents and create media platforms that adolescents will use (Lariscy et al., 2010; Nordfeldt et al., 2013). To aid in media development, several organizations including, the American Nurses Association, CDC, and the American Academy of Pediatrics Council on Communications and Media, have developed professional guidelines to assist in developing policies and procedures that govern the use of media technologies and SNS.
Gaps in Literature and Need for Future Research

Social networking sites are popular and powerful marketing and communication tools that can directly reach the adolescent population (Kachur et al., 2013). How effective these sites are for disseminating sexual and reproductive health information is not well known (Kachur et al., 2013). Although, previous studies indicate the use of social media and digital technology can increase access to information about general and sexual health issues, there is limited research examining how adolescents use new media to communicate and learn from various health and sexual issues (Divecha et al., 2012; Lariscy et al., 2010). Thus, more research is needed to understand the ways in which adolescents communicate with each other about sexual health through the use of social media and digital technologies.

Generalization of Findings

Another area of study in SNS centers on specificity of use of social media users among race/ethnic groups, geographic locations, and socioeconomic levels. Although findings noted in the studies of Divecha et al., (2012), Hua (2013), Kachur et al., (2013), and Lariscy et al., (2010) have limitations in generalizing the findings to the general adolescent population, Sasaki and Kameoka (2009) suggest disaggregation of data is important in studying variables that impact and influence social media use. Of concern is that generalizing interventions for one group of adolescents may not be as effective with another subgroup based on differing culture, race, environment, and socioeconomic factors. For example, media-based interventions that were effective for Black, urban adolescents living in Connecticut may not be as effective for API adolescents living in rural Hawai`i counties. Thus, it is imperative that studies focus on both aspects of generalization as well as disaggregation. Understanding unique cultural subgroups of API ethnicities and socioeconomic challenges present in Hawai`i may assist in creating media-
based interventions that aids in increasing screening and management of STDs. How sexuality is viewed within cultures can provide information on issues of confidentiality, shame, and stigma related to API groups in Hawai`i (Sasaki and Kameoka, 2009).

**Limitations**

Other limitations noted are that most studies with adolescents use a cross-sectional design that rely on surveys and self-reports. There are limited random-controlled trial studies of clinical trials on adolescents. Such sensitive subjects as sexuality are encumbered by privacy that may delay or prevent approvals from human subjects and ethical review boards. To fully understand the process of media effects on adolescents, longer-term longitudinal studies that include accurate measures of media use as well as other contextual and individual difference variable are necessary (Brown and Bobkowski, 2011). It is also important to note that as quickly as informatics and technology studies are being published, new media technologies are rapidly evolving, thus social norms about technology use may change in the near future, driving new directions of research regarding media use in adolescents (Brown and Bobkowski, 2011; Divecha et al., 2012).

**Summary of literature review and direction for PIP**

The review of literature demonstrates the powerful influence that media has had on adolescents throughout this digital era. Negative and positive outcomes have resulted from media campaigns, images, and advertisements. Healthcare providers and organizations are in a unique position to utilize new media technology to directly influence adolescents, by increasing access to health education, and possibly affect behavioral changes that improve overall health and decrease disparities. As with other health diseases and disparities plaguing the nation, state and local counties, macrosocial level factors play important roles. Macrosocial system, such as
race/ethnicity, culture and socioeconomic factors, can impact how adolescents use social media and digital technologies. Regardless of race and economic issues, the reality is that adolescents are embedded in a media-saturated digital world and healthcare providers need to continue to implement and evaluate media-based interventions that directly reach adolescents. Thus, future research and goals for media-based interventions for adolescents need to be driven by factors that can influence and positively impact the health of adolescents. The possible impact that social media usage can have on adolescents in reducing STDs directed the motivation and goals for the current PIP.
Chapter 3: Project Design and Evaluation Plan

To effectively reach adolescents in this digital era, social media could provide a means of disseminating information and education regarding sensitive subjects such as sexuality and STDs. The CWC has been providing family planning services to adolescents for over 10 years under the Title X Family Planning Grant. By utilizing research that indicate that social media is not only effective but influential in an adolescent’s life, the CWC piloted the use of social media in disseminating Chlamydia education to their adolescent clients. Within this chapter, the project’s methods and evaluation is explained and discussed.

Methods

Project design.

This PIP evaluated the impact of a Chlamydia educational platform accessed by adolescents on the CWC Social Networking Facebook site. Factual, age-appropriate, and cognitive-appropriate information from the CDC Chlamydia Factsheet (CDC, 2014) information (see Appendix A) was redesigned and reformatted on a newly created CWC Teen Health Site with the use of an animated educational software called “goanimate” (see Appendix K). The Teen Health Site and pilot project were then linked to the CWC Facebook page (see Appendix L).

Participants.

The target population was CWC adolescent ages 14-17 years that were transitioning from early to late adolescents. During a one-month period, between June and July 2015, adolescents scheduled for a family planning visit at the CWC were asked to participate. Adolescents willing to participate were given the Social Media Use Consent (see Appendix B) to review. Once the adolescents agreed to participate, the adolescent was given the Teen Health Information
Advertisement Card (see Appendix F) and directed to the piloted CWC Facebook page (see Appendix L) and Teen Health Chlamydia education website (See Appendix K).

**Setting.**

The primary clientele was recruited from the CWC Teen Family Planning Clinic. Adolescent family planning clients scheduled for appointments during a specified one-month period, between June and July 2015, were asked to participate upon arriving and registering for their appointments.

**Instruments.**

The following instruments were used to assess Social Media usage among adolescent clients, increase in knowledge regarding Chlamydia, and overall satisfaction with the Chlamydia education platform:

1) Social Media Use Survey
2) Chlamydia Education Platform, Pre-test, and Post-Game
3) Teen Health Education Facebook Evaluation Survey

**Social media use survey.**

The Social Media Use Survey (see Appendix C), was developed by the principal investigator and the Nursing Director of the CWC. The Social Media Use Survey was embedded as a Google Form into the Introduction page of the Teen Health Website (see Appendix K). Once the patient accessed the website, they were directed to complete the Social Media Use Survey (see Appendix C). Within the state of Hawai`i, adolescents 14 years of age and older are able to consent to family planning services without parental consent or notification. Confidentiality was maintained with assent to participate and a signature or name was not required. The Social Media
Use Survey (see Appendix C) consisted of general demographic information regarding age and
gender as well as their use of a SNS. In addition, a question asking if the participant is aware of
the CWC Facebook page was included.

*Chlamydia Education Platform and Game.*

With the assistance of an Informational Technologist (IT) Specialist, the contents of the
CDC Chlamydia Factsheet (see Appendix A) were redesigned into a newly created website
animated medium appropriate for adolescents (see Appendix K). The CDC Chlamydia Factsheet
(see Appendix A) information was set to animation with the use of an animated software called
“goanimate” (see Appendix K). In addition, a pre-test (see Appendix D) about Chlamydia was
available at the beginning of the educational information session to assess teen’s knowledge
before viewing the site. A post-test game of same questions (see Appendix D) was also
embedded into each animated series (see Appendix K) to evaluate knowledge obtained after
reviewing the educational information.

*Teen Health Facebook Evaluation Survey.*

A Google Forms Teen Health Facebook Evaluation Survey (see Appendix E) that
consisted of general demographic information of age and gender and five questions was
embedded at the end of Teen Health Chlamydia education presentation and game. The five
questions was designed to assess how the participant liked the Teen Health section, if the
participant thought the teen health topic was helpful, accessible, fun and confidential, and if the
participant would recommend or refer the Facebook site to a friend.

*Procedure.*

In June 2015, The CWC staff and NP received training on recruiting intended target
population, obtaining consent (see Appendix B) prior to participation, distributing the Teen
Health Information Advertisement card (see Appendix F), and directing the CWC adolescent clients to the Facebook page (see Appendix L). The office staff is often the first person in contact with the patients scheduled for family planning visits. During a one-month period between June and July 2015, the CWC office staff informed adolescent patients of the pilot project and included the consent (see Appendix B) and Teen Health Information advertisement card (see Appendix F) with the teen patients’ intake paperwork. Office staff was also trained to address common questions that may be asked in regards to survey participation, including consent, risks, benefits, and confidentiality. If the participant was a Facebook user, the participant was directed to the Facebook Teen Health Section and given a card with the Facebook website information (see Appendix F). A laptop computer was available in the waiting area for patients to access the Facebook webpage while waiting for their appointment or if they wished to participate but did not have access to a computer. Office staff was also trained on accessing the CWC Facebook website Teen Health section (see Appendix L) and offer direction and assistance to participants choosing to access the Facebook webpage while in the clinic.

The CWC NP was also trained on the use and dissemination of the Social Media Use Consent (see Appendix B) and Facebook Teen Health Information advertisement card (see Appendix F). There were times during the patient’s scheduled appointment that may require the patient to wait for test results, prescription refills, or further NP consultation. During these wait periods, the patient used the designated lap top to access the Facebook webpage (see Appendix L). The NP was trained to answer questions regarding the purpose of pilot project, the Social Media Consent (see Appendix B), and Facebook Teen Health Information card (see Appendix F), as well as questions that were raised regarding the Facebook confidentiality disclaimer (see Appendix G), contents on the Chlamydia education site (see Appendix K), and post-survey Teen Health Education Survey (see Appendix E).
With the assistance of an IT specialist, the Teen Health Website was created using the goanimate site. The Chlamydia education was created and embedded into the website were the surveys and pre-test and post-test questions. Once the animation and website was completed, the primary investigator asked adolescents she personally knew to navigate through the website in. This pilot run was important to identify technical difficulties and ease navigation issues prior to implementation. These “test” adolescents were not included in the survey data, results, or analysis.

**Data collection.**

Once the pilot project admitted its first participant, data was collected from the Social Media Use pre-surveys (see Appendix C), pre-test and post-test game questions (see Appendix D), Facebook site views and likes, and Teen Health Facebook Evaluation post-survey (see Appendix E). Data was collected during a one-month period between the months of June and July 2015. The principal investigator was responsible for obtaining data and inputting raw data into an Excel database. Since no identifying information within the surveys was linked to data collected, no names were associated with the data.

**Data analysis.**

Nominal descriptive statistics was used to analyze categorical and variables for the answers to 2 questions related to the Social Media Use Survey (see Appendix C) and CWC Facebook page awareness. Categorical variables such as age and gender were analyzed with correlation statistical analysis to examine associations between variables of SNS awareness. For examination of pre-test and post-test Facebook questions (see Appendix D), an analysis of how participant answered each question was used to determine if there was an increase in knowledge. In addition, both correlation statistics of demographic data and content analysis of each question
on the post-survey Teen Health Evaluation Survey (see Appendix E) were used to determine access, confidentiality, and likability of education received.

**Human Subjects**

This project was submitted to the PIP Chair and Committee members, the University of Hawai`i at Hilo School of Nursing Department Scientific Review Board and the University of Hawai`i, Committee on Human Studies for approval in March 2015. The Institutional Review Board (IRB) at the University of Hawai`i reviewed this study and determined it met human subject research in relation to conducting a questionnaire on SNS awareness and use among adolescent clients at CWC. An expedited IRB review was conducted and IRB approval was received in May 2015 (See IRB Approval Appendix J).

This project was approved for waived parental consent which applies to Article 46.116 section D from the Code of Federal Regulations (Committee on Human Subjects Policies and Procedures Manual, University of Hawai`i, 2004). Article 46.116 section D states that an IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent set forth in this section, or waive the requirements to obtain informed consent provided the IRB finds and documents that:

1) The research involves no more than minimal risk to the subjects.

2) The waiver or alteration will not adversely affect the rights and welfare of the subjects.

3) The research could not be carried out without the waiver or alteration.

4) Whenever appropriate, the subjects were provided with additional pertinent information after participation.
Confidentiality was maintained throughout the dissemination and collection of data. Only responses were gathered during data collection and no linkage or identification of response to client was made. No identifiable information other than age and gender were collected during pre and post surveys (see Appendix C and Appendix F) and for pre-test and post-test questions on the educational site (see Appendix D). The consent did not require a name or signature. Completion of the Social Media Use Survey (see Appendix C), pre-test and post-tests questions (see Appendix D), and Teen Health Evaluation Survey (see Appendix E) indicated consent so that anonymity was further maintained.

**Social media policy.**

In addition to providing accurate information about Chlamydia, users and administrators of the CWC Facebook site abided by the University of Hawai`i Community College Policy (UHCCP) #2.211 Social Media Site and/or Account Use and Management (see Appendix H). The CWC is a department operating within the Kaua`i Community College (KCC) and University of Hawai`i System. The UHCCP #2.211 is designed to provide guidelines, “best practices”, legal issues, and professional expectations for users of the University of Hawai`i Community College (UHCC) system interacting online with students, parents, alumni, donors, and the media. The CWC is a healthcare facility within the KCC campus, thus the Health Insurance Portability and Accountability Act (HIPPA) and the UHCCP #2.211 policies are utilized for users interacting with patients of the CWC. As dictated by the UHCCP #2.211 policy, the CWC Facebook users followed the “Social Medial General Guidelines and Procedures”, adhered to social media use responsibilities, and formally submitted a “Social Media Briefing” with the KCC Marketing Office. The Social Media Briefing (see Appendix I) has been officially submitted and filed with the KCC Marketing Office which further describes
the purpose, goals, target population, and execution and maintenance of the CWC Facebook administration and management.

Consent statement for patients at the CWC clinic (see Appendix B) and Facebook online Confidential Disclaimer Notice (see Appendix G) was also provided in which acknowledgment of statement provides access to Teen Health content. The risk to participants was minimal in this project. In addition, complete anonymity on Facebook was not possible and such identify protection was discussed with the participants within the Confidential Disclaimer Notice (see Appendix G) on Facebook. The disclaimer addressed what types of activity on Facebook could be linked to identity and visible to other Facebook users. Regardless if identity is known with Facebook activity, data collection did not obtain names to associate with data. The questions themselves are non-sensitive in nature and only imply awareness, usage, and effectiveness of the Chlamydia education on the CWC social media site.

There was no direct benefit to participants other than receiving information about Chlamydia; however, the information generated in this pilot project provided the CWC with more information and understanding about the relationship between social media use and sexual health services.

Participation in the study was voluntary. Non-participation did not affect the ability to access health care at the CWC and participants could withdraw at any time without penalty. Under Hawai`i State Law, adolescents ages 14 and above can consent to reproductive health services without parent consent. By applying the surveys and the pilot project into the reproductive health visit, waiver of parental rights was assumed.
Chapter 4: Results and Findings

This PIP evaluated the impact of a newly created Chlamydia education teen health site (see Appendix K) on the CWC social media Facebook page (see Appendix L). The pilot project was targeted at CWC adolescent patients ages 14-17. The overall goal of this PIP was to increase access to Chlamydia education for Kaua`i’s adolescent CWC patients.

The CWC Teen Health Educational webpage (See Appendix K) was created and developed during the month of May 2015. Training for the CWC Staff and NP was conducted in the month of June, 2015. The Teen Health Education webpage (See Appendix K) was then linked to the CWC Facebook page (See Appendix L) on June 22, 2015, which marked the start of the pilot project. The project continued until July 22, 2015. Below are the data results in relation to the project’s objectives.

Objective 1. Survey and Assess Adolescents at the CWC Regarding Their Current Use of Social Media Site Facebook and Awareness of CWC Facebook site.

Table 4.1 depicts the data collected from the Social Media Use Survey questions (see Appendix C). According to the data in Table 4.1, there were 27 participants that completed the Social Media Use Survey. The demographic data collected in Table 4.1, reflects the majority of participants (85%) were female and from the 14-year-old (40%) age group. Question #5 asked the participants if they were aware of the CWC Facebook page. Only five participants (19%) stated they knew about the CWC Facebook page and 22 participants (81%) claimed they did not know about the CWC Facebook page.
Table 4.1: Social Media Use Survey Responses

<table>
<thead>
<tr>
<th>Participant</th>
<th>Question #1 What is your gender?</th>
<th>Question #2 How old are you?</th>
<th>Question #3 Do you use a social networking site?</th>
<th>Question #4 What Social Media Site do you use?</th>
<th>Question #5 Did you know about the CWC Facebook page prior to participating in this project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>16</td>
<td>Yes</td>
<td>Instagram</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
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<td>16</td>
<td>Yes</td>
<td>Instagram</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Facebook, Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
<td>17</td>
<td>Yes</td>
<td>Facebook, Instagram</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>Female</td>
<td>16</td>
<td>Yes</td>
<td>Facebook, Instagram, Snapchat</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram</td>
<td>No</td>
</tr>
<tr>
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<td>No</td>
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<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>Yes</td>
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<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>13</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
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<tr>
<td>14</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Tweeter</td>
<td>No</td>
</tr>
<tr>
<td>15</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Tweeter</td>
<td>No</td>
</tr>
<tr>
<td>16</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Tweeter</td>
<td>Yes</td>
</tr>
<tr>
<td>17</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Tweeter</td>
<td>No</td>
</tr>
<tr>
<td>18</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>19</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram</td>
<td>No</td>
</tr>
<tr>
<td>20</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>21</td>
<td>Female</td>
<td>14</td>
<td>Yes</td>
<td>Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>22</td>
<td>Male</td>
<td>17</td>
<td>Yes</td>
<td>Facebook, Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>23</td>
<td>Male</td>
<td>16</td>
<td>Yes</td>
<td>Facebook, Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>24</td>
<td>Male</td>
<td>16</td>
<td>Yes</td>
<td>Facebook, Instagram, Snapchat</td>
<td>No</td>
</tr>
<tr>
<td>25</td>
<td>Female</td>
<td>17</td>
<td>Yes</td>
<td>Facebook, Instagram, Tweeter</td>
<td>No</td>
</tr>
<tr>
<td>26</td>
<td>Male</td>
<td>17</td>
<td>Yes</td>
<td>Facebook, Instagram</td>
<td>No</td>
</tr>
<tr>
<td>27</td>
<td>Female</td>
<td>15</td>
<td>Yes</td>
<td>Instagram, Tweeter</td>
<td>No</td>
</tr>
</tbody>
</table>
Question #3 on the Social Media Use Survey (see Appendix C) asked participants if they used a social networking site (SNS) and question #4 asked participants what social medial site they used. Table 4.1 reflects the raw data of the responses and Figure 4.1 below illustrates that data. As seen in Table 4.1 and Figure 4.1, all participants (100%) used a SNS and the majority of participants used Instagram, followed by SnapChat. Facebook users represented only eight (30%) participants.

Figure 4.1: Social Media Use Among Pilot Group
Table 4.1 also revealed additional data for question #3. Participants included all SNS sites they were using. Figure 4.2 illustrates the additional data from Table 4.1. In addition to the data that depicts that all participants (100%) used a SNS, the data reflects that the majority of adolescents in the pilot project used at least two SNS.

Figure 4.2: Number of SNS Sites Used by Adolescents in Pilot Group

![Pie chart showing number of SNS sites used by adolescents in pilot group](chart.png)

Objective 2. Create Chlamydia Education to be Designed on Facebook to Pilot an STD Educational Platform Targeted at the Adolescent (ages 14-17) at the CWC.

With the assistance of the IT Specialist/Professional Developmental Coordinator, the contents of the CDC Chlamydia Factsheet (See Appendix A) were redesigned into a Teen-friendly, interactive, and animated Teen Health Site (See Appendix K). The pre-test and post-test questions (See Appendix D) were embedded into the website activity that correlated to the animated clip. The development and creation of the Teen Health Site (See Appendix K) began in May 2015 after IRB approval (See Appendix J) was obtained. The Teen Health Website (See Appendix K) and animations took approximately one-month to create. On June 21, 2015, the Teen Health Website (See Appendix K) was completed and linked to the CWC Facebook Page.
(See Appendix L). The first participants to participate in the project began on June 22, 2015. The Teen Health Website (See Appendix K) continued to gather data from participants’ responses on the Social Media Use Survey (See Appendix C) and Teen Health Education Survey (See Appendix E) and pre-test and post-test (Appendix D) questions from June 22, 2015 to July 22, 2015.

**Objective 3. Pilot Chlamydia Education on CWC Facebook Site with Post-Survey to Assess if Teens Use Facebook, Find Site Accessible, Confidential, and Helpful, and Would Recommend Site to a Friend.**

Table 4.2 reflects data collected from the Teen Health Education post-survey (see Appendix E). Of the 27 participants that completed the Pre-Survey on Social Media Use, 12 participants (44%) completed the Teen Health Education Post-survey. The majority of participants completing the post-survey were female (83%) and of the 14 and 15 age group (66%). According to responses of question #3 in Table 4.2, 10 participants (83%) reported they liked the Chlamydia presentation and game and two participants (16%) reported no. Only one participant (8%) did not feel their privacy and identity was protected. Despite a few participants concerned about privacy or did not like the presentation, all participants (100%) reported that they learned something new, found the information helpful and that they would recommend this site to a friend.
Table 4.2 Teen Health Education Survey Responses Questions 1-6

<table>
<thead>
<tr>
<th>Question 1</th>
<th>What is your Gender?</th>
<th>Answer</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td># of responses</td>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

| Question 2 | What is your age? | Answer | 14 | 15 | 16 | 17 | # of responses | 4 | 4 | 2 | 2 |

| Question 3 | Did you like the Chlamydia presentation and game? | Answer | Yes | No | # of responses | 10 | 2 |

| Question 4 | Did you learn something new and find the information helpful? | Answer | Yes | No | # of responses | 12 | 0 |

| Question 5 | Do you feel your privacy and identity was protected? | Answer | Yes | No | # of responses | 11 | 1 |

| Question 6 | Would you recommend this site to a friend? | Answer | Yes | No | # of responses | 12 | 0 |

In addition to quantitative data noted in Table 4.2, Question #7 on the Teen Health Education Survey (see Appendix E) asked for a comment regarding anything the participant would consider helpful for other teens. Qualitative responses noted in Table 4.3 reflected quantitative data on Table on 4.2 in that many participants liked the animations. Other suggestions or comments indicated others experienced technical difficulties and several participants felt it was difficult to navigate.
Table 4.3 Teen Health Survey Qualitative Comments for Question #7

<table>
<thead>
<tr>
<th>Participant Response</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Its fine just the way it is.</td>
</tr>
<tr>
<td>2</td>
<td>Maybe more animations.</td>
</tr>
<tr>
<td>3</td>
<td>Unable to access Presentation and question game.</td>
</tr>
<tr>
<td>4</td>
<td>To show more about Chlamydia</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>If it was a bit easier to navigate</td>
</tr>
<tr>
<td>7</td>
<td>Shorter and easier to navigate maybe</td>
</tr>
<tr>
<td>8</td>
<td>No.</td>
</tr>
<tr>
<td>9</td>
<td>The section titles what is Chlamydia?, plays the video but did not show the questions. It was still helpful and I stilled learned new things about the disease.</td>
</tr>
<tr>
<td>10</td>
<td>Maybe there could be a lesson game at the end, like wordsearch about the topic or however.</td>
</tr>
<tr>
<td>11</td>
<td>Great survey, love the animation.</td>
</tr>
<tr>
<td>12</td>
<td>Nope.</td>
</tr>
</tbody>
</table>

Objective 4. Review, Analyze, and Evaluate Pre-Test and Post-Test and Facebook Views and “Likes” Data Over a One-Month Period.

Table 4.4 shows the responses collected from the pre-test and post-test questions embedded in the Teen Health Education animated site. Of the 27 participants that completed the Social Media Use Survey (see Table 4.1), 18 (66%) completed the pre-test questions. The results of the pre-test reveals that all participants (100%) answered questions #2 and #6 correctly; 17 (94%) participants answered questions #1 and #7 correctly; 16 (88%) participants answered question #3 correctly; and 11 (61%) answered questions #4 and #5 correctly. The number of participant responses decreased for each post-test question. Of 18 participants who responded to the pre-test question, 14 (77%) answered post-test questions #3, #5, #6 and #7; 13 (72%) answered post-test questions #2 and #4; and 5 (27%) answered post-test question #1. Of the participants who answered post-test questions, all participants (100%) answered post-test questions #2, #4 and #6 correctly; 12 (92%) answered post-test question #4 correctly; 4 (80%) answered post-test question #1 correctly; 12 (85%) answered post-test question #7 correctly; and
11 (78%) answered post-test question #5 correctly. Figure 4.3 below illustrates the percentage of correct responses from pre-test answers to post-test answers.

Table 4.4 Pre-test and Post-test Question Responses

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Pre-Test Answers</th>
<th>Post-Test Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TRUE</td>
<td>FALSE</td>
</tr>
<tr>
<td>Chlamydia is a common sexually transmitted disease for both males and females.</td>
<td>17*</td>
<td>1</td>
</tr>
<tr>
<td>Question 2</td>
<td>Chlamydia can be spread through anal, vaginal, or oral sex.</td>
<td>18*</td>
</tr>
<tr>
<td>Question 3</td>
<td>If someone had Chlamydia before, they will not get Chlamydia again.</td>
<td>2</td>
</tr>
<tr>
<td>Question 4</td>
<td>Chlamydia can only be spread if the infected person has symptoms of the disease.</td>
<td>7</td>
</tr>
<tr>
<td>Question 5</td>
<td>There is no cure for Chlamydia.</td>
<td>7</td>
</tr>
<tr>
<td>Question 6</td>
<td>If left untreated, Chlamydia can lead to serious health problems and make it difficult for females to have children.</td>
<td>18*</td>
</tr>
<tr>
<td>Question 7</td>
<td>Teens can be screened and treated for Chlamydia at the Wellness Center</td>
<td>17*</td>
</tr>
</tbody>
</table>

*Indicates the correct answer to the question.
To illustrate further that a possible increase in knowledge was achieved, the number of incorrect responses were also noted from pre-test to post-test in Figure 4.4 below. Figure 4.4 illustrates that the number of incorrect responses remained the same for questions #1, #2, and #6. Questions #3, #4 and #5 had significant decreases of incorrect responses from pre-test to post-test. Only question #7 had an increase of incorrect responses from pre-test to post-test.
Figure 4.4: Number of Incorrect Responses of Pre-Test and Post-Test Answers

In addition to the qualitative responses of question #7 of Teen Health Education Survey (See Table 4.3), “likes”, comments and number of people that viewed or “reached” on the Facebook site (See Appendix L) were also evaluated. According to the Facebook site (See Appendix L) on July 22, 2015, the site reached 22 people. There were no comments or Facebook page “like” on the Teen Health Project post on the CWC Facebook Page (see Appendix L).

Summary

The above tables and figures were used to illustrate the data collected from the participants responses on the Social Media Use Survey, Teen Health Education Survey, and pre-test and post-test questions that were on the newly developed Teen Health Site linked to the CWC Facebook webpage. The discussions and analysis of the data collected will be explained in the following Chapter 5.
Chapter 5 – Discussion of Findings and Implications for Practice

The overall goal of this PIP was to increase access to Chlamydia education for Kaua‘i’s adolescents CWC patients with the use of Social Media platform Facebook. The Tables and Figures noted in Chapter 4 depicted the results of this PIP. Below is the analysis of the results in relation to the PIP’s objectives. A discussion of the findings, strengths, weaknesses, limitations and implications to practice is also included.

Objective 1: Survey and Assess Adolescents at the CWC regarding their current use of social media site Facebook and awareness of CWC Facebook site.

Discussion

To evaluate the potential impact from this project to influence adolescent reproductive health awareness and impact, one must recall the theoretical framework of Urie Bronfenbrenner and the interactions and influences of the microsystems and macrosystems. This PIP pilot project assessed and targeted an intervention aimed at the most outer aspect of Bronfenbrenner’s ecosystems, The Chronosystem. This larger circle of ecological system refers to the patterning of environmental events, transitions, and the socio-historical perspective of time and its influences (Bronfenbrenner, 2005; London, et al., 2011).

At the turn of the century, adolescents were immersed into the digital revolution of media-saturation and were eager adoptees of information communication technologies (Brown and Bobkowski, 2011). The century’s technological advances provided unprecedented access to the larger world and had a significant influence on the lives of adolescents (Brown and Bobkowski, 2011). The digital revolution drastically altered the chronosystem of adolescents living in the new millennia and resulted in adolescents communicating and socializing virtually
though social media and digital technology (Divecha et al., 2012; Mesch, 2012; Landry et al., 2013).

The demographic data reflects that more female participants are accessing Family Planning Services. The small pilot sample also demonstrates that the majority of participants represented the younger age group of 14. Although 100% of participants used a SNS, many of the participants did not use Facebook and have begun to use newer developed SNS. Such data reinforces studies from Kaiser Foundation and Pew Research Center indicating that adolescents are frequent SNS users with 73% to 79% having used SNS and 81% of users reporting having a profile on at least one SNS (Divecha et al, 2012; Mesch, 2012; Kachur et al., 2013; Landry et al, 2013). Within the CWC Project, all participants (100%) reported using at least one SNS, with the majority of participants (51%) reported using at least two SNS (See Figure 4.2).

The CWC staff and NP also realized that many of their adolescent patients were not aware that the CWC had a Facebook Page. Thus, this data shows that it is possible to reach adolescents with the use of social media, but the platform used by the CWC may not reach the majority of their adolescents if limiting access to the Teen Health Education Site (see Appendix K) to the Facebook platform. To effectively reach adolescents with social media, the most current trended platform should be researched and used.

Objective 2: Create Chlamydia Education to be Designed on Facebook to Pilot a STD Educational Platform Targeted at the Adolescent (Ages 14-17) at the CWC.

With the use of site GoAnimate.com, the CDC Chlamydia Factsheet (See Appendix A) contents were set to animation (See Appendix K). The development and the creation of the Teen Health Webpage (See Appendix K) took approximately one-month and required assistance from an IT Specialist with knowledge of website creation and linking web pages to SNS.
Discussion

Media and digital technologies are well suited to young people for several reasons: 1) adolescents are frequent and early adopters of new technologies, 2) media use provides an anonymous avenue for seeking health information, and 3) the immediate access to information and to social connections can be beneficial in providing social support and accessing knowledge on general health issues (Divecha et al., 2012; Hua, 2012; Kachur et al, 2013; Park and Calamaro, 2013). Although the use of animation appeared to appeal to the majority of the participants, there is a significant learning curve to develop and create a webpage without assistance or knowledge of such skills. There also seemed to be some sort of technical difficulty within the site that limited access to post-test question #1 that was reflected in the low number of response (5 participants) of that particular question as well as qualitative comments that indicated difficulty with playing the animation or accessing the question for section “What is Chlamydia?”. Thus, it appears for the site to be successful in reaching the adolescent clientele, it may require someone who monitors the site frequently and who has sufficient informational technology or webpage knowledge to foresee technical difficulties, fix issues, as well as update information.

A few participants also commented on the difficulty in navigating the site and requested it be shorter. Keeping instructions simple and perhaps on one page may have helped, although the consultation with the IT specialist recommended separate pages for each subject to limit confusion or “cluttered” web pages. It is important for healthcare providers caring for adolescents to remember that the very nature of this millennium adolescent is access to fast and immediate information. If the information is not engaging, deemed too long or unnecessary, or cumbersome, the adolescent may abandon the program. This may explain why initially 27 participants completed the Social Media Use Survey (see Table 4.1) embedded at the beginning
of the educational program, while only 44% (12 participants) completed the Teen Health Survey at the end of the program.

**Objective #3: Pilot Chlamydia Education on CWC Facebook Site with Post-Survey to Access if Teens use Facebook, Find the Site Accessible, Confidential, and Helpful, and Would Recommend Site to a Friend.**

**Discussion**

*Access and Accessibility*

As illustrated in Figure 5.1, although 100% of participants used a SNS, CWC adolescent patients may not be using Facebook as their preferred SNS. Newer developed SNS sites such as Instagram and SnapChat have appeared to attract younger users than Facebook (see Table 4.1 and Figure 4.1). Thus, the majority of participants accessed the Facebook page during their visit at the CWC or accessed the site via a “friend’s” Facebook site. Others may have a Facebook page but no longer follow the page or it is no longer their preferred SNS. Such data reflects that access and accessibility to the Teen Health Education Website needs to include links to other SNS sites or provide teens with the direct link to the website. As discussed in the literature review, one of the challenges faced with SNS and digital technology is keeping up with the fast-pace of evolving technology as well as the current adolescent trends (Hua, 2012).

*Private and Confidential*

According to responses to the Teen Health Education Survey question #5 noted in Table 4.2, all but one participant (92%) felt that their privacy and identity was protected. There was no qualitative comment that described loss of privacy or identity or suggested improved ways to protect privacy or identity. Although the Facebook Disclaimer described the best way to protect
privacy and identity on a SNS, there is always a possibility of intentionally or unintentionally revealing one’s identity on a SNS site. The more sensitive and private the information is deemed, the more concerned the teen becomes about privacy and confidentiality. Such fear of identity being known may have prevented participants from completing the questions and surveys, which could also explain how 27 participants completed the Social Media Use Survey and less participants logged in responses for the pre-test and post-test questions, as well as the Teen Health Education Survey. Although literature suggests that the use of SNS were convenient, private and provided access to STD testing, counseling, and intervention (Swenderman and Rotherman-Borus, 2011; Shoveller et al., 2012), confidentiality and anonymity are important aspects of SNS when discussing a range of sensitive health issues (Lariscy et al., 2010).

*Helpful and Recommending to Friend*

Interestingly, despite the fact that some participants stated they did not like the Chlamydia presentation and game, according to responses to question #4 on Table 4.2, 100% of participants stated they learned something and found the information helpful. In addition, responses to question #6 on Table 4.2 also showed that 100% of participants would recommend the site to a friend. Thus, this data suggests that there was a high degree of likability of the site among the participants and willingness to share the site with their friends. Such information is important and demonstrates the possibility of reaching other teens through the participants’ social network. Healthcare providers seeking to use social media in their healthcare practices to communicate and reach an adolescent population need to consider their sites trustworthiness, reliability, currency and relevance, straightforwardness, readability, and ease of understanding (Nordfeldt et al., 2013). In addition, Nordfeldt and associates (2013) stated that layout, content, and congeniality were also important aspects for adolescents.
Objective 4: Review, analyze, and evaluation of Pre-Test and Post-Test Data and Facebook views and “likes” Over a One-Month Period.

According to the Facebook “views”, “likes”, and “comments” received on July 22, 2015 (See Appendix L), participants did not “like” or “comment” within the Facebook site. Adolescent healthcare providers understand that Privacy and Confidentiality are key aspects to consider when caring for adolescents. This is especially important when discussing sensitive health issues and subjects such as sexuality (Lariscy et al., 2010). Due to the fear to protect identity, all participants chose not to comment or “like” on the CWC Facebook post. This was expected. The principal investigator and NP decided to include the Facebook Disclaimer Notice (see Appendix G) to inform adolescents on the best way to protect their identity on the SNS Facebook site in hopes that more participants would agree to participate. This is a probable explanation for the lack of Facebook “likes” and “comments” despite the fact that 22 people viewed the site. The qualitative responses and comments noted in Table 4.3 provided a more private venue for participants to comment on what they liked about the site and prevented data from being associated with their identity.

At the bottom of the Teen Health Project post, 22 people were reached or “viewed” the post (See Appendix L). Those reached through this view or post had to be Facebook users or have a Facebook account. Due to the fact that 27 participants started the Social Media Use Survey, it is assumed that others may have used a friend’s Facebook site or the CWC laptop to access the Teen Health Webpage Link. Thus, reaching adolescents through Facebook as well as without Facebook is possible. The pilot project results as well as literature findings continue to demonstrate a need to create effective media-based interventions that are tailored to adolescents and create media platforms that adolescents will use (Lariscy et al., 2010; Nordfeldt et al., 2013).
The pre-test and post-test data illustrated that there was an increase in correct responses and decrease in incorrect responses on specific questions from pre-test and post-test answers. Although participation numbers declined from pre-test and post-test answers, significant increases of correct responses and decrease in incorrect responses were noted for questions #3, #4, and #5, indicating that participants gained knowledge in these areas.

**Strengths**

In relation to the pilot project’s objectives, the data derived from the homogenous sample of CWC adolescent clients demonstrate that the use of SNS may increase both awareness and education on STDs. The data found on the surveys indicate that CWC adolescent patients use one or more SNS and the majority found the site accessible, confidential, helpful and would recommend it to a friend. Within a month period descriptive statistics show that CWC adolescents liked the site and learned something from it. Having an avenue for the adolescent client to access the site while waiting during their scheduled appointments also increased accessibility for those that did not have a Facebook platform. Thus, using a SNS educational platform in the CWC Teen Clinic has the potential to reach the majority of the CWC adolescent clientele.

In relation to increasing education on Chlamydia itself, the data also suggests that increasing knowledge is possible. According to Figure 4.3 and Figure 4.4, the majority of post-test questions matched or exceeded the percentage of correct responses, and there were decreases in incorrect responses noted from the same pre-test questions. Only two of the seven pre-test questions had higher percentages than the same post-test question, and only one question had a higher number of incorrect responses. The figures illustrate that there were significant increases in knowledge of three of the seven questions from pre-test responses to same questions on post-test responses.
Weaknesses

Despite the perceived success and ratings of the pilot project that demonstrate a SNS platform in the CWC Teen Clinic could be useful in increasing awareness and education, there were issues and weaknesses in this pilot project that need to be addressed. Concerns and issues noted in regards to generalization, reliability and validity are discussed and addressed below.

Generalization

Due to the non-randomized homogenous sampling of a small select group of only CWC adolescent patients, the pilot project’s data cannot be generalized. Results and findings from this pilot study cannot be generalized to a larger adolescent population such as adolescents within the Kaua`i Community. Thus, a SNS platform may be successful in reaching this particular group of adolescents but may not reach a larger targeted adolescent population. Highly controlling the sample group thus compromises real-world generalizability of findings.

Reliability and Validity

This was a pilot project, in which both the Teen Health Educational Platform and Survey instruments were created by the principal investigator and CWC NP. Since this platform and survey instruments were not used in a previous project or study, reliability and validity has not been established. Reliability of the testing instrument was not obtained. Although attempted Test-retest reliability was not successful because data collection instrument did not allow for tracking of each individual participant’s response from pre-test to post-test. Without this tracking ability of individual responses from pre-question to post-question, it was difficult to determine with descriptive statistics that an increase in actual knowledge was obtained. A much stricter control over such an extraneous variable would have facilitate the detection of test-retest reliability and increase education, as well as a possible detection of any cause-and-effect
relationships. Such measures would require a higher degree of statistical analyses as well as a larger sample size to make an inferential analysis of a statistical significance.

**Limitations**

The major limitations of this pilot project were highlighted in the weaknesses above and relate to homogenous sampling that relied on surveys and self-reports. Although this was not a research study, it highlights the importance of generalizability, reliability and validity if the intent of the project was aimed at a larger population. As discussed above, the pilot project might be successful in the CWC Teen Clinic, but may not be in other facilities or with other adolescent populations outside of the CWC Teen Clinic.

As seen in the literature review, understanding and evaluating macrosocial issues of race/ethnicity, culture and socioeconomic factors were also important areas to assess and should be explored (Landry et al., 2013; Kachur et al., 2013). Sasaki and Kameoka (2009) also discussed the importance of disaggregating subgroups of culture to explore unique differences in cultures. Although the principal investigator and CWC agree that understanding culture and socioeconomic factors are important to explore, such data would not reveal significant quantitative data within the small sample of the adolescent participants. Future research on unique cultural aspects of Kaua`i’s adolescent populations would require a more qualitative research approach and different aims and goals than what was proposed in this pilot project.

In addition, the teen health educational platform as well as measurement instruments will need to be redesigned to be more effective. This pilot project gave the CWC Teen Clinic valuable data on what SNS Teens would use, teen’s concerns, as well as the potential to reach CWC adolescent clients. If true test-retest reliability is to be assured, data collection that tracks each individual response or another instrument of collection that does so will aid in extracting data that can detect increase in knowledge or possible cause-and-effect relationships. Such
measurements and inferences will require a more detailed study methodology versus a pilot project.

The data also illustrated that although adolescents are utilizing SNS and media technology, SNS and technology are fast changing and ever-evolving. Adolescents are frequent adopters of new technology, thus creation and development of technological platforms need to be current and updated to effectively reach adolescents.

**Implications for Practice**

Statistical data of adolescent risk behavior and STD infection demonstrate a need to increase STD education and quality reproductive health services for adolescents (CDC, 2013). Multiple barriers exist that prevent adolescents from seeking quality reproductive health services (CDC, 2012). These include but are not limited to: 1) lack of health insurance or income to pay, 2) lack of transportation, 3) discomfort with adult-designed facilities, and 4) concerns about confidentiality (CDC, 2012). By understanding the Bronfenbrenner’s ecosocial levels within the adolescents’ microsystems and macrosystems, implementation of health care strategies to address these barriers can be planned. To evaluate the potential impact from this project to influence adolescent reproductive health awareness and impact, one must assess aspects of Bronfenbrenner’s microsystems and macrosystems. This PIP pilot project assessed and targeted an intervention aimed at the most outer aspect of Bronfenbrenner’s ecosystems, The Chronosystem, but the Teen Clinic model at the CWC was framed from an assessment of all of Bronfenbrenner’s ecosocial systems. Utilizing principles of all aspects of the microsystems and macrosystems, from the closest microsystem connections to the larger chronosystem influences, can provide healthcare systems a more detailed assessment to plan interventions aimed at a targeted individual or population. An example of such an approach would be planning to use the CWC Teen Health Educational Site on other SNS platforms and in other public venues to
disseminate to a larger adolescent population. Within the State of Hawai‘i, the Department of Education has a mandated Sexual Education Curriculum that is given to all public health school children in high schools. Although there is a mandate to provide comprehensive sex education in Hawai‘i’s Public Schools, a standardized curriculum does not exist and it is left to each school to interpret the mandate and deliver the comprehensive sexual education curriculum and content. Partnerships between adolescents, providers, Department of Health and Department of Education, could be beneficial in creating a standardized comprehensive sexual education social platform or website that can be used to disseminate a core sexual education curriculum across Kaua‘i County and the State of Hawai‘i.

The use of social media as a platform to provide comprehensive, evidence-based education, in a confidential and private manner, is an example that addresses both issues of discomfort with adult-designed facilities as well as concerns about confidentiality. The data analysis from this pilot project demonstrated that awareness was increased about the CWC Facebook website, the majority of participants used various forms of SNS, the majority of participants liked the Chlamydia education that was redesigned with a more teen-friendly, interactive mode, and that majority of participants felt their privacy was protected. Thus, the data in the literature as well as within this pilot project suggests that using teen-friendly approaches to health care adolescents can relate to and protect and maintain their privacy could increase the likelihood of accessing education and services.

In recent literature, attention has been focused on using social media to promote adolescents’ health, evaluate effectiveness of efforts, and develop guidelines for effectively disseminating health initiatives and information (Brown and Bobkowski, 2011). Researchers, healthcare organizations, and healthcare providers are now being tasked with how to use communication and new media technology to directly reach adolescents (Divecha et al., 2012).
Thus, understanding media technology and its influences add to the responsibilities of organizations and healthcare providers who will be challenged with keeping abreast of new technological developments, current trends in adolescent sexual behavior, and integrating both into their practices (Hua, 2012). Digital media, communication technologies, and SNS are becoming powerful tools in reaching adolescents, yet keeping up with media technological advances and adolescent trends will require collaboration from informatics, IT specialist, and healthcare providers.

**Conclusion**

Adolescents are at a pivotal developmental period in their life course that poses unique opportunities and challenges for pediatric health care providers. Utilizing the socio-ecological framework and theoretical concepts of Bronfenbrenner provides a foundation for understanding the multiple factors involved in the interpersonal and ecosocial levels of an adolescent’s microsystem and macrosystem. By understanding the influences and interactions within these systems, effective strategies can be created and implemented to incorporate the unique challenges at play within the macrosystem and microsystem.

This PIP highlighted the ability to use Urie Bronfenbrenner’s Ecological Systems Theory as a framework for accessing multiple factors that influence the millennial adolescent. Utilizing the Ecological Systems framework depicted the influences that social media can have on sexuality and STD awareness of a Kaua’i CWC adolescent patient.

The potential impact on use of SNS with adolescents is sizable and healthcare providers and organizations are in a unique position to capitalize on creating innovative approaches utilizing media technologies. If SNS can directly influence adolescents awareness and increasing access to health education, it is possible to influence behavioral changes that could improve overall adolescent health and decrease adolescent disparities.
References


APPENDIX A
Chlamydia – CDC Fact Sheet (CDC, 2014)

Chlamydia is a common sexually transmitted disease (STD) that can be easily cured. If left untreated, chlamydia can make it difficult for a woman to get pregnant.

What is chlamydia?
Chlamydia is a common STD that can infect both men and women. It can cause serious, permanent damage to a woman’s reproductive system, making it difficult or impossible for her to get pregnant later on. Chlamydia can also cause a potentially fatal ectopic pregnancy (pregnancy that occurs outside the womb).

How is chlamydia spread?
You can get chlamydia by having anal, vaginal, or oral sex with someone who has chlamydia.

If your sex partner is male you can still get chlamydia even if he does not ejaculate (cum).

If you’ve had chlamydia and were treated in the past, you can still get infected again if you have unprotected sex with someone who has chlamydia.

If you are pregnant, you can give chlamydia to your baby during childbirth.

How can I reduce my risk of getting chlamydia?
The only way to avoid STDs is to not have vaginal, anal, or oral sex.

If you are sexually active, you can do the following things to lower your chances of getting chlamydia:

- Being in a long-term mutually monogamous relationship with a partner who has been tested and has negative STD test results;
- Using latex condoms the right way every time you have sex.

Am I at risk for chlamydia?
Anyone who has sex can get chlamydia through unprotected anal, vaginal, or oral sex. However, sexually active young people are at a higher risk of getting chlamydia. This is due to behaviors and biological factors common among young people. Gay, bisexual, and other men who have sex with men are also at risk since chlamydia can be spread through oral and anal sex.

Have an honest and open talk with your health care provider and ask whether you should be tested for chlamydia or other STDs. If you are a sexually active woman aged 25 years or younger, you should get a test for chlamydia every year. Gay, bisexual, and men who have sex with men; as well as pregnant women should also be tested for chlamydia.

I’m pregnant. How does chlamydia affect my baby?
If you are pregnant and have chlamydia, you can pass the infection to your baby during delivery. This could cause an eye infection or pneumonia in your newborn. Having chlamydia may also make it more likely to deliver your baby too early.

If you are pregnant, you should be tested for chlamydia at your first prenatal visit. Testing and treatment are the best ways to prevent health problems.
How do I know if I have chlamydia?
Most people who have chlamydia have no symptoms. If you do have symptoms, they may not appear until several weeks after you have sex with an infected partner. Even when chlamydia causes no symptoms, it can damage your reproductive system.

Women with symptoms may notice
- An abnormal vaginal discharge;
- A burning sensation when urinating.

Symptoms in men can include
- A discharge from their penis;
- A burning sensation when urinating;
- Pain and swelling in one or both testicles (although this is less common).

Men and women can also get infected with chlamydia in their rectum, either by having receptive anal sex, or by spread from another infected site (such as the vagina). While these infections often cause no symptoms, they can cause
- Rectal pain;
- Discharge;
- Bleeding.

You should be examined by your doctor if you notice any of these symptoms or if your partner has an STD or symptoms of an STD, such as an unusual sore, a smelly discharge, burning when urinating, or bleeding between periods.

How will my doctor know if I have chlamydia?
There are laboratory tests to diagnose chlamydia. Your health care provider may ask you to provide a urine sample or may use (or ask you to use) a cotton swab to get a sample from your vagina to test for chlamydia.

Can chlamydia be cured?
Yes, chlamydia can be cured with the right treatment. It is important that you take all of the medication your doctor prescribes to cure your infection. When taken properly it will stop the infection and could decrease your chances of having complications later on. Medication for chlamydia should not be shared with anyone.

Repeat infection with chlamydia is common. You should be tested again about three months after you are treated, even if your sex partner(s) was treated.

What happens if I don’t get treated?
The initial damage that chlamydia causes often goes unnoticed. However, chlamydia can lead to serious health problems.

If you are a woman, untreated chlamydia can spread to your uterus and fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), causing pelvic inflammatory disease (PID). PID often has no symptoms, however some women may have abdominal and pelvic pain. Even if it doesn’t cause symptoms initially, PID can cause permanent damage to your reproductive system and lead to long-term pelvic pain, inability to get pregnant, and potentially deadly ectopic pregnancy (pregnancy outside the uterus).

Men rarely have health problems linked to chlamydia. Infection sometimes spreads to the tube that carries sperm from the testicles, causing pain and fever. Rarely, chlamydia can prevent a man from being able to have children.

Untreated chlamydia may also increase your chances of getting or giving HIV – the virus that causes AIDS.

I was treated for chlamydia.
When can I have sex again?
You should not have sex again until you and your sex partner(s) have completed treatment. If your doctor prescribes a single dose of medication, you should wait seven days after taking the medicine before having sex. If your doctor prescribes a medicine for you to take for seven days, you should wait until you have taken all of the doses before having sex.

Where can I get more information?
Division of STD Prevention (DSTD)
Centers for Disease Control and Prevention
www.cdc.gov/std

CDC-INFO Contact Center
1-800-CDC-INFO
(1-800-232-4636)
Contact www.cdc.gov/info

CDC National Prevention Information Network (NPIN)
http://www.cdcnpin.org/scripts/index.asp
P.O. Box 6003
Rockville, MD 20849-6003
E-mail: info@cdcnpin.org

American Sexual Health Association (ASHA)
http://www.ashastd.org/
P.O. Box 13827
Research Triangle Park,
NC 27709-3827
1-800-783-9877
APPENDIX B

Social Media Use Consent

Social Media Use Teen Health Project

**Project Description and Purpose**
The purpose of this project is to provide education on Teen Health Issues through the use of Social Media Networking site Facebook. During the next month, teen patients will be asked about their Facebook use and directed to view our Teen Health educational Facebook section. The first Teen Health issue will be on the topic of Chlamydia.

**Procedure**
It is your decision and choice to participate in this project. Teenagers between ages 14-17 years old who are patients at the clinic will be asked to be part of this program and view the Facebook Teen Health section. If you choose to participate, please complete the short Social Media Use Survey. If you have access to a Facebook account, the office staff will provide you with a Facebook card with the Clinic Facebook website. To view the Facebook Teen Health page, a notice will appear to provide you with information on how to keep your name and identity from being visible or known to others. The notice will also ask you to verify that you are a patient participating in the project and that you are between the ages of 14 and 17. After accepting the notice, you will be directed to the Teen Health Topic Chlamydia. After viewing the education, you will be asked to answer a short survey. These questions will ask how you knew about our Facebook site, if you found the education helpful, and if you will refer this site to a teenage friend. Your answers to the survey questions will be used to see if the use of Facebook is useful for teen health education.

**Confidentiality**
The information you give us will be protected. Your name will not be on any of the forms and cannot be linked to any questions you answered. The information from you will not be shared with your parents, school, or anyone else you know. You can stop participating at any time and this will not affect your health services. The information you share will become part of group results and may be used for CWC reports.

**Risks**
If you agree to be part of this project, your identity may be revealed if you “like” or comment on the Facebook site. Before reviewing the Teen Health page, read the Confidentiality Disclaimer notice regarding protection of your name and identity. If anything regarding the project causes you any concerns about confidentiality that you want to talk about, speak with Tammie Napoleon. You can also call Tammie Napoleon at the phone number provided. A Teen Website Card, which has the website link and Tammie Napoleon’s contact information, will be given to all who agree to be part of this project.
Benefits
I understand that there is a benefit for me by participating in this project. The benefit is possibly having more education on Chlamydia. In addition, by being part of this project, my participation and answers may help doctors and nurses to give better care to teens like me who come into the clinic and need more teen friendly education.

Certification
I understand that by completing the survey below that I give my consent to be part of this project. I can stop being part of the project at any time. If I have any questions that are not answered or have comments or complaints about this project I can call:

Committee on Human Studies
University of Hawaii
Spalding Hall 253
2540 Maile Way
Honolulu, HI 96822
(808)956-8287.

Or

Principal Investigator: Tammie Napoleon, MSN, APRN-Rx, PPCNP, DNP Student
Kauai Community College Campus Wellness Center
3-1901 Kaumualii Highway
Lihue, Hawaii 96766
Office: 808-245-8308, Cell: 808-651-8023, Email: tnapoleo@hawaii.edu
APPENDIX C

SOCIAL MEDIA USE SURVEY

Please check one of the following: [ ] MALE    [ ] FEMALE

How old are you? ____________

Do you use a social networking site? [ ] Yes    [ ] No

   If you checked YES, What sites do you usually use? ________________

Do you know about the Wellness Center’s Facebook Page? [ ] Yes    [ ] No
APPENDIX D

Pre-test and Post-Test Questions on Chlamydia Education Site

1. Chlamydia is a common sexually transmitted disease for both males and females.
   [ ] TRUE   [ ] FALSE

2. Chlamydia can be spread through anal, vaginal, or oral sex.
   [ ] TRUE   [ ] FALSE

3. If someone had Chlamydia before, they will not get Chlamydia again.
   [ ] TRUE   [ ] FALSE

4. Chlamydia can only be spread if the infected person has symptoms of the disease.
   [ ] TRUE   [ ] FALSE

5. There is no cure for Chlamydia.
   [ ] TRUE   [ ] FALSE

6. If left untreated, Chlamydia can lead to serious health problems and make it difficult for females to have children.
   [ ] TRUE   [ ] FALSE

7. Teens can be screened and treated for Chlamydia at the Wellness Center.
   [ ] TRUE   [ ] FALSE
APPENDIX E

Teen Health Education Survey

Google Forms Teen Health Evaluation Survey
(embedded at end of Chlamydia Education Link)

1. What is your gender? [ ] MALE [ ] FEMALE
2. What is your age? [ ] 14 [ ] 15 [ ] 16 [ ] 17
3. Did you like the Chlamydia presentation and game? [ ] Yes [ ] No
4. Did you learn something new and find the information helpful? [ ] Yes [ ] No
5. Do you feel your privacy and identity was protected? [ ] Yes [ ] No
6. Would you recommend this site to a friend? [ ] Yes [ ] No
7. Is there anything that would make this site more helpful for teens?
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
APPENDIX F

Example of Advertising Card

FOR TEEN HEALTH INFORMATION,
JOIN US AT
https://www.facebook.com/KCC.CWC

Principal Investigator Name: Tammie Napoleon and contact number and email was included on the back of this card.
APPENDIX G

Facebook Confidential Disclaimer

Facebook Confidential Disclaimer: Facebook pages are public pages. Because pages are public, information you share with a page is public information. This means when you post a comment on a page or “like” a page or post, that comment or “like” can be seen by anyone visiting the Facebook page or connected to your friends list.

If you are concerned about your privacy and confidentiality on Facebook, please do not comment or “like” on this Facebook site. The Teen Health Education Survey questions will be provided to you with a different link and answers collected will be done without your identity, thus commenting, “liking” or posting on Facebook is not required. You do not have to like or comment if you do not want your identity to be seen.

If you understand the above notice and are 14 to 17 years of age and older and agreed to participate in our project, CLICK HERE to enter our Teen Health Site
APPENDIX H

UHCC Social Media Policies

UNIVERSITY OF HAWAI`I
COMMUNITY COLLEGES POLICY
UHCCP #2.211 Social Media Site and/or Account Use and Management
May 2011

I. Purpose
This policy is intended to ensure that any and all social media interactions on behalf of the University of Hawai`i Community Colleges (UHCC) represent the community college’s best interests and to assist college employees in effective online communication.

This policy shall apply to all community colleges and offices within the University of Hawai`i Community College system, hereinafter called the College.

The policy is designed to help employees leverage the power of social media and provide guidelines and "best practices" when posting material online. Employees and students are subject to the same laws, professional expectations, and guidelines when interacting online as in-person interactions with students, parents, alumni, donors and the media. These guidelines are broad in nature. Social media technology is evolving and no policy or procedure can address all the particular situations and circumstances that may arise.

This Social Media Policy only applies to social media accounts created to represent College groups, departments, programs, entities, etc., and does not apply to private individual accounts.

II. Related University Policies

A. University of Hawai`i Executive Policy E2.210, Use and Management of Information Technology Resources

B. University of Hawai`i System Executive Policy E2.213 System and Campus-Wide Electronic Channels for Communicating with Students

III. Definitions
Marketing Office - The Marketing Office is defined as the College's designated administrative office that is responsible for the coordination and implementation of marketing and communications activities.
Social Media - Social media is any form of online publication or presence that allows end users to engage in multi-directional conversations in or around the content on the website.

Social Media Platform - Social media platform is a type of software or technology that enables users to build, integrate or facilitate community, interaction and user-generated content. These platforms provide users the ability and tools to create and publish their own mini websites or webpages.

Social Network - A social network is a website, or network of websites, specifically established to allow end users to communicate directly with each other on topics of mutual interest. These social networks have three (3) defining characteristics:

A. Majority of content is user generated;
B. High degree of participation/interaction between users; and
C. Easily integrates with other sites

By this definition then, social media networks include but are not limited to items such as blogs (e.g., Blogger, WordPress, Typepad), social networking (e.g., Facebook, LinkedIn), social bookmarking (Delicious, Stumble Upon) news sharing (e.g., Digg, Yahoo!, Buzz) and photo and video sharing sites (e.g., Flickr, Vimio and YouTube).

IV. Responsibilities
A. The social media sites that represent the College must:

1. Abide by UH Executive Policy E2.210, Use and Management of Information Technology Resources. Included in the policy is information on Responsible Use, Confidentiality, Copyright, Private Gain, and Privacy of Student Information.

2. Follow the “Social Media General Guidelines and Procedures” (Attachment 1) for setting up and maintaining the online account.

3. Submit a “Social Media Brief” (Attachment 2) and be registered with the College Marketing Office.

4. Have at least one College faculty or staff member as an administrator at all times. College employees who are account administrators are held responsible for managing and monitoring content of their officially recognized accounts. Administrators are responsible to remove content that may violate any of the College’s and University's Policies.

5. Provide administrative access to all sites representing the College to the Marketing Office. An individual, designated by the Marketing Office will be added as an administrator or provided administrative login information.
This is required for several important reasons: if an employee leaves or relocates to another office, the administration of the site can be maintained. It also provides a back-up administration account manager. Content will not be censored; however, it will be monitored to ensure guidelines and policies are followed. This practice also allows the College to communicate efficiently during an emergency.

6. Work with the Marketing Office on the images, color palette and naming conventions for all online sites.

B. The Marketing Office will designate an individual to serve as its social media coordinator authorized to be added as an administrator or provided administrative login information for all College social media accounts

C. The Marketing Office will make the final decision in any situation regarding the use of social media and ensure the pages are set up properly according to social media sites' policies.

D. The Marketing Office reserves the right to enforce this policy by removing links to third-party web sites and/or recommending the site creator remove or change the site content as needed.

E. The Marketing Office, in consultation with Administration, will resolve any concerns and conflicts regarding social media.

F. For instructional use of social media sites, faculty do not need to use the official presence on various social media sites and can use these tools freely to support teaching and learning activities.

G. Official Student Clubs and Organizations (i.e., chartered student organizations and registered independent organizations as provided in, and in conformity with Section 7-2 and Section 7-3 of the Board of Regents policies) may create an official social media presence in consultation with the respective organization's advisor. These social media sites shall also be registered through the Marketing Office. Use of images, pictures/graphics and posted content must clearly relate to the particular group or activity to avoid confusion with institution-moderated sites. Guidelines (Attachment A) and naming conventions delineated in the Social Media Policy and Guidelines must be followed.
SOCIAL MEDIA GENERAL GUIDELINES AND PROCEDURES

General Guidelines
The keys to success in social media are being honest and thoughtful before you post and respecting the purpose of the community in which you are posting.

Content
By posting content to any social media site, you agree that you own or otherwise control all of the rights to that content, that your use of the content is protected fair use, that you will not knowingly provide misleading or false information, and that you hold the College harmless for any claims resulting from the content.

You may not post any content that is threatening, obscene, a violation of intellectual property rights or privacy laws, or otherwise injurious or illegal. The College has the right to remove any content for any reason, including but not limited to, content described above.

Know the terms of service of your social media platform:
Be sure to understand and follow the terms of service of any social media platform you use.

Be accurate.
Make sure that you have all the facts before you post. It’s better to verify information with a source first than to have to post a correction or retraction later. If you make an error, correct it quickly and visibly.

Be transparent.
Never hide your identity for the purpose of promoting the College through social media.

Respect others’ privacy.
Do not to post private information concerning others such as an email from a colleague or contact information. Exercise good “netiquette.” Consider the intended audience when posting. College sites are frequented by prospective students, alumni, friends, and other interested parties. The College encourages thoughtful social media interaction and does not seek to censor contributions to these sites. However, profanity, racist, sexist, or derogatory remarks, content that incites hate or encourages unethical or illegal activities, comments on litigation involving the College, spam and off topic remarks may be removed and the user could be banned from further participation on the site.
Be relevant and authentic.
Be thoughtful, accurate, relevant and respectful on College sites. Social networks are successful when members contribute “authentic” content.

Link to other College material.
Posts on College sites should be brief, redirecting a visitor to content that resides on the College website when applicable.

Think before you post.
There’s no such thing as a “private” social media site. Search engines can turn up posts years after the publication date. Comments can be forwarded or copied. Archival systems save information even if you delete a post.

Maintain confidentiality.
Use good judgment about content and respect privacy laws. Do not post confidential or proprietary information about the College, its students, its alumni or your fellow employees. Follow college policies and federal requirements, such as FERPA. If you discuss a situation involving individuals on a social media site, be sure that they cannot be identified. As a guideline, don’t post anything that you would not present at a conference.
SOCIAL MEDIA BRIEF

SOCIAL MEDIA PROJECT:

ACCOUNT ADMINISTRATOR:

Purpose
Why are you establishing a social media presence?

Objectives/Goals
What do you plan to achieve with this social medium?
(Inform? Encourage dialogue? Share information? What kind of information?)

Target Audience
Who will be reading and commenting on your social media? Who are you trying to engage?

Execution and Maintenance
Who will establish the social media site? (Please provide full names with contact information, such as email address and telephone number.)

Who will be the administrator and maintain the site? (List all account administrators, one of whom must be a College faculty or staff member. Provide full name and contact information.)

How often do you plan to update it?

How will you make connection to the College’s web site?
APPENDIX I

Social Media Brief Filed with KCC Marketing Office

SOCIAL MEDIA BRIEF
SOCIAL MEDIA PROJECT: Campus Wellness Center (CWC) Facebook page for patients
ACCOUNT ADMINISTRATOR: Charlene Ono, Tammie Napoleon, Diane Higa

Purpose
Why are you establishing a social media presence?
Social media has been successfully used to engage audiences, especially in regards to patient health care. The CWC has established a social media site or CWC Facebook page to provide health information to the CWC patients and College community.

Objectives/Goals
What do you plan to achieve with this social medium?
(Inform? Encourage Dialogue? Share information? What kind of information?)
Effectively disseminate and share health information to patients and college community to inform of health services and health information from the CWC. Health information of various topics as well as services such as annual flu vaccines, TB testing, and CWC hours has been routinely displayed on the CWC Facebook page.

Target Audience
Who will be reading and commenting on your social media? Who are you trying to engage?
CWC patients and members of the college community.

Execution and Maintenance
Who will establish the social media site? (Please provide the full names with contact information, such as email address and telephone number).
The CWC site has been established by Charlene Ono (onoc@hawai.edu). Phone: 245-8307.

Who will be the administrator and maintain the site? (List all account administrators, one of whom must be a College Faculty or Staff Member. Provide full name and contact information.)
Nurse Practitioners (Nursing Faculty) and Staff members will manage, maintain and be administrators of the site. Current administrators are:
- Charlene Ono, APRN (onoc@hawai.edu) Phone: 245-8307
- Tammie Napoleon, APRN (napoleo@hawai.edu) Phone: 245-8308
- Diane Higa, Clerical Staff (dahiga@hawai.edu) Phone: 245-8307

How often do you plan to update it?
At the very least information will be updated weekly depending on services and information. General and routine updates will be done beginning of each semester including summer to disseminate office hours and changes/updates in services such as TB testing or Flu Testing.

How will you make connection to the College’s web site?
There is a link to the CWC on the Kauai Community College website homepage and Facebook website link is available on CWC link.
APPENDIX J

IRB Approval

MEMORANDUM

May 6, 2015

TO: Tammie Napoleon
   Principal Investigator
   University of Hawaii @Hilo

FROM: Denise A. Lin-DeShetler, MPH, MA
   Director

SUBJECT: CHS #22945- "Increasing Sexually Transmitted Disease Education for Adolescents with Social Media"

Under an expedited review procedure, the research project identified above was approved for one year on April 29, 2015 by the University of Hawaii (UH) Human Studies Program. The application qualified for expedited review under CFR 46.110 and 21 CFR 56.110, Category (7).

This memorandum is your record of the Human Studies Program approval of this study. Please maintain it with your study records.

The Human Studies Program approval for this project will expire on April 28, 2016. If you expect your project to continue beyond this date, you must submit an application for renewal of this Human Studies Program approval. The Human Studies Program approval must be maintained for the entire term of your project.

If, during the course of your project, you intend to make changes to this study, you must obtain approval from the Human Studies Program prior to implementing any changes. If an Unanticipated Problem occurs during the course of the study, you must notify the Human Studies Program within 24 hours of knowledge of the problem. A formal report must be submitted to the Human Studies Program within 10 days. The definition of "Unanticipated Problem" may be found at: http://hawaii.edu/irb/download/documents/SOPP_101_UP_Reporting.pdf, and the report form may be downloaded here: http://hawaii.edu/irb/download/forms/App_UP_Report.doc.

You are required to maintain complete records pertaining to the use of humans as participants in your research. This includes all information or materials conveyed to and received from participants as well as signed consent forms, data, analyses, and results. These records must be maintained for at least three years following project completion or termination, and they are subject to inspection and review by the Human Studies Program and other authorized agencies.

Office of Research Compliance
Human Studies Program

University of Hawai‘i
Mānoa

1960 East-West Road
Biomedical Sciences Building B104
Honolulu, Hawai‘i 96822
Telephone: (808) 956-5027
Fax: (808) 956-8083
An Equal Opportunity/Affirmative Action Institution
Please notify this office when your project is complete. Upon notification, we will close our files pertaining to your project. Reactivation of the Human Studies Program approval will require a new Human Studies Program application.

Please contact this office if you have any questions or require assistance. We appreciate your cooperation, and wish you success with your research.
APPENDIX K

Illustrations of KCC Campus Wellness Center Teen Health Site
FACEBOOK LINK TO TEEN HEALTH PROJECT

If you have been invited to participate in our new Teen Health Project, please read the Facebook Confidential Disclaimer. Facebook Confidential Disclaimer: Facebook pages are public pages. Because Facebook pages are public, information you share with a page is public information. This means when you post a comment on a page or “like” a page or post, that comment or “like” can be seen by anyone visiting the Facebook page or connected to your friend list.

If you are concerned about your privacy and confidentiality on Facebook, please do not comment or “like” on this Facebook site. The Teen Health Education Project and its questions will be provided to you with a different link and anonymity collected will be done without your identity. Thus commenting, “liking” or posting on Facebook is not required. You do not have to like or comment if you do not want your identity to be seen.

If you understand the above notice and are 14 to 17 years of age and agreed to participate in our project CLICK HERE https://seite.google.com/u/9/health-centre-teen-health to enter our Teen Health Site.

Wellness Center Teen Health
SITES.GOOGLE.COM