San Jose State University
SJSU ScholarWorks

Doctoral Projects

Master's Theses and Graduate Research

5-2018

Improving Teen and Pediatric Provider Communication through Education and Technology

Kathy A. Connor-Prows California State University, Northern California Consortium Doctor of Nursing Practice

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_doctoral

Part of the Pediatric Nursing Commons

Recommended Citation

Connor-Prows, Kathy A., "Improving Teen and Pediatric Provider Communication through Education and Technology" (2018). *Doctoral Projects*. 89. DOI: https://doi.org/10.31979/etd.u85s-yvg8 https://scholarworks.sjsu.edu/etd_doctoral/89

This Doctoral Project is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Doctoral Projects by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

ABSTRACT

IMPROVING TEEN AND PEDIATRIC PROVIDER COMMUNICATION THROUGH EDUCATION AND TECHNOLOGY

Navigating healthcare can be daunting as an adult, but doing so as a teenager can seem virtually impossible. Until the age of eighteen, parents of children of all ages initiate, schedule, and accompany their children to see their pediatrician for virtually all appointments. Over time, children and their parents develop a special bond with their pediatrician and too frequently, this relationship becomes abruptly severed as their teen turns eighteen years old and is thrust into adult medicine. As healthcare providers, we expect healthcare consumers (including teens) to know how and when to initiate, schedule, and get themselves to an appointment. This expectation is unrealistic. Without knowing how to access their own healthcare, teens often fail. If transitioning teens lack the education and confidence, to navigate their own healthcare, their short-term and long-term outcomes can potentially be both costly and unpleasant (Haggerty, et. al 2006). Healthcare providers need to take an active role to embrace teens and help them take responsibility for their health care as they move from pediatric to adult medicine. Will the introduction of education and technology improve the online connection between teens before they transition to adult medicine? If health care providers or their representatives introduce teens to healthcare technology will the teens interact with their pediatric provider?

Kathy A. Connor-Prows May 2018

IMPROVING TEEN AND PEDIATRIC PROVIDER COMMUNICATION THROUGH EDUCATION AND TECHNOLOGY

by

Kathy A. Connor-Prows MSN, RN, FNP, DNP(c)

A project

submitted in partial

fulfillment of the requirements for the degree of

Doctor of Nursing Practice

California State University, Northern Consortium

Doctor of Nursing Practice

May 2018

APPROX ...

.

For the California State Entwersity Southern Consortion Bostor of Nursong Practice

We the undersigned certify that the prosect of the following student inexis the required standards of scholarship, format, and six h of the integrative and the student's graduate degree program for the swanding of the like the of Nursing Practice degree.

Kathy A. Commerchering	
Project A Distant	
Walker Vischer RN INF, C NS II have	
Istafna Wilhards Mill	Profiliance
Any	
Acijo Padayil MS 78	Discussor Pediatrian

AUTHORIZATION FOR REPRODUCTION

OF DOCTORAL PROJECT

I grant permission for the reproduction of this project in part or in its entirety without further authorization from me, on the condition that the person or agency requesting reproduction absorbs the cost and provides proper acknowledgment of authorship.

Permission to reproduce this project in part or in its entirety must be obtained from me.

Signature of project author:

Х

ACKNOWLEDGMENTS

Ruth Rosenblum, DNP, RN, PNP-BC, CNSChairperson/AdvisorLisa Walker-Vischer, RN, DNP, CNSChairpersonLatasha Williams, MDPhysician, Santa Clara Kaiser PermanenteAnju Padiyil, MS, RNSanta Clara Kaiser Permanente PediatricsQuang Dao, MDChief, Santa Clara Kaiser Permanente PediatricsSanta Clara Kaiser Permanente Pediatric Department, all employees.

TABLE OF CONTENTS

Page
LIST OF FIGURES
CHAPTER 1: INTRODUCTION
The Problem
Using technology to close the gap9
Theoretical Framework9
CHAPTER 2: REVIEW OF LITERATURE
Transition Readiness
Healthcare Communication
Summary of Literature Review
CHAPTER 3: METHODOLOGY
Participants 16
Recruitment16
Project
CHAPTER 4: RESULTS
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS
Early Intervention
Condensing Educational Component
Provider Driven Communication
Future Studies
REFERENCES
APPENDICES
APPENDIX A: PARTICIPANT FLYER
APPENDIX B: PARTICIPANT EMAIL #1

APPENDIX C: PARTICIPANT EMAIL #2	33
APPENDIX D: PARTICIPANT EMAIL #3	36
APPENDIX E: PARTICIPANT EMAIL #4	39
APPENDIX F: PARTICIPANT EMAIL #5	41
APPENDIX G: INSTITUTIONAL REVIEW BOARD APPROVALS	43
APPENDIX H: NIH CERTIFICATE	46

LIST OF FIGURES

Page

Figure 1. Project participation by gender	10
Figure 2. Initial survey for confidence.	19
Figure 3. Final survey for confidence.	20

CHAPTER 1: INTRODUCTION

Engaging teens with their pediatric providers is often difficult because, as under utilizers of healthcare, well teens visit their pediatrician one-third as often as younger pediatric patients and children with chronic diseases (Yonkers, 2015). Under utilizers who infrequently visit health care providers, are often less immunized, have less basic health screenings completed and are not prepared to enter the world of adult medicine. Historically, teens without chronic mental or physical conditions are considered under utilizers and, as a group, visit the doctor half as often as other age groups (Beal, Nye, Marraccini, & Biro, 2014), making it difficult to engage them with their provider and assure that their preventative health measures are current.

The Problem

Parents have full access to their children's electronic medical record (EMR) until the age of 12. Health Insurance Portability and Privacy Act (HIPPA) regulations limit parental access to the child's EMR between the ages of 12 to 18. Once the teen turns 18 years of age, parental access to any EMR information is completely deactivated. Once this transpires, health care providers are often left with only parental demographic information in the teens EMR. HIPPA prevents health care workers from contacting family members once the teen turns 18 years old. If the teen's phone number is not in their EMR prior to turning 18, their new provider of adult medicine has no way to contact them and must wait until the teen initiates the connection. The essential task is helping teens connect with their health care provider electronically prior to their 18th birthday. Failing to make this critically timed connection leaves many teens disconnected to health care services even though they are insured. If teens lack the confidence, or perceived confidence to navigate their own healthcare, their short-term and long-term outcomes can potentially be both costly and unpleasant. Preventative health measures such as blood pressure, body mass index (BMI) that are routinely monitored will be forgone and adverse sequelae may eventually ensue.

Currently, only one-third of the 5,537 17-year-olds in a large pediatric clinic at a Health Maintenance Organization (HMO) in Northern California, are connected to their pediatric provider through the organization's email system (Kaiser, 2017). Demographic information in a pediatric patient's electronic medical record (EMR) is that of their parents. The problem is that if the teen's own contact information is not entered in to their EMR prior to their 18th birthday, adult medicine providers are left without any way to contact to their new patient, and must wait until the teen reaches out to them.

Using technology to close the gap

Having grown up in a technology fed society, today's teens have mastered social media, emailing, texting, and video conferencing within their personal life. As providers, we should utilize their technological prowess to help reduce the gap in care between pediatrics and adult medicine. The research question in this quality improvement (QI) project is, will the use of technology and education improve communication between pediatric providers and the teens they care for? This project served to attempt to utilize current technology to connect teen patients with their pediatric providers prior to the transition to adult medicine and increase their confidence in booking an appointment and communicating with any health care provider.

Theoretical Framework

Braungart and Braungart, 2011, states "Social cognitive model provides a valuable public health tool for societal efforts to promote the health of its youth".

Because physically well, teens often perceive their healthcare needs as less than important, health care providers and parents serve as observational models in this project for teens as they transition to adult medicine and assume responsibility for their health and well-being. Through individual instruction, teens in this project were asked to achieve an end goal. Self-regulation determined if they reached that goal and for those that did, reinforcement was provided by healthcare providers.

Albert Bandura's Social Cognition Theory (SCT) is based on the premise that people learn through imitating, observing and modeling. Key components of this theory are: learning by observation, goal-directing, self-regulation, and reinforcement. Learning through observation can include both live and non-living (inanimate models). Living models include peers, parents, teachers, health care providers while inanimate models include: movies, lesson plans, and technology. In SCT, goal setting is the foundation of modeling through observation. The accomplishment of clear goals is the result of learning. Self-regulation factors into SCT as the learner determines if they will use what is learned and achieve an end goal or not. Reinforcement to learners in SCT can be anything the individual deems important to continue learning.

CHAPTER 2: REVIEW OF LITERATURE

Emerging Adults

Arnett (2003) identified numerous societal changes that have contributed to the lengthening the transition from teens to adulthood. Importance of college education including graduate degrees, later entrance into marriage, later childbearing, and struggles for financial independence are just factors in this change. He has labeled this period as a transition and the individuals within "emerging adults" (late adolescences through the late twenties). In 300 interviews, Arnett found the following characteristics of emerging adults: identity explorations, instability, self-focus, feeling in-between, and possibilities or optimism (2003). These characteristics, along with evolving societal environments lead people in this age group to develop issues in areas of finance, independence, relationships, responsibilities, and health care. Health care issues in emerging adults include mental health, dental, and increased use of emergency services.

Aldiss et al., (2015) conducted a qualitative, multi-site, multi-staged study to identify core aspects of difficulties transitioning teens to adult medicine. Eighteen 13 to 21year-olds participated in focus groups, along with parents and providers and were presented with questions pertaining to their perception of the move to adult medicine. Aldiss (2015) showed that while providers were unable to perceive difficulty in transitioning, parents and participants identified many changes to be made to improve the transition including preparation, education, and contact information.

Transition Readiness

Patient readiness to transition to adult medicine was the focus of a study by McManus et al., (2014). Four hundred and forty-five low-income Medicaidenrolled patients aged 14-24 from five large pediatric, adolescent, and family medicine primary care clinics in Washington D.C. were the focus of a two-year comparative study. This quality improvement (QI) study used training tools for all staff at five facilities using the Health Care Index with six core readiness elements: policy, knowledge, registry, preparation, planning, and transfer. Comparative analysis of the transition index was done at three intervals throughout the study. Over the period of the study, a significant improvement to planned readiness and ease of transition was documented by staff after the implementation of the tool that involved health care workers walking each individual teen through a six-step process. Significantly improved confidence was shown by patients after staff members initiated their new program (McManus, 2014).

Transition readiness was also assessed by Beal, Ny, Marraccini, & Biro (2014) using a convenience sample of 40 participants aged 12-21 at a freestanding Teen Health Center in a Midwestern city. Healthy participants were recruited through clinic flyers and given a 41-question survey. Some patients received cognitive interviewing while others only received the survey. Beal et al, 2014) found that results indicated most of the teens had not even thought about the transition to another provider and had a lack of confidence they would be able to do so. Older participants did show more confidence. A wide age range gives strength to this study while reduced diversity due to the use of only one site was a limitation.

Children with chronic conditions

To better understand the reasons that adolescents do not follow through with health care after they turn 18 years, Kay, Rapley, Babel & Brown (2013) examined the risk assessment of emerging adults as they transitioned to adult care. They conducted a two-year prospective cohort study with 53 patients with Diabetic Mellitus 1 (DM) age 17-19 years, at a large metropolitan teaching hospital. Data was collected using Hemoglobin A1C levels (HbA1C) and 4 well proven Diabetic questionnaires (PAID), (DES), (HADS, (EAT) at the inception of the study and 3 subsequent visits over 12 months. Results indicate the initial risk assessment at the first visit most predictive indicator of non-compliance with regards to the number of visits where those children with the highest anxiety and depression while, gender, race, and age were not significant factors. Depression and anxiety were found to be the significant factor in failed appointments and noncompliance leading to elevated HbA1c levels. Individuals attending meetings and had closer follow-up had improved behavior and diabetic numbers.

Maturo et al., (2015) used 38 participants to conduct a retrospective study of teens with Human Immunodeficiency Virus (HIV) transitioning to adult medicine enrolled in the "Movin Out" program. The "Movin Out" program helps teens with HIV transition to adult medicine. All participants were from an HIV clinic, 15.8% of the participants had acquired immunodeficiency syndrome (AIDS) and 84.2% had HIV infection. Authors found that participants completing the five-phase program at one year out were stable and confident in their ability to manage their health care.

Healthcare communication

Parent and teen preferential use of communication with health care providers was examined by Rand, Blumkin, Vincelli, Katsetos, & Szilagyi (2015) in a quantitative cross-sectional study of 400 random participants aged 10-17 years and their parents in Rochester, New York in 2011. Four pediatric clinics (2 suburban and 2 urban) were used to distribute a one-time flyer to patients to obtain demographic, race, age educational level, technology access and usage as well as their preferred method of communicating with their health care provider when health prevention reminders need to be sent out. Bivariate analysis was used to assess factors associated preferences for text versus email as preferred methods of communication. With multiple modes of communication available to all participants, results suggested that younger patients preferred text messaging while their parents preferred email.

In a large study in an out-patient clinic in 2013, Ahlers-Schmidt, Jones, Chesser, & Weeks found that preferred methods of communication between healthcare providers and patients have evolved over time. While telephone communication was still the primary preference for aging patients, parents of pediatric patients preferred email appointment confirmation and health promotion and prevention information. Differing from their parents, teens identified texting was their preferred method of communication regardless of the nature of the information.

Rempel et al., (2014) studied the effectiveness of text messaging to improve communication between health caregivers and patients. In a qualitative study in the Cardiology Division of the Stollery Children's Hospital in Canada, 13 participants aged 15-17 were recruited from a previous study of 24 congenital heart disease (CHD) patients. Patients with the technological capabilities of text messaging were recruited and nurses conversed with participants regarding their care. Field notes were coded into categories and subcategories and a qualitative inductive content analysis was performed on each texting interaction. Results showed that interaction through text messaging improved communication between nurses and patients. Texting as a preferred method of communication of teens is the strength of this study. The inability to analyze the non-uniformity of the communications between subject and nurse along with the fact that the subjects in this study were recruited from another study solely due to their condition provides the limitations.

In a systematic review of studies in 2013, Yonkers found that incorporating familiar ways of communicating: preventative healthcare applications, email, text, and video visit lead to improved interaction between transitioning teens, their providers, and the healthcare industry. Yonkers promotes thinking outside the box when it comes to connecting with transitioning teens.

Summary of Literature Review

The literature review demonstrates that many factors affect the teen's experience in the transition to adult medicine. Providers who planned early supportive education surrounding transition and used technology, improved selfperceived confidence levels of teens and parents by encouraging them to begin to connect electronically with their provider. Proper assessment and adequate preparation were shown to be factors in improving adult medicine outcomes for teens to transition smoothly. Research also indicated that pediatric health care providers should begin readiness preparedness as early as mid-teens.

CHAPTER 3: METHODOLOGY

Setting

The setting for this project was a large (500 patients per day) primary care pediatric outpatient clinic located in Santa Clara, CA, Two-thirds of the patients seen each day are under the age of ten with approximately one-tenth aged 17 years-old (Kaiser Santa Clara, 2017). Inclusion for participating in this project was defined as random 17-year-old teens who were not currently connected online through the organization's email site and who were without chronic conditions. For the purposes of the project "without chronic conditions" was determined to mean they had not seen a specialist within the last two years. Teens with chronic conditions were excluded from this project.

Participants

Institutional Research Board (IRB) approval by both the institution where the project was carried out and the school that supported it expended additional scrutiny due to the age of the participants. Considered a vulnerable population, individuals under the age of 18 years must have written parental consent to participate in any project in addition to the participants own written assent.

Recruitment

A convenience sample recruitment was done randomly as 17-year-old teens without chronic conditions arrived for care in the pediatric outpatient clinic. Once parental consent was obtained, participants were given assent forms and demographic contact information was retrieved, including EMR number, telephone number as well as personal email information (Appendix A). Fifty-four participants were initially enrolled in the qualitative project (33 females and 21 males). Each participant was given a two-digit identifier that was only associated with their Medical Record Number (MRN).

Project

This project involved a series of five emails initially using the teen's private email then transitioning to the organization's email system. The first and last emails held duplicate pre-and post- instructional 10 question surveys (Appendix B) evaluating the teen's confidence in contacting their current health care provider. Emails in-between provided basic instructions for the teen in how to establish a secure message connection to the organization and their pediatric provider, and what to say once they did (Appendix C & D). Upon completion, teens were encouraged to send an email to their pediatric provider to let them know they had successfully established an electronic connection (Appendix E). Finally, an email was sent that let the participant know that the provider had identified that they had contacted them (Appendix F), and a chart review of the participants EMR was conducted to determine if the teen completed the task. Upon task completion, a \$5.00 gift card was issued.

Forty-nine teens responded to the initial survey. Future email responses with instructions on how to connect to the organization's email system and what to say to their providers once they had accomplished that task. Twenty-one (38.8%) of enrolled participants (14 female and 7 males) completed the last survey (Appendix B) and a chart view was done to ensure that their online connection with their pediatric provide was in fact established.

CHAPTER 4: RESULTS

Fifty-four participants were initially enrolled in the project (33 females and 21 males). Each was sent an initial email which included a short 10 question survey. Forty-nine teens responded to the initial survey monkey while only Twenty-one (38.8%) of enrolled participants (14 female and 7 males) completed the last survey and a chart view was done to ensure that their online connection with their pediatric provider was in fact established. Figure 1 demonstrates by gender, the attrition rate over the course of the project.

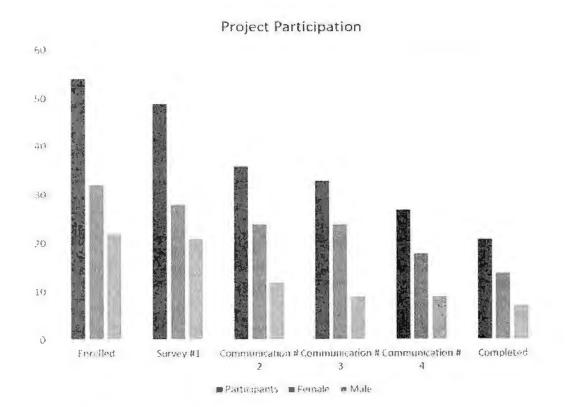


Figure 1. Project participation by gender

Results of the survey showed that five (10.2%) of the initial respondents felt somewhat confident in contacting their health care provider or booking themselves an appointment (Figure 2). Succeeding emails provided participants with instructions on how to connect to the organization's email system, what to say to their provider once they established the connection as well as examples of what should be withheld from email conversations due to privacy issues. Responses to emails began to drop off steadily after the second email was sent. Twenty-one (38.8%) of enrolled participants (14 female and 7 males) completed the last survey and a chart view was done to ensure that their online connection with their pediatric provide was in fact established. Figure 3., depicts the final survey that demonstrates that 17 of the 21 final respondents (80.9%) felt at least moderately confident in their ability to communicate with their pediatric provider and book themselves an appointment through the organization's email system.



Initial Survey Confidence



Figure 3. Final survey for confidence.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

This project demonstrated that teen confidence in their ability to interact with medical personnel was increased with the knowledge and skills that was provided. In support of McManus, (2014) findings, participants were noted to have improved communication with providers with an intervention to transition program which also improved long term outcomes. Recommendations from this project include but are not limited to: connecting earlier with teens, reducing the interactions with teens, and supporting provider-driven communication through email regarding the impending transition process.

Early Intervention

Starting the process of establishing a digital connection between pediatric providers and their teen population earlier than 17, in preparation for their transition is crucial because many of them are not seen by their provider between 17 and 18 years of age. In alignment with Beal, Ny, Marraccini, & Biro (2014) study on transition readiness, moving forward, fifteen and sixteen-year-old patients should be approached and encouraged to become connected online with their so that they are not lost in the system.

Condensing Educational Component

Extensive emails possible drove attrition rate high in this project. Recommendations to shorten and simplifying instructions and limit the number of communications with adolescents may improve completion rates in further studies. Limiting clear, age-appropriate instructions through 2 emails or texts may improve participation in future projects with teens. Ideally, rapid use of clinic office time to physically belp teens to connect digitally would be the ultimate solution to improving communication between teens and their pediatric provider.

Provider Driven Communication

Online communication with teens appears to be vitally important to continuing continuity of care. Once teens are digitally connected with their pediatric provider, health care representative from all areas within a healthcare system can engage with the emerging adults. At this facility, this connection has proven beneficial to both patients and providers in improving health prevention and promotion and preparation for their impending transition to adult medicine.

Future Studies

Utilizing information gathered from this QI project, future research involving emerging adults, healthcare and technology is necessary to help improve long-term health outcomes. Is the use of emergency services higher in emerging adults who not connected to a provider? Are Healthcare Effectiveness Data Information Sets (HEDIS) measures improved in emerging adults who are connected to a personal care provider? If available from the organization, would the use of texting improve communication between provider and emerging adult?

Twenty-first-century healthcare utilizes technology in a multitude of facets. Using the latest and most up-to-date technology available, health care organizations, providers, and their representatives that think outside the box are more likely to improve the quality of care they provide to their patients.

REFERENCES

REFERENCES

- Ahlers-Schmidt, C., Jones, J., Chesser, A., & Weeks, K. (2013). Evaluating opportunities for text message communication: A survey of parents and teens. Telemedicine Journal and E-health: The Official Journal of the American Telemedicine Association, 19(9), 711. Retrieved from: http://www.liebertpub.com/tmj
- Aldiss, S., Ellis, J., Cass., Pettigrew, T., Rose, L., & Gibson, F. (2015). Transition from child to adult care- it's not a one-off event: Development of benchmarks to improve the experience. DOI: http://dx.doi.org/10.1016/j.pedn.2015.05.020
- Arnett, J. (2003). "Emerging adulthood. A theory of development from the late teens through the twenties." The American Psychologist 55.5 (2000):469-80. Retrieved from http://www. http://sfx.calstate.edu:9003/fresno
- Bandura, A., & Estes, W. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 8(2), 191-215.
- Beal, S., Nye, A., Marraccini, A., & Biro, F. (2014). Evaluation of readiness to transfer to adult healthcare: what about the well adolescent? Health Care: The Journal of Delivery Science and Innovation, 2(4), 225-231. DOI: 10.1016/j.hjdsi.2014.10.001
- Braungart, M., & Braungart R., (2011). Educational and learning theories. In J. B. Butts, & K.L. Rich (Eds.). Philosophies and Theories for Advanced Nursing Practice (pp.195-234), Burlington, MA: Jones & Bartlett.

- Brooks, M., Bear, T., Hacker, K., Foulds, A., & Miller, E., (2105). Healthy Allegheny teens survey: a model for county-wide survey-based research. Journal of Adolescent Health, 56(2), S47-S48. doi.org/10.1016/j
- Cohn, A., Hunter-Reel, D., Hagman, B. & Mitchell, J. (2011). Promotion behavior from alcohol use through mobile technology: the future of ecological momentary assessment. Alcoholism: Clinical and Experimental Research, 35 (12), 2209-2215. Http://doi:10.1111/j.1530-0277.2011.01571
- English, A., Ford, C., (2014). The HIPPA privacy Rule and adolescents: legal questions and clinical challenges. The Guttmacher Institute 36(2). DOI: https://doi.org/10.1363/3608004
- Fugard, A., & Potts, H., (2015). Supporting thinking on sample sizes for thematic analyses: a quantitative tool. International Journal of Social Research Methodology 18(6), pp. 669–684. http://dx.doi.org/10.1080/13645579.2015.1005453
- Haggerty, K., Fleming, C., Catalano, R., Harachi, T., & Abbot, R., (2006).
 Raising healthy children: examining the impact of promoting healthy driving behavior within a social development intervention. Prevention Science, 7(257). Http://doi:10.1007/s11121-006-0033-6
- Journal of Adolescent Health (2017). Author information pack. Journal of Adolescent Health: Society for Adolescent Health and Medicine. Retrieved at: https://www.jaholine.org.
- Kaiser (2017). Pediatric dashboard. Santa Clara Kaiser Permanente: 2016 Annual Report.

- Kaiser (2017). Division of Research: Institutional review board. Retrieved from: https://dor.kaiser.org/external/DORExternal/research/irb.aspx
- Maturo, D., Powell, A., Major-Wilson, H., Sanchez, K., Santis, D., & Friedman,
 L. (2015). Transitioning adolescents and young adults with HIV infections to
 adult care: Pilot testing the "Movin' Out" transitioning protocol. Journal of
 Pediatric Nursing, 30(5), e29-e35. Retrieved from: https://doiorg.hmlproxy.lib.csufresno.edu/10.1016/j.pedn.2015.06.013.
- Mcmanus, M., White, P., Barbour, A., Downing, B. & Hawkins, K. (2015).
 Pediatric to adult transition: A quality improvement model for primary care.
 Journal of Adolescent Health, 56(1), 73-78.
 http://dx.doi.org.hmlproxy.lib.csufresno.edu/10.1016/j.jadohealth.2014.08.006
- Melnyk, B. & Fineout-Overholt, E. (2014). Evidence-based practice in nursing and healthcare: A guide to best practice, (3rd ed.). Kindle Edition.
- National Institute of Health (2016). Research using vulnerable populations: Children.Retrieved from: https://grants.nih.gov.
- Rand, C., Blumkin, A., Vincelli, P., Katsetos, V., & Szilagyi, P. (2015). Parent preferences for communicating with their adolescent's provider using new technologies. Journal of Adolescent Health, 57(3), 299-304.
 Http://doi:10.1016
- Rempel, G. Ballantyne, T., Magill-Evans, J., Nicholas, D, Mackie, A. (20140. Texting teens in transition: the use of text messages in clinical intervention research. Journal of Medical Internet Research Mhealth and Uhealth, 2(4). doi: 10.2196/mhealth.3232

- Sawicki, G., Garvey, K., Toomey, S., Williams, K., Hargraves, J., James, T., Raphael, J., Giardino, A., Schuster, M., Finkelstein, J., (2017). Preparation for transition to adult care among medicaid-insured adolescents. Pediatrics, 140(1). <u>https://doiorg/10.1542.peds.2016-2768</u>
- Shields, L., & Pearn, J. (2007). Inducements for medical and health research: Issues for the profession of nursing. Journal of Clinical Nursing, 16(7), 1196-1200. Http://Doi:10.1111/j.1365-2702.2007.01889
- Smith, K., Macias, K., & Betz, C. (2015). Brief report: Adolescents' reasons for participating in a health care transition intervention study. Journal of Pediatric Nursing, 30(5), 165-171. Http://Doi:101016/j.pedn.2015.05.007.
- Smith, S., Morgan, S., & Riley, V. (2010). Priorities and challenges in the care of teenagers and young adults. Cancer Nursing Practice 10(1), 32-38. http://dx.doi.org/10.7748/cnp2011.02.10.1.32.c8334.
- Steefel, L. & Saver, C. (2013). From capstone project to published article. American Nurse Today, 8(5). Retrieved from: https://www.americannursetoday.com.

APPENDICES

APPENDIX A: PARTICIPANT FLYER

Connecting Transitioning Teens with their Healthcare Providers

On your 18th birthday, you will become an adult and will be transferred out of the pediatric clinic and into the internal medicine department (where your parents receive their healthcare). To ease your transition to internal medicine at 18, I have developed an online tool that I would like your participation in a trial of. The aim is to help you, help yourself navigate your healthcare at Kaiser Permanente.

Your participation in this project will involve receiving an online survey via the email you provide below. Once you have completed the survey you will be sent an additional email with information regarding accessing <u>KP.org</u> and the KP MyDoctorOnline app, along with additional age-appropriate healthcare information. After completing the tool, the final survey will be sent to you using your new <u>KP.org</u> account. You will then send an email to your provider and they will respond to you.

After two short online surveys and completion of a task, you will be given your choice of a \$5.00 iTunes or Starbuck's gift card for your participation.

If you choose to participate in this project, your signature along with your parent's signature to consent to participate will be required (a separate page).

You can withdraw from this project at any time for any reason.

I have read the above information regarding this project and understand that my participation is voluntary (circle one) YES / NO

Participant Printed Name and signature:	/
Parental Name and Signature:	/
Medical Record number:	
Personal email address:	
Cell phone number:	
Kathv.A.Prows@kp.org. For questions or concern	ns please phone 408-851-1121

APPENDIX B: PARTICIPANT EMAIL #1

Survey Invitation

Dear Participant #____

Thank you for participating in this project. Please use the attached link to complete this short "Teen Survey".

https://www.surveymonkey.com/r/9DBSH8L

Once you have completed the survey, please contact me at

Kathy.A.Prows@kp.org to advise that you have completed it. Upon completion of the survey, I will send you specific information with Kaiser Permanente instructions on how to link yourself to your Kaiser provider through KP.org and MyDoctorOnline and what that enables you to do.

After successfully signing up for KP.org and the MyDoctorOnline App, we will communicate through KP.org. I will then have you send an email to your pediatric provider. Your pediatric provider will then respond to your email to confirm the connection has been made.

The final piece of this project will be that you complete one last survey that will be sent to you at your new KP.org account.

Thank you,

Kathy Prows, MSN, RN- Project Investigator Pediatric Department Santa Clara Kaiser Permanente Kathy.A.Prows@kp.org APPENDIX C: PARTICIPANT EMAIL #2

Teen Survey

What is your gender?

0 Male

0 Female

0 Trans or intergender

Do you understand that after you turn 18 years old you will no longer see your current pediatric provider (doctor or nurse practitioner)?

0 Yes

0 No

0 Not sure what this means

Have you ever made an appointment BY yourself FOR yourself to see a provider (doctor or nurse practitioner) at Kaiser?

0 Yes

0 N o

Are you aware that you can choose your adult medicine provider (doctor or NP)?

0 Yes

0 N o

0 Not sure what this means

If you are female, have you selected a women's health/gynecologist?

0 No

0 Not Applicable

Do you own a smartphone or computer?

	Yes	No
Smart Phone	0	0
Computer	0	0
Other	0	0

Are you aware that there are 4 ways to contact your doctor or nurse practitioner? Email, video visit, text, in-person appointment.

0 Yes 0 No

Have you ever emailed, texted, or used KP online to contact your current provider (doctor or nurse practitioner)? Or ordered a medication refill online?

	Yes	No	Not sure
Emailed	С.	0	0
Texted	0	0	0
Used KP online	0	0	0
Video visit for example Skype	0	0	0
Medication refill only	0	0	0
······	0	0	9

Do you have any KP 'app' downloaded on your smartphone?

0 Yes 0 No Maybe

How confident are you right now with your ability to manage your own health care needs?

0 Not at all confident

0 Slightly confident

0 Moderately confident

0 Highly confident

0 Not sure what this means

APPENDIX D: PARTICIPANT EMAIL #3

Instructions for signing up for KP.org and My Doctor Online

An array of secure online tools and resources on kp org and your physician's Home Page are right at your ingertips. 24 fouries a day, and mady to help you take his active role in managing your health. You can:

Online Features

and Resources

- . Consiliyour dooter is affice with rounds health questions
- . Act for a family summaries
- Request, change is cancel appointments for routine care
- Order and check the elutes of prescoptor rente .
- View most tab test results
- Check engibility and veryafit information
- Ven past of on east information
- * subscripe to our Healthy Beginnings P wyram y Ninasletter on kp org/mydoctor

You can alwriters up faeling locators, treath and drug information, and harwes isome classes require a test. To use our secure online features to the first time, all you need to do is register at kplong then sign on with your user ID and password.

Turn this page over for mathictions on how to get access online today and get started on a beatther way of life

KAISER PERMANENTE.



Here's how to put a password to access an array of secure online textures on to org and your physician a Home Page

- · On to No organizate "Register to get a sear IO"
- NOO 7 Crizer your name "Medica Review" Valober state of Eeth, and over a occurrent
- Stop X: Read and confirm that you up as to the Cras site tanna and conditions
- Step 3. Choose your preteriorises for a mail a solution enterta and esto mallore
- Step 4 Chapter a conjust water ID
- Step 5: Contemport our and making and tests
- Step # Curlier point dealth by insteading the last four right or your Rocks Security Number
- "It ... " Answer for an estimate that and star att seven the nature of

most early online sectionly resides (Article and the original section and the section and the section and the section of the s

- Step 8. Consiste e unique parameteriand and secure multipleasure a ky-selecting these encoding constrons for which you'll provide your own dosames.
- Your to show a faile a sate of your uper 10 and passwer's and store for a safe place

If positioned any problems with recessivition call \$4600-856-7677 to stop by item local Karse. Permanente Heelth Education Center Se assistance

KAISER PERMANENTE.



To get a pageword shilling, go to gui i dui rur s horrie page it ke nigimydoctor. Select the Fusibilit think is feature year

wine a	and the same the	
-		:
un com		

Seem 1. Respirator coss? In in the sign on ange-



12. П. К. и 2010 годор 2. В. се се селото собласти на селот 3. Условић ила и около пова се са саста наве и доластика 1944 годи селот селот селото селот селото средского и на поселото на правита на селот доласти у селото доласти селот и селото средского и на поселото на правита на селот доласти на поселото селот и около средского поселот "Конселент и пова 2000 годи се на поселото селот на селот на пова на поселото поселото по Конселент и пова пова 2000 годи на поселото."

or andmonal addictants. Joacs call manager ones blief bage on an I-1800-556-7577 or ever constance. Nexto 2 discussion of Norther Services one convent

Online Tools and Features

My Distor On no helps you managa your neeth anytima, anywhere. Go to your doctor's teche page at splorg mycomo-Yoн сап

- · Order and creck the status of pre-cription refine.
- View most lab test cos in
- · E-mail (m) motion with consumption selections
- Can which with the help of our notific tools for Codes and Fig. Here then introducties, and more
- Manage your family's hear to
- Reclett change, or careos spherid nei ta with primary care privilizions
- · Istwell organity and somelit internation
- " Vipa past office ets" mornagor
- · Choose "Prevention Services" to occ your personalized whit univision and screecing a temption
- Subscribe to an anime noise of an that is televed to your child's ege and high gits Kaiser Parmanente information and recombus our doctors recommend.
- Find a subscy of maximum and instruction of health views and pulled smartary (sets upp)

Some of these links and two a password. You don nectant a parameter

Title this game over for manufilms an analysis of get oblain access hoday and get started on a basilitual way of the

KAISER PERMANENTE

APPENDIX E: PARTICIPANT EMAIL #4

Emailing Guideline for teens

Congratulations _______on signing up for KP.org! You are now connected to your healthcare world at Kaiser Permanente. I would like you to send an email to your provider @PCP@ to say hello and let them know that they can contact you through KP.org with any messages they might have regarding your health. Once you do that your provider will email you back to welcome you to KP.org and they will let me know that they heard from you! An example of a simple email for you to send would be.

"Hi Dr. this is ______ (your name). I just wanted to let you know that I am now active on KP.org and if you need to reach me you can email me. My contact phone number is ______.

Thank you,

(your name)"

Once you have sent the email to your provider and your provider lets me know, you have done so, I will send you a short final survey through KP.org for you to complete. Send me a secure message through kp.org to let me know you have completed the survey and whether you want a \$5.00 iTunes or Starbucks card and the address where I should send it.

Welcome to Kp.org and many health connections!

Kathy Prows, MSN, RN- Project Investigator

Pediatric Department

Santa Clara Kaiser Permanente

Kathy.A.Prows@kp.org

APPENDIX F: PARTICIPANT EMAIL #5

.

•

Final Survey

Hello,

Dr. _____ let me know that they received your email through <u>KP.org</u>. Great work! Please complete the following survey now that you have linked yourself with your health care provider and Kaiser Permanente.

https://www.surveymonkey.com/r/9DBSH8L

Please respond to this email which will go directly to me once you have completed the final survey. Please indicate which gift card you would like and which address it should be mailed to. Please allow 2-3 weeks for the gift card to arrive in the United States Mail.

Thank you for your participation in this project.

If there is anything you need or have questions, feel free to reach out through <u>KP.org</u> to your provider or myself at any time. Once again, please do not leave urgent messages on <u>KP.org</u> use the Kaiser Call Center for those at 408-554-9810.

Best of health!

Kathy Prows, MSN, RN- Project Investigator Pediatric Department Santa Clara Kaiser Permanente <u>Kathy.A.Prows@kp.org</u>

APPENDIX G: INSTITUTIONAL REVIEW BOARD APPROVALS



Subject/Title: Improving Teen and Pediatric Provider Communication Using Education and Technology RDO-KPNC 17-82

Date: October 18th, 2017

Dear Kathy Connor-Prows;

Please see below determination outcome and the attached checklist used.

As the Research Determination Official (RDO) for the Kaiser Permanente Northern California region. I have reviewed the documents submitted for the above-referenced project. The project does not meet the regulatory definition of research involving human subjects as noted here:

0 Not Research

The activity does not meet the regulatory definition of research per 45 CFR 46.102(d): A systemic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

Not Human Subject Research

The activity does not meet the regulatory definition of research involving human subjects per 45 CFR 46.102(1'): Human subjects means a living individual about whom an investigator conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information.

Therefore, the project is not required to be reviewed by a KP Institutional Review Board (IRB). This determination is based on the information provided. If the scope or nature of the project changes in a manner that could impact this review, please resubmit for a new determination. Also, you are responsible for keeping a copy of this determination letter in your project files as it may be necessary to demonstrate that your project was properly reviewed.

1.5

Provide this approval letter to the Physician in Charge (PIC), your Area Manager, and Chief of Service, to determine whether additional approvals are needed.

Sincerely,

National Research Compliance Officer Director, National Compliance in Research Support Program Kaiser Foundation Research Institute 1800 Harrison Street Suite 1600 Oakland, CA 94612 510-625-2397 (telephone) 510-625-2330 (fax) <u>firic,F.(iarcialalp.org)</u>

Discovery, Diversity, Distinction,

MEMORANDUM

Date: December 22, 2017

To: Ruth Rosenblum, Principal Investigator Department of Nursing

From:

this Clarke MK

Kris Clarke, Chair Committee on the Protection of Human Subjects

Protocol #834: Improving Teen and Provider Communication using Education and Technology

The Committee on the Protection of Human Subjects performed a full review of your project and approves of your project with the submitted revisions. Your project is approved with the addition of one further revision:

1. Please add language on the informed consent and assent forms (age appropriate) that indicates that the researcher is a mandated reporter, so that the subjects know that the researcher must report to authorities any suspected abuse, such as: "By law, the study team must release certain information to the appropriate authorities if at any time during the study there is concern that child abuse has possibly occurred or you disclose a desire to harm yourself or others." OR "We will keep your child's (your) study data as confidential as possible, except for certain information that we must report for legal or ethical reasons, such as child abuse or negleet."

Approval for your project expires December 22, 2018. Should your study last more than one year, please submit an annual renewal form found on our website.

APPENDIX H: NIH CERTIFICATE

