Pharmaceutical Clinical Educator Effectiveness: Perceptions of Oncology Advanced Practice Providers and Registered Nurses

By

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Abstract

There is a paucity of literature that explores the role of the Pharmaceutical Clinical Educator (PCE) and the usefulness of the education that they offer to healthcare providers. This scholarly project explores the perceptions of oncology advanced practice providers (APPs) and registered nurses (RNs) regarding the effectiveness of PCE teaching behaviors. Data were obtained through an anonymous digital survey completed by oncology APPs and RNs (n=30) throughout the country. The survey utilized was a modified version of Fong and McCauley's (1993) Clinical Teaching Effectiveness (CTE) Tool that lists effective teaching behaviors organized into three categories. Respondents felt the three most important clinical teaching behaviors for a PCE to display were "is well prepared for clinical in-services or clinical conferences" (teaching competency), "shows genuine interest in patients and their care" (clinical competency), and "shows interest in making a contribution toward the improvement of healthcare for patients" (clinical competency). Additionally, more than half of the respondents reported barriers to receiving education. An overwhelming number of participants (82%) listed "time" as their biggest barrier, while 41% of participants stated institutional policies precluded them from receiving education.

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Chapter 1

The role of the clinical educator (CE) is to meet the ongoing educational needs of clinicians to ensure the best possible patient and population outcomes (Coates & Fraser, 2013). CEs can be found in all facets of the healthcare system including inpatient and outpatient settings like hospitals and clinics, and in settings like nursing schools and lecture halls. More recently, pharmaceutical industry leaders adopted the role of the CE to help educate healthcare providers (HCPs) as there is extensive knowledge and expertise in the pharmaceutical industry around healthcare systems, disease states, and pharmaceutical products that are developed (Allen et al., 2017). This is true, especially in the field of oncology. Pharmaceutical Clinical Educators (PCEs) present, and sometimes develop, evidenced-based presentations on disease states and products from local to national audiences (Poniatowski, Temple & Umstead, 2006). A bachelors-prepared registered nurse or a nurse with an advanced practice or master's degree usually fulfills this role within industry, as their main audience is usually nurses. Physician assistants (PAs) and pharmacists (pharmDs) are now also filling this role, especially since the healthcare provider audience is expanding due to the complexity of medications that require an interprofessional collaborative effort to effectively care for patients. Of note, the term "PCE" will be used interchangeably throughout this project when referring to the role of the PCE and the title of the HCP who is fulfilling the role of the CE in the pharmaceutical industry. Unfortunately, there are no uniform professional standards in the pharmaceutical industry when it comes to defining qualifications for CEs, and

individual companies can hire PCEs based on their own core competencies and guidelines. This creates a conundrum when trying to decide who is qualified and why. Ultimately, the PCE will educate advanced practice providers (APPs) and registered nurses (RNs), and this lack of uniform scopes and standards can affect the outcome and effectiveness of education these HCPs are receiving.

Education obtained from PCEs can be extremely beneficial to APPs and RNs who care for patients or act as CEs in their institution. Although many researchers have debated the benefits of education supplied by pharmaceutical industry personnel, there is a paucity of evidence that differentiates the role of a pharmaceutical sales representative from a PCE. A sales representative's main focus is promotion and dissemination of promotion information, while the main focus of the PCE is to educate HCPs on the safety and efficacy of products and disease states (Adams Arrington, Farrell & Henning, 2018). Adams Arrington et al. (2018) pointed out that majority of PCEs are clinical and can have constructive peer-on-peer conversations that enhance learning and can effectively meet the educational needs in an efficient manner.

Problem Statement

Understanding the perceptions of oncology APPs and RNs regarding the clinical teaching effectiveness of the PCE will aid in increasing awareness of the educational benefits that can increase interprofessional collaboration, advance nursing practice, and most importantly, improve patient and population health outcomes.

Project Aims

The overall goal of this scholarly project was to understand perceptions that APPs and RNs have regarding the effectiveness of education provided by PCEs, and to draw

awareness to the role of the PCE. This project also aimed to identify and analyze the different barriers that preclude PCE education in institutional settings and to gather insights that can be used within the pharmaceutical industry to improve upon the effectiveness of education provided by PCEs.

Clinical Question

What are the perceptions of oncology APPs and RNs regarding the effectiveness of education provided by the PCE?

Congruence with Organizational Strategic Plan

Genentech, Inc. was founded in South San Francisco in 1976. Core values include passion, integrity, and courage. The people at Genentech are passionate about science and "applying skills, time, and resources to positively impact the patients" (Genentech, 2018). This shared enthusiasm for positively impacting patients and applying skills, time, and resources align with the Doctorate of Nursing Practice *(DNP) Essentials* and is at the heart of the role of the nurse.

Review of Literature

Several databases and resources were used for the literature review. Databases included the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Health Source Nursing/Academic Edition. In addition to the databases, assistance from Megan Jaskowiak, the Bradley University librarian was obtained.

Using the keywords "pharmaceutical" and "clinical educators" within the CINAHL database yielded 13 results. Due to the uniqueness of this research question, two results were selected for final review. In addition to this search, keywords "industry" and "registered nurses" were used, which generated 222 results. This search yielded a lot

of articles that were not applicable to the topic. One article was selected. Lastly, being more specific, the key words “pharmaceutical industry” and “continuing education” were used. This yielded 105 articles and, unfortunately, none were truly applicable to this research question.

Using the keywords “interprofessional education” and “clinical educator” and “benefits” within the Health Source Nursing/Academic Edition database yielded 16 articles. One article was a review of several interprofessional education articles; therefore, it was selected for this literature review.

Assistance from Megan Jaskowiak, the librarian, yielded three usable results. A discussion around topics regarding clinical educators within the pharmaceutical industry was discussed prior to her response. Keywords and databases were not included in her response e-mail. Lastly, three additional articles were used from a previous search two years ago regarding PCEs, but the database and keywords were not recorded.

Conflict of interest. As noted previously, there is a wealth of knowledge around disease states, products, and clinical development within the pharmaceutical industry (Allen et al., 2017). Avorn (2011) pointed out that the majority of physicians get their product information mostly, and sometimes only, from pharmaceutical companies. There are many challenges sharing this information with healthcare providers as accrediting bodies, government agencies, and healthcare institutions have many concerns around conflicts of interest causing them to place restrictions on interactions between PCEs and HCPs. Avorn (2011) went on to discuss the Kefauver’s bill, which was the government’s answer to address conflicts of interest and the topic of promotion versus education. One of the most notable results of the Kefauver’s bill was the implementation of the Package

Insert, which is, by guidelines of the Federal Drug Administration's Office of Prescription Drug Promotion (FDA-OPDP), the basis for all education provided by PCEs. While this may be the federal guideline, not every sales representative or PCE follows it compliantly. Avorn's (2011) perspective piece was heavily biased and pointed out the persistent problems between interactions with sales representatives and HCPs. There was no mention of the role of the PCE. Therefore, one could either believe that the author is including the PCE role in the same bucket as the sales representative or believe they are separate entities.

Impact on nursing. Grundy, Bero, and Malone (2016) pointed out the concern for "invisible interactions" between registered nurses and industry. They called these interactions invisible because nurses reported having financial relationships with the industry, similar to those of prescribers, which occur in their daily practice without policy to prevent them. Their qualitative study resulted in 33 nurses acknowledging benefit to interactions with industry and 16 out of 56 nurses reporting they could not do their job without industry resources. One of the assumptions voiced by participants was that nurse interactions with industry were not considered marketing and thus ethically benign. Another assumption commonly voiced was the ideation that nurses are non-prescribers; therefore, having little say in the marketing messages that were directed at them. Grundy et al. (2016) go on to say the lack of policy to prevent such interactions leaves nurses without a boundary to decipher between education and sales. Grundy et al. (2016) supported the benefits of education, but also pointed out the common concerns between marketing and education. One limitation to this study was the small sample size (n=56)

and they only interviewed acute care nurses and not outpatient nurses or other staff in different settings.

Adams Arrington et al. (2018) believe the distinguishing boundary between educational presentations and promotion lie in the oath taken as HCPs to do no harm and their intent to educate. An opinion piece by Korak (2016) discussing her career pathway into industry as a PCE addressed this boundary between education and sales as well. As a PCE manager who moved up the ranks, she stated, "I remember to look with my nursing eyes and think with my business brain to develop materials that are going to best benefit patients." (p. 14). Adams Arrington et al. (2018) supported this notion while discussing ethical concerns and the role of the PCE. HCPs in the role of a PCE most likely had past experience interacting with sales representatives and are no strangers to the conflicts of interest that can arise from such interactions. Having that additional insight as a PCE helps to focus on the best benefit to the patient.

APPs and interprofessional education. What if the PCE does not have "nursing eyes" and is either a PA or a pharmD? A pharmacist, Ogbru (2012), reviewed the jobs within industry that were available to nurses, but pointed out that positions in departments such as Medical Information usually employ pharmDs. This department can be a hybrid of a PCE as they develop responses to HCP questions about the products. In addition to this role, pharmDs are usually employed in the Medical Science Liaison (MSL) department as well. This role involves relationship building with key opinion thought leaders (KOLs) and educating them on the latest research and pipeline drugs that are not yet FDA approved. This department can also be a hybrid of a PCE in certain companies, but it is not common as it crosses the sales/science line, which is one line the

industry draws to help reduce conflicts of interest and stay within the FDA-OPDP guidelines.

One could argue that regardless of the credentials a HCP holds, that individual is prepared for clinical practice, and can use this preparation and experience in the pharmaceutical industry to educate. However, is this the case when it comes to interprofessional education (IPE)?

In 2010, the World Health Organization published a *Framework Action on Interprofessional Education and Collaborative Practice*, a publication addressing IPE as a topic of interest in the healthcare setting. IPE is defined as two or more professionals in the healthcare setting that learn together to improve skills and knowledge to improve patient outcomes (Illingworth & Chelvanayagam, 2017). Illingworth and Chelvanayagam (2017) stated there was little evidence that showed IPE had a beneficial effect on health outcomes. They did serial reviews over the past 10 years and their more recent review highlighted results from 15 studies that were unable to show conclusive evidence that IPE led to improved healthcare outcomes. Results were mixed due to the variability in the execution of studies and no qualitative studies that may have yielded different data.

Lack of professional standards or guidelines. The benefits of industry education are in the literature. However, if the pharmaceutical industry standardized the role of the PCE, would the PCE then be viewed as a valued partner when it comes to educating HCPs? Allen et al. (2017) posed the question, "How can the pharmaceutical industry have a more widely accepted and legitimate role in developing and supporting medical education for HCPs?" (p. 2). Allen et al. (2017) went on to look at the opinions of 16 pharmaceutical companies in the interest of aligning quality principles for

education. “Quality” was defined as the effectiveness of achieving pre-conceived educational objectives prior to a program or educational activity. These objectives were centered on ethics, fair and balanced topics, up-to-date information, proper audience, and the process to which the program was delivered. In order to execute these quality standards, proper training and the ability to assure high levels of competence and compliance would be necessary.

Creating a Gold Standard for role clarity and educational continuity is a lofty goal, especially when the role of a CE outside of the pharmaceutical industry varies as well (Coates & Fraser, 2013). Aside from being CEs, an additional commonality between PCEs and Clinical Nurse Educators (CNEs) is that they have a multitude of titles with a variety of role expectations. For example, the PCE role has been labeled “Clinical Coordinator,” “Clinical Specialist,” and “Clinical Educator” to name a few, while the role of the CNE has been called “Staff Development Educator” or “Practice Educator” (Coates & Fraser, 2013). There are also Academic Nurse Educators (ANEs) who educate nursing students. This lack of role clarity and continuity can cause challenges amongst those who fulfill the role. Manning and Neville (2009) conducted a qualitative informative study looking at eight CNEs who transitioned from staff nursing to the role of a CNE. By using Bridge’s transition framework, they were able to assess the transition through phases of change: Endings (letting go of the past), Neutral Zone (positive and negative uncertain feelings), and Beginnings (new understandings, values, and attitudes). The authors found that those CNEs who transitioned found many challenges, mostly relating to lack of understanding and preparation for the change in role. The stages of transition were normal, but the authors believed the transition could be smoother if the

CNEs were properly prepared, if there was role clarity, and if mentors and support staff could assist in the transition. Role clarity and continuity can help those HCPs, regardless of credentials, who are coming into a new role as a PCE. While Manning and Neville (2009) supported this statement, extrapolation should be taken with caution as their study had a small sample size (n=8). The authors only looked at nurses transitioning into the role of a CNE, and did not include experiences from the HCPs who interacted with the CNEs, as they may have had a different view.

Fostering collaboration. The role of the CE is present in all facets of the healthcare continuum. Whether agreed upon or not, the pharmaceutical industry plays a role within this continuum. Evidence-based benefits exist resulting from the collaboration and partnership between industry and HCPs. While there are benefits to interactions between industry and HCPs, the current literature focuses mainly on the sales representative within industry versus the PCE. Allen et al. (2017) suggested that HCPs view the pharmaceutical industry personnel, including PCEs, as active collaborative partners in medical education. Their belief could be perceived as bias as the article is written from their opinions -- yet there are several strengths to their conclusion on quality standards. These quality standards are similar to the European Union of Medical Specialists, which is an accreditation council for Continuing Medical Education (CME) credits, with two main differences. They excluded active involvement of the pharmaceutical industry and their guidelines have more emphasis on the impact of education, transparency, and their learning design. Unfortunately, the authors stopped at opinions and did not qualitatively or quantitatively study the quality standards for evidence-based data. Regardless, Allen et al. (2017) pointed out that both PCEs and

HCPs have their own concentration on interests and biases and it is, essentially, biased to restrict the role of the PCE and what they can offer.

Pizzo Lawley, and Rubenstein (2017) addressed this concept of mutual bias and mutual benefit by encouraging collaboration. They pointed out that the leaders within an institution should be a part of fostering collaborative relationships with industry as there are mutual benefits to the education and support that can be provided. This ideation puts the onus on the institution to monitor the "quality" of education versus just the pharmaceutical company. While the authors suggested leaders of institutions get involved with managing these relationships, they failed to give an example or a method on how to manage said relationships.

Conceptual Framework

Braungart and Braungart (2008) described a learning theory as a conceptual framework used to help describe, explain, or predict how people learn. Learning theories can be used in combination or individually in the healthcare setting and no one learning theory is a perfect fit. For the purpose of this project, the cognitive learning theory will serve as the framework for the exploration of APPs' and RNs' perceptions of the effectiveness of education provided by PCEs. This theory focuses on what goes on in the minds of learners. For individuals to learn, there has to be a change in perception and thoughts to be able to formulate new insights (Braungart & Braungart, 2008).

Gestalt, information processing, cognitive development, and social cognitive theory are different types of cognitive learning theories. Gestalt theorists believe learning is a process that occurs within an individual that focuses on the thinking, understanding, organizing, and the consciousness. Aliakbari, Parvin, Heidari, and Haghani (2015)

pointed out that gestalt psychologists believe a person's ability to learn involves organizing and transforming information into a pattern (or gestalt). One of the basic principles of gestalt is that people seek simplicity, equilibrium, and regularity (Braungart & Braungart, 2008). Another principle of gestalt is that perception is selective. This principle has several implications when it comes to learning. First, no one person can attend to all stimuli at any given time. Therefore, individuals pay attention to certain behaviors and features of an experience and ignore other behaviors and features. Secondly, what the person pays attention to and ignores is influenced by multiple factors such as educational background, experiences, and attitudes. These factors vary from person to person, so perception, interpretation, and response to an educational presentation can vary immensely. Aliakbari et al. (2015) noted that Wertheimer, a gestalt psychologist, believed memorizing information was an ineffective method and useless in real life, and true learning was accomplished through understanding. Learning, in combination with understanding, can then be consistent with existing knowledge and experiences in order to create awareness. Wertheimer, Koffka, and Kohler, all gestalt psychologists, theorized that the perceptions of individuals are structured and organized into the simplest form possible in order to understand its meaning (Aliakbari et al., 2015). The four primary factors called the laws of organization, which determine groupings are: proximity, similarity, closure, and simplicity (Stemberger, 2015). The belief that these laws of organization could be used for learning helped create Wertheimer, Koffka, and Kohler's gestalt theory of learning with insight. Stemberger (2015) reviewed the additional principles of this theory, which include the idea that gaps, incongruities, or

disturbances play an important role in learning and the learner should be encouraged to discover the underlying relationship among elements.

Educational styles vary from person to person as does learning. The commonalities amongst all PCEs include a clinical background and the intent to educate HCPs on the safety and efficacy of products and disease states (Adams Arrington, et al., 2018). It is this researcher's belief that regardless of educational style, if the principles of gestalt theory are followed, the PCE will be a more effective educator than a non-clinical sale representative because their ability to have constructive peer-on-peer conversations will enhance learning and effectively meet educational needs through understanding opposed to memorizing information.

Methodology

Needs Assessment

The role of the PCE and the education they provide is not readily found in existing literature. When discussing the advantages and disadvantages to pharmaceutical industry education, the sales representative is mentioned as the main source of the education. The benefits to pharmaceutical industry education listed above creates a need for understanding the role of the PCE and the effectiveness of the education a PCE can provide. The newness of the role of the PCE in industry may be a factor in the lack of research. For example, Genentech, Inc., a biotech pharmaceutical company in the United States, started this role in April 2000. APPs and RNs are familiar with the role of the academic CE, but there is limited familiarity of the PCE role. There is a need to raise awareness of the role and to understand the effectiveness of the education a PCE can provide. The outcome of this scholarly project can help the pharmaceutical industry

improve upon the effectiveness of PCE education, and it can improve patient outcomes as APPs and RNs will be more familiar with the role of the PCE and seek the benefits of education.

Project Design

A nonexperimental research design was used in this descriptive scholarly project. The utilization of a survey tool explored the perceptions that APPs and RNs have regarding PCEs, and it identified barrier that must be overcome to improve education availability. This is an appropriate design as there is little research on PCEs and the results of this project can serve as a starting point for generating an internal campaign to improve upon the training of PCEs to include the behaviors that oncology APPs and RNs identify as being most important for effective education and can assist in overcoming barriers to education.

Subjects

Data were collected from members of the Advanced Practitioner Society for Hematology and Oncology (APSHO). APSHO is a nonprofit organization consisting of nurse practitioners, physician assistants, clinical nurse specialists, advance degree nurses, pharmacists, and students in these disciplines practicing in the field of hematology or oncology. Students in APSHO are usually RNs. In addition to this group of subjects, 22 national PCEs distributed the survey to hematology and oncology acquaintances and their local Oncology Nursing Society (ONS) Chapter Presidents for approval and dissemination.

Tool

Fong and McCauley's (1993) Clinical Teaching Effectiveness (CTE) tool was designed to provide an instrument for clinical nurse instructors to receive and process objective feedback on their teaching performance (See Appendix A). A modified version of the CTE was used in this scholarly project (See Appendix B). Permission to use and modify the tool was requested and granted by Dr. Fong (See Appendix C). The CTE tool was chosen because it looked at the instructors' nursing expertise, their consideration for the learner, and their teaching competency. "Consideration for the learner" and "teaching competency" were assessed as in the original CTE tool, while changes in the modified CTE tool reflected "clinical expertise" versus "nursing expertise." Fong and McCauley (1993) defined "nursing expertise" as "one's interest in patients, one's technical nursing skills, and ones awareness of professional responsibilities" (p. 327). This definition was modified to reflect all clinical skills regardless of discipline. "Teaching competency" was defined as the process of transmitting clinical knowledge, skills, and attitudes, and "consideration for the learner" included recognition of the learner as an individual who deserves respect, confidentiality, and support. These definitions align with Fong and McCauley's CTE.

Seven questions were omitted from the original CTE as they did not pertain to the effectiveness of education provided by the PCE. It is this researcher's beliefs that these three categories (instructors' clinical expertise, their consideration for the learner, and their teaching competency) can assess the effectiveness of education provided by PCEs and the results of the modified CTE can yield valuable objective feedback that can help the PCE focus on improving education within a pharmaceutical company to be more effective at teaching.

The modified CTE contained 18 clinical teaching behaviors that fell into the abovementioned categories. Subjects used a Likert-type scale to rate the importance of each behavior. The scale ranged from "most important" to "of no importance." In section II of the modified CTE, subjects chose the five most important behaviors from the 18 clinical teaching behaviors and ranked them from most important to least important. Section III of the modified CTE asked the subjects to write any additional behaviors they believed were important for effective teaching from a PCE, but were not included in the listed clinical teaching behaviors.

Analysis of data collected from the original CTE tool indicated the instrument was both reliable and valid (Fong & McCauley, 1993). Test-retest reliability was evaluated with an additional set of students taking the test under the guidance of the same instructors teaching the same clinical courses. A Pearson correlation coefficient of .85 indicated a high correlation between test and retest and the p value was significant at $p < .001$. Internal consistency reliability yielded a Cronbach's coefficient alpha of .965, indicating an overall high internal consistency on the total scale. Fourteen expert faculty members determined the original CTE had content validity and construct validity was determined by factor analysis.

Project Plan

Oncology APP and RN subjects with and without an APSHO membership received an e-mail with a link to the electronic survey containing a cover letter (see Appendix D) and the five-part modified CTE tool. Informed consent was implied if the subject completed the tool and an option to refuse to participate was also available to the subject. The last section of the tool asked the characteristics of the subjects and an

additional question regarding barriers to receiving education from PCEs within their facility. In order to maintain anonymity, names and identifying numbers were not included. Entry into a raffle for a $50 Amazon gift card was used as incentive for filling out the survey. Anonymity was maintained in this process as well.

There were two outcomes this scholarly project explored. The first outcome required analyzing and summarizing the perceptions of oncology APPs and RNs regarding the effectiveness of education performed by PCEs to better understand their needs. The second outcome was to identify barriers to education that oncology APPs and RNs face within their clinic or academic facility.

The modified CTE tool was sent out to oncology APPs and RNs three weeks after the committee approved the survey. This lag in time was needed for APSHO to complete the approval process for posting. In the interim, questions were uploaded into a Qualtrics survey along with an additional linked survey for the incentive. This step ensured anonymity. Data collection was to take place over 30 days, but due to unforeseen delays, the survey was posted for only 10 days. Final data analysis was completed mid July.

Project results will be reported to Genentech, Inc. with the intentions of initiating an internal campaign to improve upon the training of PCEs to include the behaviors that APPs and RNs found to be most important in effective education. Data analysis will also assist this researcher in identifying barriers to overcome in order to ensure effective education by PCEs.

Data Analysis

Data analysis was broken down and aligned with sections of the modified CTE tool. Section I results are displayed in table format with a corresponding Likert scale for

each of the five possible answers. Simple frequencies and percentages for each answer are noted and a summary paragraph of the results is included in the analysis.

Section II asked subjects to list the five most important behaviors. Each of the five behaviors listed are documented in a table by the raw number of responses. This section also asked subjects to rank the five behaviors in order of importance. An additional table totaling the number of responses by ranking is included. In addition to the two tables for Section II, a paragraph summarizing the most common responses and rankings was included.

Section III requested subjects to manually write in behaviors that they believed were important, but were not included in the 18 clinical teaching behaviors listed in Section I. These responses were reviewed and organized into three categories (clinical expertise, consideration for the learner, and teaching competency). If written responses did not align with one of the three categories, this researcher planned to create additional categories as needed with results noted in paragraph form.

Lastly, Section IV asked subjects' characteristic questions and an additional question regarding perceived barriers to receiving education from PCEs within their clinic or facility. Section IV results were broken down into two sections addressing the characteristics of subjects in paragraph form and barriers to receiving education in paragraph form. Barriers were reviewed for themes and categories.

Institutional Review Board and/or Ethical Issues

Approval was obtained from Bradley University's Committee on the Use of Human Subjects in Research (CUHSR) (see Appendix E). This scholarly project was found to be exempt from full review under Category 2 as the implementation of this

project involved an anonymous survey with no way to identify the human subjects who responded to questions (Bradley University, 2018). Due to project deviation, an addendum was made to the CUHSR application stating the informed consent and survey link would be given to 22 national PCEs to disseminate to hematology and oncology acquaintances and their local Oncology Nursing Society (ONS) Chapter Presidents for approval and dissemination. As mentioned in the Project Plan, Informed consent was implied if the subject completed the tool and an option to refuse to participate was also available to the subject.

Organizational Assessment and Cost Effectiveness Analysis

Organizational Assessment

The leadership team at Genentech advocates for clinical education, and they employ PCEs throughout the nation to support their hematology and oncology products through educating clinical oncology APPs and RNs. The ability to improve upon this education continues to be an objective for the management team of the PCEs. The results of this project can help improve the effectiveness of PCE education by focusing on the clinical teaching behaviors that oncology APPs and RNs in the clinic find important and necessary.

Creating a curriculum and implementing effective teaching behaviors across franchises within Genentech can be a barrier. Getting buy-in from all franchise leaders can be a challenge, as all franchises function differently throughout the company. Getting the hematology franchise leaders aligned with implementing change will be the first step in encouraging company-wide change.

Interprofessional collaboration is essential for this scholarly project to be successful. Illingworth and Chelvanayagam (2017) noted, "Interprofessional education 'occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (p. 813). The target population spans across several healthcare professions, and PCEs employed by Genentech represent the same diverse group of HCPs.

Cost Factors

The cost for this scholarly project was relatively low. Personnel and non-personnel costs totaled $50.00 (See Appendix F) due to an Amazon Gift Card raffle to incentivize respondents for participation. The resource that was utilized the most was man-hours to populate the Qualtric Survey, collect data, and evaluate the results. Additional man-hours will be required to support the personnel in the Commercial Training and Development Team at Genentech. Implementation of the project will be funded through Genentech, depending on company-wide adoption.

Results

Analysis of Implementation Process

The implementation process proved to be more challenging than initially expected. The initial steps for survey approval from CUHSR and from APSHO took roughly four weeks longer than anticipated. Once approval was received from both parties, this researcher learned the importance of details when requesting publishing a survey. The initial intent was to disseminate the survey to all 1000+ members of APSHO, but when the approval went through, it was to post the survey on the "Members Forum" board on the APSHO website. This organization is fairly new and the "Members Forum"

board is not as active as other organizations. Due to time constraints, an addendum was made to the CUHSR application stating the informed consent and survey link would be given to 22 national PCEs to disseminate to hematology and oncology acquaintances and their local Oncology Nursing Society (ONS) Chapter Presidents for approval and dissemination. The goal was to allow for a larger sample size yet maintain the appropriate target audience. The survey was posted for 10 days.

Analysis of Project Outcome Data

Characteristics of subjects. The 30 participants in this survey study included 10 (33%) nurse practitioners, 3 (10%) clinical nurse specialists, 6 (20%) clinical nurse educators, 2 (7%) pharmacists, 5 (17%) physician assistants, 3 (10%) registered nurses, and 1 (3%) "MSL" or "Medical Science Liaison" who did not list their degree. This totals 27 (90%) APPs and 3 (10%) RNs (it is usually a requirement for MSLs to have advanced practice degrees). Of these 30 HCPs, 8 (27%) are or have been employed at one time as a PCE, while 22 (73%) have not worked in the pharmaceutical industry. The average number of years of clinical experience amongst the subjects was 12.5 years with a range of 1 year to 30 years. The subjects' highest level of degrees obtained was 6 (20%) doctoral, 20 (67%) master's, 3 (10%) bachelor's, 0 associate's, and 1 (3%) diploma.

Section I results. Section I of the survey asked subjects to rate the importance of 18 clinical teaching behaviors on a 5 point Likert scale from "of most importance" to " of no importance." The results are presented (see Table 1) as simple frequencies and percentages for the possible responses with 27 (90%) respondents answering all 18 clinical teaching behavior questions and 3 (10%) answering 17 out of 18 clinical teaching behaviors questions. The behaviors "of most importance" were (a) "is well prepared for

clinical in-services or clinical conferences," (b) "shows genuine interest in patients and their care," and (c) "shows interest in making a contribution toward the improvement of healthcare for patients." The behaviors "of least importance" were: (a) "displays a sense of humor;" (b) "relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice;" and (c) "refers to additional resources persons and material."

Table 1

The Importance of 18 Clinical Teaching Behaviors

Question	of no importance n (%)	slightly important n (%)	Important n (%)	very important n (%)	of most importance n (%)	Total n
1. Shows recognition of the individuality of the Advanced Practice Provider (APP) or Registered Nurse (RN)	0 (0%)	2 (7%)	12 (40%)	13 (43%)	3 (10%)	30
2. Demonstrates skills, attitudes, and values that are to be developed by the APP or RN	0 (0%)	1 (3%)	7 (24%)	16 (55%)	5 (17%)	29
3. Gives constructive evaluation with out embarrassing the APP or RN	1 (3%)	1 (3%)	4 (13%)	16 (54%)	8 (27%)	30
4. Relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice	1 (3%)	2 (7%)	6 (20%)	14 (47%)	7 (23%)	30
5. Demonstrates flexibility in performing clinical nursing, clinical pharmacy or clinical practice functions	0 (0%)	2 (7%)	7 (23%)	13 (43%)	8 (27%)	30
6. Is well prepared for in-services or clinical conferences	0 (0%)	0 (0%)	2 (7%)	7 (23%)	21 (70%)	30
7. Admits limitations of function in clinical situations honestly	0 (0%)	0 (0%)	8 (27%)	9 (30%)	13 (43%)	30
8. Conference presentations include worthwhile and informative material not in Prescribing Information	1 (3%)	1 (3%)	3 (10%)	14 (47%)	11 (37%)	30
9. Makes APP or RN aware of their professional responsibilities	0 (0%)	2 (7%)	13 (43%)	11 (37%)	4 (13%)	30
10. Allows expression of diverse points of view	0 (0%)	2 (7%)	11 (37%)	12 (40%)	5 (17%)	30
11. Organizes clinical learning experiences in a meaningful manner for the APP or RN	0 (0%)	0 (0%)	4 (13%)	14 (47%)	12 (40%)	30
12. Refers to additional resource persons and material	0 (0%)	3 (10%)	10 (33%)	12 (40%)	5 (17%)	30
13. Demonstrates confidence in the APP or RN	0 (0%)	1 (3%)	5 (17%)	14 (48%)	9 (31%)	29

14. Shows interest in making a contribution toward the improvement of healthcare for patients	0 (0%)	1 (3%)	3 (10%)	11 (37%)	15 (50%)	30
15. Displays a sense of humor	1 (3%)	7 (23%)	12 (40%)	7 (23%)	3 (10%)	30
16. Demonstrates technical skill in APP or RN activities where required	0 (0%)	2 (7%)	4 (14%)	14 (48%)	9 (31%)	29
17. Shows genuine interest in patients and their care	0 (0%)	0 (0%)	1 (3%)	9 (30%)	20 (67%)	30
18. Is objective and fair in assessing APPs or RNs understanding of content	0 (0%)	0 (0%)	3 (10%)	17 (57%)	10 (33%)	30

Section II results. Section II of the survey asked the subjects to choose five behaviors from the list of 18 provided in Section I that they considered to be the most important behaviors for a PCE to exhibit. Raw numbers of responses are listed in Table 2. Twenty-one respondents selected "is well prepared for in-services or clinical conferences" as important. Twenty respondents selected "shows genuine interest in patients and their care as important," and 16 respondents chose both "organizes clinical learning experiences in a meaningful manner for the APP or RN" and "conference presentations include worthwhile and informative material not in the Prescribing Information." All three categories of behaviors were represented in the Top Five List of Behaviors.

Table 2

Top 5 Behaviors Considered to be the Most Important

Questions	Responses (n)
1. Shows recognition of the individuality of the Advanced Practice Provider (APP) or Registered Nurse (RN)	3
2. Demonstrates skills, attitudes, and values that are to be developed by the APP or RN	4
3. Gives constructive evaluation with out embarrassing the APP or RN	4
4. Relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice	5
5. Demonstrates flexibility in performing clinical nursing, clinical pharmacy or clinical practice functions	4

6. Is well prepared for in-services or clinical conferences	21
7. Admits limitations of function in clinical situations honestly	11
8. Conference presentations include worthwhile and informative material not in Prescribing Information	16
9. Makes APP or RN aware of their professional responsibilities	8
10. Allows expression of diverse points of view	1
11. Organizes clinical learning experiences in a meaningful manner for the APP or RN	16
12. Refers to additional resource persons and material	3
13. Demonstrates confidence in the APP or RN	5
14. Shows interest in making a contribution toward the improvement of healthcare for patients	14
15. Displays a sense of humor	2
16. Demonstrates technical skill in APP or RN activities where required	8
17. Shows genuine interest in patients and their care	20
18. Is objective and fair in assessing APPs or RNs understanding of content	5

In Section II, subjects were also asked to rank the five selected behaviors in order of importance from "the most important" to the "fifth most important." The raw numbers are displayed (see Table 3) and the most important behaviors identified aligned with section I results (a) "is well prepared for clinical in-services or clinical conferences," and (b) "shows genuine interest in patients and their care."

Table 3

Behaviors Listed in Order of Most Importance

Question	the most important (n)	2nd most important (n)	3rd most important (n)	4th most important (n)	5th most important (n)
1. Shows recognition of the individuality of the Advanced Practice Provider (APP) or Registered Nurse (RN)	2	2	0	0	0
2. Demonstrates skills, attitudes, and values that are to be developed by the APP or RN	2	2	1	0	0
3. Gives constructive evaluation with out embarrassing the APP or RN	0	2	1	1	0
4. Relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice	1	0	3	1	2

5. Demonstrates flexibility in performing clinical nursing, clinical pharmacy or clinical practice functions	0	1	2	3	0
6. Is well prepared for in-services or clinical conferences	5	2	4	2	6
7. Admits limitations of function in clinical situations honestly	3	2	1	4	1
8. Conference presentations include worthwhile and informative material not in Prescribing Information	2	6	2	1	4
9. Makes APP or RN aware of their professional responsibilities	1	1	1	2	3
10. Allows expression of diverse points of view	0	0	0	1	0
11. Organizes clinical learning experiences in a meaningful manner for the APP or RN	4	1	7	0	2
12. Refers to additional resource persons and material	0	0	0	3	1
13. Demonstrates confidence in the APP or RN	0	1	1	0	3
14. Shows interest in making a contribution toward the improvement of healthcare for patients	3	3	4	2	2
15. Displays a sense of humor	0	0	1	0	1
16. Demonstrates technical skill in APP or RN activities where required	1	2	0	1	2
17. Shows genuine interest in patients and their care	5	5	1	6	0
18. Is objective and fair in assessing APPs or RNs understanding of content	1	0	1	3	2

Section III results. Section III asked oncology APPs and RNs to list any additional clinical teaching behaviors that they felt were important for the PCE, but were not included in the 18 teaching behaviors listed in Section I. A free text box field with no character limit was provided for answers. Of the 30 respondents, 11 HCPs offered a total of 18 additional behaviors ranging from 1 to 5 responses per person. The 18 additional behaviors fit into the three categories (clinical expertise, consideration for the learner, and teaching competency) identified in the study and they were reviewed with this researcher's project mentor for accuracy. Responses that fit into the "clinical expertise"

category include (a) “ability to relate to the clinical work and have clinical experience,” (b) “displays critical thinking skills,” (c) “is self directed in developing professionally by means of continuing education,” (d) “recognizes and promotes importance of teamwork if the healthcare providers,” and (e) “exhibits current licensure and credentials with APP board certifications to further affirm qualifications.”

There were six responses that fell into the category of “consideration for the learner”. Five of the six responses stated the PCE should take the oncology APPs’ and RNs’ “time” into consideration. In summary, the PCE should have an understanding of daily workflow and respect the time of APPs and RNs and be flexible to accommodate the learners’ schedules. The additional response that aligned with this category was a recommendation for the PCE to “seek to understand the barriers to care for both APPs and RNs such as cost, religion, and ethnic beliefs.”

The last seven additional teaching behaviors were aligned with the “teaching competency” category. These include (a) “be sincere without a sales pitch,” (b) “be fair and balanced with the negatives and positives for the medication,” (c) “stay on topic,” (d) “have patience and the ability to respond well to different educational styles and personalities,” (e) “being able to understand how the APP’s and RN’s prior experience affects their ability to comprehend an educational concept,” (f) “being able to adapt to different learning styles,” and (g) “assess learning needs both pre and during in service then adapt presentation as needed.”

Barriers to receiving education. In the demographics section of the survey, participants were asked if they face any barriers to receiving education from PCEs in their facility. Twenty respondents submitted an answer. Three (15%) reported no barriers

and 14 of the remaining 17 (82%) reported "time" as a barrier, while 7 (41%) of the 17 reported policies restricting access as a barrier with overlapping time and policies as single responses.

Discussion

Findings

Findings in this project, suggest oncology APPs and RNs felt strongly that the three most important clinical teaching behaviors a PCE should display are "is well prepared for in-services or clinical conferences," "shows genuine interest in patients and their care," and "shows interest in making a contribution toward the improvement of healthcare for patients." These three behaviors were listed in both Sections I and II of the survey, and they fall into two of the three categories of teaching behaviors, which include "teaching competency" and "clinical expertise." The third category, "consideration for the learner," was not represented in the top clinical behaviors selected in Section I, but when subjects were asked to list additional behaviors that they thought were important that were not in Section I, an overwhelming number of oncology APPs and RNs stated, "consideration for the clinicians time" as an important behavior. Fong and McCauley's (1993) survey did not include "consideration for the clinician's time" as a behavior, probably because the initial CTE tool was designed for students in a scheduled class.

Behaviors that were considered "least important" included "displays a sense of humor," relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice," and refers to additional resource persons and material." One reason for this may be the lack of time during the clinical day. HCPs want information in a clear, succinct manner and may not have time for jokes and practice theories. They may lack the time to pursue additional resources as well.

When evaluating the biggest barriers to receiving education from PCEs, the majority of the respondents reported "time" as an obstacle. The busy workflow of the clinic and the length of presentations from PCEs create challenges for clinicians, which further supports the respondents who recommended consideration for the clinician's time as an important clinical teaching behavior for PCEs.

Gestalt theorists believe that learning happens best when real life experiences are utilized in teaching (David, 2015). The most effective clinical teaching behaviors identified in Section I, II, and III of this project, fell predominantly into the categories of "clinical expertise" and "teaching competency." Oncology APPs and RNs believe it is important for the PCE to have an understanding of the clinic and workflow to be an effective educator. Therefore, in theory, the clinical knowledge and experience that PCEs have in the clinic will enhance learning over someone who does not have a clinical background.

Limitations

The findings of this project cannot be compared to existing studies as exploration of the role of the PCE and the topic of effective PCE education could not be found in the current literature. There are several peer-reviewed studies that exist looking at the perceptions of nursing students regarding the effectiveness of nursing CEs; therefore, extrapolation of data is required. Two in particular (Collier, 2017; Gillespie, 2002) referenced Fong and McCauley's (1993) CTE tool. The results of these studies supported the importance of the three competency categories that make up the CTE tool. Citing previous studies forms the basis for a literature review and lays a foundation for understanding the research problem; therefore the paucity of literature is a limitation to

this study. As mentioned in the Needs Assessment, the role of the PCE is newer than that of the sales representative and this may be the cause for the lack of research.

An additional limitation to this study is the small sample. While sample sizes are less relevant in qualitative studies, this particular study has multiple variables that would benefit from a larger sample size: Oncology clinics vary in size, level of care, and needs; there are multiple HCPs included in the qualifying participants; and all of the United States was included creating a variable in geographic needs. More participants may have been accrued if the length of time from survey implementation to data retrieval was extended.

Another limitation to this study is tool reliability and validity. Fong and McCauley's (1993) original CTE tool was tested and found to be both valid and reliable. The modified CTE tool utilized in this project was not tested for reliability and validity. This project would have more significance if the modified CTE tool were tested under the same studies the original CTE tool underwent.

Implications

Pharmaceutical industry. Pharmaceutical industry leaders adopted the role of the PCE to educate clinic HCPs because they saw a value in peer-to-peer education. This perceived value is supported by the results of this survey that showed "clinical expertise" as a category most important for an effective PCE to exhibit. Coupling the behaviors of clinicians with strong teaching competencies and consideration for the learner, a pharmaceutical company, such as Genentech, Inc, can develop the required training necessary to guide effective PCEs.

Program develop is just one small step. There is stigma attached to the pharmaceutical industry caused by ethical concerns and conflicts of interests. This stigma is compounded by a lack of standards or guidelines for the role of the PCE. Utilization of the results of this project in addition to knowledge from existing literature supporting the benefits of industry education can help to develop competencies and guidelines for hiring and training clinicians. Partnering with accrediting agencies and displaying the desired objectives mentioned by Allen et al. (2017), the pharmaceutical industry might be able to overcome the stigma when partnering with clinics to help educate HCPs.

Lastly, leadership within the pharmaceutical industry should recognize the challenges and hurdles that HCPs face when crossing over from the clinic to industry. In their study, Manning and Neville (2009) found HCPs who transitioned into the role of a CE faced challenges around lack of understanding and proper preparation due to role ambiguity. This is no different than a HCP transitioning into the role of the PCE. Supporting and mentoring staff could assist with this transition to industry.

APP and RNs in the clinic. "Shows genuine interest in patients and their care" and "shows interest in making a contribution toward the improvement of healthcare for patients" were two of the top three effective teaching behaviors identified by the APPs and RNs who responded to the survey. These behaviors are at the very core of the nursing profession, but clearly they are not enough to be an effective educator. PCEs need to display teaching competencies and consideration for the learner. Education between PCEs and HCPs in the clinic happen everyday, but with the changing healthcare environment and the number of new drug approvals, lack of time is becoming a barrier to executing education and this needs to be taken into consideration. As Marvill (2018)

pointed out in an editorial piece, getting information to oncology nurses has important clinical practice implications such as side effect management and early intervention implementation. Interestingly enough, Marvill goes on to say the speakers giving program presentations are "usually oncology nurses themselves" and are able to adjust to the needs of the fellow nurses in the audience. This peer-to-peer education supports Gestalt theorists who believe individuals pay attention to certain behaviors and features of an experience and ignore other behaviors and features. Educational background, experiences, and attitudes influence what a person listens to and ignores. Per this theory, when the teacher has similar experiences and backgrounds of the student, there is a better chance for learning to occur.

Account level policy change. Aside from lack of time, respondents reported institution policies as the second biggest barrier to receiving education from PCEs. Concerns around conflicts of interest and company biases are usually the cause of these policies. Understanding the primary goal and role of the PCE can help differentiate the PCE from that of the sales representative. By providing effective, efficient, and valuable education, APP and RN leaders within the clinic may advocate for policy change within an institution. Showing this value begins with meeting the needs of the clinicians and adhering to the feedback from this survey.

Conclusion

Value of The Project

Oncology APPs and RNs in the role of the PCE have a vested interest in improving the healthcare outcomes of patients, as do their oncology APP and RN colleagues in the clinic. Whether it is agreed upon or not, this researcher believes the

pharmaceutical industry is a component of the healthcare continuum and collaboration amongst the HCPs in the role of the PCE and the HCPs in the clinic is essential to improving healthcare outcomes.

DNP Essentials

The *DNP Essentials* can be considered a competency roadmap that the nursing scholar must follow in order to have an impact on healthcare (Moran, Burson, & Conrad, 2017). The process of designing and developing the proposal of this project, achieving institutional review board (IRB) status, implementing this scholarly project, and analyzing the data for dissemination to improve healthcare outcomes is evidence of *DNP Essentials III*: *Clinical Scholarship and Analytical Methods for Evidence-Based Practice* (AACN, 2006).

Evidence for *DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcome* can be found throughout the theme of this project. HCP subjects were diverse, ranging from nursing backgrounds to PAs and PharmDs. The goal of employing effective communication and collaborative skills amongst HCPs is the heart of this project and, in and of itself, a competency aligned with this *DNP Essential*. Despite the lack of evidence that showed IPE had a beneficial effect on health outcomes (Illingworth and Chelvanayagam, 2017), comprehension of this *DNP Essential* is a necessity when becoming a leader of an interprofessional team within the pharmaceutical industry.

Plan for Dissemination

Sharing scholarly projects is necessary to make a change in healthcare practice and policy. Moran, Burson, and Conrad (2017) stated the impact of a scholarly project is

measured through dissemination of work to publications, stakeholders, professional organizations, and conferences. The plan for dissemination of this project will include an oral defense presentation at Bradley University on July 30th, 2018; followed by submission into the Doctors of Nursing Practice e-Repository once the final project is approved. In addition to these required processes, this project will be submitted to a peer-reviewed journal and developed into a proposal for senior leadership within Genentech to improve upon the current educational curriculum for PCEs.

Submission for publication to the Journal of the Advanced Practitioner in Oncology (JADPRO) will take place once the final project is approved. JADPRO's mission is to "improve the quality of care for patents with cancer, support critical issues in advanced practice in oncology, and recognize the expanding contributions of advanced practitioners in oncology" (Harborside Press, 2018). The end goals of this publication are to increase awareness of the role of the PCE to highlight the benefits of a collaborative relationship amongst oncology APPs and RNs in clinic with those in the role of the PCE, and to serve as a resource for other pharmaceutical companies outside of Genentech that can benefit from the results.

Dissemination of project results to Genentech will occur in the fall. As aligned with this researcher's initial plan, the project and results will be used to develop a PCE curriculum that is centered around meeting clinician needs such as limiting presentation lengths, focusing on maintaining clinical skills, and strengthening teaching competencies. In addition to this initial plan, the process of disseminating the modified CTE survey to HCPs for this project evoked the idea of doing test-retest reliability and content/construct validity studies on the modified CTE. If the modified CTE tool was reliable and valid,

Genentech and other pharmaceutical companies may distribute it after individual PCE presentations and in-services to gauge effectiveness.

Attainment of Personal and Professional Goals

It is disheartening to see the divide between HCPs in the pharmaceutical industry and HCPs in the clinic. Regardless of the reason why, witnessing this lack of collaboration and transfer of knowledge from both perspectives and understanding the impact it has on patient and population healthcare outcomes is a driver to act upon making a change. Completing this Doctor of Nursing Practice (DNP) in Leadership Program and enduring the rigors of this project has solidified the skillset and competencies needed to make a difference in the healthcare continuum. By attaining competency in the *DNP Essentials I-VIII*, this researcher is now confident in achieving the ultimate goal of bridging the gap between the clinic and the pharmaceutical industry to improve patient and population health outcomes.

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Appendix A

Clinical Teaching Effectiveness Tool

Section I

Directions: Please rate the importance of each of the following 25 clinical teaching behaviors according to the following scale:

A= of most importance
B= very important
C= important
D= slightly important
E= of no importance

_____1. Shows recognition of the individuality of the student
_____2. Constructs clinical assignments related to the course objectives
_____3. Demonstrates skills, attitudes, and values that are to be developed by the student
_____4. Gives constructive evaluation without embarrassing the APP or RN
_____5. Relates underlying theory to clinical nursing situation
_____6. Demonstrates flexibility in performing nursing functions
_____7. Respects the confidentiality of student relationships
_____8. Is well prepared for seminars or clinical conferences
_____9. Admits limitations of function in clinical situations honestly
_____10. Credits students for progress and improvement
_____11. Stresses or reviews important material from theory classes
_____12. Utilizes other resources to augment nursing in planning care
_____13. Helps in new situations without taking over
_____14. Conferences include worthwhile and informative material not in text
_____15. Makes students aware of their professional responsibilities
_____16. Allows expression of diverse points of view
_____17. Organizes clinical learning experiences in a meaningful manner for the student
_____18. Refers students to additional resource persons and material
_____19. Demonstrates confidence in the student
_____20. Offers student opportunity to practice before evaluation
_____21. Shows interest in making a contribution toward the improvement of nursing
_____22. Displays a sense of humor
_____23. Demonstrates technical skill in nursing activities where required
_____24. Shows genuine interest in patients and their care
_____25. Is objective and fair in the evaluation of the student

Section II

Please choose the five teaching behaviors from Section I that you consider to be most important for a clinical teacher to exhibit. Please write the item numbers on the five lines below.

Item numbers of the five most important behaviors

_____ _____ _____ _____ _____

Next, please write the numbers of the items chosen above in the spaces below ranking them according to your perception of their importance.

Item numbers

_____ the most important
_____ 2nd most important
_____3rd most important
_____4th most important
_____5th most important

Section III

Please list any other clinical teaching behaviors that you feel are important but where not listed in Section I. You may write as many as you wish. Please write clearly.

1.
2.
3.
4.
5.

Section IV

Directions: For each multiple-choice question, please circle the letter corresponding to the ONE response that applies to you. For each fill-in-the-blank question, please write your response in the blank provided.

1. Are you currently or have you ever been employed as a nursing clinical teacher for a school of nursing?

   a) no
   b) yes

2. Please choose the ONE response that most clearly describes your present position in nursing

   a) Staff nurse
   b) Shift supervisor of staff nurses for one unit
   c) 24 hour responsibility of a unit
   d) Shit supervisor for more than one unit
   e) Assistant director of nursing
   f) Director of nursing
   g) Other:_____(please specify)

3. Please choose the ONE response that describes your education at the time of your original licensure in nursing
   a) LPN
   b) ADN
   c) BSN
   d) Diploma

4. Please choose the one response that describes your present educational level in nursing
   a) ADN
   b) BSN
   c) MSN
   d) Doctorate in nursing
   a) Diploma

5. Referring to item number 4, how many years have you practiced nursing at this educational level?
   _____ years

Appendix B

Modified Clinical Teaching Effectiveness Tool

Section I

Directions: Please rate the importance of each of the following clinical teaching behaviors according to the following scale:

A= of most importance
B= very important
C= important
D= slightly important
E= of no importance

_____1. Shows recognition of the individuality of the Advanced Practice Provider (APP) or Registered Nurse (RN)
_____2. Demonstrates skills, attitudes, and values that are to be developed by the APP or RN
_____3. Gives constructive evaluation with out embarrassing the APP or RN
_____4. Relates underlying theory to clinical nursing, clinical pharmacy, or clinical practice
_____5. Demonstrates flexibility in performing clinical nursing, clinical pharmacy or clinical practice functions
_____6. Is well prepared for in-services or clinical conferences
_____7. Admits limitations of function in clinical situations honestly
_____8. Conference presentations include worthwhile and informative material not in Prescribing Information
_____9. Makes APP or RN aware of their professional responsibilities
_____10. Allows expression of diverse points of view
_____11. Organizes clinical learning experiences in a meaningful manner for the APP or RN
_____12. Refers to additional resource persons and material
_____13. Demonstrates confidence in the APP or RN
_____14. Shows interest in making a contribution toward the improvement of healthcare for patients
_____15. Displays a sense of humor
_____16. Demonstrates technical skill in APP or RN activities where required
_____17. Shows genuine interest in patients and their care
_____18. Is objective and fair in assessing APPs or RNs understanding of content

Section II

Please choose the five teaching behaviors from Section I that you consider to be most important for a Pharmaceutical Clinical Educator (PCE) to exhibit. Please write the item numbers on the five lines below.

Item numbers of the five most important behaviors

_____ _____ _____ _____ _____

Next, please write the numbers of the items chosen above in the spaces below ranking them according to your perception of their importance.

Item numbers

_____ the most important
_____ 2nd most important
_____3rd most important
_____4th most important
_____5th most important

Section III

Please list any other clinical teaching behaviors that you feel are important, but where not listed in Section I. You may write as many as you wish. Please write clearly.

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Section IV

Directions: For each multiple-choice question, please circle the letter corresponding to the ONE response that applies to you. For each fill-in-the-blank question, please write your response in the blank provided.

1. Are you currently or have you ever been employed as a Pharmaceutical Clinical Educator (PCE)?

   a) YES
   b) NO

2. Please choose the ONE response that most clearly describes your current position

   a) Advanced Practice Nurse
   b) Clinical Nurse Specialist
   c) Clinical Nurse Educator
   d) Physician Assistant
   e) Pharmacist
   f) Registered Nurse
   g) Other:_____

3. Referring to question 2, how many years have you practiced in this position?
   _____

4. Please choose the ONE response that describes your highest level of education
   a) Doctorate
   b) Master's Degree
   c) Bachelor's Degree
   d) Associate's Degree
   e) Diploma

5. Do you face any barriers when it comes to receiving education from Pharmaceutical Clinical Educators in your facility (e.g. policies, time)? If so, please list below:

_____
_____
_____
_____

Appendix C

Permission to Use and Modify Clinical Teaching Effectiveness

On Fri, Feb 16, 2018 at 6:39 PM, Carolyn Fong <carolyn.fong@csueastbay.edu> wrote:

> Yes, I give you permission to use the "Clinical Teaching Effectiveness" tool. Minor modications are fine. Pls send me an abstract of your findings. THX!
>
> On Fri, Feb 16, 2018 at 12:50 PM, Laurie Farrell <lfarrell@mail.bradley.edu> wrote:
>
> > Hi Dr. Fong,
> >
> > I hope this email finds you well. My name is Laurie Farrell and I am a DNP student at Bradley University. I am doing my scholarly project on Pharmaceutical Clinical Educators (PCEs). I would like to research healthcare providers' perceptions of the education that PCEs provide to clinicians. I believe your tool entitled "Clinical Teaching Effectiveness" can help me explore these perceptions. I would like to request permission to use your tool and to make minor modifications to the tool to address the needs of my project.
> >
> > Thank you for your consideration.
> >
> > Sincerely,
> >
> > Laurie A. Farrell, ARNP
>
> --
> Warm Regards,
>
> Carolyn M. Fong, RN, PhD
> Professor
> Department of NURS and HSC

Appendix D

Cover Letter for Survey

Date xx, 2018

Dear Healthcare Provider,

I am a graduate student at Bradley University. I am conducting a study concerning the perceptions of advance practice providers (APPs) and registered nurses (RNs) regarding the effectiveness of education that pharmaceutical clinical educators (PCEs) provide. This is the topic of my scholarly project, which is one of the components required to complete my Doctorate of Nursing in Leadership.

Understanding the perceptions of APPs and RNs regarding the clinical teaching effectiveness of the PCE will aid in increasing awareness of the educational benefits that can increase interprofessional collaboration, advance healthcare practice, and most importantly, improve patient and population health outcomes. The results of this study will serve as a starting point for generating an internal campaign to improve upon the training of PCEs to include the behaviors that APPs and RNs identify as being most important in effective education. It will also identify barriers that must be overcome to improve effective education by PCEs.

Please take approximately 15 minutes to complete the attached survey. All responses are confidential and anonymous. Informed consent in this study is implied if the questionnaire is completed and submitted. You can enter into a sweepstake for a $50 Amazon gift card upon completion and submission of survey. Anonymity will be maintained.

You can choose not to participate in this study by not answering or submitting the questionnaire, but I encourage you to partake in this study to help address the educational needs of APPs and RNs.

Thank you in advance for your time and participation.

Sincerely,

Laurie A. Farrell, MSN, APN, FNP-c

Appendix E

Bradley University CUHSR Approval

May 29

Dear Investigators:

Your proposed study (CUHSR 20e-18) *Pharmaceutical clinical educator effectiveness: Perceptions of oncology Advanced Practice providers and Registered Nurses* has been reviewed and was found to be exempt from full review under Category 2.

Your vita and ethics certificates are on file.

Be aware that future changes to the protocols must first be approved by the Committee on the Use of Human Subjects in Research (CUHSR) prior to implementation and that substantial changes may result in the need for further review.

While no untoward effects are anticipated, should they arise, please report any untoward effects to CUHSR promptly (within 3 days).

As this study was reviewed as exempt, no further reporting is required unless you change the protocol or personnel involved.

This email will serve as notice that your study has been reviewed unless a more formal letter is needed. Please let me know, and I will provide the letter.

Ross L. Fink, Ph.D.
Chairperson, CUHSR

Appendix F

Budget Table

Budget Worksheet (Direct Expenses)				
Item	**Quantity**	**Cost**	**Subtotal**	**Total**
Personnel				
Self	1	$0.00	$0.00	$0.00
Volunteer	1	$0.00	$0.00	$0.00
Non-personnel				
MacBook software	1	$0	$0	$0
Qualtrics	1	$0	$0	$0
Membership List from APSHO	1	$0	$0	$0
Incentive Amazon Gift Card (pending approval)	1	$50	$50	$50
TOTAL				$50
Personal out-of-pocket expense	1			$50