Research Article

The Process of Oncology Nurse Practitioner Patient Navigation: Triage an Essential Process

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Abstract
One of the most daunting challenges faced in the health care delivery system is the complexity of cancer care, and the process of care coordination, a subcomponent of patient navigation. A study was undertaken to identify a central navigation process utilized by nurse practitioners practicing oncology. The data in this article is a component of a larger study entitled: The Process of Oncology Nurse Practitioner Patient Navigation: A Grounded Theory Approach. Utilizing a grounded theory approach N = 20 oncology nurse practitioners (ONP) were recruited. To be eligible for the study the ONP had to have a: 1) license to practice in their respective state; 2) certification to practice as an oncology nurse; 3) minimum of 5 years full time experience in oncology nursing; and 4) English speaking. The participants were recruited by: 1) word of mouth networking with peers: 2) Soliciting volunteers through public announcements at professional nursing conferences; 3) Contacting authors of oncology NP navigation articles or convention pamphlets via telephone or e-mail; 4) Posting information soliciting oncology NP volunteers on blogs or websites of professional organizations with organizational director approval; and, 5) Recruiting by snowball sampling. Telephone interviews were conducted utilizing an open-ended questionnaire. Data analysis and coding revealed the central navigation processes. The triage process was carried out in a variety of unique settings, and utilized in some instances within navigation subsystems. Key triage paths were identified along the cancer continuum; documenting the need for ONP navigators to strategically place these systems in areas along the cancer continuum, to expedite timely delivery of patient care. Literature search revealed that cancer specific triage tools are lacking. Implications for research and practice include the development of these tools for cancer care. Of critical importance is the need to identify service gaps in cancer care, and strategically place triage systems, to offset these service gaps. Practical application of the research findings in relationship to current literature is integrated for discussion.

One of the most daunting challenges faced in the health care delivery system is the complexity of cancer care, and the process of care-coordination, a subcomponent of patient navigation (PN). The overall demand for oncology services is expected to increase by 48% by 2020, while the supply of oncologists will increase by only 14% [1]. These statistics translate into the necessity of a multidisciplinary coordinated timely approach to address the needs of each patient to receive quality care throughout the cancer continuum [1]. The healthcare system according to the IOM was determined to be in crises due to this growing demand for cancer care, and concomitant shrinking workforce, which has resulted in the fragmentation of delivery of patient services. Patient navigation has been determined to be a novel approach to cancer care the goal of which is to offset these fragmented services [2]. It is defined as "a professional RN with oncology-specific clinical knowledge who offers individualized assistance to patients, families, and caregivers to help overcome healthcare system barriers. Using the nursing process, an ONN provides education and resources to facilitate informed decision making and timely access to quality health and psychosocial care throughout all phases of the cancer continuum"[3]. PN is intertwined

closely with its subcomponent care coordination, as the two work hand in hand. According to the Agency for Healthcare Research and Quality (AHRQ) "Care coordination involves deliberately organizing patient care activities, and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care" [4]. Evolving research has shown that oncology nurse practitioner navigators (ONPNs) improve clinical outcomes [5-8]. We know that patient navigation is intertwined with care co-ordination, however little is known as to how the navigation process is achieved [7,9]. Models for quality assurance such as the Donabedian model have stressed the critical linkage between the role that processes have in determining outcomes, and the challenges involved in determining cause and effects of these components [10]. According to the Donabedian the constructs structure, process, and outcomes, can be used to evaluate an organization and each factor is influenced by the previous. In efforts to address the navigation process that ONP's are using in their practice, this author designed a qualitative study utilizing grounded theory to answer the question: What processes do ONP navigators use in caring for cancer patients? This study resulted in the definition of a central navigation process,

the details of which are depicted in the major study [11,12]. Please refer to these manuscripts for full details.

The purpose of this paper is to expound upon the study data which composed the triage process that was intertwined in the central navigation process. It briefly describes the study components, data pertaining to the triage process utilized by the ONP navigators, as well as a discussion for practice and implications for research.

Research Question
A qualitative descriptive study was undertaken to answer the following research question: What processes do ONP navigators use in caring for cancer patients?

Definitions
ONPNs are nurse practitioners with a certification in oncology who utilize navigation processes to care for cancer patients along any aspect of the cancer care continuum [11]. Navigation process is defined as "a series of actions or steps taken in order to achieve a particular end" [13].

Philosophical Orientation
Constructivism was the philosophical orientation for the study. Data and analyses are created from shared experiences and relationships with participants and other sources of data [14]. Researchers using constructivist grounded theory place a priority on the phenomenon of study, as the data and analysis are derived from the shared relationship with the participants. They explore how and why the research participants construct meaning in different instances in different cases. Researchers also explore how, when, and to what depth the experience described is embedded in the greater and often not so obvious relationships with individuals, situations and networks [14]. The actors or navigators have a story to tell that will unfold through the interview process involving this researcher. The goal of the research is to work towards identifying the formation of the social process of navigation that is consistent amongst the participants. The major research methods involve in depth analysis of interviews.

Methods
Procedure for Collection and Treatment of Data
Grounded theory was chosen as the methodology. Grounded theory has been chosen for the method of investigation for this study due to its shared ontological assumptions with symbolic interactionism. In grounded theory the researcher does field work to discover the meaning of the concepts being explored, and how these meanings are impacted within the social setting. The crux of the theory is that groups have shared social interpretations that are not always well defined. The research process has well defined guidelines that link theory with practical application resulting in the discovery of a theoretical explanation [15].

Setting
The settings for the study included telephone interviews in a location convenient to the participant in any area of the United States. For the most part, the researcher conducted the telephone interviews from her private study behind closed doors located in her place of residence in Houston, Texas.

Participants
The study criteria for the participants was formulated keeping in mind that a seasoned oncology nurse with a fair amount of experience who has been professionally recognized through an oncology certification process, would be the best fit. The study participants are recruited from all areas of the United States. To be eligible for the study the nurse practitioners must meet the following criteria: 1) license to practice as an NP in their respective state; 2) certification to practice as an oncology nurse; 3) minimum of 5 years full time experience in oncology nursing; and 4) English speaking. These criteria are used in order to recruit a sample of experienced NPs that would provide a detailed description of the navigation process.

Data collection
The research protocol involved an interview script, and interviews were conducted until theoretical saturation occurred. Theoretical saturation is defined as "the point in analysis when all categories are well developed in terms of properties, dimensions, and variations. Further data gathering and analysis add little new to the conceptualization, though variations can always be discovered" [16].

Data collection procedures
Data collection procedures are generated by the emerging theory and mutually agreed up by student and committee chair. Data collection is in the form of interviews using an initial interview script via the telephone. As the theory emerges the interview questions are revised on an ongoing basis. The researcher utilized memoing during the interview process which is included as part of the data for analysis. All data is to be kept in a locked file.

Sample
The sample consisted of N = 20 nurse practitioners from all areas of the United States.

Data analysis
NVivo software for windows was used for the analysis. Progressive coding techniques which included line by line, open, axial, selective and theoretical coding were used for the analysis; this was followed by the development of categories and processes [14].

Seventy-two concepts emerged after interview number seven. Eleven thematic categories emerged after interview number ten. A core category was identified. The eleven thematic categories were collapsed into seven categories (see Appendix A). These were cross referenced with the literature, and a basic social process was identified [17]. The process was confirmed with the only ONP to navigate to the survivor stage.

Appendix A

Seven Thematic Categories
Comprehensive Assessment
Needs Assessment
Triaging Care to Ensure Timely Access
Navigation Goal
Care Coordination/Pulling in Resources
Key Contacts
Tracking
Tracking along the Continuum
Guiding Survivorship Care

Survivorship Connection
Guiding the Patient to the Next Step
Supportive Care in General
Program Development/Carving a Role
Navigation Role

Findings
The goal of grounded theory is to generate a theory that describes and reflects behavior that is occurring. In all grounded theory, a basic social process (BSP) centers on a core category [18]. The core category has the function of integrating the theory. It stands alone in that is always appears in the phenomenon, and does not process out or end. The core category that emerged in this research was "expediting care along the cancer continuum." This was the goal of the process; failure to expedite care along the cancer continuum would result in treatment delays and patients more or less being "stuck in the system". The navigator expedites care by conducting a barrier-focused assessment, triaging needs, pulling in resources, guiding to the next step, tracking, and program development. The navigator is a center for care not only for the patient but within the facility and community; thus, the navigators role extends beyond the nurse patient relationship. The navigator interfaces in this navigation process within the facility and community. A basic social process in grounded theory centers on the core category [18]. In this study this process was that of connectivity and defined as "staying connected to the patient and to the system". Through interfacing with the patient/facility/community, the navigator was a center for care for all those involved in the patient's cancer journey [11].

The findings in this manuscript are taken from the data categorized under the thematic category of triage which this author presented at the 43rd Annual Oncology Nursing Society Conference abstract session. The findings of the study as relates to triage in ONP navigation is discussed, as well as a discussion of triage tools used in this study and nursing practice. This is followed by a discussion of findings as relates to current literature and practice, practical ideas and steps for integrating triage systems along the cancer continuum, and implications for further research [12].

Triage Specific Findings
Characteristics of ONP Triage in Patient Navigation
In general triage in oncology nurse practitioner patient navigation utilizes the nursing process which consists of assessment, nursing diagnosis, planning, implementation and evaluation [19]. ONP navigation triage can be viewed as an intensification of the nursing process in that it utilizes a comprehensive assessment, which sets priorities for the removal of barriers with the goal of expediting care. It simultaneously involves care coordination, and in doing so pulls in resources in the most expeditious manner to facilitate care [11]. In this study it was mostly used in the diagnostic phase, though some evidence showed that it also occurred throughout the cancer continuum. Tools were used in the triage process. Triage occurred individually, in groups of two or even teams; the overall goal was to provide expedited care [11].

Triage in the Diagnostic Phase
Patient Triage in Diagnostic Phase
The triage process involves prescribing, setting up priorities in order of importance, with the goal of expediting care.

"… I try to focus on that first visit, …to relax and get re-centered…learn about the disease, …and what is really scaring you…and how would you really feel about it if you had to have your breasts removed…Some worksheets help them with –everybody thinks they're going to die…then giving them a timeframe on you're going to see your surgeon first, and then, you're going to see the medical oncologist before your surgery, and this is what's going to happen next for you. teaching them, and then setting up appointments and referrals for them, and maybe additional testing, like going ahead and ordering a breast MRI because of breast issues, there's a history, and it's appropriate to go ahead and get an MRI, and get that going, and that way the process is started and the patient has a schedule, and then as all this starts happening, following up with patient… (#18)

"…getting them seen quickly, getting their treatment well organized…So I was able to get her started with genetic screening so that's sort of done, because she wasn't going to be getting her MRI for a couple of weeks, and she wasn't going to be seeing a surgeon, but a little bit after the MRI. So at least the genetics is started up front. Those results might be back by the time they're making a surgical decision, so it's kind of coordinating that too…so things happen in a good flow… (#10)"

Facility Triage on Initial Contact, Diagnostic
Prescribing, setting up priorities in order of importance, with the goal of expediting care was done within the context of the facility, as barriers were removed that were encountered within the institution that impeded patient care.

Yeah, I think with that initial contact to identify people that maybe don't have any resources, as far as they don't have any family help or they have a very limited help. If they have barriers like they don't drive, or, they're in a financial mess. So at least some of those rise to the top, and they will get more help than someone that is very squared away, and can sort of self-navigate. I think that helps too; to sort of pick and choose the ones that need a little more support, or people that might live in unsupportive care, or have a touch of dementia, so that's helpful to kind of figure out who really needs the help and direct it that way…..(#10).

Well being able to engage with them at pre-diagnosis when there is a suspicion of cancer and getting them through that diagnostic process from the staging work-up and pathology results and all that coordinating…getting them locked into their radiation oncologist, or medical oncologist, or surgeon….once they are engaged with that, I kind of back out and stand in the periphery unless they need me, they kind of have me as needed to help them through the system (#2).

Community Level Triage in the Diagnostic Phase
Prescribing, setting up priorities in order of importance, with the goal of expediting care was done within the context of the community, as barriers were removed that were encountered within the community that impeded patient care. This involve setting priorities for care amongst different institutions, community resources such as higher level provider care, outside resources such as support groups, transportation, insurance companies, medication access, clinical trial access, laboratory send-outs, and/or equipment to name a few.

I have all of the oncologists in the area that I have as my leads…so that if they are seeing patients; their patients…..now some of them are going to be hematology…like DVT…or thrombocytopenia…

those are not on my radar…..some I can immediately knock off… so that in any given day I review in all earnestness 10-20 patients in the morning before I even head to the hospital…because there are two hospitals…and if I review patients…I triage…and see which patients need more help…and this is the hospital I go to…and I prioritize throughout the day (#2).

I think to give you an example today, just trying to—trying to facilitate a specimen to an institution that only does certain testing on certain days and because it was the first time that our institution…we would be sending a marrow to this other facility. There were multiple tests that had to be put in place in order for that - which process…had to retrieve the marrow. We had to get the paperwork from the other facility. We had to go and find out how we were going to process the requisition…then coordinate between the pathology department and the specimen receiving department. There was—there were so many steps involved. So many steps involved. Because our role as a nurse practitioner is - it—I don't want to say all-inclusive and very comprehensive, but for lack of other terms, we are sought out to not only to do direct patient care, but also to help facilitate everything involved in patient care, whether it is coordinating home care… whether it's working with the people who would be able to provide these medications, whether it's working with the insurance…. (#14)

Triage in the Treatment Phase
Patient Triage in the Treatment Phase
Patient Triage in the Treatment Phase was done simultaneously across three contexts of care which included the patient, facility, and community. Some examples during which this occurred were during multidisciplinary rounds, care conferences, during phone calls, and/or in the chemotherapy suite. Prescribing, setting up priorities in order of importance, and intervening in the removal of barriers to care was the goal.

Well, the only thing about the role is you really have to know your patient, know their diagnosis and disease. You have to know the side effects from the treatment and make the decision as to whether or not this is something that again can be evaluated in an hour, watch and wait and see how the child does, or you know, have them again, come in immediately to be seen for attention. (#14)

What all is needed in regards to presenting the patient? Many times neoadjuvant wise it may just be a pre-breast MRI prior to any neoadjuvant, chemo to a post-breast MRI. Sometimes they will have a CT Bone Scan that will show something else that's important, or along the way they ended up needing a CT chest that shows something. So they rely on us quite a bit in regards to what imaging is going to be needed, the radiologist also rely on us in regards to helping communicate to the surgeon sometimes in regards to the localizations that might be needed for when a patient needs a lumpectomy. (#11)

Facility Triage in the Treatment Phase
"….we say this is a newly diagnosed lung cancer…let's do a multidisciplinary clinic for them…so that we can get a very fast treatment plan together for them...and what that includes is that the patient will be presented at the 0730 conference …and the patient will be seen in the office by a round robin of physicians…a short meeting will follow after the patient is seen by the specialists…again to discuss concerns…and everyone is in agreement with what the recommendations are .. and then the patient meets that day with the

treatment plan in place…and that is probably the most expedited way to move through our system. (#2)

So we usually meet for huddle at 7:45, and then at huddle we usually discuss the patients. We have input about the patient. The huddle will usually include the medical oncologist, myself, our social work counselor, and then the infusion nurses. So we go through the patient list for each patient. Then the patient during clinic hours, you usually have two—you have patients come in for treatments, and you have patients that come in to follow up. But usually what I do, I try to, you know, make sure I see the patients that are getting treatment... find out how are they doing with their treatment, and find out if they need any assistance, because I'm also the one responsible for making sure they get their oral medications, for the preauthorization, make sure that they are taking their medications, if they have any side effects. If they do report any side effects I usually take on the responsibility of doing the assessment and the management of that, but I also usually have patients that I see with the medical oncologist on follow up just to make sure we're all on the same page with the treatment plan… where I should be at in the process, either making sure the patients are getting their testing, or if a patient has any questions about what the medical oncologist might had said during the appointment, if they have any questions, sometimes I may take them into teaching session. (#10)

"So we meet weekly to review the patients that are scheduled for chemo for the upcoming week. Some patients for whatever reasons have had reactions in the outpatient setting and need to get their chemo as an inpatient. I kind of check that to make sure that, you know, a nurse is available in the hospital, that they have a bed available, and that the patient gets in when they need to get in there. So I think our weekly meetings where we're communicating, there's a couple of clinic nurses, there's the nurse practitioner, the inpatient center that I work with closely too, and we're able to fine tune, you know, with the fellow…. (#3)

Community Triage in the Treatment Phase
Well I think that it is to get them the services that they need and into the appropriate…we have a lot of patients who come to see us who don't necessarily get their further treatment with us …, because they come from quite a distance, so that if they are having their chemotherapy or radiation therapy they may go closer to home, so we may never see them back again for their surgical issues, so I think that it is getting them situated in services closer to their homes as well. I think that that is important. (#15)

Throughout this whole entire day we are receiving phone calls and answering messages. Our administrative assistant or our secretary who receives the phone calls will either page us or come into the office and give us the messages. So we pretty much answer the calls as they come in Frances, and try to troubleshoot everything and prioritize it whether it is a call for prescriptive refills we do that... if it is a sick call, we triage those calls immediately and decide whether or not those patients need to come into the clinic or go to the emergency department or if the management can be done over the phone and if they need to follow-up in the clinic sometime during that week or return a call within an hour to let us know what the clinical status is of the child.

Well, the only thing about the role is you really have to know your patient, know their diagnosis and disease. You have to know the side

effects from the treatment and make the decision as to whether or not this is something that again can be evaluated in an hour, watch and wait and see how the child does, or you know, have them again, come in immediately to be seen for attention. The other challenging aspect is to try to know the patients and their families. Some of them come in with information whereas others you really have to ask specific questions. If they say that their child is not feeling well, then sometimes I'll ask them well when is the time that they felt well?. Or when did this symptom occur? Is there a reason why you didn't call initially? Those are some of the challenges of trying to assess the urgency of the sick calls or in either case if is not so much a sick call but if a parent calls to ask a question and you have to try to understand well why are they asking the question? (#14)

Survivorship Triage

Survivorship triage though evident was not as pronounced in this study as the phases of diagnosis and treatment, though implied as shown by the excerpts below. At the time of the study the Commission on Cancer (CoC) guidelines were just initiated, and the data reflected that the ONP's were in the process of assisting in the development of survivorship programs. In January 2015 CoC Standard 3.3 mandated that a pilot survivorship care plan process involving 10% of eligible patients be implemented [20]. Distress Screening was mentioned as a triage tool for screening cancer survivors, by the only dedicated survivorship navigator in the study.

Patient Triage in the Survivorship Phase

"I would approach them during their waiting visit after they have first checked in, accompanying them to their blood draws, and their doctor visit, administer vital signs in the waiting room to the doctor's visit, and then afterwards ideally to my office where we give them a written treatment summary to make sure that they fully understand their follow-up. I do a distress screening, very informal at that time to see if they have needs as survivors and to let them know that there could be in the future long term effects, and we are available as far as a resource for them. (#20)

Facility Triage in the Survivorship Phase

In the survivorship we use, Journey Forward. Most of my tracking is done through Excel and me physically going through records and keeping up with the patient. I usually keep up with our inpatient admissions; discharges, for my breast patients. So mostly unfortunately a lot of my records are usually developed by me through Excel. We use EPIC, and we just got BEACON… (#19)

Community Triage in the Survivorship Phase

We are just starting also to interject a little bit into survivorship and treatment summaries. So as patients are kind of through with their active surveillance after GYN cancers, we are working on summarizing their care, and letting their referring GYN or primary care doctor know the plan, or recommend follow up for their patients. You know, sending the patient and the referring doctor a letter... letting them know, you know, your patient is doing well. We're sending her back to you for ongoing care. This is the follow up scheduled we recommend. (#10)

End of Life Triage

Data in this study was limited in regards to end of life triage, as the emphasis of provider care was in the diagnostic and treatment phase. The following quote is an example of an ONP that navigated a patient through end of life care. There is an overlapping of involvement on the patient/facility/community level as the patient was cared for during the patient's last days.

"I felt we did everything that we could in her final days helping the family with the hospice program …you know the husband, she was I guess 50 when she died, but young, not near retirement…you know, he was trying to work …the hospitalization…., the whole thing…interesting, she died like right before the girl graduated from high school… I thought it was successful, even though the patient died, she was well navigated. We helped her with her equipment, her pulmonary, lung drainage kits for the lung metastasis, helped her get what she needed and then when it was all over the husband wanted to get rid of things. I said "just bring them to me and we will take care of all of that" because just he couldn't have it in his heart to throw it away it was stuff that wasn't opened and we have some programs that would be more than happy to take some of those supplies that were intact so… (#18)"

Prescribing, setting priorities with the goal of expediting care is gleaned from the following example of an ONP through her assessment has anticipated end of life care for her patient as the patient declined, and prepared the family for the patient's death.

It kind of happened very quickly, but because that relationship's there you could talk to the family and let them know that, you know, things aren't going very well, and now might be a good time to get the family in, and her liver is failing, and it's hard to treat. Since they have a trusting relationship and you could sort of be with them through hospice and even death; and follow up even after the person dies to make sure the support person is okay, and letting them know about bereavement services and so forth. So it's through that whole continuum which is really nice (#10)

Methods of ONP triage

ONP navigator triage occurred individually, in groups of two or even teams with the goal of expediting care [11]. This resulted in the formation of unique partnerships with patient care associates across all care lines. Some examples of these partnerships included medical assistants, social workers, as well as other providers.

The following is an example of a participant's alliance with her medical assistant in the treatment phase on the patient level.

Pretty much during the day I'm usually making phone calls, I'm also take phone calls from patients…contacting them, following up with other departments if we had a patient and that they were finishing out of their chemo, and we wanted to go ahead and get them in radiation. I'm usually the one that contacts radiation... makes sure the patient is on schedule, or/and say the patient needed some type of—say we wanted to get them in right away for a peg myself and my MA, we usually try to get the patient in. (#13).

Partnering with a social worker results in same day Medicaid assistance for expedited cancer treatment for the uninsured. Yeah, so these patients, once they have a breast or cervical cancer diagnosis they're automatically eligible for emergency Medi-Cal or Medicaid. So that's helpful because sometimes people will come through the breast center and they don't have insurance, or they might get a mammogram for free and then if they find something it's like how do they get treatment? So the good thing is that in partnering with a social worker we're able to get them to places where they can

sign up, and they will leave with a Medicaid card that day and they could come in and start getting treated (#10).

Partnering with the medical team, specialists, and internists to assist with patient's rehabilitation through participation in the STAR program. NP role includes rounding in the hospital, prescribing, diagnosing, assessing, discharging the patient, speaking with the medical team as to what is going on with the pulmonologist, internist, referring to pain management, for physical therapy. We have something called the STAR program, it is a cancer survivor wellness program, it is kind of like a cardiac rehab, but this is a cancer rehab. It is for anyone that has undergone surgery, chemo, radiation, that type of thing for cancer, and helps get them physically back to where they were before… (#3)

Triage Tools

Navigators in this study utilized a variety of tools for navigation. The author directs the reader to a prior publication which details these tools [21]. Patient specific triage tools were the Gail Model Risk Assessment, and the Rand Lung Cancer Screening Criteria [22,23]. Facility tools included software programs such as Practice Partner, ARIA®, EQUICARE CS™, BEACON/EPIC, ASPEN, ACT and Cordata, as well as homegrown tailored computer software programs [24-29]. Some other systems include MOSAIQ®, Medical Concierge Navigator™, and Nursenav Oncology [30-32]. Pathology reporting processes and tools were also cited. Community tools utilized focus groups, which helped determine community need, as well as smoking cessation programs that were dovetailed into CT lung cancer screening programs.

Discussion

According to the Emergency Nurses Association, triage is a process of collecting pertinent information about patients who are seeking emergency care and initiating a decision making procedure that uses a valid and reliable triage acuity designation system. It involves collecting patient information and performing a focused assessment, assigning an acuity level, prioritizing needs in a time sensitive manner, establishing boundaries of physical and psychological stability, and predicting the potential trajectory of the patient's condition [33].

The Emergency Severity Index (ESI) has established reliability and validity as a triage tool and widely used in the United States. It is a five tier system that triages patients according to the most urgent to least urgent based on resources and acuity [34]. Complete information on the tool can be found on the Agency for Healthcare Research and Quality [4]. Its categories and the assigned acuity levels are: (1) dying; (2) shouldn't wait; (3) vital signs; (4) one resource; (5) no resources with level 1 being the most urgent to five being the least urgent [35]. According to this triage system, oncology patients with stable vital signs, but in need of at least one resource would fall into the fourth category which is on the low end of the priority scale. Crowded ER's are an established fact across the United States [36]. Studies have shown that oncology patients frequently seek services in emergency rooms. For example Barbera, Taylor, & Dudgen (2010) studied 91, 561 cancer patients retrospectively from 2002 and 2005 during their last six months of life [37]. It was found that 76, 759 patients made 194, 017 visits to the emergency department during the final six months of life, and 32, 016 patients made 36 600 visits to the emergency department during the final two weeks of life. In both periods, the most common reasons

were abdominal pain, lung cancer, dyspnea, pneumonia, malaise and fatigue, and pleural effusion. In fact the authors concluded that dedicated interventions to avert these admissions should be instituted. Clinical descriptions of patients or families as no longer "coping" at home were common. This concept was likely captured by diagnoses pertaining to malaise and fatigue, need for palliative care, and perhaps dehydration, which together accounted in this study for 5.1% of visits (n = 9902) during the final six months of life and 8.4% (n = 3070).

These types of patient care needs can be addressed in care areas other than an ER. For example research is emerging which shows that triage mechanisms for oncology patients such as symptom management and triage pathways used prior to patient ER entry can save a substantial amount of money. Two Oncology Care Model community hospital practices identified 222 unnecessary ER visits, saving the practices $3.85 million [38].

The question arises: does an established tool such as the one above triage our patients appropriately? This is not likely the case if the ESI system would triage oncology patients with stable vital signs, who are in need of at least one resource at level four. It can only be assumed that ER wait times would be unnecessarily long. Additionally does this level of service capture the patient's level of distress with screening, natural history of the cancer, as well as psychosocial and financial needs in addition to the wide gamut of patient/facility/community barriers? Triage as defined by ENA involves collecting patient information and performing a focused assessment, assigning an acuity level, prioritizing needs in a time sensitive manner, establishing boundaries of physical and psychological stability, and predicting the potential trajectory of the patient's condition. Though this process is clearly a component of patient navigation, formally assigning the acuity level through the use one specific tool was not always used. Oncology specific triage tools are emerging in the literature. In addition to the well-known Distress Screening, the United Kingdom Oncology Nursing Society has developed a triage toolkit based on evidenced based practice guidelines that standardize and support quality practice [39,40]. The authors report that it provides a high quality assessment and an action plan that is in accordance with the patients' risk. Hseuh & Dorcy piloted an NP lead advanced care planning process for hospitalized patients [41]. The APN used daily team rounds to firm up transition plans, address quality measures and transition gaps. The APN who led the care transitions pilot program was effective in reducing inpatient length of stay by planning which was initiated at the time of admission and ensuring that necessary equipment, teaching, referrals, and follow-ups were in place for discharge. Clark utilized triage tools and pathway to target an early intervention for diagnosis of patients with pancreatic cancer, by designing a site-specific jaundice service [42]. Beck, Kumar, & Williams developed an APN lead oncology specific emergency room at the James Comprehensive Cancer Hospital which utilized triage protocols by providing site specific oncology care. The system served as a bridge; the goal being to provide a bridge between the primary oncology teams and emergency team [43].

The findings of this study have shown that ONP navigators were used to triage patient's all along the cancer continuum, but most especially in the diagnostic phase, though some evidence showed that triage was carried out in all phases of the cancer continuum. Literature is emerging that supports ONP navigators in all phases

of the cancer continuum. Current literature indicates that that ONP navigators have played a significant role in the shortening the length of achieving a patient's diagnosis in the diagnostic resolution process through ensuring timely care, along with patient satisfaction [7].

This study indicated that ONP navigators utilized triage in the treatment phase of the navigation process. Literature is emerging which supports their use in the strategic placement of NP symptom management clinics where their skills can be utilized. Recognizing that uncontrolled symptoms lead to ER visits and hospital admissions, the Symptom Management Clinic (SMC) in the Anne Arundel Medical Center's (AAMC) Geaton and JoAnn DeCesaris Cancer Institute (DCI) was formulated to facilitate rapid access and coordination of urgent care and symptom control for cancer patients. Incorporated in this system is telephone triage which they profess has improved access to care, and has established metrics for controlling healthcare costs. During its initial 8 month inception, at least 40 Emergency Department (ED) visits were prevented and inpatient admissions from the ED for pain and/or weakness decreased by 35%. Ongoing research indicated that the lack of same day appointments resulting in ED evaluations, as well as return calls to clients late in the day after the close of the clinic. Advanced practice oncology nurses utilized these findings to form a clinic utilizing triage developed criteria and protocols, with a tailored process for scheduling with extended clinic hours, along with a patient education system. An oncology nurse triage line was part of the practice. The clinic was positioned within the medical oncology practice [44].

Some of the ONP's in this study triaged patients for placement into survivorship clinics. Various mechanisms utilized were initiating the survivorship care plans during the diagnostic process, and then placing the patient in the survivorship NP clinic at the completion of care. Another method of triage and recruitment mentioned was checking hospital records such as admissions to hospital, and ER for patients with a history of cancer, and placing them in the survivorship clinic. Interviewee #20 the only dedicated survivorship ONP in the study worked closely with the tumor board for patient care recruitment. According to Halpern et al, survivorship models vary and research is needed to determine the effectiveness of the various models [45]. Factors to consideration in formulating a program include the specific program or population, the number and type of cancer patient, provider mix, resources, and risk of recurrence [45]. The United Kingdom (UK) has developed a triage system that is integrated into their "Personalized Cancer Survivorship Care Model". This is a three tiered system that assigns patients a numerical value of one to three according to disease state, with one being the least aggressive to three being the most aggressive. Patients with a one are assigned to a general practitioner; two, a medical expert team and psychosocial team; and three, a multidisciplinary expert team [46].

The role for ONP navigation in the survivorship of cancer care is the subject of ongoing research. Project CONNECT in a quasi-experimental implementation study of 500 colon and breast cancer survivors with at least one chronic condition utilized a triage process that consisted of three evidence-based care coordination strategies. An EMR-driven registry was used as a recruitment strategy to assist with patient transitions between primary and oncology care. A nurse practitioner trained in care coordination was utilized to interact within the complex care team. Teamwork was intensified with coaching. System change is to be analyzed through segmental

regression analysis. Quantitative findings with structured observation as well as provider and patient interviews are also part of the analysis. The goal is to develop an evaluation toolkit identifying barriers, and facilitators that can be used to guide care coordination interventions [47].

Some evidenced existed in this study for the use of the triage process and patient navigation involving NP's in end of life care. Literature is emerging on this topic. Taking into account that high risk patients have complex medical and psychosocial needs; the Veterans Affair health care system in Palo Alto, California instituted an intensive nurse practitioner led program for patients in need of end of life care [48]. It was found that patients who took part in the program had higher rates of hospice referrals (74%) as compared to patients enrolled in primary care (44%) P = (.025); [48].

An innovative model for palliative care for patients with advanced cancer was tested that utilized a palliative care nurse practitioner in an oncology clinic. Approximately 10, 000 patients with active cancer, as well as 2,829 patients with advanced cancer were studied. Strategies included a structured referral mechanism, routine symptom screening, psychological support center, team meetings, team training, as well as a metric dashboard utilized as a process improvement mechanism. It was found that the embedded palliative care nurse practitioner, along with the measurement strategies could improve hospice utilization as well as advanced care planning [49].

Implications for Practice and Research
Practical application of these research findings would begin with determining where the bottlenecks on the patient/facility/community level occur and build triage processes to speed up the process of timely access through the system. The triage process of ONP navigation can be viewed as an intensification of the nursing process in that it utilizes a comprehensive assessment, which sets priorities for the removal of barriers with the goal of expediting care. The triage process involves prescribing, setting up priorities in order of importance, with the goal of expediting care. When compared to the ENA definition of triage which involves collecting patient information and performing a focused assessment, assigning an acuity level, prioritizing needs in a time sensitive manner, establishing boundaries of physical and psychological stability, and predicting the potential trajectory of the patient's condition, it is evident that no standard oncology tool was always used during the ONP's triage process. This is a growing area for nursing research. It would be important to inventory existing tools and make the best use of them as one identifies bottlenecks and triage points along the continuum. Tools would need to target disease processes, and be useful in providing cancer specific emergency services [42, 43]. They need to be oncology specific, taking into account the natural history of the cancer, rate treatment side effects, and asses for disease specific oncologic emergencies. Studies which evaluate the use of the United Kingdom Oncology Nursing Society triage toolkit which assess its utility in our care settings could add to the oncology triage knowledge base. Care maps that triage psychosocial issues are important which utilize assessments at strategic points along the cancer continuum. Further research is needed in the area of the system and team approach to ONP navigation. For example, what ONP partnerships are most effective in providing quality, timely, and cost effective care in each area of the cancer continuum? Should there be one ONP navigator that navigates the entire continuum, versus a team of ONP navigators placed at strategic points along

the continuum who utilize a structured hands-off process along each care transition? These are some of the areas in need of further research development.

Conclusion

This manuscript has discussed the findings of the study: The process of oncology nurse practitioner patient navigation: A grounded theory approach as relates to the use of triage in the navigation process. It has discussed the use of triage as part of the ONP navigation process in all phases of the cancer continuum, and documented support for these findings with current research; it has discussed the use of triage tools used in the study as well as in current nursing practice. In doing so a case has been put forth for the development of oncology specific triage tools/tool. This was followed by practical ideas for integrating triage systems along the cancer continuum, as well as implications for further research. This author would like to humbly thank the N = 20 ONP navigators for their innovative care and dedicated service, as they serve as role models for this unique and essential role.

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