Use of Information Dispensing in the Emergency Department to Improve Patient Satisfaction and Reduce Leave-Without-Treatment Rates: A Quality Improvement Project

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Abstract

Ineffective communication between healthcare professionals and patients results in decreased patient perceptions regarding the quality of care received and contributes to reduced patient satisfaction, negative patient care outcomes, and decreased compliance with treatment recommendations. A microsystem assessment completed within a rural region trauma transfer facility identified a need for improved communication between clinicians and patients to improve patient satisfaction. Information dispensing is a form of intentional knowledge sharing between healthcare professionals and patients used to proactively engage patients and improve patient satisfaction. Review of the literature identified contributing factors to patients who sought care in the emergency department (ED) and reported low patient satisfaction or left-without-treatment (LWOT) such as inadequate communication, unmet expectations, and negative patient-clinician interactions. The literature supported the use of a patient-information-leaflet (PIL) in the ED as a sustainable and cost-effective method to communicate commonly sought information requested by patients to improve patient satisfaction and reduce LWOT rates.

Chapter One

Communication between patients seeking care in the emergency department (ED) and healthcare professionals foregrounds a mutually beneficial relationship focused on achieving optimal patient care outcomes. Lack of effective communication between patients and healthcare professionals increases the risk of misinformation and decreases the patient's perception of the quality of care received (Munoz et al., 2019). Poor communication with ED patients by healthcare professional's results in decreased patient satisfaction, has negative patient care outcomes, and decreased adherence to treatment (Munoz et al., 2019; Sonis et al., 2019; Taher et al., 2020). Patient satisfaction is measured based on the patient's perception of their experience surpassing their expectations (Aleksandrovskiy et al., 2022; Sangal et al., 2019). Research supports the impact patient satisfaction has on the delivery of patient care resulting in Centers for Medicare and Medicaid Services (CMS) now associating various reimbursements for organizations with Emergency Department Consumer Assessment of Healthcare Providers and Systems (ED CAHPS) survey results (CMS, 2023; de Steenwinkel et al., 2022; Sangal et al., 2020; Sonis & White, 2020). Previously, the ED CAHPS survey was referred to as ED Patient Experience of Care (EDPEC) survey (CMS, 2023). The quality metric indicator of patient satisfaction provides intuitive feedback for healthcare organizations to guide improvement in clinician performance and delivery of care (de Steenwinkel et al., 2022; Sangal et al., 2020). Therefore, reviewing patient satisfaction results is important for healthcare organizations to assist with identifying gaps in quality of care and measuring the effectiveness of quality improvement changes.

The ED is the front door to a healthcare facility, and often the patient's first point of contact. The initial encounter in the ED presents a unique opportunity for organizations to

provide a positive patient experience and achieve optimal patient satisfaction through effective communication and delivery of care (Sonis & White, 2020). Graham et al., (2018), supports the relationship between improved outcomes related to "mortality, morbidity, length of stay, and medication adherence" with positive patient experiences in the ED (Introduction section). There is a direct relationship to patient satisfaction and outcomes. This relationship identifies a need to improve patient satisfaction rates in the ED. As a result, facilities can expect improved patient outcomes, perception of care, and increased reimbursement opportunities for hospitals.

To improve patient satisfaction, healthcare professionals can utilize the cost-effective intervention of information dispensing, or scripting, to improve communication with patients and visitors. Common information sought from patients includes "usual ED processes, wait times for common diagnostic tests and location of the food court and washrooms" (Sangal et al., 2020, Methods section). Patients who received this information demonstrated statistically significant improvement in patient satisfaction and anxiety throughout their ED visit (Sangal et al., 2020). Research supports patients prefer methods of leaflets (or brochures), media, and/or direct conversations to deliver desired information about their ED visit (de Steenwinkel et al., 2022; Sangal et al., 2020). This paper will discuss information dispensing methods and implementation strategies to improve patient satisfaction and reduce leave-without-treatment (LWOT) rates in the ED.

Background

Microsystem assessment

Microsystems are an integral part of healthcare, comprised of "clinicians, clinical and administrative support persons, information, information technology, and a defined group of patients who come together for a specific health care purpose" (Ogrinc et al., 2022, p.60).

Completing a microsystem assessment provides in-depth information pertaining to factors that influence processes and consequently impact patient care (Ogrinc et al., 2022). A microsystem assessment is comprised of evaluation of the "5 Ps" -purpose, patients, professionals, processes, and patterns (Barach & Johnson, 2006).

Therefore, to better understand the context behind decreased patient satisfaction within the ED of a rural regional trauma transfer facility, referred to in this paper as Facility X, a microsystem assessment was conducted following the "5Ps" framework.

Purpose. The microsystem assessment was conducted for an ED within a larger health care system located in the northcentral portion of a rural northwest state which serves a geographically large region that includes 14 counties. The organization is a not-for-profit organization, with level two trauma designation and specialty services such as gastroenterology, intensive care, neurology, cardiothoracic, orthopedics, and general trauma. In 2019, the ED was remodeled to double the previous bed capacity, resulting in a 32-bed department, and becoming the second largest ED in the state. The facility aims to "provide excellent care for all, healing body, mind, and spirit" while striving to "be the best health system" in the state (Facility X, n.d.).

Patients. Since January 01, 2023, the most common chief complaint of patients who present to the ED is abdominal pain followed by chest pain, lower extremity injury/pain, difficulty breathing, and then falls. The average annual patient census between 2019 and 2022 was 31,428.75. Year-to-date (YTD), the ED has seen 20,511 total patients with an average of 2,563.88 patients per month and 84.4 per day, with 37.1% of these patients being admitted to the hospital. Of the total patient census, 6.18% of patients who present for care leave-without-treatment (LWOT), and 1.73% leave against-medical-advice (AMA). The average door-to-discharge time YTD is 196 minutes (about three and a half hours), with a benchmark goal time

of 146 minutes (about two and a half hours) (Facility X, Personal Communication, October 16th, 2023).

The most recent patient satisfaction survey results from August 2023 reflect an overall satisfaction rating of 72.96% based on three categories from a post-visit survey including nurses' attention to patient needs, staff collaboration to care for patient needs, and overall rating of patient care (Facility X, Personal Communication, October 16th, 2023).

Patients in the ED are assigned an emergency-severity-index (ESI) level from one to five. A level five ESI reflects a patient with the least urgent acuity and resource requirements. Whereas a level one is suggestive of a patient with the most urgent acuity level and resource requirements. Acuity level and anticipated resource requirements of patient's aides triage staff and charge nurses in deciding who is brought back from the waiting room next. At Facility X an ESI level of three is the most common, accounting for 59.20% of all patient visits YTD for 2023. ESI level two, accounts for 19.80% of 2023 YTD patient visits and ESI level four 14.40%. Both ESI level one and five account for less than 7% combined of 2023 YTD total patient visits (Facility X, Personal Communication, October 16th, 2023). Therefore, the data supports that more than 75% of the patients who present to Facility X's ED for care are of high acuity (ESI level of three or higher) and often require multiple clinical resources.

Professionals. Patient satisfaction scores result from the patient experience throughout their entire ED visit. Thus, it is important to recognize the various roles and healthcare professionals the average patient encounters during their ED visit. The ED nursing director is a master's prepared registered nurse (RN), and the medical director is a board-certified emergency room (ER) physician. One ED manager, and one ED supervisor oversee the ED day-to-day unit operations—both RNs. Although the ED relies on collaboration between multidisciplinary staff

and departments, the primary staff involved at the patient bedside and within the waiting room are RNs, critical care technicians (CCTs), physicians/providers, and registration staff. Currently, there are 15 physicians and 3 nurse practitioners (NPs) and 3 physician associates (PAs) to care for patients seeking care in the ED. Physicians primarily work ten-hour shifts, while the NPs and PAs work twelve-hour shifts—both provider groups work varied shifts (I.e., day, evening, and night shifts). Within the ED, RNs are hired to work varied shifts. Currently, there are 28 total FTE RNs and 11 registry/per diem RNs to fulfill the fluctuating staffing requirements of the department. Part of the interdisciplinary team includes CCTs, who work alongside RNs to deliver patient care and achieve optimal patient outcomes and satisfaction. Based on the training of the employee, there are three levels of CCT (I.e., I, II, and III) with expanded scopes to utilize the employees' experience and training. CCT- I's are primarily certified nursing assistants (CNAs). CCT-II's are emergency medical technicians (EMTs). CCT-III's are respiratory therapists (RTs) or paramedics. Facility X employs 17 FTE CCTs and 24 registry/per diem CCTs within the ED (Facility X, personal communication, April 4th, 2023). Facility X is mostly made up of RN who are supported by a diverse group of skilled providers.

Processes. Patients presenting to the ED seeking care are greeted by registration staff who initiate the check-in process. After checking in, the triage team (comprised of one nurse and one to two CCTs) escort the patient to a triage room and complete triage assessments and initiate predetermined standing orders. Standing orders consist of laboratory and radiology tests, medications, protocols, and interventions guided by evidence-based best practice guidelines and facility specific provider direction. During triage, the RN determines an ESI score and communicates with the charge nurse regarding the patient's acuity. Depending on the ESI score,

and bed availability, patients are either escorted to a patient room/care area or back to the waiting room.

The ED has three patient care pods that include a fast-track, critical care, and inpatient overflow holding area. Outside of private patient rooms, hallway stretchers are also utilized to increase bed availability for ED patients. However, if the ED is overcrowded due to decreased and excess inpatient holds this can reduce bed availability for new ED patients, resulting in prolonged wait times for patients. Based on the patient census in the ED and the patient's chief complaint, the wait times for patients in the waiting room can vary significantly. Triage staff strive to perform hourly rounding that includes a patient update and vital signs for all patients in the waiting room. However, hourly rounding and providing regular patient updates can become difficult to achieve if triage becomes congested or if multiple high acuity patients arrive to the ED. When a room becomes available, the charge nurse assigns a room number for the next patient to be brought back from the waiting room based on highest acuity, not time of patient arrival.

Patterns. Every other month, a unit specific shared governance and staff meeting are conducted by ED staff and leadership to review quality metrics and suggest quality improvement (QI) changes to achieve benchmarks. The monthly meetings are open for all staff to attend, share input, and gain insight. When necessary, subcommittees meet monthly based on committee needs.

After a patient's ED visit, the patient receives a post visit survey to assess the patients' perceptions of the quality of care received and overall patient satisfaction. The results of the survey are accessed by the Patient Experience Coordinator, a Doctor of Nursing Practice (DNP) nurse practitioner who dispenses the reported patient satisfaction survey results to the ED

manager and supervisor. The top three positive and negative common themes from the monthly patient survey responses are then shared with ED staff. At the end of each month, the ED manager distributes a dashboard report with department specific quality metrics and benchmarks. Consistent feedback from patients in post-visit survey responses suggest frustration regarding wait times, bed placement (e.g., use of hallway stretchers for patient care), limited refreshments available in waiting room, lack of understanding the triage process, and why a patient who presents after another is seen by a provider quicker (Facility X, personal communication, September 27th, 2023).

Problem

As the microsystem assessment supports, post-visit ED survey results identify a need for improved communication between clinicians and patients to improve patient satisfaction and perception regarding delivery of care. The use of standardized communication through information dispensing, delivered via printed, media, or verbal methods, is a potential improvement method to increase patient satisfaction and reduce LWOT rates in the ED (de Steenwinkel et al., 2022; Sangal et al., 2020; Susterscic et al., 2018; Taher et al., 2020).

Significance

Post-visit survey responses from patients who sought care at Facility X consistently reflect dissatisfaction from patients related to communication from healthcare professionals to patients. Multiple studies suggest that decreased patient satisfaction impacts perceptions of care received by patients, contributes to staff interruptions, and in some cases impedes revenue for organizations (Horton et al., 2017; Sangal et al., 2020; Taher et al., 2020). Conversely, improved patient satisfaction improves patient compliance with medical treatment, trust in healthcare

professionals, improved utilization of services, hospital efficiency, and clinical outcomes (Sangal et al., 2020; Sonis & White, 2020).

Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey results and overall performance scores for individual organizations can impact CMS recognition and reimbursement for hospitals (Horton et al., 2017). Reimbursement and CAHPS scores for an organization are associated through CMS in relation to value-based purchasing or pay-for-performance programs (Horton et al., 2017; Liu et al., 2020). Consumer Assessment of Healthcare Providers and System survey results are monitored for organizations through various entities, including CMS approved vendor sites, to provide quality improvement feedback directly from patients and published for the public to review. Poor CAHPS scores could potentially result in reduced patient volumes and revenue (Taher et al., 2020).

Purpose/Aim

The purpose of this quality improvement (QI) project is to determine whether the use of information dispensation in the ED improves patient satisfaction and reduces LWOT rates. The project aims to investigate and adapt a standardized method of information dispensing to implement during the triage and waiting room rounding process in the ED.

Definitions

Throughout this professional paper, the following definition will be utilized:

- Information dispensing: Knowledge sharing between healthcare professionals and patients of preferred information topics related to health care delivery via video, leaflets, or poster methods (de Steenwinkel et al., 2022).
- Left-without-treatment (LWOT): Patients who leave the ED prior to evaluation from a provider (Arab et al., 2015).

- ED CAHPS: Survey utilized to collect data pertaining to patient experiences of care and identify areas requiring improvement (CMS.gov, 2023).

Chapter Two

Overview

This chapter aims to recognize and review recent literature pertinent to the research purpose of investigating the impact of information dispensing in the ED on patient satisfaction and LWOT rates. The QI project aims to investigate and adapt a standardized method of information dispensing to implement during the triage and waiting room rounding process in the ED to improve patient satisfaction and reduce LWOT rates. The search strategy conducted across four databases revealed many publications regarding patient satisfaction; however, limited research addressed the direct relationship between information dispensation, patient satisfaction, and LWOT rates. The chapter discusses findings outlined in evidence tables detailing the literature reviewed for the purpose of this QI project (see Appendices A-D). Additionally, the chapter discusses the use of a patient-centered care (PCC) theoretical framework and Plan-Do-Study-Act (PDSA) change model to identify sustainable and desired interventions for the QI project.

Search Strategy

The investigator reviewed four databases with the assistance of the University's Research Librarian to identify articles related to the QI projects' purpose and aim. Databases searched include Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, PubMed, and Web of Science. The initial search for literature conducted through Web of Science utilized key search terms including: "emergency department scripting" OR "emergency department communication" AND "patient satisfaction" OR "Left-without-treatment" OR "elopement". This search yielded approximately 450 publication results between the years 2018

to 2023. An additional search within the topic with key words “patient and staff communication” reduced the publications to 115 results.

Publications selected through Web of Science were exported to EndNote21. During the title and abstract screening process, the investigator also used a works-cited search strategy to identify further articles and evidence related to the QI project’s purpose. This technique identified suggested use of additional key words “information dispensing” or “information dispensation” and “informational pamphlet” to the search list. The investigator then conducted a secondary search using the key words: “information dispensation” AND “patient satisfaction” OR “patients experiences” OR “patient’s perceptions” OR “patient’s attitudes” AND “emergency department” OR “emergency room”. This search generated one result on CINAHL and thousands of publications on Web of Science. The investigator independently reviewed the single result on CINAHL, and articles selected from previous searches and again independently screened the works cited lists and bibliographies of the articles for relevant publications. Due to the vast number of publications generated through the Web of Science database search, the investigator primarily identified articles applicable to this QI project through screening works cited lists and bibliographies.

Inclusion Criteria

The investigator screened the publication titles and abstracts generated from the initial publication search for relevance to the QI project purpose and aim. Inclusion criteria included: (a) publication date between 2018 and 2022, (b) published in English, (c) ED setting, (d) addressed patient satisfaction, € addressed patient and clinician communication, (f) addressed factors that impact patient satisfaction or experience, (g) addressed information dispensation (scripting or communication) with patient satisfaction or LWOT rates as a primary or secondary

outcome. The investigator selected the inclusion criteria based on the need to identify existing knowledge about the subject and researched information dispensation methods. Additionally, the investigator sought to identify the importance of patient satisfaction and the impacts satisfaction rates have on the organization and the patient's perception of care in the ED.

Exclusion Criteria

Publications were excluded from the review for the following reasons: (a) only addressed patients admitted to the hospital, (b) analyzed structured discharge instructions, (c) did not measure patient satisfaction or experience. The exclusion criteria were identified to remove publications that did not provide information pertinent to the project's purpose, aim, and setting. During the search, the investigator was unable to locate publications that specifically addressed the relationship between LWOT rates and information dispensation.

Conceptual/Theoretical Framework

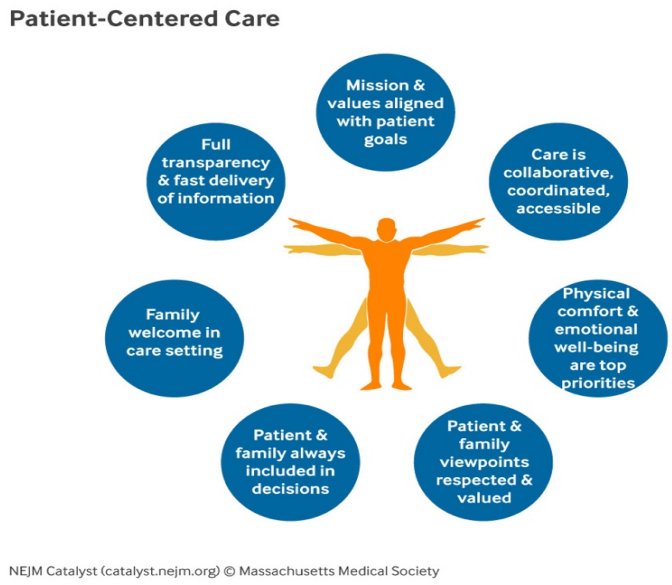
Patient-Centered Care

Patient-centered care (PCC), a theoretical framework first recognized by the Institute of Medicine's (IOM) 2001 seminal report as the foundational methodology for the delivery of health care service quality and safety for patients (Santana et al., 2018). In recent literature, patient experience has namely become a focus of quality analysis for PCC (Gartner et al., 2022). PCC methodology views patients as individual social beings and therefore recognizes the importance of meeting the individual needs and expectations of the patient as the core focus of the framework (Gartner et al., 2022). De Steenwinkel et al., (2022), stresses the importance of PCC and describes the approach as providing information that is "respectful and responsive to individual preferences, needs, and values." (p. 2). The aim of PCC primarily focuses on the

desire to “meet the needs and expectations of patients through continuous improvement of patient experience, patient outcomes, quality and safety while taking into account operational and social realities of the system.” (Gartner et al., 2022, p.19). Satana et al., (2018) describes core principles necessary for implementing PCC including incorporation of the patient perspective and providing the patient with adequate and specific information that allows the patient to then make individual healthcare decisions. The conceptual framework of PCC (see Figure 2-1) applies to this projects’ overall aim to improve patient satisfaction and reduce LWOT rates through providing detailed and specific communication tailored to the needs of the population through feedback provided by patients through post-visit patient experience surveys.

Figure 2-1:

Elements of Patient-Centered Care



Note. Diagram depicting the necessary elements of patient-centered care. From “What Is Patient-Centered Care?” by NEJM Catalyst. (2017, January 1). *What is patient-centered care?* NEJM Catalyst.

Components of Patient-Centered-Care (PCC)

According to the Institute of Medicine (IOM), to achieve patient-centered care (PCC) health care professionals must demonstrate the six main components of the model: respect for patient values, preferences, and "expressed needs"; "coordinated and integrated care, provide information, communication, and education; ensure physical comfort; provide emotional support; and involve family and friends." (Tzelepis et al., 2015, Purpose section). Patient satisfaction surveys, feedback, and patient-reported measures are the primary tools utilized by researchers to measure the quality of PCC In addition to aiding in thoroughly measuring the quality of the PCC delivered, patient feedback also helps identify needs for QI (Tzelepis et al., 2015).

Respect to Patients' Values, Preferences, and Expressed Needs. To provide PCC, health care professionals need to develop an understanding of, and respect, identified patient values, preferences, and expressed needs. Examples include respecting cultural values and needs, treatment preferences, and involving patients in decision-making Tzelepis et al. (2015), stresses the importance of frequently assessing and monitoring patient preferences and experiences to ensure health care providers remain responsive to the values, needs, and preferences of patients.

Coordinated and Integrated Care. According to the IOM, health care delivery should be "coordinated and integrated and include timely transfer of up-to-date patient information to health care professionals, and efficient transition of patients between health care settings" (Tzelepis et al., 2015, Coordinated and integrated care section). In short, the right care is

delivered at the right time and right place (NEJM Catalyst, 2017). Examples of interventions to ensure coordinated and integrated care include providing follow-up care, utilizing multidisciplinary teams (e.g., case management), and one-stop clinics. Benefits of coordinated and integrated care include reduced length-of-stay, readmission rates, and hospital admissions annually (Tzelepis et al., 2015).

Information, Communication, and Education. The IOM encourages delivery of "clear, accurate, and understandable information" to patients that includes discussion of all aspects of the patients care in conjunction with the patients' preferences regarding content and delivery (Tzelepis et al., 2015, Information, communication, and education section). Tzelepis et al., (2015) states patients are the only individual who can determine if they received the desired amount of information, the communication methods were appropriate, and if the education provided was explained in a manner they understood and are able to recall effectively. Thus, highlighting the importance of utilizing patient-reported measures to determine if health care professionals are delivering quality information, utilizing effective communication, and educating appropriately to meet the needs of the patients (Tzelepis et al., 2015). The delivery of all information in a timely manner is imperative to allow patients and caregivers to make informed decisions pertaining to their care (NEJM Catalyst, 2017).

Physical Comfort and Emotional Support. To achieve the goals of the physical comfort component of PCC, the IOM encourages health care professionals to attend to patients' physical needs, assess physical symptoms, and provide appropriate pain relief. Patients often express the need for emotional and spiritual support during their treatment course, whether it be related to acute or chronic conditions. Common psychological alterations include anxiety and depression that can be related to "uncertainty, fear, financial impact, or effect on family" or

related to the diagnosis or condition relapse (Tzelepis et al., 2015, Emotional support- relieving fear and anxiety section).

Involvement of Family and Friends. According to Tzelepis et al. (2015), facilitating family and friends' involvement in patient care can enhance rapport between health care professionals and patients, assist in communication and information exchanges, stimulate decision-making, and enhance patient satisfaction. The IOM encourages the involvement of family and friends in patient care and decision-making, assuming the provision aligns with the needs and preferences of the patient.

Search Results

Barriers to Patient Satisfaction

Based on the literature review results, multiple factors impact patient satisfaction in the ED with communication arguably noted as the most consistent factor. Communication between patients and clinicians in the ED also faces many challenges, which consequently often contributes to a negative patient experience and reduced overall patient satisfaction. Munoz et al., (2019) emphasizes the importance of communication and describes the skill as a fundamental basis to health care and patient safety while also noting the association with multiple health indicators (see Appendix A). Additionally, A cross-sectional descriptive study published by Munoz et al., reveals a significant positive relationship ($p<0.05$) between communication skills of ED clinicians and the patient perception of care received.

A second common barrier to achieving patient satisfaction includes the ED wait time. Studies reported an inverse correlation between patient satisfaction and ED visit wait time and length-of-stay (de Steenwinkel et al., 2022; Graham et al., 2018; Sangal et al., 2020; Taher et al.,

2020). Interestingly, Sangal et al. (2020), reported low patient engagement with the patient information leaflet (PIL). Sangal et al., also reported that patients who read the PIL typically experienced a longer wait time in comparison to other study participants, suggesting that long wait times potentially "prompts" the patients to read the PIL provided (Limitations section). Graham et al., (2018) suggests providing information to patients about the wait time and reasons for waiting could improve this patient expectation.

Information Dispensation Methods

The preferred delivery methods of communication vary between patients; however, the most common methods include verbal and written communication (see Appendix A and B) (de Steenwinkel et al., 2022; Graham et al., 2018). An example of a written information dispensation technique includes providing the patient with a PIL. Other methods of information dispensation can include informational videos on the waiting room television, posters, information screens, websites, and apps (de Steenwinkel et al., 2022; Sangal et al. 2020).

Additionally, a qualitative meta-synthesis of research publications conducted by Graham et al., (2018) identifies five themes that contribute to the ED patient experience including: communication needs, care needs, emotional needs, waiting needs, and physical and environmental needs. Graham et al., states the meta-synthesis findings are congruent with previous research findings and suggest many determinants of patient experience surround communication skills rather than competence levels. Further, Graham et al., discusses patient feedback regarding the use of PILs to deliver written communication. Common patient perceptions of PIL use include difficulty reading and retaining provided written information due to acute distress, and the perceived lack of "human warmth" and compassion associated with the leaflet (Graham et al., 2018, p.359). Therefore, based on the synthesis of existing literature,

Graham et al., concludes a patient preference for verbal communication in the ED, especially in the setting of acute pain or distress for patients to improve patient satisfaction. Graham et al., identifies two subthemes pertaining to communication needs from patients to achieve satisfaction: interpersonal and informational communication. Patients expressed a desire for health care professionals to demonstrate empathetic interpersonal communication that includes active listening in a caring tone (Graham et al., 2018). Additionally, patients desired clear and accurate answers to questions with frequent updates related to plan of care and explanations of ED processes (e.g., wait time) (Graham et al., 2018). The patient preferences for information delivery methods identified in Graham et al., correlate with the findings in Sangal et al., (2020), where results demonstrated low patient engagement with a written PIL as the main delivery method for communication. In summary, the literature supports the use of information dispensing to communicate commonly sought information (i.e., general, practical, and medical), via verbal or written methods, positively impacts patient experience and satisfaction regarding their ED visit (Graham et al., 2018).

Qualitative Publications

Limited recent research exists specific to the use of information dispensation alone; however, existing research evaluated supports patients prefer clear, concise, and frequent information updates about the patients' ED visit (de Steenwinkel et al., 2022; Graham et al., 2018). Appendix B reflects the qualitative research publications reviewed by the investigator with independent variables including various information dispensation methods and dependent variables and outcomes focused on patient satisfaction, perception of communication, and/or patient preference of information dispensation delivery method. Many of the publications

reviewed reported use of patient surveys and questionnaire's utilizing Likert Scales to obtain qualitative data regarding patient satisfaction and measure improvement.

Evidence consistently supports the use of PILs and the contributing role the low-cost intervention upholds towards improving patient satisfaction scores. A study completed in an urban university teaching hospital, with a similar annual total of patient visits to the QI project setting, revealed patients who received PILs with information about general information (e.g., triage, wait time, care team, privacy, costs) medical information (e.g., radiology, electrocardiogram, laboratory testing), or practical information (e.g., bathroom location, food/drink availability, WIFI) were significantly ($p < 0.001$) more satisfied than patients who did not receive the same information (de Steenwinkel et al., 2022). The findings from de Steenwinkel et al., (2022) are consistent with findings from Susterscic et al., (2018) that found doctor-patient communication (DPC) scores and patient satisfaction scores were significantly higher ($p=0.02$) in patients who received the PIL.

In contrast, Sangal et al., found that only two statements within their PIL demonstrated statistical significance ($p < 0.05$) including patients with information about the ED process and expectations (88% vs 71%; $p = 0.0012$) and the estimated wait times for test results (95% vs 75%; $p = 0.003$). Additionally, Sangal et al., reported low patient engagement due to only 49% of patients who received the PIL remembering they received the pamphlet, and 51% of patients reporting they did not remember receiving the PIL at all. Of the patients who did remember receiving the PIL, 95% found the information within the PIL beneficial. Of note, although the impact of the PIL on patient satisfaction did not reflect statistical significance in improvement, a positive trend of the results observed could suggest a positive impact on patient satisfaction. Due to the low patient engagement, Sangal et al., suggests the utilization of a triage staff member to

provide the patient with the PIL and a brief explanation of the pamphlet to increase patient engagement and awareness of pamphlet (Sangal et al., 2020). In summary, research suggests use of PILs to communicate commonly sought information from patients including general, medical, and practical information positively impacts patient satisfaction (de Steenwinkel et al., 2022; Graham et al., 2018; Sangal et al., 2020).

Quality Improvement Initiative

Taher et al., (2019) conducted a mixed method prospective QI initiative within a quaternary care medical centers' ED in Toronto utilizing the PDSA QI model to test various communication strategies with the aim to improve the patient experience and satisfaction regarding communication in the ED. Taher et al., utilized three communication strategies throughout the project including one "novel" strategy named the Acknowledge-Empathize-Inform (AEI) tool, a PIL, and a multimedia strategy (p. 811).

The results of Taher et al's., publication demonstrated improvement in patient satisfaction from 3.28 to 4.15 ($p < 0.0001$), and a reduction in patient anxiety from 2.96 to 2.31 ($p<0.001$) on a 5-point Likert scale by PDSA 3. Each survey item reflected statistically significant ($p<0.05$) improvements on the Likert scale by PDSA cycle 3, except for frequency of approaching the staff desk to ask questions which demonstrated a p value of 0.19, and did not achieve statistical significance (Taher et al., 2020). Although Taher et al's., QI project narrowly missed the stated goals of achieving a one-point Likert scale improvement regarding patient satisfaction and anxiety, the findings support the use of purposeful information dispensation via use of multimedia techniques, AEI tool, and PIL, as a statistically significant low-cost method to engage patients, enhance patient-clinician relationships, improve patient satisfaction and compliance with treatment (Taher et al., 2020).

Contributing Factors for Patients Who Leave Without Treatment (LWOT)

Limited research exists directly researching the use of information dispensing to improve LWOT rates; therefore, the investigator was unable to isolate recent publications within the last five years to analyze. Although crowding in the ED is a commonly referenced primary factor for increased LWOT rates within EDs across the nation (Sonis et al., 2018), the phenomenon of crowding is beyond the scope of this QI project. Thus, the investigator sought to investigate patient reasoning for eloping from the ED to aide in the development of a sustainable and targeted intervention to reduce LWOT rates.

Appendix D outlines findings from one study that addresses factors contributing towards patient decisions to LWOT, or “elope", from the ED. Marco et al., (2021) conducted a prospective cohort study analyzing patient perspectives and reasons for leaving prior to the completion or initiation of care by a provider in the ED. Marco et al., extracted information from a large trauma centers EHR of patients who LWOT. The findings of the study support previous research and revealed three common themes that contribute to patients leaving the ED without treatment including wait time, unmet expectations, and negative patient-clinician interactions (Marco et al., 2021).

Wait times in the ED fluctuate and often vary based on the patient's acuity according to the ESI score assigned at triage. A qualitative response from Marco et al’s (2021)., study includes the following patient statement, “*I know next time if I want to be seen quickly. I should just call an ambulance because that’s the only way they won’t make you wait*” (p.118). This patient statement suggests a lack of understanding of the ED process and triage system and coincides with the second common theme identified— unmet patient expectations. Marco et al., states study findings reflect unmet patient expectations, commonly in relation to pain control and

patient expectations of complete resolution of pain instead of improved pain relief. The third common theme Marco et al., identified is negative patient-clinician interactions in the ED. Patient responses note ED experiences including “rude” ED staff, poor staff attitudes, impatience, perceived lack of empathy from staff, and inadequate explanations of care contribute towards negative perceptions of patient-clinician interactions (Marco et al., 2021).

Although further research studies are needed to assess the direct relationship between information dispensation and LWOT rates, the research is clear on the impact of patient satisfaction on a patient's decision to LWOT. Marco et al’s., prospective cohort study within a large trauma center identified common themes that contribute towards patients who LWOT including long wait times, unmet expectations, and negative patient-clinician interactions.

Summary

Chapter Two analyzed publications identified through key search terms to identify the relationship between information dispensation, patient satisfaction and LWOT rates amongst ED patients. Four databases were utilized to isolate the selected studies based on inclusion and exclusion criteria determined by the investigator. The application of the PCC theoretical framework prioritizes the needs and values of patients based on feedback to improve care. The investigator also proposed the use of a PDSA model for change to test proposed changes and use cycle information to develop a sustainable and successful intervention to achieve the goals of the QI project. Additionally, the investigator independently reviewed and analyzed the research publications to determine the level of evidence and application to the QI project's overall aim. Communication and wait times were common findings contributing to patient satisfaction and LWOT. Three main methods of communication were identified in the research to mitigate this problem. Ultimately use of verbal communication combined with PIL appeared to have the

strongest empirical support. Finally, etiology leading to patients who LWOT was explored identifying wait time, unmet expectations, and negative patient-clinician interactions as the most common contributors. Chapter Three will describe the methods for implementation of a project utilizing the evidence suggested in the literature.

Chapter Three

Overview

The purpose of this quality improvement (QI) project is to determine whether the use of information dispensation in the emergency department (ED) improves patient satisfaction and reduces leave-without-treatment (LWOT) rates. The investigator sought to identify and propose a method of standardized information dispensation that staff at Facility X can utilize in the triage and waiting room areas within the ED. The purpose of this QI project aligns with the organizations' goals of reducing LWOT rates and improving patient satisfaction as identified within the microsystem assessment. The literature review findings discussed in chapter two revealed that providing patients in the ED with a patient-information-leaflet (PIL), coupled with verbal communication, as an effective and low-cost method of information dispensing in the ED (Taher et al., 2020). The investigator proposes providing patients who present to the ED with a PIL during the registration process and updating the triage workflow process to include a verbal explanation of the PIL and ED visit expectations from the ED staff to the patient.

Design of the Quality Improvement Initiative

Project Design

The proposed project is a clinical QI project based in the ED of Facility X. The theoretical framework of the patient-centered-care (PCC) model will guide the development of the investigators proposed QI initiative. The foundation of PCC requires inclusion of patient perspectives and providing tailored information to meet the needs and expectations of a specific target patient population (Santana et al., 2018). Further details about the PCC model are discussed in chapter two.

Setting, Target Population, and Stakeholders

The QI project will be implemented within the ED triage and waiting room areas of a larger health care system, referred to as Facility X, which serves 14 counties within a predominantly rural and geographically large state. On average, Facility X provides health care to 31,428.75 patients annually. The most common emergency-severity-index (ESI) acuity assigned to patients who seek care at Facility X's ED is ESI level three. The assigned ESI level reflects the acuity of the patient and the anticipated resource requirement to treat the patient with level five being the lowest acuity and level one the highest. A microsystem assessment conducted by the investigator, outlined in chapter one, discusses the project setting within the ED at Facility X and the details of the patient population who seek care at the organization in greater detail. The primary stakeholders of the proposed project include patients who seek care within the ED at Facility X, and the clinicians who provide care for the patients.

Planning the Project Intervention

To identify the proposed intervention, the investigator observed the triage and waiting room processes within the ED and reviewed post-visit patient experience survey responses. The investigator identified common themes in patient responses such as patient dissatisfaction with the communication between clinicians and patients coupled with unmet patient expectations. The investigator then discussed the observed themes with the ED manager and supervisor at Facility X, who mutually agreed on the need for a method to streamline communication between clinicians and patients to improve patient satisfaction.

The investigator conducted a microsystem assessment to further understand the ED patients, clinicians, and processes. The microsystem assessment identified a generous amount of

information pertaining to the target setting, including LWOT rates above the benchmark goal of less than two percent and an overall patient satisfaction rating of 72.96%. Post-visit patient survey responses reviewed during the microsystem assessment highlighted patient frustrations regarding wait times, bed placement, refreshment availability in the waiting room, and lack of understanding of typical ED processes and procedures.

Challenges

The investigator hypothesizes challenges to the implementation of the PIL due to potential resistance to change and overall unit culture within the target facility. The anticipated barriers should be addressed early in the implementation process by utilizing stakeholder (i.e., ED clinicians) input for development of the PIL template and educating clinicians on the benefits of enhanced patient communication.

Framework Guidance

For this QI project, the investigator used the PCC model framework to guide the development of the proposed intervention by utilizing the information learned regarding the target population and setting to develop a tailored PIL to meet the specific needs of the population. Core principles required for successful utilization of the PCC model include the incorporation of patient perspectives and providing patients with a satisfactory amount of specific information to enhance healthcare decision making and improve patient satisfaction (Santana et al., 2018). Therefore, to successfully incorporate PCC, the investigator required an understanding of patient values, preferences, and expressed needs (Tzelepis et al., 2015). The utilization of information obtained from the post-visit patient satisfaction survey feedback was

imperative for the investigator during the planning process for the successful development of a PCC focused QI intervention.

Proposed Implementation Procedures

To initiate the implementation process, the investigator proposes the facility reference the example PIL developed by Sangal et al., (2020) (see Appendix E). The PIL is written at a 5th grade level and contains desired information requested by patients regarding a typical ED visit such as the triage process, typical timeframe to expect laboratory or diagnostic results, identification of care team members, and frequently asked questions based on desired information from the literature review findings (Sangal et al., 2020) and post-visit patient survey responses. The specific information included within the organizations unique PIL should be patient-centered and obtained from patient feedback and staff input (e.g., commonly asked questions). Of note, the example PIL developed by Sangal et al., (see Appendix E) is available as a template to reference, however if the organization desires to use this PIL within their facility permission from the publisher should be obtained prior to use. To obtain buy-in from stakeholders for the QI initiative, staff should review the PIL template during a scheduled bi-monthly shared governance meeting. The distribution of the PIL template prior to implementation creates an opportunity for staff to ask questions, provide feedback and suggestions, and learn about the positive impact improved patient satisfaction and communication can have on clinician workflow.

After the development of the patient centered PIL, the template leaflet should then be shared with the Risk Management and Quality Improvement departments for legal team approval, and to ensure compliance with Centers for Medicare and Medicaid Services (CMS) and Emergency Medical Treatment and Labor Act (EMTALA) regulations. The implementing

facility should anticipate between two and four weeks to receive approval from the legal team. At Facility X, most of the patient population is predominantly English speaking; however, to accommodate the needs of individuals with diverse primary languages the inclusion of a QR code on the PIL that provides translation to non-English languages should also be considered.

Once approved by the organization, the PIL should again be re-introduced to staff by the ED manager or supervisor during the pre-shift huddles for both dayshift and nightshift daily for one week prior to the start of the first PDSA cycle. At this time, staff should receive education on how to provide a verbal explanation to patients about the PIL and what to expect while in the ED. Patients presenting to the ED should receive the PIL after completion of the triage process, accompanied with a verbal explanation of the pamphlet content and purpose from ED clinicians. As clinicians complete the required hourly rounding on patients in the waiting room, patients should be encouraged to review the PIL and approach clinicians if they have any unanswered questions. To ensure all staff receive the necessary information regarding the PIL use and implementation, the education provided to staff during the pre-shift huddles should also be distributed to all department staff via email communication.

Following the patient's ED visit, the patient will receive a post-visit patient experience survey that asks additional specific questions regarding the effectiveness of the PIL. Questions within the survey will ask about patient knowledge of ED processes and expectations before and after receiving the PIL. Appendix F includes an example post-visit patient questionnaire utilized by Sangal et al., (2020) to obtain patient feedback directly related to the PIL. If the implementing facility desired to utilize the example questionnaire, the organization should obtain copyright permission by Sangal et al., prior to use. Feedback from the questionnaire responses should

continue to be distributed to ED management from the Patient Experience Coordinator monthly, as determined in the microsystem assessment.

The proposed intervention is anticipated to require between one and two months of preparation prior to PIL implementation including time allocated to obtaining stakeholder buy-in, input, approval from the organization's legal representatives, and staff education. Three months of pre-intervention patient satisfaction rates should be evaluated to identify patient-centered information to include in the PIL. The total duration of the project varies depending on patient feedback and satisfaction after each PDSA cycle (see Appendix G). Each PDSA cycle includes evaluation of patient feedback and satisfaction every three months following the implementation of the PIL. A benefit to the proposed intervention includes minimal anticipated costs for the organization. Staff training will occur during already scheduled shifts and meetings, therefore requiring no additional staff budgeting. Although the intervention is an overall low-cost method, the organization should anticipate an increase in accrued costs associated with paper and printing supply usage.

Evaluation Tool and Outcome Measures

To evaluate the effectiveness of the initial PDSA cycle, a pretest-posttest evaluation tool should be utilized. The pretest-posttest evaluation method involves comparison of outcome measures (i.e., patient satisfaction and LWOT percentage rates) from prior to the intervention to the rates following the intervention. For the proposed QI project, a preliminary evaluation of outcome measures should occur three months after the intervention implementation.

Outcome measure data evaluation should utilize a Likert Scale, as suggested by multiple publications identified in the literature review. The current process for patient satisfaction

evaluation at Facility X involves post-visit patient experience survey submission to Press Ganey. The results of the surveys are then interpreted and distributed monthly to the appropriate departments by the organizations Patient Experience Coordinator, a doctorate prepared nurse. In addition to the Likert Scale results, the Patient Experience Coordinator also identifies and distributes common themes from the open response section in the survey. The Likert Scale is an effective method of obtaining and evaluating quantitative data regarding patient satisfaction and measuring improvement, therefore the investigator did not propose a change to the current process at the target facility; the facility will be able to identify improvement based on increased Likert scores.

Following the preliminary evaluation, outcome measures should then be evaluated quarterly to ensure sustainability of the project intervention and alliance with overall project aims (i.e., improve patient satisfaction and reduce LWOT rates). Evaluation of the feedback provided through the post-visit patient questionnaire is necessary to ensure PCC and identify needs for additional or updated information within the PIL. Subsequent PDSA cycles will be conducted based on patient satisfaction questionnaire feedback and outcome measures.

Summary

Chapter three reviewed the findings of the microsystem assessment and discussed the application of the PCC framework to the proposed project intervention. The PCC framework enhances the quality of information shared between patients and clinicians, which was imperative to the development of the PIL for this project. The PIL is a low-cost intervention available to improve patient satisfaction and LWOT rates at Facility X. To evaluate the effectiveness of the PIL, pre-intervention patient satisfaction and LWOT rates should be compared to post-intervention rates and post-visit patient questionnaires should be updated with

questions specific to the PIL. Chapter four will summarize the QI project findings and discuss the anticipated impact of the project on stakeholders.

Chapter Four

The purpose of this project was to determine whether the use of information dispensation in the emergency department (ED) improved patient satisfaction and reduced leave-without-treatment (LWOT) rates. Chapter four discusses a summary of the overall project including significant findings of the literature review that surprised the investigator, a reflection of the patient-centered-care (PCC) framework utilized, implementation and evaluation proposal challenges, and the impact of the project on practice and stakeholders. Further, the investigator will summarize the role of the Certified Nurse Leader (CNL) in the development of the project and discuss the correlation between the project and the CNL competencies.

QI Project Summary

The microsystem assessment conducted by the investigator at the target facility reviewed post-visit ED survey responses from stakeholders which identified decreased patient satisfaction rates and a need for improved communication. In response to the microsystem assessment, the investigator proposed an intervention to standardize and improve communication in the ED through information dispensation delivered via printed, media, or verbal methods. Research findings supported the project's purpose to utilize information dispensation in the ED to improve patient satisfaction and reduce LWOT rates.

The investigator's review of the literature identified communication as the largest barrier contributing to the patient experience and overall patient satisfaction (Munoz et al., 2019). Decreased patient satisfaction impacts patient perception of care, contributes to increased staff interruptions, and can potentially impede revenue for the organization (Horton et al., 2017; Sangal et al., 2020; Taher et al., 2020). Improved patient satisfaction was also found to be

associated with increased treatment compliance, appropriate utilization of services, improved hospital efficiency, and clinical outcomes (Sangal et al., 2020; Sonis & White, 2020). Thus, the investigator correlated the negative impact of decreased patient satisfaction on stakeholders.

The literature reflected a preference for verbal communication methods between clinicians and patients in the ED during periods of acute pain and distress (Graham et al., 2018). However, the literature review also identified written methods (i.e., patient-information-leaflet (PIL)) as a sustainable and effective method to communicate commonly sought information clearly and concisely to patients. The microsystem analysis identified patients who presented to the ED desired information updates regarding general ED processes (i.e., triage, wait time), medical information (i.e., when to expect test results), and practical information (i.e., bathroom location, food/drink availability) (de Steenwinkel et al., 2022). The literature review found ED patients who received purposeful information dispensation updates were significantly ($p<0.001$) more satisfied with their ED visit compared to patients who did not receive updates with similar information (de Steenwinkel et al., 2022).

Thus, the investigator proposed the implementation of a PIL during the ED triage process that contains information commonly sought from patients based on feedback from post-visit patient survey responses and literature review findings. In correlation with implementation strategies demonstrated in the published research, the written communication method of the PIL should be supplemented with a verbal explanation of the leaflet contents provided by ED clinicians to increase patient engagement with the PIL and patient understanding of the content included.

Discussion

The literature review revealed multiple study findings that supported the positive relationship between information dispensing and improved patient satisfaction scores. Susterscic et al., (2018) and de Steenwinkel et al., (2022) both found patient satisfaction scores to be significantly higher in patients who received a PIL during their emergency department (ED) visit. Surprisingly, study findings from Sangal et al., (2020) reported poor patient engagement with the PIL. Sangal et al., stated that many patients reported they did not remember receiving the PIL at all. However, 95% of the patients who did remember receiving the PIL reported the information included as beneficial (Sangal et al., 2020).

Similarly, during the literature review process the investigator was unable to find literature that specifically addressed the use of information dispensing to improve leave-without-treatment (LWOT) rates in the emergency department (ED). The research found by the investigator demonstrated common themes related to patient reported reasons for decisions to LWOT and patient dissatisfaction including wait time, unmet expectations, and negative patient-clinician interactions (Marco et al., 2021). Conclusively, although the direct relationship between LWOT rates and information dispensation requires further research, the current literature supports the inverse relationship between patient satisfaction and a patient's decision to LWOT from the ED.

Patient-Centered-Care Framework Alignment

The investigator proposed implementation of information dispensing in the ED aligned with the patient-centered-care (PCC) framework chosen for this project by determining the communication needs of the target population through feedback provided by the patients. The

information contained within the PIL focused on meeting the needs of the patient population in the ED based on feedback provided by patients in the post-visit survey responses. Utilization of patient feedback, a critical component of the PCC model, was important for the successful implementation of the investigators proposed project. In this project, the feedback offered valuable insights to the investigator about the information patients desired regarding their ED visit, proving essential in successfully enhancing healthcare decision-making and improving patient satisfaction.

Implications and Recommendations

Communication is a fundamental skill essential to health care practice and is associated with multiple patient health indicators (Munoz et al., 2019). Patient-centered-care requires clinicians to recognize and identify patient needs and expectations to then provide specific information tailored to the population needs to facilitate informed decision making for patients. This project impacts practice by specifically addressing gaps in communication methods between clinicians and patients in the ED. Further, the project details a low-cost intervention to improve communication and patient satisfaction with minimal disruption to current workflow for clinicians.

Gaps in the project include minimal literature to support the direct correlation between the use of a PIL on LWOT rates in the ED. Future research should investigate the direct relationship between information dispensing and LWOT rates to either support the investigators intervention choice or aide in the identification of an alternative intervention. Improvements to the project could include further investigation into the specific reasons patients at the target facility chose to LWOT as part of the microsystem assessment. This potentially could be accomplished by calling the individual patients who LWOT from the target facility, or including

specific questions within the post-visit survey they already receive to assess the patient's reason to LWOT. The information learned from this assessment would be beneficial for the investigator to further tailor the content included within the PIL to meet the needs of the target population and purpose of the project.

Implementation Benefits and Challenges

Chapter Three discussed potential barriers the investigator anticipated to the implementation process of the PIL at the target facility, including potential resistance to change and overall unit culture. The investigator proposed stakeholder inclusion for the organizations PIL template development and providing education to clinicians on the benefits of refined patient communication to promote buy-in from stakeholders. The proposed intervention is a relatively low-cost method with minimal anticipated disruption to the unit's workflow and budget; however, as discussed in Chapter Three, the organization should anticipate an increase in paper and printing supply usage.

The success of the project relies on patients to provide feedback in the post-visit surveys and demonstrate engagement with the PIL. Without feedback from patients, the framework of the project cannot be sustained. In the event of low survey response rates during the implementation phase, this may require separate investigation for the cause by the target facility. To enhance patient engagement with the PIL, the investigator proposed in Chapter Three frequent mentioning of the PIL to patients during required hourly rounding in the waiting room.

CNL Roles

The American Association of Colleges of Nursing (AACN) (2013) governs expectations of individuals within the CNL role. There are nine CNL competency essentials with core

components detailed by the AACN that reflect the expected knowledge base and scope of practice guidelines for CNLs. For this project, the role of the CNL involves the utilization of many valued CNL skills such as: conducting microsystem assessments, identifying data trends and patterns, assuming leadership roles to facilitate communication, developing and implementing QI strategies, and participating in the continuous evaluation of processes and initiatives with a focus on patient-centered-care and advocacy for improved patient outcomes. The CNL is important to lead change initiatives and participate in the facilitation of practice changes based on evidence-based findings that are focused on quality outcomes for both the patient and nursing practice.

Conclusion

This quality improvement (QI) project addressed relevant health care issues including communication needs between clinicians and patients, and the impact of patient satisfaction within the ED. As discussed throughout the project, decreased patient satisfaction rates can have negative implications to nursing practice such as reduced patient compliance with treatment, increased staff interruptions, and decreased clinical outcomes. This QI project provided a meaningful and substantive change in nursing practice by providing a low-cost and sustainable method of a PIL to bridge the communication gap between clinicians and patients, meet the needs of the stakeholders, improve patient satisfaction, and reduce LWOT rates in the ED. The PIL provides the patient with clear and concise information regarding typical ED processes to help manage patient visit expectations to improve perception of care, and therefore patient satisfaction.

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Appendices

Appendix A

Literature Pertaining to Communication Skills and Perceived Quality of Care Relationship

Author, Date	Study Design and Purpose	Methods	Sample	General Findings	Strength of Evidence
Munoz et al., 2019	Observational study within a university hospital ED in Spain to assess the influence of ED staff communication skills on the perceived quality of care by ED patients.	Cross-sectional descriptive study	n=200 patients (53%) men, 47% women, median age 44.1 (SD = 18.3)	Statistically significant ($p < 0.05$) relationship between ED staff communication skills and perception of perceived quality of care received by patient	Level of Evidence: III
Graham et al., 2018	Qualitative meta-synthesis of research to identify themes that impact patient experience.	Systematic review and Meta-synthesis	n=22 studies included in synthesis	5 themes that impact patient experience identified: communication needs, emotional needs, competent care needs, waiting needs, physical and environmental needs. Prefer clear, jargon free, verbal communication	Level of Evidence: II

Appendix B

Literature Pertaining to Information Dispensation Publications

Author/Date	Design/Method	Sample/Setting	Variables	Measurement of Variables	General Findings	Strength of Evidence
De Steenwinkel et al., 2022	Quasi-experimental: Cross-sectional observational	N=423 Urban teaching hospital with approximate 26,000 patient visits per year	IV: ID DV: Primary: PS regarding type of information received and method of delivery Secondary: Overall PS with ID	Patient questionnaire with questions about DV and patient characteristics. Primary DV: Questionnaire with 10-point Likert Scale Secondary DV: Questionnaire with 5-point Likert Scale	Average PS score regarding overall ID: 7.5 (95% CI 7.13-7.47) 77% of respondents scored ID 7 or greater, 13% scored ID 5 or lower Lower PS scores associated primarily with referral to ED by PCP (95% CI –0.671 to –0.011; p=0.04) and longer duration of ED visit (95% CI –0.003 to –0.001; p < 0.001) Patients who received specific information about ED visit (e.g., triage, wait time, general medical, or practical information) were significantly more satisfied (p <0.001) than patients who did not.	Level of Evidence: II

Susterscic et al., 2018	Mixed method: Prospective controlled, non-randomized, before-after study	N=400 2 French EDs	IV: PIL and verbal explanation about ED visit DV: Primary: DPC score Secondary: PS	Post-visit questionnaire over the phone about ID content, patient demographics, provider behavior, DPC, overall patient satisfaction, and adherence to treatment	324 sets of answers out of the 400 participants were analyzed DPC and PS scores were higher in patients who received the PIL and verbal explanation (p=0.02)	Level of Evidence: II
Sangal et al., 2020)	Quasi-experimental: Prospective Study	N= 494 Tertiary care ED	IV: PIL DV: Primary: PS with ED visit Secondary: Patient understanding of ED process and various	8-question survey scored on 4-point Likert Scale with questions about PS and understanding of information within PIL.	95% of patients found the PIL helpful Only two statements within the PIL reflected significance ($p<0.05$): knowledge of ED visit expectations (88% vs 71%; p=0.0012) and wait time for testing results (95% vs 76%; p=0.003). PS scores did not demonstrate statistically significant improvement with PIL.	Level of Evidence: II

			department wait times			

Note. IV= Independent Variable; DV= Dependent Variable; ID= Information Dispensation; PIL= Patient Information Leaflet; PS= Patient Satisfaction; PCP= Primary Care Provider; ED= Emergency Department; DPC= Doctor-Patient Communication

Appendix C

Information Dispensation Quality Improvement Study

Author, Date	Conceptual Framework	Design/Method	Sample/Setting	Variables	Data Analysis	Findings	Level of Evidence
Taher et al., 2020	PDSA and AEI	Qualitative/ quantitative Prospective multistage QI initiative.	Setting: Quaternary care medical center- Toronto General Hospital n=232 patients and 104 ED clinicians	IV1: AEI tool IV2: PIL with AEI tool IV3: Passive information sharing, multimedia intervention, PIL, and AEI tool DV1 (Primary): patient satisfaction with communication and anxiety about ED visit DV2 (Secondary):	Grounded theory to categorize themes of baseline data Inductive analysis of baseline open-ended surveys Significance level of $p<0.05$ used Two-tailed Mann-Whitney U tests used to determine statistical significance	Patient satisfaction improved from 3.28 (score of 5 being best) to 4.15 by PDSA cycle 3 ($p<0.0001$). Patient anxiety decreased from 2.96 (score of 1 being best) to 2.31 by PDSA 3 ($p<0.001$). Clinician perception of interruptions by patients from 4.33 (5 being the highest perception of interruptions) to 3.72 after PDSA cycle 1 ($p = 0.02$). After PDSA cycle 2 the results	Level of Evidence: II

				Clinician perception of patient interruptions per shift		were no longer significant(p=0.19).	

Note. PDSA= Plan-Do-Study-Act; AEI= Acknowledge-Empathize-Inform; IV= Independent Variable; DV= Dependent Variable; QI= Quality Improvement; ED= Emergency Department

Appendix D

LWOT Literature

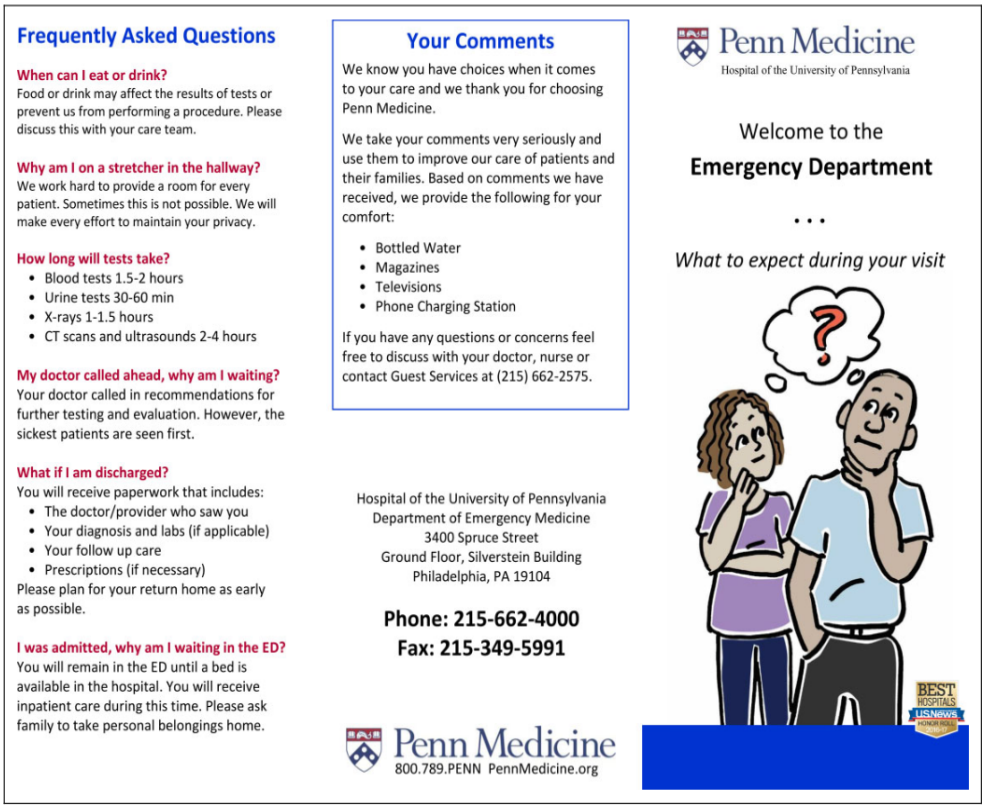
Author, Date	Study Design and Purpose	Setting	Sample	General Findings	Strength of Evidence
Marco et al., 2021	Observational Prospective cohort study Purpose to identify patient perspectives and reasons for refusing care in the ED	Miami Valley Hospital, Dayton, Ohio: Level 1 Trauma designation. Approximately 90,000 annual ED patient encounters.	n=298 patients who left AMA from setting; only 68 participated in patient interview to assess reason for leaving AMA	Reasons for leaving ED prior to completing treatment: Wait time (23%) Unmet expectations (23%) Negative interactions (15%) Did not want to be admitted (14%) Family obligations (10%) Symptom improvement (8%) Other obligations (2%) Other (14%)	Level of Evidence: III

Note. ED= Emergency Department; AMA= Against Medical Advice.

Appendix E

Example Patient Information Leaflet

Emergency Department Patient Pamphlet



Frequently Asked Questions

When can I eat or drink?
Food or drink may affect the results of tests or prevent us from performing a procedure. Please discuss this with your care team.

Why am I on a stretcher in the hallway?
We work hard to provide a room for every patient. Sometimes this is not possible. We will make every effort to maintain your privacy.

How long will tests take?
- Blood tests 1.5-2 hours
- Urine tests 30-60 min
- X-rays 1-1.5 hours
- CT scans and ultrasounds 2-4 hours

My doctor called ahead, why am I waiting?
Your doctor called in recommendations for further testing and evaluation. However, the sickest patients are seen first.

What if I am discharged?
You will receive paperwork that includes:
- The doctor/provider who saw you
- Your diagnosis and labs (if applicable)
- Your follow up care
- Prescriptions (if necessary)

Please plan for your return home as early as possible.

I was admitted, why am I waiting in the ED?
You will remain in the ED until a bed is available in the hospital. You will receive inpatient care during this time. Please ask family to take personal belongings home.

Your Comments

We know you have choices when it comes to your care and we thank you for choosing Penn Medicine.

We take your comments very seriously and use them to improve our care of patients and their families. Based on comments we have received, we provide the following for your comfort:

- Bottled Water
- Magazines
- Televisions
- Phone Charging Station

If you have any questions or concerns feel free to discuss with your doctor, nurse or contact Guest Services at (215) 662-2575.

Hospital of the University of Pennsylvania
Department of Emergency Medicine
3400 Spruce Street
Ground Floor, Silverstein Building
Philadelphia, PA 19104

Phone: 215-662-4000
Fax: 215-349-5991

Penn Medicine
800.789.PENN PennMedicine.org

Penn Medicine
Hospital of the University of Pennsylvania

Welcome to the
Emergency Department

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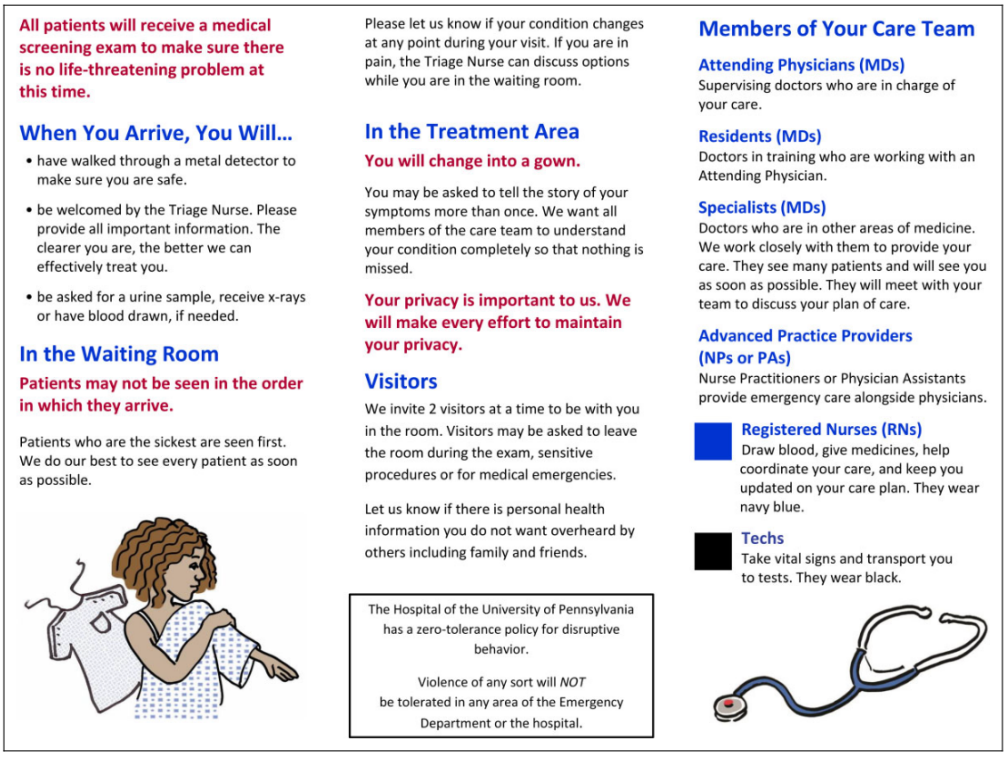
What to expect during your visit

Note. Page one of the patient-information-leaflet (PIL) example image provided by Sangal et al., (2020).



All patients will receive a medical screening exam to make sure there is no life-threatening problem at this time.

When You Arrive, You Will…

- have walked through a metal detector to make sure you are safe.
- be welcomed by the Triage Nurse. Please provide all important information. The clearer you are, the better we can effectively treat you.
- be asked for a urine sample, receive x-rays or have blood drawn, if needed.

In the Waiting Room

Patients may not be seen in the order in which they arrive.

Patients who are the sickest are seen first. We do our best to see every patient as soon as possible.

Note. Page two of the patient-information-leaflet (PIL) example image provided by Sangal et al., (2020).

Appendix F

Post-Visit Patient Survey Questionnaire

	Yes	No
1. Did you receive our welcome pamphlet today?	☐	☐
2. If so, did you look at it?	☐	☐

3. How helpful was this information?

☐ Not at All ☐ Somewhat Helpful ☐ Helpful ☐ Extremely Helpful

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
4. I understood why I waited in the waiting room before being brought back to the treatment area.	☐	☐	☐	☐	☐
5. I understood who the members of my care team were.	☐	☐	☐	☐	
6. I understood how long it would take for my test results (blood, X-rays).	☐	☐	☐	☐	☐
7. I understood how long it would take to be seen by a specialist or consultant (eg: neurologist, cardiologist, or general surgeon)	☐	☐	☐	☐	☐
8. I felt anxious during my emergency room visit today.	☐	☐	☐	☐	
9. I knew what to expect during my visit in the emergency room	☐	☐	☐	☐	
10. I understood the process of being discharged	☐	☐	☐	☐	
11. I was satisfied with today's visit.	☐	☐	☐	☐	

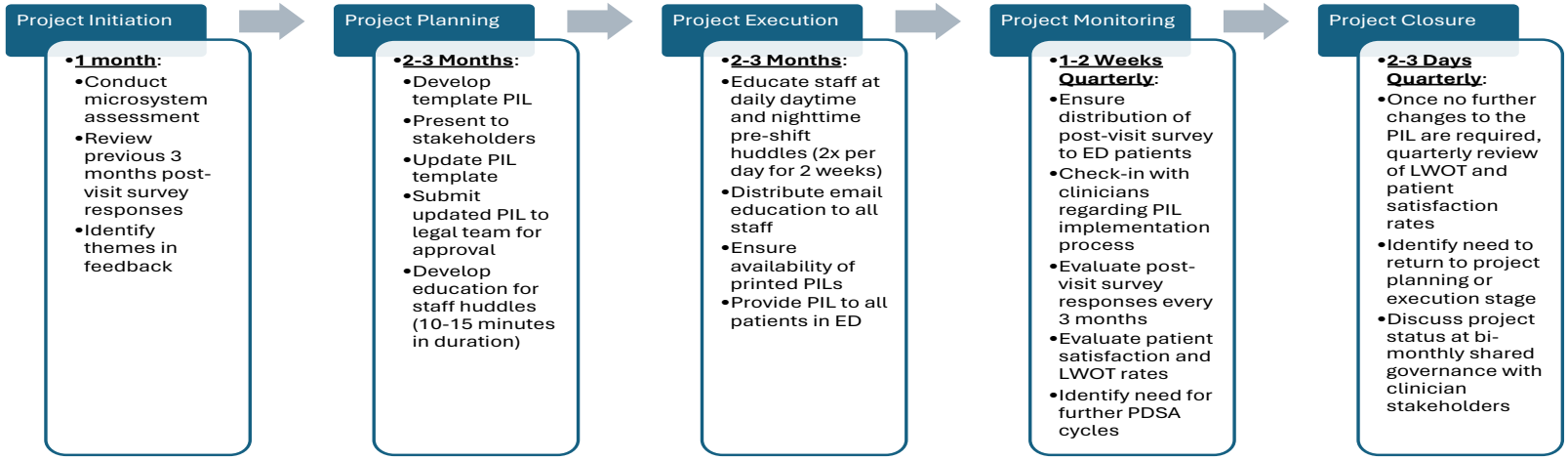
12. Please use this space to provide any additional comments regarding the way in which doctors and nurses communicated with you and your family. (continue on the back if needed)

Thank you for your participation in this survey!

Note. Example post-visit patient survey questionnaire image from Sangal et al., (2020).

Appendix G

Project Intervention Implementation Timeline



Note. Detailed estimation of the project implementation timeline**.**