Quality Improvement Project to Improve Patients' Satisfaction of Care with Implementation of a Standardized Telephone Communications Pathway

Brandie Haga
George of Tennessee, Knoxville, BHaga@vols.UTK.edu

Nicole Dunford
nicole@tnauto.net

Karen Lasater
George of Tennessee, Knoxville, klasater@utk.edu

Follow this and additional works at: https://trace.tennessee.edu/dnp

Part of the Quality Improvement Commons

Recommended Citation
Haga, Brandie; Dunford, Nicole; and Lasater, Karen, "Quality Improvement Project to Improve Patients' Satisfaction of Care with Implementation of a Standardized Telephone Communications Pathway" (2023). Graduate Publications and Other Selected Works - Doctor of Nursing Practice (DNP).
https://trace.tennessee.edu/dnp/73
EVALUATION OF TELEPHONE COMMUNICATION PATHWAY IN AN AMBULATORY CARE SETTING

BRANDIE HAGA, BSN, RN, OCN
THE UNIVERSITY OF TENNESSEE, KNOXVILLE
You have to break down communication barriers among people in the health care system. There is some really good technology already out there, but the methodology and record keeping are hundreds of years old.

Bob Hughes
Background

A project site Needs Assessment identified patient and staff dissatisfaction with communication when patients and caregivers call the clinic and highlighted the need for a standardized telephone communications pathway process

(essentially, establishing a telephone tree)
OVERVIEW OF PROBLEM

- 2 out of 5, about a 38.5%, lifetime risk of being diagnosed with cancer
- Cancer is one of the most prominent healthcare conditions in the United States
- 12 million Americans still living after receiving a cancer diagnosis

(Lawenda, 2020; Pantattoni et al 2018; U.S. Department of Health and Human Sciences, 2020)
Improved patient access
Linked anecdotally to improved outcomes in both emergency and oncologic patient care

Improved patient-provider trust
Cost savings

CLINICAL SIGNIFICANCE of Telephone Medicated Care

(Raheja, 2015)
CLINICAL PROBLEM

- 20% of ER visits among cancer patients are due to their need to talk with the treating physician.

- Nearly 4 million ER visits annually, with a number of these visits being "due to poorly controlled disease or treatment-related symptoms such as pain, nausea, and dehydration" which could be potentially preventable with better outpatient management.
  
  - increased risk for sepsis
  - hospitalizations
  - increase costs
  - possible early death

(Lawenda, 2020; Pantattoni et al., 2018, para 1; U.S. Department of Health and Human Sciences, 2020)
Cancer-related telephone helplines arose from response to expressed patient needs.

Technological advancements and better management of treatment-related side effects means longer survival.

Inpatient care shifting to outpatient management, making telephone communication essential to outpatient medical practices.

(Raheja, 2015; Wilson, 2002)
PROJECT PURPOSE

This process improvement project aims to evaluate and improve patient satisfaction with the current telephone communication pathway process.
Improve patient satisfaction by the end of two months

Implement

Based on feedback, implement changes to telephone communication pathway process

Evaluate

Evaluate patient satisfaction of telephone communication pathway

Improve

Improve patient satisfaction by the end of two months
GUIDING FRAMEWORK: PROCESS

The following PICOT question guided the literature search, project development, implementation, and evaluation of this proposed quality improvement process.

"In adults with blood cancers being treated at an ambulatory clinic (P), how does implementing a standardized telephone communication pathway form (I) compared to no standardized telephone communication pathway form (C) affect the patient experience and patient satisfaction (O) within two months? (T)."
My focus will be on:

- Rapid PDSA cycling every two weeks for two months
- Create patient questionnaire regarding their experience with current telephone pathway
- Evaluate results from these questionnaires
- Implement evidence-based changes to the existing telephone pathway

Goal of achieving seventy percent patient satisfaction

My community partners fully support this project but their timeline did not match with my academic timeline, therefore they developed and implemented a standardized telephone communication pathway.
Identification of studies via databases and registers

Records identified from:
- Databases (n = 26,600)
  - UTILITY OneSearch-26,525,
  - PubMed-19, ProQuest
  - Dissertations and Thesis
  - Global-11, EBSCOhost
  - searching Academic Search
  - Complete-11, Cochrane-9,
  - CINAHL Complete-25.

Records removed before screening:
- Records removed for duplicates (n=TBD)
- Records removed for other reasons (n = articles older than 2007, not full text, TBD)

Records screened (n=26,600)

Records sought for retrieval (n=39)

Records not retrieved (n=1)

Full-text reports assessed for eligibility (n=38)

Reports excluded (full-text):
- Wrong intervention (n=20)
- Wrong population (n=11)

Reports not retrieved (n=22)

Records sought for retrieval (n=26)

Reports excluded: Wrong intervention (n=2)
Wrong population (n=1)

Included:
- Studies included in review (n=2)
- Reports of included studies (n=6)
Critical Appraisal

1. John Hopkins Nursing Evidence-Based Practice (JHNEBP) Level and Quality Guide
2. JHNEBP Research Evidence Appraisal Tool
3. JHNEBP Non-research Evidence Appraisal Tool
4. JHNEBP Synthesis Process and Recommendation Tool
All studies were systematically appraised using the Johns Hopkins Nursing Evidence-Based Practice (JHNEBP).

After appraisal, evidence levels and quality grades were assigned.

All studies were Level III Evidence.

All assigned quality Grade A or B, indicating good or high-quality evidence.

(Dang & Dearholt, 2018)
RESEARCH EVIDENCE

- Significantly improved documentation in the outpatient setting when clinical support implemented; standardized telephone communication is an example of a clinical support system.

- Improved patient satisfaction score on Press Ganey regarding telephone communication when 5 outpatient clinics implemented a standardized telephone communication system and pathway.

- Overall, significant and showed importance of patients having access to a telephone communication system.

(Dang & Dearholt, 2018)
NON-RESEARCH EVIDENCE

Meta-analysis of 36 studies-ranging from systematic reviews to non-randomized controlled studies-concluded that telephone triage had favorable patient satisfaction and clinical safety.

However, telephone triage is widely:

- Underestimated
- Undervalued
- Underperformed
- Under-monitored

(Pygall, 2012)
Evidence relating to telephone communication in the outpatient setting was synthesized based on outcome measures of patient quality of care and patient satisfaction using the JHNEBP Synthesis Process and Recommendation Tool (Dang & Dearholt, 2018).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Satisfaction (post-intervention)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Quality of care (post-intervention)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
</tbody>
</table>

Any other outcomes of interest:

Three of five AAACN documentation standards were significantly improved with CDS implementation of telephone triage calls, which improved quality of care.

Employee feedback towards the addition of telephone triage was overall positive, expressed happiness, lower stress levels, and decreased delays when handling phone calls between after-hours.

A monthly quality improvement meeting and opening schedules several months in advance improved the patient experience.

Sample Size:

- 263 urgent calls and 752 non-urgent calls across all 3 practice sites.
- 200 patient-initiated survey, 115-second survey.

Setting:

- N/A outpatient medical practice sites within Bethesda Medical Center.
- Urban-based, resident-faculty practice.

Level of Evidence:

- III
- III
- III

Quality of Evidence:

- A
- A
- A

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Satisfaction (post-intervention)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Quality of care (post-intervention)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
</tbody>
</table>

Any other outcomes of interest:

- There was an increase in the number of primary care contacts.
- Telephone triage might be useful in adding to the delivery of primary care.
- Telephone triage intervention resulted in a negligible impact on AAI (adherence, but not intervention-specific patient satisfaction and clinical safety).
- Patient satisfaction with TTAS was generally high and there is some consistency of evidence of the ability of TTAS to reduce clinical workload.

Sample Size:

- Forty-two practices (20,990 total patients).
- 34 studies reviewed: 6 systematic reviews, 3 before-after series, 7 cross-sectional, 6 non-randomized, 2 cohort study, 1 non-RCT study.

Setting:

- Ambulatory care clinic.
- UK and international primary care centers.
- Ambulatory care clinic.

Level of Evidence:

- I
- III
- III

Quality of Evidence:

- A
- A
- A
Quality of Care
degree to which health services for individuals and populations increase the likelihood of desired health outcomes

Patient Satisfaction
an attitude and serves as an indirect indicator of performance

Patient Experience
while important metric of care quality, doesn't relate to clinical outcomes or process measures in outpatient setting

Important to distinguish between quality of care, patient satisfaction, and patient experience
PATIENT AND FAMILY PREFERENCES AND VALUES

Interpersonal
- Active listening
- Empathetic communication
- Adapting information to each patient's needs and abilities

Clinical
- Shared-decision making that accommodates clinician, patient, and caregivers needs

Structural
- Reliable and consistent utilization of standardized telephone communication pathway
There is **good and consistent** evidence to support the implementation of a telephone communication pathway as a quality improvement initiative to improve patient satisfaction and quality of care in an outpatient clinic.
Therefore, it is recommended that:

1. a standardized telephone communication pathway be implemented to improve satisfaction and quality of care in those adult patients diagnosed with a blood cancer or blood disorder, and

2. a standardized telephone communication pathway be implemented at an outpatient ambulatory clinic
AIMS FOR PRACTICE CHANGE

Within two months of project implementation, achieve seventy percent patient satisfaction of newly implemented standardized telephone communication pathway in those adults being treated for blood cancer or blood disorders in the outpatient clinic setting.
IMPLEMENTATION
Approximately 11,000 annual patient visits, primarily Caucasian patient population.

Transplant and Cellular Therapies Outpatient Clinic* located in a Middle Tennessee urban city. Serves adult patients with blood cancers or blood disorders, providing specialized oncology care to regional community and non-local patients.

Staff: 4 MDs, 3 NPs, 15 RNs, 5 support staff.

*Approval has been granted by site clinic manager for implementation of this proposed project.
PROJECT TEAM/STAKEHOLDERS

Key project site team members
- DNP Student
- Faculty Chair
- Front Desk Support Staff
- Staff Nurses

Additional team members
- Clinic Manager
- Faculty Committee Chair
- Community Committee Member
- Site IT
- UTK Statistician

Stakeholders (not on project team)
- Patient and families
- Community at large
Facilitators and Barriers

**Facilitators**
- Organizational Culture
  - desire to deliver best care
- Resources
  - evidence-based clinical practice policies and procedures
  - champions
- Networks and Communication
  - collaboration, teamwork, communication

**Barriers**
- Organizational Resources
  - time/workload
- Network and Communication
  - unit communication
  - knowledge deficit
  - attitudes-resistance to change

(Menlyk & Fineout-Overholt, 2018)
**INTERNAL FACTORS**

<table>
<thead>
<tr>
<th>STRENGTHS (+)</th>
<th>WEAKNESSES (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of the clinic is to care for and improve a person’s life and this project goal aims to do the same</td>
<td>Clinic is in a re-structuring phase and going through a lot of change-which is already challenging on the staff (resistance to change)</td>
</tr>
<tr>
<td>Clinic serves adult patients a with blood cancer from age 19 and up, allowing numerous chances to implement project</td>
<td>Lack of regulated approach for addressing patient’s symptoms when they call the clinic</td>
</tr>
<tr>
<td>Organizations mission and values statement align with project goals</td>
<td>No clear route to directly speak with a nurse, possibly delaying care for the acutely ill patient</td>
</tr>
<tr>
<td>Clinic manager is supportive of project idea</td>
<td>Absence of strong presentation and ‘buy-in’ skills</td>
</tr>
<tr>
<td>Standardized protocols and advice</td>
<td></td>
</tr>
</tbody>
</table>

**EXTERNAL FACTORS**

<table>
<thead>
<tr>
<th>OPPORTUNITIES (+)</th>
<th>THREATS (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees want to improve care for the patient</td>
<td>Staff may not be interested in learning about and implementing a telephone triage system because it can add additional work to their already heavy workload</td>
</tr>
<tr>
<td>Employees value education and opportunity for new knowledge</td>
<td>Current low retention/high turnover rates could impact intervention being utilized consistently</td>
</tr>
<tr>
<td>Improve the care given to patients (retraining of workflow)</td>
<td>Utilizing a structured telephone communication pathway form will require commitment from staff and compliance could be difficult to ascertain</td>
</tr>
<tr>
<td>Implementing a telephone communication pathway form can result in less time being spent at the end of each clinic day listening to and returning messages left by patients</td>
<td>Resistance to change</td>
</tr>
<tr>
<td>Create a user-friendly telephone communication pathway form designed so that any employee who answers the phone can easily utilize it</td>
<td></td>
</tr>
</tbody>
</table>
ETHICAL CONSIDERATIONS

Institutional Review Board (IRB) determination sought through the University of Tennessee, Knoxville.

Participation in the patient questionnaire will be voluntary and anonymous. Questionnaires will be placed in every patient check-in packet and visual prompts will be placed throughout the clinic to encourage participation, but patients will not be asked directly for a completed questionnaire.
IMPLEMENTATION TIMELINE

Sept-Oct. 2022
Complete Project Defense
Seek IRB determination

Oct. 2022-Feb. 2023
Implement project
(PDSA cycles)

Oct. 2022-April 2023
Data collection and analysis

June 2023-August 2023
Dissemination of findings to stakeholder
IMPLEMENTATION PLAN

This QI Model has two phases

Phase one: identifies aim, measures and interventions

Phase two: tests the intervention in the clinic setting

After the site is prepared, the project will be implemented for a total of two months

- The Plan-Do-Study-Act (PDSA) Worksheet tool will be used to document the test of change
- Each cycle will be started by identifying changes based on feedback from patient questionnaires two weeks prior. Improvement efforts will be recognized, implemented, and reassessed
- Rapid PDSA cycling will occur every two weeks for two months (4 PDSA cycles)

Similar to the second cycle, the third and fourth PDSA cycle will continue to implement the quantitative questionnaire, utilizing the results to modify the telephone communication pathway form to achieve a seventy percent patient satisfaction rating

Outcome measures will aim to achieve 70% patient satisfaction
DEMOGRAPHICS

Only participant demographic that will be obtained is age with an option for:

- 55 years or below
- 56-60
- 61-65
- 66-70
- 71-80
- 81 years or above

This data will be obtained during project implementation via the questionnaire
QUESTIONNAIRE

1. Age: 55 or below, 56-60, 61-65, 66-70, 71-80, or over 80 years

2. Have you called the clinic within the last two weeks?

3. If you left a message requesting a return call, did you receive a return call within 24 hours? (excluding weekends and holidays)

4. Were you treated with respect?

5. Did you receive accurate information?

6. Did your needs get met?

7. Felt that your care was improved with the telephone communication pathway?

8. Had an overall positive experience when calling the clinic?

9. Please provide additional comments/feedback
FIRST PDSA CYCLE

First PDSA cycle will determine which patient questionnaire will be used to obtain patient feedback, informing future PDSA cycles.

DNP student will develop three versions of the patient questionnaire: a qualitative, quantitative, and mixed-methods questionnaire and anonymous staff feedback regarding each questionnaire's pros, cons, and preferences will be obtained.

Three staff meetings will be scheduled at varying times, with a goal of achieving 80% staff participation.
SUBSEQUENT PDSA CYCLES

- Staff-chosen questionnaire will be implemented during the patient check-in process.
- Participation will be voluntary and anonymous.
- Completed questionnaires will be collected during the clinic visit or check-out process.
- Staff will place all questionnaires in the appropriately labeled manila envelopes located throughout clinic.
- DNP student will retrieve questionnaires from manila folders every week.
- Based on questionnaires, improvement efforts will be recognized, implemented, and reassessed through subsequent PDSA cycles.
- Rapid PDSA cycling will occur every two weeks for two months.
DATA EVALUATION

Measures of Success

Outcome
achieve at least seventy percent patient satisfaction by end of implementation timeframe

Process
utilization of patient questionnaire at check-in process
DATA COLLECTION

- Data collection will occur at six points:
  - Twice during pre-intervention
    - once from staff feedback regarding the selection of the questionnaire
    - once to obtain baseline data before implementation begins
  - Four times during the implementation
    - with each PDSA cycle
DATA ANALYSIS

Demographic analysis for single variable: age

Percent of change observed throughout PDSA cycles for variables:
- Treated with respect
- Received accurate information
- Needs got met
- Felt care was improved
- Positive experience

Open-ended question will be presented in narrative format

Assistance from UTK Statistician
DATA SECURITY

Privacy and confidentiality protection through collection, storage, analysis, and transfer

Data points recorded in anonymized, password-protected data collection spreadsheet stored in HIPAA/PHI certified UTK sponsored OneDrive for Business for storage platform

No PHI on data collection tool

Data transfer performed via UT Vault, a secure encrypted HIPAA/PHI certified file transfer application
FINDINGS
Distribution of Employee-Chosen Questionnaire Style

- Quantitative (14) - 64%
- Qualitative (5) - 23%
- Mixed-method (1) - 9%
- Did not participate (2) - 4%
Age Distribution of Respondents by PDSA Cycle

- 1st PDSA Cycle (pre-intervention)
- 2nd PDSA Cycle
- 3rd PDSA Cycle
- 4th PDSA Cycle

Age Distribution:
- 55 or below
- 56-60
- 61-65
- 66-70
- 71-80
- Over 80
Percentage of Categorical Change from Pre-Implementation through Post-Implementation

Post-implementation aim = 70%

<table>
<thead>
<tr>
<th></th>
<th>1st PDSA Cycle (Pre-intervention)</th>
<th>2nd PDSA Cycle</th>
<th>3rd PDSA Cycle</th>
<th>4th PDSA Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated with respect</td>
<td>33</td>
<td>34.5</td>
<td>66</td>
<td>66.5</td>
</tr>
<tr>
<td>Received accurate info</td>
<td>26</td>
<td>37.5</td>
<td>66</td>
<td>71.5</td>
</tr>
<tr>
<td>My needs got met</td>
<td>13</td>
<td>41</td>
<td>55</td>
<td>66.5</td>
</tr>
<tr>
<td>Care with improved</td>
<td>27</td>
<td>41</td>
<td>55</td>
<td>69.5</td>
</tr>
<tr>
<td>Positive experience</td>
<td>6</td>
<td>34.5</td>
<td>55</td>
<td>77</td>
</tr>
</tbody>
</table>
CONCLUSIONS

- Standardized telephone pathways have proven effective in improving patient satisfaction score on Press Ganey regarding telephone communication.
- Significant and showed importance of patients having access to a telephone communication system.
- Utilizing the Model for Improvement provides an effective framework for implementing best practice for standardized telephone pathways and creating sustained and successful practice change.
- This project aligns with the value the practice site places on quality improvement, positive health outcomes, and preventive care.
IMPLICATIONS

- A standardized approach to evaluating a telephone communication pathway system, while implementing evidence-based changes, in an adult outpatient oncology clinic improved care and patient satisfaction.

- Access to a large population size, albeit specialized, for this project added strength to the findings; however, quality improvement studies present limitations in the ability to generalize findings beyond the project site’s practice setting.

- Quality improvement based on synthesis of quality evidence and implemented with a team approach using the Model of Quality Improvement framework, promotes successful and sustainable change.

- Implementation of a telephone communication pathway system is a no-cost intervention, not designed to produce revenue, but did result in reduced time devoted by staff returning calls, thereby reducing hours worked.
LESSONS LEARNED

Staff and patient involvement were critical to refining our telephone communication pathway systems process and project’s overall success and sustainability.

Visual cues throughout the project site were easy methods to promote awareness and encourage participation.

Placing the questionnaire within patient check-in packets could’ve impacted authentic feedback if patients thought completion of the questionnaire was a required part of the check-in process.

Significant barriers to project implementation included substantial administration restructuring at the organizational level, which resulted in managerial instability and high staff turnover at the project site.
DISSEMINATION
DISSEMINATION PLAN

Stakeholder Presentation

Manuscript Submission to American Journal of Nursing
QUESTIONS?
REFERENCES

Available on Request