



EVALUATION OF TELEPHONE COMMUNICATION PATHWAY IN AN AMBULATORY CARE SETTING

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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

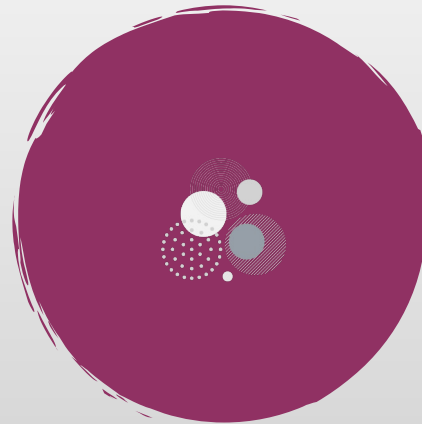
(essentially, establishing a telephone tree)



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)

CLINICAL PROBLEM CON'T

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

GOALS



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

From "Evidence-based Practice Improvement: Merging 2 Paradigms," by R. F. Levin, J. Keefer, J. Marren, M. Vetter, B. Lauder, and S. Sobolewski, 2010, Journal of Nursing Care Quarterly, 25, p. 122. Reprinted with permission.

PICOT STATEMENT

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).



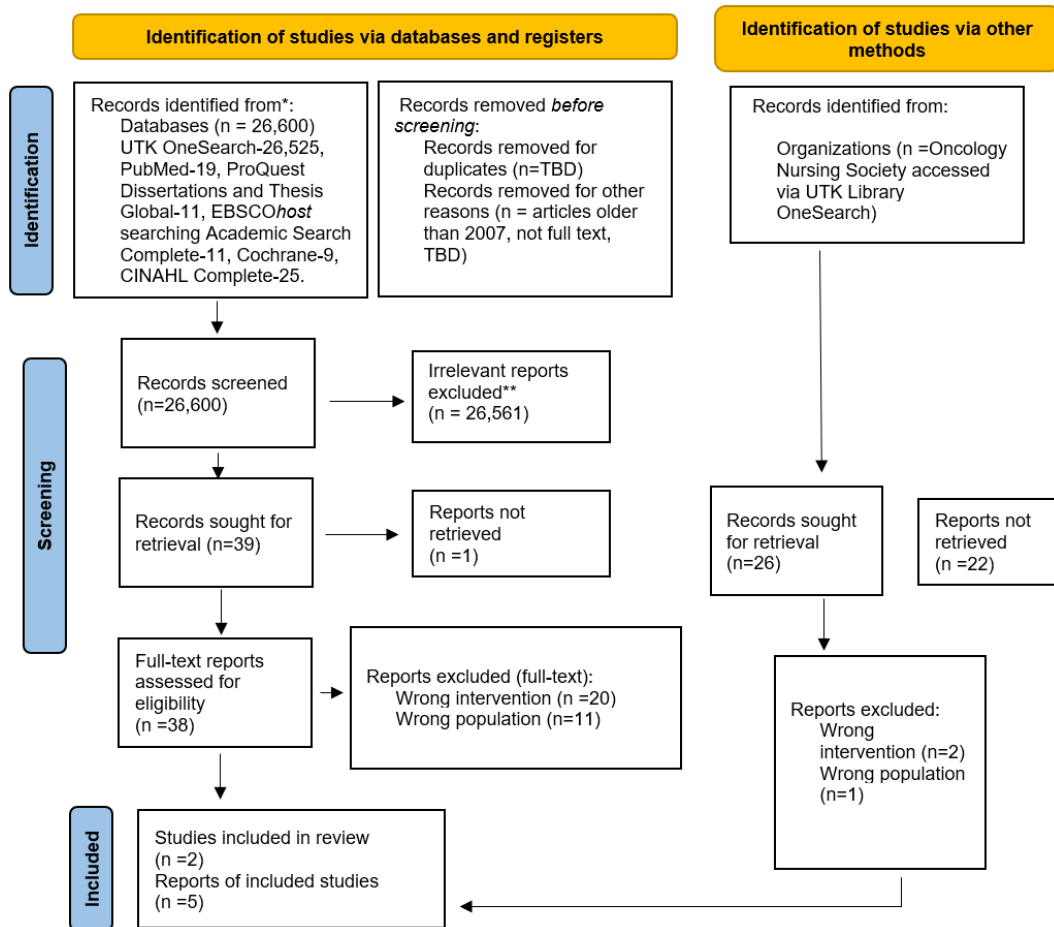
My community partners fully support this project but their timeline did not match with my academic timeline, therefore they developed and implemented a standardized telephone communication pathway

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





LITERATURE SEARCH: PRISMA DIAGRAM



John Hopkins
Nursing Evidence-
Based Practice
(JHNEBP) Level and
Quality Guide



JHNEBP Research
Evidence Appraisal
Tool

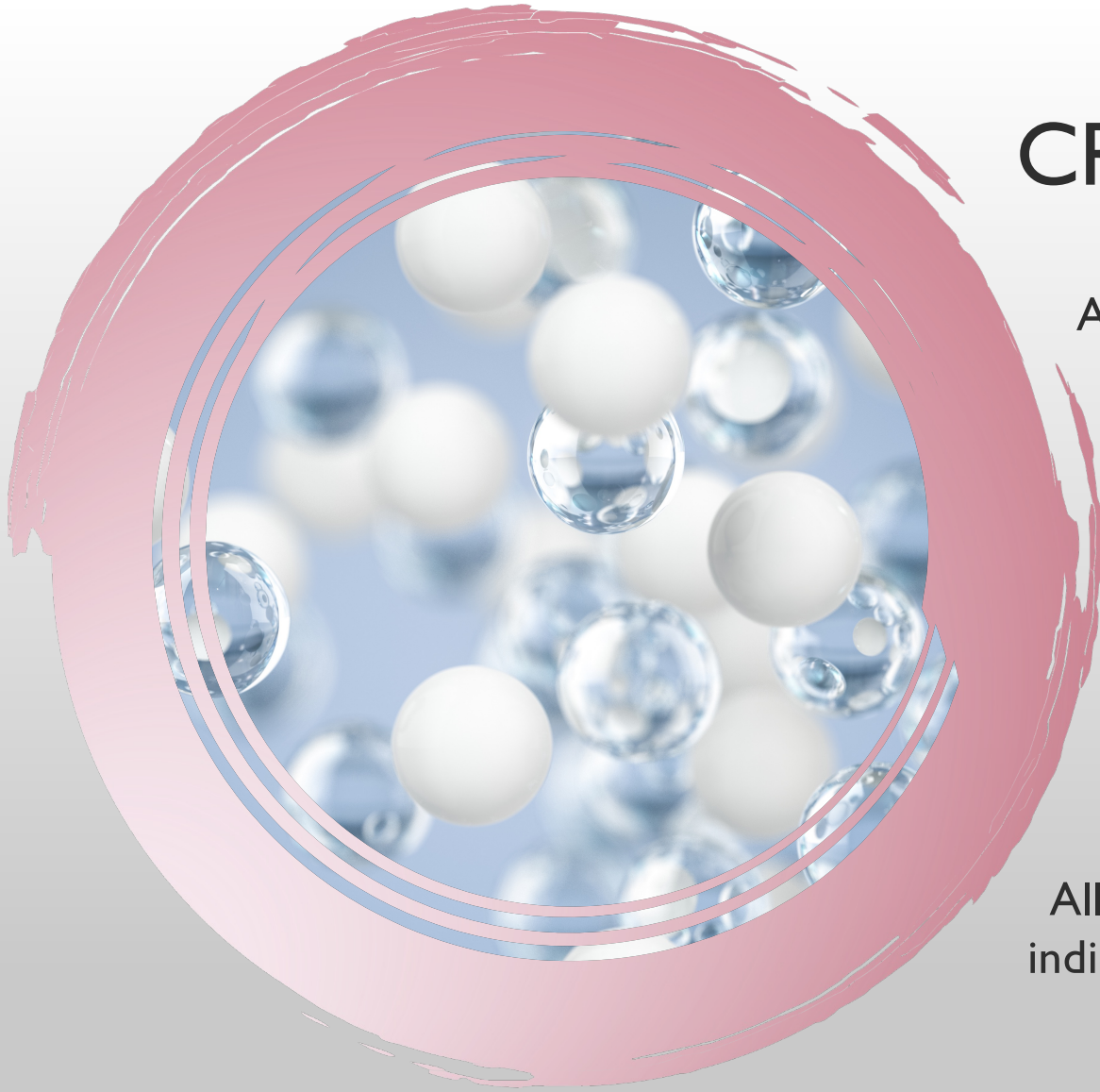


JHNEBP Non-
research
Evidence
Appraisal Tool



JHNEBP Synthesis
Process and
Recommendation
Tool

CRITICAL APPRAISAL



CRITICAL APPRAISAL

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)

Intervention (standardized telephone triage)	North, F. et al. 2017	O'Brien, L. et al 2017	Vitale, S. et al. 2019
Patient Satisfaction (post-intervention)	⊖	↑	↑
Quality of care (post-intervention)	↑	↑	↑
Any other outcomes of interest	Three of five AACN documentation standards were significantly improved with CDS implementation of telephone triage calls, which improved quality of care	Employee feedback towards the addition of telephone pathway was overall positive; expressed happiness, lower stress levels, and decreased chaos when handling phone calls between other duties	A monthly quality improvement meeting and opening schedules several months in advance improved the patient experience
Sample Size	50 triage documents	263 urgent calls and 758 nonurgent calls across all 5 practice sites	200 patients-initial survey; 215-second survey
Setting	N/A	outpatient surgical practice sites within Hershey Medical Center	urban-based, resident-faculty practice
Level of Evidence	III	III	III
Quality of Evidence	A	A	A

Intervention (standardized telephone triage)	Campbell, J. et al. 2014	Ismail, S. et al. 2013	Lake, R. et al. 2017
Patient Satisfaction (post-intervention)	↑	≠	↑
Quality of care (post-intervention)	↑	↑	⊖
Any other outcomes of interest	There was an increase in the number of primary care contact. Telephone triage might be useful in aiding in the delivery of primary care	Telephone triage intervention resulted in negligible impact on A&E attendance, but exhibited acceptable 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-comparative, 1 cohort study, 1 non-RCT study	Ten systemic reviews
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

EVIDENCE SYNTHESIS

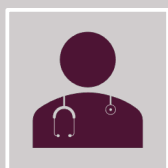
Evidence relating to telephone communication in the outpatient setting was synthesized based on outcome measures of patient quality of care and patient satisfaction using the JHNEBP Synthesis Process and Recommendation Tool

(Dang & Dearholt, 2018)



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

CLINICAL EXPERTISE

**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



RECOMMENDATIONS FOR PRACTICE CHANGE

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.

RECOMMENDED PRACTICE CHANGE CONT'

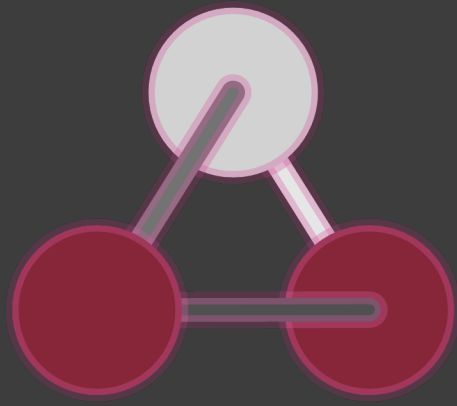
Therefore, it is recommended that:

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

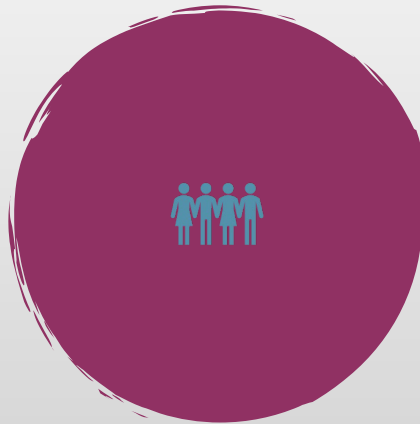


IMPLEMENTATION

SETTING AND POPULATION



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)

SWOT ANALYSIS

INTERNAL FACTORS

STRENGTHS (+)

Purpose of the clinic is to care for and improve a person's life and this project goal aims to do the same

Clinic serves adult patients a with blood cancer from age 19 and up, allowing numerous chances to implement project

Organizations mission and values statement align with project goals

Clinic manager is supportive of project idea

Standardized protocols and advice

WEAKNESSES (-)

Clinic is in a re-structuring phase and going through a lot of change-which is already challenging on the staff (resistance to change)

Lack of regulated approach for addressing patient's symptoms when they call the clinic

No clear route to directly speak with a nurse, possibly delaying care for the acutely ill patient

Absence of strong presentation and 'buy-in' skills

EXTERNAL FACTORS

OPPORTUNITIES (+)

Employees want to improve care for the patient

Employees value education and opportunity for new knowledge

Improve the care given to patients (retraining of workflow)

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

Create a user-friendly telephone communication pathway form designed so that any employee who answers the phone can easily utilize it

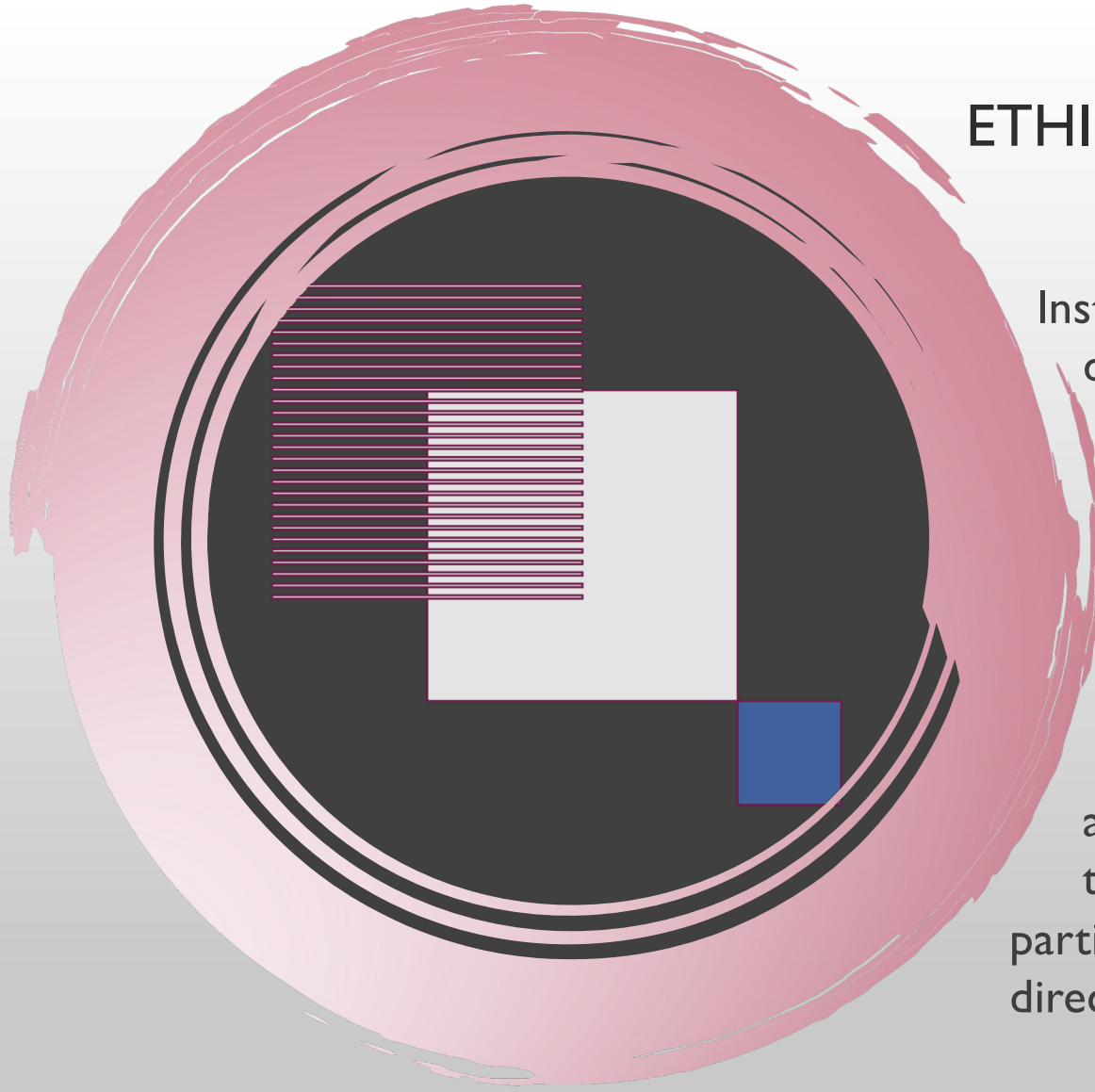
THREATS (-)

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

Current low retention/high turnover rates could impact intervention being utilized consistently

Utilizing a structured telephone communication pathway form will require commitment from staff and compliance could be difficult to ascertain

Resistance to change



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

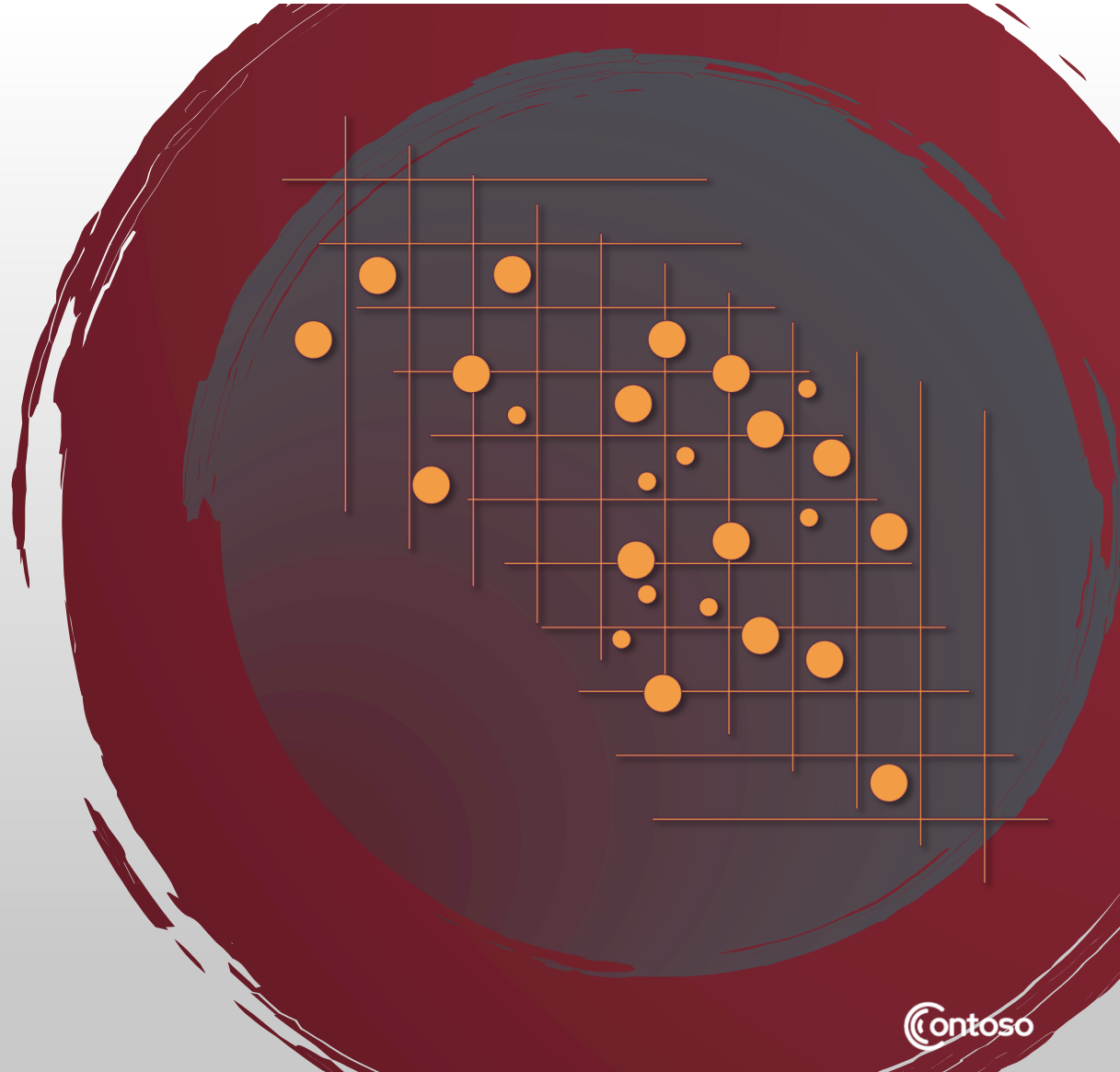
61-65

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

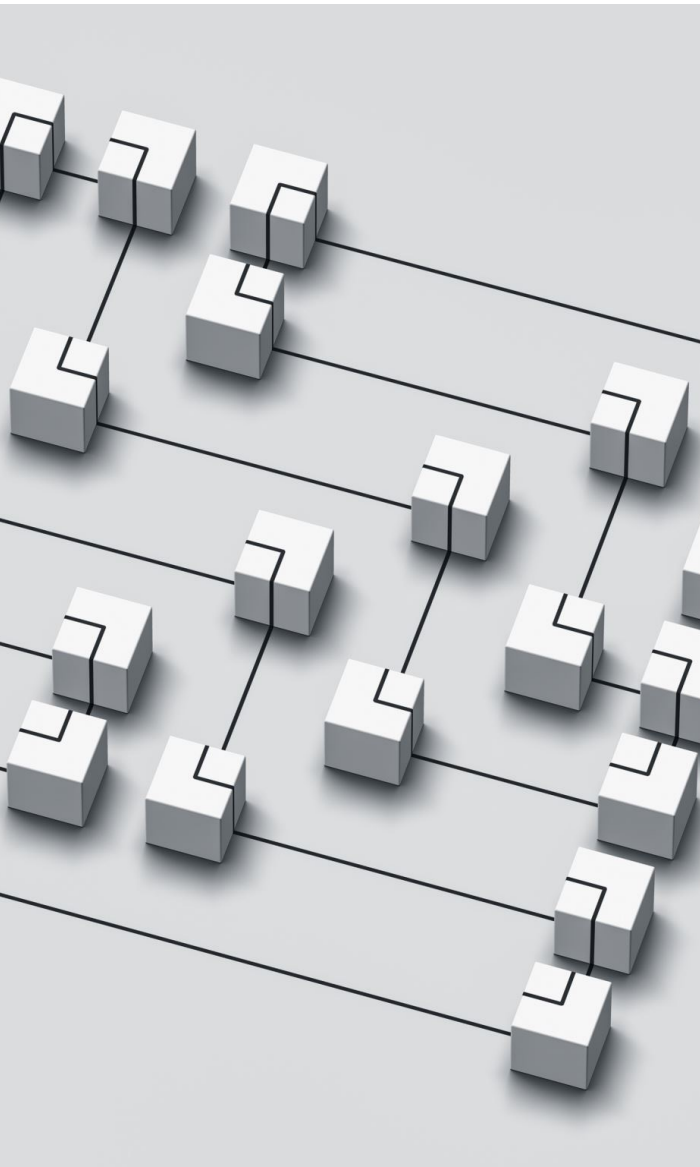
Outcome

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

Process

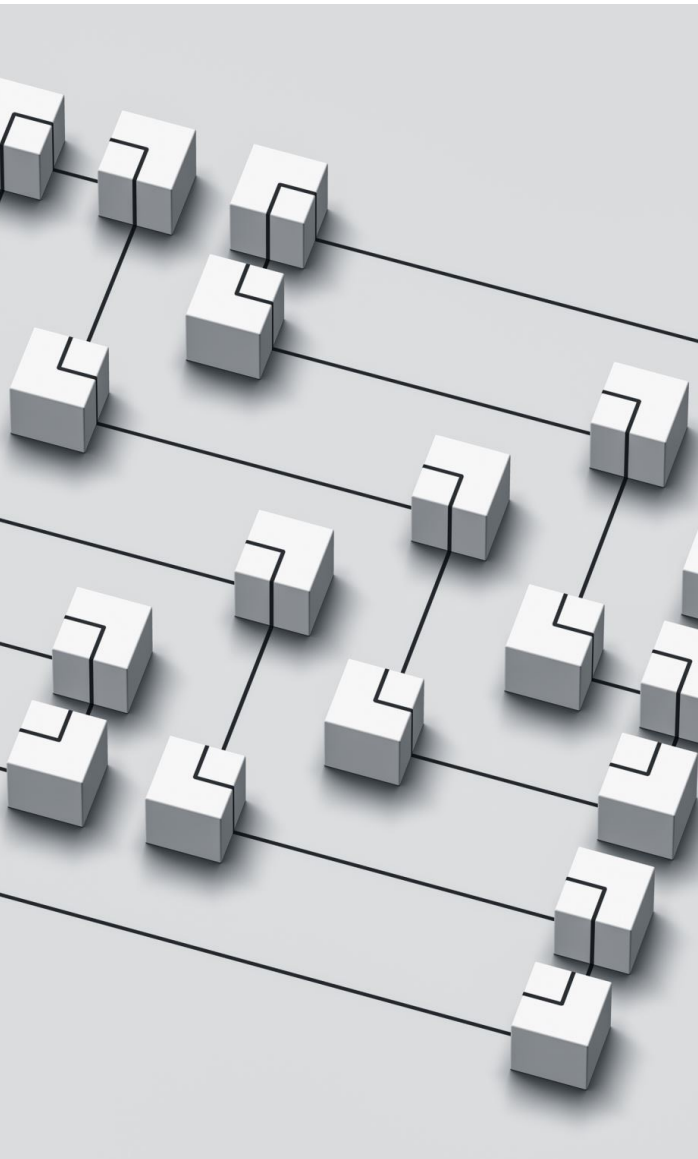
utilization of patient questionnaire at check-in process





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

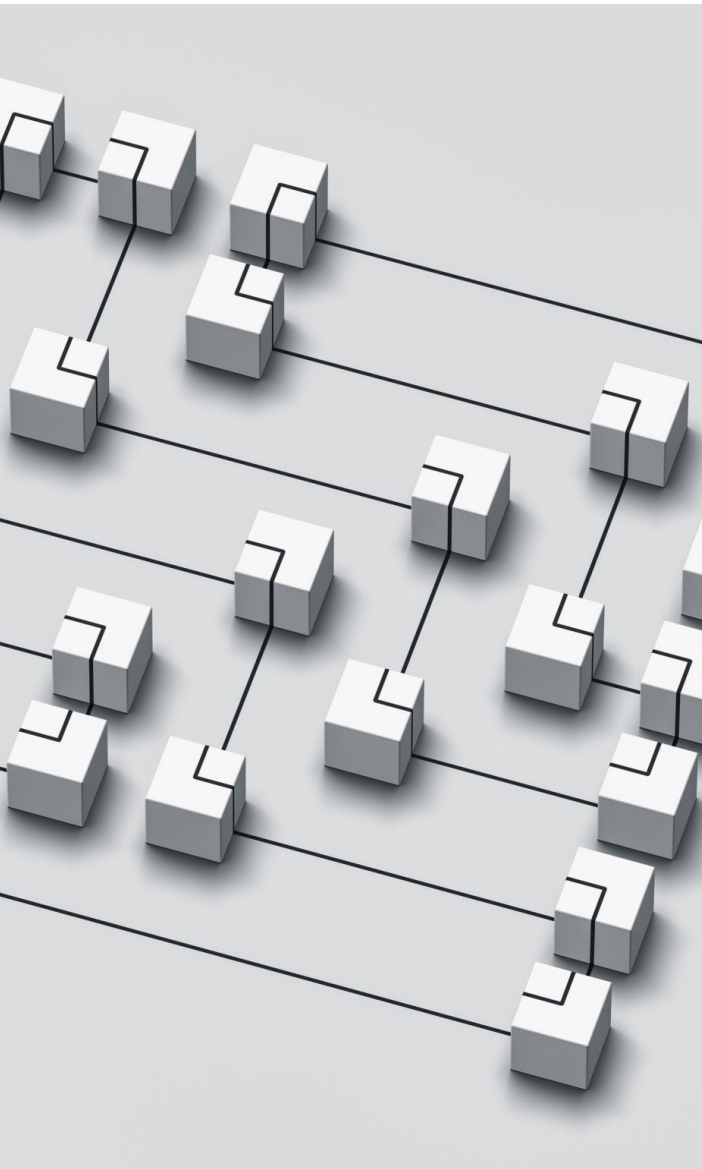
Demographic analysis for single variable: age

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

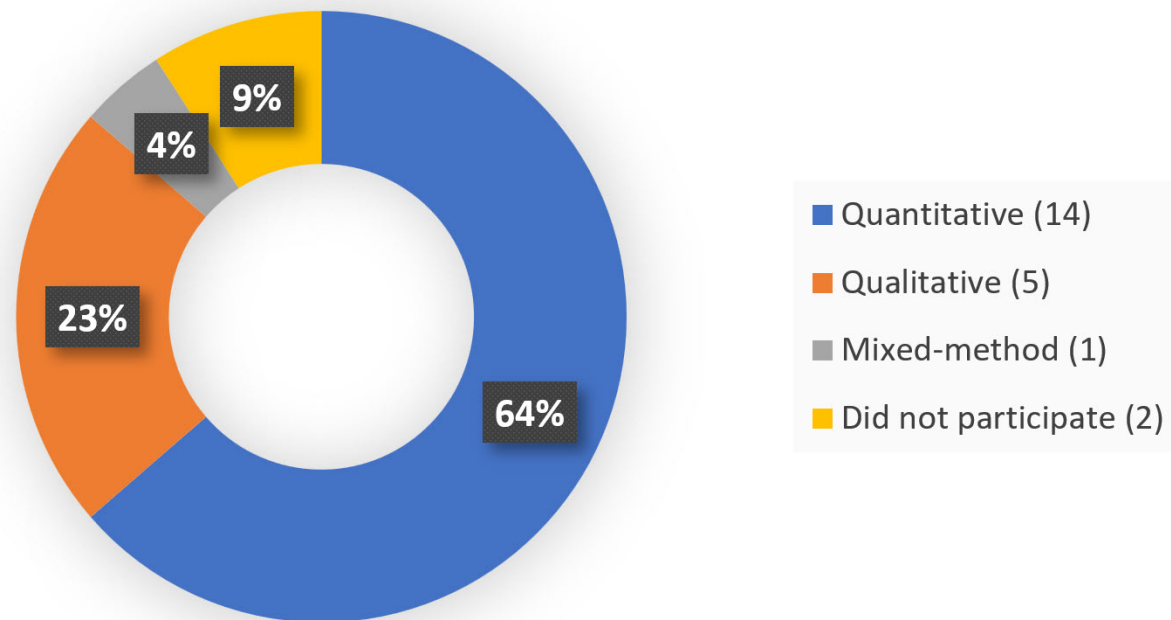
No PHI on data collection tool

Data transfer performed via UT Vault, a secure encrypted HIPAA/PHI certified file transfer application

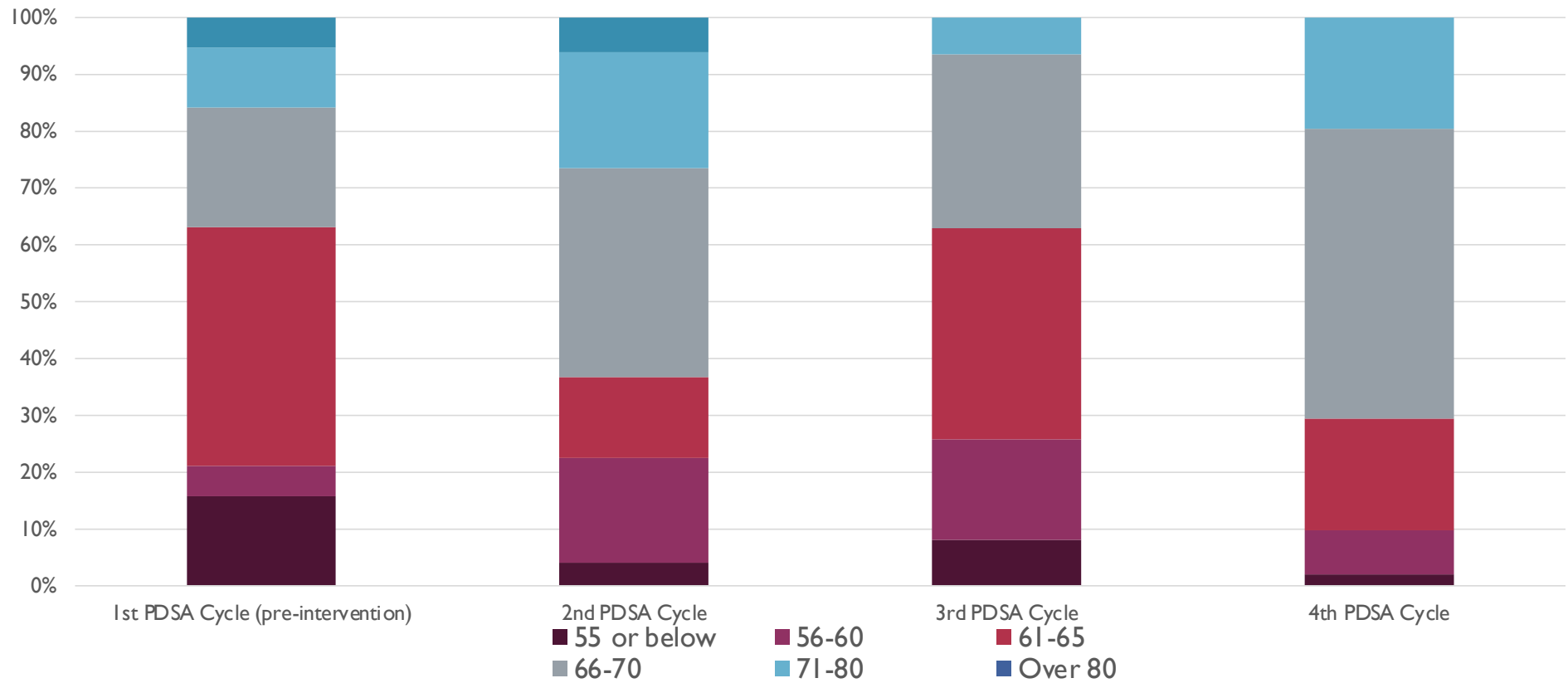


FINDINGS

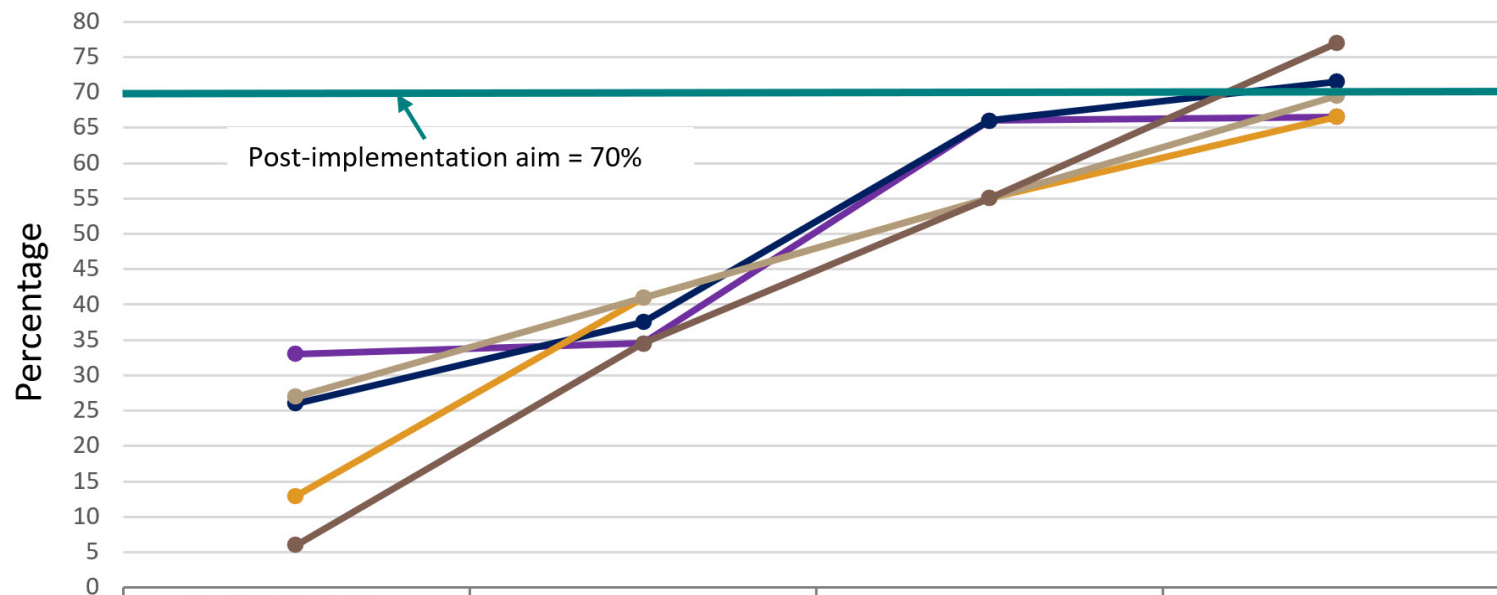
Distribution of Employee-Chosen Questionnaire Style



Age Distribution of Respondents by PDSA Cycle



Percentage of Categorical Change from Pre-Implementation through Post-Implementation



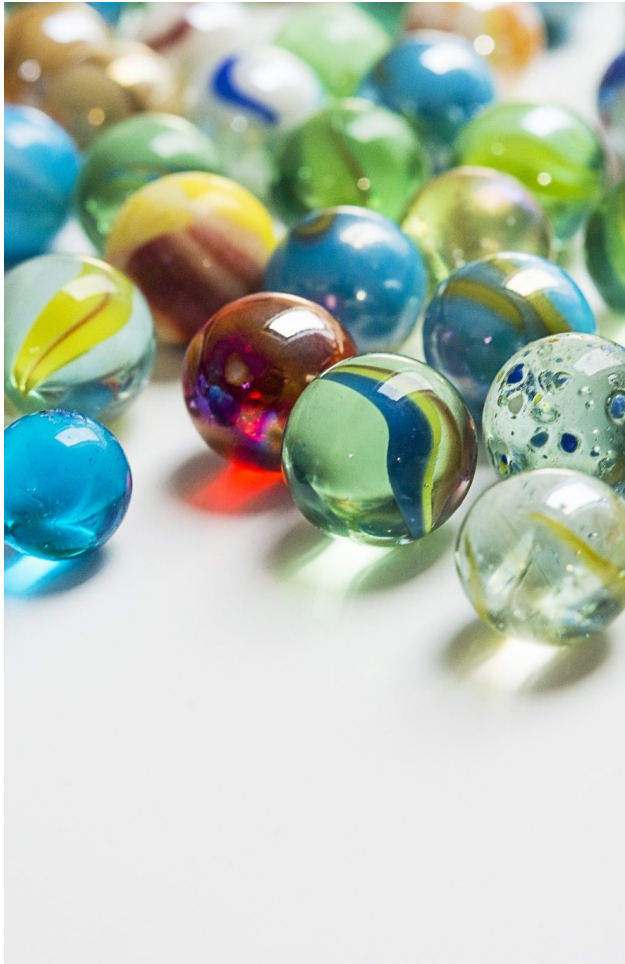
	1st PDSA Cycle (Pre-intervention)	2nd PDSA Cycle	3rd PDSA Cycle	4th PDSA Cycle
—●— Treated with respect	33	34.5	66	66.5
—●— Received accurate information	26	37.5	66	71.5
—●— My needs got met	13	41	55	66.5
—●— Care with improved	27	41	55	69.5
—●— Positive experience	6	34.5	55	77

—●— Treated with respect —●— Received accurate information —●— My needs got met —●— Care with improved —●— Positive experience



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

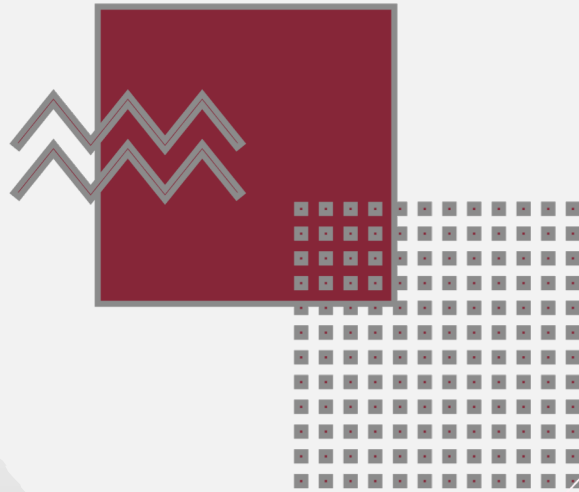
LESSONS LEARNED

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

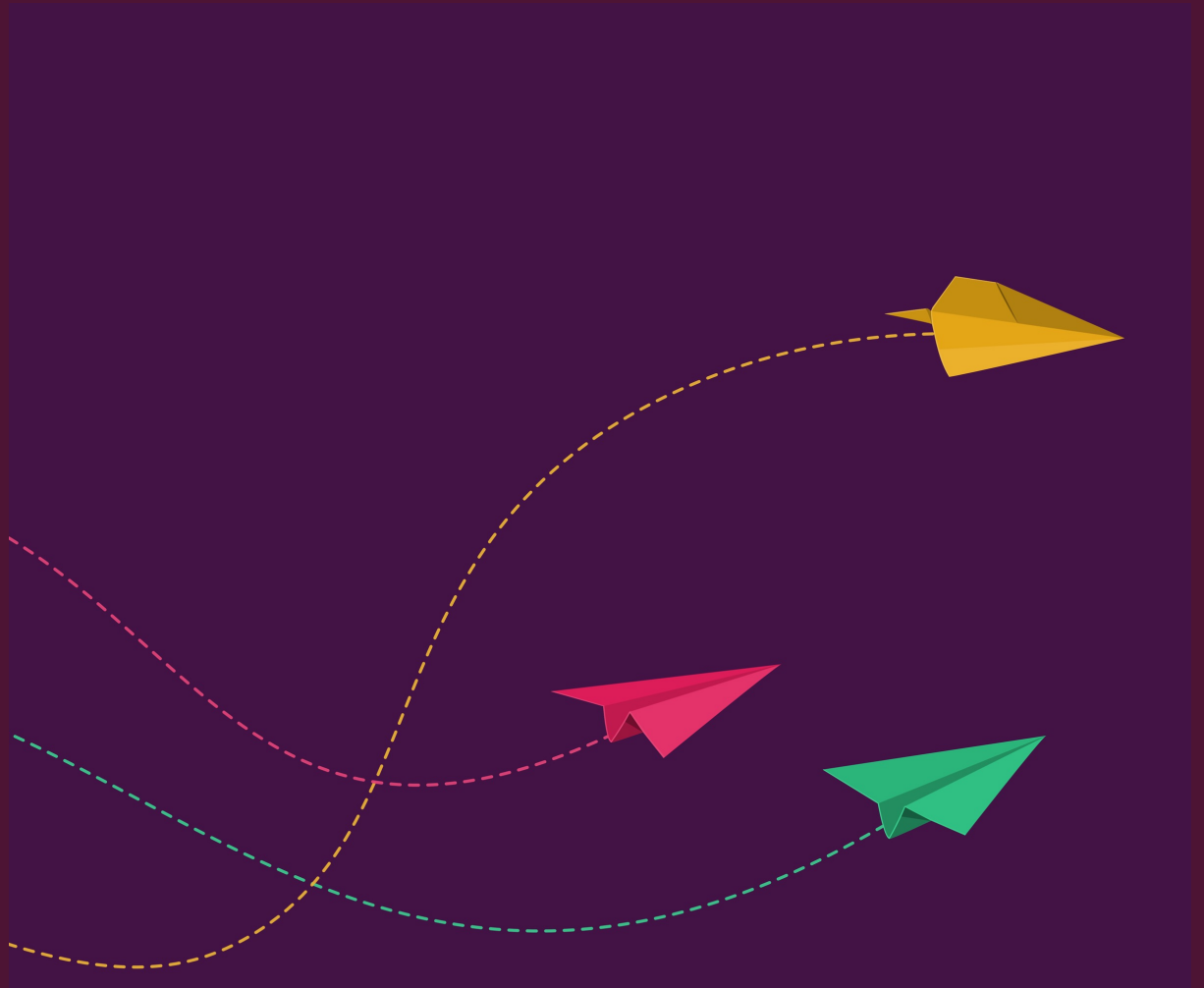
Visual cues throughout the project site were easy methods to promote awareness and encourage participation

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

