

**Improving the Quality of Medical Record Documentation at
NYCHHC/Queens Hospital**

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Project

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Table of Contents

Abstract
Problem Identification
Project Question
Search Methods.....
Review of Literature
Project Rationale
Project Framework
Project Context.....
Interventions.....
Tools.....
Data Collection.....
Ethics and Confidentiality.....
Analysis.....
Conclusion.....
References
Appendix.....

Abstract

Problem: In the Adult Primary Care Clinic at NYCHHC/Queens the problem list in EPIC was missing significant medical problems and chronic medical conditions.

Background: A poorly updated problem list in EPIC leads to ineffective communication within the healthcare team, incorrect linking of medications to the wrong diagnoses, insurance denials for medication coverage, and poor medication adherence, which compromises patient safety.

Methods. A quantitative design was utilized for this PI project. Pre- and post-tests were administered before and after the educational activity: “Medical Record Documentation Requirements”. Thirty Participants (10 Nurse practitioners, 10 Medical Doctors, and 10 Medical Residents) participated in the educational activity and completed pre and post-questionnaires. Purposeful sampling was used. Thirty chart reviews were completed to analyze the effect of this intervention, 10 charts per provider type- Nurse Practitioners, Medical doctors, and Medical Residents. The SPSS program was used for statistical analysis.

Intervention. Education was provided about the Guidelines from the Center for Medicare and the National Committee on Quality Assurance. The training focused on 21 essential elements for medical record documentation, preferred documentation style- problem-based charting, and the techniques for updating the problem list in EPIC.

Results. The McNemar Test showed a statistically significant change (the p-value is 0.012) in the knowledge level following the educational program when compared with the knowledge level before the beginning of the educational program. Statistically significant changes in documentation practices were noted after the educational activity. Before the intervention, the problem list was updated in 17 charts out of 30, and after the intervention in 23

charts out of 30, leading to a P value of 0.030. Problem-based charting utilization significantly increased as well after the educational activity from 11 charts to 20 charts out of a total of 30 charts, P value of 0.022.

Conclusion

Significance to Practice Site and Systems. Provider education on medical record documentation requirements, evidence-based strategies, and the latest guidelines from the National Committee on Quality Assurance improves documentation practices and leads to accurate updates of problem lists in EPIC and utilization of problem-based charting.

Implications for Nursing Practice/Further Research. Ongoing provider education on proper documentation practices, evidence-based strategies, and the latest guidelines from the National Committee on Quality Assurance should be offered to medical providers to improve provider communication, medication adherence, disease management, and patient safety.

Keywords: Medical Record Documentation Requirements, EPIC.

**Improving the Quality of Medical Record Documentation at
NYCHHC/Queens Hospital**

The medical directors of the Adult Primary Care Clinic (APC) in the Ambulatory Care Department of Queens Hospital Medical Center had numerous complaints about documentation deficiencies among all the disciplines- medical doctors, nurse practitioners, medical residents, and physician assistants. The most common issues were delays in chart completion and inaccurate documentation of medical conditions in the “Problem List” in EPIC (Electronic Patient Information Charting), which led to issues with patient management, insurance coverage, and reimbursement for billed services.

The root cause analysis of the current issue showed multiple factors causing this problem. The first barrier was poor standardization of required documentation for medical providers at Queens Hospital. The second reason was related to the heterogeneity of workflows- some providers used problem-based charting (integrated workflow) and others used independent charting with separate coding entries.

The third barrier was unstructured and short RN-focused orientation for nurse practitioners with limited guidance on the standards of medical documentation. Another contributing factor was that guidance in EPIC training for Nurse Practitioners for writing medical notes is provided by a registered nurse. The registered nurse does not have knowledge, education, and training related to proper documentation requirements at the nurse practitioner level. Nurse practitioners go through rigorous education and training before practicing as

independent medical providers (AANP, 2022). Therefore, orientation in EPIC on medical record documentation provided by a registered nurse is not an optimal choice.

Inadequate documentation, and inaccurate “Problem List” documentation, cause denials of medical services from insurance companies, delays in medication coverage for patients; interference with treatment adherence; disease management, patient safety; and provision of cost-effective care (Bruce *et al.*, 2023; Hwang *et al.*, 2024; Jedwab *et al.*, 2022., King, 2022; Lebrun *et al.*, 2023; Seligson *et al.*, 2021; Steele, 2022). The Joint Commission stresses that patient safety is the utmost priority for healthcare providers (The Joint Commission, 2023). The newly hired and currently employed Queens Hospital Nurse Practitioners would benefit from more clarity and guidance on what information must be included in the chart to enhance patient care and safety, promote collaboration and continuity of care, justify the billing, and provide cost-effective care.

To address the problem of poor-quality documentation, improve medical providers’ knowledge of standards for required documentation, and increase providers’ comfort level with documentation, a quality improvement project will be implemented. An educational activity on “Standards for Medical Records Documentation” will be provided to the providers in the Primary Care Clinic, such as Medical Doctors, Physician Assistants, Medical Residents, and Nurse Practitioners at NYCHHC/Queens Hospital Medical Center.

PICOT Question

In the ambulatory care department in Queens Hospital Medical Center will an evidenced-based educational activity on “Standards for Medical Records Documentation”, compared to no formal documentation training, improve medical providers’ knowledge level of the

documentation requirements, improve problem list updates in EPIC, and increase utilization of problem-based charting within five weeks?

Search Methods

The search methods utilized in this project included the keywords: “Medical Record Documentation Requirements, EPIC”. CINAHL, PubMed, Embase, and UpToDate Databases were utilized for the literature review. There were one hundred and fifty-four articles available from PubMed, 100 articles from CINAHL, UpToDate had no articles on documentation standards, and Embase had nine hundred forty-five articles. Twenty-seven articles were selected for this project. The inclusion and exclusion criteria were identified as follows: Inclusion criteria: Language-English articles and content-documentation requirements for medical providers in the US. Exclusion criteria: Language-Non -English articles.

Review of Study Methods

A review of the study methodologies in the discussed literature led to the development of the emerging themes that are relevant to this DNP project. The literature review included:

- Systematic reviews
- Quantitative studies that used surveys and paper/mail questionnaires.
- Qualitative interviews of nurse practitioners
- Cross-sectional observational study
- Descriptive, cross-sectional survey
- Scope review
- Regulatory guidelines
- Studies with Plan-Do-Study-Act improvement methodology

The study methods listed above are relevant to this DNP project because they provide scientific evidence and guidance on documentation practices, indicate preferred workflow for documentation, billing, and coding; support effective interventions and participation in quality improvement processes; and strongly emphasize having educational programs and in-service training on standards for medical record documentation((De Leeuw *et al.*, 2020; Jedwab *et al.*, 2022; Lorenzetti *et al.*, 2018; Lebrun *et al.*, 2023; Grek *et al.*, 2022; McGrath *et al.*, 2022; Bahouth & Esposito, 2009; Auffermann *et al.*, 2020; Poghosyan, *et al.*, 2022). Cochrane Handbook (2022) for Systematic Reviews confirms these types of studies produce different levels of scientific evidence and can be successfully utilized in research or quality improvement projects (Higgins *et al.*, 2022).

Review Synthesis

The Center for Medicare Services emphasizes the importance of complying with medical record documentation requirements (CMS, The Medicare Learning Network® and the Comprehensive Error Rate Testing (CERT) Part A and Part B (A/B) and Durable Medical Equipment (DME) Medicare Administrative Contractor (MAC) Outreach & Education Task Force, 2023). The American Academy of Nurse Practitioners (AANP) (2022) emphasizes that Primary Care Providers, including Nurse Practitioners, must provide “accurate documentation of patient status and care, and maintains accurate, legible and confidential records...”. AANP 2022 Standard of Care states that nurse practitioners combine the roles of “provider, mentor, preceptor, educator, researcher, advocate, and interdisciplinary consultant”. Moreover, AANP 2022 emphasizes that nurse practitioners are licensed, autonomous providers, who contribute to patient care as “team leaders” in the provision of health care. NPs interact with different disciplines and patients' families to provide patient-centered, comprehensive, quality care and

promote a safe patient environment. The National Committee for Quality Assurance (NCQA), 2018 provides detailed recommendations and offers twenty-one essential standards and six core standards for documentation in medical records.

Common Issues with Incorrect/Incomplete Medical Record Documentation.

Current evidence shows that issues with proper electronic record documentation are common in current healthcare (King, 2022; Steele, 2022, Hwang *et al*, 2024). The most commonly reported issues with documentation are delays in charting, disagreements between coded diagnosis and the progress note, poorly documented patient data, absence of subjective or objective data, incorrectly linked diagnoses, and chart cloning (King, 2022; Hwang *et al.*, 2024; Lorenzetti *et al.*, 2018).

Literature review confirms that incomplete or inaccurate documentation leads to the denial of medical services due to a lack of medical necessity, which negatively affects medication adherence and disease management (Bruce *et al.*, 2023; King, 2022; Jedwab *et al.*, 2022., Seligson *et al.*, 2021). In addition, incomplete documentation negatively affects communication between the healthcare providers, and continuity of care, and poses a great risk to patients' safety (King, 2022; Steele, 2022, Hwang *et al*, 2024). For example, Tillman *et al*, 2021 report that adverse drug reactions (ADRs) frequently are unreported or wrongly documented in the chart, even when they are life-threatening. Researchers emphasize that inadequate reporting leads to future prescribing issues and the reoccurrence of adverse drug reactions (Tillman *et al.*, 2021).

Poor documentation also hurts the financial area (Seligson *et al.*, 2021). Patient encounters are usually under-coded; often indicating a level of service that does not represent the provider's labor (Bruce *et al.*, 2023). When there is insufficient medical decision-making (MDM)

documentation, it will ultimately cause a loss of revenue (Bruce *et al.*, 2023; Seligson *et al.*, 2021;). Moreover, inadequate documentation and delayed chart completion may lead to a “time-consuming and costly lawsuit” and also cause financial burdens to the organizations (Steele, 2022).

Inadequate Orientation for Nurse Practitioners. Research proved that deficiency in proper documentation arises from a lack of proper orientation for nurse practitioners and poor onboarding practices (Auffermann *et al.*, 2020; Bullock *et al.*, 2022; McGrath *et al.*, 2021; Owens, 2019). Nurse practitioners need a structured onboarding process (American Society of Clinical Oncology, Clinical Practice Committee's APP Task Force., 2020; Bahouth & Esposito, 2009; Grek *et al.*, 2022; McGrath *et al.*, 2022). Evidence-based strategies for effective orientation include delivering orientation content in a timely fashion to hires, offering didactic content to help to learn specialty practice, and tailoring the orientation to a specific department (American Society of Clinical Oncology, Clinical Practice Committee's APP Task Force., 2020; Auffermann *et al.*, 2022; Grek *et al.*, 2022). It is strongly recommended to provide educational sessions during the NP orientation and as needed on different topics, such as required documentation, and preferred documentation methods, mentorship, and current billing practices (Bahouth, & Esposito-Herr, 2009; Auffermann *et al.*, 2020; Heale *et al.*, 2018; Hoffman, 2017; McGrath *et al.*, 2021; Owens, 2019; Poghosyan *et al.*, 2022; Lebrun *et al.*, 2023 & Bullock *et al.*, 2022).

Moreover, evidence suggests that twelve weeks or ninety-day orientation is a highly efficient length of orientation for Nurse Practitioners (McGrath *et al.*, 2022; Grek *et al.*, 2022; Bahouth & Esposito, 2009). Current evidence shows that educational programs and in-service training greatly affect the confidence, satisfaction, and performance of NPs (Grek *et al.*, 2022;

Bullock *et al.*, 2022; Auffermann *et al.*, 2020; Heale *et al.*, 2018; Hoffman, 2017; Owens, 2019; Poghosyan *et al.*, 2022).

Essential Charting Elements. The National Committee on Quality Assurance 2018 emphasizes the essential guidelines and the twenty-one essential charting elements. The six core elements indicate that:

- Significant illnesses and medical conditions should be listed on the problem list. Medication allergies and adverse reactions must be noted in the medical record. If there are no allergies or history of adverse reactions, it should be noted in the chart.
- Past medical history must be easily identified and must include serious accidents, surgeries, and illnesses.
- For children and adolescents (18 years and younger), past medical history relates to prenatal care, birth, operations, and childhood illnesses.
- The working diagnoses should be consistent with the findings.
- The treatment plans should be consistent with diagnoses.
- Documentation must confirm that there is “no evidence that the patient is placed at inappropriate risk by a diagnostic or therapeutic procedure”.

Research has proven proper documentation is an important piece in the provision of standards of medical care (Steele, 2022). Correct documentation helps with improving patient care and safety, protecting medical providers, reducing improper payments, and following federal rules and regulations (Steele, 2022).

Integrated Charting. A recent research study completed by Hwang *et al.*, 2024 proves that integrated (problem-based) charting leads to more accurate patient diagnoses and correct

billing, coding, and reimbursement. Problem-based charting differs from independent charting. The problem-based charting allows providers to use coded diagnoses to narrate a note. On the contrary, independent charting requires separate entries for the diagnosis code, which may lead to inaccurate diagnoses or discrepancies between the billed services and supporting documentation (Hwang *et al.*, 2024). Tanny *et al.*, 2023 also confirm that workflow affects documentation efficiency and patient outcomes.

Educational In-Service Training on Documentation. A systematic review by Lorenzetti *et al.*, 2018 indicates that educational interventions, reminders, audit/feedback, and templates are effective approaches for improving providers' documentation. Jedwab *et al.*, 2022 strongly recommend targeted interventions, quality improvement programs, and educational in-service to address discipline-specific challenges with charting. De Leeuw *et al.*, 2020 pinpoints that organizational leadership and medical and nursing administration must tailor educational interventions to address the learning needs of the providers as needed on an ongoing basis.

Proper documentation ensures prescription coverage from insurance companies, promotes treatment adherence, and prevents hospitalizations (Lebrun *et al.*, 2023; The National Committee for Quality Assurance (NCQA), 2018; Poghosyan *et al.*, 2022; Grek *et al.*, 2022; Bullock *et al.*, 2022; Auffermann *et al.*, 2020, Heale *et al.*, 2018). Indeed, knowledge of proper documentation and billing practices promotes the provision of cost-effective care (American Nurses Association, 2010; Clinical Practice Committee's APP Task Force, 2020; Owens, 2019; Hoffman, 2017).

Sample Template for Medical Record Documentation

A systematic review by Lorenzetti *et al.*, 2018 recommends different strategies to improve provider documentation, including the utilization of an educational tool or a prepared

template. The U.S. Department of Health & Human Services (HHS) 2023 offers an educational tool from the Medicare Learning Network. The educational tool offers a variety of sample templates for outpatient visits. These templates are available at <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/preventive-services/medicare-wellness-visits.html>. The Medicare Learning Network also offers an educational video to help providers understand the differences between the outpatient visits and billing requirements and documentation for each visit. The U.S. Department of Health & Human Services 2023 provides an optional recommendation that medical providers perform and document the assessment of social determinants of health. Ulysse *et al*, 2023 report that approximately fifty percent of the providers currently provide documentation for social determinants of health.

Project Aims

This project aims to standardize knowledge of documentation for Medical Providers in the Primary Care Clinic at Queens Hospital, to improve the quality of medical records documentation, specifically address the accuracy of the Problem List in the medical records in EPIC, and improve utilization of problem-based charting. Current documentation practices lack education and training on the required standards for medical documentation, preferred documentation methods, and web resources for updated templates for medical record documentation in the Primary Care Clinic.

Project Objectives

1. Negotiating approval from hospital leadership to improve the documentation process at Queens Hospital before the project implementation period. The writer met with the Chief Nursing Officer (CNO), medical director, nursing administration, and the Staff Development Team and discussed the implementation of this project.

2. Conduct presentations with the Staff Development Team to garner support to improve the Medical Providers' documentation and include educational activity- in-service training on "Standards for Medical Record Documentation". The writer will present a PowerPoint Presentation and discuss and suggest the program for future NP orientation/education programs.
3. Address common pitfalls in medical documentation. Prepare a PowerPoint Presentation to educate the Medical Providers in the Primary Care Clinic at Queens Hospital. The PowerPoint will include the Standards for Medical Record Documentation based on the Guidelines from The National Committee for Quality Assurance, 2018.
4. Provide a sample format for proper medical documentation for ambulatory care visits, for example, "Documentation Format for Annual Wellness Visit" recommended by the Center for Medicare (U.S. Department of Health & Human Services, 2023).
5. Provide resources or educational tools for Ambulatory Care Providers, including nurse practitioners, on recommended formats for documentation in medical records during outpatient visits.
6. Improve Medical Providers' knowledge about the standards for medical documentation, preferred documentation charting format, and comfort level with documentation.

Application of Major Tenets of Implementation Framework to DNP Project

Plan, Do, Study, Act (PDSA) model is a simple blueprint for structuring thoughts and data methodically before taking any action. PDSA cycle helps avoid changes that are based on incorrect or anecdotal data (AHRQ, 2020). This model helps organizations guide the teams on the progress of the improvement project through structured stages: Plan, Do, Study, Act (AHRQ, 2020).

Implementation Framework

The PDSA Cycle, (Plan-Do-Study-Act), will be used for this project. PDSA is a process of continuous learning for continuous improvement of the process, product or service. PDSA was introduced by Dr. Walter Shewhart in New York, in the famous Bell Laboratories in 1920s.

Plan

Current issues of medical record documentation will be investigated, such as limited education on standards for required documentation, preferred documentation format, the significance of proper documentation, Medical Providers' competence level with documentation, and its effect on patients' outcomes. An educational in-service training on Standards for Medical Record Documentation will be provided by this DNP candidate. The in-service will cover twenty-one elements for medical record documentation and emphasize six core elements, as suggested by the National Committee for Quality Assurance, 2018.

Do

The plan will be executed and set it in motion. During this implementation, the processes and outcomes will be monitored to watch what happens. A PowerPoint presentation will be offered and nurse practitioners will be educated about the Standards for Medical record documentation, preferred documentation format, resources, and the educational tools for documentation for outpatient visits. Pre and post-tests will be administered before and after the educational activity to capture the effect of the intervention. Chart Review Pre and Post-intervention will be completed to evaluate the effect of the intervention and to evaluate if the problem list has all significant illnesses and medical conditions.

Study

After implementation the results will be studied: 1. The knowledge of the required standards for medical record documentation and Medical Providers' comfort level with

documentation and application of the acquired knowledge to practice- the problem list will be evaluated and chart review of thirty medical records will be completed before and after the in-service.

Act

What was concluded from this cycle? Did the implementation process work? And if it did not work, what can be done differently in the next cycle to address that? If it did work, will it be spread and utilized in future orientation and In-service programs? (AHRQ, 2020).

Project Context

Setting

NYCHHC/Queens Hospital Medical Center is a Public Hospital, that is operated by the New York City Health and Hospital Corporation (NYCHHC) and is located in the urban area, in the middle of Queens, New York. The institution is publicly funded.

Organizational Structure

NYCHHC/Queens Hospital is a part of the New York City Health and Hospital Corporation (NYCHHC) System and is one of the 11 hospitals. Currently, the health care system has no financial issues and is providing a variety of health services to the public in New York City. Many uninsured, low literacy level patients and foreign immigrants with financial problems come to this institution to receive free or low-cost health care. Queens Hospital provides inpatient and outpatient services to a diverse patient population.

The Ambulatory Care Department consists of many outpatient clinics such as a Diabetes Treatment Center, Primary Care Clinic, Treat to Target Clinic, Pediatric Clinic, Early Childhood Services, Psychiatry, Ophthalmology, Dentistry, Urology, Nephrology, Oncology/Hematology, Virology, Pulmonary Clinic, Endocrine Clinic, Cardiology Clinic, Pain Management and many other clinics. Each clinic has a daily schedule of patients assigned to different providers such as Medical Doctors, Nurse Practitioners, or Physician Assistants. Currently, NYCHHC/Queens Hospital has fifty-six employed nurse practitioners, who serve in the outpatient and in-patient areas. The number of patients seen per clinic per day varies based on the specialty, for example: The Primary Care Clinic provides services daily to almost four hundred patients.

The project will be implemented in the Adult Primary Care Clinic (APC) in the Ambulatory Care Department. Currently, there are fifteen attending physicians, nine nurse practitioners, one physician assistant, and sixty-eight medical residents in the Adult Primary Care Clinic. The nurse practitioners are certified in different areas of practice: Family Health and Adult-Geriatric.

Population of Interest

Direct Population. In the Ambulatory Care Department at Queens Hospital Medical Center in collaboration with the Staff Development Department and Nursing Administration, the following interventions will be implemented for this Performance Improvement Project. The educational activity, training on “Required Standards for Medical Record Documentation” will be provided to the Medical Providers in the Ambulatory Care Department. A pre and post-survey will be administered to approximately thirty medical providers in the Primary Care Clinic. The Nurse Practitioners in the Ambulatory Care Department work in various Ambulatory Care clinics such

as Neurology, Gastroenterology, Adults Primary Care Clinic, Pediatric Primary Care clinic, Virology Clinic, Geriatric Clinic, Endocrinology Clinic, Cardiology Clinic, Women's Health Clinic, Hematology/Oncology, Pain Management, Nephrology Clinic, and many others.

Approximately sixteen percent hold a DNP degree, eighty-four percent hold a Master's Degree in Nursing. MD and NP populations include US graduates as well as foreign graduates.

There are many bilingual nurse practitioners and medical doctors. There is a bilingual Spanish-speaking PA in the Adult Primary Clinic (APC). There are medical providers, who were born in New York, as well as in Africa, Jamaica, Nigeria, Uzbekistan, Tajikistan, Filipinos, India, and other countries. Both male and female Medical Providers work at this institution. Some medical providers are new graduates- new attendings, new Nurse Practitioners, and there are experienced medical doctors, physician assistant, and nurse practitioners with more than twenty years of experience.

Inclusion Criteria. The medical providers such as Medical Doctors, Nurse Practitioners, and Physician Assistants, who are currently employed by NYCHHC/Queens Hospital and practice in the Adult Primary Care Clinic will be included in this project. The participants must meet the following inclusion criteria:

1. Assigned work area – Ambulatory Care Clinic at QHC/Primary Care Clinic

Exclusion Criteria

1. Primary Care Providers who are on leave of absence or resigned

Key Stakeholders

The key stakeholders are the Nurse Practitioner with a Master Science in Nursing (MSN) Degree, a Family Nurse Practitioner (FNP), an Adult Primary Care Clinic, a Chairperson of the Retention, Recruitment and Recognition Council (R3 Council), and a member of the Nurse Practitioner Council (NP Council) at Queens Hospital Medical Center, the Staff Education Department at Queens Hospital Center, the Chief Nursing Officer (CNO) of the Queens Hospital, the Assistant Director of Nursing (ADN) of the Ambulatory Care Department at Queens Hospital, the Medical Director of the Ambulatory Care Department, the medical directors of the Adult Primary Care Clinic, Medical Attending Physicians, Nurse Practitioners at NYCHHC/ Queens Hospital, Physician Assistant, NP Council, Retention Recruitment and Recognition Council at Queens Hospital Center.

The clinical mentor is a nurse practitioner with a Doctor of Nursing Practice Degree, with experience in Primary Care and Cancer Clinics. She is also a Chairperson for the NP Council. The clinical mentor has extensive experience at Queens Hospital and as a chair of the NP Council is highly motivated to address the issue and improve the documentation process at Queens Hospital. The CNO of the hospital strongly recommends starting this PI project to improve medical providers' knowledge and comfort level with documentation requirements, ensure patient safety, and promote cost-effective care. The CNO and the Assistant Director of Nursing in the Ambulatory Care Department are willing to openly discuss the issue, provide guidance, and support the PI project implementation at Queens Hospital. The Staff Development Department at Queens Hospital is willing to collaborate in the implementation of this project for Medical Providers.

The approval was obtained from the CNO of Queens Hospital and the NYCHHC Nursing

Research Committee to implement the PI project at NYCHHC/Queens Hospital (Appendix A & D).

Interventions

Educational activity on Required Standards for Medical Documentation will be provided. The guidelines for Standards for Medical Record Documentation from the National Committee on Quality Assurance 2018 will be utilized - no permission is needed considering the purpose of the guidelines for Quality Assurance and open statements in the guidelines that the organizations may use these recommendations. Twenty-one elements of medical documentation and the significance of proper medical documentation will be addressed based on the latest literature review. The latest research data will be shared and problem-based charting will be emphasized. “Problem-based charting leads to more accurate billing and coding” (Hwang *et al.*, 2024).

Permission was obtained from the CNO of Queens Hospital and the Central Office to provide this educational activity and chart review. An email was sent via work email to the Medical providers in the Adult Primary Care Clinic. In-person educational activities was scheduled in collaboration with the Medical Administration, Nursing Administration, Nurse Practitioners, and Staff Development Department. During the educational activity, the handouts, printed guidelines from the National Committee on Quality Assurance 2018, twenty-one standards for medical record documentation, were distributed to the trainees. Pre and post-questionnaire/survey were administered to assess providers’:

1. Knowledge of standards of medical record documentation requirements
2. Comfort level with documentation

After completion of educational activities, another chart review will be completed on thirty

medical records to evaluate if the Problem List has all significant illnesses and chronic medical conditions and if problem-based charting is being utilized for documenting in EPIC.

The Planning Project Team

The Planning Project team included the writer, a nurse practitioner from the Adult Primary Care Clinic; a Project Mentor, a doctor of Nursing Practice, a nurse practitioner, from the Hematology/Cancer Clinic; and the attending physician, MD, who is in charge of all the PI Projects in the Adult Primary Care Clinic. The training was offered to all medical providers in the Adult Primary Care Clinic.

Mandatory attendance was recommended and arranged in collaboration with the Nursing Administration, and the medical director of the Primary Care Clinic. The providers in the Adult Primary Care Clinic (newly hired and currently employed)- participated in this educational training. The Nursing Manager and the Medical Director –authorized specific times for the Providers to attend the training, the in-service was offered on Wednesdays at 10 AM during the Departmental Meetings and on Fridays during “Lunch and Learn” time.

Resources and Timeline

WebEx, computer, SPSS program, and printer were utilized for this project. This DNP student asked permission to use a computer, email, printer, and WebEx at Queens Hospital to communicate with medical providers in the Primary Care Clinic. DNP students have access to the SPSS program through the school- Touro University Nevada. The project was implemented within the following 5 weeks:

Week 1: February 28–March 5

Week 2: March 6–12

Week 3: March 13–19

Week 4: March 20–26

Week 5: March 27-April 2.

Week 1

During week one (2/28/24-3/5/24) the following activities were implemented:

During week one the pre-test (Appendix B) was given in person to the medical providers on the following topic “The Standards for Medical record Documentation” to assess current knowledge and comfort level with medical documentation. A paper questionnaire with a pen will be distributed. The questionnaires will be anonymous. The DNP candidate collected the pre-test questionnaires after completion, placed them in a closed office envelope, and kept them in a locked cabinet.

The in-service “Standards for Medical Record Documentation” was provided in person to Medical Providers on Monday, Wednesday, and Thursday in the Ambulatory Care Department: Primary Care. A PowerPoint presentation (Appendix D) was offered based on the guidelines from the National Committee on Quality Assurance. The online resources, educational tools, and templates for medical visit documentation from The U.S. Department of Health & Human Services and the Center for Medicare Services were shared, and the sample template for annual wellness visits with all required documentation was discussed. Common pitfalls in medical record documentation were addressed based on the literature review and the recommendations from the Center for Medicare Services, 2023. Post-tests were administered in person to the medical providers after the in-service on Standards for Medical Record Documentation to assess current knowledge and comfort level on the Standards for Medical Record Documentation requirements. A paper questionnaire with a pen was distributed.

The DNP candidate collected the pre-test and post-test questionnaires after completion, placed

them in a closed office envelope, and kept the envelope in a locked cabinet.

Week 2

During week two (March 6 – March 12) the pre-test (Appendix B) was given in person to the medical providers on the following topic “The Standards for Medical record Documentation” to assess current knowledge and comfort level with medical documentation. A paper questionnaire with a pen was distributed. The questionnaires were anonymous. The DNP candidate collected the pre-test questionnaires after completion, placed them in a closed office envelope, and kept them in a locked cabinet.

The educational training on the: “Standards for Medical Record Documentation” was provided in person to NPs on Monday, Wednesday, and Thursday in the Ambulatory Care Department: Primary Care. A PowerPoint presentation (Appendix D) was offered based on the guidelines from the National Committee on Quality Assurance. The online resources, educational tools, and templates for medical visit documentation from The U.S. Department of Health & Human Services and the Center for Medicare Services were shared, and the sample template for annual wellness visits with all required documentation was discussed. Common pitfalls in medical record documentation were addressed based on the literature review and the recommendations from the Center for Medicare Services, 2023. Post-tests were administered in person to the medical providers after the in-service on Standards for Medical Record Documentation to assess current knowledge and comfort level on the Standards for Medical Record Documentation requirements. A paper questionnaire with a pen was distributed.

The DNP candidate collected the pre-test and post-test questionnaires after completion, placed them in a closed office envelope, and kept the envelope in a locked cabinet.

Week 3

During week three (March 13– March 19) the pre-test (Appendix B) was given in person to the medical providers on the following topic “The Standards for Medical record Documentation” to assess current knowledge and comfort level with medical documentation. A paper questionnaire with a pen was distributed. The questionnaires were anonymous. The DNP candidate collected the pre-test questionnaires after completion, placed them in a closed office envelope, and kept them in a locked cabinet.

The educational training on the: “Standards for Medical Record Documentation” was provided in person to NPs on Monday, Wednesday, and Thursday in the Ambulatory Care Department: Primary Care. A PowerPoint presentation (Appendix D) was offered based on the guidelines from the National Committee on Quality Assurance. The online resources, educational tools, and templates for medical visit documentation from The U.S. Department of Health & Human Services and the Center for Medicare Services were shared, and the sample template for annual wellness visits with all required documentation was discussed. Common pitfalls in medical record documentation were addressed based on the literature review and the recommendations from the Center for Medicare Services, 2023. Post-tests were administered in person to the medical providers after the in-service on Standards for Medical Record Documentation to assess current knowledge and comfort level on the Standards for Medical Record Documentation requirements. A paper questionnaire with a pen was distributed.

The DNP candidate collected the pre-test and post-test questionnaires after completion, placed them in a closed office envelope, and kept the envelope in a locked cabinet.

Week 4

During week four (March 20 – March 26) the pre-test (Appendix B) was given in person to the medical providers on the following topic “The Standards for Medical record Documentation” to

assess current knowledge and comfort level with medical documentation. A paper questionnaire with a pen was distributed. The questionnaires were anonymous. The DNP candidate collected the pre-test questionnaires after completion, placed them in a closed office envelope, and kept them in a locked cabinet.

The educational training on the: “Standards for Medical Record Documentation” was provided in person to NPs on Monday, Wednesday, and Thursday in the Ambulatory Care Department: Primary Care. A PowerPoint presentation (Appendix D) was offered based on the guidelines from the National Committee on Quality Assurance. The online resources, educational tools, and templates for medical visit documentation from The U.S. Department of Health & Human Services and the Center for Medicare Services were shared, and the sample template for annual wellness visits with all required documentation was discussed. Common pitfalls in medical record documentation were addressed based on the literature review and the recommendations from the Center for Medicare Services, 2023. Post-tests were administered in person to the medical providers after the in-service on Standards for Medical Record Documentation to assess current knowledge and comfort level on the Standards for Medical Record Documentation requirements. A paper questionnaire with a pen was distributed.

The DNP candidate collected the pre-test and post-test questionnaires after completion, placed them in a closed office envelope, and kept the envelope in a locked cabinet.

Week 5

During the week five (March 27- April 2) Data Analysis was performed. The chart audit was completed on thirty medical records from the Primary Care Clinic before and after educational activity where a special tool (Appendix C) was utilized to evaluate if the problem list has all significant illnesses and chronic medical conditions and if the problem-based charting is

being utilized by the Primary Care providers.

Chart review was completed on thirty medical records for the medical providers such as attending physicians, medical residents, nurse practitioners, and a physician assistant to evaluate if the Problem List was being updated and has all significant illnesses and chronic medical conditions and if problem-based charting is being utilized for documenting in EPIC. The medical records were selected from the Providers' schedules from their assigned clinic for the visits with Medical Providers that occurred in the Primary Care Department before and after the educational in-service on Standards for Medical Record Documentation. The Medical records for thirty patients were selected, with approximately two to three charts per Primary Care Provider. Statistical analysis was performed using the IBM SPSS tool: McNemar's Test was used to analyze the outcomes. The results from this study were shared with the Nursing Administration and Staff Development.

McNemar's Test was used to perform the statistical analysis and analyze the effect of educational activity on providers' knowledge and comfort level with documentation and application of the acquired knowledge to practice. This educational program, the training on Standards for Medical Record Documentation, was approved for ongoing provider education at NYCHHC/Queens Hospital.

Tools

1. A questionnaire was developed by this DNP candidate to assess the knowledge and comfort level with documentation among the medical providers. The writer sought expert consultation through the project team. The validity of the questionnaire was validated by the academic mentor, the clinical project mentor, the DNP; the Practicing NP in the Primary Care/Cancer Center; and the attending Physician, MD, in the Primary Care Clinic.

2. An educational tool from the Center for Medicare was utilized and shared with the medical Providers. The tool is available online for educational purposes from the U.S. Department of Health & Human Services, Center for Medicare Services, and can be used for educational purposes as stated on its website: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/preventive-services/medicare-wellness-visits.html>

3. PowerPoint (Appendix D) was utilized for educational activity- the slides included the recommended standards for medical record documentation, the common pitfalls of the documentation, and available resources and templates for the nurse practitioners that can be used to improve medical record documentation. The validity of PowerPoint was validated by the academic mentor, DNP; clinical project mentor, DNP, the Practicing NP in the Primary Care/Cancer Center; and the attending Physician, MD in the Primary Care Clinic.

4. Statistical analysis was performed using the IBM SPSS tool: McNemar's test was used to analyze the responses from the questionnaires and evaluate the efficacy of the interventional program on knowledge acquisition, problem-based charting utilization, and problem list update in EPIC.

5. To evaluate the effect of this educational activity on NPs' performance, a special tool was developed by this DNP student (Appendix C), which helped this DNP candidate review medical records documentation and evaluate:

1. If the "Problem List" contains updated information about significant illnesses and chronic medical conditions

2. If the integrated documentation workflow (problem-based charting) was utilized during the patients' visits.

The DNP student is using EPIC regularly at Queens Hospital and can easily differentiate problem-based charting. To identify the list of all chronic conditions and significant illnesses this nurse practitioner will review the Problem List and the dates for the last entry for a specific diagnosis/condition in the Problem List, the notes from the primary care providers, and the referral that has been made to the specialists for any health condition. The problem-based charting is easily identifiable, it allows providers to use coded diagnoses to narrate a note (Hwang *et al.*, 2024). The last entry in the problem list can be reviewed by clicking on the specific diagnoses in the problem list- EPIC shows when the last entry was made for that specific diagnosis. On the contrary, independent charting requires separate entries for the diagnosis code, which may lead to inaccurate diagnoses or discrepancies between the billed services and supporting documentation (Hwang *et al.*, 2024).

The validity of this tool -the questionnaire (Appendix C), was validated by the academic mentor, the clinical project mentor, the DNP; the Practicing NP in the Primary Care/Cancer Center; and the attending physician, MD in the Primary Care Clinic.

Data Collection Plan & Process Evaluation

A reminder email about upcoming educational activities was via work email. The pre-test and post-test questionnaires were given in person. The paper platform was utilized. The paper questionnaire was distributed and collected before and after the educational activity. To ensure participant's privacy the questionnaires were anonymous. The responses were kept in a closed envelope in a locked cabinet. During the completion of the questionnaires, the DNP student observed the respondents to make sure that the questionnaires are completed independently by each respondent- Nurse Practitioners, Medical Doctors, and Medical Residents.

Chart review was completed on the same providers before and after educational activity.

Approximately one to three charts were reviewed per provider. Approximately thirty charts were reviewed before and after the educational activity. The responses and the outcome evaluation data were stored in a closed envelope in a locked cabinet.

Ethics/Human Subjects Protection

The Project is a Quality Improvement (QI) Project and does not pose a risk to participants: there is no physical harm to participants, no emotional harm, distress or embarrassment, and no loss of privacy. The questionnaires are anonymous. The responses and the outcome evaluation data will be stored in a closed envelope in a locked cabinet. The educational activity was provided to the whole provider's team at the Adult Primary Care Clinic regardless of their documentation performance. Attendance was mandated by the nursing /medical administration. Permission to perform this PI project was obtained from the Central Office. A special Nursing Research Committee reviewed the project proposal and sent approval to this DNP candidate, the CNO of the hospital, and the Staff Development Department (see Appendix E).

No IRB review is required for the QI project as per TUN policy. Project site – NYCHHC/Queens Hospital, Adult Primary Care Clinic

Data Analysis Plan

Thirty Chart reviews for Primary Care Providers was completed before and after the educational activity. A special Tool (see Appendix C) was utilized to analyze documentation practices. A McNemar's Test was used to analyze the outcome data for educational activity and for chart reviews to evaluate if the Problem list was updated and if problem-based charting was utilized.

Analysis Process

The SPSS program was utilized to perform data analysis. A statistician was overseeing the data analysis to ensure the accuracy of the analysis.

Results

Thirty Participants (10 Nurse practitioners, 10 Medical Doctors, and 10 Medical Residents) participated in the in-service and completed pre and post-questionnaires. Participants showed improvement in overall scores for most of the questions. Responses to the following questions showed the most improvement in knowledge acquisition. Specifically, question number ten, which asks regarding appropriate techniques for charting the problem list in EPIC, greatly improved. Out of thirty participants in the pretest only nineteen answered the question correctly. The post-test shows improvement: twenty-eight out of thirty participants chose the correct answer. Question four, which asks what should be included in history and physical exam, also showed improvement- twenty-five participants chose the correct answers on the post-test and only eleven participants chose the correct answers on the pre-test. Similar results with Question number one (Medicare Requirements for Charting)- Pretest (9 correct answers); Post-test twenty-one correct answers. Question number two (What should be listed on the Problem List?) Pretest -four correct answers and posttest -twenty-four correct answers.

McNemar's test was utilized: Two categorical variables measuring the same characteristic (e.g. presence or absence of the characteristic: 0=no (incorrect), 1=yes (correct) collected from each participant at different time points (e.g. before/following an intervention).

Statistical analysis (Appendix F) showed that educational intervention was effective and improved knowledge acquisition. The output of the p-value (shown as Sig.) is 0.012 which is less than $p < .05$, therefore, the null hypothesis cannot be rejected. This suggests that there is a

statistically significant change in the knowledge level following the educational program when compared with the knowledge level before the beginning of the educational program.

Analysis of the effect of educational intervention on problem-based charting completed (Appendix F). Statistical Analysis of the chart review data showed that the in-service had a positive effect and improved the quality of medical record documentation following the in-service compared to the beginning of the in-service. There is a statistically significant change (Problem-based **Charting 1**- before the intervention=11 charts out of 30, **Charting 2** after the intervention=20 charts out of a total of 30 charts). Problem-based charting – analysis P value 0.022.

Analysis of the effect of educational intervention on Problem List update completed (Appendix F). Statistical Analysis of the chart review data shows that the in-service improved the Problem List update In EPIC as well. P value 0.030. There is a significant change (**Problem List Update 1**- before the intervention=17charts out of 30, **Problem List Update2** after the intervention =23charts out of 30).

The timeline for this project was followed mostly as planned (Appendix E); however, the sessions were held twice a week instead of the planned three times a week due to the providers' work schedule.

Summary

The educational intervention on medical record documentation requirements was effective and led to a statistically significant improvement in the knowledge level of medical providers on medical record documentation requirements; increased the number of providers, who utilized problem-based charting; and improved Problem List update in EPIC.

The project was very well accepted at NYCHHC/Queens and was approved for inclusion

in ongoing training for incoming MDs, NPs, and Medical Residents.

The strengths of this project include the quantitative design which is a more rigorous design. The results demonstrated statistically significant positive effects. In addition, the population is diverse which helps the generalizability of findings among providers.

The limitations of this project are a small sample size of 30. Thirty charts were purposefully selected -before and after the intervention: ten charts per specialty- Medical Doctors, Nurse Practitioners, and Medical Residents.

Interpretation

The outcomes of this project confirm the recommendations of the research completed by McGrawth *et al.*, 2021, which strongly recommends educational guidance about documentation practices to be offered regularly for medical providers to improve knowledge acquisition and understanding of the requirements for documentation. Moreover, the outcomes of this project correlate with a recent research study done by Hwang *et al.*, 2024, which states that problem-based charting leads to the most accurate documentation and naturally improves the Problem List update in EPIC.

Cost

There will be a cost for this in-service in the future, considering that the educational program will be provided by a DNP-prepared Registered Nurse. However, there is already a DNP-prepared employed nurse practitioner at Queens Hospital, who can run this educational program. This educational program will lead to medication adherence, improve disease management and patient safety, and prevent costly lawsuits.

Limitations

Personal Bias. As a primary care provider, the author is more focused on patient care

than documentation preferences and charting.

Methodology- A small sample size.

Conclusion

Project “Improving the Quality of Medical Record Documentation” with a focus on a problem list update and problem-based charting was successfully implemented in the Adult Primary Care Clinic at NYCHHC/Queens. Education was provided to update the providers on the recent guidelines from the Center for Medicare and the National Committee on Quality Assurance and the latest research findings regarding recommendations for medical record documentation. The project improved documentation practices, and the results showed a significant improvement in problem list updates and increased utilization of problem-based charting.

The project is sustainable because nurse practitioners with a DNP degree already work in the facility and can be used for both - quality improvement and clinical practice. A DNP-prepared nurse has expertise in the evidence-based process and is prepared for project implementation. A DNP nurse has advanced competencies and leadership skills to strengthen practice and healthcare delivery.

This project is cost-effective and does not affect the staffing, it can be easily implemented in the future - the educational sessions can be delivered during the administrative time or the “Lunch and Learn Time”.

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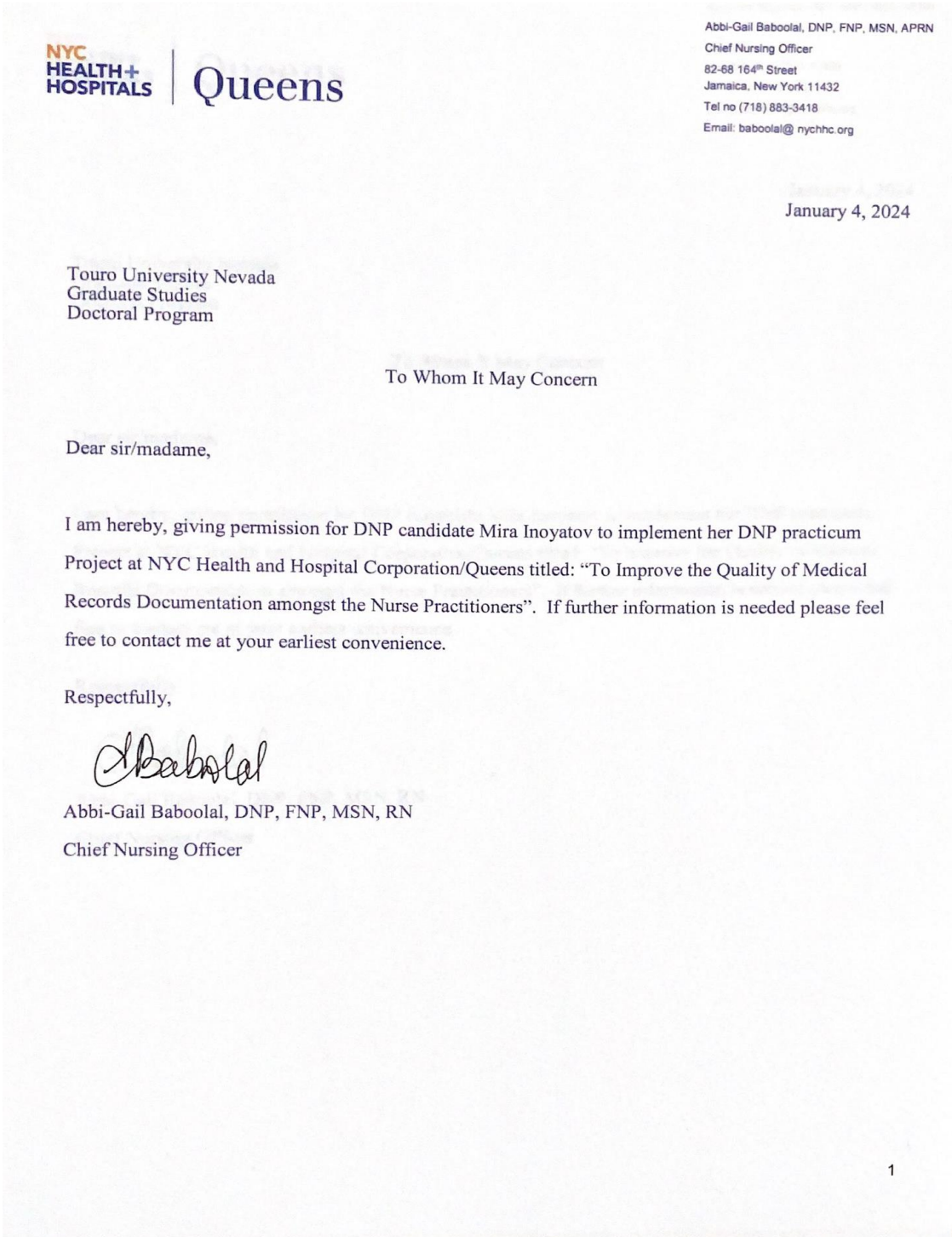
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Appendix A



Appendix B

Questionnaire on Standards for Medical Record Documentation

Please circle the correct answer

Optional

Years in practice

Question 1

The Center for Medicare and Medicaid Services Guidelines indicate that:

(Select all that apply)

1. coded diagnoses are to reflect documented diagnoses or the reason for the visit;
2. if a diagnosis exists that explains the reason for the visit, it should be recorded instead of the symptom;
3. when there is clinical uncertainty, the most specific clinically documented code should be used when possible;
4. laterality and severity should be specified when clinically known and available for the specific code

Question #2

What should be listed in the Problem list:

1. Allergies
2. History of viral illness that occurred a few months ago, from which the patient fully recovered
3. Gender and sexual orientation
4. Significant Illnesses, chronic conditions

Question #3

For Patients 12 years and older, there must be an appropriate notation in the medical record about (Choose the best answer):

1. Future or Current Career Plans
2. Religious beliefs
3. The use of cigarettes, alcohol, and substances
4. Schools attended since early childhood

Question #4

The patient presents with specific complaints. The history and physical exam must include:

1. Only objective information pertinent to the patient's presenting complaints
2. Only subjective information pertinent to the patient's presenting complaints
3. Both objective and subjective information pertinent to the patient's presenting complaints
4. Past Medical history, Medication Allergies, and Treatment Plan

Question #5

When ordering a test, the medical provider must first clarify and document:

1. If the insurance company will pay for the ordered test
2. How the results will be discussed with the patient (over the phone, or a follow-up needed)
3. Discuss risks and benefits related to the test/procedure
4. If there is no evidence that the patient is placed at inappropriate risk by a diagnostic or therapeutic procedure

Question#6

The medical record:

(Select all that apply)

1. Must have Working diagnoses that are consistent with findings
2. Must have a review for under or overutilization of consultants
3. Must have evidence that Preventative screening and services are offered (documented) per the organization's practice guidelines
4. Must be dated and signed at every visit

Question#7

What should be documented regarding the follow-up care:

(Choose the best answer)

1. The specific time for follow-up care does not have to be mentioned
2. The specific time of return must be noted in weeks, months, or as needed
3. The documentation does not have to reflect the timeframe for future follow-up
4. The documentation must reflect the guidelines for recommending a specific time frame for follow-up

Question#8

If a consultation is requested:

(Choose the best answer)

1. There must be a note from the consultant in the record
2. If the Patient did not follow up with a consultant- it is the patient's choice and there is no need to document all the details of not seeing a consultant
3. If the patient refuses to see a consultant, the provider still has to request a consultation
4. Consultation, laboratory, and imaging reports filed in the chart are initialed not by the practitioner who ordered them, to signify review.

Question #9

The Standards for Medical Record Documentation include:

(Choose all that apply)

1. An immunization record (for children) is up to date or an appropriate history must be made in the medical record (for adults).
2. Unresolved problems from previous office visits must be addressed in subsequent visits.
3. Personal biographical data include the address, employer, home, and work telephone numbers, and marital status.
4. The record must be legible to someone other than the writer.

Question#10

Please indicate how to update the Problem List in medical records in EPIC:

1. In the Problem List Activity Tab
2. Through the Visit Diagnoses Tab when the visit is open
3. In the notes section
4. Through the in-basket section in EPIC

Appendix C

The Tool to Evaluate the Documentation Practices

Circle the answer

Problem-Based Charting was utilized

Yes No

Problem List has all significant illnesses
and chronic conditions

Yes No

Appendix D

NYC HEALTH+ HOSPITALS

50 Water Street • 15th + 16th Floor • New York, NY 10004 • 332-323-5697 • 646-458-2743
Office of Patient Centered Care
Office of Research Administration

**NYC Health + Hospitals
NURSING SCIENTIFIC REVIEW DECISION FORM**

Study Title: Improving the Quality of Medical Record Documentation
Date: 2/5/2024
Principal Investigator: Mira Inoyatov, RN, NP
Program Off Study: DNP PhD EdD Other
Facility: NYC Health + Hospitals/Queens
University: Touro University, Nevada
 Quality Improvement Project Evidence Based Practice Project Research

Approval:
 Approved
 Approved with Recommendations
 Not Approved

Recommendations:

The title of the project should simply say the project; should not mention the site or hospital name in the title.

Please use **NYC Health+Hospitals/Queens** in all study related documents; **NOT** Queens Medical Center.

Anne George *Chin*

Appendix E

Project Implementation Timeline

Introduction	
Project Site	NYCHHC/Queens Hospital, Adult Primary Care Clinic
Project Mentor	Richa Mukhija, DNP
Project Purpose	Improve Medical Providers', Nurse Practitioners', Medical Doctors', and Medical Residents', knowledge and comfort level with medical record documentation.
Project Question	In the Adult Primary Care Clinic at NYCHHC/ Queens, would an educational activity, the in-service, on “Improving Medical Records Documentation”, improve the Medical Providers' knowledge and comfort level with the medical records documentation?
Project Timeline	
<p>Plan out the activities you will be performing each week during the implementation phase of Project III. Clearly delineate the time needed to carry out interventions, collect data, and evaluate the project. Set concrete dates for all implementation activities (e.g., trainings/education, interventions, data collection and analysis) and include them in the appropriate weeks below.</p> <p>Dates for implementation are posted in the Project II course announcements. Week 1 should correlate with the first week of DNP Project III, unless permission is granted to implement early.</p>	
<p>Week 1 (Dates)</p> <ul style="list-style-type: none"> • Week 1: Feb 28–March 5 	<ul style="list-style-type: none"> • Provide educational activity in-person to NPs in the Ambulatory Care Department • Primary Care • Provide educational activity with a pre and post-questionnaire Monday, Wednesday, and Thursday <p>Collect the questionnaires</p>
<ul style="list-style-type: none"> • Week 2: Mar 6–12 • 	<ul style="list-style-type: none"> • Provide educational activity in-person to NPs in the Ambulatory Care Department: • Virology <p>Provide educational activity with a pre and post-questionnaire Monday, Wednesday, and Thursday</p> <p>Collect the questionnaires</p>
Week 3	<ul style="list-style-type: none"> • Provide educational activity in-person to NPs in the Ambulatory Care Department • Pediatric

<ul style="list-style-type: none"> • Week 3: Mar 13–19 <p>(Dates)</p>	<ul style="list-style-type: none"> • Provide educational activity with a pre and post-questionnaire Monday, Wednesday, and Thursday <p>Collect the questionnaires</p>
<p>Week 4 (Dates)</p> <ul style="list-style-type: none"> • Week 4: Mar 20–26 • 	<ul style="list-style-type: none"> • Provide educational activity in-person to NPs in the Ambulatory Care Department • Cancer Center/Hematology/Oncology <p>Provide educational activity with a pre and post-questionnaire Monday, Wednesday, and Thursday</p> <p>Collect the questionnaires</p>
<p>Week 5 (Dates)</p> <ul style="list-style-type: none"> • Week 5: Mar 27–April 2 	<ul style="list-style-type: none"> • Perform data analysis. Share data with the Staff Development, CNO, and Nursing administration and recommend based on the results future interventions to improve NP competence with medical record documentation

Weekly Summary for Project III	
Clearly and succinctly summarize project status. Discussion includes any updates to the project timeline.	
DO NOT COMPLETE NOW- SAVE FOR DNP PROJECT III	
<p>(Dates)</p> <ul style="list-style-type: none"> Week 1: Feb 28– March 5 	<ul style="list-style-type: none"> Wednesday (2/28/24) and Friday (3/1/24) Distribute the pre-test questionnaires and collect the anonymous pre-test questionnaires Provide the in-person in-service to Medical Doctors, Nurse Practitioners, and Medical Residents on “Improving the Quality of Medical Record Documentation”. Collect anonymous Post Test Questionnaires. Keep all the questionnaires in a closed envelope in a locked cabinet.
<ul style="list-style-type: none"> Week 2: Mar 6– March 12 	<ul style="list-style-type: none"> Wednesday 3/06/24 and Friday 3/08/24 Distribute the pre-test questionnaires and collect the anonymous pre-test questionnaires Provide the in-person in-service to Medical Doctors, Nurse Practitioners, and Medical Residents on “Improving the Quality of Medical Record Documentation”. Collect anonymous Post Test Questionnaires. Keep all the questionnaires in a closed envelope in a locked cabinet.
<ul style="list-style-type: none"> Week 3: Mar 13–19 	<ul style="list-style-type: none"> Successful “Problem List” update noted in most of the charts completed by the providers who attended the educational sessions. The project was greatly appreciated. The attending physicians and the medical directors emphasized the importance of this project and its effect on patient safety and cost-containment, reimbursement. Resistance noted amongst the providers (mostly the residents) with problem-based charting. A meeting was held with the attending physicians to discuss a successful transition to problem-based charting. A decision was made to provide consistent reminders to the MDs, NPs, and medical residents to utilize problem-based charting. The reminders will be provided by the attending physicians and this DNP candidate. Wednesday 3/13/24 and Thursday 3/14/24 Distribute the pre-test questionnaires and collect the anonymous pre-test questionnaires Provide the in-person in-service to Medical Doctors, Nurse Practitioners, and Medical Residents on “Improving the Quality of Medical Record Documentation”. Collect anonymous Post Test Questionnaires. Keep all the questionnaires in a closed envelope in a locked cabinet

<p>Week 4 March 14-26</p>	<ul style="list-style-type: none"> • Successful “Problem List” update and initiation of problem-based charting noted in many charts completed by the providers who attended the educational sessions. • The project is greatly appreciated. The attending physicians and the medical directors supported and emphasized the importance of this project and its effect on patient safety and containment, and reimbursement. • The DNP Candidate attended daily huddles to remind the providers about the project, discussed with the attending physicians and other providers a successful transition to problem-based charting and provided consistent reminders to the MDs, NPs, and medical residents to utilize problem-based charting. • Wednesday 3/20/24 and Friday 3/22/24 • Distribute the pre-test questionnaires and collect the anonymous pre-test questionnaires Provide the in-person in-service to Medical Doctors, Nurse Practitioners, and Medical Residents on “Improving the Quality of Medical Record Documentation”. Collect anonymous Post Test Questionnaires. Keep all the questionnaires in a closed envelope in a locked cabinet
<p>Week 5</p> <ul style="list-style-type: none"> • Week 5: Mar 27–April 2 	<ul style="list-style-type: none"> • DNP Candidate Performed Chart review to check for “Problem-based charting” and Problem List update in EPIC before and after educational activity. Performed data analysis- Non-parametric test Mcnemar test to check the effect of the educational in-service: on knowledge acquisition, problem based charting initiation, and the update of Problem List in EPIC. Shared data with the Staff Development, Medical Director, CNO, and Nursing administration and recommended to include this educational activity into NP, MD, Residents’ orientation to improve providers’ competence with medical record documentation. • The medical director of Primary care Clinic appreciated the results and authorized DNP candidate to provide this educational activity bimonthly to all incoming residents, NPs, and MDs.

Appendix F

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	ID	Numeric	8	0		None	None	8	Right	Nominal	Input
2	Service	Numeric	8	2		None	None	8	Right	Scale	Input
3	Q1	Numeric	8	2	Pretest	None	None	8	Right	Ordinal	Input
4	Q2	Numeric	8	2		None	None	8	Right	Ordinal	Input
5	Q3	Numeric	8	2		None	None	8	Right	Ordinal	Input
6	Q4	Numeric	8	2		None	None	8	Right	Ordinal	Input
7	Q5	Numeric	8	2		None	None	8	Right	Ordinal	Input
8	Q6	Numeric	8	2		None	None	8	Right	Ordinal	Input
9	Q7	Numeric	8	2		None	None	8	Right	Ordinal	Input
10	Q8	Numeric	8	2		None	None	8	Right	Ordinal	Input
11	Q9	Numeric	8	2		None	None	8	Right	Ordinal	Input
12	Q10	Numeric	8	2		None	None	8	Right	Ordinal	Input
13	AQ1	Numeric	8	2	Post-test	None	None	8	Right	Ordinal	Input
14	AQ2	Numeric	8	2		None	None	8	Right	Ordinal	Input
15	AQ3	Numeric	8	2		None	None	8	Right	Ordinal	Input
16	AQ4	Numeric	8	2		None	None	8	Right	Ordinal	Input
17	AQ5	Numeric	8	2		None	None	8	Right	Ordinal	Input
18	AQ6	Numeric	8	2		None	None	8	Right	Ordinal	Input
19	AQ7	Numeric	8	2		None	None	8	Right	Ordinal	Input
20	AQ8	Numeric	8	2		None	None	8	Right	Ordinal	Input
21	AQ9	Numeric	8	2		None	None	8	Right	Ordinal	Input
22	AQ10	Numeric	8	2		None	None	8	Right	Ordinal	Input
23											
24											

Codebook for output1.sav- analysis of the effect of educational activity

Description of variable	SPSS variable name	Coding instructions
Identification number	id	
Age	Age in Years	
Pretest Question 1	Q1	0-wrong,1-correct
Pretest Question 2	Q2	0-wrong,1-correct
Pretest Question 3	Q3	0-wrong,1-correct
Pretest Question 4	Q4	0-wrong,1-correct
Pretest Question 5	Q5	
Pretest Question 6	Q1	0-wrong,1-correct
Pretest Question 7	Q2	0-wrong,1-correct
Pretest Question 8	Q3	0-wrong,1-correct
Pretest Question 9	Q4	0-wrong,1-correct
Pretest Question 10	Q1	0-wrong,1-correct
Posttest Question 1	AQ1	0-wrong,1-correct
Posttest Question 2	AQ2	0-wrong,1-correct
Posttest Question 3	AQ3	0-wrong,1-correct
Posttest Question 4	AQ4	0-wrong,1-correct
Posttest Question 5	AQ5	0-wrong,1-correct
Posttest Question 6	AQ6	0-wrong,1-correct
Posttest Question 7	AQ7	0-wrong,1-correct
Posttest Question 8	AQ8	0-wrong,1-correct

Posttest Question 9	AQ9	0-wrong,1-correct
Posttest Question 10	AQ10	0-wrong,1-correct

Knowledge Acquisition Pre and Post

Nonparametric Tests

[DataSet1]

	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distributions of different values across Pretest and Post-test are equally likely.	Related-Samples McNemar Change Test	.012 ^c	Reject the null hypothesis.

a. The significance level is .050.
 b. Asymptotic significance is displayed.
 c. Exact significance is displayed for this test.

Related-Samples McNemar Change Test

Pretest, Post-test

Total N	30
Test Statistic	6.050 ^a
Degree Of Freedom	1
Asymptotic Sig.(2-sided test)	.014
Exact Sig.(2-sided test)	.012

a. The exact p-value is computed based on the binomial distribution because there are 25 or fewer records.

Related-Samples McNemar Change Test

Post-test

Category

- Observed
- Hypothesized

Observed Frequency = 5

Pretest

	ID	Chartin g1	Proble mlst1	Chartin g2	Proble mlst2	var	var	var	var
1	1	.00	.00	1.00	1.00				
2	2	.00	.00	1.00	1.00				
3	3	.00	.00	1.00	1.00				
4	4	.00	.00	.00	.00				
5	5	.00	.00	.00	.00				
6	6	.00	.00	1.00	1.00				
7	7	.00	.00	.00	.00				
8	8	.00	.00	1.00	1.00				
9	9	.00	1.00	1.00	1.00				
10	10	1.00	1.00	1.00	1.00				
11	11	1.00	1.00	1.00	1.00				
12	12	1.00	1.00	1.00	1.00				
13	13	1.00	1.00	1.00	1.00				
14	14	.00	1.00	1.00	1.00				
15	15	.00	.00	.00	.00				
16	16	.00	1.00	1.00	1.00				
17	17	.00	.00	.00	.00				
18	18	1.00	1.00	1.00	1.00				
19	19	1.00	1.00	1.00	1.00				
20	20	1.00	1.00	1.00	1.00				
21	21	.00	.00	1.00	1.00				
22	22	.00	1.00	1.00	1.00				
23	23	.00	1.00	1.00	1.00				
24	24	.00	.00	.00	.00				
25	25	1.00	1.00	1.00	1.00				
26	26	1.00	1.00	1.00	1.00				
27	27	1.00	1.00	.00	1.00				
28	28	.00	1.00	.00	1.00				
29	29	1.00	1.00	.00	1.00				
30	30	.00	.00	.00	.00				
31									
32									
33									
34									

Codebook for output2.sav- analysis of the effect of educational activity: problem- based charting, problem list update

Description of variable	SPSS variable name	Coding instructions
ID (chart number)	ID	

Utilization of Problem-based charting before the in-service	Charting1	0-no 1-yes
Utilization of Problem-based charting after the in-service	Charting2	0-no 1-yes
Problem List update in EPIC before the in-service	Problemlist1	0-no 1-yes
Problem List update in EPIC after the in-service	Problemlist2	0-no 1-yes

Problem-based Charting Analysis Pre and Post

The screenshot displays the IBM SPSS Statistics Viewer interface. The left sidebar shows a tree view of the output, with 'Nonparametric Tests' expanded. The main window shows the following content:

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distributions of different values across Charting1 and Charting2 are equally likely.	Related-Samples McNemar Change Test	.022 ^c	Reject the null hypothesis.

a. The significance level is .050.
 b. Asymptotic significance is displayed.
 c. Exact significance is displayed for this test.

Related-Samples McNemar Change Test

Charting1, Charting2

Related-Samples McNemar Change Test Summary

Total N	30
Test Statistic	4.923 ^a
Degree Of Freedom	1
Asymptotic Sig. (2-sided test)	.027
Exact Sig. (2-sided test)	.022

a. The exact p-value is computed based on the binomial distribution because there are 25 or fewer records.

Related-Samples McNemar Change Test

Charting2

Category: Observed (blue), Hypothesized (maroon)

Problem List Update Analysis Pre and Post

