Evaluation of VERIFY tool to reduce patient identification error by nurses-Quality improvement initiatives

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KEYWORDS

Patient Identification Error, Specimen Collection, VERIFY model, PDSA (Plan Do Study Act) model.

ABSTRACT:

Background: Identification error during specimen collection is an important aspect in patient care because these errors create a negative impact in the patient. Identification error can occur usually when specimen is from the wrong patient or mislabelled.

Aims and objectives: To assess the incidence of identification error during specimen collection procedure done by nurses and to evaluate the effectiveness of VERIFY tool approach model in reducing the identification error during specimen collection. Sampling technique is purposive sampling, data collection tool followed in this study is observation checklist with 13 criteria VERIFY & PDSA model among sample size taken is 1500.

Results and conclusion: With the regular sensitization sessions using “VERIFY" approach model designed based on the NABH guidelines and hospital policy; small-group and real-time education was conducted on specimen collection, extensive skill training for nurses towards the transfer specimens to pneumatic tubes. Finally, we achieved reduced the sampling error from 7 (pretest) to 1 (post test). In conclusion, regular reinforcement sessions and clinical supervision plays a major role in ensuring prevention of identification error and the safe collection of sample practices.

INTRODUCTION

- The process of specimen collection should be carried out by trained health care personnel so as to reduce the identification error and improve the quality of patient care following the IPSG goals.
- Identification error can occur usually when specimen is (from the wrong patient) or mislabelled (incorrectly written or illegible). Previous national and international studies have shown these errors are commonest error leads to compromise in patient care.
- Prevention of Identification error during specimen collection is an important aspect in patient care because these errors create a negative impact in the patient.

BACKGROUND: Jan'22 to Dec'22: Preliminary Quality Indicator captured data of identification error through incident reporting.

Month	Ward	Reported Error
February	OPD	1
March	Male Ortho ward	1
July	Male Surgery ward	1
July	Blood Bank	1
July	Gyn. ward	1
September	EMS	1
October	Gyn. ward	1

Common RCA Identified

- Due to overcrowding in OPD Sample was mismatched
- Staff nurse collected sample without labelling sampling container
- Code blue was activated, while staff was involved in code blue, sample was taken by interns and was not properly labelled by them.
- 3 Patients in same name and patient identification mislabelling
- Two patients were in same name, so label of the sample was mismatched
- Sample was not labelled properly
- Without proper identification of the patient, wrong sample was collected from patient.

Impact Of the Identification Error

- Creates anxiety among patients with wrong report
- Delay in treatment and care as next correct report has to be obtained
- Repeat specimen collection procedure to get correct report causing pain for the patient and increase the hospital stay
- False positive results may lead to unnecessary wrong treatment

Aims And Objectives

- To assess the incidence of identification error during specimen collection procedure done by nurses.
- To evaluate the effectiveness of VERIFY tool approach model in reducing the identification error during specimen collection.

Measure:

- The Preliminary Quality Indicator captured data of identification error through incident reporting.
- Second audit done after the implementation of **VERIFY** approach model using 13 criteria checklists to assess the compliance of **VERIFY** approach and incident reporting.
- Comparison of pre and post intervention incidence of identification error

Methodology:

- **Setting:** Selected wards from in MGMCRI, Puducherry
- **Sampling technique:** Purposive sampling technique
- **No of Opportunities:** 1500
- **Data collection tool:** Observation checklist with 13 criteria & PDSA model

Intervention:

STEP-I

Construction of VERIFY approach tool.

STEP-II

Validation of VERIFY tool

STEP-III

Training of nurses

STEP-IV

Observation using checklist.

STEP-V

Thorough incident report of identification error of all wards are analysed

Description:(Regular Sensitization sessions on "VERIFY approach model designed based on the NABH guidelines and hospital policy and implementation of same. Small-group and real-time education was conducted on specimen collection. Skill training for nurses and competency was assessed, Roles and responsibilities were clearly defined. A sample-collecting nurse was assigned to transfer specimens to pneumatic tubes)

TOOL: Observation checklist

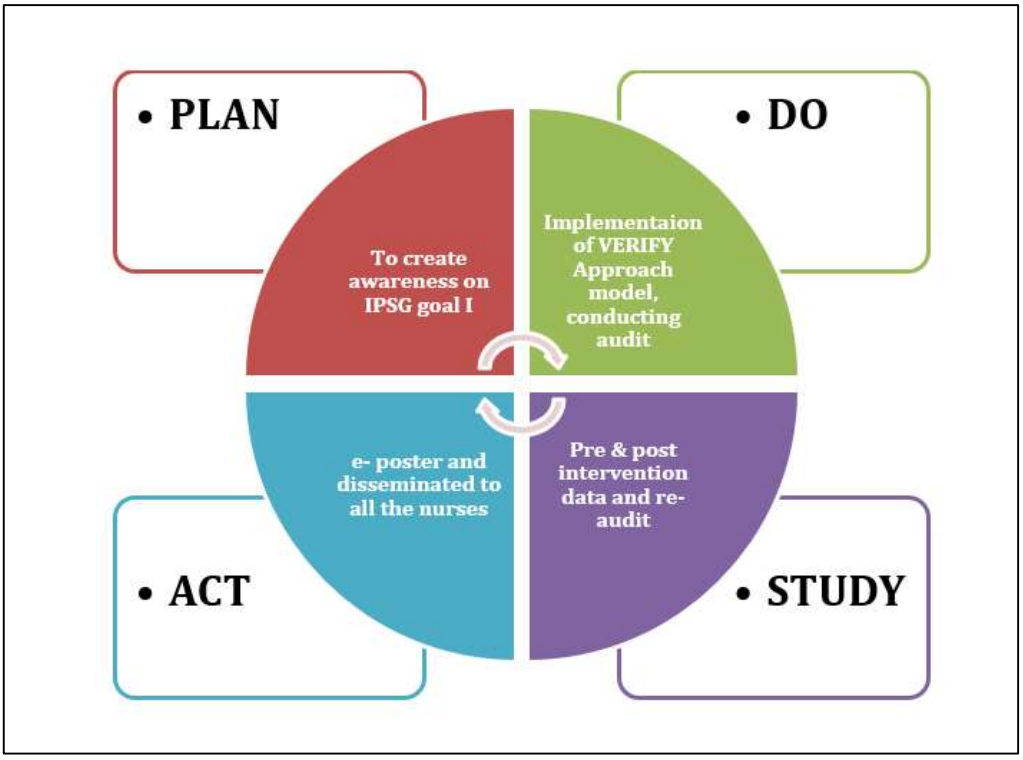
S.NO	CRITERIA	Ward : Date:		Ward : Date:		Ward : Date:		Ward : Date:		Ward : Date:	
		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Check the doctors order for collection of blood sample										
2.	Raise the sample request in HIMS by identifying the patient name and the IP number										
3.	Check whether the patient paid or not (Billing status)										
4.	Get the sticker and label it in appropriate sample container										
5.	Approach the patient with the blood sample tray with labelled sample container										
6.	Explain the procedure to the patient										
7.	Re check the patient identity with patient name, UHID no. with the patient ID tag, before taking sample & Second check by calling out patient name										
8.	Draw the sample and immediately transfer to the appropriate labelled container										
9.	Enter the patient details in the lab register with patient name, UHID and type of sample and send it to the laboratory as soon as possible										
10.	Document the samples sent to the lab										
11.	Check whether the turnaround time maintained or not										
12.	If any critical value, immediately report to the duty doctors and action taken.										
13.	Check whether critical value documented or not										

Audited By: **Verified By:**

VERIFY APPROACH

- **V**erify the doctors order before collecting blood sample.
- **E**xplain the procedure to the patient.
- **R**eady with labelled container and other articles with a tray.
- **I**dentification with patient name / UHID number
- **F**ollow the procedure for sample collection
- **I (Y)** - In time process verification (Turnaround time)

PDSA MODEL



PLAN

- To create awareness on IPSG goal I & Verify approach for specimen collection among all staff nurses of the hospital
- To assess implementation of **VERIFY** tool in all wards
- Conduct audit in all wards & get the base line data of identification error during sample collection through incident reporting.
- Nursing training given through – CNE, ward teaching and one to one teaching method.

DO

- **Audit was conducted** in all wards for identification error during specimen collection.
- **VERIFY approach model** was derived and the staff nurses were trained to use this model and the same was monitored by senior nursing personnel.
- The team worked to improve the compliance to verify approach one to one teaching method in the wards.

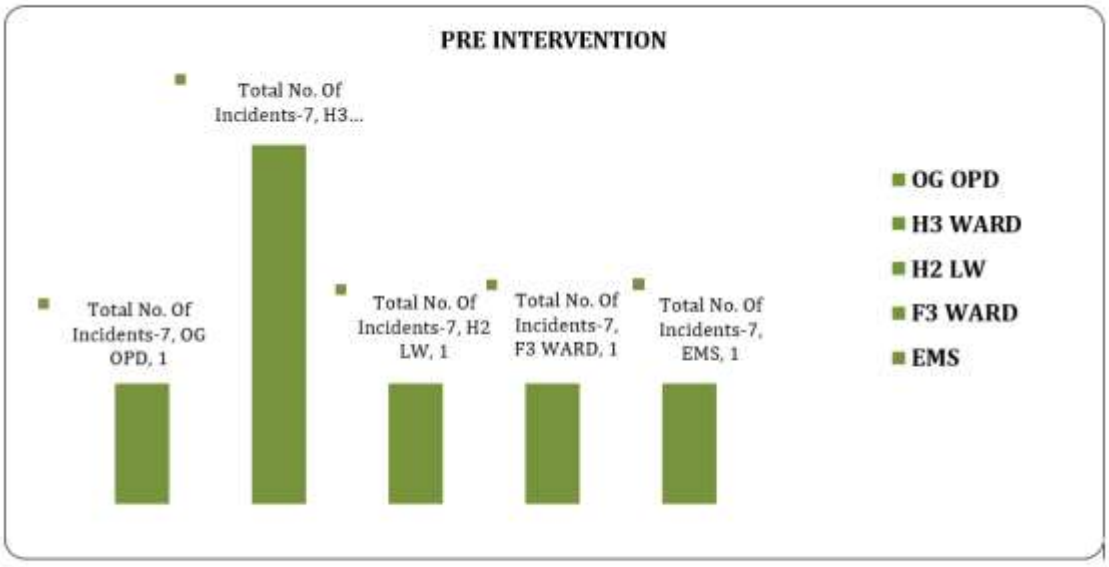
STUDY

- The analysis of the pre & post intervention data and re-audit reveals that reduced in identification error in specimen collection.
- The analysis of the compliance to **VERIFY** approach model and using observation checklist reveals that nearly 80%. Nurses had practiced the VERIFY approach model for specimen collection.

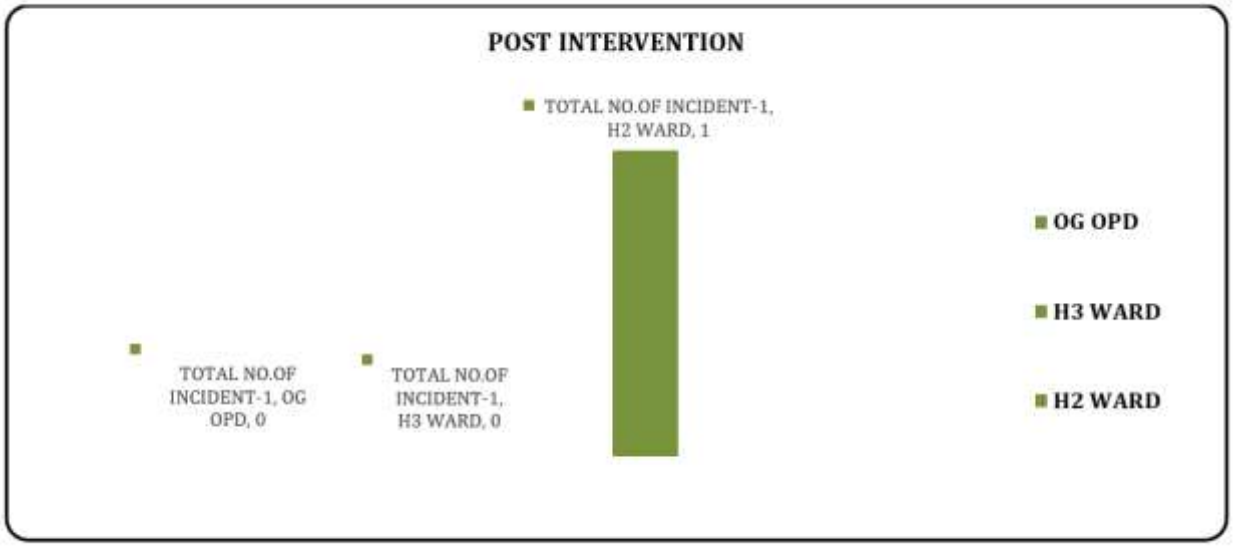
ACT

- The final audit report has shown a decreasing the incidence of identification error during specimen collection.
- Hence there was made a PPT and e- poster and disseminated to all the nurses.

Pre-Intervention Phase



Post Intervention Phase



Resuıts:

- The prevention of identification error during sample collection audit by the Staff leaders of the hospital helped us in **ensuring safe practices as per IPSG I.**
- The overall **incidence of identification error** in sampling has been drastically reduced as per set **Benchmarks.**
- The **VERIFY** approach model and 13 criteria- have become a routine culture/practice for the Nurse Leaders by Regular sensitization.
- Improvement in quality of nursing practices and patient care satisfaction.

Discussion:

Drug errors are common in emergency departments (EDs) due to a variety of circumstances. These include several patients being treated concurrently, frequent dependence on verbal directions, a wide range of high-risk drugs, a diversity of administration routes, time demands, ED dispensing and interruption and distractions. The ED is also expected to oversee intricate, frequently mishandled drug administration procedures, such as the administration of thrombolytic agents and medications for conscious sedation. Lower triaged level patients, the time of day (greater errors occur during weekend and night shifts), and LASA medications are additional characteristics linked to medication errors.

Regular evaluation and simplification are beneficial for the complex process of medication use. Hong Kong's emergency department has historically had complicated lists of medications: 1) top-up; 2)

prepackaged medicine items; 3) basket item lists (mostly for topical and IV fluids); and even leftover medications. These lists include products that are occasionally of a high-risk nature, occasionally overlap, and occasionally are rarely utilized. Regardless of the inconvenience to healthcare workers, it is important to centralize the storage of high-risk medications and dangerous drugs for safety reasons. This will allow for a less distracting work environment. Prescription, transcription, dispensing, administration, and monitoring are the five steps involved in ordering and delivering drugs in the emergency department. Every one of these phases is a weak point in a chain that could experience any number of mistakes. The two most frequent causes of prescribing errors are ignorance of the medication being prescribed and ignorance of the patient for whom the medication is being recommended. Standardizing complex medication processes, like the IVI dilution regimen of high-risk drugs, is the greatest method to eliminate errors that arise from this stage.

Communication problems between prescribing clinicians and dispensing staff are referred to as transcription mistakes. The most frequent reason for this in the ED is a misheard spoken medicine request. Implementing a system for verbal drug orders and taking measures to incorporate "readback" verification, recordkeeping, and retrospective signature are crucial in preventing such errors. When using critical redundancy to discharge patients from the emergency department, the dispensing stage is the final opportunity to fix a pharmaceutical error. In addition to verifying the patient's weight and allergy status, dispensing nurses must independently double-check the distribution of high-risk prescriptions and medications to groups that are prone to errors, particularly children.

For two reasons, pediatric patients present a special set of difficulties for emergency physicians and nurses: 1) Weight-based dosages are used for the majority of medications prescribed and administered to pediatric patients; 2) certain medications are contraindicated in children under a specific age. The fact that children vary widely in size is one of the most difficult aspects of working with them. Because of this and the requirement for weight-based dosage, mathematical errors are frequent. Elderly people, trauma patients, and individuals with impaired renal function are also high-risk demographic groups. Errors in administration occur when the correct medication is given in the incorrect dosage or by the incorrect route, or when the incorrect medication is given. Safety checklists can help prevent this kind of mistake, and employees are urged to follow the five rights (time, drug, dose, route, and patient) and three checks (prescription, drug, and patient) principles. In conclusion, there are several aspects of the ED's particular environment that could make drug errors more common and severe. In order to sustainably protect important aspects of pharmaceutical safety, our project created a tangible organizational structure.

Recommendations:

- Nursing supervisor are to requested to monitor in all wards for the effectiveness of the training program and implementation of the same.
- Periodic re-audit needs to be conducted for the compliance of VERIFY approach model for identification error in specimen collection.
- All novice nurses are trained to follow the VERIFY approach model.

Acknowledgement

We would like to thank the support from every member of the team collaboration for the study

Funding: The overall **incidence of identification error** in sampling has been drastically reduced as per set **Benchmarks.**

Ethical approval: validation from the specialized nursing personnel and medical personnel and ethical committee.

Conflicts of interest: The authors declare that there is no conflict of interest.

Contributors: All authors contributed to the design and interpretation of the study and to further drafts (Prof. Dr. Kripa Angeline A, Mrs. Mary Deepa, Ms.Premalatha P, Mrs.Christy F)

Summary:

The introduction of **VERIFY** approach model and audit with observation checklist of 13 criteria's, regular reinforcement sessions and clinical supervision by senior nursing leaders plays a major role in ensuring prevention of identification error and the safe collection of sample practices which had ultimately reduced our incidence of identification error in sample collection.

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