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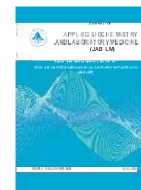

Original Article

Requirement of six core competencies for Non-technical personnel working in a Health care facility: A proposed model

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Keywords:

Health care facilities, Non-technical training, Six core competencies, PDCA concept-based model.

A B S T R A C T

Background: For assurance of quality, a healthcare organization has to recruit personnel competent enough to meet quality requirements at work to fulfill the immense necessity for assessing the competence of the personnel in the context of both technical and non-technical working ability in the concerned organization.

Aims and objectives: In the present work we explore an effective process of developing a model to evaluate the competence of non–technical staff associated with patient handling and care, concerning their respective field of work in the institution.

Methodology: We describe the gross methodology of our present effort as 1) Developing a method to derive the competence criteria for nontechnical personnel working in the healthcare facility, 2) Designing an evaluation system to assess the competence criteria for the nontechnical staff working at the healthcare facility, and 3) final assessment of the effectiveness of the developed model.

Results: Our developed method has a broad utility because of the robust framework it provides that can be applied to all the six core competencies targeted. The assessment of implementation of the evaluation system to assess the developed competence like antenatal check-ups and diagnostic evaluations showed a significant amount of feasibility of our model.

Conclusion: The proposed model is effective in ensuring quality at the nontechnical human resource level in a healthcare facility that concerns the patients visiting the place. In addition, despite the complexity and individual customized requirement of SOP for the concerned healthcare setup, the proposed model utilizes the PDCA concept to address the issue. A method to evaluate quality assurance in terms of the six core competencies needs to be addressed which can be developed by more and more customized usage of the proposed model and consequent up -gradation of the SOPs.

INTRODUCTION

I A developing healthcare facility, as well as a developed one, requires the employment of several non-technical for the smooth running of the facilities. These include the human resource team, marketing team, finance & accounts team, and quality management team as well as clinical coordinators, OPD coordinators, or front desk workforce. To assure quality, a healthcare organization has to recruit personnel competent enough to meet quality requirements at work (1). Hence there is an immense necessity to assess the competence of the personnel both technical as well as nontechnical working in the concerned organization.

As per the norms of the accrediting bodies, it is mandatory to have the competency assessment done for the practicing Clinicians in hospitals, authorized signatories in the diagnostic industry as well as the technologists working in the laboratory as per the pre-set requirements to get accredited. However, though the aforesaid nontechnical staff undergo continuous training for the smooth functioning of the institution the competency assessment program for them is not very well defined in most of the institutes. This area of lacunae needs to be targeted for better patient handling and a smooth growth curve both financially as well as quality-wise.

In a health care facility, all the nontechnical staff need to be assessed and approved by a "credential committee," which grades their ability to perform at the desk efficiently. However, this grading system does not ensure that the performance of each of them is of optimal quality.

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This article presents the process of developing a model to evaluate the competence of non–technical staff associated with patient handling and care, concerning their respective field of work in the institution. This model evaluates the competence of individual personnel and can be used as a reference for developing customized modules for training as well as determining competence criteria in each segment associated with the institutional operations, from managing patients at the front desk to marketing the product to the concerned institute, from recruiting staffs to maintain quality at each arena associated in running an organization. This article includes the following sections:
- Developing a method to derive the competence criteria for nontechnical personnel working in the healthcare facility
- Designing an evaluation system to assess the competence criteria for the nontechnical staff working at the healthcare facility
- Assessing the effectiveness of the developed model

The idea of 6 core competencies for nontechnical staff working at healthcare facilities:

The staff working in the health care facility undergo continuous training depending on their area of work, however, they do share a common area associated with patient handling. These include communicating with the patient and their relatives as well as communicating with other associates of the institutes (marketing & finance), understanding the basic ailment, and helping them with the facility they require other than the technical facility which is taken care of by the resident doctors, attending consultant, staff nurses, and laboratory technologists. The organization's academic cell conducts different programs depending on its requirements and trains personnel according to their area of work. However the basic area of patient care and handling that all need to know often is not aptly targeted and hence the personnel do lack completeness in their training, do not develop interest in whatever work they do, lack motivation, and hence prove to be incompetent. The model for the programs proposed will concentrate on educating on basic patient handling & care. Questions raised during an outcome-based evaluation will include:

1. Do the staff achieve the learning objectives set by the program?
2. What evidence can the program provide that it does so?
3. How does the program demonstrate continuous improvement in its educational processes?

Development of absolute competency is never complete; they are “a work in progress ”as healthcare is an ever-emerging area with newer facilities and technologies.

Different kinds of literature have pointed out the 6 core competencies for the technical personnel, however, it lacks for the nontechnical staff working in the health care setup. This idea of 6 core competencies formulated by the ACGME (Accreditation Council for Graduate Medical Education (ACGME) and their individual Residency Review Committees (RRCs)) in February 1999 for doctors can be used as a background for formulating a program for the nontechnical staff working in a healthcare facility as well.

These 6 core competencies are:

• Patient care/ patient handling/patient preparation
• Basic knowledge of human physiology /Medical knowledge
• Professionalism
• Systems-based Practice
• Practice-based Learning
• Interpersonal and Communication Skills

It needs to be mandated that the nontechnical staff should obtain competency in 6 areas to the level expected of them while dealing with their respective work in the healthcare system. The individual programs must define the specific knowledge, skills, and attitudes required, and provide educational experiences as needed for their nontechnical staff to demonstrate:

1. Patient care/ patient handling/patient preparation: The staff should learn to be compassionate, and empathetic towards the patients and their relatives who are already distressed. Their behavior towards them should be appropriate and always targeted towards channeling them to the appropriate department or appropriate technical staff (clinicians or laboratory personnel) effective for treating their health problems. Care should be taken always for promoting health all around the healthcare facility in whichever way each staff is expected to do.
2. Basic knowledge about human physiology /Medical knowledge: Knowledge about established and evolving biomedical, clinical, and cognate (eg, epidemiological and social-behavioral) sciences and the application of this knowledge for interpersonal help amongst the nontechnical staff in patient care;
3. Practice-based learning and Improvement that involves guiding the patients regarding different investigation, medication procedures and their official documentation, discharge of patients or delivery of reports in an effortless fashion, and evaluation of their respective work, appraisal, and assimilation of scientific evidence, and improvements in patient care;
4. Interpersonal and Communication Skills that result in effective information exchange with each other, as well as with patients, their families, and other health professionals (technical personnel)
5. Professionalism is ensured through a commitment to carry out respective professional responsibilities, adherence to ethical commitments, and privileged communication norms, thereby being sensitive towards a diverse patient population;
6. Systems-Based Practice, as manifested by an awareness and responsiveness towards the system of health care the personnel is incumbent from and the ability to use minimum resources to provide quality health care of optimal value.

2. Developing a method to derive the competence criteria for nontechnical personnel working in health care facilities :

2.1Previous studies on competence criteria

The term competency was first introduced to psychology literature in 1973 where David McClelland argued in his article about "Testing for competence rather than for intelligence”. Authors opined that traditional tests of academic aptitude and knowledge as a matter of fact neither predicted anything about job performance nor success in life. (2) Any organization including a healthcare facility must seek ways or initiatives that ensure that it has capable and committed employees. This way they can focus on the development or design of programs and functions aimed at enhancing employee skills and knowledge or strengthening employee relationships and collaboration, to be managed by specialists & consultants. Various articles have defined competency assessment programs in several ways however having one thing in common that is Employee competency management is integrated into the business strategy of the organization concerned.

Table 1: Concepts of employee competency as per previous literature available :

Authors	**Concepts/definitions**	**Measurand**
McClelland (1998) (2)	Competency is a basic personal characteristic that is a determining factor for acting successfully in a job or situation	. Ability ii. Attitude iii. Knowledge
Rao (2000) (3)	Competency refers to the worker's level of effectiveness in addressing both task and social expectations, particularly those that relate to the organization.	i. Knowledge ii. Trait iii. Skill iv. Self-concept v. Motives
Boyatzis (2008) (4)	Competency describes the individual"'s ability and capability to perform and carry out a given task or expectation	i. Capability ii. Ability iii. Capacity
Rossilah (2008) (5)	Competency describes the individual" 's functionality within a particular frame or context	i. Knowledge ii. Intellect iii. Attitudes iv. Skills

The aforesaid literature points out the necessity of developing a 6 core competency program for all staff both technical and nontechnical associated with a healthcare facility for efficient functioning. Most organizations have a preset organized format of assessing the competency of the technical personnel for the mandate emphasized on them by different accreditation agencies. However, the nontechnical staff working in the healthcare facility though the organization has focused their academic cell on workplace coaching or training or mentoring, do lack proper criteria to assess their competency. Hence many times it is seen the employees are not updated enough to the requirements of the patients & their relatives' queries, even lacking basic skills for handling the everyday crowd at these places.

2.2A Framework for deriving the competence criteria:

To develop a framework for assessing the competency of nontechnical personnel,

considering the elements related to complex techniques, we adopted the well-known PDCA framework. Here the planning component is segregated into " setting the target " and " Implementation plan " where the target is set by the competent authority or reporting authority of the personnel by developing a training module that will be based on the customized requirement of competency in that person to function effectively in his area. The target is set, and the competency module needs to be designed by the Academic coordinator in consultation with the Medical Superintendent and departmental Heads both clinical and non-clinical as well as IT. The competency module will have areas pointed towards the 6 core competency skill development involving Patient care/ patient handling/patient preparation, Basic knowledge about human physiology /Medical knowledge as required, Professionalism, Systems-based Practice, Practice-based Learning, and Interpersonal and Communication Skills in each area under his or her service domain. This entire process comprises the "Implementation of plan "& "Do" part of the cycle.

The "competency module "so formulated is used for induction of new employees as well as for training of existing employees and mock drills are undertaken to make them get familiarized with the requirements. Existing employees can be made to undertake problems with gradual levels of difficulties and complexities in patient handling, giving them to deal with cases of conflict, hostile patients and relatives, accidents & emergencies, urgencies, etc which will increase the participation of employees, self-appraisal tendencies, greater motivation, efficient leaderships, and prompt decision making in difficult scenarios. Feedback evaluation from both the employees as well as from the patient through a pretested questionnaire would make the Evaluation or " Check " part of the cycle.

Suggestions from employees, patients & relatives can help in modifying the modules, policy & procedures undertaken and further action on it will help in Quality improvement & assurance of healthcare. The combined effect will reflect in formulating marketing strategies and also increase the footfall and goodwill of the healthcare facility in the long run.

Table 2: Framework for Deriving Competence Criteria for non-technical Coordinators in Health Care Facility based on PDCA Cycle

No	Category	General action	Actions for Quality assurance Competence criteria	Competence Criteria
1	Plan	Set the target	Make decisions about the target (competency module)	
		Implementation plan	1) Identify the area of interest, common situations/cases/emergencies faced daily. 2) Identify the area of guidance required by geriatric/pediatric/pregnant/specially challenged patients. 3) Identify the indications/ contraindications for any procedure/drug usage / pathological & nonpathological test.	Coordinators must be able to guide the patients according to the instructions given on the prescription. They can answer general queries regarding health awareness programs.
2	Do	Preparation for implementation	Prepare the SOP /Module contents regarding individual competency required in each identified area for the nontechnical staff directly communicating with patients & relatives	Regular assessment regarding the protocols/ SOPs/ modules used for training the personnel
		Implementation	Train the staffs	
3	Check	Confirmation of progress	Evaluate the staff by assigning mock case handling	
		Check for any modification in the SOP required	Feedback regarding the lacunae identified while training both from the staff/trainers/evaluators' point of view Feedback from the patients & relatives regarding their experience during communication and availing services from the respective institute	Patient feedback about the personnel handling him/her
4	Act	Modification accordingly	Modify the training module accordingly periodically	

2.3A method to derive the competence criteria:

For the development of generic components of competence criteria, we propose a five-step process.

STEP 1:Target patient care/patient handling/patient preparation

STEP 2 :

Describe standard operating procedure(knowledge about basic human physiology / medical knowledge)

Developing questionnaires or mock drill plans (Practice-Based Learning, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice)

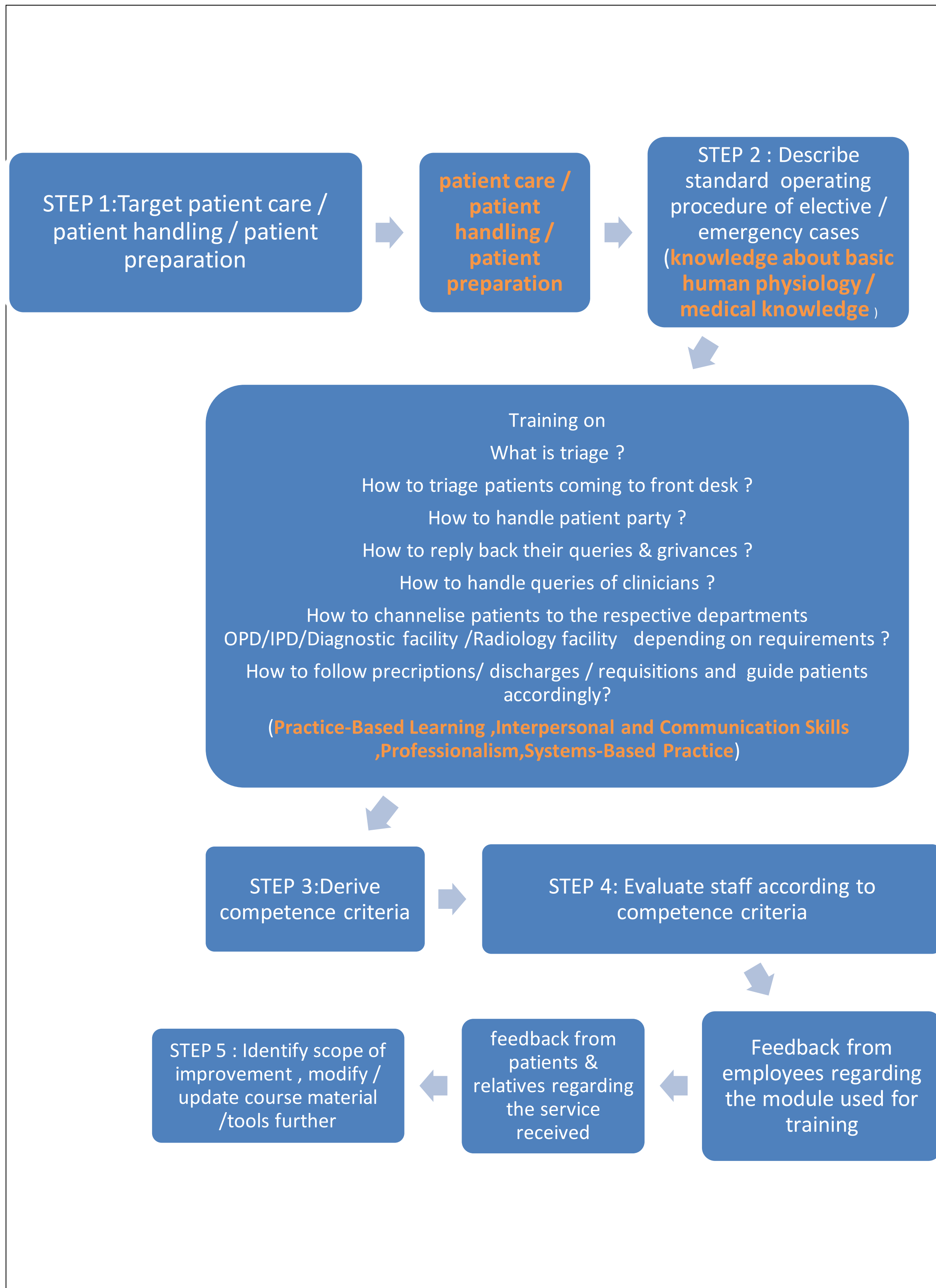
STEP 3: Derive competence criteria: can be qualitative /semi-quantitative (Participation in mock drills, actual patient handling/situation handling)

STEP 4: Evaluate staff according to competence criteria

STEP 5: Identify the scope of improvement, modify/update course material /tools further

Here we have designed for the Emergency Department, however, such modules can be created as per customized requirements for each clinical department as well as for non-clinical public area staff depending on their workflow.

Flow chart 1: Method to Derive Competence Criteria (EMERGENCY OBSERVATION DEPARTMENT)



2.4 Designing an evaluation system to assess the developed competence

The competence criteria form the knowledge base for the implementation of the evaluation system. Competence evaluation should be evidence-based to ensure the quality of the implementation of the designed competency module. The competence evaluation needs to be performed through an on-site survey by evaluators. Thus, we design an evaluation system involving 11 steps. The system consists of four phases: plan for the evaluation, preparation for the evaluation, implementation of the evaluation, and administration of

Table 3: Steps for Implementing Competence Criteria

Phase	No	Step	Actions to achieve the step	The person responsible for the implementation
Plan for evaluation	1	The decision of a targeted area for evaluation (eg: front desk officials)	Identify a specific skill to be evaluated	Academic Coordinator /Departmental heads
	2	Decision for the target skill to be evaluated (amongst the 6 score skills)	Decide a target level based on previous experience or imparted training based on the module or previous evaluation	
	3	Selection of case for evaluation	Select a case and prepare an evaluation sheet based on patient information.	
Preparation for evaluation	4	Taking an evaluation sheet for the targeted module	A senior doctor is asked to evaluate the case under the prescribed requirements to assess the skill in question.	Academic Coordinator /Departmental heads
	5	Understanding the contents of the evaluation		
	6	Request an evaluator		
Implementation for the evaluation	7	Self-review before implementing a technique	A person is asked to implement the knowledge in the presence of the evaluator.	Evaluator
	8	Implementing the technique		
Administration of the evaluation result	9	Submitting the evaluation results	Storing the results for future reference, requirement of retraining, increasing levels of training, updating module	Evaluator
	10	Storing the evaluation results		Academic Coordinator /Departmental heads

2.5 Tools for the developed system: Sheets for the evaluation of the competence criteria :

To facilitate the implementation of the proposed system, tools or sheets for the evaluation were designed to assess the competence of the nontechnical staff.

We specified the evaluation items for the staff to be evaluated and for the evaluator. In busy areas or at clinical sites, time has been a real constraint. Therefore, the designed tools can be mostly filled by the nontechnical staff who are being evaluated. Thus, the evaluator has to fill in only selected items and evaluate the staff as passed or failed the targeted level.

The resultant evaluation sheet for the implementation of the competence evaluation has been shown in Table 4.

Table 4: Evaluation sheet for front desk Nontechnical personnel

No	Competence criteria	Column for Self-Review Before Implementation	Column for Evaluator during/after Implementation
COMPETENCY 1 & 2: • Patient care/ patient handling/patient preparation • Basic knowledge of human physiology /Medical knowledge			
1	Clinical history/complaint/symptom of the individual patient/patient party	• Capability to understand basic human physiology • Triaging of patients • Referring to the required department	Personnel capable of handling patients & relatives effectively & efficiently
2	Prescription / Discharge summary interpretation for patients	• Understanding the advice given by the treating clinician • Understanding the nature of the investigations suggested • Guiding the patient/relatives regarding patient preparation for any investigation /procedure both diagnostic & therapeutic • Understanding & guiding patients regarding Pharmacy/medication advice	Patient understanding is evaluated to understand the competency of the said staff
3	Handling patient queries	• Understanding the nature of the query • Giving adequate & relevant information under the supervision of the clinician	Understanding of the patient is evaluated to test the said staff's competence
4	Handling the consultant query	• Understanding the nature of the query of the consultant	• The relevant information has been gathered by the said staff

		• Asking patients/relatives regarding the details required	• The behavioral approach of the staff evaluated from the patient feedback
COMPETENCY 3, 4 & 5: • Professionalism • Systems-based Practice • Interpersonal and Communication Skills			
5	Follow up(both diagnostic & therapeutic)	Understanding the requirement & nature of follow-up	• Reminding patients/ relatives for follow-up • Handling the old follow-up cases compassionately and equivalently • Behavioral evaluation is done from patient feedback
6	Financial Guidance	Supportive to the financial condition of the patient and advising the best possible package as required. Counseling the patient/relatives	Patient feedback
7	Grievance Redressal	• Addressing the nature of the complaint • Referring the complaint to the respective authority	Patient/relatives' feedback after the complaint redressal by the said staff
COMPETENCY 6 : • Practice-based Learning			
8	No of experiences	Has a certain number of experience	Has adequate experience
9	Informing Critical alert / revealing Bad News	Understanding the importance of the information	Handling patient relatives

2.6 Assessing the effectiveness of the developed model

The developed model needs to be assessed to confirm its effectiveness in deriving the competence criteria and feasibility of implementation of the evaluation system to assess the competence of the nontechnical staff dealing with the everyday crowd at a healthcare facility. This was done by applying this method to actual situations. The framework needed verification which was done on a small scale by recruiting 10 nontechnical staff (Clinical coordinators & Front desk personnel) working at our healthcare organization through a questionnaire.

We examined the efficiency of the developed model using the following procedure which consists of 1) steps to derive competence criteria and 2) steps for implementing the competence criteria: (MODEL QUESTIONNAIRE ATTACHED IN ANNEXURE 1)

1) Application of steps to derive competence criteria

-We asked the front desk personnel who are entrusted to communicate with patients and their relatives on their first visit to Institution A, to derive the competence criteria by describing the actions and standard procedures. They had no prior knowledge of using the proposed system. Each personnel was assigned one imaginary patient coming to them with certain symptoms involving the requirement of noninvasive as well as invasive procedures, and their way of patient handling from scratch was noted down.

-We asked the supervisors of these personnel to confirm and/or make corrections in the contents derived by them.

2) Steps for implementing the competence criteria:

We asked a working group at Institution A (consisting of consultant doctors who were co-researchers involved in the development of the system, and understood the implications of the form) to check the usability of the evaluation items developed.

-We asked a supervisor to evaluate the employees' competence through applying the developed evaluation sheet.

3. DISCUSSION

3.1 Validity of the developed model

The assessment of the effectiveness of the proposed model to derive the competence criteria for nontechnical staff working in a healthcare facility, those who all become the 'go–to ' person for the patients visiting the organization, shows implementations smoothly by front desk personnel, clinical coordinators and OPD Staffs. Despite the implementation of the knowledge/training given to them depending on individual tasks given/handled such as complications and physical attributes of the patient and patient's relatives, the proposed model emphasizes important and common viewpoints for the requirement of criteria-based competence evaluation for the nontechnical staff. In addition, the developed method has a broad utility because the framework in Table 3 can be applied to all the six core competencies targeted. The assessment of implementation of the evaluation system to assess the developed competence for one case of a pregnant patient coming for an antenatal checkup and diagnostic evaluation shows a certain amount of feasibility of the system. In Institution A, as a conventional evaluation system without detailed criteria like the proposed model in this study was already in vogue implementing a newly developed system definitely will have difficulty to substitute the existing system and may face nonacceptance by the staff in the beginning. However, as a result of this assessment, the requirement of the proposed system is established given the feasibility is considered.

3.2Significance of this study

The proposed model is effective in ensuring quality at the nontechnical human resource level in a healthcare facility that concerns the patients visiting the place. In addition, despite the complexity and individual customized requirement of SOP for the concerned healthcare setup, the proposed model utilizes the PDCA concept to address the issue. A method to evaluate quality assurance in terms of the six core competencies needs to be addressed which can be developed by more and more customized usage of the proposed model and consequent up -gradation of the SOPs. Since assessment of the nontechnical staff in this model requires expertise and knowledge and because of difficult to specify competence criteria employment of supervisors who are themselves experienced and experts, in each area, is of utmost importance. This study shows the proposed format for deriving competence criteria for nontechnical staff in Table No. This implies the versatility of the proposed model for use in the healthcare field. Furthermore, we proposed a method to derive contents based on the standard procedure. Since the model is based on the PDCA framework, building up a knowledge base related to the standard procedures is possible with subsequent wide customized usage. This knowledgebase can then be used by other organizations not only in healthcare but also in the pharmaceutical or healthcare engineering industry in a customizable format according to their area of work. Subsequently, the accumulation of knowledge within several organizations would contribute to improvement in the standard itself and competency assessment will be a mandate in all fields big or small for quality assurance to its consumers.

3.3Future issues

The proposed format can be further validated more precisely, by evaluating the model in different situations in various institutes with differences in working mode. For this, the format needs to be customizable according to the needs of the Institution. Based on this, the reliability (independence of the results from the person performing the evaluation) and usability (ability to replace conventional methods) of the developed model can be determined. More usage will bring out the pitfalls in the proposed model which can be updated as per requirement. This will ensure better competence and urge to perform better by the nontechnical staff in their work area.

CONCLUSION

The nontechnical staff / front desk personnel/ clinical coordinators are the persons who encounter grieving or distressed patient and their relatives in healthcare facilities. Hence their competence to handle them is of utmost importance. Communication skills, they are required to master various emergency technical skills like assessing the condition of the patient, The idea of triage to classify the patients entering the reception area, guiding them to the required department or clinicians or laboratory, etc as per requirement, proper idea of patient preparation required for various procedures both invasive and noninvasive as they are the communication point often for patients and their relative other than the nursing staffs. Even in places, they are required to learn the Basic Cardiopulmonary Life Support (BCLS) for handling emergencies at the reception area. Hence there is utmost importance in developing a competency assessment criteria model for all nontechnical staff associated with a healthcare facility for the efficient running of the organization.

In this study, a model was developed to evaluate the competence of nontechnical staff in healthcare facilities, concerning patient handling. The model had to be supplemented by functions, procedures, and tools based on the competence evaluation items. The PDCA cycle is introduced here in the process of deriving the evaluation items and applied. Based on these evaluation items, procedures and tools need to be designed for the implementation and management of competence evaluation according to the individualized needs of the organization depending on its catchment area. Finally, though the study examined the effectiveness of the model by applying it to 30 nontechnical staff at Institution A, it requires elucidated future tasks for refining the competence evaluation system by each healthcare facility for their customized protocol.

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CONFLICT OF INTEREST: Nil

Annexure 1
QUESTIONNAIRE TO EVALUATE SIX SCORE COMPETENCY IN NON-TECHNICAL PERSONNEL.
NAME OF EMPLOYEE :
DEPARTMENT :
ROLE: CLINICAL COORDINATION / FRONT DESK / RECEPTION /BILL COUNTER
PATIENT NAME :
AGE: SEX :
CLINICAL CONDITION /CHIEF COMPLAIN :

DEPARTMENT REFERRED TO: OPD / EMERGENCY / IPD / DIAGNOSTIC SERVICES

PATIENT QUERY :
WHAT WAS ASKED BY THE PATIENT PARTY AT THE FIRST MEETING?

HOW WAS THE QUERY ANSWERED?

DISCHARGE / REPORT INTERPRETATION / PATIENT PREPARATION FOR ANY DIAGNOSTIC OR THERAPEUTIC PROCEDURE :

PRESCRIPTION INTERPRETATION :

ANY INFORMATION ASKED BY THE DEPARTMENTAL CONSULTANT :

HOW WAS IT HANDLED?
HOW IS A CASE HANDLED IN ABSENCE OF THE COLLEAGUE WHO FIRST HANDLED THE CASE?
HANDOVER DETAILS :

CRITICAL ALERT / BAD NEWS :
HOW WAS IT REPORTED?