

# Evaluation of a Quality Assessment Manual

## EFFECTIVENESS IN A QUALITY ASSURANCE PROGRAM

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Quality assurance in occupational health nursing is a social, political, and economic activity; it is a pathway to accountability, professionalism, and power. Obligations to employee, employer, and the profession are fulfilled in the achievement and maintenance of standards and the assurance of quality (Filios, 1991).

**M**ost quality assurance programs and evaluation tools are designed to focus on nursing practice in the acute care setting. The American Association of Occupational Health Nurses (AAOHN) published "Standards and Criteria for Evaluating an Occupational Nursing Service" (1977), which focuses on the evaluation of a nursing service in the industrial setting. Also published by AAOHN is "A Comprehensive Guide for Establishing an Occupational Health Service" (1987), which contains an audit tool for an occupational health program. These publications focus on the overall occupational health program and do not focus specifically on the evaluation of a quality assurance manual.

### BACKGROUND

Migliozzi (1985) believes that quality assurance is essential to the occupational health setting if nurses are to be accountable for their actions. The author discusses the establishment

of peer review in the occupational health setting, whether one is in a single nurse unit or a corporation with multiple facilities and staff. Harris (1986) addresses quality assurance in the hospital setting, and views quality assurance as a nurse's ability to exercise control over the quality of the working environment. Although quality assurance information can be adapted for use in the occupational health setting, some aspects are unique to occupational health, such as biological monitoring and environmental hazards.

Until recently few articles have described quality assurance tools in the occupational health setting. An assessment guide for occupational health nurses was developed by Manchester, Summers, Newell, Gaughran and Spitler (1991). This tool was designed to evaluate occupational health nurses' practice in any type of occupational setting and in single nurse units or in multiple nurse occupational health units. The assessment guide is based on AAOHN standards, job descriptions, and the American Industrial Hygiene Association (AIHA) audit tool for occupational health programs.

Filios (1991) focused on the formulation of the self evaluation tool described by Manchester (1991). The tool was designed using the structure, process, and outcome approach. The tool was lengthy, which contributed to a low response rate among participants. The authors hope that the formulation of this assessment tool "will provide an impetus for further refinement" (Filios, 1991).

In July 1992 AAOHN *Journal* devoted the entire issue to total quality management (TQM) in business and continuous quality improvement (CQI) in health care, key concepts for occupational health nurses involved in defining health care

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## ***Quality assessment evaluation can assist in the professional development of the nursing staff.***

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services delivered or purchased by their companies (Rooney, 1992a,b). According to Widtfeldt (1992b), "measurement must be a priority of any program in health services" which will enable occupational health nurses to be at the forefront of the quality movement. Widtfeldt (1992a) further discussed the difference between quality assurance and quality improvement, with examples of quality improvement in the occupational health setting.

Conbere (1992) described a patient satisfaction measurement tool used to evaluate the satisfaction of employees or dependents with medical case management services. This tool was devised for use by the occupational health nurse to evaluate the quality of medical case management that employees are receiving.

### **PURPOSE**

This article describes a project evaluating an occupational health quality assessment manual. The quality assessment manual was written to establish standards of care in an occupational health unit. The goal of the project was to determine the effectiveness of the quality assessment manual as part of the overall quality assurance program and to make recommendations based on the findings.

### **METHODOLOGY**

#### ***Sample***

The project was conducted at federal agencies within a single U.S. Public Health Service Region. Five local health units in the local region provide services to employees of federal agencies. The majority of these health units consist of one nurse, with a contract physician who performs the physical examinations. Each health unit reports to the regional nurse coordinator. Services include: education programs, immunizations, illness and injury care, screenings, physical examinations, and fitness testing. The quality assurance program consists of a health unit review every 2 years, the quality assessment manual which is to be used in each health unit, and occasional meetings and memos about quality assurance issues.

One health unit was selected for review of three specific quality assurance categories: em-

ployee injury, employee illness, and employee health promotion services. Employee health records provided the information required in this review. The five health units in the local region were reviewed for additional quality assessment factors in the clinical records category.

### ***Quality Assessment Manual***

The manual is divided into two main sections: representative Federal Employee Occupational Health Program services, and clinical and administrative records. The first section contains nine program service categories:

- a. Employee injury.
- b. Treatment prescribed by employee's physician.
- c. Employee acute illness.
- d. Employee immunizations.
- e. Employee health maintenance examinations.
- f. Physician administered screening examinations.
- g. Employee occupational health exposure.
- h. Employee health promotion services.
- i. Nurse administered employee screening test.

Each program service category has structure criteria and process criteria. Structure criteria focus on the setting in which care takes place (Swansburg, 1990), whereas process criteria reflect what the nurse does to and for the client (Baker, 1983; Horn, 1976). Although outcome criteria were not specifically examined in this evaluation, these criteria focus on the end result, or the change that takes place (AAOHN, 1987; Donabedian, 1988).

The program clinical and administrative records section consists of clinical records and administrative records and contains only structure criteria.

### ***Instrument***

The model found in "A Plan for Implementation of the Standards of Nursing Practice" (ANA, 1975) was used, since it can accommodate a variety of situations from an individual nurse's performance to an institutional or organizational setting. This model is relevant for the evaluation of the quality assessment manual, since the steps in this model are basic steps essential to the success of a program (Migliozzi, 1985):

1. Identify values.
2. Identify structure, process, and outcome standards and criteria.
3. Measure to determine degree of attainment of standards and criteria.
4. Interpret strengths and weaknesses based on measurements.
5. Identify possible courses of action.
6. Choose course of action.
7. Take action.

As this model is designed primarily to assist in

the overall quality assurance program, a portion was adapted for the evaluation of the manual. Steps 2 through 5 were used, as these are applicable to the quality assessment manual evaluation. Once the possible courses of action have been identified, a plan will be developed, including the appropriate course of action for this setting, and action will be taken.

To develop the evaluation tool, the first step was to examine the standards. According to the AAOHN (1987), standards must be established to measure the care rendered. A standard provides both a means to evaluate the practice (Beckman, 1987) and to establish the desired or achievable level of performance (Bloch, 1977). Included in these standards are only those factors that nurses can directly control. According to Donabedian (1986), criteria for measuring standards may be divided into three categories: structure, process, or outcome. The structure approach involves evaluating such things as facilities, equipment, personnel, and policy. The process approach includes evaluating the nursing care, and the outcome approach focuses on nursing actions—the end result or change that takes place (AAOHN, 1987).

The second step was to determine process criteria for each standard. Process criteria are to be measurable (ANA, 1975; Migliozi, 1985) and should assist with achieving certain standards (Horn, 1980). The process criteria defined in the quality assessment manual provide the basis for the evaluation tool.

Once standards and criteria have been determined, the tool must measure the degree of attainment (Migliozi, 1985). This involves gathering objective data—in this case, through a chart review. Finally, the tool allows interpretation of strengths and weaknesses, based on the measurement, and recommendation for changes.

The process criteria for the categories employee injury, employee acute illness, and health promotion formed the basis for the audit tool. Twenty-nine process criteria formed the employee injury and employee acute illness portions of the tool. For the health promotion category, six process criteria were included in the audit tool.

Finally, 10 structure criteria formed the basis of the audit tool for the category of clinical records. The structure criteria is consistent with "A Comprehensive Guide for Establishing an Occupational Health Service" (AAOHN, 1987), which recognizes health unit structure, such as "organizational characteristics of nursing services, facilities, equipment, personnel, and policy."

### **Procedure**

Four categories in the quality assessment manual were chosen for evaluation—three from the

program service section and one from the clinical/administrative records section—as these categories give a cross sectional sample of the manual and are major services provided to subscribers. The four selected categories were:

- Employee injury.
- Employee acute illness.
- Employee health promotion services.
- Clinical records.

The process criteria for the categories of employee injury, employee acute illness, and employee health promotion services were evaluated through chart review or review of the health unit. Structure criteria were examined through clinical records review, as these were the only criteria contained in the clinical records category.

Examining clinical records is one of the most common forms of quality assessment (Baker, 1983). A review of the employee health record was conducted in the categories of employee injury and employee acute illness to evaluate the effectiveness of the quality assessment manual, not to evaluate the nurse in the health unit. Twenty health records were randomly selected and reviewed for the two categories. A sample of 20 health records was considered feasible, since 29 criteria were being examined.

Entries written in 1991 were reviewed, as the information dating back to 1990 had been evaluated during the previous review. It was also thought that current entries may serve as a better learning tool for those nurses presently employed.

*Employee Injury and Acute Illness Category.* The evaluation of the manual began with a review of the standard in the employee injury and employee acute illness sections to ensure that each standard is directly related to nursing action. The standard for employee injury is that the nurse will accurately recognize employee injury, assess the condition, and either treat or refer as indicated. The standard for acute illness is that the nurse will provide employees with evaluation of acute symptoms and provide the necessary evaluation or treatment or refer for necessary treatment. Both standards are related to nursing action.

The 29 process criteria listed in Table 1 formed the basis for the employee health record audit tool. When examining the process criteria, the focus was on statements that were measurable and reflected nursing activities. For example, one process criterion is that the nurse will record in the employee health record using problem oriented charting (S.O.A.P.). This requires nursing action and it is desired that the nurse will chart the encounter. To apply the 29 process criteria to the occupational health setting, 20 employee health records were randomly reviewed.

*Health Promotion Category.* The evaluation

TABLE 1  
**Process Criteria**

**Nursing Action Criteria**

Entry legibility  
Entry signed by health professional  
Date of occurrence  
Time of occurrence  
Assessment  
Treatments  
Follow ups  
Referrals  
Referral follow up  
Signed instructions  
SOAP charting

**Client Information Criteria**

Employee signature  
Surname  
Birthdate  
Occupational code  
Workplace building  
Workplace room  
Workplace phone number  
Supervisor's name  
Supervisor's phone number  
Employing agency  
Form initialed  
Employee's home address  
Employee's phone number  
Physician's name

**Employee Records Criteria**

Appropriate forms  
Correct position of papers in chart  
Forms bound in chart  
Chart forms completed

process began by examining the standard in the employee health promotion category. The standard is that the nurse will actively participate in planning and implementing health promotion programs that shall be available to all federal employees to promote healthful work practices. The standard includes activities for which the occupational health nurse is responsible.

The employee health promotion services category consisted of six process criteria, which formed the basis for the audit tool in this category: communication procedures present, target population, sample population aware, sample population using services, distribution of health promotion brochures, and employee orientation. To determine if the criteria were being met, five local health units were reviewed.

*Clinical Records Category.* The clinical records category does not contain a standard, but only 10 structure criteria. These criteria, which formed the basis for the audit tool in this category, are: the use of an appointment book, nursing orientation checklist, medical officer orientation checklist, disaster plan present, inventory of pharmaceutical compounds, emergency equipment checklist, daily encounter log, audiometric equipment maintained, spirometry equipment maintained, and record of cleaning equipment up to date. To assist in the evaluation of the clinical records category a health unit review was conducted in the five local health units.

**DATA**

*Employee Injury/Acute Illness Categories.* Results of the employee health record review for the employee injury and illness category are shown in Figures 1 and 2. When the results of the record review or health unit audit were examined, the question asked was, "Is the standard being met through the criteria? If not, then is it a problem with the nurse's performance or is it a problem with the selection of criteria?" According to the chart review for employee injury, over half of the criteria were met.

The data for employee injury and employee acute illness indicate some specific areas where there is either a deficit or an absence of information. According to the quality assessment manual, follow up, referral, and referral follow up procedures should be present. In the employee injury category the nurse had made an effort to follow up with eight employees regarding their injury, but there was no follow up noted when there was an ill employee. The categories referral, referral follow up, signed instructions, and employee signature all show a lack of nursing performance. According to the quality assessment manual there should be written evidence that instructions were given to the employee and the employees must sign that they received instructions. Both categories of employee injury and acute illness showed a deficit in this area.

Another problem common for both injury and acute illness categories was the occupational code. None existed in the charts, nor was there a space on the face sheet for this code. This is a problem with the criteria in the manual.

All other areas that show a deficiency are those areas that were not completed according to the quality assessment manual. This is reflected in Figures 1 and 2 under "forms complete" where there is a score of zero. It was not possible to have all forms completed due either to a lack of information about the occupational code or a deficit of information on the client's chart. For example, the

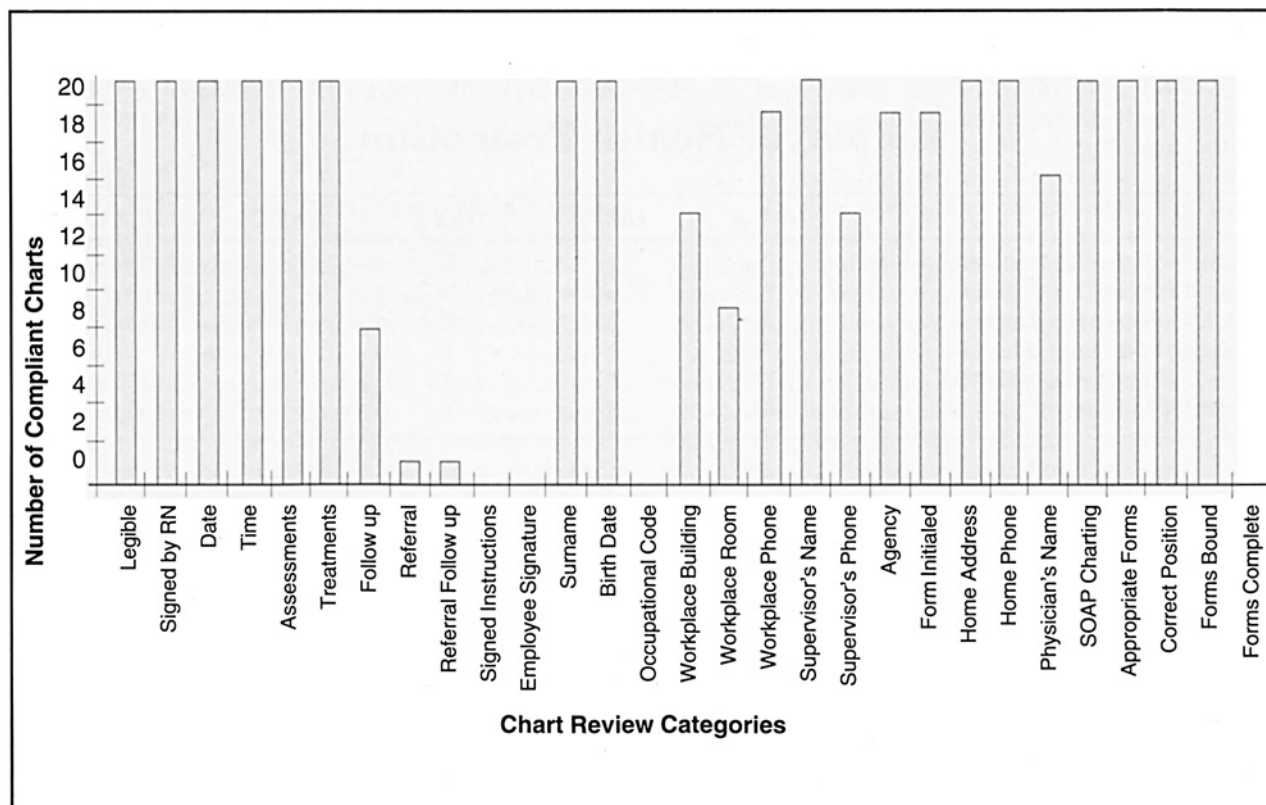


Figure 1: Employee injury chart audit.

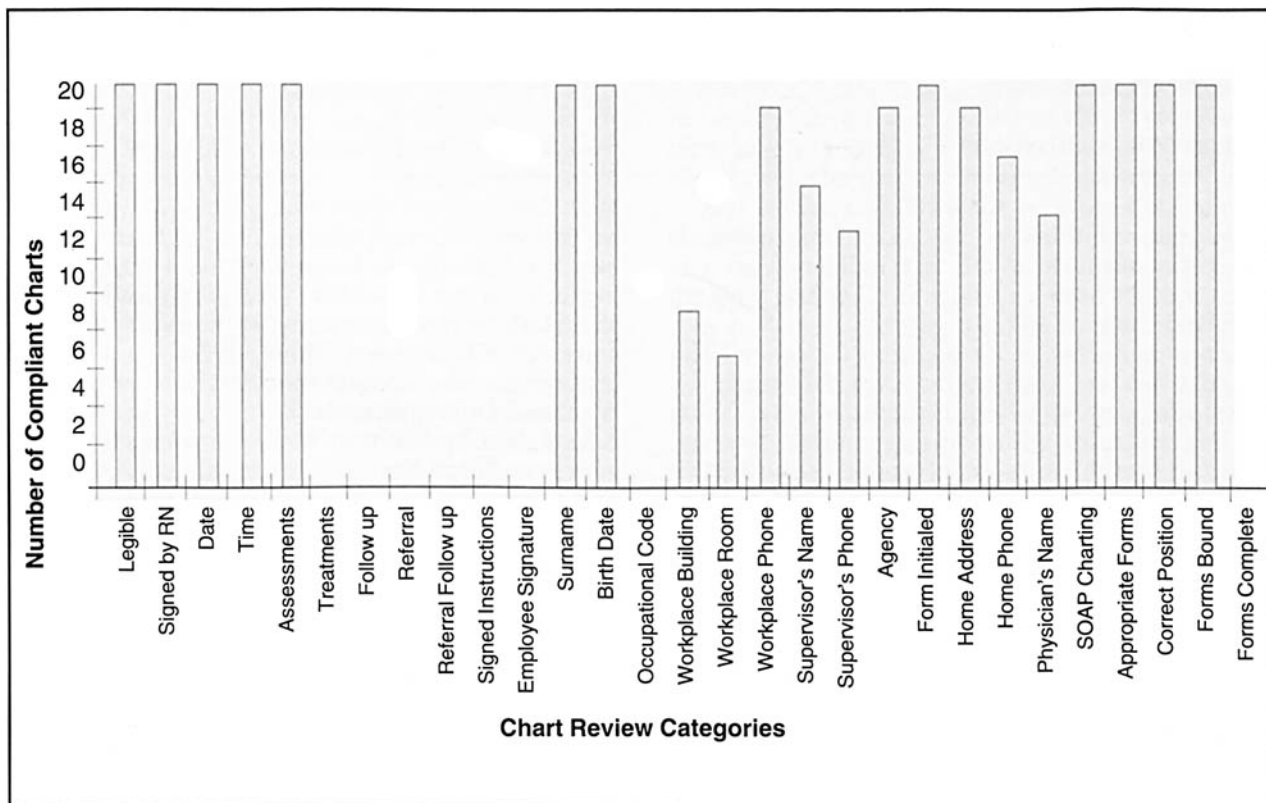


Figure 2: Employee acute illness chart audit.

TABLE 2  
**Employee Health Promotion**

	<i>Unit A</i>	<i>Unit B</i>	<i>Unit C</i>	<i>Unit D</i>	<i>Unit E</i>
Communication Procedures Followed	Y	Y	Y	Y	Y
Target Population Informed	Y	Y	Y	Y	Y
Sample Population Aware	Y	Y	Y		Y
Sample Population Use	Y	Y	Y	Y	Y
Health Promotion Distributed	Y	Y	Y	Y	Y
Employees Oriented	Y	Y	Y		Y

TABLE 3  
**Clinical Record Review**

	<i>Unit A</i>	<i>Unit B</i>	<i>Unit C</i>	<i>Unit D</i>	<i>Unit E</i>
Appointment Book	Y	Y	Y	Y	Y
Nursing Orientation Checklist	Y	Y	Y	Y	Y
Medical Orientation Checklist			Y	Y	
Disaster Plan		Y	Y	Y	Y
Pharmaceutical Compound Inventory					
Emergency Equipment Checklist	Y	Y	Y	Y	Y
Daily Encounter Log					
Audiometric Calibrations	Y	Y	Y	Y	Y
Spirometry Calibrations	Y	Y	Y	Y	Y
Equipment Cleaning Records			Y		Y

nurse had not filled in the physician's name or telephone number or did not indicate that the client did not have a physician. This is a problem with performance, not the criteria.

*Employee Health Promotion Category.* The majority of the health units are following the criteria for employee health promotion (see Table 2). The difficulty with the information received from the health units is that none of the health units has assessed whether the sample population is aware and using the health unit services. None of the nurses in the five health units knew exactly how they would go about assessing this. The nurse in health unit D was not sure if the sample population was aware and had not assessed this; this nurse also did not conduct any type of new employee orientation. The remaining health units assumed that a sample population was being reached as to the number of visits in the health units, but no formal assessment of this had been conducted.

*Clinical Records Category.* The review of clinical

records indicated that all five health units are meeting the criteria for appointment book, nursing orientation checklist, emergency equipment checklist, and calibrations of audiometric and spirometry equipment (Table 3). Only two health units meet the criteria for medical orientation checklist. One of these is the primary health unit responsible for orientation of the medical officer, which explains the deficits for the other health units. Another unit showed a deficit for the disaster plan criteria, which was not a problem with the quality assessment manual but with nursing performance.

A deficit exists in all five health units in keeping a pharmaceutical compound inventory. The nurses did not know what this inventory is. Each health unit shows a deficit for the criteria "daily encounter logs." These encounter logs are no longer used, as a computer system has been implemented and daily records of visits are generated on the computer.

The final criteria for equipment cleaning ap-

pears to be a problem with nursing performance and not the quality assessment manual. Two units keep records of cleaning, while the other health units do not.

## RESULTS

The results of this evaluation reveal compliance in many areas and also deficits of information for the follow up, referral, referral follow up, signed instructions, and employee signature for both employee injury and acute illness categories. The cause of these deficits may be the lack of a defined follow up procedure in the health unit policy and procedure manual. The occupational code is another area where a deficit exists, as well as a lack of information as to what this code means.

According to Migliozi (1985), process criteria are to be measurable and centered on nursing actions. The process criteria in the health promotion category are measurable and are based on the nursing assessment and evaluation of the population; for example, a sample of the population is aware of the health unit services, and a sample of the population uses the health unit services. In the category of health promotion, no data are available as to whether the health units are reaching the sample population with their health promotion programs. Measurement through assessment and evaluation has not been taking place.

The clinical records category reveals a deficit in the criteria for pharmaceutical compound inventory and daily encounter logs. Nurses lack information about the pharmaceutical compound inventory. The daily encounter log does not exist at this time.

## RECOMMENDATIONS

This review clarified the quality assessment manual standards and criteria. This review should encourage further discussion and implementation of the quality assessment manual, and advance professionalism in occupational health nursing by promoting accountability of care providers.

The quality assessment evaluation can assist in the professional development of the nursing staff. The nurse-coordinator meeting is a time during which the staff could discuss, revise, or review quality assurance issues. A review of the manual and clarification of problem areas could be initiated. One staff member could be designated to be responsible for establishing, implementing, and revising the quality assessment manual (Swansburg, 1990).

When instructions are necessary after an injury or an illness, the nurse should provide a

written instruction sheet to the employee which could also be recorded in the employee's chart. These instruction sheets could be generated on the computer, and the appropriate sheet printed out for the particular illness. Instruction sheets could be available in the health unit for several different types of common occurrences. The nurse could include a copy in the employee's chart with the signature of the employee indicating that they received instructions, understood the instructions, and had any questions answered.

The occupational code is used for employee identification, although confusion exists as to what this code is and where it should be entered on the employee record. This item could be deleted from the quality assessment criteria.

In the health promotion category possible courses of action would be to accurately assess whether target populations in the different agencies are being informed and whether a sample of this population is aware and using the health unit. The quality assessment manual does not define sample population, so the nurses have assumed they are reaching this population. If the quality assessment manual defined a sample population, the nurses could assess accurately whether the population is aware of and using the health unit.

The clinical records category needs updated criteria; for example, replace the daily encounter log with the computer printout of daily visits to the health unit. The pharmaceutical compound inventory should be defined so that each health unit can reach this criteria. It also would be clearer for the nurses if each health unit maintained a standard form for recording equipment cleaning.

## CONCLUSION

It is important that criteria in quality assessment manuals not only be measurable, but also realistic. Occupational health nurses can assist in the development of criteria before measurements are implemented, which would provide more meaning to the overall assessment process.

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## IN SUMMARY

### Evaluation of a Quality Assessment Manual Effectiveness in a Quality Assurance Program.

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1. An occupational health quality assessment manual was evaluated to judge its effectiveness as part of an overall quality assurance program.
2. The first step in the evaluation process examined standards; the second step determined measurable process criteria.
3. A quality assessment evaluation should promote accountability among care providers and clarify standards and criteria.

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