
2a. Teaching in the Outpatient Department II: Defining and Evaluating the Quality of Ambulatory Teaching Sites

Judith L. Bowen, MD, FACP

1. Introduction

How can ambulatory educational programs be evaluated?

Borrowing from the business and quality improvement literature, Dr. Bowen described several examples of relationships between “quality” or “value” and measurable variables:

- **Value = Quality/Costs** is an equation that represents “quality” as “benefit” over “costs,” and is the basis for several variations on this theme.
- **Value = f (Quality/Costs x Volume)** is an equation that represents value as a function of quality, costs, and the volume of service. (From the ‘Clinical Value Compass,’ Dartmouth Medical School, E.C. Nelson, Dsc, MPH.)
- **Value = Appropriateness x [Outcomes + Satisfaction]/Cost** includes the notion that health care should be appropriate, and satisfaction is an important element. (From the ‘Value Equation,’ Virginia Mason Medical Center, Seattle, LF Fenster, MD.)
- **Educational Quality = f (environment) x [outcomes + satisfaction]/costs** is an “educational quality equation” developed by Dr. Bowen. “Environment” refers to the learning environment being evaluated; “Outcomes” refers to educational program outcomes; “Satisfaction” refers to participant—learners, support staff, teachers—satisfaction levels. (See Bowen JL et al,

Defining and evaluating quality for ambulatory care educational programs. *Academic Medicine*, 1997; 72: 506 - 10.)

2. Small group discussion

How do you define “Educational Quality?”

Participants in this workshop then divided into small groups and generated possible measures of educational quality. The ideas (questions, measures) generated by the group are:

General

Triangulation: quality is a relationship between values, performance, and outcomes

Educational Culture

Values are important and are setting dependent

Quality of life is important

Orientation

Goals of learning

Organization—balance of emphasis with hospital patients and outpatients; schedules changes post-call

Lack of barriers to learning

Team work in determining objectives: representation vs. consensus

Are learners empowered?

Learner Characteristics

As the learner improves, the patients improve: should we compare learner level with patient outcome?

Student thinking—how to promote critical thinking

Motivation to learn

Outcomes

Should we measure long term educational outcomes or intermediate outcomes?

Satisfaction with learning

Long term learning

Stakeholders include program directors, patients, learners, and faculty

Costs

Time

Time—time spent often depends on learner level

Time pressure

Patients

Appropriate volume of patient care

Diversity of patient problems

Patient satisfaction

Heterogeneous

Appropriate exposure to patients, types of problems

Physical Aspects

Physical space (e.g. number of rooms)

The physical environment influences volume

Resources, computers

Appropriate support staff

No waiting time

Charts are available

Access to teachers

Curriculum

Learner knowledge brought to experience is important to consider

Assess the spectrum of patients (a curricular issue)

Core competencies

Consistent delivery of the curriculum

Goals, skills, objectives

Agreed upon learning goals

Teacher Characteristics

Desire to teach

Teaching is a priority

Sensitive to learners

Has adaptable teaching style

Motivation to teach

Promotes feedback and reflection at multiple levels

Provides consistent experiences

Articulates clear objectives

Keeps a learner involved

Balances autonomy and supervision

Manages time

Provides focused teaching and feedback

Teaches learners to ask the right questions to be productive learners

3. How can quality be measured?

In order to measure and improve educational quality, what would you choose to work on at your ambulatory teaching clinic and why? What would you measure? How would you measure?

Dr. Bowen shared her experience in applying several measures in exemplary ambulatory teaching sites. Her examples demonstrated the application of quality improvement techniques to gather data about the quality of the site. Examples addressed these questions:

- Are the residents behind schedule because of delays in getting patients ready for their exams? If so, where are the delays in the process?
- Are the residents waiting for preceptors to be available to discuss cases?
- How often are the residents asking for help from preceptors?
- How often are the residents working independently?
- How long does it take a resident to see a new patient? Does it vary by level of learner? Does the resident's schedule reflect the time required to evaluate patients?
- How does the "no show" rate for resident patients compare with faculty patients?

Dr. Bowen also shared preliminary data from a qualitative study eliciting residents' needs in their continuity clinic. **Communication and control** are the primary themes woven throughout the data. Additional themes include:

- **workload** (scheduled with the right number of patients; feeling pulled to clinic from other learning roles in the hospital);
- **process** (standardize the exam rooms, get messages to residents in a timely fashion);
- **teaching** (preceptors need to be physically present in clinic and ready to discuss cases);
- **team work** (communicate well with support staff in your practice, know each other well enough to anticipate needs); and
- **predictability** (establishing rapport with your faculty, nurses, and other ancillary staff).