# Practice-Based Research in Healthcare Social Work

*Karen M. Allen and William J. Spitzer*

## INTRODUCTION

Research informs and advances social work practice in two ways. The first benefit occurs when we use empirical studies to help select and evaluate clinical interventions and strategies or to learn more about a disease, its causes, and its prognosis. **Evidence-based practice** describes the process of inquiry that begins when we turn to published, scholarly research to answer questions about the type of treatment shown to be most effective with a given patient population or problem (Giles, 2004; Jackson, 1998; McNeece & Thyer, 2004). We identify research on the problem, critically evaluate it, assess its applicability to our situation, and, after integrating it into our practice or program, evaluate the effectiveness of the intervention (Drake, et al., 2001; Straus, Richardson, Glasziou, & Haynes, 2005.). **Best practice standards** are published protocols or steps that should be followed in certain circumstances. These standards arise from research findings that support their effectiveness.

*Best practice models* incorporate the most efficient and effective *standards of care* in treating problems. When social workers design new programs and look to the literature and/or agencies in the community to learn about state-of-the art programs, their effort is to identify a best practice model that can be applied to the new program. The landmark Patient Protection and Affordable Health Care Act that was passed in 2010 supports the use of evidence-based medicine and best practice standards as a means of standardizing care across the country, thereby reducing costs and variations while improving overall quality.

The second benefit of research occurs when we evaluate our own practices, programs, and services. **Practice evaluation** involves integrating basic research methodologies and evaluation strategies into our own professional practice so that questions about the effectiveness of our interventions can be answered. Particularly during periods of financial

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constraint, all human-service providers, including social workers, are challenged to demonstrate that their interventions are effective and that their services make a positive difference in the lives of their clients. Funding sources understandably require data that justify research or operating expenditures, and, particularly during times of decreasing government resources, administrators need a sound basis for making decisions about maintaining or eliminating programs and services. Documenting how problems have been successfully addressed serves to educate decision-makers about the important contributions made by social work (Bloom, Fisher, & Orme, 2009).

Practice-based evaluation typically describes the research activities of a social worker relative to delivering services to patients on their own caseload. When we expand the scope of evaluation and collect data from the caseloads of multiple social workers, we engage in *program, department, and/or agency evaluation*, similar to our conceptual model of micro-, mezzo- and macro-level client systems. Micro-evaluation is focused on individual workers' practice, whereas mezzo-evaluation aggregates data from multiple workers at a program, service, or department level and macro-evaluation examines the composite results of multiple workers, services, and programs at the agency level. Employing all three levels of evaluation is crucial for assessing the overall effectiveness of social work services and value of the professional contributions added to an agency.
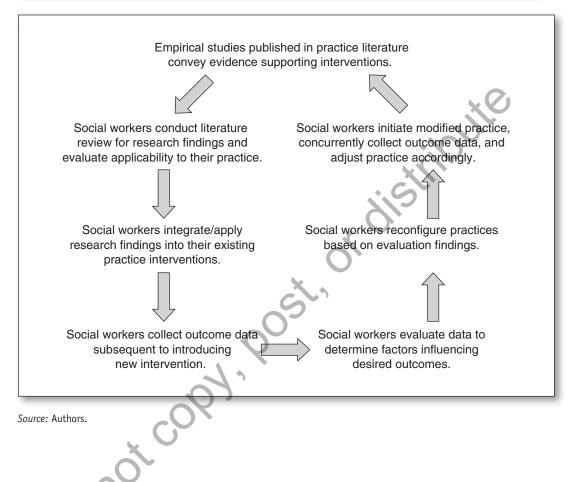
The process of integrating research, evidence, and empirical data into practice overlap and can be conceptualized as a circle. The beginning of the circle starts when one explores existing research to determine the best clinical approach or best practice standard to use with your patient population. You read and critique the literature, determine the best studies and model approaches based on your goals or focus, design a program or intervention incorporating the findings in the literature, and then evaluate the effectiveness of your program. When you analyze and summarize your evaluation data, you close the circle as shown in *Figure 6.1* below.

This chapter takes you through each step of evidence-based practice and the practice evaluation cycle described above. Each chapter in Part II of this book presents an overview of a theoretical or treatment approach that can be utilized in given situations. Research is cited to justify each approach and to demonstrate its effectiveness. The practice approaches described in this book are therefore evidence based.

## EVIDENCE-BASED PRACTICE

**Evidence-based practice (EBP)** is an approach that was introduced into medicine during the 1980s and that has now been adopted in many professional contexts. EBP in medicine is defined as the "integration of best researched evidence and clinical expertise with patient values" (Institute of Medicine, 2001, p. 147). This broad definition recognizes the importance of professional experience and knowledge in consideration of patient values and preferences when selecting treatment options. Evidence-based practice is a decision-making process that uses established evidence to design, select, implement, and evaluate practice interventions (NcNeece & Thyer, 2004; Mullen, 2004). Empirical evidence is established through testing in formal research studies.

**Figure 6.1** Evidence-Based Practice and Practice Evaluation Cycles



Source: Authors.

One way of integrating best-practice standards in healthcare is through the use of **critical pathways** or *clinical practice guidelines* based on empirical evidence. These treatment protocols are standardized and implemented most frequently as a tool for intervening with chronic, complex, and/or high-cost diseases. A critical pathway affords a methodology or "map" that can be used by healthcare team members to focus on particular patient problems or populations. Pathways list and sequence times for "critical" steps during patient-care interventions (Rotter et al., 2010). Pathways seek to increase consistency in care by reducing any variation between provider interventions. This consistency is achieved by articulating step-by-step patient-care guidelines based on demonstrated research and best practice approaches. Healthcare organizations select or develop critical pathways for patient problems and then scrutinize any reasons for varying from these pathways. At the same time, attention is focused on

determining the effectiveness of the pathways and identifying factors that influence outcomes.

Social workers benefit from being aware of, and being part of, critical pathways. Our services may represent one component of a path, for example, when certain patients warrant a psychosocial assessment on a particular day of care. It is fundamentally important that social workers be active participants on interdisciplinary teams responsible for developing critical pathways used by our facilities, particularly when mental health, psychosocial, or continuity-of-care issues affect patient care. Such participation is important as it affords opportunities for social workers to define the optimal manner for using our services and thereby deriving maximum benefit for both the patients and the facility. We effectually determine when, how, and by whom particular services will be initiated. Dienemann, Campbell, Landenburger, and Curry (2002) developed an illustrative critical pathway for use with patients admitted to the hospital as the result of interpersonal violence.

Although there may be evidence documenting their effectiveness, some interventions may transgress sensitive cultural, religious, social, and/or personal values of patients. To illustrate, while a legitimate and usually effective medical intervention, the ordering of a blood transfusion would violate the fundamental religious beliefs of any practicing Jehovah's Witness. Healthcare professionals must strive to be aware of and respect patient wishes. Colleagues and/or hospital ethics committees should be readily consulted when questions arise about the appropriateness of any intervention. Gambrill (1999) defined EBP as "the effective use of professional judgment in integrating information regarding each client's unique characteristics and circumstance, including their preferences and actions, and external findings. The steps in the process are

1. Identify a practice decision that needs to be made.

2. Formulate a question that can be answered by exploring the research.

3. Locate the best evidence and information available to answer the question.

4. Critically evaluate the evidence.

5. Apply the results of this appraisal to the practice decision.

6. Evaluate effectiveness and seek ways to improve intervention in the future

(Straus et al., 2005, p. 3–4)

Evidence-based practice is based on an expectation that practitioners will critically evaluate information discovered during the exploration of patient-care issues (Gibbs, 2003; Gibbs & Gambrill, 2002). Gibbs (1989) and Cournoyer (2004) developed resources and guidelines for social workers to use when looking at empirical and evaluation studies on practice interventions. These guidelines can be used to critique the study and to consider factors such as the sample size, whether or not random assignment and controls were used, and the extent to which study findings can be generalized to other populations.

While Internet sources on diseases and treatments can be useful to patients when they are learning about their condition and its management, practitioners need to systematically

review current scholarly and empirical research studies published in *peer-reviewed* professional journals. Literally all hospitals feature medical libraries that are available for staff researching patient conditions and treatment. A thorough analysis of research studies is necessary to determine which interventions yield the most desirable or "best" outcomes. Even the most carefully conducted research contains some margin of error, so professional experience dictates caution in using a given treatment approach, even when supported by evidence.

Clinical experience also can guide us in taking an approach used and tested with one group of patients and then making appropriate modifications so that another group might benefit from its application. In all instances, social workers and other healthcare professionals have an ethical responsibility to inform patients of any known limitations in research guiding their interventions and recommendations. Patients and families are in a better position to make informed decisions about their care when they understand the basis for and implications of involved professionals' opinions and actions. Importantly, informed consent also increases the prospect for the patients' subsequent compliance with any treatment directives.

Depending on the presenting issues, healthcare social workers most often review articles in social work, nursing, and/or medical journals. When addressing complex problems, research into the literature of disciplines beyond social work is recommended. The more extensive the literature review, the greater the likelihood of achieving a fuller understanding of both the presenting problem(s) and the interventions. Since disciplines vary in their patient-care approaches because of unique perspectives, methodologies and expertise, it is valuable to be aware of the factors that influenced the selection of any one approach. Such knowledge enhances your understanding of other professionals' actions, can guide your interaction with them, and can influence your recommendations about maximizing your contribution to patient care. Regardless of literature, some consistent criteria exist for evaluating articles:

- Is the article a scholarly publication in a peer-reviewed journal?

- Are the authors identified with their professional affiliations and credentials?

- Is an abstract provided that summarizes the content of the article? Does it assist in deciding whether to read the article?

- Is the problem or topic clearly defined? Does the author outline research questions, study purpose, approach, theoretical framework, or hypothesis?

- How would you classify the article? Is the article conceptual or theoretical, empirical or research?

- Is a description provided of a best-practice model or program?

- What supportive or clarifying literature is cited in the article? Are the articles recent and appropriate to the topic?

- Are the research methods clearly identified?

- How were the participants selected?

- Is a control (comparison) group included to contrast or aid in explaining findings?

- Are variables operationalized and appropriately measured? If data-collection instruments are used, are they found elsewhere in the literature or were they created by the author(s) for the current study? Was the reliability and validity of the data collection instruments ascertained?

- Are study findings clearly summarized and conclusions clearly presented?

- Are study limitations discussed? Can study findings be generalized to other populations?

- Is the article written in language that is appropriate to the professional discipline, and is it free of bias?

The case study below provides an example of how research can be used in the everyday practice of a hospital-based healthcare social worker.

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### CASE EXAMPLE

Susan is a medical social worker in an acute-care community hospital. Because the staff size is small, the social workers are not able to contact every patient. In addition to seeing patients when they are referred by other team members, Susan reviews the admission information for every patient who is admitted to her unit in order to identify those who potentially would benefit from social work services. On reviewing the admissions records one morning, Susan notices that a 35-year-old man was admitted to intensive care the previous night with a diagnosis of scleroderma.

From her knowledge of medical terminology, Susan is able to partially discern his medical condition as his diagnosis contains the suffix "derma," which relates to the skin. She is curious as to what skin condition would cause a young man to require intensive care. On her way to the unit, she stops at the medical library for a quick reference. She learns that scleroderma actually means "hard skin" and that it is an autoimmune disease affecting connective tissue. In some patients the condition is localized and can be treated, but in others it can affect all tissues and organs in the body, hardening the tissues and potentially resulting in death. She prepares herself as this latter category probably describes the patient who has been admitted to the intensive care unit. She realizes that she needs to prioritize visiting the patient as she will likely need to address end-of-life as well as grief and loss issues.

During her quick search of the literature in the MEDLINE database, Susan learns that there is no known cure for the disease, but best-practice standards indicate that the use of steroids and immunosuppressant drugs can be helpful. A number of articles indicate that patients often experience depression and may develop a substance-abuse disorder. Susan reads in one article that

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alternative approaches, including Vitamin E, can be beneficial, and that detoxified patients may be particularly sensitive to chemicals in the environment. She notes, however, that the article does not appear to be peer-reviewed and is not published in a scholarly or scientific journal. Furthermore, the author does not cite any empirical evidence justifying the use of these alternative approaches. Now suspect of the article's findings, Susan decides to ask the patient's attending physician, a rheumatologist, if he is aware of any indications for using alternative treatments.

When Susan arrives on the unit, the nurse manager eagerly approaches her and asks her to see this patient, who is in fact, dying from scleroderma. Susan recognizes from her research that she needs to screen the patient for depression and substance abuse. While saddened by the patient's prognosis, she is grateful that she researched the patient's condition so that she was prepared to provide the appropriate support needed by the patient and his family.

Because of the potential harm to patients and families from practitioners acting on the basis of poorly designed studies, the field of medicine developed criteria for evaluating research and the legitimacy of any study findings. These criteria include expecting large sample sizes and the random assignment of subjects into control and treatment groups. These studies, referred to as **clinical trials**, are divided into specific phases.

The National Institutes of Health (www.clinicaltrials.gov), which provide substantial funding for medical and healthcare research projects, define four phases of clinical trials. *Phase I trials* investigate the use of experimental drugs or treatments on small groups of people (usually numbering 20 to 80 subjects). The goal is to determine if the interventions are safe to use, identify potential side effects, and determine effective dosage levels. In *Phase II*, treatments are rendered to larger samples ranging from 100 to 300 subjects. In *Phase III,* between 1,000 and 3,000 participants are engaged in an effort to confirm treatment effectiveness, monitor side effects, and compare any new treatment to existing treatments. Permission to move from one phase to another must be given by the Institutional Review Board (IRB), an oversight committee that approves research projects and ensures that human subjects in the study are protected from unreasonable risks. A research study can be halted at any point if a treatment produces serious side effects. The final stage, *Phase IV,* occurs after the treatment is introduced to the market. Phase IV trials seek to delineate serious risks, benefits, and most appropriate use. Studies that have proceeded through all phases of clinical trial, including random assignment of patients to experimental and control groups, are referred to as the "gold standard" of medical research. These trials represent the most carefully conducted research studies, yielding the most reliable findings available to guide practice.

A **Meta-analysis** is a technique used to synthesize and evaluate findings of multiple research studies that address a particular problem. In the analysis, investigators establish criteria for judging research and then summarize all of the study findings. Bradley, Greene, Russ, Dutra, and Westen (2005), for example, conducted a meta-analysis of treatment for Post-Traumatic Stress Disorder (PTSD). To be included in this meta-analysis, studies had to have tested established psychotherapeutic approaches, used a validated instrument to

examine PTSD (the dependent variable), and employed an experimental design with random assignment into treatment and control groups. With 26 studies meeting the criteria, the meta-analysis revealed that while psychotherapy seemingly improved initial recovery from PTSD, patients were often left with residual symptoms over the long term.

## FROM RESEARCH TO QUALITY IMPROVEMENT

Healthcare organizations expend considerable time, money, and energy evaluating the quality of their services. This effort evolves from a commitment to providing quality care but also reflects the fact that the costs and risks of delivering poor care can be significant and impact the life or death of patients. Severe negative consequences arising from care or lack of care are referred to as **adverse outcomes or occurrences** and are customarily reviewed by a healthcare team of the facility or health system. Beginning in 2008, the federal government elected to deny or reduce provider reimbursement for 10 preventable complications found to occur in hospitals. These complications include hospital-acquired infections, pressure ulcers (Stages III and IV), and patient injuries sustained as result of falls (U.S. Department of Health and Human Services, 2008).

To assist tracking these occurrences, most healthcare organizations maintain a philosophy and practice of **continuous quality improvement (CQI)** or **total quality management (TQM)**. Originally designed by Edward Deming (Walton & Deming, 1986) for use in business, TQM has been widely applied in the healthcare arena. TQM seeks to create a culture in which all staff members continuously engage in activities that evaluate and improve upon patient satisfaction and service quality. The following principles are crucial in TQM (Kirst-Ashman & Hull, 2009):

1. The centrality of the patient and family as customers is critical to all improvement activities.

2. Customer feedback is essential to improving services.

3. Quality is a primary goal of the institution.

4. Employee empowerment is essential in creating a culture of quality. This requires providing adequate training and support to employees.

5. Teamwork is essential for improving quality.

6. Leadership is critical for establishing a culture of quality.

7. TQM assumes a long-term perspective based on a continuous cycle of process improvement requiring determination of where we are now, where we want to be, and what specific action steps are necessary to get there, followed by an ongoing evaluation of progress.

Although quality-improvement efforts are typically centralized and overseen by one department such as an Outcomes Management or Quality Improvement Department, every

professional providing patient care contributes in some way to this effort. Social work and nurse case managers in Quality Management Departments frequently provide leadership and administrative oversight to quality-improvement efforts.

Fundamental to quality improvement is a *continuous* cycle of monitoring. Important performance variables called **indicators** are identified for study, and a minimum standard or **benchmark** is set. To illustrate this process, let's say we want to examine patient satisfaction with the continuity-of-care planning provided by social work. Patient satisfaction with this planning may be identified as one indicator. As satisfaction with care planning is necessary to promote patient compliance with treatment, patient satisfaction becomes a particularly important variable. We accordingly set a benchmark that 90 % of all patients surveyed will report they are "very satisfied" or "somewhat satisfied" with social work services. When we first do our study, we learn that only 80 % of our patients are satisfied. As we did not reach our desired benchmark performance, we set out in sequence to (1) identify the contributing factors that detracted from patient satisfaction, (2) implement procedural changes in response to those factors, (3) repeat the study, and (4) continue introducing practice changes until we determine that patient satisfaction with care planning has reached our desired benchmark performance level.

TQM is predicated on teamwork and utilizes tools to understand and remedy quality concerns. *Flow charts* are often used to outline major patient-care processes. When a problem develops, flow charts aid in identifying the point(s) in the overall process where things went wrong. An example of a  flow chart developed to assess how to prevent patient falls in hospitals can be found at http://www.ahrq.gov/professionals/systems/hospital/fallpxtool-kit/fallpxtk-tool3a.html.

*Fishbone diagrams* are another quality-improvement tool that is used to identify the causes and effects of problems. *Figure 6.2* demonstrates how a fishbone diagram might be utilized to reveal potential contributing factors to delayed discharges of hospitalized patients in a particular health system. To create this diagram, optimally an interdisciplinary team would be assembled to explore factors complicating the discharge of patients. The main spine of the diagram represents the essential process under study. The "fish bones" on the top and bottom of the main spine (e.g., personnel, the operating environment, patient-care processes, and relevant resources) reflect contributing factors that impact the patient-discharge process.

"Fishboning" can be used to focus brainstorming discussions when teams are convened for *critical incident debriefings*. Following a patient-care incident with negative implications, debriefings are often employed to analyze problems and to propose corrective steps that minimize or eliminate reoccurrence of those problems. The Joint Commission defines **sentinel events** as "unexpected occurrences involving death or serious physical or psychological injury, or the risk thereof." Serious injury specifically includes loss of limb or function. The phrase "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome (see  http://www.jointcommission.org/sentinel_event.aspx ). Hospitals and **regulatory agencies** require that sentinel events be tracked and systematically studied in an ongoing effort to protect patient safety and promote optimal care.

To best analyze the issue or problem, all parties relevant to the process are convened and are given the opportunity to provide input on the steps, roles, or functions, and
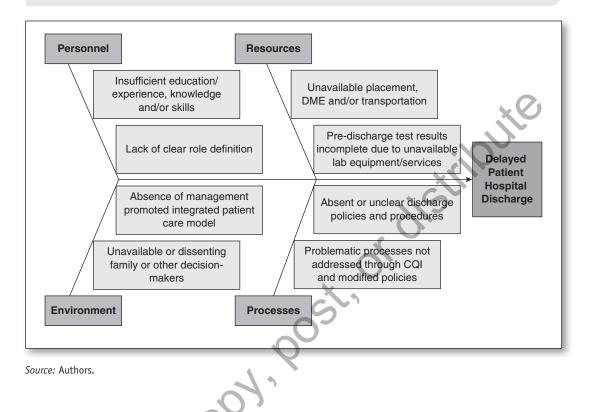
**Figure 6.2** Select Factors Affecting Delayed Hospital Discharges

outcomes related to their patient-care effort. The intent is to reveal at what point and in what manner certain factors that led to an adverse outcome developed. As patient-care processes are most generally intertwined and interdependent on one another, one negative factor can have a compounding impact on yet other factors and trigger a sentinel or otherwise undesired event. Through discussion, these compounding factors can be mapped and then steps can be initiated to remedy identified concerns.

## PRACTICE-BASED EVALUATION

Social workers are ethically obligated to evaluate their practice with attention to the success and appropriateness of their interventions. Practice-based evaluation is a systematic, continuous process for posing and answering important questions about the services, programs, and treatments provided by a facility, a work unit such as a department, or individual staff. Practice evaluation is also referred to as **practice-based research**, and here the terms are used interchangeably. Research, as you know from your research classes, strives to eliminate bias and to achieve rigorous control over the variables being studied. In

true research, those providing patient care would not serve as researchers because serving in the dual roles of provider and researcher could bias any study. In comparison, practice-based research or evaluation often involves service providers directly evaluating their own work. Despite the risk of introducing bias, the intent is to encourage professionals to knowledgeably self-critique their practice and consequently implement service changes that better meet patient needs.

Evaluation differs from research in several ways. Although a report is compiled, evaluation findings are treated in confidence and remain internal to the facility. They generally do not appear in the literature, although public dissemination of results could potentially benefit the profession and overall patient care. Studies destined for publication require approval by the facility's Institutional Review Board before the project is started. This requirement ensures that protections for human subjects are in place and are followed. Evaluations tend to be naturalistic in that they typically examine something that we are doing and how we are doing it. Evaluations rarely involve random assignment into groups or study the impact of withholding specific treatment from patients. Exceptions are made when naturally occurring comparator groups are available for study, such as patients on service waiting lists.

Crucial ethical issues must be considered when engaging in practice evaluation. These include potential bias toward wanting to study and report successes; contending with managers, funders, and clinicians who may seek to influence findings (whether positive or negative); using evaluation to highlight conflicts between the needs of an organization, its patients, and its workers; recognizing actions that can influence the dissemination or suppression of evaluation findings; and avoiding the use of information gathered for one purpose (such as program improvement) for different purposes (such as performance evaluation). Additional ethical challenges arise when evaluation designs are changed midstream or at the time of formal reporting and/or when weak findings are used as the basis for making critical service decisions. Responsible evaluations require that designs be developed in consultation with staff, be written in advance with approval from administration, and be executed according to stated plan; they also require that the findings be reported and used as initially proposed (Bloom et al., 2009).

Posavac (1980) put forth a definition of evaluation that remains relevant to healthcare social workers. Evaluation was regarded as "a collection of methods, skills and sensitivities necessary to determine whether a human service is needed and likely to be used, whether it is conducted as planned, and whether the human service actually does help people" (p. 6). While social work services should be examined to determine if they are *effective* in accomplishing stated goals, *utilized* by clients, and *compliant* or consistent with established plans and policies, it is crucial that productivity and efficiency be evaluated. Such analysis simultaneously contributes to advancing benchmark professional practice and maximizing positive patient-care outcomes.

**Productivity** can be measured by using frequency counts of the services provided, patients seen, and problems addressed. Social workers should routinely collect such data as well as select patient profile characteristics including, but not limited to, age, income, educational level, residence, and type of insurance coverage. Incorporating such data affords a more comprehensive, updated client profile for program oversight and service planning. It provides insight into factors that may account for differential results in service delivery.

**Efficiency** is related to the amount of time required to render a unit of service and/or the cost of delivering that service. While always an important dimension, determining efficiency in service delivery becomes particularly important when resources are limited. To maximize the use of valuable resources (e.g., staff, equipment, physical plants, etc.), we must responsibly ensure that services are offered in the most efficient and cost-effective manner. One methodology for calculating efficiency utilizes time studies in which staff document the length of time necessary to perform select activities, such as assessments, counseling, family meetings, referrals, nursing home placements, and so on. An average is calculated and is used for projecting the time required to provide a planned service with an assumed number of staff and clients. Studies are typically performed for a specified period of time (e.g., day, week, month, or year) and then are repeated as warranted when workloads or other operational changes occur.

Studies that involve assessing the results of interventions measure effectiveness. Immediate results are often labeled outputs, while long term results are called outcomes. For example, passing a class is an immediate outcome of an educational activity. Using the material learned in class with clients is an outcome.

To illustrate the use of a time study, let's assume that the average initial psychosocial assessment by a social worker in a healthcare system takes 40 minutes. Three years later, as a result of an increase in patient turnover and decrease in patient length of stay (LOS), the social work department was found to have intervened with approximately 20 % more patients without a staffing increase. How was it possible to have decreased assessment times by such an amount? While one can argue whether or not this change represents a service improvement, the data were presented to hospital administration as evidence that social work had responsibly self-adjusted its operations to contend with the challenging increase in patient admissions and reduced LOS times experienced by the healthcare system. The following general framework can be used for evaluation of patient-care services:

- **Productivity:** What services do we provide and how much are we providing?

- **Efficiency:** How much does it cost in dollars and/or time to provide services?

- **Utilization:** Who needs and receive our services?

- **Compliance:** Are we doing what we are supposed to do?

- **Effectiveness:** Does what we do make a difference? Do we achieve desired outcomes?

*Table 6.1* provides a basic template for recording social work productivity measures. The patient name and admitting diagnoses are entered, and a key is developed for listing problems, delivered services, and the outcomes associated with social work intervention. Problem lists identify contributing factors such as inadequate home support, substance abuse, inadequate health insurance, and inadequate income. Social work services provided in healthcare settings typically include high-risk screening, psychosocial assessments, patient/family education, counseling, and continuity-of-care (or discharge) planning. The referral list of other facility and community professionals is tracked as evidence of perceived/actual patient

**Table 6.1**  Service Provision Record

| Patient Name | Diagnosis | Identified Problems | Services Provided | Referral initiated to: | Intervention Outcome |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

*Source:* Authors.

needs. Listed outcomes can include whether problems were resolved and/or the discharge target of the patient (e.g., own home, nursing home, home healthcare, assisted-living facility, etc.). If a time series study is conducted, time per service category can be calculated and productivity can then be deduced. Other categories can be added, such as referral sources (how patients came to the attention of social work), type of health insurance, and patient admission and discharge dates.

Systematic, ongoing collection of data about delivered services is crucial, whether by an individual professional or organized operational unit like a department. Such statistics reflect the efficiency and effectiveness of the service contribution, thereby addressing the relative worth of the professional operation. On a micro-level, they allow for determination of individual staff performance, whereas on a macro-level, aggregated performance statistics can influence decisions to shift unit staffing on the basis of changes in patient volumes and needs or to concretely support the need for additional staff.

An example of an actual inpatient social work statistical data collection form is found in *Appendix D*. This form, utilized at a large academic tertiary medical system, focuses on the most significant factors in assessing the "value-added" contribution of social work to overall patient care:

- What services were rendered?

- Were the services efficiently delivered (was service promptly initiated and then executed)?

- Were the intended service goals accomplished?

- Were there barriers that deterred efficient, effective service delivery and what were the implications of these barriers?

- What was the complexity (or "acuity") of the service need?

- Who had responsibility for the satisfactory delivery of each afforded service?

- What was the ultimate patient outcome; i.e., what happened to the patient?

Several crucial features are integrated into this form. *First*, by collecting the dates of the high-risk screening along with the patient's admission date, an analyst is able to determine the *rapidity* of problem identification. An accompanying analysis of medical-record charting would then allow assessment of both the prompt initiation of service following identification of the problem and the extent of necessary involvement (one potential measure of service *intensity and/or competence*). *Second*, not only are the specific services listed but, by obligating the social worker to indicate the extent to which he or she satisfactorily provided that service ("goal accomplishment"), there is a measure of at least *staff-perceived* effectiveness. *Third*, by noting systemic (hospital), community, patient, and/or family barriers to service, insight is provided into possibilities for addressing such issues in future circumstances while also emphasizing social work's role in *solving* rather than contributing to service-delivery problems. The *fourth* feature, noted at the bottom of the form, is a recording of the patient acuity level.

This department used four specifically designated levels of increasing problem complexity (acuity) based on the numbers and nature of presenting medical and psychosocial issues. Provision for form completion by multiple social workers reflects the prevalence of patient intra-hospital unit transfers (e.g., emergency department admission with transfer to intensive care and subsequent transfer to a medical or "step-down" unit). With the form being provided to subsequent social workers who receive the patient on transfer, the initial (opening) social worker formally conveys what was done with the patient to that point. When those social workers complete and submit the form, there is then one complete statement of all presenting issues and what was attempted and accomplished with that patient. This information was utilized in supervision as one means of assessing staff intervention as well as generating recommendations for needed process change.

One potential drawback of evaluations is that the process can become political, with staff and administrators reluctant to embark on studies that would reveal service shortcomings or highlight issues with negative repercussions. Examining the impact of service reductions, for example, could prove to be a painful process for individual practitioners or professions potentially negatively impacted by the study findings. It is important to remember, however, that any self-study by practitioners or professions, even if addressing contentious issues, still places them in the *proactive* position of identifying key patient-care issues and initiating their own recommendations or remedies. Reflecting responsible action, it is far more advantageous than passive reliance on *others* to assess the extent of a problem, its contributing factors, and what potential solutions or alternative future courses of action are most viable or appropriate.

## BEST PRACTICE IN EVALUATION DESIGN

Evaluation strategies should be empowering. They should be simply constructed, accomplishable in their execution, and capable of producing meaningful results. If evaluation becomes an overly complex or irrelevant process, staff will resent the additional work and may subvert or otherwise negate the legitimacy of any findings and recommendations. Evaluation plans, like a research study, should be prepared as a proposal or protocol, with

the purpose of the study and its steps being clearly stated. Supervisory input should be sought, followed by approval from an appropriate facility committee or administrator(s). The design should minimize intrusions on patients and families who are directly involved in the study. Only pertinent questions should be used, and efforts must be made to protect the confidentiality of both the data and the participants. If there is a prospect that the study findings will be published or otherwise made available to outside audiences, consultation regarding the dissemination of the study and its findings should be sought from the healthcare facility's Institutional Review Board, Human Subjects Protection Committee, or equivalent body within the larger organization.

There are seven steps in the **evaluation process**: *designing, planning, implementing, data analysis and interpretation, reporting, data utilization*, and *follow-up*. The *design phase* determines the purpose of the evaluation as well as its scope, target, and questions. The methodology for the evaluation is identified along with the type of data that will be collected and the sampling techniques. Data-collection instruments unique to the study may be designed, or, alternately, standardized instruments may be employed because of their proven track records and the desire to avoid additional time in preparing new instruments. *Planning* calls for establishing realistic timelines for data collection, methodologies, and interpretation. The need for any resources must be outlined. The study proposal must be clearly written and presented with regard to the manner in which data will be used to evaluate and improve patient-care services.

In the *implementation phase*, data are gathered, coded, and entered. The data are then analyzed, and the results are summarized and interpreted. In the *reporting phase*, an initial report is prepared and then is shared with all key stakeholders for their review and response. Incorporating stakeholder recommendations in the final study report enhances both the prospect of a more comprehensive assessment of the problem(s) as well as inclusion of all potentially viable corrective actions. Of particular importance, such collaboration furthers the prospect for subsequent "buy-in" to any future service changes by affected parties in the organization. The *utilization phase* takes the proposed recommendations and integrates them into operations by changing policies, practices, and services. Steps for further evaluation are identified, including assessment of any operational changes that will be initiated as a result of the study.

The term **evaluation target** refers to the focus of an evaluation. We can study an individual patient, a caseload, a service or program, the facility as a whole, a community, or specific policies. The strategies presented here are generally appropriate for most evaluation problems, although they may have to be modified depending on the intended evaluation target. When we begin an evaluation project, we ask *evaluation questions*, which are formulated like the questions in a research study. The wording of evaluation questions is exceedingly important. Questions that are ambiguous, leading, or misunderstood will invalidate the evaluation by generating responses that are inappropriate and irrelevant. Questions should be posed broadly enough to yield complex findings but narrow enough to focus the study. Examples of suitable evaluation questions include "How well are we doing at providing this particular service?", "Are we doing what we set out to do?", "What do patients need?", "Are they getting what they need?", "Are we reaching our goals or benchmark?", and "What is achieved as a result of providing specific services?"

After deciding what we need to evaluate, the next step is to determine how we will get the answers to our questions. This determination in turn impacts the design of the evaluation. We can gather quantitative data, qualitative data, or both. Evaluation designs must be spelled out in terms of the type of data that will be collected, how the data will be collected, and how the data will be analyzed. The sample must be identified in terms of who will be questioned and why they were selected for study. We can sample patients, family members, other members of the healthcare team, and members in the community (such as referral agencies). Often, convenience samples are used to expedite data collection. An example of such a sample would be the surveying of every patient on our caseload for a given period of time. We do need to make sure that our sample is representative, meaning that our sampled population is the one that is most relevant for responding to our questions, and that we have sampled enough of our population that we can reasonably generalize or apply our findings to others outside of our sample. If we cannot generalize, the applicability and usefulness of our study will be limited to only those we sampled.

Sometimes it is not necessary to ask questions of patients directly. Instead, we can elect to review patient medical records or computer files and seek answers there. This method is called **data mining**, or conducting a **retrospective audit**. This process entails obtaining data about a service *after it has been rendered*, as opposed to engaging in a **concurrent monitor** to collect information from recipients of a service *while it is still being provided*. A retrospective audit is exemplified by a review of 200 randomly selected medical records that was performed for the purpose of determining if there were adverse outcomes among high-risk hospitalized patients who *had not* received social work services. For purposes of the audit, "high-risk patients" were defined as those aged 75 years or more, who lived alone, were uninsured or under-insured, and who were experiencing three or more chronic illnesses. The medical records department randomly selected patients' medical records based on the desired sample criteria provided. Upon review, 30 % of the sampled inpatients were found more likely to be readmitted to the hospital within 90 days after discharge if they did *not* see a social worker for discharge-planning services. The medical records were also reviewed to determine compliance with protocol and policies, such as the standard that patient assessments be completed within a specified period of time following referral to the social worker. The representative sample size meant that the study findings could be generalized to that hospital inpatient population and those of similar hospitals.

The finding that nearly a third of inpatients who did not receive social work were readmitted is significant both from the standpoint of unmet patient-care needs and from the standpoint of the negative financial impacts to patients and institutions experiencing potentially avoidable and costly re-hospitalizations. This finding revealed a particularly meaningful value added contribution by social work not only in promoting patients' safe, expedient recovery (a quality-of-life issue) but also in minimizing unnecessary healthcare expenditures to patients and the prospect of incurred losses arising from non-reimbursed care to provider facilities and involved professionals. Such a dual-focus undeniably underscored the systemic importance of maintaining sufficient social work resources and promoting their timely introduction upon patient admission.

When we involve patients, family members, or other involved parties in completing surveys or focus groups, **informed consent** must be obtained. Informed consent simply

means that those who would be questioned agree to participate on the basis of their understanding of the study, their role, and how the information will or will not be used. The voluntary nature of participation must be stressed, with an assurance that there will be no penalties for refusing or withdrawing. A survey introductory paragraph can address such issues by providing the following information:

- The purpose of the study
- Basic participant instructions and information (such as time required)
- Any potential risks and benefits
- How confidentiality will be assured
- How data will be handled
- How results will be used and shared
- The voluntary nature of the study, with no penalties for opting out of all or part of the study

## Formative and Summative Evaluations

Two overarching strategies are available to evaluate practice. In a **formative evaluation,** concurrent monitoring collects data *during the time of service* that is used to measure how a service is being delivered and received. The advantage of this strategy is that the identification and remedying of existing service problems can immediately benefit the patient and family. The intent is to determine how a program or service is currently operating, the extent to which it is reaching the appropriate target population, whether or not the service is being implemented as designed, and whether or not resources are appropriate to deliver the service (Rossi & Freeman, 1993).

To illustrate the use of a formative evaluation, we could ask patients and families currently receiving hospice care if they perceive that they are receiving adequate support from their social worker during the dying process, if their questions are being adequately answered in a timely manner, and if they perceive that their wishes are being respected. We can then intervene to modify a patient's treatment plan or our approach on the basis of the responses to our questions. While we frequently engage in such questioning, systematically collecting respondent data allows us to incorporate this information as part of a formative practice-evaluation strategy.

When counseling patients and families, we may use a task or goal-attainment scaling to measure progress. Patients would periodically be asked to rate their progress on achieving goals by using a scale with a range of positive and negative values or numbers. A score of 0 would indicate that the patient had not made progress toward a goal, whereas a positive score would indicate progress and a negative score would mean the patient had fallen behind in reaching his or her goal. When we integrate this kind of simple tool into our practice and track progress from week to week, the social worker and the patient openly discuss the results of treatment and make ongoing adjustments to the intervention plan and approach as indicated.

The other type of general evaluation approach is called **summative evaluation** because it is done at the conclusion of services. The word "sum" means the total or the act of totaling. Summative evaluations may be conducted when a patient is being discharged and is asked to complete a patient-satisfaction survey or when patients attend a group and complete an evaluation at the end of the session(s). There are four levels to consider in summative evaluation. A *Level-I evaluation* asks patients to report their overall satisfaction with, or appreciation of, a service. An illustrative Level-I question is "To what extent did you enjoy the program?" *Level-II evaluation* questions are more specific and ask patients to subjectively report on whether they learned something from an experience or service. An example of a Level-II question response might be "As a result of this program, I learned how to use the food pyramid to plan meals." A *Level-III evaluation* occurs when patients are objectively tested on their knowledge after an intervention. When you take a final examination in a course, your instructor is using a Level-III evaluation to determine what you learned from the course. Level-I, II, and III evaluations are also called one-group, post-test only designs (Kirst-Ashman & Hull, 2009). If your instructor pre-tested you in the first class period and then repeated that test at the end of the course, he or she was using a *Level-IV* evaluation. As a Level IV evaluation requires a pre-test and post-test design to measure changes as a result of the intervention, it is also referred to as a *pre-test/post-test design* (Kirst-Ashman & Hull, 2009).

## CASE STUDY

### Patient Evaluation

As a pediatric social worker, Carly was concerned about the number of her patients who were obese. The unit recently initiated a peer-support group for obese children and teens in addition to a weight-loss and exercise program. Unfortunately, interventions remained unavailable for the parents. Carly reviewed the research and learned that parental involvement is a key component to all successful childhood obesity intervention programs. Working with the unit interdisciplinary team, Carly developed a psychoeducational support group for parents of teens in the weight-loss program. A primary care physician interested in health promotion and disease prevention was invited to consult with the group.

The team identified a variety of topics that parents would benefit from knowing and understanding about childhood obesity. These topics included health risks and obesity, the role of genetics in obesity, developmentally appropriate nutrition, creative options to promote activity and exercise, emotions and food, and behavioral management strategies for children participating in weight-loss programs. For each of topics, the team created three multiple-choice questions from material covered in class. The parents were tested on the first and last nights of class, and the difference between the test scores was computed. Items were then analyzed to determine if there were gaps in covered material. The curriculum was then revised to provide additional content in areas reported by parents as problematic.

**What kind of evaluation is this?**

After reviewing the data, Carly wondered if the participants enjoyed being in the group, felt supported, and thought their time was well spent. She designed a satisfaction survey for the group that was then distributed to group members for completion on the last night of class.

**What level is this evaluation?**

## EVALUATION DESIGNS

Both formative and summative designs can be used to gather quantitative and qualitative data. **Qualitative research designs** typically explore the experiences of small samples of subjects. While the data gathered can be measured numerically and thus quantified, the emphasis in qualitative research is on analyzing the words of respondents in order to understand common themes, beliefs, perceptions, knowledge, or impressions of an issue, service, or problem. In comparison, **quantitative research designs** use larger samples and gather objective, numerical data such as test scores, recidivism, and relapse and drop-out rates to measure relationships between variables or the impact of interventions (Kirst-Ashman & Hull, 2009). Utilizing data from both sources can prove to be beneficial when we summarize quantitative data about patient satisfaction with social work services and then add narrative comments from patients or family members to clarify the manner in which the intervention proved valuable. Focus groups of recipients may also prove valuable in gathering qualitative data about impact and other impressions of rendered or planned services.

To gather data for statistical analysis, we can develop our own unique survey questions or select from a broad array of existing and proven standardized data-collection instruments and surveys. We can also create surveys that combine our questions with those of previously prepared surveys that are available in the public domain. Many physicians, for example, routinely use *the Beck Depression Inventory* to screen patients for depression. Another common instrument, *the Quality of Life Survey*, is used to measure the general emotional and physical well-being of patients. The RAND Foundation makes a number of frequently used survey instruments available on their website at http://www.rand.org/health/surveys_tools.html/. Corcoran and Fisher (2007) developed a valuable compendium of frequently used assessment tools for social workers and mental healthcare providers.

When designing your own survey, it is important to ensure that each question is relevant to the study. Survey-response instructions should be provided with an introductory paragraph clearly explaining the study purpose and the voluntary nature of participation. The researchers and bodies sanctioning the study as well as the provisions for confidentiality and protection of the data should be identified. Contact information regarding the study should be provided, and, if the survey is mailed, the return address and requested data submission date should be noted.

Whenever a survey data-collection instrument is being used for the first time, a "pilot" (preliminary) study should be undertaken with a small, separate test group of respondents to ensure that the study instructions and questions are clear. The goal is to create an easily understood instrument that minimizes any misinterpretation of questions. Confusing questions may go unanswered, or respondent answers may not address the intended issue or topic. To avoid introducing potential bias into responses, care should be taken to ensure that questions are neutrally stated in terms that cannot be interpreted as culturally or socially inappropriate.

Questions should only address *one* issue. "Double-barreled" questions that simultaneously address multiple issues are apt to prompt inappropriate, inaccurate, or otherwise unusable responses. An example of a double barreled-question is "Overall, I felt the hospital social worker was knowledgeable and available to me." This item simultaneously asks the respondent about both the social worker's knowledge and availability—two different things that could easily warrant two completely different responses. What if the respondent perceived the social worker as available but not knowledgeable? If the respondent answers "no" or provides a Likert-scale response like "strongly disagree," is that in relation to both the worker's knowledge and ability, just the ability, or just the availability? The answer becomes unclear and therefore unusable.

Two categories of questions can be asked on a survey. *Open-ended questions* allow respondents to choose their own words and length when answering. Because of the infinitely unique array of possible answers, content analysis is required during survey-response analysis. In comparison, *closed-ended questions* ask individuals to state their responses on some form of a scale, such as being able to choose among answers that range from "strongly agree" to "strongly disagree" in response to specific statements about an issue. Both open- and closed-ended questions can be utilized on the same survey.

A variety of scales are available to organize study-questionnaire responses. *Anchored scales* assign increasingly large positive or negative numbers to reflect the intensity of response to a question. A value of − 5, for example, could be assigned to show that respondents "Strongly Disagree" with a statement, whereas a value of + 5 would denote that respondents "Strongly Agree" with the statement. By providing a continuum, respondents are afforded the opportunity to more accurately convey their individual reactions to a statement. "On a scale of 1 to 10, with 1 being the lowest score and 10 being the highest, how would you rate your experience?" is an example of *continuum scaling*. To ensure enough variation for statistical data analysis (e.g., mean, median, mode, standard deviation), provide at least five and up to seven possible response options, or data points. Scales should be evenly balanced with the same number of negative and positive responses. Scales may provide respondents with a "neutral point" ("neither agree nor disagree") or with a "not applicable (n/a)" option. There are pros and cons to providing respondents the option of being "neutral" in their answer. If a neutral point is not provided, the scale is considered to be a *"forced-choice scale"* as respondents are forced to indicate a positive or negative answer. One advantage of selecting a forced-choice scale is that it compensates for *"regression to the mean,"* or the tendency of respondents to select a midpoint in answering questions in order to avoid taking an extreme position.

The following are examples of *Likert-type scales* that can be considered when creating survey instruments. Note the modifiers at the beginning of the questions that encourage respondents to answer in ways that are generally, rather than absolutely, true or false.

1. **Rosenberg Self-Esteem Scale**

   *Question: How true is this statement? "All in all, I am inclined to feel that I am a failure":*

   - Almost always true
   - Often true
   - Sometimes true
   - Seldom true
   - Never true

2. **Post-Workshop Evaluation**

   *Question: " Overall, I would rate the material provided in this workshop as . . . ":*

   - Excellent
   - Good
   - Average
   - Fair
   - Poor

3. **Market Survey**

   *Question: "In rating this product, my reaction was to . . . ":*

   - Dislike it completely
   - Dislike it somewhat
   - Dislike it a little
   - Like it a little
   - Like it somewhat
   - Like it completely

4. **Performance Assessment**

   *Question: "Overall, my supervisor lets employees know what is expected":*

   - Never
   - Seldom
   - Sometimes

- Often
- Always

5. **Attitude Index**

   *Question: To what degree do you agree with this statement . . . "Overall, I think staff morale has improve":*

   - Strongly Agree
   - Agree
   - Neither Agree nor Disagree
   - Strongly Disagree
   - Disagree

## Single-Subject Designs

Evaluations may also employ a **single-subject design**. Single-subject designs are case-specific and measure the progress of *one* client or patient over time. The presenting problem, whatever it may be, is measured *before treatment* to establish a *baseline*. The problem is then repeatedly measured and graphed to create a visual representation of changes in the patient's condition or problem over time. The problem behavior is counted or measured along the vertical (or "Y") *axis* (the left hand side of the graph) and the time elapsed on the horizontal ("X") *axis* (the bottom of the graph). Time may be measured in increments of minutes, hours, days, weeks, months, or beyond.

The following exercise uses a continuum scale to assess a presenting problem for a single subject. Each week, the patient rates the severity of his or her concerns, with responses recorded on a graph to illustrate progress.

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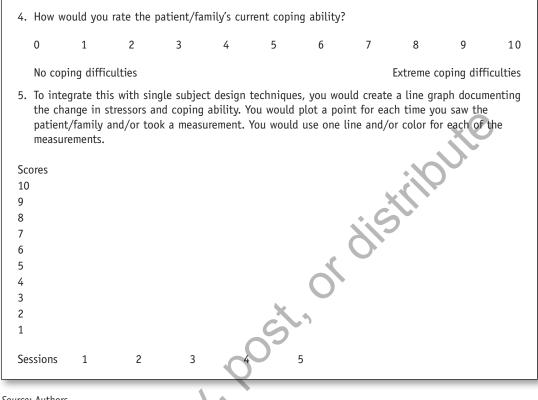**Exercise:** Creating a Single-Subject Design

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### Single-Subject Design Exercise

Directions: Think of problems, issues, needs, etc. that you commonly face in your practice. Select a case that best represents a "typical case scenario" for you. What would the patient/ family describe as their present concerns or stressors? List them below.

1. Present concern:

2. Using the scale below, how would you rate the severity of their concerns?

   | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
   |---|---|---|---|---|---|---|---|---|---|---|

   Not severe             Extremely severe

3. What would constitute adequate coping for this situation?

4. How would you rate the patient/family's current coping ability?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

No coping difficulties                                                          Extreme coping difficulties

5. To integrate this with single subject design techniques, you would create a line graph documenting the change in stressors and coping ability. You would plot a point for each time you saw the patient/family and/or took a measurement. You would use one line and/or color for each of the measurements.

Scores
10
9
8
7
6
5
4
3
2
1

Sessions      1          2          3          4          5

## Representative Case Studies

**Representative case studies** are a form of single-subject design with particular relevance to healthcare social workers. This study type is popular when patient and/or family characteristics and presenting problems are the most commonly seen in a given situation. Often used for training and evaluation purposes, case studies are written as complete narratives with essential variables or characteristics highlighted. The presenting problems are identified, and then initiated interventions are reviewed and the outcomes are discussed. An invitation is generally made for any plausible alternative approaches to such patient-care situations.

Illustrating the usefulness of single-subject designs, a young woman with multiple sclerosis is presented as a representative case study in an in-service training program of a hospital social work department. The case is selected because the following issues are involved: financial concerns because the woman can no longer work, relationship issues with her spouse, sexual dysfunction, substance abuse secondary to inadequate pain management, grief and loss issues due to decreased functional ability, and inadequate health insurance coverage for treatment. As these issues are prevalent among many patients experiencing progressive, degenerative neuromuscular diseases, this case became a representative study. The intervention of the social worker was also regarded as representative

of the services and skills used in this kind of practice. The social worker assisted the patient in applying for Social Security Disability, initiated a spend-down and spousal protection of assets as part of the process of applying Medicaid, found a community resource that would donate needed medical equipment and build a needed wheelchair ramp, initiated family and substance-abuse counseling, made a referral to a community mental health agency so that counseling could be continued post-discharge, and requested consultation by appropriate medical specialists to evaluate the patient's sexual dysfunction and pain.

## Cost-Benefit Analysis

Generally speaking, social work services in healthcare institutions do not directly generate revenue through fees. Hospital reimbursement for inpatient social work services is characteristically derived from the room rate charge. While insurance may be directly billed in some instances for counseling or crisis intervention, our services more often are viewed as enhancing the quality of patient care and life by addressing psychosocial needs identified during case management, discharge, or continuity-of-care planning. These interventions are potentially significant cost-saving contributions to health systems. Cost savings are achieved when inpatient discharges are not delayed due to inadequate post-hospitalization care plans or when inappropriate readmissions, emergency department use, and/or extended outpatient care result from patient incomprehension of or inability or unwillingness to comply with crucial medical instructions. Of importance, health system savings resulting from reduced patient litigation may also evolve from social work interventions that clarify patient and family understanding of healthcare interventions and options and the implications of treatment compliance.

Cost savings may be difficult to isolate because numerous coexisting factors may interact to affect any potential financial gain. It is relevant to note, however, that beginning with changes in hospital reimbursement during the 1980s, many services, including social work, were eliminated or substantially changed because accounting and design consultants focused only on the "bottom line" financial impacts of any patient-care service. This meant that the service had to demonstrate that it generated revenue, reduced incurred costs, or otherwise afforded some strategic operational gain to the healthcare system. Insufficient evidence of those contributions can be thought to have partially contributed to organizational redesigns that negatively impacted social work. **Cost-benefit studies** represent one important strategy for documenting and analyzing the financial impacts achieved by a service. In a cost-benefit study, the costs of providing a service are compared with the financial benefits that are derived to the system or its users.

To generate a cost-benefit study or analysis, all resources and costs associated with a particular service are examined. These costs include personnel salaries and benefits as well as costs arising from facility space and administrative "overhead transfer" charges, equipment, supplies, and staff education. The amounts of these costs must be determined and then combined to arrive at the total service-delivery cost for a designated time period. At the same time, benefits resulting from providing the service during that specified time period must be identified, and then an analysis of the costs associated with achieving the benefit(s) must be performed. The goal is to demonstrate either that an intervention

brought in revenue exceeding the cost of providing the service (thereby contributing a system profit) or that the system experienced savings that were greater than the costs incurred in delivering the service.

While appearing to be a straightforward process, linking dollar amounts to results achieved by social work may require considerable effort. While we may be able to measure a reduction in patient anxiety as a result of seeing a social worker for discharge planning before the patient goes home, how do we assign an economic value to this benefit? In many situations, doing so is not possible. However, since patients' decreased anxiety contributes to the prospect of them being discharged on time or earlier, we can compute cost savings from not having the expenses associated with a hospital room and associated services (including housekeeping, dietary services, utilities, debt servicing, and any or all involved professional charges). As shown in the case studies below, accurately measuring the financial impacts of any one service or procedure dictates close collaboration with fiscal services.

## CASE STUDY [1]: COST-BENEFIT ANALYSIS

### Unnecessary Emergency Admissions

An example of a cost-benefit study was conducted by one of the authors at a community hospital where unnecessary emergency room admissions were costing the institution $300,000 in uncompensated care per year. Area physicians were directing their elderly patients and families to the hospital ER for a 3-day admission to qualify them for skilled nursing-home coverage under Medicare. The patients, however, had no legitimate need for skilled nursing-home care, nor had they any medical condition to warrant hospital admission. Rather than being turned away, the patients were held in observation until a social worker could see them to assist with the nursing home-placement process. This process resulted in the loss of revenue to the health system when Medicare denied coverage for the hospital stay.

To address the problem, the hospital social work director met with the Medical Director and Chief Financial Officer (CFO). A part-time social worker with an MSW was hired with the goal of preventing three unnecessary emergency room hospital stays. The CFO calculated the cost savings derived from reducing unnecessary admissions by determining that each uncompensated hospital day cost the system incurred approximately $1,000. Based on that figure, if the social worker were able to reduce hospital stays by three days per month, the savings would offset the payroll costs of the social worker and any further reduced hospital stays would represent real operational savings to the hospital. The social worker proved to be an important resource to the hospital by successfully reducing hospitalizations and contributing to overall system savings.

## CASE STUDY [2]: COST-BENEFIT ANALYSIS

### Patient Medicaid Application Intervention

Another cost-benefit study reflecting the significant impact of targeted social work intervention was conducted at a major academic tertiary health system in the Northwest. In this instance, profound amounts of reimbursement were not being realized by the health system when potentially Medicaid-eligible inpatients were discharged from the hospital with little or no social work contact to assess either their financial status or ability to subsequently follow-up in a timely manner to complete a Medicaid application.

Recognizing the implications to patients and the health system, the social work director approached hospital administration, fiscal services, and state Medicaid program officials with a plan to initiate early social work contact with this patient population for the purpose of establishing eligibility status and actually opening Medicaid cases with hospitalized patients when appropriate. As such permission had never been delegated by the state to a hospital or outside entity, the social work director convinced the Medicaid agency and hospital to initiate a pilot study with the hiring of a full-time staff in the health system social work department. On the specific request of social work, fiscal services then conducted two cost-benefit analyses that produced significant findings. "One revealed that the first 32 cases (with social work intervention) analyzed generated $122,272 in revenue on hospital charges of $1,291,650, and the other concluded that the annualized program effect of the new social work intervention was **$2,322,513.00.** Fiscal services formally identified this revenue as otherwise unrealized if not for the intervention of the social work department." (Spitzer & Kuykendall, 1994, p. 296)

Beyond the addition of *four* new staff, the social work department experienced widespread recognition and enhanced organizational stature for what was regarded as its major contribution to the university during an otherwise difficult financial period. It should be emphasized that the derived benefit was not only to the health system by virtue of the revenue stream, but importantly, the quality of life of the patients and their families was enhanced as a result of their now having available reimbursement for basic healthcare services. Of consequence, the social work intervention brought not only initial but *ongoing* coverage for needed healthcare. The clearly documented success of this program led to its subsequent adoption by other hospitals with the endorsement of the state Medicaid program.

## OUTCOMES AND QUALITY EVALUATION

The ultimate study question focuses on the  effectiveness of our intervention. *Did it make a difference? Is the patient and/or family better off as a result of our intervention?* In healthcare, a number of outcome studies are required by various oversight bodies including Medicare and accrediting organizations such as the Joint Commission (http://www.jointcommission.org) and the Commission on Accreditation of Rehabilitation Facilities (www.CARF.org). National patient-safety goals have been developed, including reducing hospital acquired infections, improving communications between patients and providers, reducing patient injuries from falls, and

reconciling medications as patients transition from one level of care to another (http://www
.jointcommission.org/PatientSafety/NationalPatientSafetyGoals). Healthcare providers submit
their data, and publically available reports are generated for review.

One important source of public-safety information that is relevant for social workers are
those reports detailing the safety and quality inspections of nursing homes and other licensed
community-care providers. These reports are prepared by the federal and many state governments. A Medicare website offers quality data on every Medicare and Medicaid-certified nursing home in the United States (http://www.medicare.gov/NHCompare). Since social workers (in
deference to client self-determination and to avoid potential conflicts of interest) do not typically recommend patients and families to specific nursing homes, this resource is invaluable
for families seeking data on which to base needed placement decisions. In addition to the
federal site, select states such as Virginia provide websites providing basic data and inspection
findings that reflect the quality of care in assisted-living communities, and adult day-care and
respite-care homes (http://www.dss.virginia.gov/facility/search/alf.cgi). Social workers and
others seeking inpatient and outpatient hospital care can make comparisons of providers in
their communities by utilizing the United States Department of Health and Human Services
website (http://www.hospitalcompare.hhs.gov/hospital-search.aspx).

**Utilization review** (UR) is an integral function of quality-care assessment and regulatory
compliance. Utilization review coordinators or case managers are responsible for making
sure that patients meet specified criteria for the services that they are receiving, ranging
from inpatient hospitalization to skilled nursing or rehabilitation care. UR personnel review
patients' medical records and work closely with insurance companies to get initial approval
for services and then continuations, if justified. Social workers often serve in UR and case-management functions, particularly in behavioral health.

## CREATING A POSITIVE CULTURE FOR EVALUATION

Carefully planned and executed evaluation is critical to ensure that patients and families
receive the best healthcare possible. At the same time, providing data that denotes efficiency, including the numbers and types of patients served, crucial issues or care problems
addressed, and the quality of rendered services is of vital interest to social work and health
systems. Substantiating that the profession made positive impacts on patients' quality of
life by economically delivering effective services makes an impressive statement about the
"value" and soundness of social work operations.

Evaluation can be risky, however, when complex, expensive, or recurring problems are
explored and accountability is assigned. To address such problems, it is important to create
work environments that actively promote continuous service evaluation. Practitioners should
be expected to engage in self-assessment and collaborative reviews toward the goal of benefiting those who receive their services by continuously refining their own interventions and
competence. Regular, constructive staff supervision should be augmented by opportunities
to update practice knowledge through continuing education, including conference attendance. While service evaluations should be integrated into existing practice whenever possible, care should be taken to avoid over-evaluation. Evaluations should conclude once
problems are found to have low risk of adverse outcomes, are infrequent events, and/or lead

to findings that are not useful in understanding or reshaping practice. While collaboration among all levels of staff is critical, quality studies must be kept clear from performance evaluations, which are a separate management activity. Most importantly, evaluations should be kept simple and meaningful (Mullen, 2004; Proctor, 2004; Wade & Neuman, 2007).

## SUMMARY

This chapter examined the significance of practice research and evaluation in contemporary healthcare social work. It highlighted the importance of evidence-based practice and discussed use of clinical pathways and clinical practice guidelines. The concepts of continuous quality improvement and total quality management were introduced as mechanisms for tracking outcomes both at the individual practitioner level and the organizational level.

Evaluation of practice was considered in terms of patient outcomes, productivity, and efficiency. The seven evaluation process steps (designing, planning, implementing, data analysis and interpretation, reporting, data utilization, and follow-up) were introduced. The use of retrospective audits and concurrent monitors are employed to collect data, followed by formative or summative evaluations to present findings. Qualitative and quantitative research designs were discussed as well as the use of single-subject designs, representative case studies, and cost-benefit analyses. The importance of creating a positive culture for evaluation was underscored. While risks exist, carefully planned and executed evaluations are fundamental to maximizing positive patient-care outcomes either at the individual patient level or the overall operational level.

## KEY TERMS AND CONCEPTS

- Best practice models
- Best practice standards
- Practice evaluation
- Evidenced-based practice
- Meta-analysis
- Adverse outcomes or occurrences
- Critical pathways
- Continuous quality improvement
- Sentinel events
- Indicators
- Benchmarks
- Output and outcome
- Practice-based evaluation and research

- Productivity, efficiency and effectiveness
- Data mining
- Retrospective audit
- Formative and summative evaluation
- Qualitative and quantitative designs
- Evaluation process
- Evaluation target
- Concurrent monitor
- Informed consent
- Single-subject design
- Representative case study
- Cost-benefit studies
- Utilization review

## QUESTIONS FOR DISCUSSION

1. Why is evaluation important in social work practice?

2. What activities are you doing in your field agency that might be interesting to evaluate? How might you go about beginning to evaluate them?

3. What are the barriers to conducting evaluation studies in our agencies?

## EXERCISES

1. You are running a psychoeducational support group for cancer survivors in your organizations. Design a Level-3 evaluation for the group.

2. Review the evaluation and assessment data at your agency. What is currently being studied? How is it being studied? What are the results? How are the results used to make program improvements?

3. Present a representative case study for an individual who is coping with multiple sclerosis or some other chronic, progressive disease. Go to the literature and determine who is mostly to be affected? How many are affected? What is the typical disease progression? What are the physical and emotional effects of the disease? What are the treatments? What supports and strengths can help people cope with the illness. After doing the research, create a "case study" of an individual who demonstrates the conditions and characteristics that you have identified. How can social work assist the person/family?

## REFERENCES

Bloom, M., Fischer, J., & Orme, J.G. (2009). *Evaluating practice: Guidelines for the accountable professional*. (6th Ed.). Boston, MA: Allyn & Bacon.

Bradley, R., Greene, J., Russ. E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162*, 214–227. Retrieved on-line from http://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.162.2.214

Corcoran, K., & Fisher, J. (2007). *Measures for clinical practice. Volumes I & II*. (4th ed.). New York: Oxford University Press.

Commission on Accreditation and Rehabilitation Facilities. (n.d). CARF accreditation focuses on quality results. Retrieved from http://www.carf.org/home/

Cournoyer, B. (2004). *The evidence-based social work skills book*. Boston, MA: Allyn & Bacon.

Dienemann, J., Campbell, J., Landenburger, K., & Curry, M. A. (2002). The domestic survivor assessment: A tool for counseling women in intimate partner violence relationships. *Patient Education and Counseling, 46*(3), 221–228.

Drake, R. E., Goldman, H., Leff, H. S., Lehman, A. F., Dixon, L., Mueser, K. T., & Torrey, W.C. (2001). Implementing evidence-based practices in routine mental health service settings. *Psychiatric Services*, *52*, 179–182.

Gambrill, E. (1999). Evidence-based practice: An alternative to authority-based practice. *Families in Society, 80,* 341–350.

Gibbs, L. E. (1989). Quality of Study rating form: An instrument for synthesizing evaluation studies. *Journal of Social Work Education, 25,* 55–67.

Gibbs, L. E. (2003). *Evidence-based practice for the helping professions.* Pacific Grove, CA: Brooks/Cole.

Gibbs, L., & Gambrill, E. (2002). Evidence-based practice: Counterarguments to objections. *Research on Social Work Practice*, *12*, 452–476.

Giles, S. (2004). Establishing evidence-based renal social work practice guidelines. *Journal of Nephrology Social Work, 23,* 48–52.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academies Press.

Jackson, C. A. (1998). *Evidence-based decision-making for community health programs.* Santa Monica, CA: Rand.

Kirst-Ashman K., & Hull, G. (2009). *Understanding generalist social work practice.* (5th ed.). Belmont, CA: Brooks/Cole.

McNeece, C. A., & Thyer, B. A. (2004). Evidence-based practice and social work. *Journal of Evidence-Based Social Work, 1,* 7–25.

Mullen, E. J. (2004). Facilitating practitioner use of evidence-based practice. In A. R. Roberts, & K. Yeager K. (Eds.). *Evidence-based practice manual: Research and outcome measures in health and human services*. New York: Oxford University Press, 205–210.

Posavac, E. (1980). *Program evaluation: Methods and case studies*. Boston, MA: Prentice Hall.

Proctor, E. K. (2004). Leverage points for implementation of evidence-based practice. *Brief Treatment and Crisis Intervention, 4,* 227–242.

Rossi, P. H., & Freeman, H. E. (1993). *Evaluation: A systematic approach*. Thousand Oaks, CA: SAGE.

Rotter, T., Kinsman, L., James, E., Machotta, A., Gothe, H., Willis, J., & Kugler, J. (2010). *Clinical pathways: Effects on professional practice, patient outcomes, length of stay and hospital costs.* Cochrane Database of Systemic Reviews, 3(3). doi: 10.1002/14651858.CD006632.pub2

Spitzer, W., & Kuykendall, R. (1994). Social work delivery of hospital-based financial assistance services. *Health and Social Work, 19,* 295–297.

Straus, S. E., Richardson, W. S., Glasziou, P., & Haynes, R. B. (2005). *Evidence-based medicine: How to practice and teach EBM.* (3rd Ed.). Edinburgh: Churchill Livingstone, UK.

The Joint Commission. (2014). *Sentinel Event*. Retrieved on-line from http://www.jointcommission.org/sentinel_event.aspxm

U.S. Department of Health and Human Services: Office of the Inspector General. (2008, Dec.) *Adverse events in hospitals: Overview of key issues.* Retrieved from http://oig.hhs.gov/oei/reports/oei-06-07-00470.pdf

Wade, K., & Neuman, K. (2007). Practice-based research: Changing the professional culture and language of social work. *Social Work in Health Care, 44*(4), 49-64.

Walton, M., & Deming, W. E. (1986). *The Deming management method*. New York: Berkeley Publishing.