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AALNC

AMERICAN ASSOCIATION OF LEGAL NURSE CONSULTANTS

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The Journal of Legal Nurse Consulting

Purpose

The purpose of the journal is to promote legal nurse consulting within the medical-legal community; to provide both novice and experienced legal nurse consultants (LNCs) with a quality professional publication; and to teach and inform LNCs about clinical practice, current legal issues, and professional development.

Manuscript Submission

The journal accepts original articles, case studies, letters, and research. Query letters are welcomed but not required. Material must be original and never published before. A manuscript should be submitted with the understanding that it is not being sent to any other journal simultaneously. Manuscripts should be addressed to JLNC@aalnc.org.

Manuscript Review Process

Submissions are peer-reviewed by eminent professional LNCs with diverse professional backgrounds. Manuscript assistance can be provided upon request to the editor. Acceptance is based on the quality of the material and its importance to the audience.

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Features

Departments

Tempus Fugit

Time flies! Another year almost ending for chapter meetings and functions, another excellent Educational Conference completed. It's hard to believe that my term as *JLNC* Editor is also ending after 2 years. My thanks to Barbara Levin, who appointed me during her term as national AALNC President, with special appreciation to Lynda Kopishke for her mentorship and support as former Editor and current President. I will rejoin my colleagues on the Editorial Board as a continuing member, and I am grateful for their continued work. But most of all, my gratitude is to Erin Larson, the Managing Editor, for her sustaining endeavor to keep us all on track. Without her and the team at AALNC Headquarters, we would not have this *Journal* published each quarter. My final indebtedness is to all of the authors for sharing their expertise.

Have no fear, readers! The *JLNC* remains in very capable hands. Kara DiCecco will be the new Editor. Kara has been a member of the Editorial Board, authored several articles, and held leadership positions in her local chapter and most recently as a national Director at Large. Congratulations, Kara. We anticipate your impact on future issues.

Kara has authored the lead article in this issue. Her *Medical Literature, Part II* follows her first part in the Winter 2007 issue and helps us to understand the components of published research. Kara breaks down each section with clear explanations to illuminate technical jargon. Evidence-based research is not only critical to practice, but is essential to support expert testimony. Kara goes above and beyond with double duty by also writing a book review on Andy Kessler's *The End of Medicine: How Silicon Valley (and Naked Mice) Will Reboot Your Doctor.*

Certification is an ongoing topic for discussion by legal nurse consultants, whether novices or experts. In *Nursing Expertise: A Look at Theory and the LNCC® Certification Exam*, Moniaree Jones applies Benner's theory of levels of nursing experience in relation to the required amount of practice associated with certification examinations.

A major frustration in writing a report for a client is realizing that the medical records are incomplete. Barbara Boschert responds with a Q & A column, *Time Limits for Requested Medical Records*, about the length of time for production of records and the fees that are charged.

In the Legalese department, Karon Goldsmith reviews the distinctive characteristics of nursing home litigation. Anyone who has ever tackled the voluminous amount of records in a nursing home case is well aware of the daunting task, and Karon's article *Document Discovery in Nursing Home Litigation* will provide further insight.

Keep writing!

Holly Hillman

Holly Hillman, MSN RN
Editor, *The Journal of Legal Nurse Consulting*

Medical Literature, Part II: A Primer on Understanding Scientific Design

Kara L. DiCecco, MSN RN LNCC

KEY WORDS
Medical Literature, Evidence-Based Medicine, Expert Witness, Scientific Design

With the Court's overwhelming reliance on Federal Rule of Evidence (FRE) 702 and the gate-keeping function of the judge for admissibility of expert testimony, it has never been more incumbent on the legal nurse consultant (LNC) to locate, interpret, and critique the medical literature of evidence-based medicine (EBM). Published in the Winter 2007 issue, Part I examined the need for and importance of scientific literature in court. Unquestionably, research is conducted in all fields of professional study, and published reports likewise result, but the LNC's focus is EBM in scientific research. As Registered Nurses (RNs), we utilize scientific research in our patient care and evaluate patient outcomes in daily practice. As LNCs, we possess the insider's knowledge that only results from immersion in practice. This primer for the novice LNC or attorney new to reading medical research will examine the pitfalls of scientific publication and the benefits of critical analysis of the scientific article. The intent of this article is to provide the reader with a basic understanding of scientific design and is intentionally limited in its scope, as true comprehension of scientific principles is a life-long journey. This article concludes with a list of online resources and a glossary of terms to assist the dedicated traveler in taking their first steps.

"If you want to play the game, you had better know the rules of the game. And if you want your opponent to play by the rules, you'll not only have to recognize the infraction, you'll have to complain to the referee and tell him or her exactly which rule was violated by the opposition."

– Author Unknown

Despite the maelstrom of controversy that persists about the true nature of scientific design, a measure of standardization does indeed exist in the scientific process. Pointedly, there are four generally accepted steps to the scientific method: 1. Observation and appraisal of an event; 2. Formulation of a hypothesis to explain the event; 3. Use of the hypothesis to predict the existence of other events (or to predictably measure the results of new observations); and 4. Performance of experimental tests of the predictions by unbiased examiners (Introduction to the Scientific Method, 1996). Scientific research mandates that investigators initiate precautions to control for the influence of bias and conduct experiments in a controlled manner to eliminate the threat to the validity of the study (Burns & Grove, 2001). Results, once obtained, are intended to reveal a finding that can be considered germane to a wider population (Hogan, 2001). This is arguably where the unanimity ends.

Consensus on a singular, acceptable design for arriving at absolute certainty continues to elude both law and science. This is evidenced in the scientific community with the acceptance of a result confirming the hypothesis that is understood to only support the hypothesis; it does not prove the hypothesis (Pandit & Yentis, 2005). In law, the burden of proof in litigation similarly calls for less than absolute certainty. The criminal burden of beyond a reasonable doubt, though poorly defined, stops short of demanding the absence of all doubt. The civil requirement of the preponderance of evidence is even more forgiving in its weighing the scales at 51% or greater for a party to prevail in legal matters. In issues of medical causation, the "reasonable probability" or "more likely than not" standard is substituted. In contrast, "scientific proof" requires a 95% or greater certainty.

Rule Out Differential Definitions

Unless otherwise stated, when referring to the "scientific publication," this article is referring to a quantitative research design. This decision is based on the prevalence of experimental design in EBM (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Multiple forms of literature exist with regard to research design. The spectrum ranges from one end of basic editorials, discussions, or letters in response to the recent studies to a middle ground of meta-analysis and systematic reviews to the far-end extreme of studies of true experimental design. Each has a place in the global evaluation of knowledge on a given topic, but the weight of its merit should be viewed individually.

Because the world of research design and statistical analysis is replete with dual definitions that hinge on subtle distinctions, the reader must interpret the intended definition in the context of the study. Here the terms "investigator," "researcher," and "author" are used interchangeably to refer to the primary author. What follows is a walk-through of the skeletal structure of a sample research article.

The Abstract

An abstract provides the intended publisher with an overview of the study's purpose, methodology (including whether animal or human subjects), results, and conclusions. The abstract allows the reader to evaluate whether or not the study is applicable to their area of interest or (in the case of litigation) relevant to the issue. From a litigation perspective, abstracts provide an excellent starting point for the preliminary

investigation of literature available on the issue. A word of caution, however: abstracts tend to focus only on the positive results (Hayreh, 2000). As with any research, it is unwise practice to rely solely on the abstract for the paper's intent; the entire article must be retrieved and reviewed. Table 1 delineates the basic elements of the research article.

Table 1: Anatomy of a Research Article.

Abstract (basically materials and methods): Provides an overview of the research paper. These are usually freely accessible. Three excellent sources of abstracts are: **http://www.ncbi.nlm.nih.gov/entrez** **http://www.cochrane.org** **http://www.cinahl.com**
Introduction (sometimes referred to the materials and methods section): Key concepts, purpose, review of the literature, framework, significance of the study. **Statement of the Problem or Hypothesis:** A statement summarizing the problem or the rationale for conducting the study or issue to be investigated. The hypothesis is what the authors hope to show. If the author is building on a theoretical framework or model, it should be explained here. **Review of Literature:** A brief review of the history and of what is known to date with references to key literature.
Methodology: Subjects, research design, instruments, data collection, study procedures. Provides in depth information about the study's design and procedures, including a detailed description of the study population, which treatment(s) were used, and how data was collected and analyzed.
Results: Research findings, statistical tests, values of the statistics, significance of the statistics. This section gives a description of the data collected by researchers, which tests were performed and the results of their statistical analyses. Section often includes graphs, tables and charts.
Discussion: Interpretation, implications, study limitations. Interpretation of the results and the author's conclusions. Should contain the discussion of what their findings mean. Was the hypothesis confirmed? Should also discuss how the findings may affect clinical practice, the potential limitations of the study, and suggestions for future research.
Bibliography: Contains the citations for the literature reviewed. A great source for similar articles. Retrieval and review of these articles can also alert the reader as to whether primary or secondary sources where used. Typically the literature cited should be within the last 3-5 years, although "hallmark" studies may be much older.

The Introduction, Hypothetically Speaking

Within the introduction, the author introduces the reader to the need for the study. The researcher will start with a premise (hypothesis) in the form of a question or as a problem statement. The study may be based on what science currently knows and the investigator hopes to confirm (or refute), or it may be an original concept. The hypothesis can be non-directional, directional, associative, causal, simple, or complex but regardless of the distinction, all hypotheses imply the prediction of a relationship (Norwood, 2000). See Table 2 for further explanation of the null hypothesis.

The introduction will also define the variables conceptually and operationally (Burns & Grove, 2001). The variable is the label given to describe the thing suspected of causing or manipulating a particular result (independent variable) and the result itself (dependent variable). This section should also include a history of previous research and what is currently known. The author should also furnish literature both in support of or in opposition to the author's theory if such literature exists (Burns & Grove). Since it is unrealistic for the author to retrieve all articles published on the topic, relevance of the literature chosen is of utmost importance.

Table 2: The Null Hypothesis.

Double-negatives are not reserved for depositions alone. Researches commonly start with the premise that the study's manipulation of the independent variable, will have no effect on the dependent variable. This is known as the null hypothesis. A type I or type II error can occur with the researcher's conclusion of the hypothesis. For example:

What the researcher manipulates in one group won't show a difference in the results of the two groups when compared (doesn't change a thing). If the results confirm this, the researcher accepts the null hypothesis.	**What the researcher manipulates in one group won't show a difference in the results of the two groups when compared. If the results show this is false (something did change as a result), the researcher rejects the null hypothesis.**
Type I Error (α = alpha) Researcher incorrectly concludes there was a difference but there wasn't. Mistakenly rejects the null hypothesis.	**Type II Error (β = beta)** Researcher incorrectly concludes there wasn't a difference when there really was. Mistakenly accepts the null hypothesis.

Left to Their Own Design

Two mainstays of research design are quantitative and qualitative studies. Quantitative research uses numerical data, statistical analysis, and semi-controlled experimental conditions to yield its findings and assess the magnitude of the relationships of the variables. Qualitative research is characterized by narrative data, inductive/theory-based reasoning in the native environment of the subject under study. The study is oriented to understand and interpret life experiences within a culture or from the individual's frame of reference.

The choice of approach must entertain the purpose of the study and the consideration of what is appropriate to the research objective (Polit & Hungler, 1989). For example, in a qualitative study (where control is intentionally less rigid), the researcher may use a selective sampling of subjects for the event under study because the researcher seeks to understand naturally occurring events. In contrast, the researcher of a quantitative study may incorporate control by using a random assignment to reduce the effect of selective bias. The dimensions of quantitative design include descriptive, correlation, experimental, quasi-experimental, and non-traditional variations (Doordan, 1998). Table 3 on the following page provides a sampling of research designs.

Table 3: Sampling of Research Design.	
Case-control study	Patients who already have a certain condition are compared with people who do not.
Case report/ Case series	Collections of report on the treatment of a single patient or collections of reports on the treatment of individual patients with the same condition.
Cohort study (or Longitudinal)	A case-defined population who have a particular treatment that are followed over time and compared with a group that did not have the treatment. May be prospective (followed into the future) or retrospective/historical (looking into the past)
Systematic review *Meta-analysis*	Comprehensive overview of related studies. Combining the reports and results of several different studies in an effort to mathematically average out any differences cause by random chance or local variation in an effort to get a close to the truth as possible. Meta-analysis
Experimental design* **Quasi-experimental design** (no randomization or no control group) **In clinical trials, the double-blind, randomized controlled trial (RCT) is considered the "Gold Standard."*	Classic experimental design is the most common type of experimental design, although there are numerous variations of this design. Three essential elements of experimental research are: randomization, manipulation of the independent variable, and control of the experimental situation (including control or comparison group). Randomly assigned groups (usually two) one to receive the treatment or therapy and one to receive the control. In a double-blind study, neither the researcher nor the participants know who receives the experimental drug and who is receiving the control drug (placebo).
Animal studies or test-tube research	Generally the lowest level of EBM. Conducted in the initial stages of research.

Is That a Threat?

Study validity refers to how accurately a study's findings portray the event under study. While the existence of control only truly exists in layers, its effectiveness is determined by the strategies incorporated by the researcher (Norwood, 2000). Control is the attempt to reduce the chance of error (i.e., threats to validity) and increase the likelihood that results of the study will mirror reality (Burns & Grove, 2001). Three areas of study validity are: 1) Statistical conclusion validity; 2) Internal validity; and 3. External validity (Norwood, 2000). Statistical conclusion validity is concerned with the believability of the statistical results (i.e., the appropriate tests and power associated with the statistical procedures) when compared with the real-world setting (Norwood, 2000). The type of statistical test used is driven by the research question asked (Morin, 1997a).

Internal validity is a reflection of whether the study's findings are true or falsely influenced by extraneous variables (Burns & Grove, 2001). Put another way, this refers to the degree to which observed changes in the dependent variable are correctly attributed to the independent variable.

External validity refers to the extent the findings are applicable outside of the study's setting (Burns & Grove, 2001). Several areas of particular interest to critical analysis of the research design are the internal threats of instrumentation, selection bias, and mortality (i.e., the attrition rate or drop-out rate). Threats to internal validity are of heightened concern in studies conducted for the purpose of establishing a cause-and-effect relationship (Norwood, 2000). An example of a threat to external validity is the Hawthorne effect, in which subjects alter their behavior when being observed (Norwood). Still recognized in research, the Hawthorne effect has ironically become the subject of debate, owing in part to a lack of controls in the original study (Rice, n.d.; Holden, 2001).

The Goldilocks Observation

Some sample sizes are too large, some are too small, and some are just right for the subject under study. Part of the analysis of research design is to recognize the impact and influence of sample size and composition. Investigators must consider the question they are posing, data they are gathering, and purpose of their study in order to determine the optimal size. In general, quantitative studies use larger sample sizes than qualitative, due to the nature of the study.

The sampling rule in quantitative studies of "30 subjects per variable (or group) of interest" is based on the Central Limit Theorem (CLT) and presents a statistical challenge to the need for increasingly large samples (Norwood, 2000). Opponents of this method counter that anything less than 100 is considered small and the largest size possible should be used (Burns & Grove, 2001; Polit & Hungler, 1989). Morin (1997b) observed that qualitative samples ranged from 5-50 subjects. A "power analysis" is a statistical test used to determine the necessary sample size large enough to ensure statistical significance will be detected (Norwood).

Sample size additionally influences the study's power. "Power," in statistics, refers to the ability of a statistical test to detect a relationship between two variables, if one exists. For clinical trials, power is usually set at 80 to 90% (Hogan, 2001). Power of 0.80 means there is an 80% probability of detecting a relationship, if one exists (Norwood, 2000).

In selecting a sample, the researcher must also consider the type of sample. A random assignment is considered less biased than a convenience sample. For example, a researcher studying the effects of blood pressure on the population at large would be better served by random assignment of groups more representative of the average. In contrast, a convenience sample of the first 100 people entering a senior center (with likely higher-than-average profile for hypertension) would present an inherent bias to the results.

A Few Good Concepts

There is a multitude of statistical procedures and tests to provide the reader with the implications of a study's data. The alchemy of experimental research design marries key concepts with the numerical conclusion. Many statistical concepts are unique to the particular study being conducted, while others

are routinely seen in the literature. It is key to remember, when evaluating a research design, that statistical conclusions must be evaluated in the context of that particular study.

Statistical significance is a predetermined value that allows the researcher to rule out the possibility that the results did not occur just by chance. This is generally set between 0.05 and 0.01 and referred to as the P (probability) value. Although arguably an arbitrary cut-off point, as stated previously, scientific proof is traditionally set at 95% or greater. Alpha (α) is a probability threshold for a decision. The level of significance (α) corresponds to statistical value for the null hypothesis to be appropriately rejected.

Relative risk is commonly seen in epidemiological studies. Frequently, although not exclusively, epidemiologists use a case-series design to evaluate the relative risk. This type of risk is calculated by comparing a group of people who have the disease under study against a group without the disease (i.e., control group). It cannot be overstated that finding an association between two factors is not the same as establishing cause-and-effect relationship.

In *Allison v. McGhan Medical Corporation* (1999), the Eleventh Circuit Court illustrated this point when citing the "doubling risk" in relation to proof of causation. In toxic tort, to cross the doubling-risk threshold, the plaintiff must prove that their risk of increased chemical exposure is at least two times the background incidence of a given disease (Redick, 2004). In relative risk, as in other areas, it is extremely important to know the confidence interval and confidence limits, which is the range of values within which the true value of the population is expected to lie. For instance, a relative risk of 2 (with a specified confidence of 95%) might have confidence limits of 1.6-2.4, which has considerable implications for interpretation.

It is important to note that study validity is a separate concept from measurement validity, even though an instrument must be both reliable and valid. For example, using a thermometer that yielded consistent and accurate results with regard to the patient's core temperature would be considered reliable but not necessarily valid for measuring a concept that does not respond to evaluation by this type of measurement, such as intelligence.

An "instrument," understood to mean a data-collection tool, may range from a survey to a visual analog scale to a blood pressure cuff to another form of measurement. When referring to instrument use in research, reliability refers to the precision of measurement (i.e., stability, equivalence, internal consistency) and is expressed as the reliability coefficient, while validity refers to how well the instrument measures the concept it is intended to measure (Dunnington, 1997a; Dunnington, 1997b). One example of measurement

validity is criterion-related validity and speaks to the statistical correlation of how well the tool measures selected criterion. A correlation coefficient is calculated to determine relationship in measurement performance. As a general rule of thumb, in instrument use, a reliability coefficient and/or criterion-related validity of 0.70 or higher is considered acceptable (Dunnington, 1997a; Dunnington, 1997b). Table 4 provides more detail on the statistical concepts of statistical significance, power, relative risk, and correlation.

Table 4 : Significance, Power, Relative Risk, Correlation.

***P* Value:** The smaller the *P* value, the greater the "statistical significance." The *P* value may also be written as α (alpha). ***P* value=0.000001** 1 in a million! ***P* value=<0.01** Less than 1 in 100 probability (possibility) the occurrence (result) is due to random chance (luck) ***P* value=≤0.05** Equal to or less than 5 in 100 probability the occurrence is due to chance ***P* value=0.05** (or 5% or the 1 in 20 rule, 5/100 = 1/20). If I did this test 100 times, when I look at the results that showed there was a change, of the 100 results only 5 may have occurred by pure chance. So I can be 95% certain, the change is from the experiment I conducted. ***P* value=0.5** 50 in 100 (50%) probability (possibility) the occurrence (result) is due to random chance (luck)	**Power:** Refers to the ability of a statistical test to detect a relationship, if one exists. For instance, a relationship between the two groups. Example formula for determining a study's power. **Power is usually set at 1-β** **Therefore, if α = 0.05, power = 1 – 4(α) = 0.80** Power of 0.80 means there is an 80% probability of detecting a relationship, if one exists. **If *P* < α, the null hypothesis is rejected.** Low power also means wide confidence intervals. Studies with more subjects typically have higher power.
Relative Risk: The risk of an event (like contracting a disease) relative to the exposure. Also known as risk ratio or rate ratio. $RR = \frac{P\text{exposed (those w/disease)}}{P\text{control (those w/o disease)}}$ **Relative Risk — Association** Greater than 3 — Strong Between 2 and 3 — Weak Between 1 and 2 — Very Weak 1 — None Less than 1 — Negative	**Correlation Coefficient:** Used to determine the relationship of sets of data to one another. The correlation is assigned a number from +1.00 to –1.00. **+1.00 indicates a step-by-step increase in the variables** **0.00 indicates the absence of a relationship between variables** **-1.00 indicates an inverse (↑ ↓ or ↓ ↑) but equal movement in the relationship of the variables.** The closer the correlation is to either +1.00 or –1.00 the stronger the association.

A Healthy Dose of "Skepticemia"

Someone once quipped that a statistician can have his head in an oven and his feet in ice and say that, on average, he feels fine. This humorous observation cuts both ways. Because qualified statisticians understand that figures can lie, they are experts at finding mathematical error or "adjustments" to raw data. As Greenhalgh (1997) observed, "Many papers published in medical journals have potentially serious methodological flaws" (p. 243).

Interpreting complex statistical data should involve a professional statistician or similar expert. When a patient relies on a qualified surgeon to remove a diseased appendix, the patient also has an obligation to obtain a basic understanding of what will occur during surgery and post-operatively to work jointly with the surgeon toward optimal recovery. The same is true of statistical analysis. The trial team will need to rely on professional translation of complex statistical data (e.g., epidemiological studies in toxic tort), but this does not equate with a total abdication of duty by the LNC or attorney in the interpretation of data.

Just as disciples of math learn to double-check their findings by first estimating the answer, during the initial reading of the research paper, the LNC and attorney should independently evaluate whether they draw the same conclusions as the author. This review is not an unfailing mathematical operation; it is more an intuitive process. Furthermore, when reviewing a scientific paper, the reader should bear in mind that the design may be methodologically sound but adds little value to field of study, or that the data may reveal a statistical significance but no clinical significance.

Here's a Topic… Discuss

The discussion should address the author's conclusions and link the discussion to the hypothesis or problem statement. The outcome should be clearly stated and the findings plausible (Wooten & Ross, 2005). Any limitations to the study design should be freely offered and explain the potential drawback on the study's findings (Greenhalgh, 1997). If the author chooses to speculate about the applicability of the research to future practice, those observations should be clearly labeled as such.

Playing "Defective"

Looking at the individual components of the research study requires a critical eye. Each component serves a specific purpose but must be reviewed in the context of the entire study. The intellectual critique of research is defined by Burns and Grove (2001) as the "systematic, unbiased, careful examination of all aspects of a study to judge its strengths, limitations, meaning, and significance based on previous research experience and knowledge of the topic" (p. 663). By understanding that everything published is not necessarily accurate, void of prejudice, or meant to advance scientific knowledge, the appreciation for the value of critical analysis in scientific literature exponentially increases.

Disappointing Galileo

Galileo understood the importance of questioning blind obedience to common knowledge when he tested Aristotle's theory of acceleration. Aristotle conceptualized that heavier objects fall faster than lighter ones when dropped from equal distances. Replicating the formality of today's scientific process but limited by what experimental control was feasible in the early 1500s, Galileo proceeded to demonstrate the fallibility of Aristotle's conclusion. The experiment demonstrated that objects regardless of mass, subject to gravitational force, and, that in the absence of wind friction, fall with equal speed (Carpi, 2003; NASA, 1971). Despite this experimental breakthrough and with a little convincing on the part of the Inquisition, Galileo's discovery was silenced for many years.

This crude but effective illustration of one type of publication bias shows how unpopular theories, despite their validity, may not receive warranted public attention (Davis, 2000). Conversely, studies with little contributory value to furthering scientific knowledge have received space in the most prestigious journals by way of supporting popular notions of highly regarded scientific scholars (Hayreh, 2000). In the alternate view, duplication of a study's results lends validity to the methodology and conclusions if the hypothesis is confirmed and weeds out faulty design if overturned. In either event, homage to a published article should not be automatically granted, regardless of the author, and deference to the institution should not be bestowed on its celebrity reputation but reserved for its ethical conduct.

The maxim holds that "scientific theory can never be proved, only disproved." It is common practice that negative results (e.g., failure to support the proposed hypothesis) are rarely published in peer-reviewed journals even though they instruct akin to positive results (Gould, 1993). From a business perspective, it makes for better press and public relations to publish experiments that lend credence to the insight of gifted researchers and funding bodies. This is not to say that less-than-promising results are never published, just that the rate at which scientific journals deny authors of unfavorable results is markedly disproportionate to the acceptance of favorable results (Davis, 2000; Gould; Hayreh, 2000). In the same vein, if a testifying expert is opining on less than half the available scientific knowledge, the jury is denied a portion of the essential facts on which to deliberate.

Salami Slicing and Spin Doctors

"Salami slicing" is defined as "redundant publication in which the data from a study are inappropriately divided into two or more papers" (Segen, 1995, p.785). Even though the author is able to build his curriculum vitae by publishing the results twice with half the effort, it is ethically irresponsible. The practice only serves to clutter the literature with repetitive and non-contributory findings (Kassirer & Angell, 1995). Other questionable behaviors occur in publication as well (Davis 2000; Gould, 1993; Husten, 1994; Sackett, 1994).

Spin doctors, though more closely identified with the political arena, are not completely foreign to the world of scientific publication. A *New York Times* editorial by Lawrence Altman, MD, (1994) called the public's attention to the practice of public relations firms approaching prominent physicians to write opinion pieces that are quietly financed by pharmaceutical companies. The article further provided that both The Lancet and The Journal of the American Medical Association (JAMA) publicly discourage the practice of physicians ghostwriting scholarly reviews.

Sometimes these questionable practices take the form of post-hoc (i.e., after the fact) changes. If the findings are not as expected, yielding only negative results to the proposed research, what positive findings can be published about the study? Can the unexpected findings support a reworded hypothesis? Can the data be analyzed from different statistical perspectives to eventually yield favorable results?

Legal practitioners are on the qui vive to the "progressive assumption" of words leading in favor of a particular position. Practical experience quickly introduces the attorney to the advantages of the hypothetical line of questioning. "If we assume as true… then we can conclude" may also be found in published literature. A simple turn of words may solidify a vague concept into accepted observation and through repeated publication an immutable fact (Hayreh, 2000).

Ethical conduct is one of the basic tenets to scientific inquiry; however, fierce (and at times unfriendly) competition exists in academia to obtain research grants and funding (Pandit & Yentis, 2005). The maxim, "He who publishes first, wins" is borne out of this challenge and sometimes leads to the premature publication of findings or the extensive use of secondary sources (Davis, 2000). This fertile ground for ranking, recognition, and monetary rewards can lead to unprincipled behavior. Peer review is also no safeguard against falsified data by the researcher in an otherwise well-articulated experiment (Husten, 1994).

Getting to Carnegie Hall

Dedicated practice in comparing studies and reviewing the research literature will develop the novice LNC's skills in critical analysis of the research design. As evidence-based medicine (EBM) moves to the forefront of public awareness, it is incumbent on the LNC to assist the attorney in recognizing valid studies and reliable assumptions. Arguably, EBM is not new to bedside patient care, only becoming more formalized and recognizable to the consumer. Health care practitioners have traditionally used formalized research to determine the best choices in patient care and tracked medical interventions to patient outcomes through published reports (Sackett et al., 1996).

Evidence-based practice is not limited to medical practice. It borrows its fundamental concepts from other fields of evidence-based practice such as nursing, science, engineering, statistics, psychology, sociology, and more. It is not the sole property of one domain of practice but shares its function with the majority of health care disciplines. EBM

is grounded firmly in the medical/scientific literature, as it calls to the practitioner to assimilate and digest the current state of knowledge and well-founded research into patient care (Sackett et al., 1996).

Table 5: Critical Analysis.

The Researcher's Credentials	What are the primary investigator's credentials, authority to write, institutional affiliation? Is the study published in a peer-reviewed journal? If so, are there any editorials, reviews or retractions printed about the study? If co-authored, what role did the author fill? (In some cases, the credited name listed the last position did not participate in the research but allowed their facility to be used). Does prior research show a trend or pattern? Are the results self-serving? Was the author paid for the article? Does the author ghostwrite?
The Study's Design	Why was this design chosen? Appropriate sampling size? Appropriate samples chosen? Do you draw the same conclusions as the author's? If a replication study, what is the purpose? Does it further contribute to scientific knowledge?
Sample	Is the sample size adequate to be generalizable? Is it a random or convenience sample? Is it a representative sample of the population under study?
Statistical Testing Used	What is the research question? Is the right statistical testing chosen? Are there unusual or esoteric tests run? Do they add anything to the value of the study? All data used and accounted for? Are statistical results provided and explained (i.e. power, statistical significance, etc.)?
Confounding Factors	What was the protocol for control of confounding factors? What is the attrition rate? Is there bias in selection, by the experimenter or in reporting, in recall if survey used? What are the threats to validity? Were instruments calibrated? Did researchers receive proper instruction in how to conduct the study prior to implementing?
Mavericks and Outliers and Spin Doctors	Dredging and mining can occur end the study's conclusion. Suppose a pharmaceutical company paid thousands of dollars to support the research only to find out the study yield a negative finding. If the study goes to press, what positives can be published about the study ("publication bias")? Did the author account for outliers? Do all the test results contribute to the study?
Sponsors and Limitations	Is there sponsorship or underwriting disclosed? Was the Institutional Review Board (IRB) involved if received federal funding or involved human subjects? Does the article point out its limitations? Do you see limitations not freely offered? Does the math check? Do the findings still stand or have they been overturned?
Bibliography	What are the sources? Are the primary or secondary? How old are the sources? Any "hallmark" studies cited? If online sources, do links work? Credible web site? Always pull the sources of article the expert will rely on. Read these as well.

Conclusion

It has been said that science is not truth but the process of searching for the truth. While the same may be said of the litigation process, unlike science, it is essentially a zero-sum game with one winner and one loser. LNCs are enjoined with the attorney to use research to improve practice in redirecting the missteps inherent to adjudication, using only "snapshots" of scientific theory.

This article is not meant to condemn the inevitable flaws in research because without research, scientific practice would not advance. An ethically conducted study will withstand the scrutiny of critical analysis. The unique complexity of research design invites scientific inquiry by qualified professionals and underscores the importance of critical analysis of the expert's literary aegis. Recognizing the judge's unenviable duty to decide fairly despite the presence of unfamiliar tools and terminology acknowledges the incongruous nature of the law. In moving from the bedside to the legal field, the LNC is a learned intermediary of the scientific method and its holdings providing a much needed counter-balance.

Glossary of Sample Research Terms

As-Treated Analysis: Excludes subjects who did not stay on the intended treatment.

Bias: A type of error in which factor skews the data in one direction.

Blinding: Deliberately concealing any study-related information from subjects, clinicians, or researchers to prevent bias. For example, a double-blind design using medications would prevent (both) subjects and researchers from knowing who is receiving the intervention (actual medication) and who is receiving the placebo.

Central Limit Theorem: The means of many samples drawn from a population tends to be normally distributed.

Central Tendency: A statistical index describing the clustering and distribution of scores. The mean, median and mode are all measures of central tendency.

Confidence Interval (CI): Intervals calculated on the results of the data to show the strengths and weaknesses of the evidence. A 95% CI means that if you repeat the test 100 times you could be 95% sure the data would fall within the calculated range. Also known as margin of error. (Since the confidence interval assumes the limits, often reported as a single percentage, for instance 95%.)

Confidence Limits: The upper and lower boundaries/values of a confidence interval, that is, the values that define the range of a confidence interval. (For example, its right around the value X… give or take a few).

Correlation Coefficient: The relationship of the sets of data to each other.

Data Analysis: The gathering, display and summary of data.

Dependent Variable: What is being measured (the effect).

Descriptive Statistics: A method of summarizing the content of information data. Examples of graphical descriptors are graphs, bar charts, pie charts. Examples of numerical descriptors are the mean and standard deviation.

Evidence-Based Medicine: The integration of clinical expertise, patient values, and the best evidence into the decision making process for patient care.

Extraneous Variables (a.k.a. Confounding Factors, Internal/External Threats): Events ("noise") that may influence the results of a study leading to incorrect conclusions.

Generalizability: How well a research result can be applied to a wider population outside of the experiment.

Independent Variable: What is being done (the cause)

Intent-to-Treat Analysis: Uses data from all participants who were initially enrolled in a study whether the stayed on the assigned treatment.

Mean: The arithmetic average of the data.

Median: The middle number occurring in a set of data, where half the numbers are below and half are above.

Mode: The most frequently occurring numerical value in a set of data.

Maturation: Threat to the internal validity of a study, such as when subjects age.

Outliers: The extreme scores or values in a set of data that are exceptions to the overall findings.

P value: Value set by the researcher to determine whether or not the results are statistically significant.

Power: The ability of a study to detect a statistically significant result.

Primary Sources: The original, firsthand report or research of an event, experience or research findings.

Probability: The laws of chance.

Randomization: The process by which every member of a selected population has an equal chance of being assigned in a treatment group or a control group.

Representativeness: The degree to which key characteristics of the sample population resembles characteristics of the larger population.

Sample: A sub-set of the population that is ideally, truly representative of the population under study.

Secondary Sources: In research literature, a report or synopsis of a research study by someone other than the original researchers but paraphrased by the current author.

Standard Deviation (SD): A measure of the spread of data. For example, refers to what falls outside the concentrated distribution of a normal shaped bell-curve. The larger the spread, the greater the SD.

Statistical Inference: The science of drawing statistical conclusions from specific data, using the knowledge of probability.

Statistical Regression: The tendency of extreme data to move toward the mean in repeated testing.

Statistically Significant: A value (usually pre-set) to determine whether or not the results are due to the study conducted or the occurrence of random chance.

Test Statistic: A statistic used to test the null hypothesis.

Treatment Group: Those subjects in a study who receive the intervention, drug or therapy under study.

t-test: Random variable that uses the standard deviation of the sample to lend a predictive value on the larger population.

Online Resources/References

Statistics Tutorials
A tribute to cancer survivor, Steve Dunn, now maintained by a group of volunteers. One objective of this site is to provide an educational resource for those needing a more straightforward explanation regarding treatment choices, reading medical literature, and so much more. Phenomenal resource.
www.cancerguide.org (scroll down to choose Statistics)

It is not possible to do this resource justice in one sentence. You must see it to believe it. Billed as an interactive statistical calculation pages, it *does not* disappoint. John C. Pezullo, a past Associate Professor in the Departments of Pharmacology and Biostatistics at Georgetown University, in Washington, DC, graciously acknowledges the contributions of many volunteers in the success of this project.
http://statpages.org

Rice Virtual Lab in Statistics. The online resource is the property of David M. Lane who has generously posted this resource on the web. The first link, HyperStat Online, is only one of its excellent resources.
www.ruf.rice.edu/~lane.rvls.html

Test your growing knowledge at Selecting Statistics. Allows you to input your data to find the appropriate test.
www.socialresearchmethods.net/selstat/ssstart.htm

Evidence-Based Medicine Tutorials
Several excellent links at the BioMedical Library at the University of Minnesota
www.biomed.lib.umn.edu/help/guides/ebmtutorials

University of Alberta, Canada has given us the EBM Toolkit. Extensive reference in reader friendly format.
www.med.ualberta.ca/ebm

Tutorials for Reading Medical Literature
Student's Guide to Medical Literature. Written for medical students, the website invites anyone interested in the topic to visit. Provided by the University of Colorado at Denver Health and Sciences Center.
http://denison.uchsc.edu/SG/index.html
(includes a glossary of terms)

How to Read a Paper: Getting Your Bearings by Trish Greenhalgh is provided courtesy of the online British Medical Journal. This paper is actually one in a series that covers a wealth of information on understanding medical literature.

www.bmj.com/cgi/content

Click on advanced search, enter the year 1997, vol. 315, pg. 243 and click on search. Choose full text to retrieve this reference.

The Federal Judge's Manual

Reference Manual on Scientific Evidence (2nd edition).

www.fjc.gov

From the home page, choose publication & videos, then type Reference Manual on Scientific Evidence to view the federal judge's reference book. More than 600 pages.

References

Allison v. McGhan Medical Corp., 184 F.3d 1300 (11th Cir. 1999).

Altman, L. K. (1994). The doctor's world: Some authors in medical journals may be paid by spin doctors [Editorial]. *New York Times,* C3.

Burns, N., & Grove, S. (2001). *The practice of nursing research: Conduct, critique & utilization* (4th ed.). Philadelphia: Saunders.

Carpi, A. (2003). The scientific method. *Visionlearning,* SCI-1(1). Retrieved January 20, 2007, from http://www.visionlearning.com/library/module_viewer.php?mid=45

Davis, B. D. (2000, March). The scientist's world [Commentary]. *Microbiology and Molecular Biology Reviews,* 1-12.

Doordan, A. M. (1998). *Research survival guide.* Philadelphia: Lippincott.

Dunnington, S. (1997a). Measurement theory: Part I reliability. *Nursing research: A practical approach for the practicing nurse.* Wilmington, Delaware: Delaware Nurses Association.

Dunnington, S. (1997b). Measurement theory: Part II validity. *Nursing research: A practical approach for the practicing nurse.* Wilmington, Delaware: Delaware Nurses Association.

Gould, S. J. (1993). Cordelia's dilemma. *Natural History,* 102(2), 10-15.

Greenhalgh, T. (1997) How to read a paper: Getting your bearings (deciding what the paper is about). *British Medical Journal,* 315, 243-246. Retrieved July 17, 2006, from http://www.bmj.com/cgi/content/full/315/7102/243?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=greenhalgh&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&sortspec=relevance&volume=315&firstpage=243&resourcetype=HWCIT

Hayreh, S. S. (2000). Scientific literature and gospel truth. *Indian Journal of Ophthalmology,* 48(2), 93-99.

Hogan, C. (2001, June) How to read a scientific paper: Part 3. *The Body: The Complete HIV/AIDS Resource.* Retrieved July 28, 2006, from http://www.thebody.com/gmhc/issues/juno1/paper.html

Holden, J. D. (2001). Hawthorne effects and research into professional practice. *Journal of Evaluation in Clinical Practice,* 7(1), 65-70.

Husten, L. (1994). Tricky business. *Harvard Health Letter,* 19(12).

Introduction to the Scientific Method (1996). *Manual of the Undergraduate Physics Laboratories of the Department of Physics and Astronomy at the University of Rochester.* Retrieved December 11, 2006, from http://teacher.nsrl.rochester.edu/phy_labs/AppendixE/AppendixE.html

Kassirer, J. P., & Angell, M. (1995). Redundant publication: A reminder. *The New England Journal of Medicine,* 333(7), 449-450.

Morin, K. H. (1997a). Bivariate statistical tests: The difference between two groups. *Nursing research: A practical approach for the practicing nurse.* Wilmington, DE: Delaware Nurses Association.

Morin, K. H. (1997b). Sampling. *Nursing research: A practical approach for the practicing nurse.* Wilmington, DE: Delaware Nurses Association.

NASA, (1971). Space educator's handbook: NASA lunar feather drop home page. Retrieved January 20, 2007, from http://www1.jsc.nasa.gov/er/seh/feather.html

Norwood, S. L. (2000). *Research strategies for advanced practice nurses.* Upper Saddle River, NJ: Prentice Hall Health.

Pandit, J. J., & Yentis, S. M. (2005). All that glistens: How to assess the value of a scientific paper. *Anaesthesia, 60,* 373-383.

Polit, D. F., & Hungler, B. P. (1989). *Essentials of nursing research: Methods, appraisal and utilization.* (2nd ed.) Philadelphia: J. B. Lippincott.

Redick, T. P. (2004, March). Toxicogenomics and expert strategies for the mass tort litigator. *Environmental and Toxic Torts Committee Newsletter of the American Bar Association, 6*(1). Retrieved January 6, 2007, from http://www.abanet.org/environ/committees/toxictorts/newsletter/mar04/ELTT0304.pdf

Rice, B. (n.d.) The Hawthorne defect: Persistence of a flawed theory. Retrieved January 6, 2007, from http://www.cs.unc.edu/~stotts/204/nohawth.html

Sackett, D. L. (1994). The scandal of poor medical research [Editorial]. *British Medical Journal,* 308, 283-284. Retrieved January 6, 2007, from http://www.bmj.com/cgi/search?loct=eh om&andorexactfulltext=and&resourcetype=1&disp_type=&sortspec=relevance&author1=sackett&fulltext=&volume=308&firstpage=283

Sackett, D. L., Rosenberg, W. M. C., Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: What it is and what it isn't. *British Medical Journal,* 312, 71-72. Retrieved January 5, 2007, from http://library.umassmed.edu/EBM/index.cfm

Segen, J. C. (1995). Current med talk: A dictionary of medical terms, slang & jargon. Stamford, CT: Appleton & Lange.

Wooten, J. M., & Ross. V. M. (2005). How to make sense of clinical research. RNWeb. Retrieved July 18, 2006, from http://rnweb.com/rnweb/content/printContentPopup.jsp?id=142654

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Nursing Expertise: A Look at Theory and the LNCC® Certification Exam

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KEY WORDS
Certification, Nursing Expertise

Dr. Patricia Benner is a well-known nursing theorist whose 21 years of experience with the Dreyfus Model of Skill Acquisition has earned her many awards and honors for her contribution to the nursing profession. This article gives an overview of Benner's theory, her landmark work, and its application in defining nursing expertise as it applies to the Legal Nurse Consultant Certified (LNCC®) exam. A recent proposal seeks to change the required 2,000 legal nurse consulting specialty practice hours prior to sitting for the LNCC® (Legal Nurse Consultant Certified) exam, instead recommending general nursingpractice hours. While not all of Benner's concepts may be applicable to the practice of legal nurse consulting, it is hoped that looking at this conceptual model will provide a better understanding in defining the importance of what is considered the minimum qualifications to sit for the LNCC® exam.

In her exceptional work *From Novice to Expert: Excellence and Power in Clinical Nursing Practice,* Dr. Patricia Benner introduced the concept that expert nurses develop skills and understanding of patient care over time through a sound educational base and a multitude of experiences (Benner, 1982). She proposed that one could learn knowledge and skills by "knowing how" without ever learning theory "knowing that." The premise is that the development of knowledge in applied disciplines such as medicine and nursing is composed of the extension of practical knowledge through research and understanding the "know-how" of clinical experience. In other words, experience is a prerequisite for becoming an expert.

Analysis of Benner's Theory

Until we had the publication of Benner's research, which focused on critical care nurses, this characterization of the learning process had gone largely undefined (Dracup & Bryan-Brown, 2004). The Dreyfus model used by Benner is developmental and based on experiential learning. Benner writes that nursing requires both *techne* and *phronesis*.

Techne is defined as the knowledge that can be captured from procedural or scientific knowledge (Benner, 2004). Benner gives the example of providing clear parameters and guidelines to students. At this stage, the learner cannot rely on previous experience, so the student must be given safe and clear directions on how to proceed. Nursing programs must provide for situation-specific learning in clinical experiences, although students would benefit from simulated experiences.

Phronesis is more complex because it is a reasoned practice employed by expert clinicians through experiential learning, which nurses are continually improving through practice (Benner, 2004). According to Benner, the integrated rapid response is hallmark and gives a complex example of where nurses have made some rapid decisions during emergencies. Phronesis is learned in the authentic situation with patients and feedback from experts (National Council of State Boards of Nursing [NCSBN], 2005).

The Dreyfus Model of Skill Acquisition used by Benner offers a useful tool for understanding the differences between the experienced nurse and the novice. The model was derived by University of California, Berkley professors Stuart Dreyfus, a mathematician and systems analyst, and Hubert Dreyfus, a philosopher, from their study of chess players and pilots. Benner found that the model can be generalized to nursing. It takes into account the increments in skilled performance based on experience as well as education. This model has provided a basis for clinical knowledge development and career progression in clinical nursing (Benner, 1982).

As Atherton (2003,¶5) aptly phrased it, "The Dreyfus model uses a five-stage typology of developing expertise. First there is the 'Novice' stage where there is rigid adherence to taught rules or plans, little situational perception and no discretionary judgment. Second is the 'Advanced Beginner' in which guidelines for action are based on attributes or aspects. Situational perception still is limited and all attributes and aspects are treated separately and given equal importance. Thirdly the 'Competent' stage is coping with crowdedness. One now sees actions at least partly in terms of longer term goals. Conscious deliberate planning takes place along with standardized and routine procedures. Fourth is 'Proficient' where situations are seen holistically rather than in terms of aspects. One sees what is most important in a situation and perceives deviations from the normal pattern. Decision making is less labored and maxims are used for guidance with varied meanings according to the situation. Finally comes the 'Expert' stage where one no longer relies on rules, guidelines or maxims. There is intuitive grasp of situations based on deep tacit understanding. Analytic approaches are used only in novel situations or when problems occur. There is vision of what is possible."

Further support for clinical learning is obtained from the Situated Cognition Theory, which is based on the premise

that all learning is influenced by the situation where it occurs. This emerging theory has been studied in education, anthropology, sociology, cognitive science, and psychology. The theory represents a shift in the traditional psychological theories of learning to view learning as emergent and social. While health professions have not formally studied this theory, it is nonetheless highly relevant to our profession. The goal is to help the student develop the higher-level thinking and reasoning skills that are an integral part of nursing. Research has focused on the importance of the faculty in bringing the student to an authentic environment to learn.

Applying the principles of Situated Cognition Theory, a nurse must practice in authentic situations. Benner equates "novice" to the period of nursing where students have no experiential background on which to base their approach or understanding of a clinical situation as "Advanced Beginner" or "New Graduate." "Competent" is seen as 1 to 2 years of practice. "Proficiency" is a transitional stage on the way to expertise. "Expertise" involves practical wisdom or phronesis (NCSBN, 2005).

Nursing, like medicine, is rich in socially embedded clinical know-how that encompasses perceptual skills of expertise, transitional understandings across time, and understanding of the particular in relation to the general. Clinical knowledge is a form of engaged reasoning that follows operandi thinking in relation to patients' and clinical populations' particular manifestations of disease, dysfunction, and response to treatment and recovery trajectories (Benner, 2004).

Experience teaches the proficient nurse what to expect in a given situation. The competent nurse does not yet have enough experience to recognize a situation in terms of the overall picture or which aspects are most salient or important. Experience, as it is understood and used in the acquisition of expertise, has a particular definition that should be clarified. Experience is not the mere passage of time or longevity; it is the refinement of preconceived notions and theory by encountering many actual practical situations that add nuances or shades of differences to theory. Theory guides clinicians and enables them to ask the right questions. Only from the assumptions and expectation of the clinical practice of experts are questions generated for scientific testing and theory building (Benner, 1982).

Application to Current Practice

Licensure as a Registered Nurse (RN) is the basic entry-level requirement for the profession of nursing, as well as for the practice of legal nurse consulting. Regulated by state statute, licensure ensures that an individual has acquired the entry-level knowledge and skills to function as an RN but does not indicate expertise in a particular area. Health care has become more complex and specialized, with the need for nurses to acquire advanced knowledge and skills to meet expanding health care needs. Correspondingly, a mechanism for identifying these specialized nurses was also needed. Certification has emerged as the recognized and accepted method for identifying those who have attained advanced knowledge, experience, and expertise in a specialty area.

Certification is conferred by nongovernmental agencies or associations to acknowledge that an individual has met certain predetermined criteria established by that particular agency or association. Typically, these agencies or associations are accredited, professional nursing specialty organizations that have met rigorous accreditation criteria. Just as nursing certification programs can have very different standards, the value of their respective certifications also differs significantly. Only by identifying standards and understanding the quality criteria utilized by each certifying organization and it respective certification program can the true value of certification be established.

The American Board of Nursing Specialties (ABNS) was incorporated in 1991, with the goals of creating uniformity in nursing certification and increasing public awareness of the value of certification. ABNS recognized that certification in a nursing specialty was of no value if the organization that certified the nurses did not adhere to rigorous, consistent principles and practices that exemplified quality certification. ABNS established 18 standards that must be met for a certification program to be recognized. Currently, ABNS has accredited certification in 12 professional certifying organizations. Individuals who successfully complete

professional certification examinations offered by ABNS-recognized organizations are considered "board certified."

The other nationally recognized accreditation board is the National Commission for Certifying Agencies of the National Organization for Competency Assurance (NCCA). Only eight nursing organizations have met the 21 accreditation standards established by the NCCA (Feliciano, 2006).

Practice Makes Perfect

Because no specific coursework or formal LNC educational program is required, outside of the completion of nursing school and the license to practice as an RN, the requirement was instituted that an RN must have 2,000 hours of legal nursing experience prior to sitting for the national certification exam. Passing a state board of nursing exam indicates the minimal requirement to practice nursing but does not make the nurse an "expert" RN, just as passing the LNCC® certification exam does not make an individual an "expert" legal nurse consultant (LNC). However, board certification in specialty nursing practice reflects the achievement of a standard beyond licensure and is an objective measure of knowledge in the specialty (ABNS, 2005).

The importance of clinical time spent practicing in the field of legal nursing is evident when speaking with peer LNCs. A brief, personally conducted survey of colleagues was done in which two survey questions were asked to members of a local constituency of LNCs: 1) Can you tell me approximately how long into your work as an LNC passed before you first began to feel you had a true understanding of the LNC practice specialty? 2) In your opinion, what time frame do you feel is sufficient for a nurse in the LNC specialty practice area to have a true comfort level? The survey revealed that most did not begin to have a true understanding of their field of practice in legal nursing until they had been on the job for at least 1 year. This is in keeping with the 2,000 hours requirement to sit for the LNCC® exam.

Congruence

In her landmark work *From Novice to Expert: Excellence and Power in Clinical Nursing Practice,* Benner introduced the concept that expert nurses develop skills and understanding of patient care over time through sound educational base as well as a multitude of experiences. She proposed that one could gain skills and knowledge without ever learning the theory, with the premise that the development of knowledge in applied disciplines such as nursing and medicine is composed of the extension of practical knowledge through research and understanding clinical experience. In short,

experience is a prerequisite for becoming an expert. Until the publication of Benner's research, this characterization of the learning process had gone largely undefined (Dracup & Bryan-Brown, 2004).

Experience teaches the proficient nurse what to expect in a given situation and how to modify plans in response to these events. The Dreyfus Model of Skill Acquisition posits that, except in unusual circumstances, the performer will experience his or her current situation as similar to some brain-stored, experience-created, typical situation due to recent past history of events; hence, the person will experience his or her situation at all times through a perspective. Rather than a conscious calculation of this perspective or plan, it will simply present itself to the performer. Because of this experience-based ability to recognize whole situations, the proficient nurse can now recognize when the normal is absent (Benner, 1982).

This work experience is an important stepping stone to taking the certification exam. It assures that the LNC will have, over time, developed the skills and understanding that come with experience within the legal nursing arena itself. Work experience within the field will teach the LNC the typical events that occur in the overall specialty area.

Conclusion

"Can expertise be taught? I suspect not. This is partly a matter of semantics because the developing expert has by definition become a self-teacher before attaining full expertise. The relative importance of learning from experience becomes greater the more expert one becomes. Although an individual might be inspired by a greater expert and learn from him or her, he or she does not 'teach' in the conventional sense" (Atherton, 2003, ¶30).

Many nurses who are viewed as experts would not describe themselves as such because, perhaps, experts are more willing to admit their need to learn than lesser practitioners. They did not consider themselves incompetent before earning their certifications nor believe that they became experts immediately upon earning them. There are nurses who are as good as or better than colleagues in those fields and who, for whatever reason, did not desire to become certified. It is certain in most cases, however, that the type of nurse who would bother to earn those additional hours of experience and sit for an exam purely for personal satisfaction is most likely the nurse whom any individual would want to provide care.

References

American Board of Nursing Specialties. (March 5, 2005). *A position statement on the value of specialty nursing certification.* Retrieved January 26, 2007, from http://www.nursingcertification.org/position_statements.htm.

Atherton, J. S. (2003). Competence, proficiency and beyond. *Doceo.* Retrieved October 24, 2006, from http://www.doceo.co.uk/background/expertise.htm

Benner, P. E. (1982). From novice to expert: Excellence and power in clinical nursing practice. *American Journal of Nursing,* 82(3), 402-407. Retrieved October 22, 2006, from http://libdata.lib.ua.edu:2205/view/0002936x/ap060986/06a00060/?currentResult=0002

Benner, P. E. (2004). Designing formal classification systems to better articulate knowledge, skills and meanings in nursing practice. *American Journal of Critical Care,* 13(5), 426-443. Retrieved November 5, 2006, from http://findarticles.com/p/articles/mi_m0NUB/is_5_13ai_n7069118/print

Dracup, K, & Bryan-Brown, C. (2004). From novice to expert to mentor: Shaping the future. *American Journal of Critical Care,* 13(6), 448-450. Retrieved October 19, 2006, from http://www.findarticles.com/p/articles/mi_m0NUB/is_6_13ai_n6366686/print

Feliciano, M. (2006). Questions & Answers: There are several Legal Nurse Consultant certifications currently available. What are the differences among them and why should I consider LNC certification if it is not a requirement to practice as an LNC? *The Journal of Legal Nurse Consulting,* 17(2), 18-21.

National Council of State Boards of Nursing, Inc. (2005, August). Clinical instruction in prelicensure nursing programs. In *National Council of State Boards of Nursing Position Paper.* Retrieved October 22, 2006, from http://www.ncsbn.org

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Time Limits for Requested Medical Records

Barbara A. Boschert, RN BSN

Question: How long does an entity have to comply with a request for production of medical records? Is there a limit to how much they can charge?

Answer: Time limits for the production of medical records vary from state to state, as do the associated fees.

Under the HIPAA Privacy Rules, federal regulations for how long an entity has to act on a request for release of protected health information (PHI) are considered by many to be the most restrictive. While state statutes actually have the option of being more restrictive, most opt to follow Federal guidelines. For a general overview of information contained in the HIPAA Privacy Rules, **www.cms.hhs.gov/HIPAAGenInfo/** can be a helpful site.

By contrast, fees are typically set by the state, as HIPAA is uncharacteristically non-descriptive, stating simply that the fee must be "reasonable" (§164.524). Legal nurse consultants (LNCs) are reminded to be wary, as individual institutions may pose intentional or unintentional roadblocks to the acquisition of records, and may attempt to charge fees that are greater than those set by state statutes – a practice that can be successfully challenged by the requesting party. LNCs, either independent or in-house, have an opportunity here to demonstrate yet another way in which they can save the client/employer time and money, with a little research into applicable state and/or federal regulations.

Aside from time limits and cost constraints, an entity is not compelled to disclose PHI if the authorization form is not "HIPAA-compliant." Should the attorney wish to build his/her own form, the exact specifications can be found in HIPPA §164.508(c) of the Code of Federal Regulations. Another option may be to collect authorization forms from each institution upon initial contact. The LNC is reminded to periodically check that the authorization form on file is their most recently updated version. It is permissible to have the client sign the form, without dating it or designating who or what. The consultant should make copies of the original as needed, completing the date, information type, and entity from which the records are requested.

Time Limits for Production of Records

Time limits range from as restrictive as 10 days (Florida §766.204) to as broad as the general use of the term "reasonable" (Missouri §191.227). Determining the applicable time limit is challenging because the manner in which each state categorizes the information varies, effectively prohibiting the use of a single source listing. For example, one may file it in their administrative code, while another maintains it in their revised statutes. Furthermore, within these categories, the exact ruling may be found under subheadings such as "tort," "health," "public health," or "medical malpractice."

Obviously, this complicates the search. The LNC can consider building a database of this information, perhaps in a Microsoft Word table format. In addition, it may help to save a listing of Web addresses, in anticipation of periodic returns to the site to confirm that the information is still current.

As stated in HIPAA §164.524, federal guidelines apply to those states that do not otherwise address this issue individually. The facility "must act on a request for access no later than 30 days after receipt of the request," unless the information is kept off site, in which case the entity has 60 days to act. "Acting" on the request is translated as either (a) informing the individual of the acceptance of the request and providing access, or (b) written notice to the individual that access is denied. Statement of denial of access must be made in written format, in a timely manner, in plain language, and containing the basis for the denial. It must also include a description of how to file a complaint procedure, as well as the name, or title, and telephone number of the contact person or office designated to address such complaints. In the event of a denial, the attorney has various options available, i.e., filing a motion to compel production, serving a subpoena to the medical records custodian to appear for deposition with the records in hand, or filing a separate action to sue for the records. On the other hand, if the denial was issued because the facility does not possess the PHI requested, but they do possess the knowledge of where to direct the request for access, they must inform the individual of that fact and provide contact information.

If, for any reason, the covered entity is unable to produce the records within the 30-day time limit (other than the aforementioned issue that the information is maintained off site), the entity must provide written explanation for the delay and the date by which they will complete the request. The covered entity may have only one extension of time for action on a request for access. "The health care practitioner/facility cannot protect itself from a lawsuit by failing to produce records within the usual statutory time frame as the start of the statute of limitations time period may not be triggered until or when the plaintiff discovers that the defendant is purposefully concealing material information" (Iyer, 2003, p. 47).

According to Florida §766.204, "It shall not be grounds to refuse copies of such medical records that they are not yet completed or that a medical bill is still owing." In other words, the excuse that the physician hasn't signed off on the records is insufficient grounds for withholding a chart. In this instance, the LNC could attempt to ascertain the hospital's policy on time limits for providers to complete their documentation, so as to (a) learn if they are in violation of their own policies, and/or (b) track their progress to the date specified within their policy.

If the files are voluminous, the covered entity may suggest a medical record "abstract" or summary of the PHI. This option is open to the entity only if (a) the individual requested it in lieu of the actual record, or (b) the individual agrees to receipt of the PHI in this format when proposed by the covered entity, and also agrees to any fees associated for such summary or information. The consultant needs to keep in mind that if the case involves allegations of medical malpractice occurring within the covered entity itself, nothing short of the complete medical record will suffice for a thorough investigation of the health care facts contained therein (Barbacci, et al., 2001).

Cost Limits for Production of Records

The fee structure for production of records is set by the state in most instances, due to the ambiguity of HIPAA guidelines in this area. The following two examples demonstrate the range of what a state may mandate.

- Missouri §191.227 specifically states the maximum handling rate for records request is $17.05 and the rate for copies is $.40 per page for the cost of supplies and labor. In addition, the facility may charge postage and a notary fee (the latter not to exceed $2). These fees shall be subject to annual adjustment, and the increase/decrease must be posted to the Web site of the Department of Health and Senior Services by February 1 of each year.
- Iowa Administrative Code r. 876-8.9 indicates expenses to prepare duplicates shall not exceed $20 for 1-20 pages, $20 plus $1/pg for 21-30 pages, $30 plus $.50/pg for 31-100 pages, $65 plus $.25/pg for 101-200 pages, and $90 plus $.10/pg for more than 200 pages.

Currently, a state-by-state listing of medical record copying charges is available at **www.lamblawoffice.com/medical-records-copying-charges.html**.

Requesting/Obtaining Records of the Deceased

Privacy rights extend beyond death. Missouri §191.227 indicates that, upon written request, records may be released to a patient, "guardian," or "legally authorized representative of a patient." In wrongful death cases, the challenge lies in defining "legally authorized representative." Some attorneys may contend that authority granted in a Durable Power of Attorney (POA) ought to be sufficient; however, by definition, a Durable POA dies with the individual.

The answer to this question seems to be interpreted on a case-by-case basis, and includes such persons as an administrator, executor, or personal representative. Some have successfully argued that, by virtue of the fact that an individual has the right to bring action under the Missouri wrongful death statute (§537.080), the same individual thus possesses the right to acquire records of the deceased, e.g.:

- spouse or children or the surviving lineal descendants of any deceased children, natural or adopted, legitimate or illegitimate, or by the father or mother of the deceased, natural or adoptive;
- if there are no representatives from the previous class, then brother or sister of the deceased, or their descendants;
- if there is no representative from the previous two classes, then a person may be appointed by the court.

In many states, a certified copy of the death certificate, HIPAA authorization executed by the Estate's administrator, and a notarized copy of the appointment of administrator will secure copy of the medical record. The reality of this dilemma, however, is that the success (or failure) of acquiring records on a deceased individual is most dependent upon the health care facility's knowledge and/or interpretation of the definition of a "legally authorized representative."

Summary

As LNC's, we realize that what we bring to the legal team is our medical knowledge that enables us to analyze health care facts and their impact on the outcome. Likewise, we recognize that the attorneys contribute their knowledge of the law. Some LNCs may argue that the points discussed in this column fall more within the scope of the attorney's practice, and less with what the consultant must embrace. While it is not our business to know the law, per se, it greatly behooves us to possess a general knowledge of concepts that may directly impact our work product, and thus our value to the client/employer.

References

Barbacci, M., Browsky, D., Calderone, A., Davis, S., Clark, K., & Iyer, P. (2001). *Essentials of medical record analysis: A quick guide.* New York: CRC Press.

Florida §766.204. Title XLV. Torts. Chapter 766. Retrieved December 12, 2006, from http://leg.state.fl.us/Statutes

HIPAA §164.508. Retrieved December 12, 2006, from http://www.access.gpo.gov/nara/cfr/waisidx_06/45cfr164_06.html

HIPAA §164.524. Retrieved December 12, 2006, from http://www.access.gpo.gov/nara/cfr/waisidx_06/45cfr164_06.html

Iowa Administrative Code r. 876-8.9. Retrieved December 12, 2006, from http://www.iowamedical.org/ola/Medical_Record_Fees_Advisory_Feb_2005.pdf

Iyer, P. (Ed.). (2003). *Legal nurse consulting: Principles and practice* (2nd ed.). New York: CRC Press.

Missouri §191.227. Retrieved December 12, 2006, from http://www.dhss.mo.gov/ProtectingThePublic/FeesMedicalRecords.html

Missouri §537.080. Retrieved December 12, 2006, from http://biotech.law.lsu.edu/cases/sol/Wrongful_Death_and_Survival.htm

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Thanks goes to all St. Louis Chapter members who contributed resources, answers, and anecdotal notes, via the chapter listserv, on this interesting and challenging issue.

Helpful Web Sites

- **www.cms.hhs.gov/HIPAAGenInfo/**
  General overview of information contained in the HIPAA Privacy Rules
- **www.lamblawoffice.com/medical-records-copying-charges.html**
  State-by-state listing of medical record copying charges

Document Discovery in Nursing Home Litigation

Karon Goldsmith

To greatly enhance the quality of services offered in a nursing home case, legal nurse consultants (LNCs) must understand the discovery patterns and strategies. Knowledge of these strategies can help to provide invaluable benefits to plaintiff and defense attorney, nursing home risk management departments, insurance companies, regulatory agencies and fraud investigation teams.

Nursing homes are owned by governmental agencies, individuals, or corporations. It is imperative to know the ownership structure in order to understand the importance of discovery strategies. Jurors respond to the manner in which ownership information is presented in focus groups and at trial. Attorneys assist the jurors in correlating the significance of financial decisions, operational decisions and company marketing plans to the quality of care provided to the residents in each facility. Money, power, and market forces are three main factors that delineate why corporate nursing homes are different.

How Nursing Home Corporations Make Money

The Nursing Home Reform Act was passed as part of the Omnibus Budget Reconciliation Act of 1987 (OBRA '87), redefining the quality of care required to be provided by participating facilities (Centers for Medicare and Medicaid [CMS], 2007). This included detailed revisions to the Medicare and Medicaid statutory reimbursement schedule. In addition to establishing the standard of care for the operation of skilled nursing facilities, the Act mandated compliance by any nursing home eligible for reimbursement through Medicare and Medicaid. Primarily, nursing homes make money two ways: 1) through reimbursement from the federal and state government, private pay, or insurance companies; and 2) by reducing costs to maximize profit margins.

Medicare: Upon admission to a skilled nursing facility, federal regulations mandate that a resident be assessed with a Minimum Data Set (MDS), completed within the first 5 days (CMS, 2007). The MDS demands information for all the resident's activities of daily living and serves as a tool for planning the resident's care, as well as a certified, sworn document confirming billing or reimbursement. After completing the MDS, the MDS coordinator will certify a Resource Utilization Group (RUG) score for the resident. The Centers for Medicare and Medicaid services (CMS) calculates the basic rate for rural and urban reimbursement. Each individual RUG score represents a per diem reimbursement rate. The reimbursement rate is based on geographic areas determined by the Census Bureau Statistical Areas (CBSA). The nursing home will receive the per diem reimbursement rate for Medicare plus ancillary charges. Generally speaking, all nursing homes – not just corporate nursing homes – look for Medicare residents who require ancillary or rehabilitation services because such service charges generate revenue in addition to the per diem rate.

Medicaid: Medicaid reimbursement rates are cost-based and facility-specific. A Medicaid-eligible resident with the same RUG score could receive a different reimbursement rate from corporate nursing home A than from corporate nursing home B. Even if the same corporation owns both nursing home A and B, the Medicaid reimbursement rate will potentially be different because Medicaid reimbursement establishes a per diem rate based on the cost of direct care, indirect administrative and operating costs, fair market value, food costs, size, location, labor costs, and more, and will therefore always be different from one nursing home to another. They are, by definition, unique to the individual facility and usually provide significantly less reimbursement than Medicare.

Private Pay: Almost all nursing home corporate chains determine separate private pay reimbursement levels for the facility; however, there are exceptions. For example, Minnesota has an Equalization of Rates Statute regulated under Minnesota Statute 256B.48 Conditions of Participation, restricting facilities from charging private pay more than the Medical Assistance per diem rate (Minnesota Legislature Office of the Revisor of Statutes, 2007). The major objective of the equalization statute was to deter a facility's incentive to provide preferential admissions to private pay residents. Most nursing home corporate chains complete comparative salary surveys and benefit packet surveys in the local community. Obtaining this information for private pay residents through surveys, findings, and conclusions are important pieces of evidence for a corporate nursing home's establishment of a private pay rate. Private pay reimbursement is also community-unique.

Budget Constraints, Profit Margins

Due to size, structure, and market forces, corporate nursing homes are in a better position to bargain for and receive discounts in areas such as food costs, pharmacy, and other services. Corporate nursing home chains increase their profitability by increasing the margins and cutting budgets; however, problems can arise when budget cuts affect staffing or the delivery of care for activities of daily living. Reducing staff, under-capitalization, and the failure to reasonably address systematic failures in the nursing home setting can result in harm to residents.

Under-capitalization occurs when a nursing home corporation does not equip a skilled nursing facility with a reasonable amount of capital for prospective liability. In situations where nursing homes are understaffed and the nursing home has been warned or issued citations for federal and state violations, and yet the parent corporation continues to cut nursing staff and/or labor budget, there is the potential for resident harm caused by understaffing. An under-capitalization claim can be made against the corporate nursing home.

Identifying the Corporate Defendant

Although it sounds silly, identifying the corporate defendant can often be difficult. "The new litigation strategy for nursing homes includes nursing home operators converting individual nursing homes into limited liability corporations (LLCs) or corporations opting not to carry long-term care insurance" (*USA Lawyers Weekly,* September 26, 2005). Many nursing homes separate their real estate assets from the operation of the nursing home.

The real estate on which the nursing home stands and building which houses the nursing home are purchased by a separate entity, often a limited liability corporation (LLC). Particularly in the south, the real estate is then placed into real estate investment trusts (REITS), which are forms of protected real estate investments. The LLC that purchased the real estate and placed it into a trust enters into a lease whereby the facility is leased to another "separate" LLC. In turn, the second LLC can sublease to a third LLC, which may enter into an agreement with another LLC to operate the facility. The LLC that acts as the licensee of the facility can often have no assets, no property, no liability insurance, and is "judgment proof." There are different variations on the basic theme of separating real estate and ownership and having little or no insurance for the management company. Whatever the variation, the money always filters back to the original LLC.

Corporate Liability

Direct: Parent corporate nursing home chains can be found to be directly liable. Without delving into separate outlines summarizing federal and state case law regarding corporate liability, courts will look to the parent corporation's control of the day-to-day operation of the individual nursing home. In particular, focus will be on the degree of control over budgets, staffing, labor, food costs, staffing ratios, the establishment of policies and procedures, and regional and/or area support staff to enforce the above.

Other avenues to explore include the individuals responsible for the choice of vendors and pharmacy. Is there an exclusive contract between the pharmacy and the corporation who picks the rehabilitation services? Is this a subsidiary of the parent corporation? Who authors the policies and procedures and oversees enforcement of the same to establish patient care standards? What authority do the Director of Nursing and Administrator have to hire more staff, change budgets, cancel and negotiate new service contracts, etc.? All services delivered must be examined. It is also vital to identify the Medical Director's level of authority and responsibility in the management of patient care in the nursing home.

Indirect - Piercing the Corporate Veil: A corporation is ordinarily treated as a legal entity that is distinct from its shareholders. The rights and obligations of the corporation are normally separate, and the corporate entity may be shielded from liability. Under certain circumstances, a protective corporate entity may be disregarded, and the corporation held liable. These situations generally arise when one of the following scenarios occurs: 1) the corporate formalities are ignored; 2) a corporation is under-capitalized; or 3) disregarding the corporate entity is necessary to prevent fraud.

When certain circumstances are met, it is appropriate to pierce the corporate veil, and parent nursing home corporations will be found liable for harms committed by their subsidiaries. Information most often obtained during a lawsuit can shed light on these issues. In a situation where multiple LLCs own, lease, and sublease a facility, issues to be addressed are:

- Identification of the members of the Board of Directors for each corporation;
- Salary received by members of the Board of Directors;
- Recorded minutes from meetings of the Board of Directors;
- Corporate formalities followed by the Board of Directors;
- Actual addresses of the multiple corporations and entities;
- Election procedures of the corporations;
- Corporate letterhead used for correspondence;
- Securities Exchange Commission (SEC) filings, if the nursing home is publicly traded;
- Authentication and certification of Medicare cost reports;
- Tracking of money generated and spent by the nursing home; and
- Reports or documents verifying revenues transferring from the operating company to the parent corporation.

Individual Liability: In 2004, the Florida Court of Appeals in *Canavan v. National Healthcare Corp.,* 889 So2d 825 (Fl. Ct. App., 2004) held direct liability on the owner and sole shareholder of a corporate nursing home for understaffing and cutting budgets. In summary, the court pointed to facts where the parent corporation made the conscious decision to cut staff while at the same time ignoring complaints of inadequate staffing. Although the owner and operator provided no hands-on care to the residents or had any involvement other than budgeting and capitalization, the court found the sole proprietor individually responsible for the harms suffered by the plaintiff.

Presuit Investigation

Information obtained prior to filing the lawsuit can be helpful to the attorney in determining whether to proceed with legal action. While all nursing home corporate cases will eventually be hard fought over issues of liability, causation, and damages, a thorough investigation by plaintiff and defense attorneys can save time and the expense of a lawsuit. In order to properly identify the defendants, correctly understand the theories of liability, and effectively litigate a nursing home case, the following information should be obtained and analyzed:

- Web site;
- Publicly traded-Security Exchange Commission reports;
- 10K Reports;
- Annual Shareholder Reports;
- State Licensing Agency file with disclosure of ownership statement and identification of the federally mandated Governing Body;
- Medicare Cost Reports;
- Medicaid Cost Reports;
- Online Survey Certification and Reporting (OSCAR) Reports;
- Advertisements or promotional information;
- Admission Contracts;
- Certified copy of resident's file;
- Insurance policy declaration sheets held by the facility or corporation;
- Correspondence regarding exemption of responsibility by insurance company;
- Signed arbitration agreement by client or family;
- Information from Secretary of the Treasury or like state agency regarding corporate officers' proof of insurance or bond;
- Web site for Secretary of State;
- Change of ownership documents; and
- 2- to 5-year history from your state's designated facility surveying agency, such as Department of Heath and Family Services or Administrative Law investigator.

By gathering these documents and developing a flowchart of ownership for the facility, it is possible to solve the riddle of the owner, operator, and licensee of the facility. Most importantly, it is possible to see where the money flows.

Discovery Basics

After the lawsuit has been filed, obtaining additional corporate information will help to further formulate decisions on theory of liability and causes of action. This will be case specific depending upon the type of nursing home corporation, the theory of direct or indirect liability, harms suffered by the resident, and whether or not punitive damages are warranted. Once the complaint has been filed and served, the following additional discovery documents will be requested:

- Organizational chart of the nursing home's corporate structure;
- Home office reports;
- Punch detail reports;
- Productive nursing hour reports;
- Budget documents, including variance reports;
- Tax returns;
- Profit and loss reports;
- All policies and procedures;
- Bonus incentive plans;
- Personnel files for all employees involved in the care of the resident;
- List of "Governing Body" pursuant to 42 Part 483.75 (CMS); and
- Documents that establish the implementation of the policies regarding the management and operation of the facility.

Conclusion

In nursing home cases, the information needed varies from facility to facility. The documentation showing whether the nursing home implements policies/procedures and complies with standards of care likewise varies. LNCs are reminded to be specific on the type of information requested to be contained within the documents, not necessarily the title of the requested document. The old caveat "Be clear about what you are requesting" absolutely applies when requesting documents. Don't necessarily assume that what is requested is what it is called.

All of this information is important in proving or defending liability and identifying the entities that are liable. Plaintiff attorneys need to know what they are requesting to determine levels of liability of different corporate entities. Defense attorneys need this information to be able to defend non-liability of their clients in a nursing home case.

References

Centers for Medicare and Medicaid. Retrieved March 2007 from www.cms.hhs.gov

DeMoor, J, Ibelle, B. (2005). A new litigation strategy for nursing homes. USA Lawyers Weekly, September 26, 2005.

Florida Court of Appeals. Canavan v. National Healthcare Corp., 889 So2d 825 (Fl. Ct. App. 2004).

Minnesota Legislature Office of the Revisor of Statutes. Retrieved March 2007 from www.revisor.leg.state.mn.us

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The End of Medicine: How Silicon Valley (and Naked Mice) Will Reboot Your Doctor

Reviewed by Kara DiCecco, MSN, RN, LNCC

The End of Medicine: How Silicon Valley (and Naked Mice) Will Reboot Your Doctor
Author: Andy Kessler
Publisher: Collins
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Copyright 2006
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Number of pages: 354
www.harpercollins.com

Imagine that you have been given the key to an odd-looking door. Even though the door is in plain view, the general public largely ignores its existence. Only a select few go in, and no one seems to take special notice when the inhabitants leave at the end of each day. Now imagine that behind this door is a one-of-a-kind experience to take a look at the future of medicine. As you step through the door, someone hands you a note: "Congratulations. You have entered the medical lottery."

As a nurse, I am familiar with high-stakes race of the body's ability to adapt in the climate of rapidly mutating diseases. I know that dedicated scientists are working around the clock on the next vaccine to avoid pandemic devastation. I can fully appreciate that scientific breakthroughs must occur almost daily to combat increasingly sophisticated viruses. What I didn't realize is that despite how gifted these scholars are, how noble the cause is, or how revolutionary the discovery may be, these individuals must jockey for the same scarce funding as individual proponents of orphan drug development. Be warned. Your idealistic, future vision of a disease-free Eden for humankind is subject to a throttling.

Author Andy Kessler is arguably best-known as the undisputed authority of investment trends on Wall Street. He wrote of his experiences in *Wall Street Meat.* His subsequent work *Running Money* and its companion volume *How We Got Here* provided a financial sleuth's view of hedge funds and their players. Given the nature of Mr. Kessler's work, had it not been for the word "medicine" on the book's cover, I might not have stopped to look. In retrospect, that would have been my loss.

Curious, I opened the book to find a humorous narrative set among several men on a ski trip with one recounting the story of a particularly nasty fall. The story instantly becomes more somber when the storyteller reveals how the injured downed a beer and ignored an increasingly stiff neck until testing revealed he had sustained an unstable neck fracture. Oh, and by the way, diagnostics also showed a brain tumor. I was hooked. This promised to be good… I just had no idea how good.

The chapters transition through hilarious personal anecdotes. The reader meets savvy investors and cutting-edge entrepreneurs. More importantly, Kessler takes the reader along as a silent observer on revealing interviews with some of the best and brightest scientific minds. These geniuses are surprisingly candid, sharing not only their tremendous knowledge but also their mounting frustration with the "Big Pharma" gatekeepers.

Kessler brings the reader front and center for a series of clinical demonstrations on the latest use of technology in diagnostic medicine. We intuitively begin to understand why this subculture of brilliant scientists, so focused on preventative medicine, must subversively package their wares to move imperceptibly closer to funding and approval. This is a game of survival. Preventative medicine does not readily yield financial gain. *Actual* disease, however, is hugely rewarding.

I will not lie to you. This book is not a quick or easy read. It demands your complete focus and is wholly unforgiving if you let your mind wander. Even as a voracious reader, I found myself revisiting paragraphs and repeatedly linking to authoritative, online sources to define unfamiliar concepts in an attempt to check my understanding. The energy this book requires is not the product of poor literary style; rather, it is the product of improbability. My own limitations delayed my grasp of what these clinical scholars are just clock-ticks away from realizing: a world of virtual colonoscopies, home-test kits for disease producing markers, implantable nanotechnology (chips and wires) for antibody recognition, a 25-second scan to completely map the human heart, and a literal "C.A.T. and mouse" game of genetic engineering.

The author confesses that his exploration into the marriage of science and technology was not deliberate – at least not initially. It was more a heady combination of curiosity and opportunity, but Kessler quickly found himself seduced by the possibilities. Once there, he honed his journalistic insight at the world of elusive funding and pharmaceutical "Godfathers."

The book is a lesson in the realities of competing interests. The reader is somehow changed because their political awareness has now been challenged. As consumers, we should know, for example, who "owns" CA125 (the genetic marker for ovarian cancer) and why marketing influences and big business prevent its widespread use for early detection. By walking through the door that Kessler opened, the reader is both enlightened and enticed. The reader is perhaps even now morally obligated to learn more.

Submission Guidelines for *The Journal of Legal Nurse Consulting*

The Journal of Legal Nurse Consulting (JLNC), a refereed publication, is the official journal of the American Association of Legal Nurse Consultants (AALNC). The journal's purposes are to promote legal nurse consulting within the medical-legal community; to provide both the novice and the experienced legal nurse consultant (LNC) with a high-quality professional publication; and to teach and inform the LNC about clinical practice, current national legal issues, and professional development.

The journal accepts original articles, case studies, letters, and research studies. Query letters are welcomed but not required. A manuscript must be original and never before published, and it should be submitted for review with the understanding that it is not being submitted simultaneously to any other journal. Manuscripts should be addressed to Katie Fitzgerald, Managing Editor, Journal of Legal Nurse Consulting, 401 North Michigan Avenue, Chicago, IL 60611-4267; email: kfitzgerald@sba.com (email preferred), phone: 312/321-5177.

Manuscript format

Manuscripts should not exceed 12 pages (approximately 3,000 words) in length. The title page should include the title of the manuscript and the authors' names, credentials, work affiliations and addresses, daytime phone numbers, fax numbers, and e-mail addresses. One author should be designated as the corresponding author. The title page, the tables and figures, and the reference list should each appear on a separate page. Pages, beginning with the title page, should be numbered consecutively.

Manuscript submission

Submit one paper copy and one electronic copy (on a 3.5-in. disk) or via email kfitzgerald@sba.com. Microsoft Word is preferred. Use a minimum of formatting; do not use unusual fonts or a variety of type, and do not insert headers or footers except for page numbers. Create a separate file for tables and figures—do not insert them into the text file. Clearly label the disk with the submission title, word processing program name and version, and name of the corresponding author.

Style and Reference Guidelines

JLNC follows the manuscript style and reference guidelines of the Publication Manual of the American Psychological Association (4th ed.). Legal citations must adhere to the guidelines published in The Bluebook: A Uniform System of Citation (15th ed.), Cambridge, MA: The Harvard Law Review Association.

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When using figures or tables from another source, the author must obtain written permission from the original publisher and include that as part of the manuscript submission materials. The author is responsible for obtaining permission for the use of photographs of identifiable persons.

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Figures include line drawings, diagrams, and graphs. Tables show data in an orderly display of columns and rows to facilitate comparison. Each figure or table should be labeled sequentially (e.g., Figure 1, Figure 2 or Table 1, Table 2) and should correspond to its mention in the text. All photographs must be black-and-white glossy prints.

Manuscript Review Process

Manuscript submissions are peer reviewed by eminent professional legal nurse consultants with diverse professional backgrounds. First-time authors are encouraged to submit manuscripts. Manuscript assistance can be provided upon request to the editor. Acceptance will be based on the importance of the material for the audience and the quality of the material. Final decisions about publication will be made by the editor.

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Please use the checklist below to be sure that your submission follows *JLNC* guidelines.

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_____ Guidelines in the *Publication Manual of the American Psychological Association* (4th ed.) and *The Bluebook: A Uniform System of Citation* (15th ed.) (for legal citations) have been followed.

_____ All references cited in the text are included in and agree with the reference list. References in the reference list appear in alphabetical order and include all the elements described in *Publication Manual of the American Psychological Association* (4th ed.).

_____ Permission for including or reproducing previously published information (e.g., tables and figures) is enclosed.

_____ Numbers and percentages have been checked against one another and the text for accuracy.

_____ Tables and figures reflect the information given in the text.

_____ The four paper copies are printed double-spaced on 8? x 11-in. paper, and manuscript has been copied onto a 3.5-in. disk.

_____ The manuscript does not exceed 12 pages in length.

_____ The title page includes the title of the manuscript and the authors' names, credentials, work affiliations, addresses, daytime phone numbers, fax numbers, and e-mail addresses.

_____ The pages are numbered consecutively, beginning with the title page.

_____ Photographs are black-and-white glossy prints.

_____ One author has been designated as the corresponding author.

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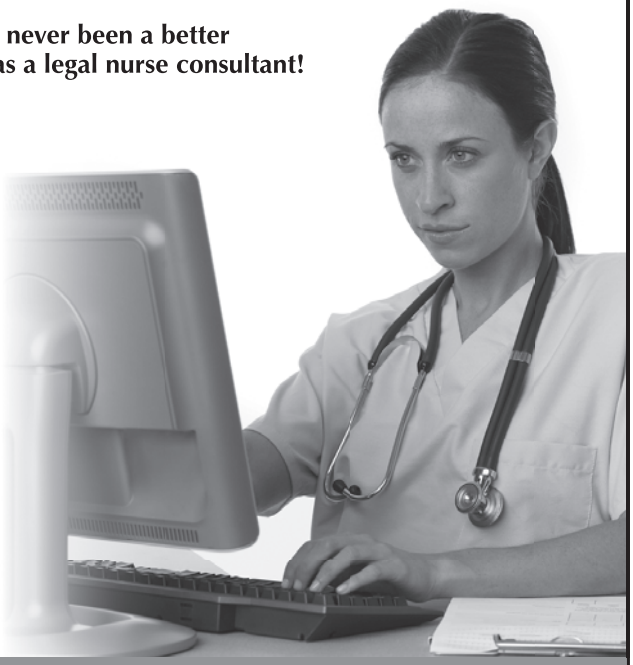

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