



THE UNIVERSITY OF
NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

UNANNOUNCED SURVEYS AND TRACER METHODOLOGY: LITERATURE REVIEW



A REPORT FOR THE AUSTRALIAN
ACCREDITATION RESEARCH NETWORK:
EXAMINING FUTURE HEALTH CARE
ACCREDITATION RESEARCH

The Centre for Clinical Governance Research in Health undertakes strategic research, evaluations and research-based projects of national and international standing with a core interest to investigate health sector issues of policy, culture, systems, governance and leadership

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CONTENTS

| | |
|--|----|
| 1. Introduction | 2 |
| 2. The literature review process..... | 2 |
| 3. Search strategy..... | 4 |
| 3.1 Search of academic databases | 4 |
| 3.2 Refining the identified literature..... | 6 |
| 3.3 Analysis and findings..... | 6 |
| 3.4 Systematic analysis of the unannounced survey literature..... | 7 |
| 3.5 Systematic analysis of the tracer methodology literature | 8 |
| 4. Conclusion | 10 |
| 5. References..... | 11 |
| 5.1 Methodological references | 11 |
| 5.2 References and selected abstract extracts to unannounced surveys | 11 |
| 5.3 References and selected abstract extracts to tracer methodology..... | 21 |

1. Introduction

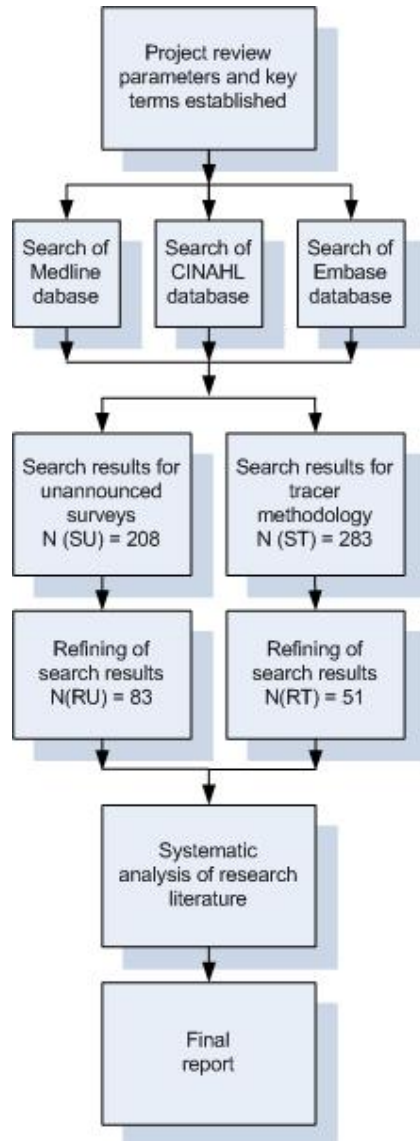
The purpose of this report is to examine the health care accreditation literature focusing upon unannounced surveys and the patient tracer methodology. The literature has been examined to systematically identify and review published articles, reports or documents concerned with the two topics.

The report is best read in conjunction with the Centre's monograph "An Analysis of the Health Sector Accreditation Research Literature". The report has been compiled for the Australian Accreditation Research Network, a body investigating what research might be undertaken in the future to examine health care accreditation.

2. The literature review process

A triangulated search strategy has been employed in this research and the data has been subject to content analysis. The literature review process involved searching multiple databases, refining the identified literature and then analysing selected publications. The review was conducted in August 2007 and is based on the process that has been used in other reviews (Greenfield and Braithwaite 2007; Travaglia and Braithwaite 2006; Bak et al. 2004a; Bak et al 2004b). The following diagram, Figure 1, represents the search and analysis strategy utilised.

Figure 1: Literature review process



Key to terms:

N = number of articles

SU = search results for unannounced surveys

ST = search results for tracer methodology

RU = refined search results for unannounced surveys

RT = refined search results for tracer methodology

3. Search strategy

3.1 Search of academic databases

Academic databases were systematically searched to find published literature on accreditation. The databases searched were Medline (medicine), Embase (medicine and health services), and CINAHL (allied health). The references were downloaded to Endnote version X.0.2, a reference manager package.

Guided by Greenfield and Braithwaite's (2007) literature review "accreditation" and "Joint Commission on Accreditation of Healthcare Organizations" were the initial key terms in this task. In association with these were terms related to the two topics under review to focus the selection of references. A complete list of the search terms used for this review are provided in Table 1. In this table "Exp" refers to a MESH term which has been "exploded" for the widest possible capture of the term.

Table 1: Search terms

| SEARCH TERMS FOR THE LITERATURE SEARCH | |
|--|---|
| 1. | Unannounced |
| 2. | Exp "Joint Commission on Accreditation of Healthcare Organizations" |
| 3. | International Organization for Standardization |
| 4. | Exp Accreditation |
| 5. | Survey or data collection |
| 6. | Exp Health services |
| 7. | Tracer methodology |
| 8. | Tracer approach |
| 9. | Tracer |

Table 2 presents the number of articles we found via our searches. Lines 1 – 11 are the searches for unannounced surveys, while lines 12-20 refer to the searches on the use of tracer methodology in accreditation. In the search on the use of tracers, all references to "tracer methodology" and "tracer approach" were automatically downloaded, but the more generic term "tracer" was combined with other key search terms; this is because the term is also used in clinical medicine and these references needed to be identified and removed. The summed outcomes of the searches are on lines 10 and 20 respectively; for unannounced surveys $N(SU) = 208$ and for tracer methodology $N(ST) = 283$ where SU refers to the search results for unannounced surveys and ST refers to the search results for tracer methodology and N is the number of articles.

Table 2: Results of the literature search

| SEARCH TERMS | DATABASE RESULTS: NUMBER OF ARTICLES | | | |
|--|--------------------------------------|---------|--------|------------|
| | MEDLINE | EMBASE | CINAHL | TOTAL |
| 1. Unannounced | 208 | 125 | 92 | 435 |
| 2. Exp "Joint Commission on Accreditation of Healthcare Organizations" | 5765 | 11089 | 1929 | 18783 |
| 3. Exp Accreditation | 12349 | 11089 | 3634 | 27072 |
| 4. Exp Data collection (Medline and EMBASE) Survey (CINAHL) | 885639 | 269805 | 10416 | 1165860 |
| 5. 1 and 2 | 49 | 7 | 49 | 105 |
| 6. 1 and 3 | 50 | 7 | 52 | 109 |
| 7. 1 and 4 | 64 | 9 | 2 | 75 |
| 8. Exp Health Services | 1086914 | 1048297 | 207771 | 2342982 |
| 9. 1 and 8 | 58 | 69 | 17 | 144 |
| 10. 5 or 6 or 7 or 9 | 114 | 74 | 63 | 251 |
| 11. Removing duplicates from 10 [N(SU)]. | | | | 208 |
| 12. Tracer Methodology | 105 | 62 | 15 | 182 |
| 13. Tracer Approach | 37 | 34 | 1 | 72 |
| 14. Tracer | 26525 | 22858 | 244 | 49627 |
| 15. 1 and 14 | 1 | 0 | 2 | 3 |
| 16. 2 and 14 | 16 | 5 | 19 | 40 |
| 17. 3 and 14 | 18 | 5 | 22 | 45 |
| 18. 4 and 8 and 14 | 44 | 63 | 0 | 107 |
| 19. 12 or 13 or 15 or 16 or 17 or 19 | 150 | 128 | 25 | 373 |
| 20. Removing duplicates from 10 [N(ST)]. | | | | 283 |

3.2 Refining the identified literature

A process of refining the selected literature from both searches was undertaken to identify those articles providing current research findings. In the case of the selected literature for unannounced surveys [N(SU) = 208], a total of 125 references relating to unannounced drug surveys, unannounced patients (used for assessing clinical skills) and unannounced drills was removed. The refined literature for unannounced survey, N(RU), is 83 references where RU refers to the refined literature for unannounced surveys and N is the number of articles.

The selected literature for tracer methodology, [N(ST) = 283], had 232 references removed; these referred to non-accreditation issues, that is, tracer drugs, individual disease tracers, or the use of tracers to assess patient compliance to medication or other treatments, and non-human subjects. The refined literature for tracer methodology, N(RT), is 51 references where RT refers to the refined literature for tracer methodology and N is the number of articles.

Table 3: Refining of the selected literature

| | NUMBER OF REFERENCES | LIMITING CRITERIA | REFERENCES REMAINING |
|---------------------|-------------------------------------|--------------------------------------|-----------------------------------|
| Unannounced surveys | Selected literature 208 N(SU) | Unrelated references (- 125) | Refined literature 83 N(RU) |
| Tracer methodology | Selected literature 283 N(ST) | Unrelated references (- 1232) | Refined literature 51 N(RT) |

3.3 Analysis and findings

The literature for each of the two topics, unannounced surveys and tracer methodology, was systematically analysed by one researcher and the analysis reviewed by the other researchers on the project team. Each topic is now discussed.

3.4 Systematic analysis of the unannounced survey literature

The unannounced survey refined literature, N(RU), identified 83 articles. Within this literature no research articles were identified. The articles are discursive, and usually short, commentaries, many of which are published in industry journals. They offer opinions and advice to colleagues about what to expect, how to prepare and how practically to respond to an unannounced survey visit. The majority, 78% (65), are anonymous and only two to three pages long; of those articles that do identify the author, 22% (18), are similar in content. For example, Bombard (2004) notes the unannounced survey visit is more focused and that this is due to the use of tools that collect pre-survey data on an organisation to determine priority areas for review. The survey comprises an opening and leadership conferencing between the survey team and organisational staff and then using the tracer methodology to follow the trajectory of patient care. There is no timetable and the surveyors could be anywhere in the hospital at any point in time. There is much more attention to the practicality of patient care. As a result direct care staff are more heavily involved in a survey than previously. Surveyors directed questions to staff about quality and safety practices, as well as closely observing their behaviour in clinical settings.

All articles refer to accreditation conducted by the Joint Commission. The Joint Commission initially conducted unannounced surveys on a 5% random sample of accredited organisations to ensure ongoing compliance. However since 2006 all surveys, with the exception of a list of services, have been conducted on an unannounced basis (Joint Commission 2007). The Joint Commission provides the following, unsubstantiated, rationale and benefit claims for unannounced surveys (this information is taken from a power-point presentation which is downloadable from their web-site):

Rationale of Unannounced Surveys

- Focuses on being prepared for the next patient.
- Focuses the shift to operational systems and patient care processes.
- Logical next step in the Shared Visions-New Pathways paradigm.



Benefits of Unannounced Surveys

- Organizations can focus on preparation for their next patient/resident/client, not on their next survey.
- Organizations can use the accreditation process as an operational management tool.
- Accreditation is now a validation of an organization's continuous systems improvement efforts rather than a simple standards compliance exercise at a point in time.



4

Benefits of Unannounced Surveys (cont'd)

- The survey will provide a more accurate picture of an organization's actual day-to-day performance.
- Unannounced surveys are seen as more credible with outside organizations and the public.
- Accreditation will be viewed as a by-product of good management.



5

[From the Joint Commission web site, accessed 1 August 2007, web address: http://www.jointcommission.org/AccreditationPrograms/Unannounced_Surveys.htm]

3.5 Systematic analysis of the tracer methodology literature

The tracer methodology or tracer approach was introduced in the early 1970s by Kessener and Kalk (1973). The aims of this approach are twofold. Firstly, to evaluate the quality of care and, secondly, to identify areas that need improvement through the use of tracers which are deemed to be

'representative' of those areas of care. Tracers most commonly used in accreditation are individual patients, tracked through their patient record, and systems, such as radiology or rehabilitation (Joint Commission on Accreditation of Healthcare 2005). Diagnoses of individual diseases, for example schizophrenia, can also be used as tracers (Janssen et al. 2000). Specific medications can be used as tracers for the prevalence of particular conditions or illnesses, for example Parkinson's disease (Lai et al. 2003).

The tracer methodology refined literature, N(RT), identified 51 articles. Eighteen anonymous opinion based contributions were removed. The remainder, which were written from 1976 to 2007, were categorised into two groups. The point of divide is 2003 when information about Joint Commission's impending use of trace methodology was released. The first group, from 1976 to 2005 contains 17 articles, with most (14) appearing on or before 2002. The second group, 'the Joint Commission tracer writings' dates from 2003 to 2007. All of these latter references, 33 in total, refer to the Joint Commission. The majority appear in industry or speciality journals, and are short in length, ranging from 1 to 6 pages. These articles give advice on what to expect from, or how to prepare for, the Joint Commission accreditation process, and most deal directly with their own field or department, for example home and hospice care (Friedman 2004a, 2004b), trauma care (Whalen 2004), emergency departments (Wojtkowski 2005), and radiology (Keenan 2006).

In 2005 the Joint Commission renamed its tracer activities distinguishing between "patient care tracers" and "patient system tracers" (Joint Commission on Accreditation of Healthcare 2005). Patient care tracers follow patients (via their records or charts) through their experience from the start of their care to their current status focusing on applicable standards and priority focus areas. Patient systems tracers follow through processes, systems and functions, such as medication management, infection control, and data use, which are considered to affect the patient's care. The surveyors then relate these systems findings to the findings of the individual care tracers (Friedman 2004a; DeLorenzo 2005).

A total of 8 research articles was identified. Five of these are categorised as 'the early writings' being pre-2002 publications. Two of the studies dealt with primary care (Amonoo-Larston and de Vries 1981; Osterweis and Bryant 1978), one with the use of tracer methodologies in emergency medicine (Egges and Turnock 1980), one with its use in assessments of quality of care in residential homes (Fleishman et al. 1992), and one with ambulatory care (Novick et al. 1976).

A variety of tracers was used to implement the tracer methodology including the use of tracer conditions (Amonoo-Larston and de Vries 1981; Novick, Dickinson et al. 1976) and screening and immunization rates (Osterweis and Bryant 1978). Egges and Turnock (1980) used a direct patient tracer method

while Fleishman et al. (1992) used a combination of tracers from medical, nursing and psychosocial areas of care.

Of the three latter studies, all used tracer diagnoses to evaluate one or more aspects of the quality of care. The first monitored the quality of hospital tuberculosis services in four hospitals (Hongoro et al. 2005), the second used 10 tracer diagnoses to assess the cost of measuring outcomes of acute hospital care (Schneeweiss et al. 2003), and the third used tracer diagnoses to assess the specific causes of unplanned readmissions (Swart 2005). All eight studies concluded that tracer methodology was a useful method for assessing quality of care. Six of the eight studies, with the exception of Egges and Turnock (1980) and Swart (2005), found discrepancies between the predicted and the actual quality and level of care.

4. Conclusion

This report has examined the accreditation research literature focusing on the issues of tracer methodology and unannounced surveys. No research literature was identified for unannounced surveys. A small number of older research articles were identified for tracer methodology; while they concluded it was a useful method for assessing quality of care at the time they were not being used within an accreditation program. Hence the value or benefit of both unannounced surveys and tracer methodology within accreditation programs remains to be empirically demonstrated.

5. References

5.1 Methodological references

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Bak, P., Bocker, B., Muller, W.D., Lohstrater, A. and U.C. Smolenski (2004b). Certification and accreditation systems as an instrument of quality management in the rehabilitation (part 2) - characteristics of most widely used systems. *Physikalische Medizin Rehabilitationsmedizin Kurortmedizin*; 14; 283-290.

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5.2 References and selected abstract extracts to unannounced surveys

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The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has begun conducting unannounced surveys of a random sample of accredited organizations in the mid-point of their accreditation cycles. These surveys focus on problem areas identified by accreditation surveys conducted the previous year. The American Health Information Management Association (AHIMA) firmly supports this change in Joint Commission accreditation procedures and believes the result will benefit patients and providers alike. Unannounced surveys by the Joint Commission, state departments of health, and others give providers an opportunity to validate their ongoing commitment to quality care. HIM professionals, who are committed to the ongoing provision of optimal patient care, should

take the lead in supporting this concept and actively promoting its value to their colleagues and their communities.

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Anonymous (1993). "Joint Commission plans random, unannounced surveys." *Hospital Home Health*; 10(5): 68-70.

Anonymous (1993). "Joint Commission surveyors to make unannounced visits." *Same-Day Surgery*; 17(4): 43-45.

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Anonymous (1994). "Random unannounced survey topics for 1995." *Joint Commission Perspectives*; 14(5): 10.

Anonymous (1996). "Random unannounced survey topics for 1997." *Joint Commission Perspectives*; 16(5): 9.

Anonymous (1997). "1998 random unannounced survey topics announced." *Joint Commission Perspectives*; 17(5): 4-5.

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Anonymous (2000). "How to stay prepared for a random unannounced survey." *Joint Commission Perspectives*; 20(5): 6-9.

Anonymous (2001). "JCAHO selects elements for random unannounced surveys." *American Journal of Health-System Pharmacy*; 58(10): 859.

Anonymous (2001). "JCAHO targets home care for unannounced surveys." *Hospital Infection Control*; 28(3): 4.

Anonymous (2001). "Random unannounced surveys in 2001." *Joint Commission Perspectives*; 21(1): 5.

Anonymous (2002). "2002 topics listed for unannounced surveys." *Same-Day Surgery*; 26(6): 83-83.

Anonymous (2003). "Accreditation process link: random unannounced survey topics for 2004." *Joint Commission Perspectives on Patient Safety*, 3(11): 3-3.

Anonymous (2003). "Are you ready for your first unannounced survey?" *Hospital Peer Review*, 28(11): 152-4.

Anonymous (2003). "Continuous compliance: starting in 2006, your ED must be prepared for unannounced accreditation surveys." *ED Management*, 15(5): 1-2.

Anonymous (2003). "JCAHO announces upcoming shift to unannounced surveys." *Hospital Peer Review*, 28(5): 61-4.

Anonymous (2003). "JCAHO sets timetable for unannounced surveys." *Patient Care Management*, 19(6): 12-12.

Anonymous (2003). "JCAHO shift to unannounced surveys." *Central Lines*; 19(4): 10-10.

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Anonymous (2003). "JCAHO to conduct unannounced resurveys in all accreditation programs in 2006." *Joint Commission Perspectives*; 23(5): 1.

Anonymous (2003). "JCAHO will shift to unannounced surveys by January 2006." *OR Manager*, 19(5): 15-15.

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Anonymous (2003). "Planning more important for unannounced surveys." *Hospital Peer Review*, 28(6): 76-7.

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Anonymous (2003). "RN news watch: professional update. JCAHO to shift to unannounced visits." *RN*; 66(6): 16.

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Anonymous (2004). "Unannounced surveys begin for some SDS programs: new tracer methodology will be used." *Same-Day Surgery*: 3-4.

Anonymous (2004). "Unannounced surveys will focus on these areas." *Same-Day Surgery*: 4-4.

Anonymous (2004). "Wary of unannounced surveys? Try these tips." *ED Management*: 3-4.

Anonymous (2005). "Are you ready for unannounced surveys?" *Biomedical Instrumentation & Technology*; 39(4): 282-283.

Anonymous (2005). "Frequently asked questions about the unannounced survey process." *Joint Commission Perspectives*; 25(9): 1.

Anonymous (2005). "JCAHO to shift to unannounced surveys by 2006." *MEDSURG Nursing*; 14(2): 92-92.

Anonymous (2005). "Staff incentives help prepare for surveys." *ED Nursing*; 8(11): 128-129.

Incentives are an effective way to keep staff motivated for continuous preparedness and unannounced accreditation surveys.

- Ask nurses random questions during weekly rounds.
- Reward correct answers with paper money.
- Have a contest where the nurse with the most 'dollars' exchanges them for a gift certificate.

Anonymous (2005). "Unannounced survey process on track for full implementation in 2006." *Joint Commission Perspectives*; 25(1): 6-7.

Anonymous (2005). "Unannounced survey takes its toll on ED--will you be ready when it's your turn?" *ED Management*; 17(8): 85-8.

The new era of Joint Commission on Accreditation of Healthcare Organizations surveys requires an extra measure of preparation, as well as a refresher course on how to respond if surveyors find violations in your ED. Participate in periodic performance reviews, and make an effort to get on your hospital's Joint Commission committee. If violations are found, meet with your staff. Be honest, and solicit their involvement in finding solutions. Overcrowding, medication management, and privacy will be the Joint Commission's major areas of emphasis during surveys.

Anonymous (2005). "Unannounced surveys: what you'll need to do within minutes of JCAHO's arrival." *Hospital Peer Review*, 30(5): 61-5.

Anonymous (2005). "Will you be ready for JCAHO's unannounced surveys in 2006?" *OR Manager*, 21(7): 1.

Anonymous (2006). "Are you prepared for an unannounced visit from the Joint Commission? New survey method calls for constant readiness." *Hospital Employee Health*; 25(4): 37-40.

Anonymous (2006). "Exploring staff qualifications and unannounced surveys." *Biomedical Instrumentation & Technology*, 40(1): 34.

Anonymous (2006). "First EDs to undergo regular unannounced surveys warn: be prepared for questions." *ED Management*, 18(5): suppl 1-2.

ED managers undergoing the first regular unannounced accreditation surveys report that surveyors are heavily interested in the ED. Be sure you are notified and notify your staff as soon as surveyors arrive. Use a last-minute checklist. (See p. 3) Expect patients to be traced to the ED and for your staff to be questioned. Be prepared for surveyors to emphasize National Patient Safety Goals, including those on read-back of orders/test results and hand off communication. Interdepartmental teams and quizzes can help your staff be continuously prepared.

Anonymous (2006). "How to guard against impostor JCAHO surveyors." *Healthcare Benchmarks & Quality Improvement*, 13(6): 64-6.

Proper security procedures are an important quality concern, asserts JCAHO official. JCAHO now providing same-day advanced warning of unannounced survey visits. Reporting incidents is critical to the development of new interagency database.

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Proper security procedures are an important quality concern, asserts JCAHO official. JCAHO now providing same-day advanced warning of unannounced survey visits. Reporting incidents is critical to the development of new interagency database.

Anonymous (2006). "JCAHO describes unannounced survey process to the public." *Getting Paid in Behavioral Healthcare*; 11(5): 4-4.

Anonymous (2006). "JCAHO update: random unannounced survey process will change in 2008." *Health Care Food & Nutrition Focus*; 23(3): 11-11.

Anonymous (2006). "JCAHO, unannounced: just-surveyed organizations share compliance tips." *Hospital Peer Review*; 31(4): 45-9.

Anonymous (2006). "On-site JCAHO surveys offer lessons to others." *Healthcare Risk Management*; 28(6): 68-69.

This year's move by Joint Commission on Accreditation of Healthcare Organizations to make all surveys unannounced puts more pressure on organizations to be ready all the time. Those who have been through unannounced surveys offer some tips.

- Surveyors now focus on talking with staff, not administrators.
- Unannounced surveys require a major shift from past efforts to comply.

- Games and fun ideas can help educate staff.

Anonymous (2006). "Random unannounced surveys end in 2007." *Same-Day Surgery*; 30(4): 48-48.

Anonymous (2006). "Unannounced surveys." *Joint Commission Perspectives*; 26(4): 1.

Anonymous (2006). "Unannounced surveys don't require QI changes." *Healthcare Benchmarks & Quality Improvement*; 13(2): 19-21.

Don't "react" to surveyors; be ready when they come to your door. Consider holding regular 'JCAHO Summits' to update staff on latest standards. No radical changes needed, but staff should be made aware of their resources.

Anonymous (2006). "Unannounced surveys don't require QI changes: but new tools can help with documentation." *Healthcare Benchmarks & Quality Improvement*; 13(2): 19-21.

Don't "react" to surveyors; be ready when they come to your door. Consider holding regular 'JCAHO Summits' to update staff on latest standards. No radical changes needed, but staff should be made aware of their resources.

Anonymous (2006). "Unannounced surveys: what JCAHO asks ED nurses." *ED Nursing*; 9(8): 88-89.

Accreditation surveyors are asking ED nurses about medication reconciliation, patient assessment, and medication safety.

- Surveyors want to know that narcotics aren't being diverted.
- Surveyors express concern about drugs being stocked in several dosages.
- Nurses are asked about processes for non-English-speaking patients.

Anonymous (2006). "When you go through an unannounced survey, will you sink or soar? Joint Commission process receives high marks from those who prepare." *Same-Day Surgery*; 30(6): 61-64.

The Joint Commission on Accreditation of Healthcare Organizations has been doing unannounced surveys since January, and a few simple steps can help you sail through the change smoothly. Check the web site daily to find out if surveyors are arriving that day. Have a system in place to communicate their imminent arrival to managers and staff. Use a last-minute checklist. (See checklist, p. 63.) Several people should know how to check identification of surveyors.

- Have updated key documents on hand. (See list, p. 64.)
- Have someone accompany surveyors on patient tracers.
- Review videos/DVD on tracer process. Hold as many mock patient tracers as possible, and conduct them when your census is high.

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Bombard (2004) "And So It Begins: JCAHO's New Survey Process" <http://community.nursingspectrum.com/MagazineArticles/article.cfm?AID=11279>, accessed 1/8/07.

Bradley, D. (2004). "HIPAA compliance efforts." *Pediatric Emergency Care*; 20(1): 68-70.

OBJECTIVES: Identify the regulations from the Health Insurance Portability and Accountability Act (HIPAA) that impact the emergency department. Describe processes that demonstrate compliance with the security and privacy regulations that pertain to protected health information. Identify the consequences of noncompliance to this congressional mandate. **METHODS:** A review of the literature was conducted to extract the effects of the legislation on emergency services. Since the inception of the law in 1996, additional regulatory requirements have been added to the protection of protected health information. Concomitantly, practice changes are conducive to emergency department's compliance with these regulatory mandates. **RESULTS:** HIPAA encompasses 6 components in the regulations that must be addressed. Of these, most organizations focus on the greatest areas of risk, which include the transmission of electronic data and the security and privacy components. To avoid financial penalties and imprisonment, facilities must demonstrate and adhere to the regulations outlined. Verification of compliance could occur through random unannounced visits by the Department of Health and Human Services, Office of Civil Rights, or through health information privacy complaints filed against the individual or the organization. **CONCLUSIONS:** A sharing of best practices and benchmarking could contribute to organizational savings and improve productivity if facilities were forthcoming in describing how they demonstrate compliance. As interpretations and applications of the law are modified, practice changes will also occur. Since each facility is held to the same standard, it behooves one to provide mutual support so as not to begin the process from its genesis.

Brandt, M. D. (1993). "American Health Information Management Association position statement. Issue: the Joint Commission's unannounced surveys." *Journal of AHIMA*; 64(10): insert 2p.

Cesare-Murphy, M. (2003). "JCAHO to switch to unannounced surveys in 2006." *Getting Paid in Behavioral Healthcare*; 8(6): 4-5.

Dahl, M. (2001). "Random unannounced surveys. What you can expect." *Health Care Food & Nutrition Focus*; 17(8): 11-2.

Dubiel, P. (2007). "Preparing for a JCAHO survey: utilization of imaging specific tracers." *Radiology Management*; 29(2): 30-5.

Imaging tracer teams, as well as hospital tracer teams, are utilized to prepare the staff on what to expect when JCAHO surveyors come through the departments during a survey. The tracer teams replicate the surveyors to determine compliance and ensure the staff is comfortable with the methodology and know how to respond to any questions. With JCAHO surveys now being unannounced, the imaging specific tracers keep staff, physicians, and administration all focused on meeting the standards while continuing excellent patient care. The facilities of the Seton Healthcare Network in Austin, TX implemented tracer methodology and were surveyed by JCAHO in the first half of 2006. This article describes this process at these facilities and details the resulting outcomes.

Fogg, D. M. (1999). "Clinical issues. Package sterilization; wrapper thickness; random unannounced survey policy; restraints; tourniquets." *AORN Journal*, 70(5): 908.
Friedman, M. M. (1999). "Your lucky day: winning a Joint Commission random unannounced survey." *Home Healthcare Nurse*, 17(5): 287-91.

Green, J. (1993). "JCAHO begins unannounced surveys this month." *Health Facilities Management*, 6(7): 59-61.

Gropper, E. I. (1999). "Expect truly unannounced surveys (and more) from the Joint Commission." *Nursing Management*, 30(10): 36-8.

Prepare your unit for Joint Commission survey changes effective January 1, 2000. They come following an Office of the Inspector General investigation that found strengths and weaknesses in the survey process.

Joint Commission on Accreditation of Healthcare, O. (2007). "Approved: 2007 fixed components for random unannounced surveys." *Joint Commission Perspectives*, 27(2): 13.

Joint Commission on Accreditation of Healthcare, O. (2007). "Approved: additional exemptions from completely unannounced surveys for ambulatory care and disease specific care programs." *Joint Commission Perspectives*, 27(1): 10.

Joint Commission (2007) "Facts about the Unannounced Survey Process", http://www.jointcommission.org/AccreditationPrograms/Unannounced_Survey_Process.htm, accessed 1/8/07.

Keil, O. R. (1994). "The Joint Commission's Agenda for Change: what does it mean for equipment managers?" *Biomedical Instrumentation & Technology*, 28(1): 14-7.

As the Agenda for Change unfolds, several major changes will take place. Organizations seeking accreditation will face potentially greater pressure to improve as accreditation and performance data become more available to the public and payers. Future accreditation decisions will be based more on observed, demonstrated, and measured performance than on statements of policy and practice. Key to this in the survey process are the new unit-based survey and the use of indicators. Finally, accreditation evaluation activities provided by the Joint Commission will become a more persistent part of the life of accredited organizations. New activities will include an annual contact to update demographic information, the random, unannounced survey process, and frequent data and information exchanges based on the indicator database. The goal of these changes is to get closer to the real work of patient care through measurement and assessment of organizational competence, performance, and ability to change. The challenge facing clinical engineers as equipment or technology managers is to extend their vision of the equipment management process beyond the engineering needs of medical equipment. The key focus of the new Joint Commission standards and accreditation process is the acquisition and use of information. Equipment, as it becomes more complex, requires more user knowledge to be applied effectively. As part of the information highway, the clinical engineer of tomorrow must focus on the information content of the equipment being introduced and determine the most effective method of transferring the information into user "brainwave."

Keil, O. R. (2006). "2006: The dawn of unannounced JCAHO inspections." *Journal of Clinical Engineering*, 31(1): 3-4.

Kinnersley, P., Y. Ben-Shlomo, et al. (2005). "The acceptability of simulated patients for studying and assessing general practice consultations in the United Kingdom." *Education for Primary Care*; 16(5): 540-546.

'Announced' and 'unannounced' simulated patients have been used internationally to study the content of consultations. However, 'unannounced' patients have not been widely used in the United Kingdom and there have been concerns about the ethics of their use for assessment. Our objective was to measure the acceptability of these methods to assess the consultations of British general practitioners (GPs). We undertook a cross-sectional questionnaire of 2000 GPs in England and Wales. Participants were asked whether they were prepared to see either unannounced simulated patients only (25%), announced simulated patients only (25%), or both (50%). Half of each group were offered a chance of a monetary reward for responding. Of 1724 eligible doctors, 987 (57.3%) returned the questionnaire. Of these, 374 (37.9%) were willing to see either an announced and/or an unannounced patient. Having the MRCP/FRCGP, past experience of working with simulated patients, being part of a teaching or research network and qualifying more recently were all associated with greater willingness to see unannounced patients. The monetary reward worsened to the rate of return of the questionnaire.

Lynch, D. J. (2006). "Did someone say "JCAHO"?" *ACSM's Health & Fitness Journal*; 10(4): 31-34.

Just mentioning the word JCAHO in a hospital environment can send shivers up and down administrators' spines. This article discusses the JCAHO guidelines, suggested actions, training for staff, and general recommendations so that you can be ready for any unannounced visit while providing your members with a safer health and fitness facility.

Moore, J. D., Jr. (1999). "No warning. JCAHO revises survey process so 'unannounced' is just that." *Modern Healthcare*; 29(32): 2.

Morrissey, J. (2003). "JCAHO has some surprises for hospitals starting in '06. All triennial accreditation surveys will become unannounced as part of larger evaluation process." *Modern Healthcare*; 33(14): 8-9.

Murphy-Knoll, L. (2006). "Nurses and the Joint Commission unannounced survey process." *Journal of Nursing Care Quality*; 21(3): 203-5.

Murphy-Knoll, L., D. Christiansen, et al. (2005). "Are you ready for unannounced surveys?" *Biomedical Instrumentation & Technology*; 39(4): 282-3.

Murphy-Knoll, L., D. Christiansen, et al. (2005). "JCAHO news & views. Are you ready for unannounced surveys?" *Biomedical Instrumentation & Technology*; 39(4): 282-283.

O'Leary, D. S. (1993). "Unannounced surveys: a positive force." *Joint Commission Perspectives*; 13(1): 2-3.

Rich, D. S. (1993). "Unannounced surveys." *Hospital Pharmacy*; 28(8): 801.

Roberts, C. (1994). "What can you expect during your onsite survey?" *Journal of AHIMA*; 65(4): 18.

The world of accreditation is in constant change, and as health information management professionals, we should always embrace change. New standards and survey procedures provide us with new goals, outlooks, ways to increase the quality of patient care, and

opportunities to mentor the hospital staff including the medical staff and governing board. I encourage you to evaluate, amend, and build on the information contained within this article. Remember that talking to your peers about their experiences and working as though your survey is tomorrow is your best bet for superior survey results. Who knows, you could receive an unannounced survey.

Steiner, J. W., K. A. Murphy, et al. (2006). "How to utilize benchmarking in the clinical laboratory." *Clinical Leadership & Management Review*, 20(6): E4.

Benchmarking of clinical laboratory activities has become a tool used increasingly to enable administrators and managers to obtain an independent evaluation of the performance of the laboratory and identify opportunities for improvement. Benchmarking is particularly important because of the diversity and complexity of the various sections of the laboratory. The critical component of laboratory benchmarking is peer comparison, as solutions to shortcomings or problems can be titrated and planned through this process. The reliability of benchmarking must be supplemented and modified by the input of the manager's detailed understanding of local circumstances. At this critical moment, the changes in peer review strategies instituted by JCAHO, CAP, CLIA, and individual states create an urgent opportunity to assist medical directors and laboratory managers in maintaining an overview of the performance and quality of laboratory operations. Unannounced site visits will require prompt reports and alerts of undesirable changes in performance. The future goals of benchmarking must expand to include surveys of laboratory test utilization and patient outcomes as ultimate measures of test utility in the clinical process and important assessments of the quality of patient care.

Sturkey, E. N., S. Linker, et al. (2005). "Improving wound care outcomes in the home setting." *Journal of Nursing Care Quality*, 20(4): 349-55.

In 2001 through 2003, our agency received deficiencies in infection-control practices, specific to wound care, from JCAHO and Medicare surveyors. Efforts to correct this pattern were initially unsuccessful. As a result, in 2003, an interdisciplinary performance improvement team was formed to assess, plan, and implement a wound care program utilizing research-based best practice. The changes in process, practice, and education resulted in success, with improvement evidenced by 100% acceptable practice during our 2004 unannounced JCAHO/Medicare survey, a declined rate of wound infection per our Medicare OASIS Adverse Event Report, and a decrease in wound care patient visits.

survey, U. J. (2005). "Unannounced survey takes its toll on ED - will you be ready when it's your turn? Hospitals' accreditation endangered, EDs partly to blame." *ED Management*, 17(8): 85-88.

The new era of Joint Commission on Accreditation of Healthcare Organizations surveys requires an extra measure of preparation, as well as a refresher course on how to respond if surveyors find violations in your ED.

- Participate in periodic performance reviews, and make an effort to get on your hospital's Joint Commission committee.
- If violations are found, meet with your staff. Be honest, and solicit their involvement in finding solutions.
- Overcrowding, medication management, and privacy will be the Joint Commission's major areas of emphasis during surveys.

Williams, J. S. (2006). "Biomed manager shares experience about unannounced JCAHO survey." *Biomedical Instrumentation & Technology*, 40(4): 301.

Woodward, C. A., B. Hutchison, et al. (1998). "What factors influence primary care physicians' charges for their services?" *CMAJ: Canadian Medical Association Journal*; 158(2): 197-202.

Objective: To determine the extent of variation in physicians' charges for health care encounters with unannounced standardized patients and factors associated with the variation. Design: Cross-sectional study. Setting: Family practices open to new patients within 1 hour's drive of Hamilton, Ont. Participants: A stratified random sample of 125 physicians who had responded to an earlier survey regarding preventive care were invited to participate. Of the 125, 44 (35.2%) declined to participate, and an additional 19 (15.2%) initially consented but later withdrew because they closed their practices to new patients. Sixty-two physicians thus participated in the study. Intervention: Unannounced standardized patients posing as new patients to the practice visited study physicians' practices between September 1994 and August 1995, portraying 4 scenarios: 28-year-old woman, 52-year-old woman, 48-year-old man and 70-year-old man. Outcome measures: Physician characteristics, encounter characteristics and charges made for services. Results: The 62 physicians had 246 encounters with the standardized patients. Charges were made to the health insurance plan for services by 59 physicians for up to 4 encounters (215 encounters in all). Charges varied considerably both within and across patient scenarios. Time spent with the patient was an important factor predicting charges made ($p < 0.01$), although the effect of time spent on charges varied across scenarios ($p < 0.01$). Fee-for-service physicians charged more for their services than physicians who usually had alternative billing arrangements ($p < 0.01$). Female physicians charged more for their services than their male colleagues ($p = 0.03$). No relation was found between quality of preventive care and charges made ($p = 0.15$). Conclusions: Physician-related factors are better able to account for the variability in charges for their services than patient-related factors. Physicians seeing comparable patients may earn much more or less than their colleagues because of differences in the services they provide and the way they apply the fee schedule. Quality-assurance techniques are likely needed to reduce the variability in charges seen and increase value for money spent in health care.

5.3 References and selected abstract extracts to tracer methodology

Amonoo-Lartson, R. and J. A. de Vries (1981). "Patient care evaluation in a primary health care programme: the use of tracer conditions as a simple and appropriate technology in health care delivery." *Social Science & Medicine*; 15(5): 735-41.

Anonymous (2003). "All in the details: tracer method looks for thorough notes: surveyors evaluate policy compliance throughout continuum of care." *Same-Day Surgery*: 1-2.

Anonymous (2003). "Educating staff on tracer methodology is a must: survey results depend on it." *Hospital Peer Review*; 28(12): 161-5.

Anonymous (2003). "Infection control, medication management will be big tracer targets during 2004 surveys." *Briefings on Patient Safety*; 4(12): 11-11.

Anonymous (2003). "New tracer surveys: more face time between staff and surveyors." *Briefings on Patient Safety*; 4(12): 9-10.

Anonymous (2003). "Patient safety and tracer activities: ensuring safe systems." *Joint Commission Perspectives on Patient Safety*; 3(10): 1.

Anonymous (2004). "Educating staff on tracer methodology is a must: survey results depend on it." *Patient Education Management*, 11(3): 32-36.

Anonymous (2004). "Eye on JCAHO. What to expect in the data use system tracer." *Joint Commission Benchmark*; 6(2): 3-4.

Anonymous (2004). "Getting ready for JCAHO's tracer method." *OR Manager*, 20(5): 28-9.

Anonymous (2004). "How did the new tracer process go?" *OR Manager*, 20(11): 20-1.

Anonymous (2004). "Joint Commission update. Surveyors will ask nurses to describe patient care: you won't know exactly when to expect surveyors." *ED Nursing*; 7(3): 29-31.

Effective for 2004 surveys, the new patient tracer methodology of the Joint Commission on Accreditation of Healthcare Organizations will have a major impact on ED nurses.

- You'll need to describe patient care processes to surveyors.
- Surveyors will want to see that your daily practice is consistent with written policies.
- Mock surveys are an effective way to identify problem areas and educate staff.

Anonymous (2004). "Survey monitor: new tracer surveys emphasize communication among staff, departments." *Briefings on Patient Safety*, 5(1): 9-9.

Anonymous (2004). "Tracer methodology focuses on patient care." *Case Management Advisor*, 15(11): 130-132.

Anonymous (2004). "Tracer methodology focuses on the care of patients, not paperwork: pay less attention to manuals, more to safety goals." *Hospital Home Health*; 21(9): 97-99.

Anonymous (2004). "Tracer methodology: how it can help you improve quality." *Healthcare Benchmarks & Quality Improvement*, 11(6): 61-3.

Tracer methodology follows patient through the entire continuum of care. Concurrent, rather than retrospective, approach is seen as a plus. Walk around creates opportunities to observe many different activities.

Anonymous (2004). "Unannounced surveys begin for some SDS programs: new tracer methodology will be used." *Same-Day Surgery*: 3-4.

Anonymous (2004). "What to expect in the data use system tracer." *Joint Commission Benchmark*; 6(2): 3-4.

Anonymous (2005). "Make your next mock tracer more effective." *Hospital Peer Review*; 30(7): 93-4.

Anonymous (2005). "Tracers: they're not just for accreditation surveys." *ED Management*; 17(8): 88-9.

Conducting periodic tracers will help your staff improve their performance, enhance communications with other hospital departments, and become more familiar with Joint Commission on Accreditation of Healthcare Organizations standards and terminology. Address specific service lines (i.e., pneumonia, stroke) to identify more targeted opportunities for improvement. Pay particular attention to handoffs and documentation when conducting your own internal tracers. Mock surveys, including tracers, can be valuable tools for ensuring ongoing readiness for Joint Commission visits.

Anonymous (2006). "Joint Commission to implement program-specific tracers in 2007." *Joint Commission Perspectives*; 26(11): 4-5.

Anonymous (2006). "Prepare for emergency management committee meeting as part of Joint Commission survey." *ED Management*; 18(2): 1-3.

Accreditation surveys for larger hospitals will include an emergency management committee meeting and a disaster tracer. The plan will be reviewed in the hospital's incident command center, and the full incident command team will attend, he says. Staff will be asked about their roles in a disaster. All hospitals should have a plan for responding to biological and chemical disasters. Don't rely on drills alone; also use training.

Anonymous (2006). "When you go through an unannounced survey, will you sink or soar? Joint Commission process receives high marks from those who prepare." *Same-Day Surgery*; 30(6): 61-64.

The Joint Commission on Accreditation of Healthcare Organizations has been doing unannounced surveys since January, and a few simple steps can help you sail through the change smoothly. Check the web site daily to find out if surveyors are arriving that day. Have a system in place to communicate their imminent arrival to managers and staff. Use a last-minute checklist. (See checklist, p. 63.)

- Several people should know how to check identification of surveyors.
- Have updated key documents on hand. (See list, p. 64.)
- Have someone accompany surveyors on patient tracers.
- Review videos/DVD on tracer process.
- Hold as many mock patient tracers as possible, and conduct them when your census is high.

Cesare-Murphy, M. (2003). "Customized: JCAHO priority focus process and tracer methodology to drive survey activity." *Getting Paid in Behavioral Healthcare*; 8(9): 4-5.

Dalton-Bunnow, M. F. and F. J. Halvachs (1993). "Computer-assisted use of tracer antidote drugs to increase detection of adverse drug reactions: a retrospective and concurrent trial." *Hospital Pharmacy*; 28(8): 746-9.

The authors found that a concurrent review of use of antidote drugs commonly used for the treatment of adverse drug reactions is an effective method for identifying such reactions. Computer-assisted detection helped rule out false-positives and decrease the number charts to be screened, thereby reducing the time needed to find adverse drug reactions.

DeLorenzo, M. (2005). "Shared visions-new pathways: what to expect at your next JCAHO survey." *Nursing Management*; 36(3): 26-30; quiz 31.

JCAHO's revised survey process offers a new format and tracer methodology that impacts the way healthcare facilities must organize and prepare for their next survey.

Dubiel, P. (2007). "Preparing for a JCAHO survey: utilization of imaging specific tracers." *Radiology Management*; 29(2): 30-5.

Imaging tracer teams, as well as hospital tracer teams, are utilized to prepare the staff on what to expect when JCAHO surveyors come through the departments during a survey. The tracer teams replicate the surveyors to determine compliance and ensure the staff is comfortable with the methodology and know how to respond to any questions. With JCAHO surveys now being unannounced, the imaging specific tracers keep staff, physicians, and

administration all focused on meeting the standards while continuing excellent patient care. The facilities of the Seton Healthcare Network in Austin, TX implemented tracer methodology and were surveyed by JCAHO in the first half of 2006. This article describes this process at these facilities and details the resulting outcomes.

Egges, J. and B. J. Turnock (1980). "Evaluation of an EMS regional referral system using a tracer methodology." *Annals of Emergency Medicine*; 9(10): 518-23.

To improve patient care, cost effectiveness, and resource utilization, the Illinois EMS Program attempted to regionalize emergency medical care services by identifying referral centers for critically ill and injured patients. The performance of one referral region was evaluated applying a tracer method designed to tract patients whose clinical conditions, as determined by a clinical panel, required treatment at a designated regional center. The proportion of patients reaching the appropriate centers suggests that the regional referral system under study appropriately moved only about one half the patients with the tracer conditions to the designated referral center. Additional patients were transferred to hospitals with greater emergency department capabilities, although these hospitals were no formally designated centers. Except for low birth weight, factors that might be associated with referral patterns indicate no significant differences between those patients at the regional center and those treated elsewhere.

Evans, P. J., P. Zinkin, et al. (2001). "Evaluation of medical rehabilitation in community based rehabilitation." *Social Science & Medicine*; 53(3): 333-48.

Almost all governments and non-governmental organisations in developing countries use a community-based rehabilitation (CBR) approach to work with disabled people. Although disabled people's organisations reject the categorisation of disability in individual terms, 'medical rehabilitation' is still regarded as an important but time limited process within rehabilitation. The paper lists measures and methods used in a comprehensive evaluation, and presents a practical method to examine the quality of medical rehabilitation. The method was developed and applied in an evaluation of service needs and service provision for disabled people in low-income communities, for the Ministry of Welfare, Government of India. The method described is a tracer approach. It assesses quality in three aspects of medical rehabilitation: (i) Technical quality, based on application of minimum technical standards for each impairment. (ii) Interpersonal quality, by observation of service sessions and interviews with service users. (iii) Management (structural) quality, by comparing the rehabilitation goals of service users and service providers. The method differs from most others in that it is process oriented, as opposed to output oriented. The method meets the challenges of providing low-cost assessment of a difficult outcome measure (the quality of medical rehabilitation), within a complex process (CBR). It is anticipated that the tracer method will be useful to the objective evaluation of disability services throughout the developing world.

Fleishman, R. (2002). "The RAF method for regulation, assessment, follow-up and continuous improvement of quality of care: conceptual framework." *International Journal of Health Care Quality Assurance Incorporating Leadership in Health Services*; 15(6-7): 303-10.

The RAF method for regulation, assessment, follow-up and continuous improvement of quality of care was developed in Israel in the late 1980s by the Quality of Care Unit at the JDC-Brookdale Institute. During the past decade the RAF method has been adapted to and implemented successfully in a number of government regulatory systems operated by services in the Ministry of Health and the Ministry of Labor. This article presents the conceptual framework of the RAF method. It describes the three theoretical approaches that

have been integrated--the tracer approach, the model for quality assurance and the introduction of organizational change--to create a broad conceptual framework. It then presents the key operational principles at work in the field that drive the RAF mechanism in its efforts to achieve a constant improvement in quality of care.

Fleishman, R., G. Mizrachi, et al. (1994). "Improving regulation of care." *International Journal for Quality in Health Care*; 6(1): 61-71.

The JDC-Brookdale Institute of Gerontology, in collaboration with Israel's Ministry of Labor and Social Affairs and Ministry of Health, has developed a program to improve government regulation of long-term care institutions for the elderly, and thus the quality of institutional care. The aim of the program was to introduce greater uniformity and objectivity into the existing surveillance system, increase the participation of institution residents, and ensure public access to instruments and criteria. The tracer methodology was used and tracers representing the medical, nursing, psychosocial and environmental-operational areas were developed in consultation with specialists in each field. The program was welcomed by surveillance personnel, and implemented on a nation-wide basis. Although there have been difficulties with its implementation, these have largely been resolved through discussion, workshops and supplementary training for surveyors. Due to the program's success, new programs are being developed to improve the regulation of other kinds of institution.

Fleishman, R., N. Ross, et al. (1992). "Quality of care in residential homes: a comparison between Israel and Florida." *Quality Assurance in Health Care*; 4(3): 225-44.

This paper reports on two studies of the quality of care in long-term care institutions for the elderly, one in Israel and one in Florida, which used the tracer methodology developed by the JDC-Brookdale Institute of Gerontology for examining quality of care in such institutions. A tracer is a well-defined and frequently occurring problem which has a known treatment. Tracers from the medical, nursing and psychosocial areas of care were used in the studies. Data were collected by multidisciplinary teams of medical and paramedical personnel who examined and interviewed elderly residents, interviewed staff members, conducted observations, and reviewed records. Differences inherent in the two study groups--such as in cultural norms and organizational systems--were taken into consideration, and the instruments were adjusted accordingly. The tracer method proved to be a feasible method for assessing quality of care in both locales. Findings regarding 12 tracers show that for units previously assessed as either good or poor/mediocre by surveyors, good units consistently scored higher than poor/mediocre units in quality of care. Florida scored higher for quality of care in the medical area, and Israel in the nursing and psychosocial areas.

Friedman, M. M. (2004). "Tracer methodology and the new Joint Commission home care and hospice survey process: part 1." *Home Healthcare Nurse*; 22(10): 710-4.

Friedman, M. M. (2004). "Tracer methodology and the new Joint Commission home care and hospice survey process: part 2." *Home Healthcare Nurse*; 22(11): 748-52.

Hongoro, C., B. McPake, et al. (2005). "Measuring the quality of hospital tuberculosis services: a prospective study in four Zimbabwe hospitals." *International Journal for Quality in Health Care*; 17(4): 287-92.

OBJECTIVE: To show how the use of a prospective approach to measuring the quality of services for a specific diagnosis can generate useful information for improving the quality of services in environments with limited information technology and data. **DESIGN:** Tracer approach focusing on intensive treatment of tuberculosis in hospital. The study was conducted in Zimbabwe in 1999. Local tuberculosis management guidelines were first

translated into explicit quality assessment criteria and a panel of public health experts assisted in weighting different factors (structural and process) of the criteria. Factor weightings were based on both local knowledge and experience, and potential contribution of a factor to the likelihood of a positive outcome. A total of 138 patients was recruited into the study cohort at admission and followed up to discharge. An assessment of what was done to and for the patient was made for the entire hospitalization episode using explicit criteria. Comparisons were made between actual and maximum performance scores. SETTING: The study was conducted at four regional referral hospitals. The hospitals serve at least six secondary hospitals, and several public and private primary care facilities. The hospitals have a dual role as they also provide secondary care to their immediate catchment population. RESULTS: Notable quality gaps are observed between actual and maximum quality levels in all four hospitals although the size of the gap differed significantly. Variation in the quality of services between the hospitals is explained by distinguishable differences in structural and process aspects of tuberculosis management. CONCLUSIONS: It is feasible to conduct prospective quality assessment in developing countries with minimal disruption of routine activities. The study also showed that prospective exploration of health care quality for a specific diagnosis can provide insights into hospital-level quality issues. Such information is useful for monitoring and improving the quality of hospital services in general.

Janssen, B., C. Burgmann, et al. (2000). "External quality assurance of inpatient treatment in schizophrenia. results of a multicenter study." *Nervenarzt*, 71(5): 364-72.

Due to legal regulations, external quality assurance is mandatory in Germany. Supported by the German Health Ministry (BMG), we present the results of a multicenter study in four hospitals with different structures on 1042 inpatients with the tracer diagnosis of schizophrenia (ICD 10). We defined disease-specific indicators of structure, process, and outcome quality, developed an assessment instrument, and implemented a feedback system for quality comparison. The resulting quality profiles are useful as a starting point for internal quality management.

Joint Commission on Accreditation of Healthcare, (2005). "Joint Commission renames tracer activities." *Joint Commission Perspectives*; 25(3): 9-10.

Kessner, D. and C. Kalk. (1973) *A strategy for evaluating health services*. Institute of Medicine, National Academy of Sciences.

Keenan, P. (2006). "Periodic performance review in the accreditation process." *Journal of Radiology Nursing*; 25(1): 13.

This article addresses how to prepare for a Joint Commission hospital survey through the use of the Periodic Performance Review process. To prepare for a Joint Commission survey, the hospital must be aware of the priority focus areas such as Communication, Credentialing, and Quality Improvement. This article also gives examples of questions to prepare the staff for the upcoming survey.

Lai, B. C. L., M. Schulzer, et al. (2003). "The prevalence of Parkinson's disease in British Columbia, Canada, estimated by using drug tracer methodology." *Parkinsonism & Related Disorders*; 9(4): 233-238.

Objective: To estimate the prevalence of Parkinson's disease (PD) in British Columbia utilizing the prescription database of the College of Pharmacists. Methods: Patients receiving anti-parkinsonian drug (anti-PD) prescriptions between 1996 and 1998 were stratified by year, age, gender, drug use category, and geographic location. The numbers of patients on levodopa alone, or levodopa and/or other anti-PD drugs were adjusted using published data which gave estimates of the proportion of undiagnosed patients with PD, the proportion of

those treated for parkinsonism with definite PD, the proportion of patients with PD not being treated with anti-PD medications, and the proportion of patients treated with anti-PD medications who have PD. Use of the anti-PD drug bromocriptine for other purposes in women under 50 years of age was also considered. Results: The estimated prevalences of PD based on all anti-PD medications used were 109, 121, and 125 per 100,000 population in 1996, 1997, and 1998, respectively. Estimated prevalences of PD based on levodopa use were 126, 134, and 144, respectively. The prevalence in both prescription groups increased with age. The male to female ratio of prevalence ranged from 1.16 to 1.21. Conclusions: Using a large, accurate database, it is possible to estimate the prevalence of PD in a large population, though the assumptions built into the estimate remain to be validated in the subject population.

Magnarelli, F. (2005). "What one facility learned from the tracer methodology." *Biomedical Instrumentation & Technology*, 39(3): 202-3.

Murphy-Knoll, L. (2006). "Nurses and the Joint Commission tracer methodology." *Journal of Nursing Care Quality*, 21(1): 5-7.

Novick, L. F., K. Dickinson, et al. (1976). "Assessment of ambulatory care: application of the tracer methodology." *Medical Care*, 14(1): 1-12.

Utilizing a tracer method in the assessment of care was investigated in a large pediatric clinic. A set of tracers were selected and agreement was obtained concerning the relevance of care criteria by at least 80 per cent of the facility physicians. One tracer, iron-deficiency anemia, was studied using two nonphysician abstractors to review a sample of 100 patient records with hemoglobins of 11.0 gm/100 ml or less. Results were compared with an implicit review by a panel of physicians. In 52 patients, the low hemoglobin level was not recognized. Only 25 patients proceeded through the care levels of evaluation, diagnosis, treatment, and follow-up. Poor compliance was found with the approved criteria. Weighted scores of the explicit tracer method were closely related to ratings by the implicit reviewers. Utilizing tracer assessment with nonphysician abstractors demonstrated remediable deficiencies in health care services.

Nutting, P. A., G. I. Shorr, et al. (1981). "Assessing the performance of medical care systems: a method and its application." *Medical Care*, 19(3): 281-96.

As health care becomes more differentiated, fewer people receive the majority of their care from a single source. Yet, most methods for assessing health care focus on the care provided by a single facility or group of practitioners. A method is described which tracks individuals through the diffuse medical care "system" and examines the process of care received for complete episodes of care. Through the use of tracer conditions the individual's pathway through the system is followed and the contribution of the various system components (e.g., facilities and providers) is assessed for various functions of care (e.g., screening, diagnosis, treatment), thus pinpointing deficiencies in the process of care. The method is designed to sample systematically from the entire provider and consumer system. Use of this methodology in a variety of settings, including American Indian communities, has proved to be feasible and has uncovered deficiencies in the delivery of health services which might have been overlooked by other approaches. This article describes the assessment method and presents selected results which demonstrate the assessment outputs.

Osterweis, M. and E. Bryant (1978). "Assessing technical performance at diverse ambulatory care sites." *Journal of Community Health*, 4(2): 104-19.

The purpose of the large study reported here was to develop and test methods for assessing the quality of health care that would be broadly applicable to diverse ambulatory care organizations for periodic comparative review. Methodological features included the use of an age-sex stratified random sampling scheme, dependence on medical records as the source of data, a fixed study period year, use of Kessner's tracer methodology (including not only acute and chronic diseases but also screening and immunization rates as indicators), and a fixed tracer matrix at all test sites. This combination of methods proved more efficacious in estimating certain parameters for the total patient populations at each site (including utilization patterns, screening, and immunization rates) and the process of care for acute conditions than it did in examining the process of care for the selected chronic condition. It was found that the actual process of care at all three sites for the three acute conditions (streptococcal pharyngitis, urinary tract infection, and iron deficiency anemia) often differed from the expected process in terms of both diagnostic procedures and treatment. For hypertension, the chronic disease tracer, medical records were frequently a deficient data source from which to draw conclusions about the adequacy of treatment. Several aspects of the study methodology were found to be detrimental to between-site comparisons of the process of care for chronic disease management. The use of an age-sex stratified random sampling scheme resulted in the identification of too few cases of hypertension at some sites for analytic purposes, thereby necessitating supplementary sampling by diagnosis. The use of a fixed study period year resulted in an arbitrary starting point in the course of the disease. Furthermore, in light of the diverse sociodemographic characteristics of the patient populations, the use of a fixed matrix of tracer conditions for all test sites is questionable. The discussion centers on these and other problems encountered in attempting to compare technical performance within diverse ambulatory care organizations and provides some guidelines as to the utility of alternative methods for assessing the quality of health care.

Paschen, U. and K. D. Vitt (1992). "The tracer concept of quality assurance in the hospital--a critical evaluation." *Gesundheitswesen*; 54(9): 460-4.

The "tracer concept", on which the introduction of quality assurance measures in Germany according to section 137 GRG is based, are critically confronted with the general test philosophy. It is shown that this tracer methodology does not come up to expectations and should be abandoned. Development and introduction of indicators are recommended that would be more appropriate to attain the target of quality assurance: quality improvement.

Phillips, A. M. (2004). "JCAHO tracer methodology: what it means to rehabilitation services." *HPA Resource*; 4(1): 1.

Romm, F. J., W. E. Cockrell, 3rd, et al. (1984). "Veterans Administration and ambulatory care: the "low-priority" veteran." *Southern Medical Journal*; 77(4): 489-93.

We describe several consequences of an effort to reduce patient volume in a general medical clinic (GMC) by releasing "low-priority" veterans. With a before-after descriptive study, we determined what sources of medical care these veterans used and assessed changes in their medical status using hypertension as a tracer condition. Private providers were used exclusively by 35% of veterans, 33% continued to use VA medical services, 11% used a combination of VA and private care, and 16% used other miscellaneous sources of care. While most veterans (74%) paid cash for their care, 35% also used Medicare or Medicaid supplementally. In veterans with hypertension, the diastolic blood pressure distributions were ostensibly unchanged after release. These results suggest that a reduction in services provided to "low-priority" veterans is feasible without deleteriously affecting their medical status. With regard to blood pressure control, those veterans who obtained private sources of care did as well as those who remained in the GMC.

Schilling, J., R. Cranovsky, et al. (1996). "Quality management and quality assurance: terminology of a structural change in medicine." *Schweizerische Rundschau fur Medizin Praxis*; 85(22): 714-20.

The topic of quality assurance and management gains increasing interest by society, medical professionals, carriers of health expenses and government. In this review the most important terms borrowed from industry and management will be critically explained to persons employed in Health Systems in particular. Beside numerous novel quality terms, closer attention is paid to the Donabedian model, extended by indicational quality, audits, tracer systems, ISO models, technology assessment, total quality management, new control mechanisms in health care and costs. In the context of structural changes in society and medicine the new aspects of quality are featured as a real chance for a 'healthy' Public System and not as a threat.

Schneeweiss, S., A. Manstetten, et al. (2003). "Costs of measuring outcomes of acute hospital care in a longitudinal outcomes measurement system." *American Journal of Medical Quality*, 18(1): 3-9.

It is widely acknowledged that the measurement of outcomes of care and the comparison of outcomes over time within health care providers and risk-adjusted comparisons among providers are important parts of improving quality and cost-effectiveness of care. However, few studies have assessed the costs of measuring outcomes of care. We sought to evaluate the personnel and financial resources spent for a prospective assessment of outcomes of acute hospital care by health professionals in internal medicine. The study included 15 primary care hospitals participating in a longitudinal outcomes measurement program and 2005 patients over an assessment period with an average duration of 6 months. Each hospital project manager participated in a previously-tested structured 30-minute telephone interview. Outcome measures include time spent by the individual job titles in implementing and running the outcomes measurement program. Job-title-specific times were used to calculate costs from the hospitals' perspective. One-time costs (2132 +/- 1352 Euros) and administrative costs (95 +/- 97 Euros per week) varied substantially. Costs per patient were fairly stable at around 20 Euros. We estimated that the total cost for each hospital to assess outcomes of care for accreditation (10 tracer diagnoses over 6 months) would be 9700 Euros and that continuous monitoring of outcomes (5 tracer diagnoses) would cost 12,400 Euros per year. This study suggests that outcomes of acute hospital care can be assessed with limited resources and that standardized training programs would reduce variability in overall costs. This study should help hospital decision makers to estimate the necessary funding for outcomes measurement initiatives.

Shaw, C. D. (1997). "Health-care league tables in the United Kingdom." *Journal of Quality in Clinical Practice*; 17(4): 215-9.

There is a global search for performance indicators for health services as a basis for quality improvement, external assessment, management control and public accountability and information. This requires agreement on what constitutes good performance as perceived by a disparate range of potential users, and on what aggregated or tracer data faithfully reflect policy objectives. To these challenges are added the technical problems of collating comparisons which are complete, accurate, timely and statistically valid, as well as behavioural problems of their interpretation and use. Examples are given of the Patients' Charter (National Health Service in England) and the Scottish outcome indicators. This experience from the UK may well have some relevance in other countries.

Snyder, B. (2005). "Secrets to a successful JCAHO survey." *Biomedical Instrumentation & Technology*; 39(2): 135-136.

Swart, E. (2005). "What do we conclude from re-admissions about quality of inpatient care?" *Gesundheitswesen*; 67(2): 101-6.

Quality assurance in hospital care increasingly focuses on evaluation of outcome. Problems arise with displaying results of medical care beyond discharge. In this context hospital readmissions are often used as outcome variable. But it is unclear whether readmissions are meaningful indices of quality of hospital care and if so, where to get valid data on readmissions. We used claims data of the regional health insurance fund in Saxony-Anhalt (AOK Saxony-Anhalt) from 2002 and 2003 (850,000 insured; nearly 300,000 cases per year). All hospital admissions of a insured person are identified by an anonymous id-number independent of the admitting hospital. By this way we can analyze readmissions individually. Readmission are frequent events in hospital care. Nearly one third of all patients were admitted at least a second time in 2003. 18 % of all hospital cases are readmissions within 30 days after discharge. Readmissions concentrated on chronically ill, oncological, or multimorbid patients. Many of the readmissions take place in the context of planned therapies or post-operative treatment. 'Revolving-door patients' with multiple readmissions point to problems in cooperation of ambulatory and hospital care. By defining tracer diagnoses and specific causes of readmissions unplanned readmissions may be identified as a quality indicator of suboptimal care. Readmissions don't express suboptimal care per se. But taking into account methodological aspects a tracer approach with defining specific unplanned readmissions may provide meaningful outcome indicators. These can be derived from claims data fast, routinely, and with low costs. Further validation of the approach is needed.

Whalen, E. (2004). "Tracer and trauma: are you prepared for JCAHO?" *Journal of Trauma Nursing*; 11(2): 53-4.

Wojtkowski, J. M. (2005). "Our JCAHO journey: one emergency department's approach to the new tracer methodology." *Journal of Emergency Nursing*; 31(5): 487-9.

Zimmer, J. G. (1979). "Medical care evaluation studies in long-term care facilities." *Journal of the American Geriatrics Society*; 27(2): 62-72.

This report describes the selection, design, conduct, analysis, and application of medical care evaluation studies in long-term care facilities (skilled nursing homes) in a regional program in the Rochester region of upstate New York. Eight examples are presented to highlight methodologic approaches and problems. They are classified under four general headings: Administration Audits, Diagnosis-specific Studies, Care Modality-specific Studies, and General Outcome Indicators. The implementation of results and recommendations from the studies is discussed and an application of "tracer" methodology for assessing the components of care activities in long-term facilities is described. Problems and challenges in long-term quality care are outlined.