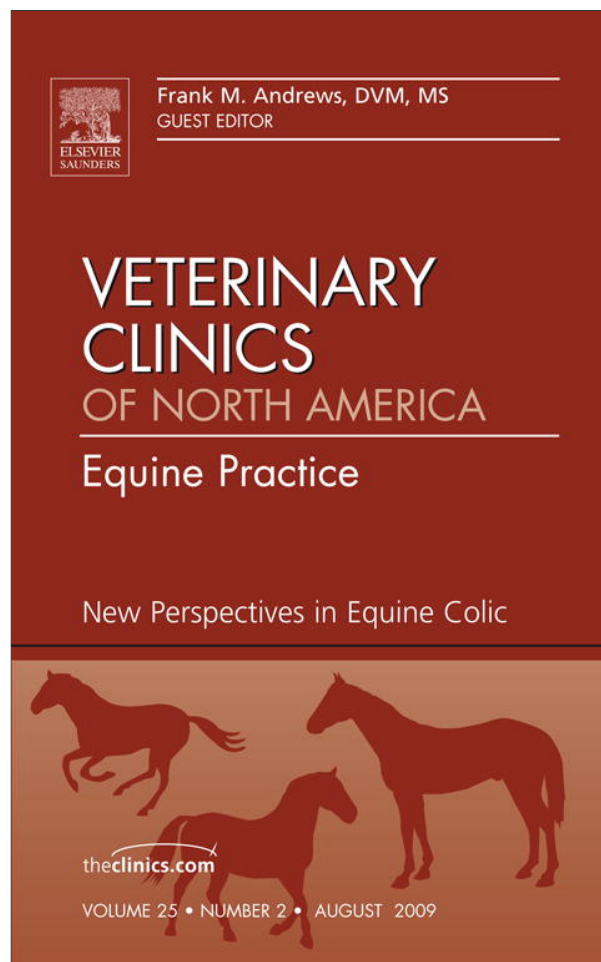


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# Clinical Governance, Clinical Audit, and the Potential Value of a Database of Equine Colic Surgery

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## KEYWORDS

• Clinical governance • Clinical audit • Colic surgery • Horse

What is the mortality rate of horses undergoing colic surgery at your hospital? How many of those deaths could be prevented? What is the rate of wound infections following colic surgery? What proportion of horses admitted to your hospital for treatment of small intestinal obstruction develop postoperative ileus, and how are they managed? What proportion of horses developing postoperative ileus recover? What is the average cost for treatment of a horse with right dorsal displacement at your hospital?

The answers to these and numerous other questions are vitally important to every clinician and equine hospital that undertakes colic surgery in horses. Such data provide baseline measurements of performance in relation to colic surgery that are required if any attempt is to be made to improve performance and maximize the quality of care that an individual veterinarian or hospital can provide. Sadly, most equine hospitals currently do not record such information,<sup>1</sup> thereby limiting the possibility of achieving improvement. Sustainable improvements can be achieved only by monitoring and critically appraising the results of clinical work.<sup>2</sup>

This article introduces the concept of clinical governance as a tool for improving quality of care and discusses the potential value of a large database of colic surgery in implementing some of the components of clinical governance in the field of equine colic surgery.<sup>1</sup>

## CLINICAL GOVERNANCE

“Clinical governance” is the term used to describe a systematic approach to maintaining and improving the quality of patient care within a health system. The term is widely

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used in the United Kingdom where, since April 1, 1999, all National Health Service (NHS) bodies have had the statutory duty of clinical governance placed upon them. The same standards also apply to the private sector. The most frequently cited formal definition of clinical governance is

*A framework through which NHS organizations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish*<sup>3</sup>

Clinical governance aims to integrate all the activities that affect patient care into one strategy. This integration involves improving the quality of information, promoting collaboration, teamwork, and partnerships, reducing variations in practice, and implementing evidence-based practice.

The system of clinical governance brings together all the elements that seek to promote quality of care. Clinical governance is composed of several different elements<sup>4</sup>:

- Education and training
- Clinical audit
- Clinical effectiveness
- Research and development
- Openness
- Risk management

Clinical effectiveness is a measure of the extent to which a particular intervention works. It means ensuring that interventions and treatments are based on the best available research evidence.<sup>4</sup> The measure on its own is useful, but it is enhanced by considering whether the intervention is appropriate and whether it represents value for money.

Poor performance and poor practice too often thrive behind closed doors. Processes that are open to public scrutiny, while respecting individual patient and practitioner confidentiality, and that can be justified openly are an essential part of quality assurance. Open proceedings and discussion about clinical governance issues should be a feature of the framework.

Medical clinicians are under increasing pressure to show that their services are safe, effective, and efficient.<sup>5</sup> Consideration and analysis of the quality of care are accepted as major responsibilities of all health care organizations.<sup>6</sup> In the United Kingdom, the high-profile discussions about the problems of pediatric cardiac deaths at the Bristol Royal Infirmary during the period from 1984 to 1995 raised public and political awareness of the issues. The experience of the pediatric cardiac surgical service in Bristol was a result not of flawed physicians<sup>7</sup> but rather of a lack of leadership and teamwork. The report of the Bristol Royal Infirmary Inquiry included 198 recommendations, 2 of which stated that patients must be able to obtain information about the relative performance of the hospital and of consultant units within the hospital.<sup>8</sup> These recommendations led to an increasing belief that the interests of the public and patients would be served by publication of individuals' surgical performance as reflected by postoperative mortality. A precedent for such reporting also exists in the United States: in 1990 the New York Department of Health published mortality statistics for coronary surgery for all hospitals in the state and has published comparable data each year since.<sup>9,10</sup>

At about the time of the Bristol Royal Infirmary inquiry, the Society of Cardiothoracic Surgeons of Great Britain and Ireland tried to redress perceived deficiencies in surgeons' approach to national data collection and audit, in addition to debate about

how to measure their clinical performance, by producing unambiguous guidelines on data collection and clinical audit in cardiac surgical units.<sup>7,11</sup> After detailed discussion, the Society agreed to institute the collection of data on surgeon-specific activities and in-hospital mortality for several index procedures and to use a stringent set of limits to initiate an internal assessment. An annual mortality higher than a SD above the mean was set as the trigger for a review by local clinical governance. This review was intended to be a constructive process, not a trigger for criticism, blame, or ill-considered actions. The problem with this approach is that there always will be 2.5% of consultants under review, no matter how much improvement is gained.

Compelling arguments for performing systematic audits in human surgery have been documented more recently.<sup>12,13</sup> The Scottish Audit of Surgical Mortality is a voluntary, peer-reviewed, critical-event analysis that has become an established part of standard surgical practice in Scotland.<sup>14</sup> The scheme boasts a high level of support from Scottish surgeons, perhaps because it seems to be effective. After the analysis revealed errors in specific processes of care (eg, failure to use ICUs and failure to use prophylaxis for deep venous thrombosis) as contributing to surgical deaths, system-wide changes occurred, and the frequency of such errors declined greatly. The potential effectiveness of a program that focuses on death as the only critical event may be limited, however.<sup>12</sup> Although errors occur often in medicine, errors contributing to death occur in only 6% of cases identified by Scottish Audit of Surgical Mortality. Errors that do not occur often or that generally do not result in mortality are likely to be missed by such an analysis. In addition, the focus of the program on processes of care would indicate that feedback at the hospital level is at least as essential as feedback at the individual surgeon level.

## CLINICAL AUDIT

Clinical audit is the process formally introduced in 1993 into the United Kingdom NHS and is defined as “a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change.”<sup>15</sup> The key component of clinical audit is that clinical performance is reviewed (or audited) to ensure that what should be done is being done; if deficiencies are found, the clinical audit provides a framework to enable improvements to be made.

The essence of clinical audit is developing and improving clinical practice. Although clinical audit is a relatively new concept for the veterinary profession,<sup>16</sup> the belief that clinical staff constantly should seek to improve care is as old as the profession itself. Clinical audit takes this concept a step further and promotes the idea of continuous improvement, ensuring not just good care, but an on-going process of development; “a journey that never ends.” Conducting a clinical audit means that you are comparing your actual performance in a defined area of clinical practice against targets/guidelines (which are, one hopes, evidence based) to see whether you are consistently achieving good practice (ie, you are meeting your targets and guidelines). If you are not meeting the targets, you then must investigate why not, create a plan of action to amend any shortcomings (often involving the modification or creation of clinical guidelines), implement the actions, and, once these steps have been successfully implemented, re-audit.

Clinical audit involves measuring your own practice and comparing it with what you consider to be best practice. Unless you can prove that you are indeed undertaking best practice in all areas that you study, you will use the results to identify areas in which your practice is deficient and then implement changes to improve; these

changes will be followed by a re-audit. As a result, clinical audit usually develops as a cyclical process (Fig. 1).

The clinical audit process seeks to identify areas for service improvement, to develop and carry out action plans to rectify or improve service provision, and then to re-audit to ensure that these changes have an effect. Within the clinical audit cycle there are stages that follow the systematic process of establishing best practice, measuring against criteria (targets), taking action to improve care, and monitoring to sustain improvement. As the process continues, each cycle aspires to a higher level of quality.

Clinical audit is a technique that aims to measure and improve clinical performance, thereby improving the standards of patient care.<sup>17</sup> Clinical audit requires the comparison of data relating to a clinical issue from a specific clinician or institution with a standard set of data that describes the “normal” or “expected” results. The absence of readily available standards in many areas of veterinary clinical work (including colic surgery) makes it difficult to undertake an effective clinical audit. One of the major objectives of the proposed international audit/database of colic surgery<sup>1,2</sup> is to provide evidence-based data that can be used as the standards (or “targets”) in clinical audit. Colic surgery is obviously only one area of equine practice that might benefit from assessment by clinical audit, but the high costs of colic surgery and the major implications for welfare make this area of equine surgery particularly suited to this process.

#### DATABASE OF EQUINE COLIC SURGERY

Equine colic surgery has been performed routinely by equine surgeons since the mid-1960s. Although the general success rates of colic surgery have improved significantly,<sup>18</sup> the surgery still carries significant rate of case fatality and risk of complications. It also is expensive surgery, especially in cases that require significant

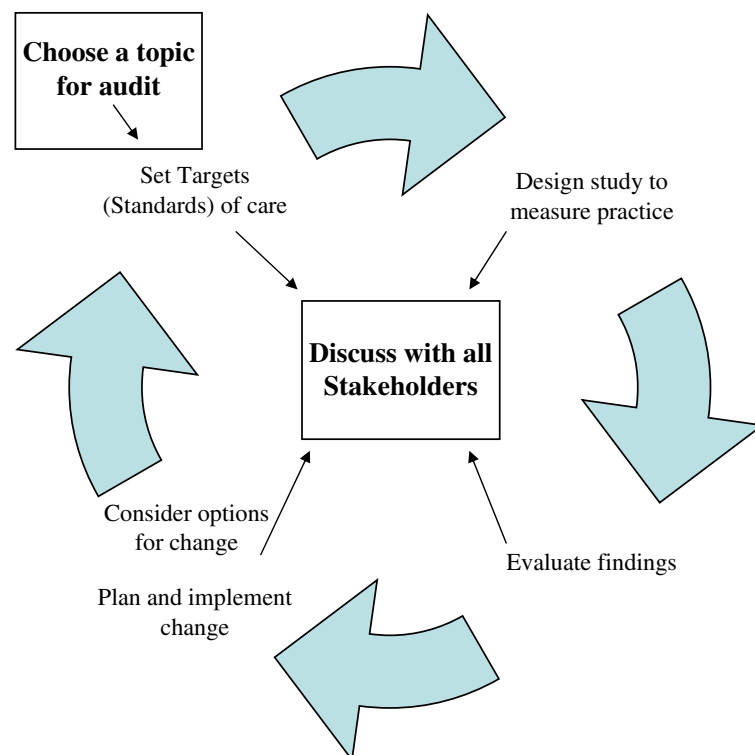


Fig. 1. The audit cycle.

postoperative intensive care. It is important that this type of surgery be undertaken efficiently and performed to the highest attainable standards. Owners (and insurers where appropriate) have a right to see evidence that surgeons are achieving these goals while treating patients (the horses) in the most humane and appropriate ways.

Many factors influence the death rates and complication rates of colic surgery. Most importantly, the delay between the onset of colic and the surgery, the nature of the underlying disease (ie, strangulating versus simple obstruction), and the severity and effects of shock and toxemia will have major influences on the success and complication rates.<sup>18-23</sup> Other factors, such as competence of the surgical team and the nature of postoperative intensive care, which are known to affect outcomes in human surgery,<sup>24,25</sup> are also likely to influence the outcomes of colic surgery.

With increasing awareness, both by the profession and by the general public, of the importance of clinical standards in human health care, it is appropriate that attempts be made to introduce protocols to measure and improve standards of care in veterinary surgery. The concept of an international audit and database of colic surgeries was proposed in an editorial leader published in the *Equine Veterinary Journal*.<sup>2</sup> The aims of this international audit and database would be (1) to improve the quality of care for colic patients by allowing appropriate comparison of clinical performance with local, national, and international standards, and (2) to provide useful data about changing trends within the specialty. These aims could be achieved by

1. Systematic collection at each contributing center of an agreed minimum dataset on a defined patient population
2. Aggregation and validation of data
3. Analysis and development of risk stratification models for outcome measures
4. Regular feedback to contributing centers

The creation of such a database of colic surgery obviously depends on the willingness and ability of equine hospitals and surgeons to provide the required data. A feasibility study was undertaken recently to assess the attitudes of equine colic surgeons toward potential participation in such a scheme.<sup>1</sup> The results indicated that there is a good level of interest among equine surgeons in developing a large-scale database for colic surgery, and most surgeons would be willing to contribute data from their own hospitals provided that the data collection is quick and easy and that confidentiality of the data is maintained.

If such a database became reality, it probably would not, at least initially, be placed in the public domain. Although many databases of human surgery are freely available on the Web, the major value of this database of equine colic surgery would be in allowing individual surgeons and hospitals to compare their own results with others undertaking similar procedures. The complexity of the numerous factors that affect outcome in individual cases means that the results would need to be interpreted with caution and with a detailed understanding of the disease processes and effects of treatments. To demonstrate improvements in quality, however, organizations need good information. Good data are essential to plan, commission, implement, manage, and evaluate services. It is hoped that a large-scale database of equine colic surgery would provide valuable data about complications, outcomes, and other variables that could be used to bring about real improvements in the standards of care for horses affected by colic.

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