

CLINICAL AUDIT IN EQUINE PRACTICE

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Rose *et al*, 2016

- Included horses
- 6 studies describing 10 clinical audits
 - 0 equine
- 2 partial audits
 - 0 equine
- 13 reviews of clinical audit and application to practice
 - 5 directly mention equine

Rose *et al.* *BMC Veterinary Research* (2016) 12:40
DOI 10.1186/s12917-016-0661-4

BMC Veterinary Research

RESEARCH ARTICLE

Open Access



A systematic review of clinical audit in companion animal veterinary medicine

Nicole Rose¹, Lorraine Toews² and Daniel S. J. Pang^{3,4*}

Conclusions:

- Few clearly identifiable in the veterinary literature
- Often suffer poor design and reporting
- Incorrect indexing likely → underestimation

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EQUINE VETERINARY EDUCATION
Equine vet. Educ. (2000) **12** (5) 226-231

Editorial

Optimising outcomes - the role of audit in medical and veterinary practice

Veterinary audit

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The suggestion (Rossdale 2000) that, in all walks of life, there are increasing trends towards introducing systems of performance analysis **throws down the**

Medical audit

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In EVJ's first editorial of the new millennium, the author opined, "the most outstanding objective of the 21st century must be the means of learning from

Mair and White, 2005

- Proposed an international audit & database of colic surgery
- Many potential benefits but also significant difficulties

Equine vet. J. (2005) **37** (4) 287-288

Improving quality of care in colic surgery:
time for international audit?

Mair and White, 2008

- Surveyed colic surgeon attitudes and opinions towards clinical audit
- High level of interest in an international database
- But multiple concerns also raised
 - Confidentiality
 - Time involved in data collection & submission
 - Concerns over management and reliability of data

400

EQUINE VETERINARY JOURNAL
Equine vet. J. (2008) **40** (4) 400-404
doi: 10.2746/042516408X284655

The creation of an international audit and database of equine colic surgery: Survey of attitudes of surgeons

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Keywords: horse; colic surgery; clinical audit; survey; database; questionnaire

Mair, 2009

- Review of clinical governance and audit

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

Tim Mair, BVSc, PhD^{a,b,*}

RESEARCH ARTICLE

Open Access

Prospective survey of veterinary practitioners' primary assessment of equine colic: clinical features, diagnoses, and treatment of 120 cases of large colon impaction

Equine Veterinary Journal ISSN 0
DOI: 10.1111/

Experimental and Basic Research Studies

International online survey to assess current practice in equine anaesthesia

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[§]Vetstream Ltd, Cambridge, UK

J Vet Intern Med 2018;32:822–831

Survey of Equine Referring Veterinarians' Satisfaction with Their Most Recent Equine Referral Experience

C. Best , J.B. Coe, J. Hewson, M. Meehan, and D. Kelton

Background: Little is known about the veterinary referral process and factors that contribute to positive outcomes.

Objective: To investigate equine referring veterinarians' (rDVMs') satisfaction with their most recent referral experience and compar

Synovial sepsis is rare following intrasynovial medication in equine ambulatory practice

L. C. R. SMITH^{*} , C. E. WYLIE , L. PALMER and P. H. L. RAMZAN 

Rosdals LLP, Rosdals Equine Hospital, Exning, Newmarket, UK.

*Correspondence email: lewis.smith@rosdals.com. Dr Wylie's present address is: Department of Pharmacology, University of Sydney, Blackburn Building, Sydney, New South Wales 2006, Australia. Received: 12.02.18; Accepted: 21.12.18



A database survey of equine tumours in the United Kingdom

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Survival and complication rates in 300 horses undergoing surgical treatment of colic. Part 1: Short-term survival following a single laparotomy

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Retrospective Study

Journal of Veterinary Emergency and Critical Care 20(4) 2010, pp 421–425
doi: 10.1111/j.1476-4431.2010.00545.x

Incidence of transfusion reactions to commercial equine plasma

Laura Y. Hardefeldt, BSc, BVMS; Nicholas Keuler, MS and Simon F. Peek, BVSc, PhD, DACVIM

Equine Veterinary Journal ISSN 0425-
DOI: 10.1111/evj.1

Analytical Clinical Studies

Description of veterinary events and risk factors for fatality in National Hunt flat racing Thoroughbreds in Great Britain (2000–2013)

S. E. ALLEN^{†*}, S. M. ROSANOWSKI[†] , A. J. STIRK[‡] and K. L. P. VERHEYEN[†]

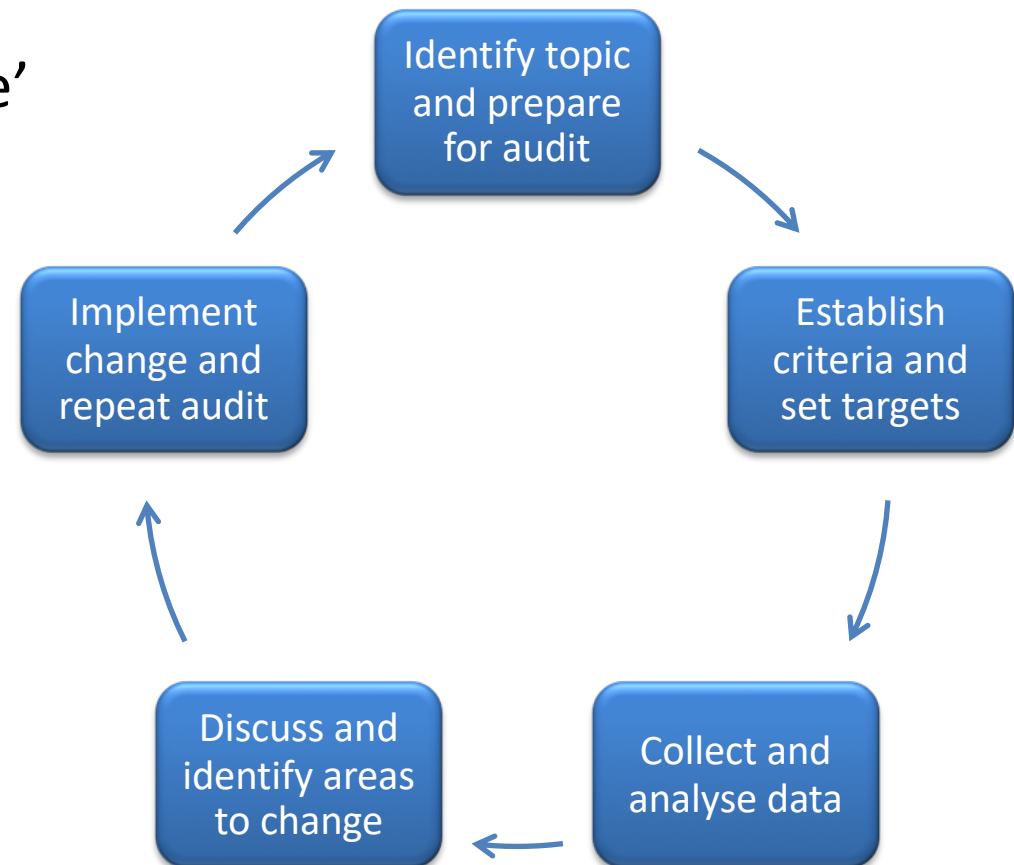
[†]Veterinary Epidemiology, Economics and Public Health Group, Department of Production and Population Health, Royal Veterinary College, University of London, Hatfield, UK



- Multicentre, prospective survey of castration complications
- Provides guidelines for practices to perform clinical audit
- Also identify factors associated with complications → may be used to identify possible areas for change

Clinical audit = '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'

- Key components of clinical audit:
 - 'implementation of change'
 - 'continual cycle'
 - 'improving clinical practice'



Wylie, 2015



Equine Veterinary
Journal



Equine Veterinary Journal ISSN 0425-1644
DOI: 10.1111/evj.12409

Prospective, retrospective or clinical audit: A label that sticks

TABLE 1: Key differences between clinical research and clinical audit. Modified and adapted from Health Research Authority (2009) and National Research Ethics Service (NRES) Ethics Consultation E-group (2006) [3,4]

Differentiation	Research	Clinical audit
Definition	Attempts to create new knowledge regarding best practice	Creates knowledge of clinical practice and need for improvement
Aim	To generate or test hypotheses, identify or explore themes	To answer whether a service reaches a predetermined standard
Scope	Usually large scale, over a long time period, one-off/discrete study	Usually small scale, shorter time period, but an ongoing/cyclical process
Measures	Clearly defined research questions, aims and objectives	Current clinical practice against evidence-based clinical guidelines or standards
Interventions	May involve a completely new treatment, or placebo	Choice remains that of clinician and patient
Routine care	May involve different treatments, samples or investigations	Does not affect normal treatment
Data collection	Usually involves collection of data additional to routine care	Usually involves analysis of existing data from patient notes
Randomisation	May use random sampling methods	Does not use randomisation
Allocation	May involve allocation of patients to intervention groups	No allocation to intervention
Statistical analyses	Often extensive	Often basic, descriptive
Replication	Results can be replicated	
Generalisability	Results need to be generalisable to a target population	Specific and local to one particular patient group
Next step	No mechanism to act on findings	Responsibility to act on findings via an action plan
Influence	Findings can have a wide influence on clinical practice	Findings usually only influence practice within the area evaluated
Ethical approval	Always requires ethical approval	Does not require ethical approval

Confidential enquiry of perioperative equine fatalities (CEPEF)

CEPEF 1 – preliminary report

CEPEF 2 – full findings

CEPEF 3 – multicentre, international RCT

CEPEF 4 – currently underway



- Shares many features with clinical audit
 - Identified criteria and evidence from the literature
 - Measured performance
 - Analysed data, identified risk factors and made recommendations
 - Has not yet repeated the process or confirmed that outcomes have improved

Colic and general anaesthesia

- Criteria – mortality rates
- Problems
 - Poor preparation and understanding
 - Small audit team
 - Data collected was too simple
 - No change implemented
- Achievements
 - Productive and interesting vet meeting



Closed pharmacy

- Criteria – ?
- Problems
 - Too much data was included
 - Too much expected of one person
 - Unrealistic targets
- Achievements
 - Changes implemented
 - Reduced stock in vet cars
 - Changes to drug storage
 - Changes to stock circulation
 - Significantly reduced wastage



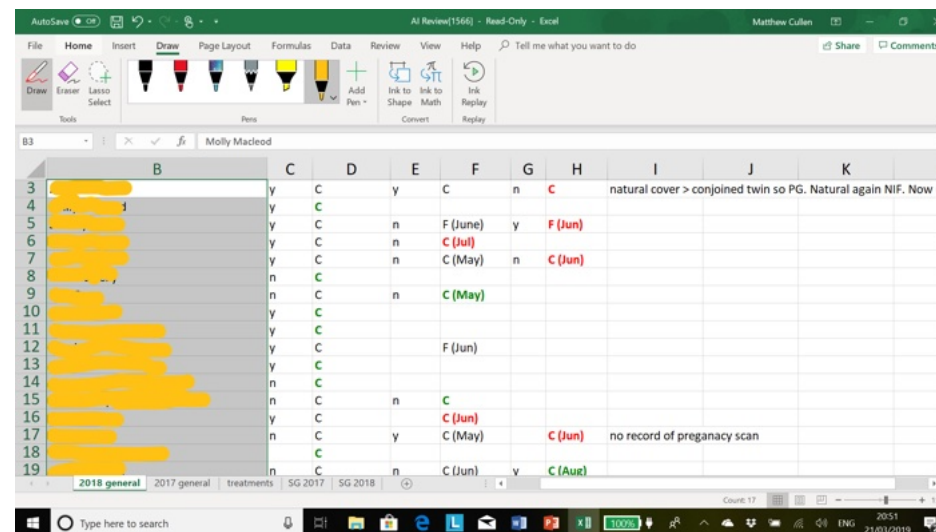
Postoperative pyrexia



- Criteria - incidence of pyrexia in first 24h after surgery
- Changes
 - New protocol for cleaning of anaesthetic machine
 - Changes in ET tube storage and cleaning
- Repeated audit → significant reduction in postoperative pyrexia

Artificial Insemination

- Criteria – pregnancy rates
- Discussion points:
 - Lots of clinicians involved
 - Variable techniques
 - Low uptake of endometrial swabs
 - Reduced semen motility compared to previous year
- Changes:
 - One vet overseeing all AI
 - Creation of practice protocol based on best available evidence
 - Peer-observed inseminations
 - Change of AI package pricing → compulsory swabs
 - Review of semen storage and purchase of more tanks



	B3	C3	D3	E3	F3	G3	H3	I3	J3	K3
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4		y	C	y	C	n	C	natural cover > conjoined twin so PG. Natural again NIF. Now u		
5		y	C	n	F (June)	y	F (Jun)			
6		y	C	n	C (Jul)					
7		y	C	n	C (May)	n	C (Jun)			
8		n	C							
9		n	C	n	C (May)					
10		y	C							
11		y	C							
12		y	C		F (Jun)					
13		y	C							
14		n	C							
15		n	C	n	C					
16		y	C		C (Jun)					
17		n	C	y	C (May)		C (Jun)	no record of pregnancy scan		
18		n	C							
19		n	C	n	C (Jun)	v	C (Aug)			


Current projects

- VetCompass
- Castration complications app – audit tool
- PhDs at Nottingham
 - EBM in colic
 - Investigating quality improvement methods in equine clinical practice
- International Colic Surgery Audit
 - www.internationalcolicaudit.com



- RCVS Knowledge
- Review articles → human and small animal literature

Clinical Audit




Clinical audit in farm animal veterinary practice. Part 1: preparing for audit

Katie Waine qualified from Bristol university in 2008. She recently completed a PhD at Nottingham university on facilitators and barriers to carrying out clinical audit in farm

Katie Waine, Rachel Dean, Chris Hudson, Marnie Brennan

This article, the first in a two-part series providing practical advice for practitioners on carrying out clinical audits, discusses the preparation and initiation of clinical audit in farm animal practice. In the second article, to be published in a subsequent issue of *In Practice*, the stages of data collection, analysis and re-audit will be discussed along with some of the

Clinical Audit



Clinical audit in farm animal veterinary practice. Part 2: conducting the audit

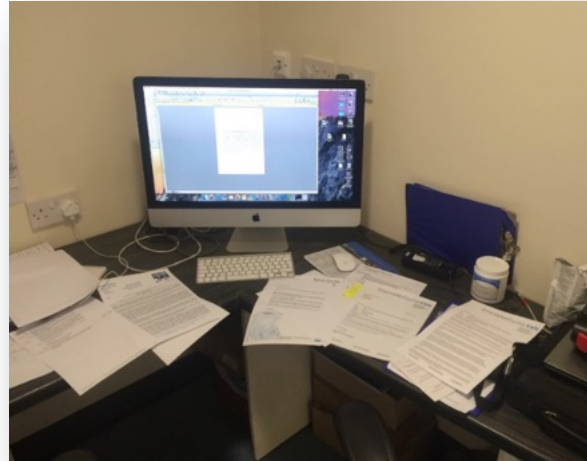
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This article, the second in a two-part series providing practical advice for practitioners on carrying out clinical audits in farm animal practice, focuses on the data collection, analysis and discussion steps of clinical audit. Part 1, which was published in the October issue of *In Practice*, discussed preparing for and initiating clinical audit in farm animal practice. Both

In Practice: first published as 10.1136/in

Summary



- Equine review articles reflect the growing veterinary interest in clinical audit over the past 20 years
- Most examples of clinical audit are performed in practice and not published
- Successful clinical audit has been and is being performed in equine veterinary practice

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