Using Human Factors to develop an incident reporting system in Veterinary Practice.

Zoe Lenard BVSc FANZCVS(Radiology)
Animalius Vet
6 Focal Way Bayswater 6053.

Introduction and Problem:

The provision of veterinary clinical services is complex, mimicking a human healthcare scenario on a smaller scale. Smaller teams of veterinarians and nurses manage multiple functions: admissions, diagnostics and anaesthesia, surgery, post-operative patient care and rehabilitation, pharmacy, and client financial liaison. In some respects, veterinary team members have more oversight over the entire patient journey (and more visibility over errors) but it can be harder to monitor processes. Performing systems analysis is not embedded culturally in veterinary practice.

A new multidisciplinary veterinary hospital underwent a period of rapid growth, resulting in a doubling, then tripling of staff size to accommodate growing patient base. Early on, slips in patient care were managed by individuals modifying their behaviour, but a "Swiss cheese" event precipitated a reassessment of incident reporting and analysis.

Development of Framework:

Using human factors principles (Catchpole) we developed a reporting system to log adverse events. Initial prototypes used Safety I concepts, where linear cause-effect chains could explain adverse events (Hollanagel) were rapidly discarded in favour of a systems analysis using wider frameworks (Moray) modified for the veterinary context. For each adverse event, assessment considered patient, team and task factors, communication, staffing, and organization factors, a modification of the Yorkshire Contributing Factors framework. The prototype involved staff self-reporting to Adverse Event Champions, prompting a review of the incident.

Whilst initial reports tended to focus on catastrophic or severe adverse events, lower impact events or near misses tended not to be reported. Reasons for non-reporting included lack of staff awareness of what categorized an adverse event, fear of reprimand, a lack of understanding of how to report, and time pressures (too busy to report). Further modifications include

- Developing an easy-to-use, cost-neutral reporting system using existing software (SharePoint, Microsoft Forms and Power Automate Flow functions). This allows a one-click, simple interface in a central location in a place that is highly visible to all staff. Logging time is reduced 2-3 minutes and is possible from PC, tablet or smartphone.
- Each logged event is immediately assessed.
- Reinforcing a "no blame" culture with regular review of adverse events in real time, with regular feedback to the entire team about the events.

Results:

Engaging the team with quarterly AE view sessions has led to novel solutions and better buy-in. Event logging increased significantly. A twice-yearly thematic review allows for dissemination of learning, maximising the benefits of logging. Staff are more actively engaged with the process,

and the rate of logging near misses increased. Complex issues (e.g. medication errors) are able to be assessed in a more strategic way, with better understanding of contributory factors. Anonymous reports are rare; there is a strong just culture with frequent self-reporting.

Conclusions:

An understanding of Human Factors allowed us to develop a simple Adverse Event log, which has become a valuable resource in our clinical practice, and signficaintly improved our safety culture. This tool could be easily implemented in other small veterinary teams without significant cost.

References:

Catchpole K. Spreading human factors expertise in healthcare: untangling the knots in people and systems. *BMJ Quality & Safety* 2013;**22:**793-797.

Moray 2000: Culture, politics and ergonomics. Ergonomics, 43, 868-868

Hollanagel E Safety I - and Safety II: The Past and Future of Safety Management. Farnham, Surrey: Ashgate Publishing Lit 2014

https://improvementacademy.org/resource/yorkshire-contributory-factors-framework/ Accessed 27 Nov 2024.