

Telemedicine & E-health

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Acknowledgements & Declarations of Interest

- Director – Coach House Vets Ltd
- Innovation and Global Development lead on RCVS Council
- Chair – Greenham & Crookham Commons Commission
- Chair – Royal Agricultural Society of England
- Trustee – Innovation for Agriculture
- Trustee – World Horse Welfare
- Board Advisor and Shareholder – Cat Dog Fish
- Board Advisor – The Affordable Petcare Company



Dave



Picture of wounds and location

iMessage

Telemedicine and Telehealth

B2B2C



Virtual
Veterinary
Specialists



**IMPROVED PATIENT
OUTCOMES**



**CONVENIENT FOR
YOUR CLIENTS**



**LESS STRESSFUL
FOR THEIR PETS**

CODE OF PROFESSIONAL CONDUCT



- 1.1 VSs must make animal health & welfare their first consideration when attending to animals
- 1.2 VSs must keep within their own area of competence and refer cases responsibly
- 1.3 VSs must provide veterinary care that is appropriate & adequate

Under care

- 4.4 Prescription Only Veterinary Medicines (POM-V) must be prescribed by a veterinary surgeon, who must first carry out a clinical assessment of the animal under his or her care
- 4.11 A veterinary surgeon cannot usually have an animal under his or her care if there has been no physical examination; consequently a veterinary surgeon should not treat an animal or prescribe POM-V medicines via the Internet alone

Guidance to the Code

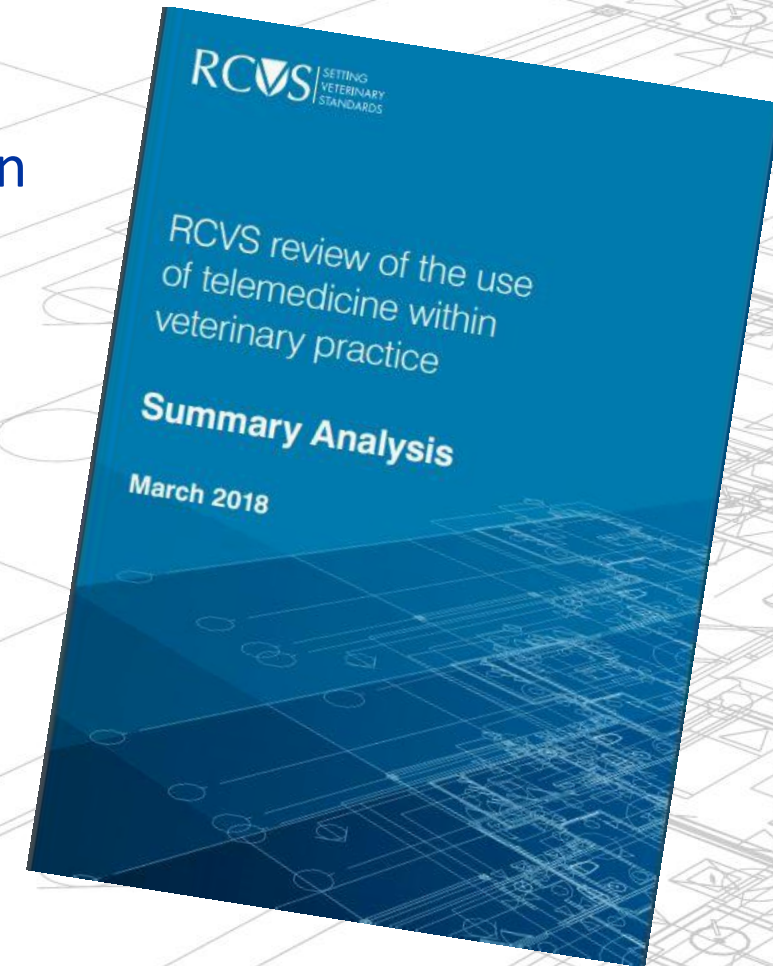
- 2.28 General advice may be given in response to an enquiry.

2.29 Specific advice provided remotely, for example via phone or video-link with or without additional physiological data (commonly referred to as telemedicine or telehealth), should only be given to the extent appropriate without a physical examination of the animal. The more specific the advice, the more likely it is that the animal's owner should be advised to consult a veterinary surgeon in person for a physical examination. In this scenario the animal owner should be asked to provide the veterinary surgeon carrying out the physical examination with a copy of any advice given remotely.

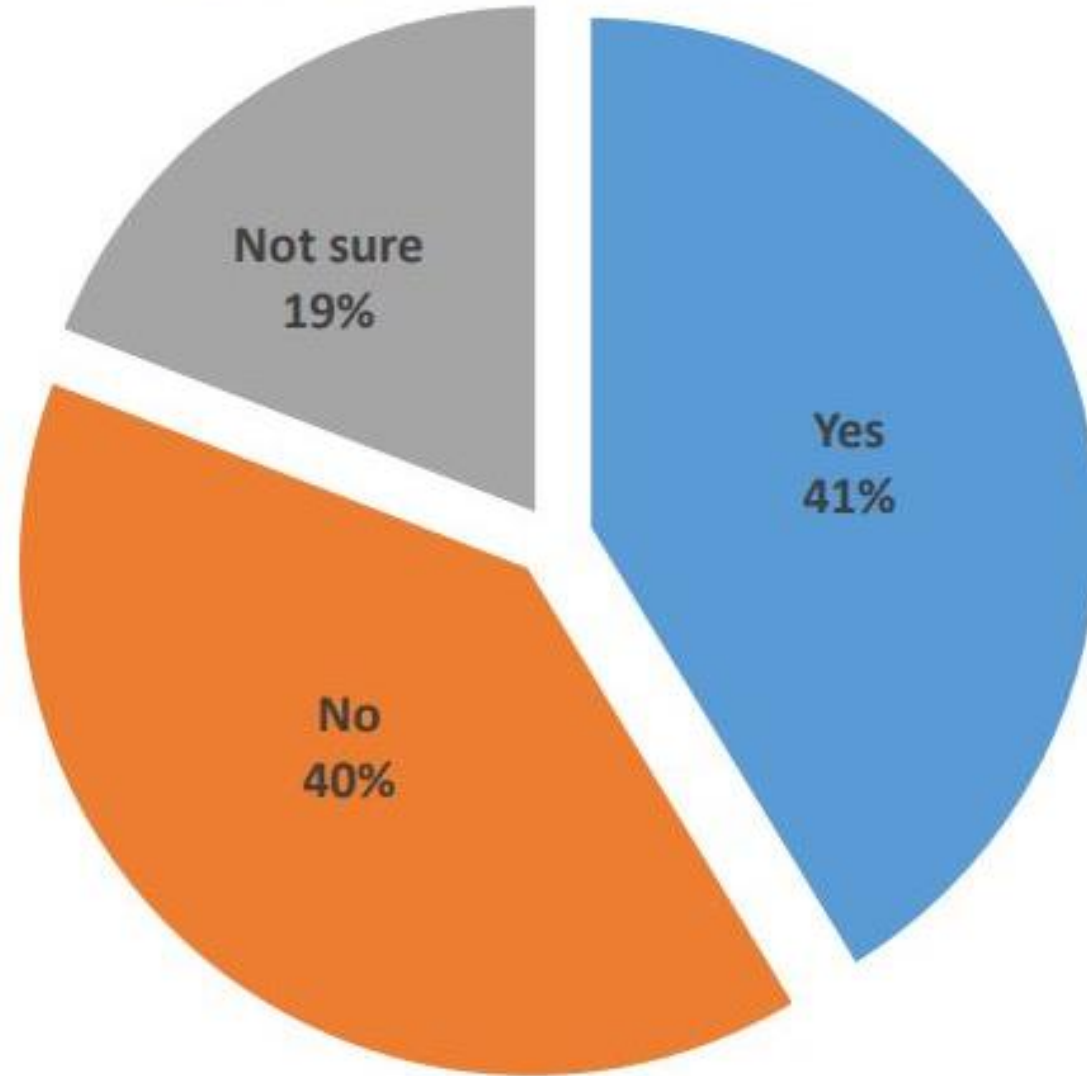
2.30 Veterinary surgeons should ensure as far as possible that the provision of specific advice provided remotely does not compromise welfare, since the animal has not been examined and there is no ability to monitor the animal.

A profession divided

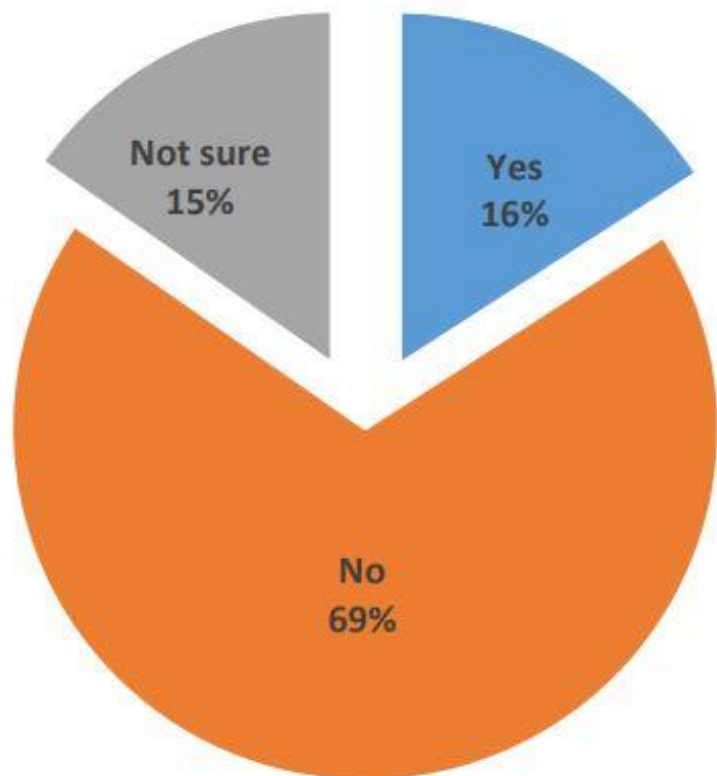
- RCVS Consultation on the use of telemedicine in the within veterinary practice (March 2017)
 - Profession divided on key issues
 - Considerable confusion on current Guidance
 - No clear route forward



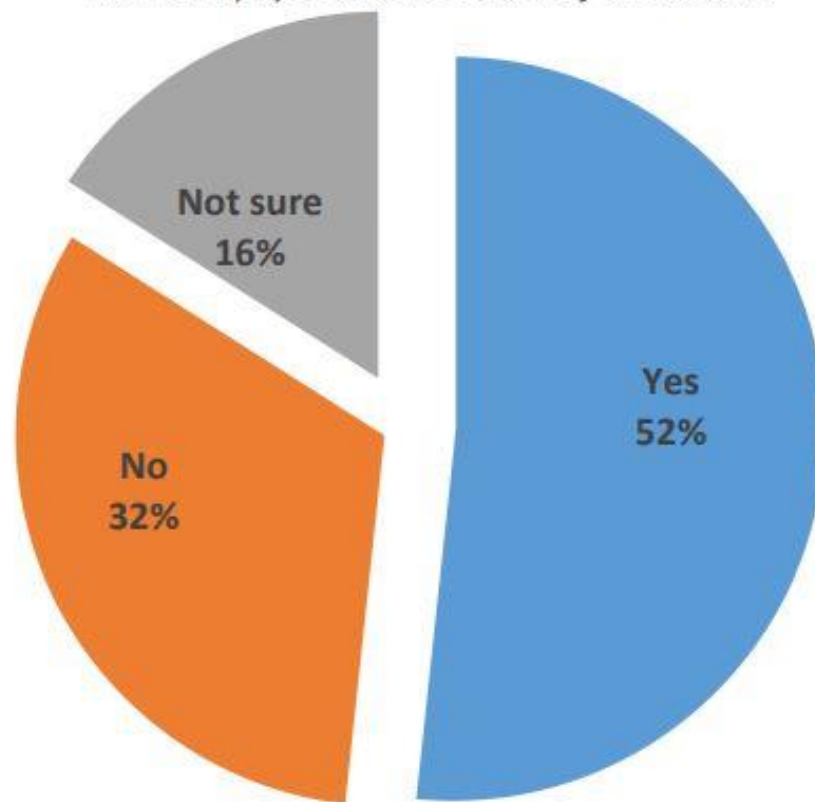
Question text: Technological advancements now allow for remote visual examination of an animal and provision of an animal's physiological data. In light of this, should the supporting guidance above be amended to allow for remote examination to take the place of physical examination in some circumstances?



Question Text: Do you consider that the current definition of 'under care' should be extended to allow veterinary surgeons to prescribe veterinary medicines where there has been no physical examination of the animal?



Question Text: In the human healthcare sector certain types of products may be remotely prescribed by telephone, video-link, or online. Do you consider that there are certain classifications or types of veterinary medicines that should be able to be prescribed without a physical examination of the animal?



Telehealth: regulatory challenges

- Regulatory challenges, including:
 - Perceived lower quality service
 - Borderless nature
 - Managing continuity of and responsibility for care
 - Potential for fraud (client and service provider)
 - Assuring the quality of data from wearables/implantables



Ethical Concerns & Risks

- Value of face to face consultation – depersonalisation
- Client privacy risks
- Breakdown of geographical barriers – fraudulent practice
- Restricted access to those without the tech
- Questionable priorities
- Efficacy
- Interprofessional communications
- Antibiotic misuse
- Vested interests

Ethical Concerns & Opportunities

- Increased access to veterinary care – lowering of barriers
 - Lowering financial barriers – out of hours
 - Reducing non-financial barriers – geography, travel, time
- Filling the vacuum – Dr Google
- Enhancing continuum
- Extending veterinary reach
- Improved productivity
- Flexible working – time & location

The Google logo is displayed in its characteristic multi-colored font (blue, red, yellow, blue, green, red) on a light gray rectangular background.

do i have c|

do i have **cancer**

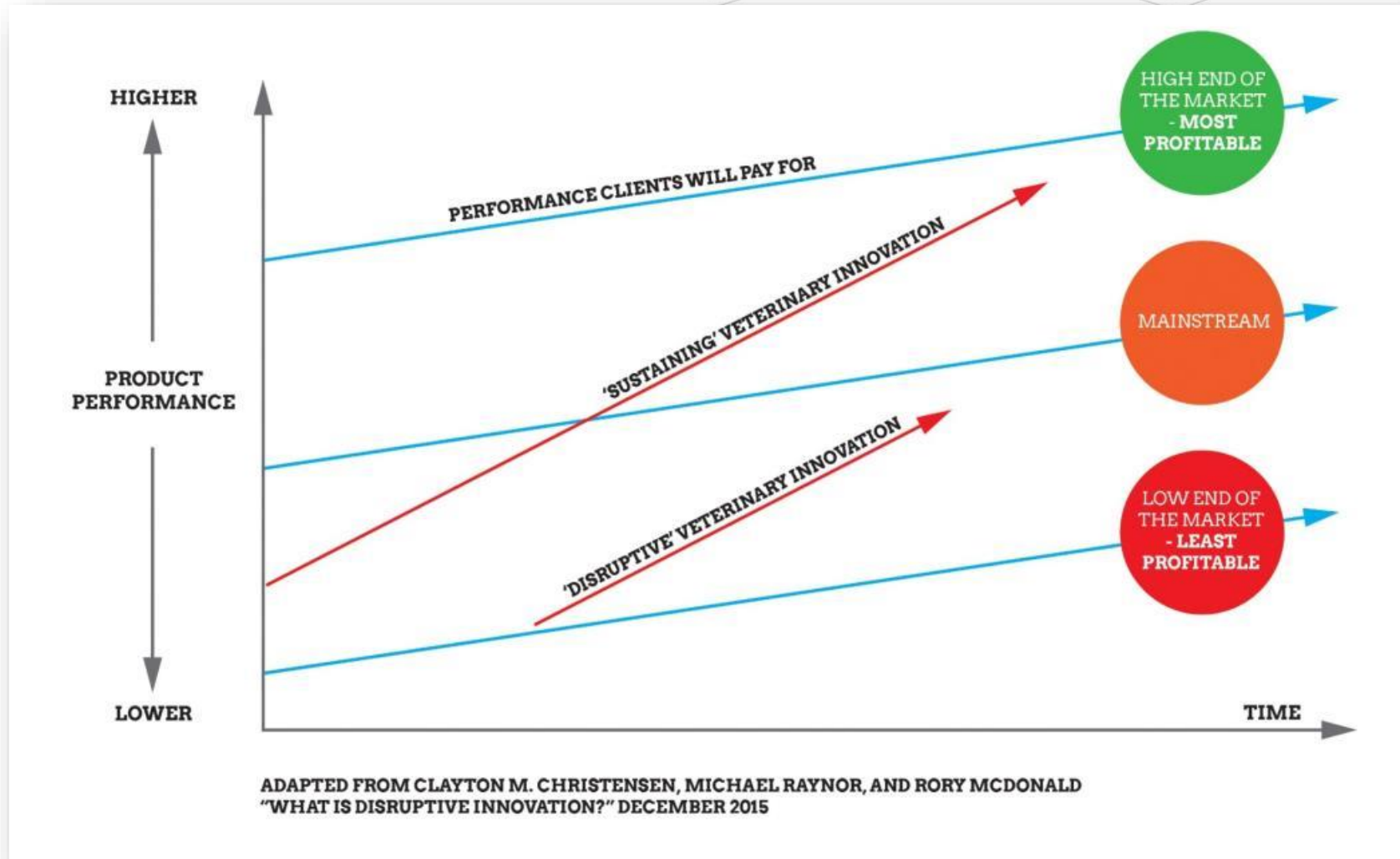
do i have **chronic fatigue**

do i have **celiac disease**

do i have **chlamydia**

Press Enter to search.

Ripe for disruptive innovation



Disruption is the fundamental mechanism through which we will build a higher quality, more convenient, and lower cost health care system. If leaders with such vision do indeed step forward, we will all have access to more health care, not less.'

Christensen, C., Bohmer, R. & Kenagy, J., 2000.

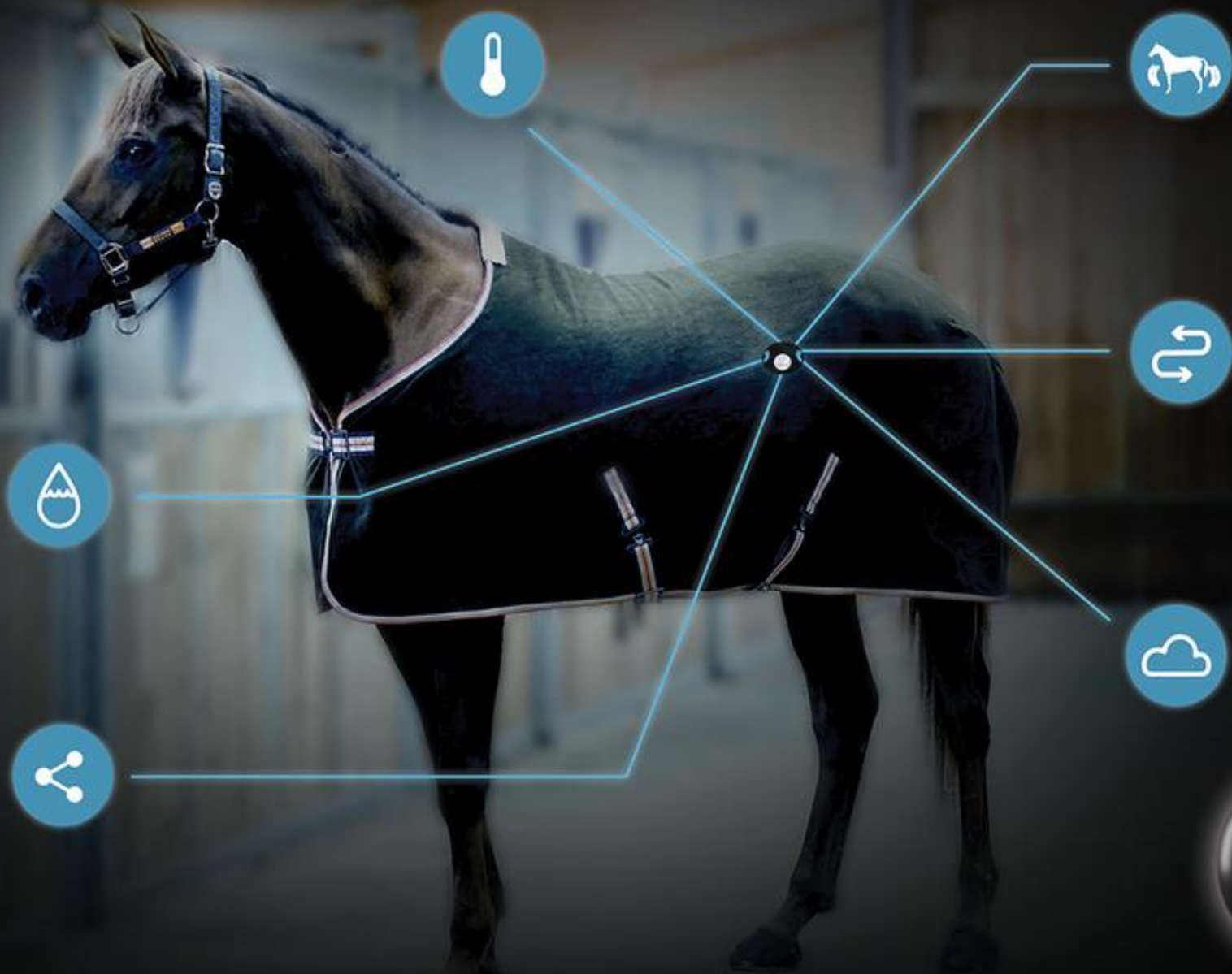
'Will Disruptive Innovation Cure Health Care?'. *Harvard Business Review*, Issue Sept-Oct.

Drivers of change

- Wearables and implantables
- Low cost, real-time genomic sequencing
- Big Data
- Artificial Intelligence (AI)







Orscana



Portable, real-time genomic sequencing

- Detection and characterisation of bacterial pathogens
- ID in minutes and strain level resolution in 2 hours
- antimicrobial resistance profile
- monitoring the emergence of AMR



Human Level AI

- Average expert prediction – Human Level Artificial Intelligence by 2040
 - All professions will be disrupted and the role of human intervention / expertise will diminish.
- Professions must prepare and define their role, identity and value added.

“When we see how much can be done with existing technology, to improve access to healthcare for people everywhere, we ask ourselves two simple questions: if not us, then who? If not now, then when? There are no excuses for not trying...”

Dr. Ali Parsa, Founder and CEO of babylon

