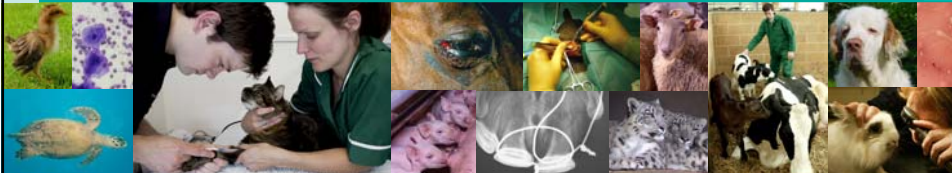


# Veterinary Science and the Teaching and Practice of Health Care Professionals

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## Similarities and differences of medicine and veterinary medicine

### Medicine

- Students
- Education
- GP practice
- Hospital practice
- Patients

### Veterinary medicine

- Students
- Education
- GP practice
- Referral practice
- Patients + clients

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## What's interesting about Veterinary Science



- How does / could it impact on teaching and practice for health science professionals?
  - Education
  - Public health
  - Comparative medicine

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## Education

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- Mapping the curriculum
- Consultation on the curriculum
- Integrating research
- Utilising diverse teaching methods
- Developing skills and behaviours
- Student recruitment

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## Vision for the curriculum

- Clinical integration from Day 1
  - Bring relevance to basic sciences
- Diverse teaching methods
  - Problem solving and preparation for LLL
- Integrated research degree
  - Developing research literacy
- Clinical training in appropriate facilities (no tertiary referral hospital)
  - Relevant Day 1 competencies

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## Curriculum Framework

- Systems-based modules repeated twice as (i) clinical science module (ii) clinical module
- Lecture-free final year of clinical rotations
- Some “long” modules
- Many “hidden” modules

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## Delivery

- Lectures
- Clinical relevance directed learning
- Practical classes
- Question and case-based learning

All except lectures are delivered in small groups with Facilitators

## Developing skills and behaviours

Module Development SOP - Including amongst other things for Clinical Science Modules:

- Delivery by other professionals
- Skills including:
  - Clinical examination
  - Surgical skills
  - Animal behaviour
  - Case planning
- Behaviours including:
  - Professional conduct
  - Ethics

## What's interesting about Veterinary Science



- How does it / could it impact on teaching and practice of health science professionals?
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## What's interesting about veterinary science?



- **Early veterinarians were mainly concerned with the care of horses and mules**
- **Recent veterinarians generally thought to be mainly concerned with companion animals**
  - **Within this of course there are huge benefits to human health**
    - Pet ownership
    - Assistance animals
    - Social inclusion
    - Animals as therapy

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## What's interesting about veterinary science?



- Despite this perceived polarity, veterinarians have been involved in controlling diseases affecting humans:
  - Leonard Pearson initiated the tuberculosis testing of cattle to help stop the spread of this disease to both man and other cattle
  - Evan Stubbs isolated the avian influenza organism
  - Karl Meyer developed a method to prevent botulism in canned foods
  - Eradication of *Brucella abortus* from the UK

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## What's interesting about veterinary science?



- And developing techniques that have other health benefits to humans
  - Veterinarians have been leaders in assisted reproduction technology (largely market-led)
  - Veterinarians have been leaders in experimental surgery (external fixation, organ transplantation)
  - Veterinarians have been the vanguard of food inspection services

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## Comparative Medicine



There is recognition that study of comparative medicine could reap huge benefits:

*"It is no longer possible to recognise two entirely distinct branches of medicine ... Comparative medicine is the medicine of the future, and the sooner that is realised, the better for man and beast"*

Mills, 1896

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## What is comparative medicine?



- Not just – *"compelling one species, usually a rodent, to model the disease of another, usually human, through pharmacological, surgical, immune or genetic interventions"*
- But it is – *"the open minded study of comparable disease in different species"*

Michell, 2005

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## Public Health = Comparative Medicine



The University of  
Nottingham

- Public health

= comparative medicine when considering the basic biology of host-pathogen interactions for zoonotic species

But also,

= comparative medicine when monitoring disease transmission between species

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## What's happening at Nottingham?



The University of  
Nottingham

- Research themes within the Veterinary School are 'Comparative Medicine' and 'Integrated Food Chain Research'
- The Veterinary Laboratories Agency (government farm animal surveillance) is a formal partner with the Veterinary School
- Establishment of joint appointments with the Health Protection Agency and the Medical School and the Veterinary School

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## What's happening nationally and internationally?



- Development of the proposed Medical Research Council - Comparative Clinical Science Foundation
  - Aims to provide structure and focus to encourage collaboration between veterinary and human medicine
- Anything else?

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So,



- Even though Comparative Medicine (spontaneous disease in animals and public health) provides an unprecedented opportunity for improving human health
- Are we making the most of the opportunity?
  - No:
    - Dearth of veterinary surgeons recruited into research
    - Internationally there is a lack of collaborative research between medical and veterinary faculties and variability in coordination of surveillance

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## Veterinary Science and Human Health



- Why are veterinary surgeons not recruited into research?
  - Lack of exposure (epidemiological data)
  - ? Lack of opportunities
  - ? Lack of Funding
- What prevents collaborative research?
  - Lack awareness (citation index of veterinary journals)
  - Lack joint meetings
- The answers lie around knowledge and communication

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