

Focus on Severe Suffering



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RSPCA Animals in Science Department

- Promotes
 - **Replacement**
 - **Reductions** in numbers and suffering and
 - Improvements in **welfare** while animal use continues
- Helps ensure robust ethical review that effectively challenges **whether and how** animals are used



Aims of this session

Provide support, information and inspiration to help you reduce – or ideally avoid – **severe suffering**

Main focus on disease models

- Resources produced by RSPCA and with partner organisations – IAT, LASA, LAVA
- Practical case studies
- Panel discussion

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Everyone has a part to play

- Competent authorities
- Animal Welfare Bodies
- Persons with responsibilities under Articles 24 and 25 (attending veterinarians, staff responsible for ensuring information access, training and competency etc)
- National Committees
- Scientists
- Animal technologists
- NGOs
- National 3Rs centres



'Severe suffering' - definition

In the UK and EU, animals in 'severe' procedures are likely to experience:

- severe pain, suffering or distress
- long-lasting moderate pain, suffering or distress, or
- severe impairment to their wellbeing or general condition

Equivalent severity classifications in other countries:

- USA: Category E
- Canada: D or E
- Australia/NZ: *death as endpoint or severe physiological challenge*

Why severe suffering?

All laboratory animal suffering is a concern, but reducing and avoiding 'severe' suffering should be a top priority

- Ethical and animal welfare benefits
- Legal requirements to minimise suffering
- Scientific benefits – better welfare means better science

10%

of animals used in experiments worldwide experience 'severe' suffering*

10m

animals across the world experience severe suffering each year*

+1m

procedures involving severe suffering each year within UK and EU**

Causes of severe suffering

Three main reasons:

1. Some procedures or 'models' are likely to cause severe suffering
2. A combination of less severe factors can lead to increased overall suffering: 'cumulative severity'
3. Where animals die, this may involve severe suffering – including both unexpected mortality, and 'death as an endpoint'

Potentially severe procedures

- Batch potency testing of vaccines and other biologics
- Infectious disease models with severe symptoms, e.g. some vaccine development
- Studies of diseases that cause severe suffering in humans, e.g. rheumatoid arthritis, sepsis, spinal cord injury
- Some regulatory toxicology tests, e.g. acute toxicology, ecotoxicity



Expert working groups

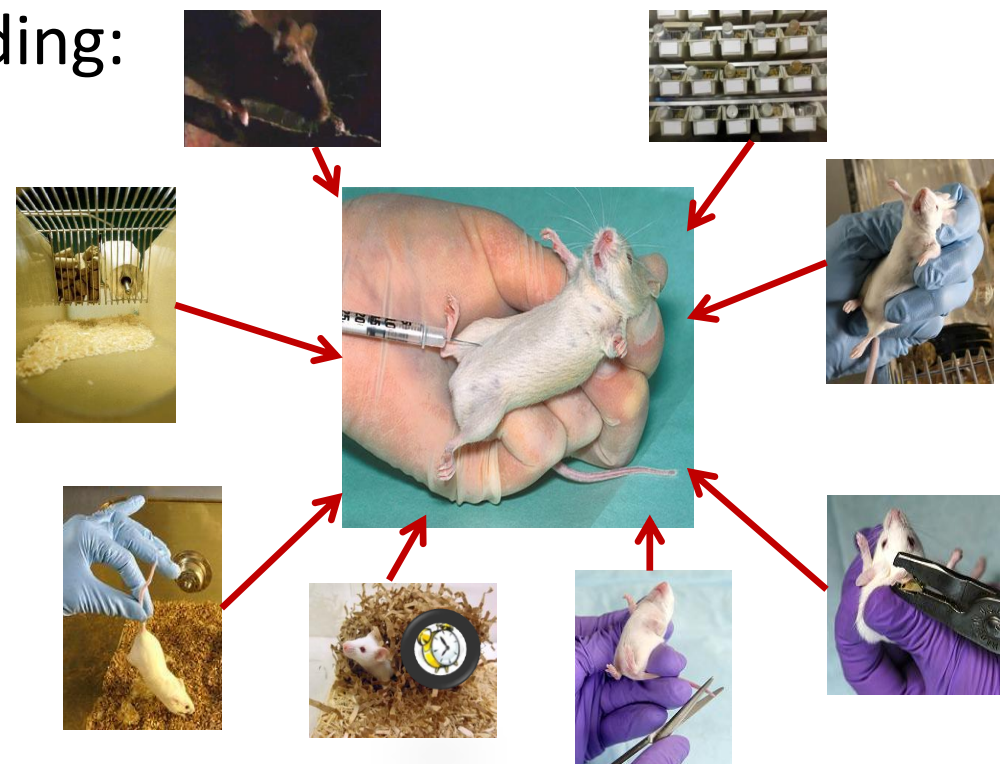
Cancer	Cardiovascular studies	Experimental Autoimmune Encephalomyelitis (EAE)
Ischaemic stroke	Liver fibrosis	Neuropathic pain
Rheumatoid arthritis	Seizures, convulsions and epilepsy	Sepsis
Spinal cord injury	Vaccine potency tests	Vaccine studies using non- human primates

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Cumulative severity

Apart from experimental procedures, animals experience many other **life events** – including:

- transport
- marking for identification
- capture
- handling
- restraint
- laboratory housing and husbandry
- humane killing





Breeding >



Capture from the wild >



Transport >



Marking for identification >



Genotyping >



Housing >



Husbandry procedures >



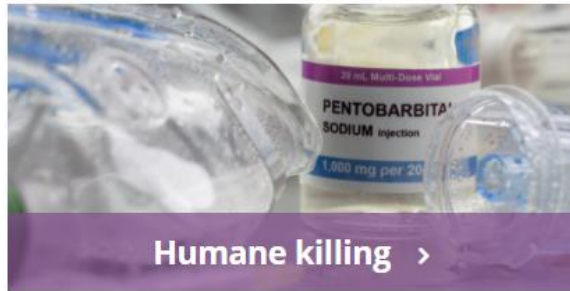
Handling and restraint >



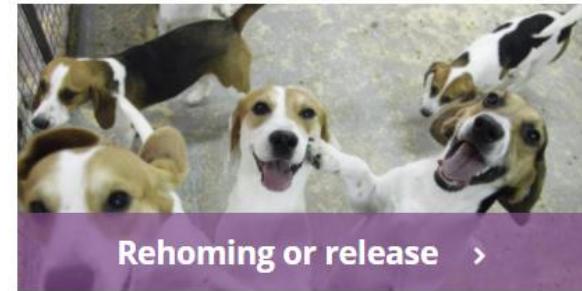
Scientific procedures >



Effects of procedures >



Humane killing >



Rehoming or release >

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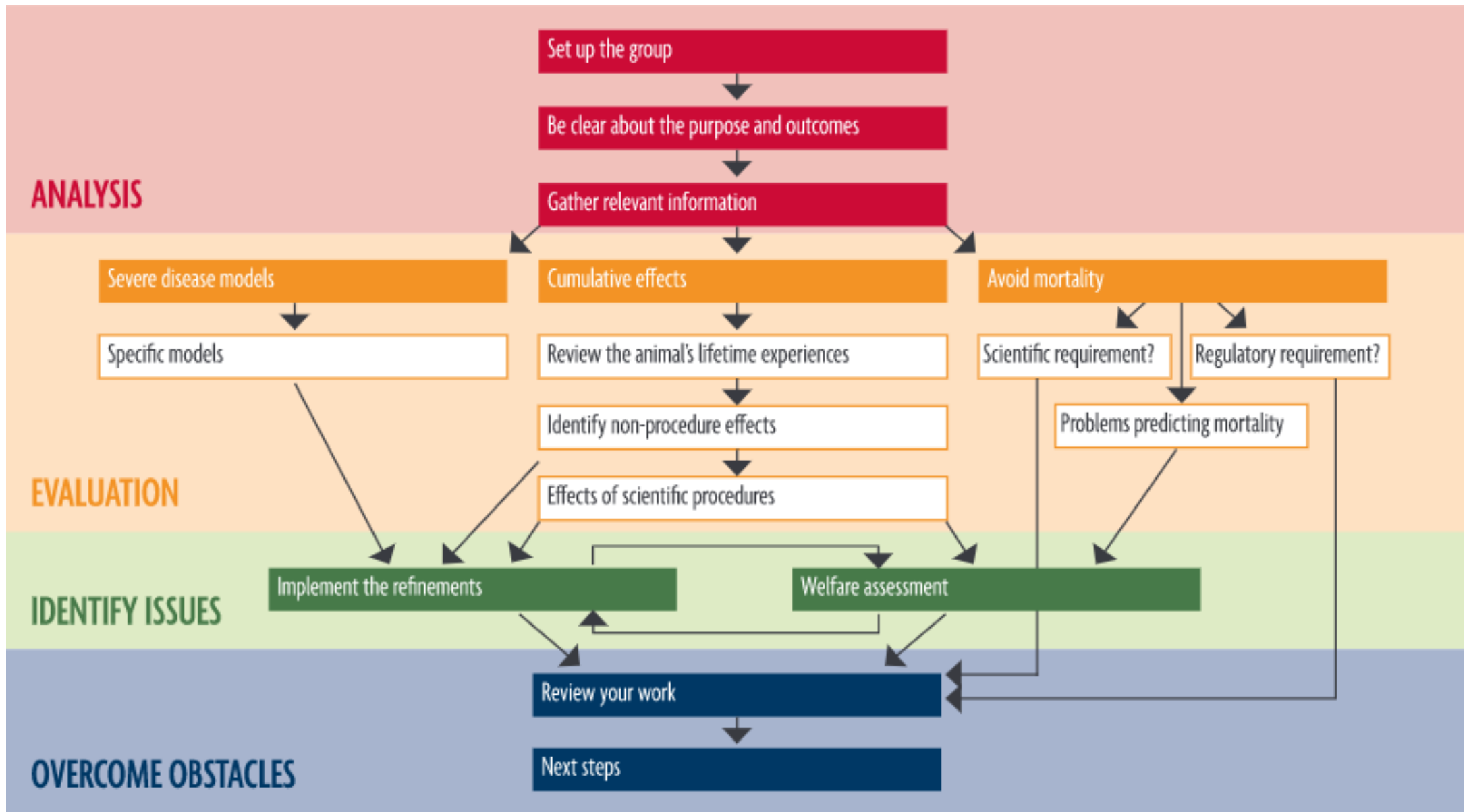
THE ROADMAP TO REDUCING SEVERE SUFFERING

The 'Roadmap' is a practical exercise to help you focus on procedures in your institution that could cause 'severe' suffering, identify contributing factors and find ways of avoiding or refining these.

A key principle of the Roadmap is an 'audit' of procedures, carried out by an appropriate team of people with different expertise and perspectives.



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focusonseveresuffering.co.uk/roadmap

Events

International RSPCA Focus on Severe Suffering meetings

- Brussels (2016)
- Berlin (2017)
- Athens (2019)
- **Stockholm (2022)**

Other meetings:

- FELASA: Prague (2019)
- GSK: Stevenage (2019)
- Focus on Fish: online (2020)
- **Focus on Fish 2: TBD**



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Ethics

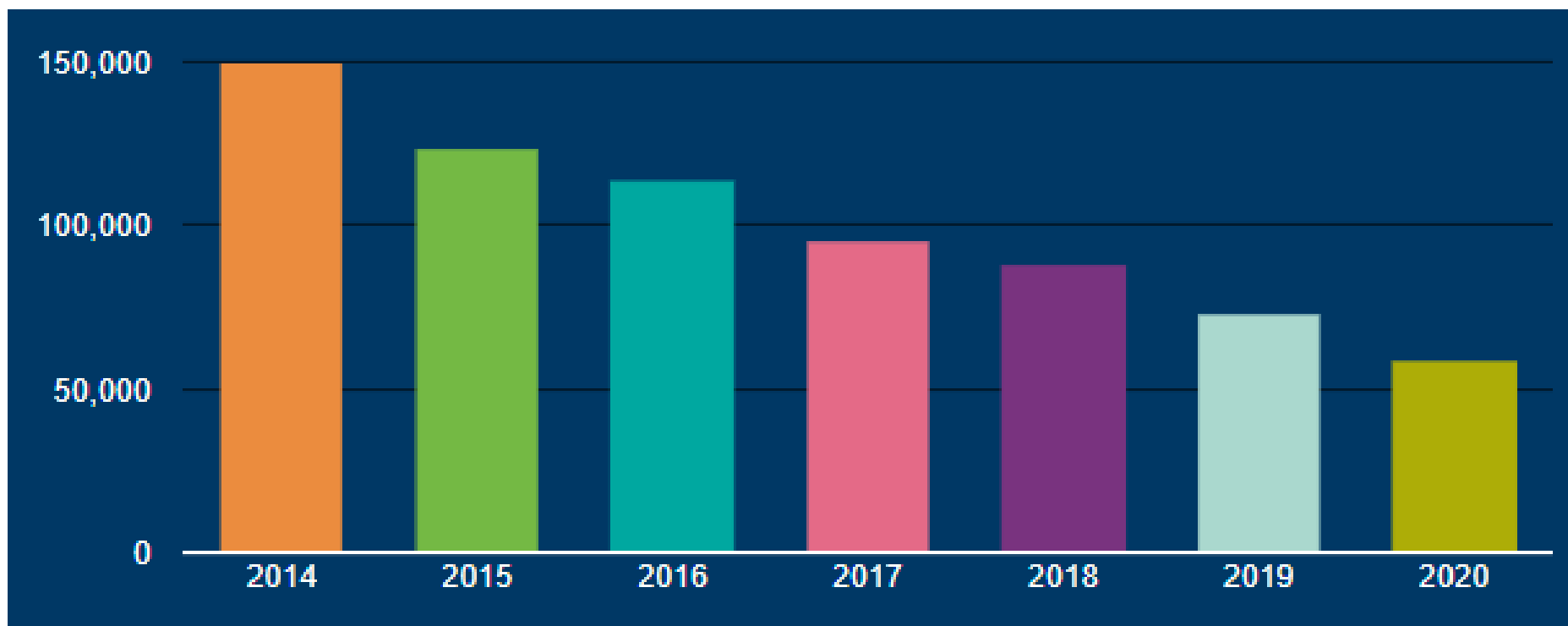
“Where severe suffering is unavoidable, there should be an exceptionally high level of benefit and likelihood of achievement.”

UK Animals in Science Committee

Questions for AWBs or ethics/Animal Care and Use Committees:

- Why is severe suffering needed?
- What is being done to reduce/avoid this?
- Are the benefits sufficiently high to justify the suffering?
- Can you demonstrate that the model is translatable?
- Could the protocol be run with a moderate severity limit?
- What if we said ‘no’?

Progress so far ...



61% reduction

in experimental procedures
causing severe suffering in the UK
since 2014