Checklist of information needs

The aim of this document is to help you identify significant and important information needs related to common conditions that will help you form a useful question to investigate for a Knowledge Summary.

The common conditions include the seven categories below.

1. Epidemiology (risk factors)
2. Diagnosis
3. Treatment
4. Harm/improvement
5. Prognosis
6. Control (risk reduction)
7. Prevention (risk avoidance)

For each of these categories a detailed checklist of factors to consider is provided below to help you identify Knowledge Summary questions.

Once you have formed a question the next step is to refine it using the PICO method. See 'How to use the PICO method to write a clinical query' and the EBVM Toolkit 1 for further information.

1. Epidemiological risk factors

- Risk factors that determine the occurrence and distribution of disease in a population
- Incubation period
- How long can the organism survive outside the host
- What factors influence this survival
- Method of spread
- How contagious is the organism?
- Carrier state
- Are all carriers excreting the organism?
- Is the carrier state lifelong?

- Are all infected animals clinically affected?
- Is there a screening test?
- What is the sensitivity and specificity of the test?
- How many animals do I need to test to confirm the aetiology at a given prevalence level?
- How long does it take for the serological antibodies to rise following infection?
- How long do the antibodies persist following infection?
- Is there a licensed vaccine?
- Are serological antibodies an indication of protection?
- How good is the protection, afforded by the vaccine?
- How often does the vaccine have to be given?
- Can the vaccine be used in the face of an outbreak?
- How quickly and what level of protection is provided?
- Can vaccinated animals be detected?
- Can vaccinated animals be distinguished from naturally infected animals?

2. Diagnosis

Clinical presentation – differential diagnosis

- Sensitivity and specificity of the clinical signs for the disease
- Prevalence of the disease
- What is known about the pathophysiology of the disease?

Diagnostic tests/further investigations

- Accuracy of the test
- Specificity of the test
- Sensitivity of the test
- Disease prevalence
- Sample type

3. Treatments

Drug therapies

- Efficacy
- Dose

- Frequency
- Length of treatment
- Combinations of drugs
- Costs
- Harm caused by treatment versus harm caused by disease
- Residues/withdrawal time
- Relative performance compared to other drug interventions

Surgical procedures

- Success rates and comparative success rates
- Persistency of outcome
- Costs and required expertise

Other treatments and patent management protocols

- Success rates
- Costs
- Frequency
- Comparative efficiency

4. Measures of improvement/harm

It would be useful to be able to provide the owner with a probability that the treatment will be successful. Effective treatments operate by improving outcomes of a disease. Such an improvement should be considered in two ways:

- Increasing the likelihood of a good outcome (e.g. increased survival)
- Decreasing the likelihood of a bad outcome (e.g. reduced mortality)

Terms to consider when asking questions about treatment or harm caused by treatments are:

- Absolute risk reduction
- Relative risk reduction
- Number needed to treat
- Number needed to harm

Does the reduction in consequences of the additional risk warrant the cost of reducing or removing exposure?

5. Prognosis

- Impact on the patient and the owner regarding life quality
- Prognostic indicators of outcomes and survival
- Timing

Owners benefit from knowing when an outcome can be expected, particularly if the condition is progressive, debilitating, and invariably fatal. The pattern of survival over time, and the quality of life over time, are important considerations in a fatal disease.

- As a percentage of survival at a particular point in time
- As a median survival (the length of time by which 50% of study patients have had the outcome)
- As a survival curve that depicts at each point in time the proportion (expressed as a percentage) of the original study sample who have not yet had a specified outcome

Does the awareness of the likelihoods of the various outcomes over time help the owner/vet/VN make important decisions about the future of the animal?

6. Control (risk reduction)

- Have all important factors associated with epidemiology been identified?
- Does the reduction in risk justify the cost/effort of reducing the exposure by prophylactic treatment and/or vaccination?

7. Prevention (risk avoidance)

- Have all important risk factors associated with the epidemiology of the disease been identified?
- Does the risk avoidance justify the cost/effort of removing the exposure by prophylactic treatment and/or vaccination?