





EFSA guidance for assessing stunning effectiveness studies – the assessment approach

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OUTLINE

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- Background
 - Objectives and scope of guidance
 - General aspects applicable to studies on stunning interventions
 - Assessment Approach
 - Eligibility criteria
 - Reporting quality criteria
 - Methodological quality criteria
 - Possible outcomes of the assessment process

BACKGROUND

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- Several submissions of stunning studies to AHAW Panel in 2013
 - Need for structured, harmonised approach
 - Self-task of AHAW Panel
 - define criteria against which studies evaluating the efficacy of stunning interventions regarding animal protection during stunning will be assessed
 - Checklist with scientific reasoning for each checklist item

OBJECTIVES AND SCOPE OF GUIDANCE

■ Objectives

- assessment process, criteria applied to studies on known new or modified legal stunning interventions to determine their suitability for further assessment by EFSA AHAW Panel

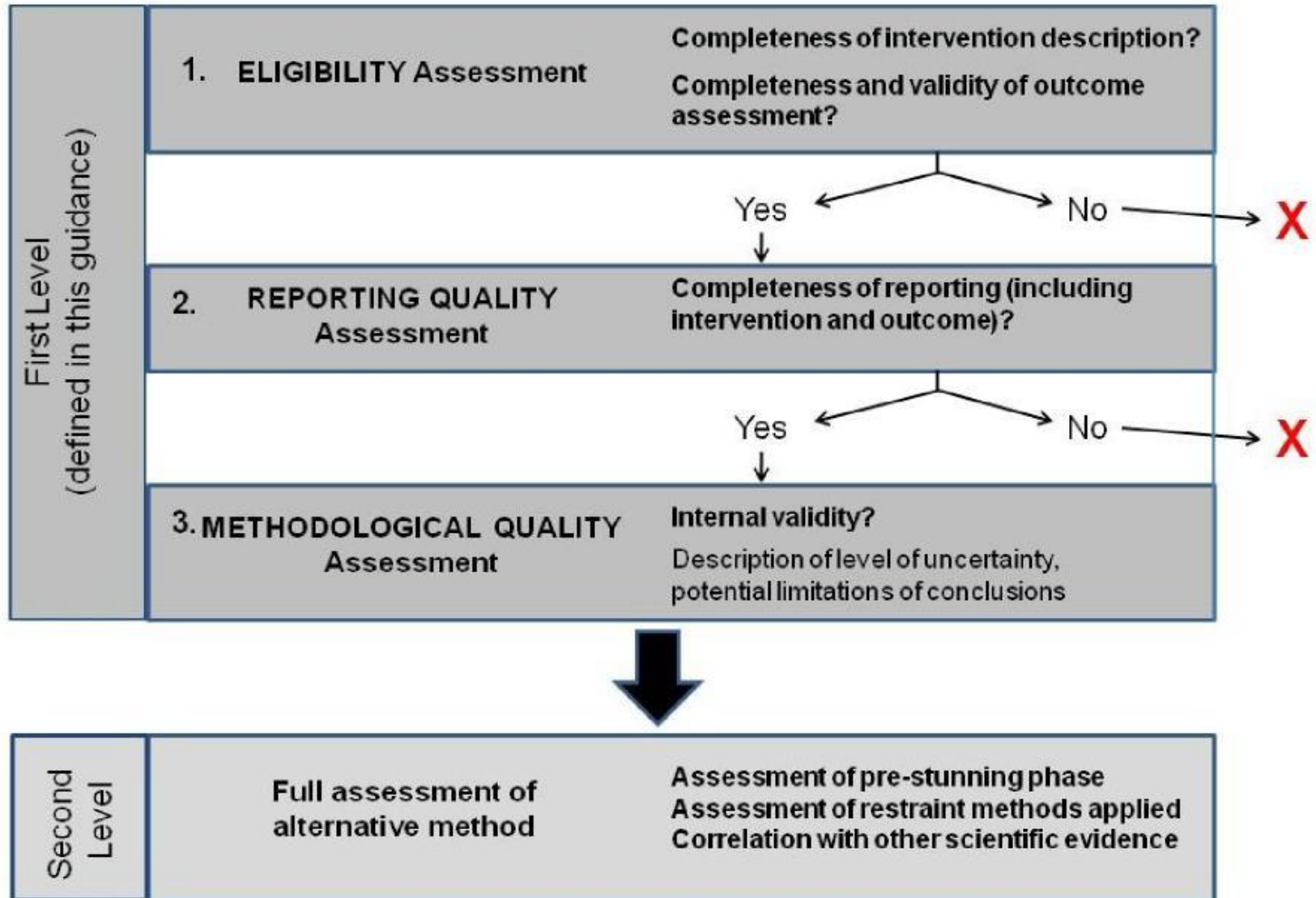
■ Scope

- known new or modified legal stunning interventions
- back-up stunning interventions
- used at slaughter
- Not: depopulation, other on-farm slaughter or killing (e.g. emergency killing interventions)
- Not: pre-stunning handling

GENERAL ASPECTS REGARDING STUNNING STUDIES

Type	Conditions	Elements of research recommended
I. Proof of concept	Study under controlled laboratory conditions	<ul style="list-style-type: none"> A. Comprehensive record of stunning intervention and key parameters B. Assessment of onset and duration of unconsciousness by EEG or ECoG C. Assessment of absence of pain, distress and suffering using behavioural and either physiological or neurological animal-based measures D. Comprehensive record of outcome assessment E. Stunning without sticking to establish duration of unconsciousness achievable with simple stunning intervention
II. Ground truthing	Study under slaughterhouse conditions	<ul style="list-style-type: none"> F. Comprehensive record of stunning intervention and key parameters G. Assessment of onset and duration of unconsciousness using animal-based measures H. Assessment of absence of pain, distress and suffering using behavioural and either physiological or neurological animal-based measures I. Comprehensive record of outcome assessment J. Assessment of absence of pain, distress and suffering during restraint/pre-stunning if it deviates from conventional methods and/or is potentially painful

ASSESSMENT APPROACH




GENERAL ASPECTS REGARDING STUNNING STUDIES

Examples:


- controlled environment studies: EEG or electrocorticography (ECoG)
- stun without exsanguination to establish the duration of unconsciousness achieved
- “sham operation” + exposure to full procedure/apparatus, including stunning

More later...


ELIGIBILITY CRITERIA

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- based on Council Regulation (EC) No 1099/2009
 - Intervention:
 - key parameters described in legislation, others provided by experts on stunning interventions (*Annex I, Chapter 1*)
 - Outcome:
 - A.** Immediate onset of unconsciousness and insensibility (*Art. 2 (f)*); **OR**
 - B.** Absence of avoidable pain, distress and suffering until the loss of consciousness and sensibility; (*Art. 2 (f)*)
 - AND**
 - C.** Duration of the unconsciousness and insensibility (until death) (*Art. 4.1*)


REPORTING QUALITY CRITERIA

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- reporting guidelines designed to increase transparency and comparability of conducting and reporting scientific studies
 - REFLECT and STROBE statements
 - parameters relevant to studies on stunning interventions



METHODOLOGICAL QUALITY CRITERIA

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- internal validity
 - identify and assess possible biases
 - selection, attrition and performance bias
 - qualitative narrative
 - level of uncertainty surrounding the evidence presented
 - potential limitations of conclusions

POSSIBLE OUTCOMES OF ASSESSMENT

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- **Criteria are fulfilled**
 - sufficient detail regarding intervention and outcome to allow for a conclusion to be reached about the suitability (or lack thereof) of the intervention
 - full assessment of the animal welfare implications follows, including pre-stunning
 - **Criteria not fulfilled**
 - insufficient detail regarding intervention and outcome to allow for a conclusion to be reached about its suitability (or lack thereof)
 - assessment report highlighting shortcomings, indication of required improvements

MORE DETAIL IN FOLLOWING PRESENTATIONS:

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- Studies under laboratory and slaughterhouse conditions – principles (*Chapter 1*)
 - Eligibility criteria for stunning interventions
■ (*Chapter 3.1*)
 - Eligibility criteria for outcomes of stunning interventions (*Chapter 3.2*)
 - Assessing unconsciousness, pain and suffering during interventions (*Chapter 3.2.2*)
 - Case study