

**Table 1.** The COHERE standards

Item	Standard Number	Recommendation
<b>Introduction</b>		
Background	1	Review the human, animal, and environmental context of the problem and justify why a One Health study is appropriate to address the scientific question
Rationale	2	Clearly state the research aims and/or hypotheses in the context of the relationship among the three domains (human, animal and environment), or state and defend the nature of the study if it is not hypothesis-driven
<b>Methods</b>		
Study design	3	<ul style="list-style-type: none"> <li>(a) Explain or describe the relationship/interaction (epidemiologic, biological, ecological, spatial/temporal, <i>etc.</i>) of the collection of the human, animal, and environmental specimens and/or data<sup>a</sup></li> <li>(b) Provide inclusion and exclusion criteria for all domains</li> <li>(c) According to study design, follow other guidance, <i>e.g.</i> STROBE and its extensions (STROBE-VET, STROME-ID), CONSORT, PRISMA, <i>etc.</i>, as indicated</li> </ul>
Human participants	4	<ul style="list-style-type: none"> <li>(a) Provide qualitative and/or quantitative description of the human population or human data, including characteristics related to inclusion or exclusion from the study, sample size (at all relevant population levels), and sample size justification, as appropriate</li> <li>(b) Ensure human subject assurances adhere to the highest standards of ethics governing human subjects research</li> </ul>
Animal participants <sup>b</sup>	5	<ul style="list-style-type: none"> <li>(a) Provide qualitative and/or quantitative description of the animal population (domestic, captive exotic, or free-ranging wild), including characteristics related to inclusion or exclusion from the study, sample size (at all relevant population levels), and sample size justification</li> <li>(b) Include, at minimum, the common or generic name for the species of animal or animals studied, and provide the taxonomic <i>Genus species</i> if indicated (<i>i.e.</i> for less common species) if the species chosen is dependent on study design<sup>a</sup></li> <li>(c) Ensure animal subject assurances adhere to the highest standards of ethics governing animal subjects research</li> </ul>
Environment <sup>b</sup>	6	<ul style="list-style-type: none"> <li>(a) Identify environmental (abiotic) and/or ecosystem (biotic) factors including vector characteristics<sup>b</sup> if appropriate, that are under investigation</li> <li>(b) Describe the type and purpose of any environmental samples or data collected</li> <li>(c) Provide qualitative and/or quantitative description of the</li> </ul>

Checklist for One Health Epidemiological Reporting of Evidence (COHERE), December 2016

		study location, including geographic locale ( <i>e.g.</i> region and country, latitude/longitude or a centralized point if the location of the site is sensitive information), ecosystem type ( <i>e.g.</i> mangrove forest) and/or land use description ( <i>e.g.</i> urban, agricultural, etc.), and number and description of where samples were obtained <sup>b</sup>
Measurement	7	<p>(a) If indicated, include the frequency of sampling (<i>i.e.</i> sample interval) and calendar timing (<i>i.e.</i> date, month, season, year)<sup>b</sup></p> <p>(b) Describe the relationships/interactions (epidemiologic, biological, ecological, spatial/temporal, <i>etc.</i>) among human, animal, and environmental samples and data, as well as other significant differences in data collection methods between domains<sup>a</sup></p> <p>(c) Describe and justify testing or analysis measures used, and indicate the validity for such measurements for use among human, animal and environmental domains</p>
Analysis	8	<p>(a) Identify how data among the three domains were collected</p> <p>(b) Explain how any hierarchical relationships within and between domains (<i>e.g.</i> at the individual or group level) were handled</p> <p>(c) If data were handled differentially among the three domains (<i>e.g.</i> collection of data from one domain at a different time interval than from another domain), describe this in sufficient detail to allow assessment of potential bias introduced by this decision<sup>a</sup></p>
Study team	9	<p>(a) If applicable, describe the involvement of study team members, stakeholders and community members (<i>e.g.</i> farmer participant stakeholders, industry, <i>etc.</i>)</p> <p>(b) Indicate how study team members representing all three domains contributed to development of the research question and study design</p>
Ethics	10	<p>(a) Report animal (IACUC/ACUC) and human ethics (IRB) approvals, as well as other relevant permissions that were obtained</p> <p>(b) If applicable, describe the framework for adhering to community based research standards (<i>e.g.</i> community approval, cultural respect, knowledge translation)</p>
<b>Results</b>		
Human participants	11	<p>(a) Report recruitment data, provide study population percentages and describe generalizability of study population to underlying population</p> <p>(b) Describe demographics (<i>i.e.</i> sex, age, race/ethnicity, <i>etc.</i>) or case characteristics, as well as exposure factors</p>

Checklist for One Health Epidemiological Reporting of Evidence (COHERE), December 2016

		and behavioral characteristics evaluated, of human subjects <sup>c</sup>
Animal participants	12	<ul style="list-style-type: none"> <li>(a) Report study population percentages and describe generalizability of study population and study species to the underlying animal population of interest</li> <li>(b) Describe demographics (<i>i.e.</i> sex, age, breed, <i>etc.</i>) or signalment, as well as exposure factors, of animal subjects</li> <li>(c) If applicable, describe animal management characteristics (<i>i.e.</i> housing, diet, other environmental factors)</li> </ul>
Environment	13	<ul style="list-style-type: none"> <li>(a) Report findings from collected samples and/or measurements, including measures of heterogeneity that could impact generalizability of findings</li> <li>(b) Provide descriptive statistics for all appropriate environmental/ecosystem variables</li> <li>(c) If appropriate, provide geographic referencing for all samples or data submitted to public databases</li> </ul>
Measurement	14	<ul style="list-style-type: none"> <li>(a) Identify populations, pathogens and/or vectors to the same taxonomic level across all three domains</li> <li>(b) Report findings in a way that is standardized or equivalent across all three domains</li> </ul>
Analysis	15	<ul style="list-style-type: none"> <li>(a) Provide comparative statistics, qualitative comparisons or integrated analyses among human, animal, and environmental variables, including (as appropriate) measures or descriptions of uncertainty (<i>e.g.</i> variance, confidence intervals, qualitative limitations)</li> <li>(b) Consider the potential for lack of independence or group effects that may impact statistical inference (<i>e.g.</i> at the household or building level, pen or other animal cohort level, and community level)</li> <li>(c) If indicated, provide geospatial comparisons or illustrations of spatial relationships (<i>e.g.</i> maps) to describe the distribution between human and animal populations</li> </ul>
<b>Discussion</b>		
Overall	16	<ul style="list-style-type: none"> <li>(a) Provide a comprehensive discussion that integrates the human, animal and environmental aspects of the results</li> <li>(b) Indicate generalizability of findings to local, national, and/or international levels</li> </ul>
Limitations	17	<ul style="list-style-type: none"> <li>(a) Discuss any discordance in acquisition, analysis or interpretation of data among the three domains (<i>e.g.</i> identify problems with application of different methods among the domains)</li> <li>(b) Identify where methods lack validation (<i>e.g.</i> animal methods used in human populations or vice versa)</li> </ul>

		<ul style="list-style-type: none"> <li>(c) Identify any methods that may not have been optimal to address research aims and suggest how future studies could overcome such limitations</li> <li>(d) Comment on issues that may impact the reproducibility of the study, as appropriate</li> <li>(e) Identify and discuss potential sources of bias</li> <li>(f) Discuss species-specific differences that may impact the results or the interpretation of the results</li> <li>(g) Identify other potential populations of humans or animals that could be involved in the problem and were not measured or addressed in the study</li> </ul>
One Health Contribution	18	<ul style="list-style-type: none"> <li>(a) Describe how a One Health approach to the study—specifically incorporation of expertise among the discipline and integration of findings from human, animal and environmental domains—furthered the understanding of the data/research problem</li> <li>(b) If appropriate, describe lessons learned from the One Health interdisciplinary study team approach, <i>e.g.</i> successes and challenges identified as part of the process of conducting the study, methods for operationalizing participation among the disciplines, and cost-benefit analyses of the resource efficiencies of One Health studies</li> <li>(c) Identify how the conclusions relate to promotion of human, animal and ecosystem health</li> <li>(d) Include “One Health” as a keyword and, if appropriate, also in the title of the manuscript</li> </ul>
Acknowledgment	19	Indicate funding source(s) and potential conflicts of interest

<sup>a</sup> Please adhere closely to STROBE or extension (*e.g.* STROBE-VET, STROME-ID, *etc.*) guidelines for reporting of observational epidemiology studies, which may impact placement of these COHERE checklist data. Where indicated, data should be placed in methods or results sections per STROBE guidance.

<sup>b</sup> Please see additional discussion of definitions of biological vectors and when and how to report them as part of the animal participants or part of the environment

<sup>c</sup>The authors and working group strongly encourage collection of and consideration of additional data on human subjects as appropriate, particularly occupation/work-related exposures, socioeconomic parameters, and other community parameters.