

Additional file 2: Summary of the two-step screening.

First step screening (title and abstract level)	
Publication type	Does the study involve a primary research article on avian influenza? <ul style="list-style-type: none">• Yes (include)• No (exclude)¹
Population	Does this article study avian influenza in poultry? <ul style="list-style-type: none">• Yes (include)• No (exclude)²
Study type	Does this article study the propagation of the influenza epidemic at the population level? <ul style="list-style-type: none">• Yes (include)• No (exclude)³
Model type	Does this article describe a mechanistic approach in studying an avian influenza outbreak? <ul style="list-style-type: none">• Yes (include)• No (exclude)⁴
Second step screening (full text)	
Publication type	Does the study involve a primary research article on avian influenza? <ul style="list-style-type: none">• Yes (include)• No (exclude)¹
Population	Does this article study avian influenza in poultry? <ul style="list-style-type: none">• Yes (include)• No (exclude)²
Study type	Does this article study the propagation of the influenza epidemic at the population level? <ul style="list-style-type: none">• Yes (include)• No (exclude)³
Model type	Does this article describe a mechanistic approach in studying an avian influenza outbreak? <ul style="list-style-type: none">• Yes (include)• No (exclude)⁴
Model objective	Does this article present a model that was used to estimate transmission parameters using AI epidemic data and/or to evaluate mitigation strategies after calibration to AI epidemic data? <ul style="list-style-type: none">• Yes (include)• No (exclude)⁵

¹ Articles to be excluded are reviews, commentaries, editorials, and perspective papers.

² Articles to be excluded are those that do not focus on avian influenza in at least one domestic poultry species.

³ Articles to be excluded are those that focus on experimental or molecular studies.

⁴ Articles to be excluded are those using a non-mechanistic approach. By mechanistic approach, we mean compartmental or individual-based (non-exhaustive list) models where the process of infection was made explicit.

⁵ Articles to be excluded are those using theoretical models that have not been fitted on AI epidemics (HP or LP) data.