Supplementary Material S1—Design of data collection instruments.

Online surveys were developed using Qualtrics XM software (Qualtrics, Provo, UT) and were designed to be completed in 15-20 minutes to minimize the time commitment of participants. The pre-meeting online survey was designed to collect demographic information and identify the areas of animal health and production in which participants were most actively involved, assess the level of agreement with general statements regarding antimicrobial resistance (AMR) (e.g., AMR is a serious concern for human health), and determine the level of comfort sharing AMR-associated data using a 5-point Likert scale (i.e., “Extremely comfortable,” “Somewhat comfortable,” “Neither comfortable nor uncomfortable,” “Somewhat uncomfortable,” or “Extremely uncomfortable”). Participants were also asked to rank a range of concerns related to sharing AMR and antimicrobial use (AMU) data. Participants were also asked if they would be supportive of efforts to develop statutory data protections for personally identifiable information collected related to AMU and AMR data from animals (i.e., yes, no, or maybe); they were given as an example the Health Insurance Portability and Accountability Act (HIPAA) protections that prevent sensitive human patient health information from being disclosed without the patient's consent or knowledge. Since we were particularly interested in identifying what livestock owners thought about development of an AMR database and dashboard, we developed six unique questions for those who owned livestock1 (“livestock owner specific questions”) and one unique question for those who did not. The post-meeting online survey was based on the pre-meeting survey and aimed to assess changes in participants’ perceptions related to the topics discussed after the focus groups.

The focus group instrument was initially developed for the in-person focus group at the 2022 National Institute for Animal Agriculture (NIAA) annual meeting2 and then adapted for the virtual sessions. For the in-person focus group, a set of four worksheets containing multiple-choice and open-ended questions were developed. The objective of these forms was to collect basic demographic information, assess attendees’ opinions on benefits and concerns about collecting and sharing AMR data from animal sources via a central dashboard, determine their level of comfort concerning AMR data sharing, and investigate the needed level of geospatial definition.

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1 Question defined livestock as animals intended for food production.
2 Held in Kansas City, Missouri on April 20, 2022.
Using the in-person response forms as a template, a standardized PowerPoint presentation was created with a similar set of questions for use in the virtual focus groups. A moderator script was also developed for these meetings to ensure consistency across focus groups and guide the discussion during the sessions. During both the in-person and virtual focus groups, the participants were first given a brief overview of the topic, then asked a series of open-ended questions to allow participants to articulate their own perceived benefits and concerns associated with a centralized AMR data dashboard before being provided with a list of potential benefits and concerns. For the provided list of benefits, participants were asked to choose a response from “Yes, clear benefit,” “Maybe a benefit but not sure,” “No, not a benefit,” and “Unsure what this means.”

A few questions were only included in the in-person or virtual focus groups instruments. For example, a list of general and geospatial data, as well as maps to visually illustrate various levels of geospatial details including 3-digit zip codes, were provided to participants in the virtual focus groups and they were asked to comment on their level of comfort sharing various types of data and levels of geospatial data. In response forms during the NIAA in-person focus group, participants were asked an open-ended question about where the central AMR dashboard should be located and why, but that not discussed in the virtual one. Brief demographic information was collected during the in-person focus group but was not collected during the virtual focus groups as participants had already self-selected which focus group to attend based on demographic information. In addition, based on the responses of individuals within each focus group, moderators occasionally asked the participants additional questions for clarification which were not standardized across meetings.