The National Advisory Committee on Meat and Poultry Inspection

Data Collection, Analysis, and Transparency Subcommittee

General Statements

- The charge to this subcommittee – “Data Collection, Analysis, and Transparency” – represents a broad range of issues linked with diverse economic, public health, and regulatory objectives. Subcommittee members are grateful for being given the opportunity to provide input but acknowledge that several of the charges where beyond their capability to fully address considering the diversity of perspectives represented and the limited time available to complete the task.

- The subcommittee acknowledges the significant efforts FSIS has made to address National Academy of Sciences and General Accounting Office findings. FSIS has developed detailed plans that the subcommittee feels are generally heading in the right direction. If implemented, these plans should position the Agency such that it can progressively make better assessments of factors most directly linked with public health objectives.

- Subcommittee members are in agreement that the Agency’s primary focus should be on pursuing public health objectives.

- Subcommittee members recommend that FSIS continue actively engaging stakeholders, both external and internal; to maintain ongoing two way communication regarding data needs as the Agency refines its information technology (IT) and data management systems.

- Data must be both accurate and timely to be actionable. Given the diversity of data needs and users, the subcommittee recommends that both summary and raw data be made available.

- Because FSIS data are generated from a wide range of sources that have been collected in different ways (routine, random, targeted collection systems), it is important that the Agency provide sufficient contextual information with data, so those using the data are aware of potential limitations when using the data.

1. Who are the likely audiences / primary stakeholders that FSIS should consider?

   The subcommittee recommends that FSIS impress upon its audience that public health protection is the agency’s primary concern and that the public health goals and objectives of FSIS’ PHIS be clearly communicated to all stakeholders. Furthermore, it is recommended that metrics used to monitor the agency’s public health goals and accomplishments are defined and shared with those evaluating and designing the data.
collection analysis and dissemination plan. Having access to the metrics will provide a better foundation for making recommendations concerning the process.

The subcommittee suggests that FSIS’s primary audiences and stakeholders are both internal and external to the agency. Internal audiences and stakeholders would include, but not be limited to the following: USDA staff at all levels (policy makers, specialists, operational supervisors, and front line staff). External stakeholders would include but not be limited to the following: local, state, and federal (FDA, CDC, and OIG) government, Congress, FSIS inspected establishments and the broader food industry, academia, public health food safety and consumer NGOs, animal welfare advocates, consumers, and the general public.

The committee recommends that FSIS obtain ongoing input from both internal and external stakeholders to ensure that the needs and requirements of all PHIS users be met. Representatives of stakeholder groups could participate on one or more ‘team(s)’ responsible for identifying their data and training needs but not responsible for any policy decisions. In addition to obtaining expertise of the end-user, the team approach would heighten transparency of the FSIS’ system design process and data plans. It is the committee’s belief that the stakeholders would be able to provide the Agency with a more accurate description of their needs.

2. FSIS is considering posting more detailed sampling results (both microbiological and chemical) and inspection results.

a. Does the committee consider these the highest priority datasets to make available?

The subcommittee recommends that data - sampling results (both microbiological and chemical) as well as inspection results - be prioritized by their public health relevance which should be determined by FSIS experts with appropriate public participation. The subcommittee believes FSIS data that drives food safety improvements, advances in food safety research, and public health improvements should be published for the public, and the format of the data should be designed to be of value to stakeholders responsible for public health improvements.

It is expected that the ‘team(s)’ will have the expertise needed to more accurately define the data needs of the various food safety stakeholders along the farm-to-fork continuum. The ‘team(s)’ should present its recommendations to FSIS by identifying clearly the short, medium and long term data needs of the various stakeholders. The subcommittee also recommends that FSIS obtain guidance from NAS, NACMCF, or other entities with recognized expertise in data management and analysis to improve data accessibility and usefulness for internal as well as external stakeholders. A standardized language for inspection data should be developed and a glossary created and shared with all of FSIS audiences/stakeholders.
3. When reporting sampling data and results:

a. What criteria can/should FSIS use to evaluate what information to release publicly?

While the subcommittee had extensive conversation and suggestions on this question, given the limitation of time the subcommittee believes this topic should be further explored.

FSIS should identify risk-based criteria so that the Agency can establish clear priorities for preparing and releasing data. Priority should be given to ensure the highest quality data are available for those variables most directly linked with public health objectives. The recommended ‘team(s)’ with appropriate time and consideration could more clearly define when, how and in what format sampling data should be reported. It is the subcommittee’s recommendation that FSIS provide its specific public health goals and objectives to the ‘team(s)’, and how the agency uses the data to assess progress towards these goals and objectives. Additionally, the FSIS should consider homeland security issues before posting information on its website.

It is recommended that proprietary information not be shared, and the source of the data provided should be clearly communicated to indicate limitations of data. In addition, data should be user friendly and provided in a format that allows querying.

b. Under what criteria and conditions should FSIS consider posting establishment specific data in which the establishment is identified?

The subcommittee has no specific recommendations for this question but discussed the following as issues that the Agency should consider:

- Identify what establishment information can be legally released if it is requested (example: FOIA)
- Streamline the information sharing process and anticipate the data that will be needed by both external and internal stakeholders (examples: assuring that key regulatory tasks are being accomplished as intended, assessing progress towards public health objectives)

c. What should we consider posting that we don't now, and at what frequency?

Given the diversity of the subcommittee and the limited time that we have to work on this question, it is beyond our capability to provide any detailed recommendations.

4. How should FSIS determine variables and time intervals for reporting?

The subcommittee agrees with the general approach of focusing on public health outcomes FSIS is using, but suggests they be reviewed by NACMF or some other external statistical analysis and/or quality control experts.
a. Which variables are higher priorities?

It is the subcommittee’s recommendation that the details pertaining to the data should be developed after considering the advice of the ‘team(s)’. The approach for identifying and implementing data collection, analysis, and dissemination procedures should include short, medium, and long term plans. In the short term, FSIS needs to assess the quality and scope of the existing data to help in the design and the optimal functionality of the PHIS as it is being implemented in Phase I.

The subcommittee recognizes that some data sharing needs may be focused on efficient accomplishment of current regulatory requirements that may not be clearly linked to public health objectives.

The subcommittee appreciates the candor of FSIS staff in acknowledging that the degree of alignment between regulatory activities and public health outcomes cannot currently be documented in all cases.

Given the significant costs of developing, implementing and refining automated data management systems, it is critically important to have ongoing input from representatives of groups likely to use the data regarding the most essential variables. FSIS has established some mechanisms to obtain input. The subcommittee recommends that these be formalized.

b. What time intervals would be most useful?

It is the subcommittee’s recommendation that the ‘team(s)’ with the advice and counsel of the NACMCF or some other statistical quality control and or statistical analysts determine the most useful time intervals. The subcommittee recommends that the Agency carefully consider the usefulness of data to both internal and external stakeholders as it invests resources to improve the collection, entry, quality control, and reporting of data.

c. What levels of aggregation are most useful? Most appropriate?

It is the subcommittee’s recommendation that the ‘team(s)’ determine the levels of aggregation that are most useful and appropriate. However, the following must be considered:

- Acknowledge that multiple factors can impact data consistency and comparability including but not limited: the collection process, system design (routine, random, targeted), laboratory testing methodology, and data management/quality control procedures in place.
- Do not use the term “prevalence” unless the data collection system was specifically designed to provide prevalence estimates.
The subcommittee suggests that FSIS should be diligent in assuring that the data collected for PHIS is appropriately defined, timely, and recorded correctly. The subcommittee also recommends that FSIS implement data quality checks and processes to ensure that all variables used in PHIS are accurate. Finally, the subcommittee recommends that FSIS develop and conduct training that is appropriate and timely for both internal and external food safety stakeholders involved in data collection and analysis.

5. FSIS Data Collection

a. What should FSIS consider in designing verification sampling to also provide reasonable measures of pathogen prevalence in product?

The subcommittee did not have time to adequately discuss this topic during the meeting and therefore provides no recommendation in this report. We recommend the FSIS consider: 1) putting this topic on the agenda for the next NACMPI meeting, 2) providing members with appropriate background materials, well in advance of the meeting, to inform the discussion, and 3) including a presentation at the next NACMPI meeting by both FSIS personnel and statisticians who have challenged the use of verification sampling data to estimate pathogen prevalence in product.

If this issue is placed on the agenda, we recommend that the background materials identify the agency’s current position and include papers and comments from statisticians outside the USDA who have previously reviewed this issue and provided the agency with input.

b. What should FSIS consider to address differences in inspection non-compliance rates between establishments, circuits, and districts?

The subcommittee strongly recommends that FSIS implement additional measures to verify that PHIS data are accurate reflections of actual differences in non-compliance rates among establishments, circuits and districts. Priority should be placed on addressing those differences most likely to represent a public health risk. Furthermore, FSIS must be certain that training for and pilot testing of the program will be extensive enough to know how inspectors will react to new situations that arise in the field due to implementation of the new PHIS system. FSIS should also make all of the data available to the NACMCF and ask that committee to undertake a detailed review of whether the system is accurate.

The subcommittee recommends that inspectors be well trained in order to standardize inspection protocols so that the rigor of inspection is commensurate with the type of product, volume of operation, and relative potential health risk of the product.