Coding strategies of focus groups assessing consumer knowledge and behaviors related to the safe handling of mechanically tenderized and enhanced beef products

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Introduction: Foodborne illnesses resulting from Shiga-toxin producing *Escherichia coli* (STEC) are often associated with consumer mishandling of food and cooking practices. In May 2016, USDA FSIS required the mandatory labeling of mechanically tenderized beef products (MTBs). MTBs have the potential of exposing consumers to STEC contamination from improper cooking, time-temperature abuse, or cross-contamination. Therefore, understanding consumer motivation and consumer views of intact and non-intact cuts of beef is necessary for designing and implementing food safety interventions to encourage proper handling of enhanced beef products.

Purpose: The objective of this study is to utilize mixed methods through the analysis of both qualitative and quantitative data to develop a framework for addressing potentially harmful consumer behaviors and attitudes. Focus groups, coupled with a national survey, will be implemented to identify the most effective methods for conveying food safety messages related to the handling of MTBs. Specifically, this aspect will discuss focus group coding strategies related consumer knowledge and behaviors toward mechanically tenderized and enhanced beef products.

Methods: Thirty-three focus group sessions were held throughout rural and urban Virginia and North Carolina counties (n=236) in 2016. Sessions were audio-recorded and transcribed. Focus group data will be analyzed for common themes and categories using constant comparison analysis. In this study, constant comparison analysis aims to generate categories and themes that can explain consumer behavior and attitude towards both mechanically tenderized beef while further confirming and expanding upon previous research in food safety behaviors. A codebook is currently being developed. NVIVO 11 Pro analysis software will be used to code focus group text data and pinpointing frequent, dominant, and significant themes found in raw textual data; this may include attitudes toward food safety, raw meat, and trusted retailers.

Results: Codebook development has begun. Preliminary data indicates that general attributes of beef, such as price, color, its sell-by date, and country of origin are all factors that affect purchasing behavior. Consumer numbing was also identified; consumer numbing occurs when consumers have been inundated with the same stimuli that they no longer pay attention to the stimuli. This phenomenon may contribute to consumers’ inability to identify correct safe handling instructions. Upon learning more about MTB, participants were divided on whether the knowledge and risks would affect purchasing decision. Important concepts regarding intervention strategies included further clarity of information and the development of more understandable labels to create transparency on packaging.
Significance: Through the use of mixed methods, a holistic picture of consumer knowledge of and attitudes toward both intact and non-intact cuts (MTB) can further guide the development of intervention methods towards effecting positive food safety behavior change.