

Research project IZS VE 08/10

Effectiveness of *consensus conference* targeting university students as a tool to communicate the microbiological risk of consuming meat products

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Studies on the perception of food related health risks (Battaglini, 2007; Sturloni, 2006; Bucchi, 1999) have shown that the public is mainly concerned with the consumption of chemically contaminated foods (Lanzola and Piva, 2004; Arzenton et al., 2005; European commission, 2006), as opposed to improper handling, preparation, and conservation and the related risk of microbiological contamination (i.e., foodborne diseases). However, experts and public-health authorities continue to place emphasis on microbiological contamination as a serious public health threat, probably because of the high incidence of foodborne diseases and the fact that clinical onset is evident after a brief period. The World Health Organization (WHO) has estimated that, in the most economically developed countries, each year at least 10% of the population is affected by foodborne pathologies.

In Europe, in 2008, the most commonly implicated bacteria in outbreaks of foodborne disease were *Salmonella* spp. and *Campylobacter* spp. (EFSA 2010). With specific regard to Italy, there are approximately 300,000 cases of foodborne diseases each year (Lanzola and Piva, 2004). Although data from Eurobarometer indicate that in the past 30 years Europeans' knowledge of issues related to biomedical sciences has increased (Bucchi, Neresini 2010), consumers generally show little awareness of biological risks and how to avoid them. For example, the importance of salmonellosis and campylobacteriosis is often underestimated because the public perceives the risk to be low (Arzenton et al., 2005). However, in managing and controlling microbiological risks, the individual can play a crucial role, in that the improper storage and preparation of foods in the home (Redmond & Griffith, 2003) can favour bacterial contamination and thus the risk of exposure to toxic infections.

In decreasing this risk, the role of communication is fundamental, and identifying effective means of targeted communication has become a research priority. In doing so, increasing importance has been placed on the direct involvement of consumers, through a participatory process sharing both content and the strategy to be adopted (Sheperd, 2008; Tiozzo, 2010). Moreover, targeted communication initiatives that take into consideration consumers' perceptions and behaviours are a valid means of reducing the incidence of foodborne diseases, by disseminating information on proper food preparation and handling (Arzenton et al., 2009).

Another objective is that of divulging in a timely manner the results of microbiological research, which is consistent with the most recent recommendations in the field of Science Communication. In fact, Science Communication has recently focussed on identifying techniques for defining means of handling foods that can be implemented in home kitchens and which are meant to become common practice for consumers. To this end, the Istituto Zooprofilattico Sperimentale delle Venezie (IZSVE) has created an "experimental kitchen", that is, a laboratory for recreating the typical food-storage and preparation habits of consumers and producing scientific data regarding these habits.

The objectives of the present project are: i) to develop a method of direct and participatory communication (i.e., a consensus conference), which was originally created to increase the public's awareness of the issue of genetic engineering yet which has recently focused on medical issues (Nielsen et al., 2006), so as to decrease the microbiological risk related to the consumption of meat products (e.g., hamburger and

sausage) among young persons; and ii) to evaluate the effectiveness of active participation by evaluating changes in the behaviour of the persons who participated in the decision-making/knowledge process for developing the contents of the information message (i.e., the indications for proper food storage and preparation resulting from research conducted in the experimental kitchen).