Risk Analysis and Bovine Tuberculosis in Developing Countries

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Bovine tuberculosis (BTB) can have a dramatic impact on an economy and on human and animal health. Over the past two decades, BTB has received increasing attention due to its sustained high prevalence among animal populations. Infected animals and animal products pose a significant risk to humans. This is particularly true in developing countries with immunocompromised individuals, mostly HIV-infected, and in communities where human consumption of raw milk is widespread and meat inspection is rudimentary. The maintenance of wild game reserves and the persistence of infection in livestock in these countries also increase the risk of BTB transmission to humans. Greater cooperation between animal services and public health agencies is necessary. Within this context, the use of quantitative risk analysis (QRA) should facilitate the assessment, management, and mitigation of the risk of BTB transmission from domestic and wild animals to humans. Drawing from field surveys in Uganda, QRA models were developed that took into account the various transmissions' pathways e.g. milk, meat, bushmeat, and animal clinical cases. Local knowledge, gathered through participatory epidemiological surveys among farmers and consumers, and the opinions of experts were considered to better evaluate QRA inputs. The use of risk analysis should be promoted as a decision-making tool and in policy-making processes to improve animal and public health in developing countries. The final goal is to develop pro-poor strategies aiming to improve food safety and decrease the likelihood of zoonoses in order to protect consumers and to keep markets open to smallholder livestock keepers.