

**Selection of meat inspection data for animal welfare index***Søren Saxmose Nielsen, Matthew James Denwood and Hans Houe**University of Copenhagen, Department of Veterinary and Animal Sciences, Denmark;  
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National welfare indices of cattle and pig production are being established in Denmark, and register data from abattoirs may contribute to such indices. The objective of this study was to select potentially welfare-relevant abattoir recordings and to assess the sources of variation within these recordings with a view towards inclusion in a national welfare index. Slaughter codes from the largest sow (n=3), slaughter pig (n=9) and cattle (n=8) abattoirs covering 92% of slaughtered animals in Denmark during 2012 were pre-selected based on expert judgment of having animal welfare relevance. This resulted in 22 individual codes and 8 code combinations for pigs, and 20 individual codes and 9 code combinations for cattle. Random effects logistic regression was used for each code/combination to determine the magnitude of variation derived at the level of the farm or abattoir, of which farm variation might be associated with welfare, whereas abattoir variation is most likely caused by differences in recording practices. Codes/combinations were excluded for use in the national welfare index based on poor model fit, or a relatively large abattoir effect. Ultimately, there was a large abattoir effect for most of the codes modelled. Among the pre-selected codes, the following number of codes or combinations were found to be potentially useful for a welfare index: 8 for slaughter pigs, 15 for sows, 5 for cattle <18 months of age, and 6 for older cattle. The majority of codes were considered to be not appropriate to be carried forward to the welfare index. It should also be noted that the accuracy of each code/combination was not assessed, only the observed variation between farms and abattoirs. In order to improve the possibility of using meat inspection data in animal welfare assessment, it is highly needed to identify the reasons for the large variation between abattoirs.