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PERSISTENCE OF ST398 MRSA CARRIAGE IN LIVESTOCK FARMERS

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Objectives A few years ago a new strain of Methicillin resistant *Staphylococcus aureus*, the CC398, Livestock Associated MRSA, emerged in humans. Carriage in humans is associated with intensity of livestock contact. It is unknown if carriage of livestock associated MRSA is persistent.

Methods We conducted a longitudinal study among veal farmers in which repeated nasal and throat swabs were taken for MRSA detection. Periods with and without animal exposure were covered and the exposure was monitored during a production cycle. A total of 51 randomly selected veal calf farms were visited. Farmers, family members and employees (n=155) were asked to fill in questionnaires to identify potential risk factors for MRSA colonisation. Nasal and throat swabs were repeatedly taken from each participant for over a 2 months period. Swabs were analysed by selective bacteriological culturing. Data were analysed using generalised estimation equations (GEE) to allow for correlated observations within individuals.

Results Mean MRSA prevalence was 38% in farmers and 16% in family members. Carriage of MRSA in farmers was strongly related to duration of animal contact and was strongly reduced in periods without animal contact. Family members, especially children, were more often carriers when the farmer was a carrier (OR=2, $P<0.05$). Few of the participants were persistent carriers.

Conclusions The presence of LA-MRSA in farmers is strongly animal-contact related. The rapidly decreasing MRSA prevalence during absence of animal contact suggests that LA-MRSA is not a persistent coloniser in most humans. These results are of relevance for MRSA control strategies.