Resistance to antibiotics is a rapidly growing global problem and a threat to public health, although the local situation in Denmark is still relatively favourable.

Antibiotics are prescription drugs in Denmark, and for a number of years now measures have been introduced to lower their consumption. Nevertheless, consumption of antibiotics has increased in both the human and the veterinary sector.

In the view of the Danish Council of Ethics, part of the explanation may be that both the rationing of antibiotics and the prevention of infection involve ethical dilemmas. In this statement the Council introduces these dilemmas, and presents a number of recommendations based on them.

The research work underpinning this statement, together with video clips and other resources, can be found on the Council’s website at www.etiskraad.dk/antibiotika (only in Danish)
**Ethical dilemmas**

**Dilemma 1: Rationing antibiotics**

The need to prescribe human antibiotics reflects the general living condition of a population, including hygiene conditions in homes, in public spaces and at workplaces, day-care facilities and hospitals. The consumption of antibiotics in farming is largely a result of the production methods chosen.

Owing to the great mobility of people, animals and foodstuffs, the effect of a cautious approach to using antibiotics on the local resistance situation is uncertain.

However, the extent of resistance is inextricably bound up with the consumption of antibiotics. Even well-justified use promotes resistance development. Within a fairly short span of years, increasing resistance to antibiotics will reduce patients’ access to potent and effective antibiotics.

It is crucial, therefore, to exercise reticence regarding the use of antibiotics, in spite of the fact that greater reticence will involve a greater risk for patients, animals and livestock. Examples of obviously unjustifiable use—that is to say where antibiotics are prescribed even though the treatment is known to be ineffective, and where reticence is therefore bound to have no impact—are probably rare.

How should the doctor, veterinarian and farmer balance consideration for the patient, animal or herd with regard to future patients?
Dilemma 2: Preventing infection
Being a carrier of antibiotic-resistant bacteria entails a risk of infection. Infection can entail medical risks and social strains and stresses.

Those not infected should be protected against infection. That may call for the use of isolation, restraining measures etc. Those not infected should also have the option of deciding which infection risks they want to expose themselves to. That advocates openness around infection sources, e.g. by informing the public about infected animal herds or having a duty to report a knowledge of infected individuals.

For carriers of resistant bacteria, however, such initiatives can be stigmatizing, offensive and involve interfering in the individual’s freedom. Furthermore, experience has shown that carrier status, as a consequence of stigma, has been concealed to a greater extent, thus causing the risk of infection to rise.
Recommendations

• In guidelines the authorities should acknowledge the ethical dilemmas in which doctors, veterinarians, farmers and ordinary citizens are placed as a result of endeavours to ration antibiotics and prevent the spread of antibiotic-resistant bacteria

• The authorities’ efforts to combat antibiotics resistance should be intensified in the health sector with a view to reducing the problem both nationally and internationally. Particular heed should be paid to specialist guidelines for the use of antibiotics and their implementation

• The authorities should minimize the stigmatization, isolation and discrimination that may attach to being a carrier of antibiotic-resistant bacteria. First and foremost, the risk of infection should be limited by improving general hygiene

• Use of antibiotics “to be on the safe side” or to reduce discomfort should be avoided in interaction between doctors and patients

• The authorities should redouble their efforts to combat antibiotics consumption in farming. This can be done, for example, by promoting and demanding stricter criteria for healthier forms of production and by limiting the use of herd medication

• Nationally and internationally, the authorities should work to promote consumers’ scope for choosing products made with limited consumption of antibiotics