A conservative tradition of treatment with room for improvement.

Use of antibiotics in hospitals and nursing homes

Antimicrobial resistance is an increasing public health problem globally, and has been described as the health services' climate crisis. The topic was dealt with in the UN General Assembly in September 2016, with Norway playing an active role. There was broad agreement that the work to combat resistance must be intensified, both internationally and in the individual member countries (1).

Correct use of antibiotics reduces the selection of resistant microbes so that the sensitive normal flora is not supplanted. It is particularly important to avoid the unnecessary use of broad-spectrum antibiotics.

Norwegian doctors have traditionally been conservative in prescribing antibiotics. However, recent decades have seen a slide towards higher total consumption and more widespread use of broad-spectrum drugs (2). This change can only partially be explained by changes in the patient population, increasing resistance or other medical needs. Since 2012, total antibiotic consumption has fallen slightly, but it is too early to conclude that we are on the path to a lower consumption that will remain stable (2). The establishment of national guidelines for the primary healthcare service (3) and for hospitals (4) may have contributed to this positive trend. The guidelines cannot allow for every clinical situation, but should be normative for the great majority of patients.

Efforts to optimise the use of antibiotics must be based on thorough analyses of how the drugs are prescribed. All antibiotics dispensed in Norway are registered in the Norwegian Prescription Registry, but their use in institutions is currently not recorded at an individual level. The Prescription Registry is therefore an important data source for the primary healthcare service, and the value of registration will further increase with the implementation of the decision by the Storting to require that the indication be specified on prescriptions for antibiotics (5). In hospitals and nursing homes, we currently have no corresponding data sources at the level of individual patients.

This issue of Tidsskriftet presents two articles on the use of antibiotics in hospitals (6) and nursing homes (7) respectively, based on point prevalence surveys from spring 2016. It is mandatory that such surveys be conducted twice yearly, with the option of two additional, voluntary rounds. The reports are compiled by the Norwegian Institute of Public Health and provide a snapshot of the situation in the institutional health service. The method has obvious weaknesses, such as variation in registering practice and incomplete datasets, but for the time being it is the best we have.

Øyunn Holen and colleagues (6) show that broad-spectrum antibiotics constitute 33 % of all antibiotic prescriptions in hospitals, and that lower respiratory tract infections are the most frequent indication for antibiotic treatment. Of patients with lower respiratory tract infection acquired outside a health institution, the proportion treated with broad-spectrum antibiotics is far higher than might be expected based on the national guidelines. Torunn Alberg and colleagues (7) show that urinary tract infections are the most frequent indication for antibiotic use in nursing homes and that recommended first-line drugs represented 60 % of the prescriptions for these indications. In many cases deviations from the recommended dosage were identified, and microbiological tests to support the diagnosis were only undertaken in half of the patients. The widespread prescribing of methenamine as urinary prophylaxis sets Norwegian medical practice apart from that of all other countries.

The overall picture of antibiotic use in Norwegian health institutions is that prescribing doctors continue to uphold a tradition of conservative treatment, but that nevertheless there is room for improvement. There is considerable, unexplained variation between institutions of the same type, among hospitals as well as nursing homes. The trend over time shows that some units have a falling overall consumption and reduced use of broad-spectrum drugs, while for others the use of antibiotics has stagnated or even increased (2). A more detailed analysis of these differences requires better data sources. The health trusts have begun the introduction of electronic patient charts, but there is currently no national mandatory requirement for indication to be specified on prescriptions for antibiotics. This must be in place in order for individual prescribers and medical communities to obtain feedback on whether their practice is in accordance with medical advice and guidelines.

The Norwegian Government has set clear objectives in its action plan against antimicrobial resistance in health care (5). Overall consumption shall be reduced by 30 % and the use of broad-spectrum antibiotics in hospitals by 30 % in 2020 compared to the level in 2012. By the end of 2017, all hospitals must have established separate antimicrobial stewardship programmes, central to which will be training, monitoring and feedback. It is currently unclear how antimicrobial stewardship will be organised in nursing homes, but it is natural for the programmes to be designed in collaboration with the primary and specialist health services.

Combatting antimicrobial resistance is a matter of treatment quality and patient safety. It is a management task to facilitate good quality at all stages of the treatment chain and to follow up deviations, but in the final analysis, all doctors who prescribe antibiotics must take their own share of the responsibility for using them as correctly as possible. The articles by Holen and colleagues and Alberg and colleagues represent important contributions to this work.

Gunnar Skov Simonsen
gunnar.skov.simonsen@unn.no

Gunnar Skov Simonsen (born 1965), director of the Norwegian Surveillance System for Antimicrobial Drug Resistance (NORM) and the Department of Microbiology and Infection Control, University Hospital of North Norway. He is a professor of medical microbiology at the University of Tromsø – The Arctic University of Norway.
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