Inger Nordin Olsson was born in 1955 and received her MD from the Karolinska Institute, Stockholm in 1980. She did her internship at Karlskoga hospital and obtained her specialist qualification in Family Medicine in Örebro primary health care in 1989. For twelve years she was in charge of a health care centre, followed by employment and commission as a senior consultant physician in the county council’s primary care. Since 2010 she is employed at the National Board of Health and Welfare, the Department of Supervision, as a medical supervisor. The work presented in this thesis begun in 2005 under the tutorship of Professor Peter Engfeldt, Family Medicine Research Centre, Örebro University, Sweden.

The general aim of the thesis was to examine the effect of different interventions to implicate on the usage of inappropriate and hazardous multi-medication in elderly ≥75 years and with ≥5 drugs. The studies were performed with different perspectives; surveillance in nursing homes, the nursing process, prescription quality and physician feedback, medication appropriateness and quality of life.

In the nursing homes, the intervention resulted in significant positive results in the quality of drug treatment, a shift in health care utilization with concomitant use of fewer drugs. The study showed an extreme shortage of monitoring of health status and surveillance of the effects of drugs in the elderly. More attention must be focused on the importance and the complexity of the nursing process; health assessment and medication management must be promoted in care of the elderly. There must be sufficient and adequate reporting based on the registered nurses’ nursing and medical skills to monitor and evaluate as well as to question the drug treatment in teamwork with the physician. For the elderly in ordinary homes, the intervention had no effect on quality of prescriptions or quality of life. This underlines the major challenge of finding new strategies for improving prescription quality to improve patient outcome measures such as quality of life and reduce the known risks of polypharmacy for the elderly. The cohort study has shown the validity of the basic principle in prescribing: the more appropriate medication the better quality of life. Since drug quality is related to the patients’ quality of life, there is immense reason to continuously evaluate every prescription and treatment. The evaluation and if possible deprescribing should be done as a process where both the patient and physician are involved.