The implementation of national IT projects in social and health care

Various national and regional projects have been undertaken in the past two decades to improve efficiency in Finnish social and health care. In 1996 the Ministry of Social Affairs and Health published a strategy for utilising information technology, and on this basis efforts have been made to promote IT development in the field. The present audit concerned the development of electronic patient records and electronic prescriptions in the National Archive of Health Information project and the National Project for Social Services IT. The audit also examined problems regarding the use and usability of information systems in health care.

IT management expenditure in public administration totalled about 2.1 billion euros in 2009. IT management expenditure by local authorities and federations of municipalities in the field of health care totalled about 270 million euros in 2009. Health care's share of IT management expenditure in public administration thus amounted to about 13 per cent in 2009.

The main audit questions were how well the strategic objectives set for national IT development projects directed by the Ministry of Social Affairs and Health have been achieved and whether projects have been conducted in accordance with the principles of good governance. The audit focused on development from 2003 to the present.

The audit found that the National Project for Social Services IT has taken action-oriented measures to improve IT management and has the preconditions to achieve solutions that will increase productivity in social services by developing information technology. Making information technology and IT management a focus of strategic development in social and health care is justified in view of the large operational benefits offered by ICT. The importance and urgency of this work are underlined by the fact that health care in-

formation systems are fragmented and many systems are approaching the end of their life cycle.

National projects to develop health care information systems have produced modest results, however, and have been poorly directed. Projects have been implemented in an IT-centred manner. Activity-oriented development work designed to increase efficiency and productivity in health care has been insufficient.

Reforms of IT management and information systems in health care have been implemented on top of existing multi-level organisational structures. so inflexible structures and outmoded practices, for example in handling documents, have guided the drafting of legislation. Uncertainty concerning the future development of the structure and organisation of social and health care and multi-channel funding have also hampered the development of IT management and information systems. The organisation- and document-centred system architecture and different organisations' inflexible procedures have slowed the reform of IT management in health care. Furthermore shortcomings and delays in the specification of a national information architecture have been a key reason for the delay in IT projects in the field.

The development and introduction of national IT system services will cost 400-500 million euros. The Ministry of Social Affairs and Health has not provided Parliament adequate information on the total costs of the National Archive of Health Information (KanTa) project. Adequate cost monitoring has not been performed in the project, nor were costs and benefits investigated adequately when national solutions were decided. The KanTa project has lacked the required professional leadership and sufficient monitoring tools. The project organisation has also proved inefficient.

The introduction of KanTa services, originally scheduled to take place by 1 April 2011, will be delayed from two to four years in public health care and from three to five years in private health care. The Ministry of Social Affairs and Health does not have a clear picture of the objectives of KanTa services. Descriptions of the system architecture have gaps in many respects. Nor will KanTa services solve problems in health care information systems. The basic cause of problems is fragmentation and the obsolete structure of patient record systems.

Seven different patient record systems are in use in public health care organisations. In addition there are numerous special applications and solutions using patient record systems, some of which (such as laboratory and imaging systems) are shared by several organisations. Local authorities also have separate systems for dental care and occupational health care, which must be able to handle electronic prescriptions and patient records and other necessary information in electronic form according to the archive's specifications.

Patient record systems in the public sector are approaching the end of their life cycle, so developing systems in the present manner does not make sense economically or operationally. For this reason the Ministry of Social Affairs and Health should begin studying ways to develop a single national patient record system for basic health care in the public sector. In addition the Ministry of Social Affairs and Health should take measures to arrange the monitoring of the development of patient record systems, since no one is in charge of monitoring systems logic at present.

The costs and benefits of the National Project for Social Services IT have not been evaluated. The organisation of the project has been partly outsourced, and the project has been implemented on a shaky financial basis and in the form of short-term subprojects. Nevertheless, over six million euros has been appropriated for the project since its launch in 2005. The project has mainly resulted in studies and the preparation of specifications for social care. The Ministry of Social Affairs and Health should clarify the implementation of the project. An additional problem is local authorities' resources, which are not sufficient to develop information technology in social care and health care at the same time. Financing should be ensured to implement the health care information system as a whole before measures are taken to implement national services in social care.

The Ministry of Social Affairs and Health should also take measures to clarify IT strategy in social and health care. Based on this strategy it should prepare a realistic plan with timetables for introducing electronic prescriptions and the electronic archive of patient records as well as an evaluation of when the development of IT system architecture can continue in social care, taking local authorities' resources into account.

There are shortcomings in the drafting of legislation regarding IT management in the administrative sector of the Ministry of Social Affairs. The strategic point of departure in preparing provisions is that KanTa services will be introduced simultaneously. The ministry has consequently assumed that health care providers will be required to register for KanTa services by a fixed date. This approach cannot be considered successful, since local authorities, federations of municipalities and private health care providers cannot do anything about the time frame in which the Ministry of Social Affairs and Health, the National Institute for Health and Welfare and the National Supervisory Authority for Welfare and Health will complete specifications. Only after specifications have been completed and patient information systems are ready to go into operation can health care units be required to register for KanTa services. The Ministry of Social Affairs and Health should take steps to improve the drafting of legislation.

The National Institute for Health and Welfare has outsourced functions to the Association of Finnish Local and Regional Authorities, social welfare centres of expertise and the University of Eastern Finland. Similarly, national classifications and codes are administered by the Association of Finnish Local and Regional Authorities and the Finnish Medical Society Duodecim. This model contains operational and economic risks. The National Institute for Health and Welfare should take measures to bring classifications and codes under official control or under the statutory control of a standardisation organisation together with intangible rights concerning the development of codes. The Ministry of Social Affairs and Health should clarify project management and particularly decision-making procedures, and the monitoring of projects should be made systematic without forgetting cost-effectiveness.

Health care units spend 2,000-3,000 person-days a year on producing basic data for the statistics collected by the National Institute for Health and Welfare. In practice health care units have to produce the reports required by the National Institute for Health and Welfare or purchase them from IT suppliers. These reports are based on information that has already been recorded in patient information systems. The Ministry of Social Affairs and Health and the National Institute for Health and Welfare should together prepare the architecture for collecting national patient information in

order to improve the efficiency of data collection. The National Institute for Health and Welfare is also engaged in research activities that appear to overlap with research work at universities.

On the basis of audit findings, the National Audit Office cautioned the National Institute for Health and Welfare and the National Supervisory Authority for Welfare and Health concerning procedures that were not in line with legislation.