CONFEREECE ABSTRACT

How to modernise a nationally implemented data exchange system to meet
the future needs in Danish healthcare delivery

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1: MedCom Denmark

Introduction: All hospitals, laboratories, pharmacies, municipalities, physiotherapists, general and
specialist practitioners etc. in Denmark routinely use MedCom -communication in their daily work. MedCom's standards are built into more than 150 IT systems and approx. 6.5 million MedCom - standards are exchanged monthly.

The present infrastructure is based on Value-added Networks (VANS), which was created in the 1990s. The messages in the VANS network have standardised content, and the message format is mainly based on EDIFACT. To meet the future needs of the Danish healthcare sector, the national eHealth strategy contains a priority on implementing a fundamental modernisation of both MedCom’s standards and the associated infrastructure.

Aims, Objectives: The Danish healthcare system is facing organisational changes that call for a paradigm shift in the MedCom communication, namely: Fewer, highly specialised hospitals with short courses of treatment and quick handing-over of patients to municipality and general practice.

Thus, close and parallel collaboration between municipality, general practice and specialists at hospitals on treatment and care is, therefore, essential. The purpose of the modernisation is firstly to make relevant data available for online sharing at the request of health professionals; and secondly to support a fast, stable and secure transmission of relevant data sets at the time, the patient responsibility unequivocally shifts between sectors.

Highlights, Results or Key Findings: Consequently, the internationally preferred standard, HL7 FHIR®, will replace EDIFACT. The choice was made in close collaboration with IT vendors and representatives from all parts of the healthcare sector. It has been crucial to

- secure an upgrade based on known technologies and supported by available development tools
- support globalisation of Danish health -IT development
- simplify future revisions of MedCom’s standards in conjunction with the user/business needs

HL7 FHIR® underpins transmission of information between IT systems, as known in the original MedCom communication, as well as data sharing between IT systems.

In 2020, the Danish Health Data Authority published a target architecture for future message communication, which pointed at EU’s eDelivery solution to replace VANS for point-to-point message communication in the health domain, including increased security in the exchange using modern technology and standards. In addition, there will be the possibility to add document sharing of messages through the National Service Platform.
Conclusions: A well-functioning MedCom -communication is critical for the daily activities across the whole health system. Consequently, many organisations must maintain the current and new technical solution in a multi-annual transition period. Additionally, the MedCom -communication is still growing and must be upheld in parallel with the introduction of new standards and new infrastructure.

Implications for applicability/transferability, sustainability, and limitations: With the introduction of the EDIFACT -communication years ago, the Danish healthcare sector has already harvested the apparent gains from replacing paper-based workflows with digital data exchange. FHIR® is still a new technology for many IT vendors, and an initial investment to make the transition is required from both vendors and customers.