Conclusions

The Capital Region has developed standard pathways for COPD and diabetes. These pathways are all text-based documents, which are difficult to use in clinical practice at the point of care. They serve as reference material for clinical practice for the entire region, including 14 hospitals covering a population of 1.7 mio. citizens, 29 municipalities and 1000 general practitioners.

As an answer to this programme, a cross-sectorial analysis and design group was set up, consisting of clinical specialists, IT rejects and architects from municipality, GP and hospitals. Impelled by the case management and CRM industry and products, the Danish tradition of standardized digital handover protocols for patients transferred between sectors was lifted to the computer-based modeling and implementation of pre-standardized and formulated care management plans by prototyping as a start point for the implementation. The result was a shared individualized plan embedded in the planning and coordination module: “P&C”

The results from the from a clinical simulation study with the P&C prototype identifies opportunities for designing the healthcare organization with embedded coordination functions to support the care processes in particular in relation to chronic conditions like COPD and diabetes. This includes new roles and healthcare business logics based on coordination and continuity in the case management and empowerment of the patients.

The plan & coordination module

Pathways
Text based standard pathway and guideline for COPD and diabetes

Health service catalogues
Transforming text-based standard pathways to computable health services

Care Plan
Instantiating, individualizing and maintaining the patients plan

Health Condition
Using data from measurements and monitoring to overview the patients condition

The purely clinical plans are instantiated as standard care management programs with patient details, services per stratification level, and leaves room for self-defined optional services. The plan is shown in 3 explodeable tree levels in a Gantt diagram. The services are designed as standard placeholders for concrete services, to be modeled into searchable service catalogues, owned and managed by the different providers. A diagram of service states and shifts between them was defined, and made documentable on a per-service manner. These service state shifts are the core formulation of the it support of the coordination problem. The care programs are formulated in a manner such that it is possible to concatenate the instantiated plans over multiple health conditions, and the system holds a simulated results window with measurement results stemming from the execution of services.

References