

A Model Developed for Assessing the Production Control

Maturity at Healthcare Departments - By Fredrik Elsnitz & Filippa Ramberg

The Swedish healthcare system has been struggling with good access to healthcare for a long time. Many public reports call for the increased implementation of production control in order to deal with accessibility issues. When working well, production control ensures timely delivery of healthcare services and effective utilization of resources. Maturity of the healthcare production control is generally low in Sweden today, and a model for assessing the maturity of production control is absent.

Swedish healthcare's accessibility has been regulated under the National Guarantee Act (Nationell vårdgaranti) for several years, and the speed with which referrals, surgeries and other medical evaluations have been performed has been set in legislation. Even though healthcare regions are required to adhere to these standards, no region is able to fulfill the standard set by the National Guarantee Act. Waiting times have already ballooned with the Covid-19 pandemic and Swedish healthcare will also see an increased demand due to an increasingly aging population in the future. What they now need is something called production control - a term one might associate with the manufacturing industry. By quantifying the healthcare need and actively matching that with the capacity of resources in an effective and efficient manner, one can create balance in the production.

The maturity of activities associated with healthcare production control are low today. Many departments do not have adequate forecasts of healthcare needs and thus don't know how much healthcare they need to produce. Several regions have however rolled out initiatives to increase healthcare production control with varying levels of success. In order to both enable improvement of the production control, as well as prioritizing efforts between departments, a standardized tool for assessing the maturity of the production control within each clinic is needed. Such a tool is commonly called a maturity model, and in this thesis we set out to create a maturity model of healthcare production control at departmental level.

To do this, we researched maturity models in adjacent fields of e.g., S&OP planning, to find patterns in how maturity is described. This was complemented with discussion of healthcare planning performance and different elements of healthcare production control. We then set out to adapt this to the healthcare system by analyzing published literature on the subject and then working with experts within the field, through interviews, workshops and test evaluations to create the healthcare production control maturity model (HCPCMM). The overall methodology was inspired by the constructive approach, and literature specific to the development of maturity models.

The final maturity model is designed as a grid and consists of twelve different 'process areas' divided into the categories of 'Organization and Culture', 'Structure and Routines', 'Measurements and Control', and 'IT'. A differentiation for each process area across five different maturity levels was made, enabling an in depth discussion of maturity. In contrast to existing maturity models, the definition of appropriate data was shown to be extra important for healthcare, something that to an extent has inhibited broad application of optimization in healthcare planning. We hope that the HCPCMM will support discussions around healthcare production control maturity in Sweden from now on.