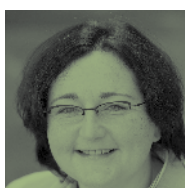


Needs-oriented manpower planning in hospitals

In many German hospitals, manpower planning is still limited to the professional group of nursing, and even there to the management and calculation of shift models. Given the increasingly difficult basic economic situation and the statutory restrictions on working time, the demand for effective, needs-oriented manpower assignment is becoming ever more urgent



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With the reworking of the European Working Time Directive and the resulting change in the German Working Time Act (Arbeitszeitgesetz), an intense debate over doctors' working hours has begun. Hospitals are under considerably greater pressure with respect to working hours. In parallel with the statutory amendments regarding maximum working hours, especially with respect to "on call" duty, the new financial principle of the diagnosis related groups (DRG) requires more efficient organisation of treatment processes. This combination of needs related to reducing workloads while increasing productivity can be solved only through well thought out working time management. Yet in past years such professionalising of working time management has been neglected in hospital medical services. Traditional combinations of regular duty and on-call duty reflect neither the actual working hours nor the operational needs.

For years now, software supported work schedule organisation has been developing in the field of nursing, which represents the largest professional group in hospitals. Many of the products on the market grew out of those developments. Consequently, many hospitals already have appropriate computer programs to assist with job scheduling. One might suppose that it would be easy to incorporate the new working time models for doctors into those programs. In practice, however, there are specific requirements that make it difficult to integrate those medical planning systems into existing solutions. In addition, many programs are limited, being used only to represent and manage shift models. Support is seldom provided for structured needs oriented planning, which is becoming increasingly important.

New Requirements

The European Court of Justice, in its decisions in recent years, has determined that on-call duty in the form of personal presence in the hospital counts as working time within the meaning of the European Working Time Directive (93/104/EC), regardless of whether or not the employee is allowed to rest. Those decisions contradicted the prior German Working Time Act, under which such hours were classified as rest periods. The German Working Time Act was amended to take that change into account on 1 January 2004, so that on-call hours are now counted as working hours. It is up to the parties to the collective agreement to agree on the specific organisational details within the margin of discretion allowed by the ECJ decision. This sparked intense debate in Germany, which in 2006 culminated in protests and strikes by doctors. As a result, for the first time, specific working time arrangements for doctors were agreed to in collective agreements, which were intended to do justice to the specific requirements of medical activities. Through the new regulations of the Working Time Act, collective agreements take on considerably greater importance, since the central issues of working hours can and should be governed by them.

The key issues of the wage regulations involve the restriction of daily working hours and average working hours. The on-call duty scheduling is regulated in a binding manner; workload analysts are supposed to lend assistance to ensure that on-call duty does not reach the workload level of full time work. Moreover, another important demand of the doctors is implemented in the collective agreement: to keep a record of the actual working hours. This places hospitals under increasing pressure to schedule the doctors' working hours better, since the actual workload throughout the day is now visible. In many

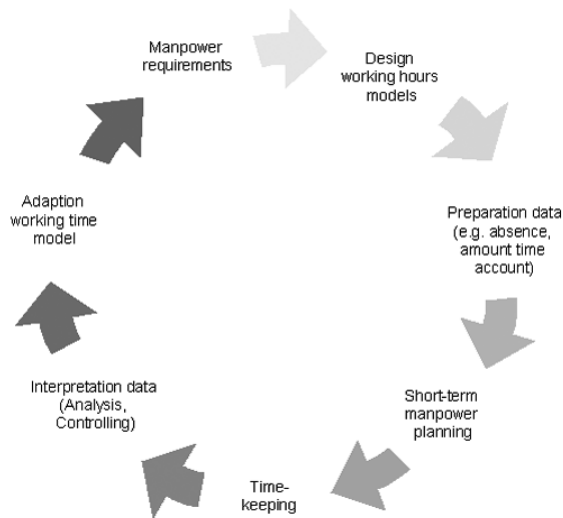


Figure 1
Process model for needs oriented manpower planning

fields, this will lead to adjusting the operating hours to the actual needs. In addition, the actual extent of overtime worked by doctors is made clear through a record of the hours worked.

Besides this pressure for change because of changes in working times, financial issues intensified the pressure to optimise organisational workflows and thereby increase productivity. The effects of introducing DRG, combined with the extra burdens of price increases and the value added tax increase, are placing greater economic pressure on hospitals. The necessary efficient planning and streamlining of workflows cannot be achieved without a needs oriented, flexible system of working hours. At the same time, employee satisfaction and the related customer satisfaction in the hospital are becoming increasingly important in light of the competition among hospitals, Professional working time management involves an optimal match of needs and capacity while taking such factors into account.

Software solutions

To support these tasks, a variety of software solutions have been developed in recent years, with a focus on representing and managing shift models in the field of nursing. Accordingly, many programs are geared towards the requirements of nursing. Clear hierarchical structures determine the job schedules, schedule approval, and accounting.

For the duties of doctors, in contrast, who often work in regular service shifts extended by on-call duty, simple recording on a calendar was (apparently) sufficient, especially since only on-call duty and absences were planned.

Flexible working hours, working hour accounts, service modules with shortened on-call hours, and other complex models can no longer be managed through the resources available in the calendar or an Excel spreadsheet and require computer assisted job schedule organisation.

Using the existing programs for doctors is made more difficult through different needs for the scheduling and recording of working hours combined with prejudices against the programmes developed for nursing. The existing solutions are being adapted accordingly or new solutions for the professional group of doctors are being developed. A special requirement resulted, for example, from the scheduling of on-call duty, which frequently requires access to the several planning units (master plan) in order to schedule the work on a comprehensive basis. Work schedules for doctors sometimes contain block diagrams in which the occupation of individual posts is planned.

Documenting the actual hours worked, which is the job of the head of the ward in the case of nursing duties, is often arranged differently in the case of doctors' duties. Employees organise and record the working hours by themselves. Such scheduling is supported by web applications and time recording systems through which the working hours of employees can be documented.

The overall focus of the activity is on assisting the administrative tasks of scheduling and accounting.



That will not suffice to cope with the future requirements of needs oriented manpower assignment; rather, structured working time management is necessary for comprehensive use of the organisational possibilities of computer assisted manpower planning.

Needs-oriented manpower assignment

Scheduling the manpower planning to suit the actual needs, which always requires making available the exact number of properly qualified employees, presupposes the following:

- Planners must be well acquainted with the manpower assignments to be expected during the scheduling period.
- That need must be represented as accurately as possible in the working hour models, which should also be capable of reacting to changes in needs.
- Planners must have real-time access to the information necessary for their tasks.
- Planners need assignment scheduling support tools that allow them to create optimal plans as efficiently as possible.

In this connection, needs analysis, forecasting and work time controlling in order to better match manpower assignments with actual needs are taking on increasing importance. This is all the more important since only a few hospitals are currently capable of conducting quantitative analysis of the extent to which manpower planning satisfies actual needs. In some cases data is lacking or has not been properly prepared.

Professional manpower planning begins and ends by formulating the needs and the matching manpower assignments to those needs. Need forms the basis for the working time models, and analysis and evaluation of the manpower planning shows how well the specified need was represented and provides a basis for making further adjustments. A few manpower planning systems already offer the possibility of forecasting needs and comparing them with the actual manpower assignments. Specialised software tools that assist with working on such formulation include, for example, Operating Hours Assistant by XIMES (see XIMES.com). That program supports several methods of calculating manpower requirements and comparing manpower assignments with the actual requirements.

Manpower planning and accurate recording of hours worked supply the data needed to create structured, real-time analyses, in connection with corresponding performance data. Such analysis in turn provides a basis to forecast needs and adjust the model, which concludes the circle of needs oriented manpower planning. This makes it clear that changing the working hours is not a one time project but rather must be developed into a standardised, continual process. This requires not only on suitable software solutions but also qualified planners.

The basis prerequisite for effective time management is comprehensive knowledge about planning, the basic conditions, and management of working hours. Moreover, clear responsibilities and areas of authority must be created.

The know how that has been developed over decades in the field of nursing must be transferred and adapted quickly to the duties of doctors in the context of modern job scheduling.

Increasing flexibility requires all concerned to take on significantly more responsibility and think in terms of business management. Employees need to organise themselves more effectively and control their working processes themselves. Planners must be capable of recognising potential improvements from the results of the personnel controlling operations and to incorporate such improvements into the ongoing development of working time models.

Selecting and introducing new work organisation programs will no longer be geared towards possibilities of organising the actual work schedule itself but rather on mastering comprehensive tasks to achieve structured and, above, all needs oriented manpower planning. ■

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