

By Bettina Tondorf

# Computerised Support for Manpower Planning

When calendars are no longer sufficient for duty rotas

Changes to working time legislation and mounting demands for more flexible working hours have shifted the locus of the debate on manpower planning to the need to use computerised support when drawing up duty rotas, even for medical staff. For years, software solutions have been used to support manpower planning in nursing. The reason most of these programmes can be traced back to nursing is that the need to simplify processes was particularly acute in the largest occupational group. For this reason, many programmes are geared towards the requirements of nurses. Until recently, however, it was deemed sufficient, when making rostering arrangements for medical staff - who generally work regular hours supplemented by on-call shifts - to make a few simple entries on a calendar, particularly as only on-call hours and absences were planned. The position changed, however, with a recent European Court of Justice ruling on on-call hours. It is no longer feasible to deal with flexible working times, working time accounts, duty modules with shortened on-call hours and other models using the limited scope of a calendar or an Excel spreadsheet.

With software solutions for manpower planning already in use in many hospitals, it is only logical that they should be introduced for duty rota planning in the medical professions. However, this is not as simple as it seems. Experience has shown that specific requirements must be met if this other, medical side of planning is to be integrated into existing packages. Moreover, many doctors criticise these programmes as inappropriate for manpower planning in the medical professions because they are tailored towards the needs of nursing. A further complicating factor is the tendency of medical staff to harbour strong prejudices towards planned shift systems, which they believe do not do justice to their unique needs. This article will elucidate differences in terms of the requirements placed on this occupational group and outline potential solutions, drawing on the planning process.

## Demands

Manpower planning is a complex process on which a variety of demands are made. On the one hand, the roster must satisfy quantitative staff needs, as well as the qualitative needs of the staff deployed, and, as such, take quality

requirements into account. On the other hand, the manpower planner must control costs through staff deployment decisions. The roster is also a document showing compliance with pay and legal requirements. Staff requests must be recorded and flow into the planning procedure. The following fundamental subtasks must be completed in manpower planning:

1. Determination of requirements;
2. Selection of appropriate working time models; and
3. Assignment of staff to tasks/work centres and working times.

To identify real differences between the professions it is useful, as a first step, to take a closer look at manpower planning in nursing.

## The nursing solution

In terms of organisational structure nursing is characterised by a clear hierarchy, which is reflected in the duty rota, its approval and the accounting procedure in place. Responsibility for the duty rota lies with ward heads who study manpower planning as part of their training.

Three basic approaches can be discerned in manpower planning. The first is the authoritarian allocation of duties, generally by a single individual who makes few allowances for the wishes of individuals. The opposite is the case with the dialogue-centred approach which is characterised by an elaborate co-ordinating process. The third concept - "hours on request" - involves staff guiding rota arrangements on the basis of personal preferences.

Duty rota planning is sub-divided into a "target plan", a roster for the forthcoming planning period, and an "actual plan", in which short-term manpower planning is carried out.

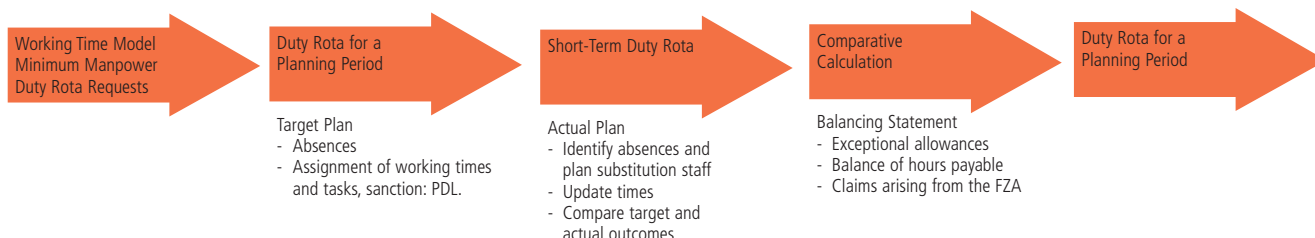
## New demands

In 2005, as part of a working time project for medical staff, the University Hospital of Essen began implementing the new plans in its SP-Expert (Astrum) programme, which is already in use in its nursing department. The hospital's director of personnel, Klaus Wawrzyniak, describes the starting point as follows: "It is imperative that the doctors involved in manpower planning receive adequate training in

all aspects of the new systems. They must also come to accept that this process involves one of their original functions, one they have, in any case, been performing for a long time. Until now, however, awareness of this last point has been lacking.” It quickly became clear that urgent action was required in terms of organisation, skills and technology.

had developed over years and needed to be standardised. Moreover, manpower planning for doctors threw up a number of technical issues which placed special demands on the programme. When planning on-call services, access to a range of planning units – the master plan – will be needed to plan comprehensive services.

The task of documenting “actual” hours worked – a job



Those with responsibility for manpower are not clearly defined in the medical profession. The role is exercised at different levels and authority and qualifications vary widely. Furthermore, this entails little more than allocating on-call and stand-by duties, although sophisticated function plans aimed at ensuring that certain posts are continually

normally done on the nursing side by the ward head – had to be done differently on the medical side because no provision was made to introduce a work time recording system for medical staff. A web application has been created to allow each member of staff to document changes in hours and to access information on his or her duty rota



filled can also be found. Working times are frequently documented using the times recorded in the statement on exceptional allowances, which are initialled by a superior but not scrutinised or challenged. Few superiors treat manpower planning as an opportunity to control costs. The only exceptions are cases where working times are corrected retrospectively to curb the amount of overtime subject to a surcharge.

arrangements. Notwithstanding this arrangement, superiors retain their role of monitoring and sanctioning working times. Work done with those doctors with responsibility for manpower planning indicates that extensive training must be accompanied by intensive supervision if the new working time models are to be implemented in the duty rota programme on a sustainable basis.

Effective time management hinges on comprehensive knowledge of planning, underlying conditions and managing working time. Responsibilities and competences must also be clearly demarcated. For this reason, staff in Essen received training in the technical aspects of the programme and on current legislation on working time and pay rates, as it pertains to manpower management. The expertise developed in nursing over decades must be quickly transferred to the medical professions and adapted to their needs in order that medical manpower planning can be modernised.

## Conclusion

Overall, the experience gathered to date indicates that high performance IT resources are required to implement modern working time models and control working time in an efficient manner. To maximise the benefit of this precious resource, it is vital to introduce organisational change and enhance the skills of all those involved. This message must be communicated in hospitals to ensure these new models have available to them the most effective computerised management options; to allow responsibilities to be defined; and to give staff the opportunity to acquire the requisite skills.

Despite the existence of manpower planning programmes in Essen and the fact that it proved possible to fall back on the capacity planning arrangements already in place, several issues required clarification. Different accounting procedures and definitions of hours worked were in use. These

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