

Planning of Midwives - DTU Orbit (09/11/2017)

Planning of Midwives

At a hospital in Denmark around 40 midwives support the pregnancy of approx. 6000 pregnant women every year. Their role is to monitor the pregnancies and prepare the women for labour. Based on the due date of a woman, authority guidelines prescribe specific and mostly rather narrow time windows within which the pregnant woman should have consultations with a midwife. Therefore, once a pregnant woman enters the system, here sequence of consultations for the time period until labour is fairly fixed. There is a clear goal that, as far as possible, each pregnant woman should see the same midwife at every consultation. Every week the newly arrived pregnant women are assigned an arbitrary free time slot belonging to a specific midwife. In turn this midwife is expected to have consultations with this woman in specific weeks according to the authority guidelines. This random assignment of pregnant woman to specific midwives, without any concern to the midwives' future schedules, means that each midwife has a very unbalanced workload over the year. Furthermore, it means that there is an imbalance between the workloads of the different midwives. The aim of this project is therefore to devise a method that can make a fair distribution of pregnant women among the midwives. The distribution should result in a balanced work load for each midwife and a balanced work load among the midwives while at the same time making sure that the time windows for consultations are not violated.

General information

State: Published

Organisations: Department of Management Engineering, Management Science, Operations Research, Transport DTU, Technical University of Denmark

Authors: Græse, L. (Ekstern), Vilhelmsen, C. (Intern), Larsen, J. (Intern)

Publication date: 2016

Event: Abstract from 28th European Conference on Operational Research, Poznan, Poland.

Main Research Area: Technical/natural sciences

Source: PublicationPreSubmission

Source-ID: 133889863

Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017