

# **The Future of Mental Health Services: A Proposed Computer Simulation**

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## **Abstract.**

In Germany, mental health policy development and planning of services are influenced more by pressure groups than by serious trend research. A suitable computer simulation of psychiatric services is virtually non-existent. For these reasons we are developing a simulation model that will allow reliable and impartial prognoses about mental health services in order to support planners and researchers.

For this purpose we are currently identifying parameters and processes of the German mental healthcare system, and analyzing dependencies on external variables such as demography and economics. The resulting simulation model will be a representation of relevant aspects of the system, and it will enable detailed analysis of its behaviour. By making implemented parameters and their mathematical relationships adjustable, it will be possible to define different simulation scenarios for answering a large variety of what-if-questions.

Interesting scenarios may be for example: "If a remedy for disease X is developed in 2010, the number of required hospital beds will decrease by Y percent p.a." or in regard to current discussions in Germany: "Shortening hospital stays for mental disorders by X days won't have an effect on national mental health." Based on the first development stage of our model, preliminary simulation results actually suggest that the therapeutic outcome is not dependent on the length of hospital stays. Future scenarios must be analyzed to estimate the influence on factors as comorbidity or quality of care.

We believe that the implemented simulation model will make a contribution to current trend research and planning of psychiatric services.