Abstract:

More than 100 stroke units have been established in Germany. In rural areas, however, acute stroke care needs to be improved. In order to advance clinical stroke therapy, two specialized stroke centers founded a telemedicine network (TEMiS) among 12 community hospitals in eastern Bavaria. Each network hospital established specialized stroke wards where qualified teams manage acute stroke patients. Twenty-four hours daily, physicians in local hospitals are able to contact the stroke centers via videoconferencing including transmission of digital DICOM data. To study the efficacy of this network, a controlled trial will be performed. Five TEMPiS-network hospitals will be matched with five other hospitals equal in size, catchment area, and diagnostic techniques. For about 1 year, all consecutive stroke cases in the matched study hospitals will be prospectively recorded in a database. Neurological deficits will be quantified on the National Institute of Health Stroke Scale within 24 h after stroke onset. Mortality and institutional care as a combined primary endpoint will be assessed after 3 and 12 months. Furthermore, functional outcome according to the modified Rankin scale, Barthel score, and quality of life will be assessed using a standard telephone interview. Data acquisition started in July 2003, and final results
are expected in 2005.