Progress of Quality Indicator Rates Regarding Treatment of Patients Hospitalized in Germany due to Community Acquired Pneumonia (CAP)

Herth FJ[1], Knape H[1], Frank U[1], Simpfendoerfer M[1], Braitmayer J[1], Berwanger I [1], Bruder I[2], Rode S[2], Wirth Y[2]

[1]Pneumonia Working Group of the Federal State of Baden-Wuerttemberg, Stuttgart, Germany, [2] GeQik, Stuttgart, Germany

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Background:

Community acquired pneumonia (CAP) is defined as lower respiratory tract infection associated with symptoms of acute infection with or without new infiltrate on chest radiographs. It is contrasted to the pneumonia acquired in a hospital or a long-term care facility. CAP is one of the most common infectious diseases. The incidence rates increase by age and number of concomitant diseases. The estimated overall annual rate of CAP in Germany is about 400.000 to 600.000 cases, about 200.000 patients require hospitalization.[1] Since 2005, due to lethality rates above 10 %, CAP is part of the German external quality assurance program of hospitalized patients and data has been collected since.

Material and Methods:

Several indicators regarding process and outcome of CAP treatment had been introduced nationwide in all 16 federal states of Germany in 2005. In the federal state of Baden-Wuerttemberg about 1/10 (2005 cases, 8.3%) of the collected 24189 cases had the waiver.

In a retrospective study, data had been longitudinally analyzed in regards of mortality risks, age, hospital duration, and risk factors accordingly.

Results:

Since introducing the external quality assurance program, the rates of the respective quality indicators like early bloodgas-analysis/pulse oxymetry, early antimicrobial treatment, CRP/Procalcitonin Follow-Up, patient mobilisation, and evaluation of all seven clinical stability parameters prior hospital discharge increased continually.

The hospital lethality rates, overall and by CRB-65 grading remained stable besides annually growing mean patient age; potential risk factors for fatal outcome are increasing age, CRB-65 severity, and multi-morbidity (figure 1-5.).
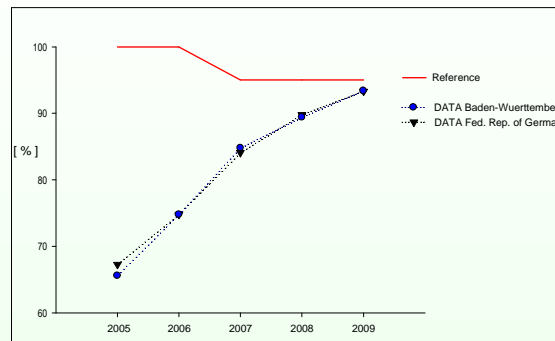
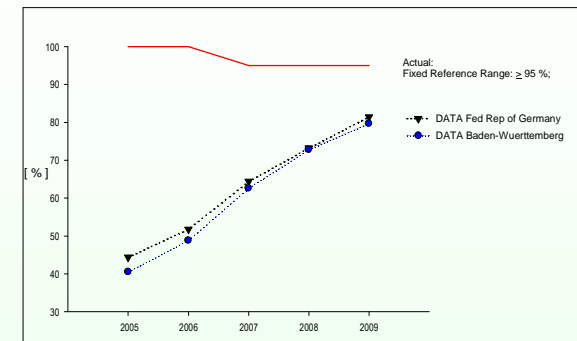Figure 1: Percentage of patients with bloodgas-analysis/pulse oxymetry performed within 8 hours of hospitalisation.
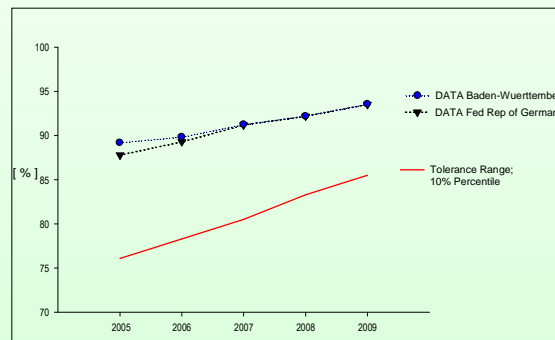
Figure 2: Percentage of patients with antimicrobial therapy within 8 hours of hospitalisation

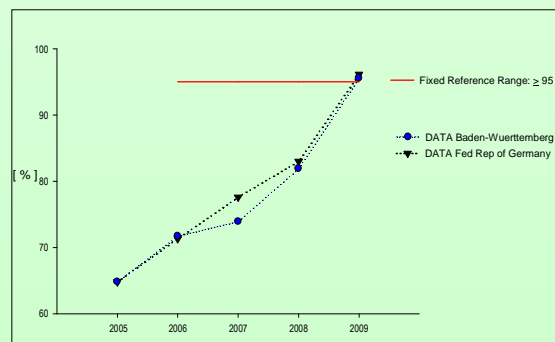Figure 3: Percentage of patients with reviewed clinical diagnositics/therapy; high risk patiens with CRB-65 score in (3, 4)

Figure 4: Percentage of patients with completely determinated clinical stability criteria prior dismission

Figure 5: Percentage of fatal cases, all patients

Conclusions:

Due to the introduction and monitoring of specific quality indicators, the awareness of existing guidelines is growing. In addition to improvements gained by the treatment process, detection of potential deficits and errors in the collected data may require clarification between the local medical pneumonia working group and respective hospitals. The entire procedure over the last years leads to increased rates of quality indicators measuring process as well as result outcome parameters.

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Reference:
Hoeffken G, Lorenz J, Kern W et al.: Epidemiology, Diagnosis, Antimicrobial Therapy and Management of Community-acquired Pneumonia and Lower Respiratory Tract Infections in Adults, Guidelines of the Paul-Ehrlich-Society for Chemotherapy, the German Respiratory Society, the German Society for Infectiology and the Competence Network CAPNETZ Germany. *Pneumologie.* 2009; 63(10):e1-e68