Supplementary

Methods
Study Design and Setting
As a quality control project, the study was approved by the local Ethical Committee (EKBB, Ethikkommission beider Basel: EK 2012/059) which waived the requirement for individual informed consent.

Clinical and Laboratory Data
We used vital signs and clinical parameters as well as sociodemographic factors from the study datafile. Missing data were added to the file by review of medical charts. Chest X-rays were analysed by a radiologist. We collected laboratory parameters measured within 48 hours of hospitalization and the first value was used for analysis. The CRP measurements were performed on the automat Vista (Siemens, Switzerland) with a detection limit of <3mg/L. For PCT analyses we used a centralized time-resolved amplified cryptate emission technology-based assay with a detection limit of 0.06 μg/L (Kryptor PCT, Thermo Scientific Biomarkers (Brahms AG), Henningsdorf, Germany).

Microbiological diagnostics
In clinical routine, microbiological analyses were performed at the discretion of the treating physician and included blood cultures, urinary antigen testing for pneumococci and Legionella pneumophila serogroup 1, sputum cultures, influenza PCR or multiplex PCR testing of a nasopharyngeal swab or broncho-alveolar fluid. Based on our pneumonia protocol, the testing of urine antigen for Legionella is recommended for all patients presenting with pneumonia. The Filmarray Respiratory Panel was designed by BioMérieux and tests for a comprehensive panel of 20 respiratory viruses and bacteria (Adenovirus, Coronavirus 229E, HKU1, OC43, NL63, Human Metapneumovirus, Human Rhinovirus/Enterovirus, Influenza A, A/H1, A/H1-2009, A/H3, Influenza B, Parainfluenza 1, 2,3,4, respiratory syncytial virus, Bordetella pertussis, Chlamydophila pneumoniae, Mycoplasma pneumoniae). This system integrates sample preparation, amplification, detection and analysis into one simple system.

Statistical analysis and Definitions
Discrete variables were expressed as counts and percentage, continuous variables as median and interquartile ranges (IQR). Categorical data was analysed with Fisher’s exact T test. Two group comparisons of normally distributed non-parametric data were performed using Student’s t-test. For data not normally distributed, Mann-Whitney’s U test was used.
All statistical analyses were performed with STATA 12.1 statistical software (StataCorp, College Station, Texas). A p-value <0.05 was considered statistically significant.