Predicting future treatment needs from annual review data

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Objectives: From April 2012, UK centres will be funded based on treatment patients needed the 12 months leading up to annual review the previous calendar year. Thus, funding will be based on data 3–15 months old, potentially understimating patients’ health needs. We investigated whether data from the previous calendar year (only 3 months old) were better at predicting subsequent treatment needs.

Methods: The following data were collected retrospectively from all patients treated at our centre from 2008 to 2011: number of in-patient days (IP days), number of days of iv antibiotics (IV days), and month of annual review. Wilcoxon matched-pairs signed-rank and Kolgorov–Smirnov tests were used to test whether data from the previous calendar year were better than annual review data from that year at predicting treatment needs the following calendar year.

Results: 103 patient-years (41 patients) were analyzed. IP days differed by a mean 2.9 days (range –66 to +132) from the previous calendar year, compared to a mean 3.5 days (range –100 to +144) from annual review. IV days differed by a mean 3.2 days (range –97 to +178) compared to a mean 5.1 days (range –78 to +218). Differences in the means were not significant (p=0.33, Wilcoxon). When data were analyzed to look at the variation in treatment band there was no significant difference.

Conclusion: Though treatment needs for some individuals changed dramatically from year to year, overall the treatment needs of patients in a given calendar year were reasonably predicted by the treatment given as measured at patients’ previous annual reviews. There would be no benefit in using calendar year data rather than annual review data.

Improved life expectancy in cystic fibrosis patients: real progress or reduced measurement bias?

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Objectives: To calculate life expectancy at birth of cystic fibrosis patients in France (period 1994–2008) and to interpret trends by distinguishing between the improvement attributable to progress in healthcare and that explained by better observation and measurement conditions.

Methods: The study population is that of the French Cystic Fibrosis Registry (RFM) which has recorded individual clinical data on patients since 1992: diagnosis, vital status, anthropometry and spirometry, bacteriology, morbidity and therapeutic management.


The RFM mortality data were compared with the life tables of the French population giving, for the past, the same life expectancies at birth.

Conclusions: The increase in life expectancy of cystic fibrosis patients, from 29.4 years in 1994 to 48.8 years in 2009, can be explained by two factors:

– improved patient survival: at the adult ages when the majority of cystic fibrosis deaths occur (15–35 years), the risks of dying in 2008 were lower than in the past.
– improved coverage of the RFM, linked to the introduction of neonatal screening in 2002 and a reorganization of healthcare management for CF patients: this led to the inclusion of a growing number of adults and of asymptomatic newborns who were previously unobserved and whose presence has contributed to lowering the age-specific risks of dying.