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Lud van der Velden has studied sociology. He has worked as a researcher in the field of "education and labour market" from 1986 onwards. He has been involved in manpower planning in health care from 1996 onwards. He is the main architect of the manpower planning model that is used by the Dutch Advisory Committee on Medical Manpower Planning (ACMMP).

Presenting:

The accuracy of general practitioner workforce projections

Summary:

Background: Health workforce projections are important instruments to prevent imbalances in the health workforce. For both the tenability and further development of these projections, it is important to evaluate the accuracy of workforce projections. In the Netherlands, health workforce projections have been done since 2000 to support health workforce planning. What is the accuracy of the techniques of these Dutch general practitioner workforce projections?

Methods: We backtested the workforce projection model by comparing the ex-post projected number of general practitioners with the observed number of general practitioners between 1998 and 2011. Averages of historical data were used for all elements except for inflow in training. As the required training inflow is the key result of the workforce planning model, and has actually determined past adjustments of training inflow, the accuracy of the model was backtested using the observed training inflow and not an average of historical data to avoid the interference of past policy decisions. The accuracy of projections with different lengths of projection horizon and base period (on which the projections are based) was tested.

Results: The workforce projection model underestimated the number of Dutch general practitioners in most years. The mean absolute percentage errors range from 1.9% to 14.9%, with the projections being more accurate in more recent years. Furthermore, projections with a shorter projection horizon have a higher accuracy than those with a longer horizon. Unexpectedly, projections with a shorter base period have a higher accuracy than those with a longer base period.

Conclusion: According to the results of the present study, forecasting the size of the future workforce did not become more difficult between 1998 and 2011, as we originally expected. Furthermore, the projections with a short projection horizon and a short base period are more accurate than projections with a longer projection horizon and base period. We can carefully conclude that health workforce projections can be made with data based on relatively short base periods, although detailed data are still required to monitor and evaluate the health workforce.