Observed versus estimated acquisition costs associated with medicines recommended by the All Wales Medicines Strategy Group (AWMSG)

Paul Deslandes, Stuart Keeping, Kath Haines and Philip A Routledge.
All Wales Therapeutics and Toxicology Centre, Cardiff, Wales.

Introduction

- AWMSG advises the Welsh Government on the introduction of new medicines into Wales. Its health technology appraisal programme provides recommendations based primarily on clinical and cost-effectiveness.
- AWMSG adopts NICE guidance where available and appraises the remaining new medicines not on the NICE work programme. Should NICE issue guidance subsequently, however, its advice supersedes AWMSG recommendations.
- £800 million was spent in Wales on NHS medicines in 2015-2016 (approx. 13% of health budget). Approximately 67% was spent in primary care and 33% in secondary care. The mean annual cost of AWMSG and NICE approved medicines in the period 2013-2016 was £144 million.

Aim

- To compare the estimated budget impact of medicines appraised by AWMSG with the observed expenditure in each of the first three years following positive recommendation.

Methods

- Estimated medicine costs were obtained from company submissions to AWMSG.
- Observed medicine costs were obtained from primary and secondary care dispensing databases used in Wales.
- Databases do not show indications for which medicines were used, therefore medicines already in use for other indications were excluded.
- Estimated and observed costs were compared using Spearman correlation analysis.
- Mean expected and observed costs were compared using Wilcoxon Matched-pairs signed rank.

Results

- 49 of 163 medicines recommended by AWMSG between 2005-2013 were included in the study. Of the remaining 114 medicines, 36 were not recommended by AWMSG, and 78 had evidence of usage for other indications prior to the relevant AWMSG appraisal. Costs of 35 medicines (71%) were overestimated in Years 1 and 2 and costs of 38 medicines (78%) were overestimated in Year 3. The number of medicines with zero observed costs were 11 (Year 1), 9 (Year 2) and 4 (Year 3). Spearman correlation coefficients were 0.61 (Year 1), 0.69 (Year 2) and 0.71 (Year 3).
- Wilcoxon matched pairs signed rank test was used to compare the set of observed costs versus the set of estimated costs in each of the three years. The test showed that the two cost populations were different in all three years; p values were 0.04 (Year 1), 0.005 (Year 2) and 0.001 (Year 3).

Conclusions

- The sum of the observed costs for the 49 medicines was compared to the sum of the estimated costs; total costs were overestimated by 41% (Year 1), 53% (Year 2) and 64% (Year 3).

Contact: Stuart.Keeping@wales.nhs.uk