# Pharmacoeconomic evaluation and its application in clinical guideline development

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### Abstract

Pharmacoeconomic evaluation is an analysis technique that combines data on both costs and health outcomes to allow clinical decision makers to assess the cost effectiveness of pharmaceutical products and services. It is an important tool for decision makers when allocating the scarce resources available for their healthcare systems. One particularly important application of pharmacoeconomic evaluation is its use in clinical guideline development. The incorporation of pharmacoeconomic evaluation in these guidelines ensures that the pharmaceutical products and services recommended for use on a large scale represent value for money and ensures that best use is made of the finite resources available. The National Institute for Health and Care Excellence (NICE) in the UK is leading the way in utilizing economic evidence to inform its recommendations for clinicians and has well-developed methods for using economic evidence in its guidelines.

In this talk, a brief introduction to the types of economic evaluations will be given. The concept and importance of clinical guidelines will also be explained with examples of the different approaches to their development given, in terms of type of evidence, inclusion of pharmacoeconomic evaluations and recommendations made. Examples will be given from NICE guidelines to illustrate how the evidence from pharmacoeconomic evaluations informed the guideline recommendations, drawing on the speaker’s personal experience in conducting these pharmacoeconomic evaluations.

 **Recent Publications**

1. Dawoud D, Baines D. “Economic Evaluation and its Types”. In “Economic Evaluation of Pharmacy Services”. By: Zaheer-Ud-Din Babar; 1st Edition; 2017; Academic Press.
2. Dawoud D, Fenu E, Higgins B, Wonderling D, Amiel SA. Basal Insulin Regimens for Adults with Type 1 Diabetes Mellitus: A Cost-Utility Analysis. Value in Health. 2017; 20(10):1279-87.
3. Amiel SA, Pursey N, Higgins B, Dawoud D. Diagnosis and management of type 1 diabetes in adults: summary of updated NICE guidance. BMJ: British Medical Journal (Online). 2015; 26;351.
4. Neilson J, O’Neill F, Dawoud D, Crean P. Intravenous fluids in children and young people: summary of NICE guidance. BMJ. 2015; 351:h6388.
5. Keeney E, Dawoud D, Dias S. Different Methods for Modelling Severe Hypoglycaemic Events: Implications for Effectiveness and Cost-Effectiveness Analyses. Pharmacoeconomics. 2018; 36(5): 523–532.
6. Dawoud D, Haines A, Wonderling D et al. Using pharmacoeconomic evaluations to inform national guideline recommendations: an example from the U.K. FIP Pharmacy Practice Research Conference, Lisbon, Portugal 25-27 June 2018.

  Biography

Dr. Dalia Dawoud; Associate Professor at the Clinical Pharmacy Department, Cairo University and Lecturer in Clinical Pharmacy Practice at the University of Hertfordshire, UK. Dr. Dawoud was awarded her Ph.D. from King's College London. Her main research interests are Pharmacoeconomics and its applications in health technology assessment, clinical guideline development, and clinical pharmacy practices and policy research with particular focus on pharmacist role in improving health outcomes. Dr. Dalia has extensive experience in mixed-methods research, systematic reviewing, network meta-analysis and economic modelling. She has published in leading journals including the British Medical Journal (BMJ), Research in Social and Administrative Pharmacy (RSAP) and Value in Health. Dr. Dawoud serves on the editorial board of RSAP as Associate Editor for Pharmacoeconomics and Outcomes Research. She is also an editorial board member for BMC Journal of Pharmaceutical Policy and Practice (JoPPP) and Elsevier Open Access journal “Heliyon”.

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