The Hebrew University of Jerusalem

Syllabus

Economic Evaluations of PH & Med Interventions - 95147

Last update 08-02-2021

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Public Health - International Prog.

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English

Campus: Ein Karem

Course/Module Coordinator: DR Gary Ginsberg

Coordinator Email: gmginsberg@gmail.com

Coordinator Office Hours: by appointment

Teaching Staff:
Dr.

Course/Module description:
In recent years, there has been growing awareness of the economic considerations in medical decisions. Since the free market fails in the health realm, there is no easy mechanism to make the allocation of resources, and to achieve an efficient allocation of resources. Hence there is a need for economic evaluations of medical interventions and programs. Increasingly suppliers of technologies and medical services are required to prove an economic advantage by the payers. This course is a technical training which will introduce the student to the most popular methods to perform economic evaluations of medical technologies and programs.

Course/Module aims:
To teach the student the rationale and method of carrying out a cost-utility analysis of public health and health service interventions.

Learning outcomes - On successful completion of this module, students should be able to:
1. To perform basic costing of medical interventions.
2. To calculate treatment savings as a result of an intervention.
3. To estimate the number of DALYS avoided due to decreased morbidity and mortality.
4. To perform a full cost-utility analysis of an intervention.

Attendance requirements(%):
None

Teaching arrangement and method of instruction: lectures and class exercises

Course/Module Content:
E1. Course Overview, Prioritisation, Rationing.

E2. Market versus Planning in Health Services, Agency relationship, Externalities. Why we need cost-utility analysis?

E17D. Where in the world should we be carrying out screening for colorectal

cancer?

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*E4B. *Costing Interventions. Direct, Indirect Costs. Social, Governmental and Health Services Perspectives.*

E6. Cost-Containment studies and their limitations. Home hospitalisation for the elderly.

*E5. *Measuring treatment costs.*

E7. Classical Cost-Benefit Analysis (CBA). Brief Overview.

E8. Medical Technology Assessment (CBA). Example of Vaccinating against Hepatitis A.

*E12. *Choosing a comparator and measuring effectiveness. Model Building.*

*E11. *Calculating Burden of Disease. PYLL, HALES, Disability Weights. Measuring QALY and DALY losses from morbidity and mortality.*

E9. Cost-Effectiveness Analysis. Elderly Care, Chronic Renal Disease.

*E13. *DALY reductions -Adjusting for Coverage and Compliancy*

E14. Cost-Utility Analysis (CUA). Definition of cost-effectiveness criteria.

E14B. ACER vs ICER.

E15. CUA of Haemophilus Influenza Vaccinations in Albania.

E16. Transforming results published in other countries into the context of your country.

E17. Some of the following CUA Examples: Stroke units or window bars? Cervical Cancer and Colorectal cancer screening in Developing Countries. Vaccinating against Meningococcal B, Downs syndrome screening. Hypertension Prevention, Adding fluoride, vaccinating against RSV.

E18 Do Economic-Epidemiologic evaluations affect policy?

<u>Required Reading:</u>

**** Ginsberg GM. CHAPTER 7. ASSESSING EVIDENCE-: COST- EFFECTIVENESS ANALYSIS. In Carmen Aceijas (ed.) Assessing Evidence to improve Population Health*

and Wellbeing. 2011, Learning Matters, Exeter.

***WHO (2006). Immunization costing and financing. A tool and users guide for comprehensive multi-year planning (cMYP). WHO Geneva. http://whqlibdoc.who.int/hq/2006/WHO_IVB_06.15_eng.pdf*

***WHO (2003) .Generalized Cost-effectiveness, A Guide. Edited by T. Tan-Torres Edeger, R Baltussen, T Adam, R Hutubessy, A Acharya, D.B. Evans and C.J.L. Murray. WHO, Geneva. http://www.who.int/choice/publications/p_2003_generalised_cea.pdf*

WHO CHOICE (Choosing Interventions that are Cost effective) http://www.who.int/choice/en/

Ginsberg GM, Generalizability of Cost-Utility analyses across countries and settings, Best Practice & Research Clinical Gastroenterology, doi: 10.1016/j.bpg.2013.08., 2013.

Chisholm D, Baltussen R, Evans DB, Ginsberg G, Lauer JA, Lim S, Ortegon M, Salomon J, Stanciole A, Tan-Torres Edejer T. What are the priorities for prevention and control of non-communicable diseases and injuries in sub-Saharan Africa and South East Asia? BMJ2012;344:e586

Additional Reading Material:

Ginsberg; GM; Lim S; Lauer JA. Johns BP, Sepulveda CR. Prevention, Screening and Treatment of Colorectal Cancer: a Global and Regional Generalized Cost Effectiveness Analysis. Cost Eff Resour Alloc. 2010 8,2. http://www.resource-allocation.com/content/8/1/2 Accessed January 3rd 2011.

** Ginsberg GM, Tan-Torres Edejer T, Lauer JA. Sepulveda CR. Screening, Prevention and Treatment of Cervical Cancer - A Global and Regional Generalized Cost Effectiveness Analysis. Vaccine. 2009;27;43; 6060-79. Epub 2009 July 31.*

Ginsberg GM. HPV vaccinations - possibly necessary but not sufficient. Lancet Global Health 2014. E367-8. http://dx.doi.org/10.1016/S2214-109X(14)70249-9

Ginsberg GM, Lauer JA, Zelle S, Baeten B, Baltussen R. Cost-effectiveness of strategies to combat breast. cervical, and colorectal cancer in sub-Saharan Africa and South East Asia: mathematical modelling study. BMJ 2012;344:e614doi:10,1136/bmj.e614.

Ginsberg G, Block C, Stein-Zamir C. Cost-Utility analysis of a Nationwide Vaccination Program against Serogroup B Meningococcal disease in Israel. International Journal

of Public Health, 2016;61;6;683-692. DOI 1-10 10.1007/s00038-016-0821-0

Jit M, Demarteau N, Elbasha E, Ginsberg G, Kim J, Praditsitthikorn N, Sinanovic E, Huttubessy R. Human Papillomavirus Vaccine introduction in low and middle income countries: guidance on the use of cost-effectiveness models. ,BMC Medicine. May 2011.12;9;54

Ginsberg G.M. and Tulchinsky T.H. Costs and Benefits of a Second Measles Inoculation of Children in Israel, the West Bank and Gaza. Journal of Epidemiology and Community Health 1990; 44; 274-80.

Tulchinsky T.H., Abed Y., Ginsberg G. et al. Measles in Israel, the West Bank and Gaza: Incidence and the case for a new eradication strategy. Review of Infectious Diseases 1990; 12; 951-8.

Sinha A, Kim S, Ginsberg G, Franklin H, Kohberger R, Strutton D, Madhi SA, Griffiths UK, Klugman KP. Economic burden of acute lower respiratory tract infection in South African children. Paediatr Int Child Health. 2012 May;32(2):65-73.

Ginsberg G, Kark J, Einav S. Is out-of-hospital resuscitation worthwhile? Cost-Utility Analysis of Cardiac Resuscitation Services in Jerusalem. Resuscitation 2015; 86;54-61.

Ginsberg G, Eidelman AI, Shinwell E, Anis E, Peyser R, Lotan Y. Cost Utility Analysis for the Prevention of Early-Onset Neonatal Group B Streptococcal Diseases in Israel. Israel Journal of Health Policy Research 2013, 2:6 doi:10.1186/2045-4015-2-6.
Ginsberg G. Cost Utility Analysis of Interventions to Reduce the Burden of Cervical Cancer in Israel. Vaccine 2013, 31S,I46-I52.

Ginsberg GM, Cuckle H. Cost-Utility Analysis of cfDNA Screening for Down's Syndrome in Israel. Current Progress in Obstetrics and Gynecology volume 4. Nov 2016; 19; 1-17.

Ginsberg GM, Somekh E, Shlesinger Y. Cost-Utility Analysis vaccination against RSV in Israeli Infants.. Israel Journal of Health Policy Research. Forthcoming 2018.

Course/Module evaluation:
End of year written/oral examination 80 %
Presentation 0 %
Participation in Tutorials 0 %

Project work 20 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:

The first part of the exam will consist of approximately 10 multiple choice compulsory qualitative and quantitative questions of 6 points each, followed by a choice of 4 quantitative questions from 7 worth 10 points each.