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PHS5 ECONOMIC EVALUATION OF A NEPHROPROTECTION PROGRAM IN PATIENTS OF THE MEXICAN INSTITUTE OF SOCIAL SECURITY WITH CHRONIC KIDNEY DISEASE

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OBJECTIVES: Clinical evidence shows that nephroprotection programs in patients with chronic kidney disease (CKD) can slow disease progression, improve patient’s health, life expectancy and reduce hospitalizations and early deaths. In Mexico, there are few nephroprotection programs. The purpose of this study was to analyze a nephroprotection program in patients with stage 3 chronic kidney disease (CKD) of the Mexican Institute of Social Security. Methods: None.

RESULTS: The nephroprotection program was cost-saver for CKD stage 3 mainly due to the reduction in hospitalizations and early deaths avoided.$169

CONCLUSIONS: The nephroprotection program is cost-effective, with an ICER of $59547/QALY when compared to annual mammography provided 19.14 QALYs at a discounted cost of $37,765 while mammography provided 19.14 QALYs at a cost of $23,226 over 30 years of screening. The incremental cost-effectiveness ratio of breast MRI compared to mammography was $159,470/QALY. In one-way sensitivity analysis and net benefits sensitivity analysis, the cost-effectiveness of the intervention or net benefits of screening depends critically on the accuracy of both MRI and mammography.

CONCLUSIONS: Annual MRI screening of women who have more than 15% lifetime risk of breast cancer was found to be potentially cost-effective, with an ICER of $99,470/QALY when compared to annual mammography alone. The benefits of early detection of breast cancer with MRI in this population may outweigh the added cost of screening and the higher risk of false positives. However, the cost-effectiveness of MRI screening is highly dependent on the accuracy of MRI and Mammography. There remains some statistical uncertainty around this result.

PHS5 COST-EFFECTIVENESS OF BREAST MRI AND MAMMOGRAPHY FOR SCREENING HIGH RISK POPULATION


OBJECTIVES: Breast magnetic resonance imaging (MRI) is a sensitive method of breast screening and is increasingly being used for detection of breast cancer among high-risk groups. The specificity of breast MRI screening is high and costs are quite high. The purpose of this study was to determine if breast MRI is a cost-effective approach for the detection of breast cancer among young women who are at high risk.

METHODS: All the costs were calculated using cost data from the Mexican Institute of Social Security. The study design was a cost-effectiveness analysis from the societal perspective with results reported in 2013 U.S. dollars. One-way and net benefits sensitivity analysis assessed uncertainty in model parameters.

RESULTS: Breast MRI provided 19.38 discounted quality-adjusted life-years (QALYs) at a discounted cost of $37,765 while mammography provided 19.14 QALYs at a cost of $23,226 over 30 years of screening. The incremental cost-effectiveness ratio of breast MRI compared to mammography was $159,470/QALY. In one-way sensitivity analysis and net benefits sensitivity analysis, the cost-effectiveness of the intervention or net benefits of screening depends critically on the accuracy of both MRI and mammography.

CONCLUSIONS: Annual MRI screening of women who have more than 15% lifetime risk of breast cancer was found to be potentially cost-effective, with an ICER of $99,470/QALY when compared to annual mammography alone. The benefits of early detection of breast cancer with MRI in this population may outweigh the added cost of screening and the higher risk of false positives. However, the cost-effectiveness of MRI screening is highly dependent on the accuracy of MRI and Mammography. There remains some statistical uncertainty around this result.

PHS5 THE COST-EFFECTIVENESS OF ANTENATAL SYPHILIS SCREENING USING POINT-OF-CARE TESTING IN LOW AND MIDDLE INCOME COUNTRIES IN ASIA

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OBJECTIVES: Untreated syphilis in pregnancy is associated with adverse clinical outcomes to the infant. In low and middle income countries in Asia, roughly one out of three women is not tested for syphilis during pregnancy. The objective of this analysis was to evaluate the cost-effectiveness, budget impact, and potential reduction in adverse pregnancy outcomes of antenatal syphilis screening using the recently introduced point of care immunochromatographic strip (ICS) test for 11 select countries in Asia.

METHODS: A previously published cost-effectiveness model was adapted to reflect the perspectives of the respective national health care systems. Clinical outcomes of infants born to syphilis-infected mothers on the endpoints of stillbirth, neonatal death and congenital syphilis were obtained from published sources. Treatment was assumed to consist of three injections of benzathine penicillin. Country-specific inputs included the antenatal prevalence of syphilis, annual number of live births; proportion of women with at least one antenatal care visit; per capita gross national income and estimated hourly nurse wages. RESULTS: In all 11 Asian countries, syphilis screening is highly cost-effective with an weighted average cost/DALY averted of $US$2 (range: US$23-$US$18). Universal screening may reduce the annual number of stillbirths by up to 10,000, neonatal deaths by up to 4,000, the annual incidence of congenital syphilis by up to 5,000 and avert up to 450,000 DALYs at an incremental annual direct medical cost of US$18 per woman. Due to its low screening rate of 0.1%, Indonesia accounts for almost 50% of DALYs that could be averted. In contrast, Laos, Malaysia, and Thailand are close to universal screening and leave little room for improvement. CONCLUSIONS: The use of ICS tests for antenatal syphilis screening is highly cost-effective in low and middle income countries in Asia. Antenatal programs should either expand or maintain full access to syphilis screening using the ICS test.