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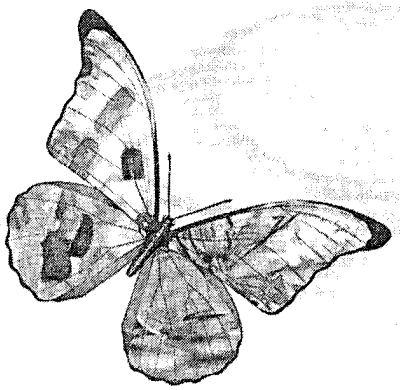

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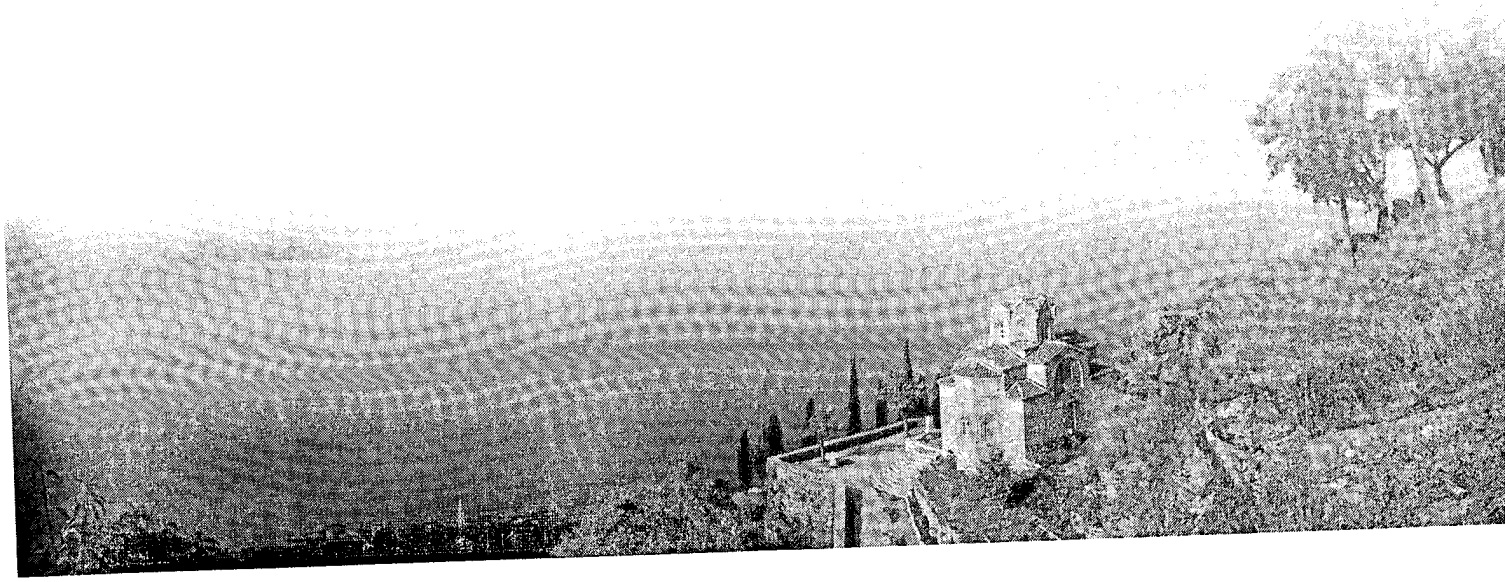

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EVIDENCE BASED MEDICAL CARE AND PHARMACOECONOMICS

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Key words: evidence based medical care, pharmacoeconomics, newborns, health care

An evidence-based practitioner must be able to understand the patient's circumstances, to identify knowledge gaps, and frame questions to fill those gaps; to conduct an efficient literature search; to critically appraise the research evidence, and to apply that evidence to patient care.[1] Delivering evidence-based medical care requires providing care that is high-quality and safe, and at the same time cost-effective. However, while the knowledge and technology regarding effective medical therapy continuously improves, the practice of medicine is not on the same level, because the risk of iatrogenic errors becomes higher.[2] Regarding the gaps between evidence and practice, Lomas et al.[3] evaluated a series of published guidelines and found that it took an average of approximately five years for these guidelines to be adopted into routine practice. Pharmacoeconomics involves processes similar to EBM, but it deals with decisions on the population rather than the patient level. Pharmacoeconomics is the scientific discipline that evaluates the clinical, economic and humanistic aspects of pharmaceutical products, services, and programs, as well as other health care interventions to provide health care decision makers, providers and patients with valuable information for optimal outcomes and the allocation of health care resources.The overall goal of it is to provide the most efficient use of resources, taking into account both the cost and the value derived from a given technology. These evaluations assist health care decision making because both cost and effectiveness are considered. New therapies are increasingly complex in terms of administration, effects, and cost. At present, there is no standard threshold for what constitutes cost-effective therapy, so each health care system is likely to have its own criterion for acceptance. Taking into consideration the accelerated process of developing/edopting and adapting Clinical Guidelines based on high level of evidence, the aim of this paper was to evaluate the role of Evidence Based Medical Care in the context of pharmacoeconomic (PE) decision making by health care providers. Clinical Guidelines may be considered a measure for providing evidence-based care, increasing the patient safety and reducing the unnecessary costs, thus improving the cost/benefit ratio. The method of evaluation consisted of the following steps: deep review process of the two most frequent clinical disturbances (neonatal non-haemolytic jaundice and early onset infection) in term newborns born at the University Clinic for Gynecology and Obstetrics in Skopje, detailed analysis of the nationally accepted Clinical evidence based guidelines covering the same

diseases, and performing comparative analysis of the number and type of investigations in two time-periods-before and after implementation of the Guidelines.

Results: throughout the evaluation, many of the previously explored investigations and therapy introduced, were found unnecessary. Within the first clinical disease-non-haemolytic jaundice, using evidcence-based Clinical guidelines enables the clinician to reduce the number of venepunctures (by introducing the transcutaneous bilirubinometer and clinical application of the Kramer's rule), reduces the necessity for phototherapy (PT) by using the threshold levels of the serum bilirubin for PT for separate gestational age and for exchange transfusion as well. Regarding the secong Clinical guideline, early onset of neonatal infection, as cost reduction were considered: number of venepunctures for full blood count and C-reactive protein using the empirical therapy for all term newborns having prenatal maternal risks for infection, recommendation to cease the therapy following normal levels of white blood cells and neutrophils, etc.

Unfortunatelly, the exact cost-reduction can not be calculated due to the type of reduction (mainly qualitative reduction, meaning time consuming, health benefit for the baby etc). The credibility of pharmacoeconomics lies in developing studies in accordance with generally applicable standards of analysis and interpretation. Then users can translate pharmacoeconomic research findings into practices to ensure that decision makers allocate scarce health care resources wisely, fairly, and efficiently.[4]

Moving toward more evidence-based practice has the potential to improve quality and safety while simultaneously reducing costs, thus improving the outcomes of the Pharmacoeconomics. This field of the pharmacotherapy becomes increasingly important in terms of patient safety and national cost saving, thus enabling the relevant authorities to reallocate the resources.

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