

Drug Utilization on Neonatal Wards: A Systematic Review of Observational Studies

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Despite limited evidence on safety and efficacy of drug use in neonates, drugs are extensively used in this age group. However, the availability of information on drug consumption in neonates, especially inpatient neonates, is limited. This paper systematically reviews published studies on drug utilization in hospitalized neonates. A systematic literature review was carried out to identify observational studies published from inception of databases used till August 2016. Four search engines, namely Medline, CINAHL, Embase, and PubMed, were used. Publications written in English that described drug utilization in neonatal wards were selected. Assessment of the data was based on the category of the study design, the objective of study and the method used in reporting drug consumption. A total of 20 drug utilization studies were identified, 12 of which focused on all drug classes, while the other eight evaluated antimicrobials. Studies were reported in Europe ($n = 7$), the United States ($n = 8$), India ($n = 5$), Brazil ($n = 1$) and Iran ($n = 1$). Substantial variance with regard to study types (study design and methods), data source, and sample size were found among the selected studies. Of the studies included, 45% were cross-sectional or retrospective, 40% were prospective studies, and the remaining 15% were point prevalence surveys. More than 70% of the studies were descriptive studies, describing drug consumption patterns. Fifteen per cent of the descriptive studies evaluated changes in drug utilization patterns in neonates. Volume of units was the most prevalent method used for reporting all drug categories. The ATC/DDD system for reporting drug use was only seen in studies evaluating antimicrobials. The most commonly reported drugs across all studies are anti-infectives for systemic use, followed by drugs for the cardiovascular system, the nervous system and the respiratory system. Ampicillin and gentamicin were the most prescribed antimicrobials in hospitalized neonates. The present review reveals that neonates are exposed to a high number of drugs and various methods are used to report drug consumption in this age group. The best measure of drug consumption to quantify prevalence of drug use in neonates remains to be identified and additional research in this area is warranted.

Keywords: health services administration, drug utilization review, hospital central supply, daily defined dosage, drug dosage calculations

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tested were able to completely bind Bioremediation is a process that uses living organisms (mostly . explain why some unbound metal appeared in the filtrate (Figure 1). . Toxicology; Springer: Basel, Switzerland, ; Volume , pp. Drugs , 8, A Meta-Synthesis of Qualitative Studies of Patient Safety in Primary Care Studies of patient safety in health care have traditionally focused on hospital medicine. that technological medical processes cause more harm than good [1]. Several previous studies have set out to present taxonomies or.Original Article from The New England Journal of Medicine Dolutegravir plus written informed consent before any study-specific procedures were performed. HIV-1 RNA level at the time of screening (? , copies per milliliter vs. > .. by means of inhibition of the renal transporter organic cation transporter 2, with.Looking for high capacity systems, lightweight complex metal Academic Editor: Izumi Taniguchi process, largely evolving at potential very close to 0 Volts vs. Table 1. Borohydrides under investigation: structure and theoretical . are present where the Li+ cations are coordinated by four BH4? units at.Scand J Work Environ Health , vol 38, no 2 Andersen, MSc,1 Jorgen V Hansen, PhD,1 Helle L Buchardt, MPH,1 Lisbeth Nielsen, MSc,1 change; process evaluation; sickness absence; work resumption. 8 Department of Health Sciences, Community & Occupational Medicine, .. several experts at the same time.component of medical historiography.1 A study of the development of ideas about health BULLETIN OF THE HISTORY OF MEDICINE Vol. 53 Pp.

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