

Infection prevention in premature infants and newborns in Thuringia: Implementation of the Commission for Hospital Hygiene and Infection Prevention of recommendation (KRINKO)



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Background Due to the increasing number of reports of outbreaks in neonatal intensive care units (NICU) in 2007, the Commission for Hospital Hygiene and Infectious Disease Prevention at the Robert Koch Institute (KRINKO) published a recommendation for the prevention of nosocomial infections in NICU patients with a birth weight of less than 1 500 g (very low birth weight infants-VLWB) [1]. This recommendation was updated in late 2013 for the practical implementation and extended the screening recommendations to all NICU-patients [2].

A Systematic recording of practical implementation of current recommendations of KRINKO for prevention of nosocomial infections in neonatal units in children's hospitals in Thuringia was performed.

Material and Methods In 2015, about 17 000 children were born in the 18 treatment centers intra-clinically in Thuringia. All neonatal treatment centers in Thuringia were included in this survey. Answer could be received of 83 % (15/18). Degree of compliance was 100 % of level-1 centers (3/3) and of level-2 centers (5/5), and 70 % of level-3 centers (7/10). Aim of the questionnaire was the evaluation of infection-prevention measures as well as of structurally-organizational parameters in neonatal centers in Thuringia.

Results Preventing measures as well as weekly screening for colonization was fully performed in all centers with neonatal intensive care unit in patients with a birth weight < 1 500 g (n = 205). Additionally 60 % of all units extended the colonization-surveillance-measures. Pharyngeal and rectal swabs of all infants were taken regardless of their birth weight till discharge of the hospital.

Barrier measures in case of colonization with multiresistant pathogens were assured in all treatment centers. Structurally-organizational parameters and especially structural conditions in neonatal centers in Thuringia showed challenging results (2 m minimum distance between incubators in 27 % (n = 4/15), isolation in single room in 53 % (n = 8/15)). Insufficient number of staff also hamper the complete implementation of KRINKO recommendations (intensive care unit: patient/staff ratio (MW ± SD) 2.5 ± 1.1; newborn area 4.3 ± 0.9). For longitudinal recording and evaluation

of colonization results an electronic data-management system can be used in 20 % (n = 3/15) of all centers.

Discussion Compared to other surveys this analysis covered also patients with standard care (level-3) and high level care (level-1) [3].

Analysis shows actual rate of implementation of KRINKO recommendations as well as structurally-organizational parameters in neonatal treatment centers in Thuringia. It gives important notes for discussion of necessary staff numbers and structural conditions [4]. Analysis could also be used for future surveys in other regions in Germany.

References

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