The Rondonia study: Mercury concentrations in children

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Our longitudinal study evaluates the association between infant Hg exposure and neurodevelopment in 1433 children from Rondonia, Brazilian Amazonia. With people coming from different Brazilian regions, the present population has both traditional families that base their diets on fish and starchy foods and city dwellers with more cosmopolitan food habits. In this changing environment, we are investigating the growth and neurodevelopment of infants, using hair-Hg of mother (HHg) as a marker of prenatal exposure, and mothers HHg, infants HHg and breast-milk Hg as a marker of postnatal Hg exposure. The study includes the heterogeneity of factors associated with changes in infant physiology and sources of Hg exposure: mothers (hair and lactation) and environment (food). We also examined the association between infant neurodevelopment and maternal socio-economic status and Hg exposure features. All pregnancies of mothers, resident in municipalities of the Madeira River Basin with expected dates of delivery between 2006 and 2007 were eligible for the study. The newborns were clinically examined with special attention to vitality, perinatal reflexes, maturity, and congenital malformations, and Appgar scores were recorded. Children has undergone detailed physical and neurobehavioral examination to evaluate the postnatal exposure at 6 months, 2 and 5 year-old. A questionnaire is applied to assess socioeconomic, educational status, food habits, and vaccine schedule and a sample of children hair is taken to verify mercury exposure. Anthropometric data were compared with data tabulated by World Health Organization. The child’s development was assessed using Bayley Scales of Infant Development and Stanford-Binet Intelligence Scale.

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To train and assess nurses on generic competencies those are frequently used in their areas of clinical practice

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Background: Nursing shortage caused recruitment of foreign nurses who has different educational background and different scope of practice, leading to non-standardized care and jeopardizing patient safety.

Aim: The aim of this descriptive study is to train and assess nurses on generic competencies that are frequently used in their areas of clinical practice.

Method: Train the trainer workshop was designed and conducted for six-generic competencies stations to assess 239 nurses who are engaged in the delivery of patient care at KAMC. Eighty-nine nurses were randomly selected to assess the impact of the competency training by pre-test and post-test exams. At the completion of the competency assessment, participating nurses completed the competency fair satisfaction survey.

Results: 18% of nurses failed the “Adult Physical Assessment” competency. About 18% of nurses failed the “Medication Administration” competency. Nurses scored the highest pass rate in the “Vital Signs” competency (96.19) and “Oxygen Therapy Administration” (93.62%). There were significant differences in means of pre-test and post-test in regard to the impact of competency training. The majority of nurses (87%) reported their satisfaction with the competency fair.

Conclusion: Competency training and assessment in a multi-cultural institution is very paramount in standardizing patient care. Clinical educators must carry the responsibility of classifying nurses according to their competencies and plan developmental portfolio accordingly.

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