A tertiary hospital’s pediatric residents’ knowledge, attitude and practice of intravenous fluids prescription: A prospective study

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Background: Intravenous Fluid (IVF) is the most common therapy that pediatricians prescribed. Fluid management is the “core skill” of any pediatricians. Therefore, they are expected to know the various compositions and fluid regimens and its common indications including deficits and replacement therapy, resuscitation of acutely ill patients and to provide maintenance fluid requirements in those who have reduced or restricted oral intake. Despite the frequency in which pediatric trainees prescribe IVF, the burden from mortality and morbidity related to IVF is huge with an estimate that inappropriately prescribed fluids harm one in five patients. Common causes of harm include fluid overload, electrolyte imbalances and dehydration.

Objective: To assess current IVF prescriptions’ knowledge, attitude and practices among pediatric residents at a tertiary hospital.

Methods: This is a cross-sectional study that used questionnaires to determine the knowledge, attitude and practice of pediatric residents in prescribing IVF. The questionnaires were face-validated by three experts that are knowledgeable in fluid prescription (nephrologist, intensivist and gastroenterologist). After validation, the questionnaires were pre-tested among a minimum of 10 respondents, these are the pediatric fellows that are currently having their subspecialty training of their field of choice. After gathering the informed consent to the participants, residents were asked to answer the 25-items questionnaires. Upon completion of the examination, the answers were scored and analyzed.

Results: A total of 64 pediatric residents were surveyed. Response rate was 100%. There were 25 first-year, 19 second-year and 20 third-year residents respectively that participated in the study. The aspect on the questions regarding the contents of IVF portrayed that more than 50 percent of pediatric residents have inadequate knowledge about fluid therapy. It also revealed poor knowledge on the normal values of body fluid losses. For practice questions, all year levels scored very low 35% and below and there was no significant difference among the three groups. For attitude questions, the scores of the three year levels differed significantly in five questions, on each question the 2nd year residents showing the highest scores and the first year the lowest. Overall attitude scores showed significant difference, with the second year level residents showing the highest and the first year level the lowest. On a scale of 1-10, the residents scored themselves on their adequacy of training as 6.5, 5.7 and 5.7 for 1st, 2nd and 3rd year residents, respectively. There was found no significant difference among the three scores.

Conclusion: This research concluded that residents are prone to prescribe IVF that can cause adverse events, knowledge scores were low all year levels achieving score of only 50% and below, practice scores were lower, with no year level scoring more than 33%, attitude scores has higher percent correct answers at 65% and below. The feedback on performance is critical and should be delivered constantly and religiously by a competent consultants, fellows, seniors or colleagues that will be influential to the success of future interventions to improve IVF prescribing, this feedback will ultimately enhanced decision-making and therefore best patient outcomes.

Biography
Mary Joy S Torres has pursued Bachelor of Science degree in Medical Technology and Medical degree at University of Santo Tomas, España, Manila, Philippines. She has obtained Pediatric Residency Training at Philippine Children’s Medical Center.

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