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ABSTRACTS COLLECTION

The 46th Annual Meeting of the European Society for Blood and Marrow Transplantation: Quality Management Group Oral Session (O179-O180)

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Quality management Oral Session

O179.

Integration of Theory and Practice: scenario-based Skill Training in Administering CAR-T Cells

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Background: Chimeric Antigen Receptor T-cells (CAR T cells) can destroy cancer cells and provides a new opportunity to achieve cancer remission for patients with acute lymphoblastic leukemia and certain types of non-Hodgkin Lymphoma. There are certain life-threatening adverse reactions associated with this new therapy: cytokine release syndrome and CAR-T-cell-related encephalopathy syndrome. It is important that registered nurses can recognize and intervene when a side effect occurs. Kolb (1984) stated that knowledge is created by transforming experience into existing cognitive frameworks. A key concept in learning is participation in the actual experience. This concrete experience provides the basis for learning. At Radboudumc nurses have the opportunity to use scenario based training and reflection to practice and demonstrate their competence in a realistic safe environment, prior to the actual clinical experience.

Methods: The goals and objective for the scenario based skill training were outlined as follows: nurses recognize side effects of CAR-T cell infusion, namely cytokine release syndrome and CAR-T-cell-related encephalopathy syndrome. Nurses will assess critical health incidents associated with the infusion of CAR-T cells through observations, measurement of physiologic parameters using the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach. Nurses will communicate with the doctor by using the RSVP (Reason Story Vital Signs Plan) method. Nurses will intervene to correct or stabilize the situation following the protocol for treatment. Nurses were informed that scenario based skill training were used to test their critical skills when administering CAR-T cells. One month prior to attending the scenario based skill training nurses were provided with the wards standard operating procedures for infusion of CAR-T cells and a CAR-T cell infusion study article. The scenarios that were used incorporated lab data, change in status and medication. All necessary equipment and supplies such as pulse, oximeters, thermometers, medications etc. were available for use during the scenario based training. Nurses who were trained in infusion of CAR-T cells were responsible for developing scenarios, incorporating all the skills and knowledge that are needed for the infusion of CAR - T cells and managing the side effects.

Manikins were used during the training; the voice of the manikins was performed by one of the trainers. A doctor was available in case the nurse wanted to discuss the situation with the doctor.

Upon completion of the scenario based skill training nurses completed an evaluation of the experience.

Results: Overall evaluation of the scenario skill based training was positive. Objectives as stated before were met. The most frequently mentioned comment from nurses' evaluations was that the training helped boost their confidence; nurses felt that they knew what they were expected to do in case of an adverse event when administering CAR-T cells.

Conclusions: Higher levels of critical thinking and clinical judgment skills are required with new therapies in treating hematologic malignancies. Scenario skill based training helps transforming experience with adverse effects into existing cognitive frameworks. Thereby scenario skill based training enhances the recognition and prompt implementation of interventions which increases the quality of care for patients who are receiving CAR-T cells.

Disclosure: Nothing to declare.

O180.

"TPFMEA", An International Model for Assessing Risks in a Stem Cell Transplant Program

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Background: Organizations that decide to implement a quality management system needs to develop a risk assessment methodology. Risk assessment is essential in a quality system, because it is effective in preventing errors, managing possible incidents and is a specific requirement for JACIE accreditation. This should reflect all aspects of the process, including the identification of risks and the evaluation of the severity of each risk. Hence, we have developed and proposed a new model of risk analysis and assessment specific to transplant centers with the aim to support the centers in the identification and evaluation of common risks.

Methods: The first phase comprised of 4 JACIE accredited transplant centers (1 from South Africa and 3 from Italy). FMEA (Failure modes and Effective analysis) methodology was used to develop a new risk assessment model and adapted it to the specific needs of a stem cell transplant program. For each facility (clinical unit, collection unit, processing unit) we have identified several processes, and for each process we have defined the main risks which might occur. The risks identified have been categorized into 3 categories and for each risk we have verified the different implications (patient/donor or personnel). Then, for each risk, we have identified the occurrence, severity and level of detection.

In the second phase of the project, each transplant center applied the TPFmea methodology to their organization, to verify the defined system and the occurrence and probability of each risk. Finally, we calculated the RPN to evaluate the application of the **TPFmea** methodology in the team.

Results: The ***"TPFmea"*** model has been applied to different centres and thanks to this study we have reached the following results: a) we have identified the common risks unique to each transplant centre. b) We have created a tool specific to a Transplant Program for managing and preventing errors. c) We have standardised the severity of each risk.

Conclusions: This model was created to provide a practical tool for accredited centers required to implement a risk assessment model. Furthermore, it is an instrument for benchmarking the several centers in order to identify the real risks and to share corrective actions for improving the quality of the centers.

Disclosure: No relevant disclosure.