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Resident-Driven Ultrasound-Guided Peripheral Intravenous (USGPIV) Nursing Education Program Reduces Attempts and Time to IV Access

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medication regimen-17/23 (74%). Physical exam maneuvers performed on the SP's included: cardiac exam "18/23 (78%), pulmonary exam "23/23 (100%), deep vein thrombosis (DVT) exam-10/23 (44%), pulse exam "5/23 (22%). 13/23 (57%) residents documented a DVT exam and 15/23 (65%) residents documents a pulse exam/no pulse deficit.

Conclusions: Based on the assessment of a common ED complaint, residents frequently did not perform all key elements of the H&P. It appears a number of residents documented elements of the physical exam that they did not perform. A limitation of the study is that it is possible residents may have not felt it appropriate to perform all facets of the physical exam on a SP but instead documented what they would normally do. Continuing education should focus on teaching key elements of H&P and appropriate documentation.

60 Resident-Based Preceptorship Improves Student Clinical Skills in the Emergency Department

Ruest A, Smith C, Gagdil R, Tang A, Moradian N, Sokolovsky S, Ashfaq S, Montalvo E, Aghera A, Schiller J / Maimonides Medical Center, Brooklyn, NY

Background: Resident as Teacher (RaT) programs have been shown to improve resident knowledge, skills, and attitudes towards teaching. However, little study has been devoted to the effect on student learning outcomes.

Objectives: To assess the effect of a RaT curriculum on clinical skill performance of medical students in an emergency medicine clerkship.

Methods: This prospective, randomized study performed at an urban community academic hospital investigated the effects of an RaT program on the clinical performance of 4th-year medical students in a 4-week clerkship. Students were randomized into two groups. In week 2, Group One (N=30) received an 8-hour shift devoted to one-to-one precepting by a senior resident without other clinical responsibilities. Group Two (N=25) was precepted in week 4. Both groups were given a standardized simulated encounter in weeks 1 and 3 - before and after Group One's precepted session. Two trained raters independently scored each student's performance on a Likert scale of 0 to 5. Groups One and Two were compared by observing improvement of student performance in 5 clinical skill categories. A p-value <0.10 was considered statistically significant based on previous educational research.

Results: Median difference of performance for Groups One and Two were, respectively: data gathering 1.00 (Range: -0.50 to 2.50) vs. 0.50 (Range: -1.00 to 2.50) (p=0.057); emergency management 1.00 (Range: -0.50 to 3.50) vs. 0.50 (Range: -2.00 to 2.50) (p=0.026); professionalism 1.00 (Range: -1.00 to 3.00) vs. 0.50 (Range: -1.00 to 2.50) (p=0.424); communication 1.00 (Range: -1.00 to 3.00) vs. 0.50 (Range: -1.00 to 1.50) (p=0.123); medical knowledge

1.00 (Range: -1.00 to 3.00) vs. 1.00 (Range: -1.50 to 3.50) (p=0.635); and total score 6.75 (Range: -2.00 to 11.50) vs. 4.50 (Range: -4.00 to 11.00) (p=0.018).

Conclusion: The RaT preceptor program helps improve student performance of data gathering, emergency management and total clinical score in a standardized patient setting.

61 Resident-Driven Ultrasound-Guided Peripheral Intravenous (USGPIV) Nursing Education Program Reduces Attempts and Time to IV Access

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Background: Obtaining peripheral intravenous (PIV) access in the emergency department (ED) can be difficult for nurses. A resident-driven ultrasound-guided peripheral intravenous (USGPIV) access nursing training program was initiated as an interprofessional quality project.

Objective: To compare venous access times in difficult-to-access patients requiring more than 2 attempts using the traditional manner against those in whom USGPIV placement was utilized. Secondary outcomes were to identify specific patient criteria that may predict difficult intravenous access.

Method: Nurses were trained with a 2 hour course and 20 successful USGPIV cannulations. ED patients were defined as "difficult access" after 2 traditional PIV attempts by one nurse were unsuccessful. Cohort 1 consisted of all patient encounters with >2 access attempts by the traditional technique. Cohort 2 consisted of all patient encounters when USGPIV was employed after 2 unsuccessful attempts. Cohort data included the recorded time, number of attempts, and barriers to successful cannulation recorded in the electronic medical record (EMR.) Data from the EMR was retrospectively analyzed to determine which characteristics were most frequently encountered when a nurse was unable to place PIV access. Results: Successful cannulation attempts differed between blind and ultrasound guided technique (3.75 vs. 1.16.) USGPIV was 2.7 times faster (19.7 min vs. 8.36 min) than traditional access placement. Characteristics most commonly recorded for difficult access included chronic illnesses, cannot adequately visualize, and skin color (33%; 71%, 15% respectively).

Conclusion: A resident-driven nursing USGPIV training program decreased the delay and number of attempts to establish PIV access in difficult access patients. Particular characteristics are more prevalent when encountering difficult access, but further study to prospectively evaluate predictive value is required.

62 Senior Medical Students Perception of the Final Year of Medical School, the Impact of Faculty Advice