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Methods: Data was collected from 115 patients undergoing hemodialysis at Taipei Hospital. Patient's age, duration of treatment, frequency of tPA used, diabetes and hypertension status, and Karnofsky score was obtained via electronic records. The number of injection sites was assessed by hemodialysis nurses and then averaged from the two nurses' reports.

Findings: Patients with 6 injection sites made up 68.9% (31 of 45) of the patients who have never used tPA, while also presenting with the lowest rate of the use of tPA five times or greater at 5.6% of patients (4 of 73). The data did not show associations between number of injection sites and the prevalence of studied co-morbidities, nor differences in the patients' Karnofsky score among the various patient groups.

Interpretation: This study suggests that patients with 6 injection sites tend to be more likely to have no occurrences of the use of tPA for thrombosis at Taipei Hospital. As most patients undergo hemodialysis three times a week, 6 injection sites would allow for one site for arterial and venous access each day of treatment. The lack of relation between the number of injection sites and the studied co-morbidities and Karnofsky score suggests that these factors do not prevent the use of AV shunts capable of 6 injection sites. This preliminary study suggests that it may be beneficial for nephrologists and surgeons to pursue AV shunts capable of 6 injection sites in order to decrease the occurrence of thrombosis.

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Abstract #: *2.003_GOV*

A comparison between Fried Frailty Score and serum albumin levels in Taiwanese patients with ESRD on hemodialysis

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Background: According to the U.S. Renal Data System, the prevalence of ESRD in Taiwan is highest in the world. Considering the health burden in ESRD patients who receive life-time hemodialysis and the financial burden for patients and countries, it is of great interest for clinicians to effectively assess treatment options for better use of limited resources. Studies have shown hypoalbuminemia to be an independent predictor of mortality in dialysis patients. In this study, we explored the validity of Fried Frailty Score as an additional prognostic factor in determining mortality and quality of life in ESRD patients undergoing hemodialysis, through comparing its relation to serum albumin level. We hypothesize that the Fried Frailty Score would inversely correlate with plasma albumin level in ESRD patients undergoing hemodialysis.

Methods: We surveyed and calculated the Fried Frailty Score for 158 hemodialysis patients at TIHTC Hospital using 5 criteria established by Fried: unintentional weight loss, weakness, slow walking speed, low physical activity, and self-reported exhaustion. We obtained laboratory data and comparisons were made by graphing serum albumin levels of patients, categorized by frailty score from zero to five. Seven were excluded due to insufficient laboratory data.

Findings: The ratio of patients with normal albumin to those with hypoalbuminemia decreases significantly as frailty score increases. In patients with a frailty score of zero, 22 out of 60, or 36.7% have hypoalbuminemia. 14 out of these 22 patients, or 63.6%, are less than 60 years old. Patients, who have a frailty score of zero, had greater odds of hypoalbuminemia if they are less than 60 years old than if they are older. OR: 2.1618, 95% CI: 0.7351 to 6.3572, $P = 0.1613 > 0.05$.

Interpretation: As frailty score increases, serum albumin decreases in ESRD patients undergoing hemodialysis at TIHTC Hospital. This finding strongly suggests the scores have powerful prognostic value in the outcome of ESRD patients, their mortality, and quality of life. Such information can assist the medical team in providing effective interventions and influence patients' decisions in choosing the treatment modality, such as peritoneal dialysis, renal transplantation, or starting hospice.

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Abstract #: *2.004_GOV*

Building a resilient health system (HS) in Liberia: Health Information System (HIS) Strategic Planning

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Project Purpose: In the aftermath of the Ebola crisis, strengthening the National HIS has been recognized by the MOH Liberia as one of the key interventions in building a resilient health system. Indeed, during the Ebola epidemic it became clear that the fragmentation of the current HIS made it impossible to have the "right information at the right time in the right place". Many HIS subsystems, such as the Health Management Info System (HMIS) and the Disease Surveillance Information System (DSIS) were not interconnected, and HIS stakeholders did not coordinate and contributed even further to the fragmentation by setting up separate reporting system. The Ministry of Health (MOH) decided to conduct a comprehensive HIS strategic and operational planning exercise with a particular focus on leadership and coordination.

Design: The HIS strategy development used three coordination mechanisms: (1) a Core Team constituted by around 10 HIS professionals from the MOH as well as from technical agencies; (2) the HIS Stakeholders Working Group, representing all HIS government as well as external stakeholders; and (3) Health Sector Coordination Committee (HSCC), a high level decision making body led by the Minister. With technical assistance by the USAID funded MEASURE Evaluation project, the HIS strategic planning process was implemented in four stages, through broad based consensus building among key HIS stakeholders inside and outside the MOH. First, all HIS stakeholders reached consensus on the HIS strategic plan development process. Secondly, the core team developed the HIS assessment tools and called together all stakeholders in an assessment workshop. The third stage consisted of a HIS Strategic Planning workshop, again with all stakeholders, where, based on the assessment results, a HIS strategic and operational plan were developed. HIS strategic objectives and interventions were identified, prioritized, and costed. Finally, these HIS strategic and operational plans were validated by the HSCC.

Outcome & Going Forward: The strategic planning process took place between July and November 2015. It is expected that these