with bedsize, and showed variations by region. CONCLUSIONS: This study demonstrates that orthopedic surgery type, physician specialty, patient severity, hospital characteristics, and use of pharmacological agents impact total blood transfusion costs. Newer medications/technologies may reduce blood transfusion costs in hip/knee surgeries, and this reduction may be even greater in certain subgroups.

**PSU7**

"TECHNO-MARKERS" FOR THE ASSESSMENT OF HEALTH TECHNOLOGY UTILIZATION

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OBJECTIVES: The actual extent of health technologies utilization is fundamental criterion for health technology assessment and management. Although crucial, this information may not be accurately available due to incomplete clinical registries and other limitations. As this is a major hindrance we developed a model enabling indirect assessment of the technology utilization, by measuring techno-markers, which are specifically associated with the technology under study. METHODS: During 2004 we evaluated the model by collecting data on techno-markers for cardiac surgery in one Israeli medical center. The Techno-markers chosen were compared to surgical registries and estimate error was calculated. Estimate error less than 5% indicates non-significant differences between techno-markers and surgical registries. RESULTS: Total of 1040 cardiac surgeries was compared to utilization of 1064 (2.3%) surgical-drapes and 1224 (17.7%) bone-wax units. In addition, 832 cardiopulmonary bypass (CPB) surgeries were compared to utilization of 874 (5%) oxygenators, 854 (2.6%) cardioplegia-sets, 1029 (23.7%) control-valves, and 848 (1.9%) aortic-cannulas. Furthermore, utilization of 208 “off-pump” coronary artery bypass (OPCAB) were compared to 204 (2%) air-water blowers, and 241 (15.8%) stabilizers CONCLUSIONS: Techno-markers demonstrated an estimate error less than 5% (surgical-drapes for cardiac surgeries, oxygenators, cardioplegia-sets, and aortic-cannulas for CPB, and air-water blowers for OPCAB) require further statistical analysis for establishing a comprehensive utilization model. Significant differences between observed and expected should alert the management system. In conclusion, valuable technomarkers must be distinctive to the technology and easy to monitor, thus their selection requires good clinical understanding of the technology. When chosen appropriately, techno-markers can provide a new approach for estimating and supervising the extent of health technology utilization.

**PSU8**

APPLICATION OF (PRO)spective STUDY OF PATIENT SATISFACTION (PS) TO MONITOR QUALITY AND TO SUPPORT MANAGEMENT OF HEALTH CARE PROVIDER—AN EXAMPLE OF MEETING ISO 9001:2000 REQUIREMENTS BY THE CARDIOSURGICAL UNIT IN POLAND.

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BACKGROUND: Patient Reported Outcomes (PRO) and particularly Patient Satisfaction (PS) are nowadays important measures of the overall quality of health care. ISO 9001:2001 requires regularly performed, patient surveys as quality monitoring tools. OBJECTIVES: To monitor the quality of health care provided by a cardiosurgical unit in Poland using PS evaluation and to apply the results to its administration. METHODS: A 48-item questionnaire was designed that defines nine areas of medical care (reception, sanitation, stuff, rehabilitation, medical care, food & diet, patient rights, hospital, suggestions). In 45 scaled questions a five-point Likert scale (very poor, poor, barely acceptable, good, very good) was used. There were 3 open-ended questions. A survey of 150 patients was conducted in 2004. All patients, who underwent cardiosurgical procedures were included during their 7-days post-operative stay in the intensive care unit. For the analysis, all questions were categorized into 3 dimensions: technical, functional and environmental (A. Donabedian, 1980). RESULTS: A total of 128 questionnaires (87.5%) were returned of which 94 (73.5%) were from males. The majority (96.7%) were treated for the first time. Less than 1% were younger than 41 years, 52.8% were between 41 and 60 years. The majority 97.7% of answers were positive. Areas with relatively high share of negative assessment were identified as rehabilitation (4.6%), food & diet (5.0%) and patient rights (7.0%). Qualitative analyzes of food & diet area, illustrated main complains: 52.2% eating hours, 13% taste, 8.7% diet (7.0%). Main complains: 52.2% eating hours, 13% taste, 8.7% diet needs. Additionally, functional and environmental dimensions were evaluated more positively then technical dimension. CONCLUSION: Patients overall presented a high level of reported satisfaction on aspects of their care relating to function and environment, and a lower level of satisfaction in technical aspects of care. This study demonstrates a practical application of PRO surveys in monitoring the quality of health care unit. The results could be applied in enhancing local unit management and improving the efficient distribution of resources.