TR6 - Poli de Figueiredo,Luiz Testing Smart Monitors in STARS (Sao Paulo Trauma Assessment and Resuscitation Study) - The first 24hrs of En Route Trauma Care Luiz Poli de Figueiredo, MD; George C. Kramer, PhD; Jose Otavio Auler, MD; Roberto Stefanelli, MD; Luiz Guilherme Villares da Costa, MD; Joel Avancini Rocha, MD; Fernando G. Zampieri, MD; Rodrigo Lima, MD; Ricardo Galesso Cardoso, MD; Lais Navarro, MD; Matheus F. Vane; Mike Kinksy, MD; Jose Salinas, PhD; Donald S Prough, MD; Lee Cancio, MD and Michael Given, PhD

An accelerating number of new smart' monitors (SM) are becoming available for trauma care. SM are often smaller, lighter with increased connectivity and interoperability. More importantly, SM promise more robustness, accuracy for traditional vital signs, as well as new vital signs, triage assistance and multivariable acuity indices. Randomized controlled trials are a gold standard, but are expensive, lengthy and narrowly focused for assessing clinical value and cost effectivenoss. Quantitative process improvement with cohort analysis is being used with increased frequency for testing new therapeutics. We propose use of a single, rigorous 'proving ground' for SM use in trauma care. STARS is the pilot study for this effort. Sao Paulo (SP) has an impressive magnitude of occurrence, severity and focused care of trauma. Delayed transport times due to traffic are not uncommon. Sao Paulo has one main trauma center (Clinicas — University of SP); large ED ICU and 94 total traurna/SICUr beds, a single Emergency Medical Service (SP Fire Dept.) that serves 12 million citizens. EMS receives 1,000+ calls per day, 40% injury and trauma. Unique to the system are the prehospital trauma teams (highly experienced surgeon-intensivist, nurse and medic) that are deployed to the most severe cases in special trauma ambulances or life flights (-7200/year). Phase 1 studies are now underway and assessing the Athena Wireless Vital Signs Monitor, Nonin Equanox 4-channel tissue oxygen monitor and Masimo Radical-7 multivariable pulse oximeter to be employed for the first-24hrs hour of trauma care with continuous monitoring from field, transport, ED, OR and ICU. Phase 1 will assess feasibility of effort and provide data.to define a quantitative process improvement methodology for assessing clinical impact and cost.