Abstract:

It has only been during the past decade that contamination of the intraluminal fluid pathway has gained recognition as a cause of CR-BSI. The IV connector is the gate keeper of the intraluminal fluid pathway. The care and maintenance of catheters is the complete responsibility of the primary nurse. The primary CR-BSI causative agent is biofilm formation. Biofilm formation depends on the number of cells, the presence of surface conditioning and the flow rate of the solution. Staph epidermis, and Staph aureus have surface cell receptors which assist in fibrin, fibrinogen location enabling the microorganisms to successfully adhere. Therefore, intraluminal contamination prevention strategies must be two-pronged - to prevent active and passive microorganism migration into the intraluminal fluid pathway and to prevent microorganism adhesion by minimizing fibrin build-up on the internal surface. The two care and maintenance procedures nurses use to protect the intraluminal pathway are swabbing the connector septum and flushing the connector after use. Individualizing the care based on the patient has not been studied. Since every patient is unique, different catheters and connectors are used, and even the nurse’s experience and knowledge are different, achieving consistent positive outcomes using a one-size-fits-all approach has shown to have inconsistent outcomes. An overview of swabbing and flushing is discussed and then how IV connector design affects these practice and outcomes is reviewed. It is imperative to recognize what procedures are performed for improved patient outcomes, versus what
procedures are performed to overcome IV connector design features. If flushing and swabbing procedures are standardized to general time requirements alone and connector design is overlooked, it should be understood that outcomes may vary and this variance may not be related to inconsistent nursing adherence to IV connector related swabbing and flushing procedures.