The project extensively reviewed comparative literature of studies between conventional three-way stopcock methods and closed arterial lab sampling devices” Benedict et al (2017).

Abstract:

As the quality of patient care continues to improve, nursing professionals are continuously tasked with researching, implementing, and evaluating best practices. The practice of obtaining blood samples from paediatric patients, using a conventional three-way stopcock method, has been associated with peripheral arterial catheter intraluminal contamination and catheter-related bloodstream infections. A paediatric cardiac intensive care unit (PCICU), in a large medical centre in the USA, set an objective to mitigate the risk of possible contamination by implementing the use of closed arterial lab sampling devices.

Reference:
