

Changing the culture regarding intravenous cannulation in an emergency department – a quality improvement project

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There has been a culture in emergency departments (EDs) of inserting peripheral intravenous catheters (PIVCs) “just in case”. Current evidence suggests that approximately 50% of inserted PIVCs are unused. Apart from causing discomfort to patients, PIVCs have been associated with staphylococcus aureus bacteraemia. So, if the proportion of unused PIVC can be safely reduced both pain and risk will be reduced for patients. There were also potential cost saving in consumables and improved workflow for nurses. In 2014 the ED of Box Hill Hospital participated in the Victorian Emergency Care Clinical Network’s (VECCN) project to reduce the proportion of inappropriate PIVCs. This was a quality improvement project led by a local team and evaluated by VECCN before and after data analysis. We collected data on one day’s worth of adult patients for each of the before and after phases. Data collected included whether a PIVC was inserted in ED and whether it was used for clinical purposes while the patient was in the ED. PIVCs inserted by pre-hospital clinicians were excluded. Clinical purposes was defined as administration of IV medication, IV fluids, blood products or contrast agents (or similar) for imaging studies. Blood drawn from the PIVC for analysis was not regarded as a use for clinical purposes. Our pre-data showed that 53% of patients had a PIVC inserted, of which 59% were used for clinical purposes in ED. A number of changes were implemented within the department to reduce the number of PIVCs inserted that were unused. These included an advertising campaign for the project, the introduction of clinical champions and PIVC insertion criteria, redesigning venepuncture/PIVC trolleys, and undertaking a number of educational sessions for medical and nursing staff. Post-data showed a PIVC insertion rate of 41% (effect size 12%, $p=0.03$) and PIVC use rate of 75% (effect size 16%, $p=0.04$). We are working to sustain our improvements. Our project shows that culture change is possible with the right strategy, the right mind set and the dedication of a good team.