Peripheral Intravenous Replacement in Adults: Routine vs. Clinically Indicated

Carol A. Hunt
Peripheral Intravenous Replacement in Adults: Routine vs. Clinically Indicated

Carol A. Hunt, MS, RN, CCRN-K
Lehigh Valley Health Network, Allentown, Pa.

Background
- Current policy requires peripheral intravenous (PIV) catheters to be replaced every 96 hours.
- Patients often require intravenous (IV) therapy (antibiotics, fluids etc.) beyond the initial 96 hours.
- Raising questions about costs, workflow and patient satisfaction

PICO Question
In adult medical surgical patients, does replacing peripheral intravenous catheters every 96 hours (current practice) compared to replacing peripheral intravenous catheters when clinically indicated impact peripheral intravenous catheter complications?

Evidence

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnhart, E., Always, A., Halm, M. (2019)</td>
<td>Over three-month period, 137 Peripheral Intravenous Catheters had dwell time of greater than 96 hours. No negative outcomes during the intervention, including no increase in phlebitis rates.</td>
</tr>
<tr>
<td>McGuire, R., Coronado, A. (2020)</td>
<td>Implementing clinically indicated removal of Peripheral Intravenous Catheters (PVC) resulted in better patient experience with fewer PVC’s for course of treatment resulting in cost savings.</td>
</tr>
</tbody>
</table>

Implementation
- The initial plan was to round on patients to visualize PIV’s (assess the site, condition of dressing, line reconciliation, etc.).
- Due to COVID and restricted visiting, chart audits and communication with nurses became the major source of PIV monitoring. Chart audits were performed to view documented number of hours PIV dwell > 96, potential complications and adherence to policy.
- RN’s documented assessment of PIV site every 4 hours. There was consistent and frequent communication (via telephone) with RNs to ensure PIV’s functioning with no signs of infection, infiltration, inflammation, or phlebitis.

Outcomes

NURSES’ TIME SAVED
- 25 PIV’s with >96 dwell time.
- Total PIV hours with > 96-hour dwell was 972 hours.
- Nurse’s time saved was 39 hours. This time was allotted to other patient care activities.

COST SAVINGS
- Cost saving was approximately $600 over the three-month period.

PATIENT SATISFACTION
- Patient satisfaction scores increased during the pilot. Overall score of 84% during the first quarter (prior to the pilot) and 87% during the second quarter (during the pilot).

IMPACT ON COMPLICATIONS
- There were no complications (infection, inflammation, infiltration, phlebitis) related to PIV dwell more than 96 hours (PIV in place up to 240 hours during this pilot).
- An unexpected outcome: some PIV <96-hour dwell were removed and not replaced.

Next Steps
- Share results with director, staff and other stakeholders.
- These discussions will be held 11, during huddles and team meetings.
- In addition to sharing results at this location, the project and results will be presented to Network Leadership. Network by-in, support of the evidence, will lead to consideration of policy change.

REFERENCES