Supplement Integration

This supplement to the nursing best practice guideline *Assessment and Device Selection for Vascular Access* is the result of a scheduled review of the guideline. As part of its commitment to ensure consistency with the best available evidence, the Registered Nurses’ Association of Ontario (RNAO) has established a monitoring and review process which involves a full review of each guideline every 3 years.

As part of the health care team, nurses caring for clients requiring vascular access have an important and continued role across the continuum of care. Please note that to ensure consistency with the scope of the original guideline, this review has not addressed nurses working in specialty areas such as pediatrics, gerontology, oncology and dialysis, or the care of clients requiring infusion therapy through the following devices: arterial lines, hemodialysis catheters, pulmonary artery lines, pheresis lines, epidural catheters, pressure monitoring devices, umbilical vein, femoral catheters, and/or intraosseous lines. Nurses working in these areas or with these devices will require further practice direction from guidelines in their areas of practice.

Review Process

A panel of specialists was assembled for this review, comprised of members from the original development panels of the *Assessment and Device Selection for Vascular Access* and *Care and Maintenance to Reduce Vascular Access Complications* guidelines, as well as other recommended individuals with particular expertise in this practice area. A structured evidence review based on the scope of the original guideline was conducted to capture the relevant literature. Initial findings regarding the impact of the current evidence base on the original guideline were summarized for the review panel. The review panel members were given a mandate to review the original guideline in light of the new evidence, specifically to ensure the validity, appropriateness and safety of the guideline recommendations as published in 2004. In December 2007, the panel met to achieve consensus on the impact of this new evidence on the existing recommendations.
Review of Existing Guidelines
One individual searched an established list of websites for published guidelines and other relevant content. This list was compiled based on existing knowledge of evidence-based practice websites and recommendations from the literature. Six international guidelines were critically appraised using the Appraisal of Guidelines for Research and Evaluation Instrument (AGREE, 2001). From this appraisal, two guidelines were identified to inform the review process and were circulated to all panel members:


Literature Review
Concurrent with the review of existing guidelines, a search for recent literature relevant to the scope of the guideline was conducted with guidance from the Review Chair. The search of electronic databases, including CINAHL, Medline and EMBASE, was conducted by a health sciences librarian. A Master’s prepared nurse completed the inclusion/exclusion review, quality appraisal and data extraction of the retrieved studies, and the summary of the literature findings. The comprehensive data tables and reference lists were provided to all panel members. A summary of the evidence review is provided in the Review Process Flow Chart.

Panel Review
After a review of the current evidence, no substantive changes were made to the recommendations. It was noted by the panel (particularly in regards to Recommendation 2.0) that the reference from the Intravenous Nurses Society (2000) cited in the original document has been updated, and is no longer applicable to the original discussion of evidence. The updated INS document (2006) has been reviewed by the panel, and is cited as a reference to support this guideline. Additional resources to support implementation and evaluation, such as the RNAO vascular access e-learning course and chart audit tool, are available on the RNAO website at www.RNAO.org/bestpractices.

Review Findings
A review of the most recent studies and relevant guidelines published since the development of the original guideline does not support changes to the recommendations, but rather suggests stronger evidence for our approach to assessment and device selection for vascular access. The panel would like to emphasize the need for further research in this area in the future.

Review Process Flow Chart

<table>
<thead>
<tr>
<th>New Evidence</th>
<th>Literature Searched</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield 78 abstracts</td>
<td>Yield 6 guidelines to be screened for consistency with inclusion/exclusion criteria.</td>
</tr>
<tr>
<td>4 studies that met inclusion criteria</td>
<td>Yield 6 guidelines that met inclusion criteria</td>
</tr>
<tr>
<td>Quality appraisal of studies</td>
<td>2 guidelines included after AGREE review</td>
</tr>
<tr>
<td>Develop evidence summary table</td>
<td>Review of 2004 guideline based on new evidence</td>
</tr>
<tr>
<td>Supplement published</td>
<td>Dissemination</td>
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</tbody>
</table>
References/ Bibliography:


For implementation resources developed to support the uptake of this guideline, please visit the RNAO website at www.rnao.org/bestpractices.