Current CRRT practices in Canadian Hospitals: What a survey found.

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Background

- Treatment modality for over 20 years for acute kidney injury associated with acute and chronic medical conditions.
- The nursing work is highly complex
- The learning requirements are challenging
Purpose of study

- To explore nursing practices with CRRT using the newer Prismaflex machines, and
- To examine how CRRT programs are functioning with regard to overall nursing management
Methods

- The authors conducted a national survey in 2010-11 to collect data on current Canadian nursing practices with CRRT
- Number of questions: 61
- This survey was a follow up to a previous national survey completed in 2006.
Methods

- Each potential participant was sent a survey packet consisting of a covering letter, a letter of information, the survey questionnaire, and a stamped return envelope.

- The survey packet also was translated into French.
The survey content

• Demographics;
• general information;
• CRRT education;
• ordering & initiating;
• vascular access;
The survey content (cont’d)

- filters & fluids;
- anticoagulation;
- filter life;
- adverse events;
- Use of SLED (sustained low efficiency dialysis)
Sample/Setting

- The target population was ICU nurse educators in Canada representing as many as possible CRRT programs across all provinces and territories.
- Community and teaching hospitals included.
Ethics

- Ethical approval was obtained from the University of Ottawa Health Sciences and Science (HSS) Research Ethics Board
Data Analysis

- Descriptive statistics were employed to analyze the survey data.
- Content analysis of responses to the short answer questions was performed.
Results

- 129 surveys sent out and 73 were returned (a response rate of 57%). Thirty-six hospitals (49%) used CRRT and the Prisma flex machine was employed by 94% of these hospitals.

- Of those 36 hospitals using CRRT, 75% were teaching and 25% were community
RESULTS

- The critical care units in this survey were mainly medical surgical with a small number of specialty units such as neurosurgery, trauma, post cardiac surgery.
- Number of beds ranged from 1-40 with 78% having 10-29 beds.
Results

Number of years using CRRT:

- 26/35 (74.3%) had used CRRT for greater than 8 years
- Only 5/35 (14%) had been using CRRT in the last 4 years or less.
Results

Number of machines

- 29/35 (83%) had 1-6 machines. There were some regional programs that shared up to 14 machines over several sites.

Number of patients per month

- 33/36 (92%) of sites had 1-10 patients per month. In the 2005 survey, 94% had 1-10 patients per month.

Number of days on CRRT

- 23/35 (66%) were on CRRT for 4-6 days. This question was not asked in the original survey.
Indications for CRRT

- Patient put on CRRT because of sepsis, surgery such as cardiac surgery, acute and chronic renal failure
Education-training programs

- 34/36 (94%) had a dedicated training program for their nurses. It was 91% in 2005.
- 24/34 (71%) had 8 hour training program
Education — percentage of ICU nurses who were trained

- In the community hospitals, 44% cited that 51-60% or greater of their staff were trained in CCRT.
- In the teaching hospitals it was 77% cited that 51-60% or greater of their staff were trained.
Education-how often sessions offered

- Responses indicated that sessions were held at different times during the year
- For 48% of respondents it was once or twice a year. For 19% it was as needed. The remainder varied from 3x/year to 12x/year
Nursing experience required to manage CRRT

Participants had a wide range of beliefs about background experience and readiness for learning this skill.

- In the community hospitals, 78% wanted two years experience or more.
Nursing experience required to manage CRRT

- In the teaching hospitals, responses were more varied:
  - 22% requiring no experience or less than one year
  - 48% between 1-2 years
  - 30% greater than two years
Staff coverage for breaks, vacation etc

- All had mechanisms to cover for breaks by having CRRT trained nurses on each shift in addition to the nurse caring for patient on CRRT.
Biggest concern of CRRT practice

Biggest concern is maintaining staff competence after initial training.
Issue same as first survey
Other findings: Initiating CRRT

Who decides to start CRRT?

- 11/36 (31%) nephrologist
- 14/36 (39%) intensivist.
- 8/36 (22%) nephrologists and intensivist together. Comments revealed a collaborative relationship.
Other findings: Who writes the CRRT orders

- 20/36 (56%) were written by the nephrologists.
- 9/36 (25%) were written by intensivists
- The remainder are intensivist and nephrologists together
Other findings: Adverse events

- Bleeding issues are still number 1 when compared with survey 1.
Considering using SLED

sustained low efficiency dialysis

- 11 yes
- 23 no
Currently using SLED

- 30-no
- 3 yes-all said the dialysis nurse initiates and maintains dialysis
Conclusions

- Maintaining staff competence remains a crucial issue.
- Participants had a wide range of beliefs about background experience and readiness for learning this skill.
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