

# Evaluation of Chronic Kidney Disease Symptom Management Algorithms and Patient Information Sheets in Two Kidney Care Clinics



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## Background

- As renal function declines, symptoms related to chronic kidney disease (CKD) become more prevalent and impact quality of life (QoL) in the non-dialysis CKD (ND-CKD) population
- BC Provincial Renal Agency (BCPRA) has implemented the Edmonton Symptom Assessment System (ESAS) to systematically assess patients' symptoms
- In patients with eGFR  $\leq$  15 mL/min, ESAS is assessed at each Kidney Care Clinic (KCC) visit (every 1 to 4 months) and scores  $\geq$  4 (moderate to severe symptoms) require further assessment by the multidisciplinary team
- BCPRA has developed 8 symptom management algorithms and accompanying patient information sheets to aid in the management of CKD-related symptoms
- There is limited published data assessing symptom burden and the impact of symptom management guidelines in the ND-CKD population

## Objectives

- To assess patients' ESAS score before and after implementation of the BCPRA symptom management algorithms
- To assess patients' satisfaction after receiving care following the BCPRA algorithms and patient information sheets
- To assess renal nurses' and renal dieticians' satisfaction with the BCPRA algorithms and patient information sheets

## Methods

- Design:** Prospective quantitative and qualitative study
- Inclusion Criteria:**

Phase I	Phase II
<ul style="list-style-type: none"> <li>Age <math>\geq</math> 19 years</li> <li>ND-CKD with eGFR <math>\leq</math> 15 mL/min attending KCCs at St Paul's Hospital (SPH) or Vancouver General Hospital (VGH), Vancouver (BC)</li> <li>ESAS <math>\geq</math> 4 for fatigue/insomnia, pruritus, loss of appetite and/or nausea</li> </ul>	<ul style="list-style-type: none"> <li>Renal nurses and renal dieticians working at the SPH and VGH KCCs</li> </ul>

### Exclusion Criteria:

Phase I	Phase II
<ul style="list-style-type: none"> <li>Unable to speak English</li> </ul>	<ul style="list-style-type: none"> <li>Renal nurses and renal dieticians who have not used the symptom management algorithms/guidelines at least twice prior to focus groups</li> </ul>

### Data Collection:

- Phase I:** Interview eligible patients to assess satisfaction and to solicit feedback on symptom management recommendations and/or patient information sheets
- Phase II:** Focus groups with eligible KCC nurses and dieticians to assess satisfaction and solicit feedback on symptom management guidelines and patient information sheets
- Analysis:** Descriptive statistics to assess demographic data and changes in patients' ESAS score and extraction of themes from interview and focus group transcripts

## Results

Table 1: Baseline Patient Characteristics (N=8)

Sex (Male/Female)	4/4
Mean Age $\pm$ SD (years)	68.8 $\pm$ 6.0
Mean eGFR $\pm$ SD (mL/min)	13.3 $\pm$ 1.6
Median KCC Vintage (IQR) (months)	51 (34.5 – 67.5)

Table 2: Symptoms Addressed at KCC Visit (N=8)

Patients who recognized that symptoms were addressed	Poor Appetite (N=2)	Nausea (N=1)	Pruritus (N=3)	Fatigue (N=5)
	2	1	2	0

Table 3: Patients' Satisfaction (N=5)

Recommendations helpful to:	Not Helpful	Somewhat Helpful	Helpful	Very Helpful
Improve Symptoms?	0	3	1	1
Improve quality of life?	0	2	2	1
Recommendations have worsened symptoms or quality of life?	Yes		No	
	0		5	
Patient Information Sheet:	Yes	No	Not Received	
	4	0	1	
Easy to use?	4	0	1	
Helpful?	4	0	1	

Table 4: Patients' Change in ESAS Score (Mean Follow-up of 80  $\pm$  12.6 days)

Patient	Symptom	Pre-Intervention ESAS Score	Post-Intervention ESAS Score
1	Low appetite	7	6
2	Low appetite	5	4
3	Pruritus	6	4.5
4	Pruritus	8	4
5	Nausea	6	7

Table 5: Renal Nurses' and Renal Dieticians' Satisfaction [N=11; nurses (9), dieticians (2)]

Frequency of Use:	Not used at all	Zero to once per week	One to three times per week	Greater than 3 times per week	Unable to Characterize
Guidelines/Algorithms	0	5	3	2	1
Patient Information Sheets	2	3	6	0	0
Overall opinion:	Not Satisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Uncertain/Not Answered
Symptom management algorithms/guidelines?	0	1	8	2	0
Patient information sheets?	0	0	9	2	0
Symptom management algorithms/guidelines and/or patient information sheets:	Yes		No		
Difficulty using?	1		10		
Concerns regarding recommendations outlined?	0		11		

Table 6: Themes Identified During Patient Interviews and Nurse/Dietician Focus Groups

Patient Interviews (N=5)	
Patient-Centered Care	Patient-friendly information sheet (4) Recommendations take into account patient preference (3)
Patient Education	Patient information sheet informative/helpful for symptom management (4)
Standardized Care	More comprehensive assessment (1)
Renal Nurse/Dietician Focus Groups (N=11)	
Standardized Care	Standardized information being asked/provided to patients (8) Earlier intervention with recommendations (3) Increased confidence due to evidence-based recommendations (3) Improves understanding among colleagues in KCC (2)
Patient-Centered Care	Individualized patient care (5) Patient autonomy for treatment options (3)
Follow-Up	Logistic challenges with patient follow up (5) Prompts for follow up (4)
Patient Education	Algorithms/Patient information sheets allow for better patient education and information retention (4) Stimulates patient questions for future clinic visits (2)
Accountability	Being more proactive about making recommendations (3)

## Quotes

### Patients:

- "...it gave me an outline of what to expect"
- "...it convinced me that it was ok to go with what my doctor suggested"

### Renal Nurses and Dieticians:

- "...you have a standard way of like giving the same message so even if I don't see the patient at the next visit the next person can give the same information and reinforce the same points rather than giving new points and overwhelming the patient"
- "... it gives me more confidence in giving the information which I have always kind of known but to have it laid out nicely, research based gives us more confidence"

## Limitations

- Small sample size
- Only three of four intended symptom management tools could be assessed
- Sample size was too small to analyze data for individual symptom management algorithms/guidelines

## Suggestions for Further Improvement

- Make patient information sheets available in other languages
- Incorporate more visuals and less text in the patient information sheets
- Allocate more time for symptom management discussion during KCC visits
- Standardize the strategy to follow-up on the symptoms addressed and recommendations made during KCC visits
- Investigate further as to why patients did not perceive that certain information for symptom management was provided

## Conclusion

- Majority of ESAS scores improved after interventions
- Patients perceived that information sheets were helpful and easy to use
- Renal nurses and renal dieticians are satisfied with the symptom management algorithms/guidelines and patient information sheets

## References

BCPRA Kidney Care Committee. Systematic Symptom Assessment and Management (using the Modified Edmonton Symptom Assessment System). BC Provincial Renal Agency; 2017. Available from: <http://www.bcrenalagency.ca/resource-gallery/Documents/Systematic%20Symptoms%20Assessment%20and%20Management%20Guideline.pdf>

