

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



Puneet Vashisht, B.Sc.(Pharm), Monica Beaulieu, B.Sc.(Pharm), MD, MHA, Hilary Wu, B.Sc.(Pharm), PharmD, Nadia Zalunardo, B.Sc., MD, MS, Judith Marin B.Sc.(Pharm), M.Sc., PharmD

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 ≤ 15 mL/min, ESAS is assessed at each Kidney Care Clinic (KCC) visit (every 1 to 4 months) and scores ≥ 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"> Age ≥ 19 years ND-CKD with eGFR ≤ 15 mL/min attending KCCs at St Paul's Hospital (SPH) or Vancouver General Hospital (VGH), Vancouver (BC) ESAS ≥ 4 for fatigue/insomnia, pruritus, loss of appetite and/or nausea 	<ul style="list-style-type: none"> Renal nurses and renal dieticians working at the SPH and VGH KCCs

Exclusion Criteria:

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

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>

