

REGIONAL VARIATION IN ORAL NUTRITIONAL SUPPLEMENT USE AMONG PATIENTS WITH NON-DIALYSIS CHRONIC KIDNEY DISEASE (CKD-ND) IN BRITISH COLUMBIA

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Background:

Malnutrition and protein-energy wasting are complications of advanced CKD associated with increased risk of mortality and morbidity. In BC, a Nutritional Supplement Policy stewarded by renal dietitians guides prescription of oral nutritional supplements (ONS).

Objectives:

To describe ONS prescription practices and their regional variation among CKD-ND patients in BC.

Methods:

In this retrospective cohort study of adult CKD-ND patients who initiated follow-up at multidisciplinary Kidney Care Clinics (KCC) during 2013-2018, we used descriptive statistics to evaluate ONS prescription patterns within the first year of KCC entry. We used a Sankey plot to assess longitudinal ONS prescriptions over 3 years in the subset of patients who entered KCC during 2013-2015. In each regional health authority, dietitian resources were quantified as number of registered dietitian full-time equivalents (FTEs) per 1000 KCC patients.

Results:

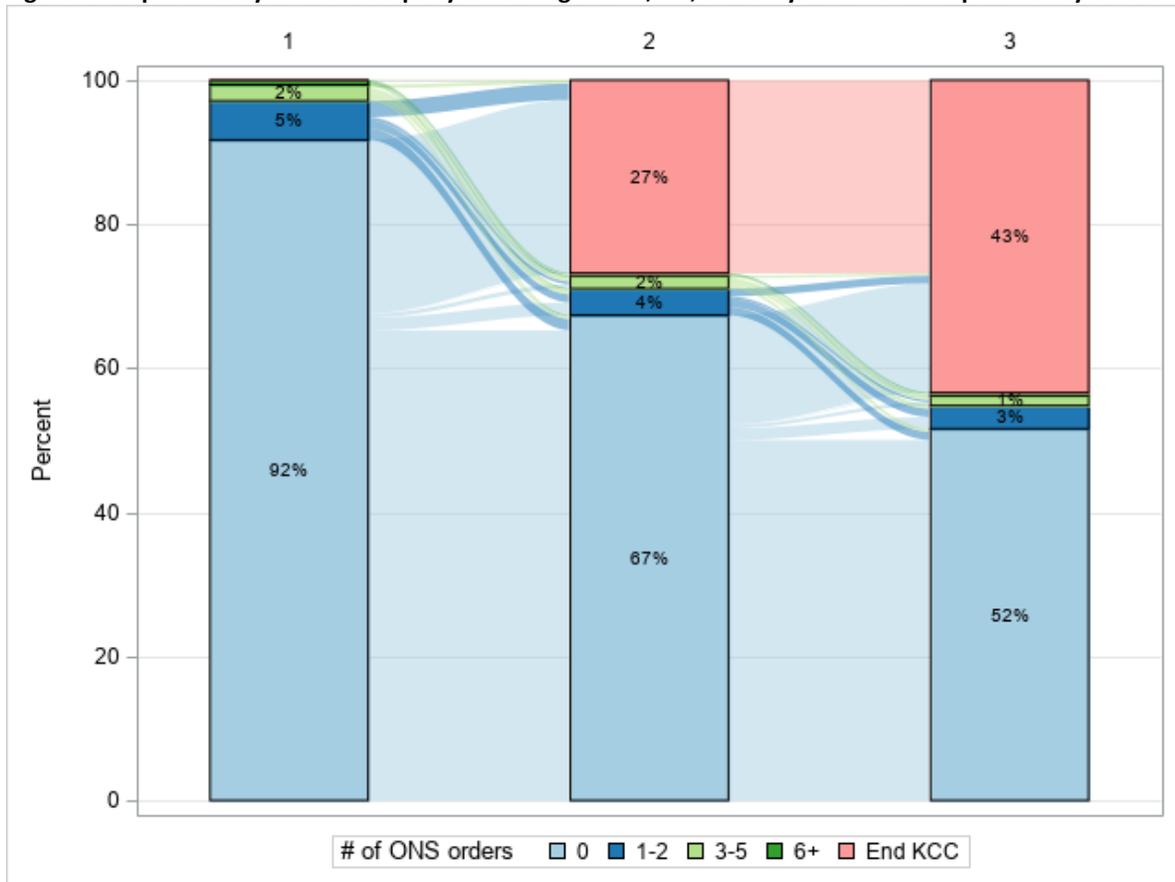
Out of 15859 CKD patients, 1389 (9%) were eligible for and prescribed ONS within 1 year of clinic entry. Among health authorities, ONS prescriptions varied between 2.7% to 10.5% of patients (Table). Regions with lower dietitian FTEs/1000 patients had lower adjusted rates of ONS prescription compared with regions with greater dietitian resources. 65.4% of patients prescribed ONS in year 1 had infrequent use (1-2 prescriptions/year), and of these, 29.3% discontinued ONS during year 2. 66.7% of patients with 3+ prescriptions/year in year 1 continued this pattern in subsequent years (Figure).

Table: ONS prescriptions by Health Authority

Health Authority	% of patients prescribed ONS	Adjusted* % of patients prescribed ONS	# of registered dietitian full time equivalents per 1000 CKD patients
Vancouver Island	7.1%	7.8%	0.70
Fraser	10.5%	8.9%	2.12
Vancouver Coastal	9.7%	7.4%	1.37
Vancouver Island	9.0%	8.4%	2.12
Northern	2.7%	1.7%	0.81

* age, eGFR, BMI, serum albumin, and neutrophil-to-lymphocyte ratio

Figure: % of patients by ONS orders per year during the 1st, 2nd, and 3rd year of follow-up at Kidney Care Clinics



Conclusions:

We demonstrated variation in ONS prescription patterns within BC. Future analyses will explore patient and clinic factors underpinning this variation. These findings will assist with quality improvement initiatives and dietitian resource allocation.