# An Exploratory Retrospective Scoping Chart Review of An Individualized Inpatient Managed Alcohol Program (RAAP)

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## BACKGROUND

- Island Health implemented a formal managed alcohol program called the individualized managed alcohol plan (iMAP) in June 2020 after development of a policy, procedure, and clinical order set.
- Managed alcohol programs are an emerging health care service that provides an alternative option to detoxification for those with severe alcohol use disorder (AUD) who want to continue to consume alcohol.
- The majority of programs in Canada are community-based programs and have demonstrated significant benefits in terms of reducing alcohol related harms.
- Overall, the literature has very little content to help guide us when setting up and optimizing an inpatient managed alcohol program (iMAP).
- This review seeks to look back over the past two years of the program, characterize patients and their managed alcohol intake in hospital, and assess whether we have achieved our ultimate goal of harm reduction in patients with severe AUD.

## METHODS

**Research Question:** As a new harm reduction pathway, does enrollment of patients into an individualized inpatient managed alcohol plan (iMAP) result in a reduction in alcohol related harms?

**Design:** Exploratory Retrospective Scoping Chart Review

**Inclusion Criteria:**
- A sampling of inpatients who received alcohol (vodka or beer) as part of iMAP in tertiary care hospitals within Island Health from June 1st, 2020 – October 1st, 2022

**Exclusion Criteria:**
- Subsequent encounters to iMAP (only the first encounter was considered)

**Hospital Sites Involved:** Victoria General Hospital (VGH), Royal Jubilee Hospital (RJH), & Nanaimo Regional General Hospital (NRGH)

**Total Sample Size (N):** 64 patients

**Statistical Analysis:**
- Performed an inter-rater discussion between a panel of reviewers to help eliminate sources of bias and extrapolate several themes and key findings from the results.
- This consisted of each reviewer independently examining the data and then meeting to discuss commonalities/differences between each reviewer's findings.

## OBJECTIVES

**Primary**
- When possible, determine if enrollment of patients into iMAP resulted in a reduction in alcohol related harms (i.e. reduction in standardized drinks, transition into stable housing, fewer episodes of withdrawal/intoxication) compared to admission.

**Secondary**
- When possible, determine aspects of the admission, that would help contribute to a reduction in the alcohol related harms (i.e how quickly was iMAP initiated into a patient's admission).
- Identify processes and procedures that were not followed, did not translate into positive patient care or could be adjusted to improve care of patients in the program.

## RESULTS

**Table 1. Baseline Patient Characteristics**

| | |
|---|---|
| Mean Age (years)[1] | 57 |
| Gender (%) | Female 21.9 |
| | Male 78.1 |
| | Intersex 0 |
| Severe AUD on admission (%) | 100 |
| Median Drinking Duration (years) | 39 |
| Housing Status on Admission (%) | Stable Housing 53.1 |
| | Precarious Housing 4.7 |
| | Shelter 21.9 |
| | Homeless 9.4 |
| | Not Documented 10.9 |
| % of patients who initiated iMAP on admission | 32.8 |
| % of patients prescribed anti-craving medications | 33.9 |
| % of patients that initiated discharge against medical advice | 18.3 |
| % of patients who had the desire to continue drinking[2] | 80.5 |

**Notes:**
[1]on date of admission to hospital
[2]documented in 33/41 patient's notes, 23 patients had no record of documentation

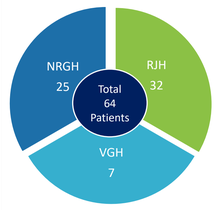


**Figure 1.** Distribution of Patients Across Tertiary Care Sites (N = 64)

**Figure 2**. Total Length of Hospital Stay

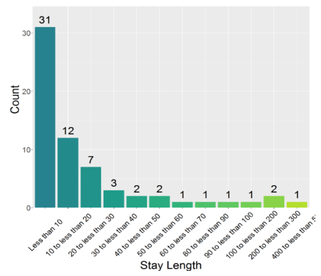


**Figure 3**. In the past three months (leading up to admission), patients have experienced the following:

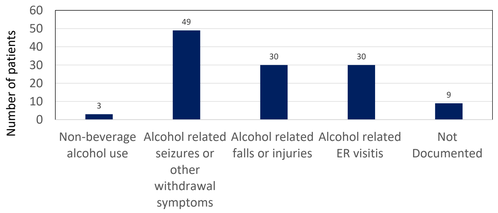


**Table 2. Ordered Alcohol Regimen**

| Vodka | |
|---|---|
| **% of patients** | **Scheduled Order** |
| 5.9 | Vodka 40%, 50 mL (1 dose/ 1.2 SD), soln-oral, while awake Q1H |
| 13.7 | Vodka 40%, 50 mL (1 dose/ 1.2 SD), soln-oral, while awake Q2H |
| 7.8 | Vodka 40%, 50 mL (1 dose/ 1.2 SD), soln-oral, while awake Q4H |
| 19.6 | Vodka 40%, Other |
| | **PRN Vodka Order** |
| 33.3 | Vodka 40%, 50 mL (1 dose/ 1.2 SD), soln-oral, Q1H, prn |
| 10.4 | Vodka 40%, Other |
| 2.1 | PRN not ordered |
| **Beer** | |
| **% of patients** | **Scheduled Order** |
| 3.9 | Beer 5%, 355 mL (equivalent to 1 can) (1 dose/1 SD), soln-oral, while awake Q1H |
| 13.7 | Beer 5%, 355 mL (equivalent to 1 can) (1 dose/1 SD), soln-oral, while awake Q2H |
| 11.8 | Beer 5%, 355 mL (equivalent to 1 can) (1 dose/1 SD), soln-oral, while awake Q4H |
| 31.4 | Beer 5%, Other |
| | **PRN Beer Order** |
| 41.7 | Beer 5%, 355 mL (equivalent to 1 can) (1 dose/1 SD), soln-oral, Q1H, prn |
| 10.4 | Beer 5%, Other |
| 2.1 | PRN not ordered |

**Notes:**
[1]SD = standard drink

**Table 3. Reported Causes of Death**

| | |
|---|---|
| Pneumonia | 3 |
| Respiratory Failure | 1 |
| Heart Attack | 3 |
| Cancer[1] | 2 |
| Stroke | 1 |
| Overdose (narcotic) | 1 |
| Bleeding (brain, esophageal variceal) | 2 |
| Fall resulting in a subdural hematoma | 1 |
| Septic Shock | 1 |
| Unknown cause | 3 |
| **Total Number** | **18** |

**Notes:**
[1]Neuroendocrine tumor of the small bowel and lung cancer

**Table 4. Primary Objectives**

| | |
|---|---|
| **A. Efficacy** | |
| % of patients that experienced a decrease in the number of standard drinks consumed over their admission period[1] | 56.1 |
| Housing Status on Discharge (%) | Stable Housing 28.1 |
| | Precarious Housing 3.1 |
| | Shelter 14.0 |
| | Homeless 0 |
| | Not Documented 54.7 |
| **B. Safety** | |
| % of patients that consumed additional quantities of alcohol outside of iMAP | 17.2 |
| Additional variety of alcohols and non beverage alcohols that were consumed outside of iMAP[2] | Vodka, Hand sanitizer |

**Notes:**
[1]documented in 23/41 patient's charts, 23 patients had no record of documentation
[2]Often not documented as nurses were unsure of the substance that was used. Patient would leave the ward and return intoxicated.

**Table 5. Secondary Objectives**

| | |
|---|---|
| Median time to iMAP initiation (days) | 3 |
| Median duration of enrollment in iMAP (days) | 13.5 |
| Number of patients that initiated anti-craving medications[1] along with their iMAP (%) | 22.2 |
| % of patients satisfied with the program[2] | 84.6 |

**Notes:**
[1]medications include: naltrexone, gabapentin, topiramate, and acamprosate
[2]documented in 11/13 patient's charts, 51 patients had no record of documentation

"The iMAP program has been very helpful in managing my withdrawal and makes it easier to stay in hospital"

"A challenge that I have had with detox was return to community without immediate follow up with stabilization"

"Previously, withdrawal symptoms have led to the patient discharging themselves from hospital against medical advice. Our team is happy to be involved in any way that may support the patient in feeling safe during their hospital stay."

## DISCUSSION

- Good representation of the whole cohort despite there being ~200 patients enrolled in the program over the past two years.
- 100% of patients in the program met criteria for AUD on admission.
- Majority of patients were placed on a detoxification care plan first compared to iMAP potentially due to acute illness, staff being unfamiliar with the program, or pending consultation services from addictions medicine.
- Median time until iMAP initiation was 3 days.
- In summary, the majority of patients preferred to continue drinking.
- 56.1% of patients achieved a reduction in the number of standardized drinks however, a large portion of patients had no record of alcohol intake prior to admission.
- 84.6% of patients were satisfied with their care demonstrating the value of having an option of a managed alcohol program. By involving patients in the decisions surrounding their care, we are able to support their choices in a more fulfilling way and transition them from homelessness toward more stable housing. In summary, 0% of patients (compared to 9.4% on admission) returned to homelessness on discharge however, there was a significant portion of patients whose discharge housing was undocumented.
- Due to the lack of documentation gathered, we were not able to assess how many fewer episodes of withdrawal/intoxication were reported throughout each patient's admission. We hypothesize that patients would more likely experience withdrawal symptoms at admission and when transitioning from detox to iMAP.
- 17.2% of patients consumed additional alcohol outside of the program due to fear of judgement, not being satisfied with the type of alcohol provided, ability to socialize with others, reluctance to ask for as required doses due to stigmatization, and potentially managing their withdrawal symptoms.
- 33.9% of patients were prescribed anti-craving medications on admission but many were not compliant. Addictions medicine regularly considered starting anti-craving medications however, only 22.2% of patients consented.
- Our patients are medically frail and 28.1% of patients ended up passing away from various causes of death. Two deaths were associated with alcohol related harms (i.e. esophageal varices, falls)
- This emphasizes the vulnerability of this population and the importance of developing trusting and non-judgmental relationships with our patients in order to encourage them to seek out care earlier.

## LIMITATIONS

- Exploratory retrospective scoping chart review
- Differences in documentation (electronic vs paper charting)
- Difficult to measure a reduction in number of SDs due to lack of documentation on consumption prior to admission/while in hospital
- Lack of discharge planning– challenging to determine continuity of care
- Restricted to reporting on three tertiary care sites due to barriers to accessing patient records and limited research timeline

## RECOMMENDATIONS & NEXT STEPS

- Procedure and policy revisions to reflect the new assessment forms that have emerged over the last two years, along with training on documentation expectations.
- Educate all staff/providers on the option of enrolling patients into iMAP rather than waiting for addictions to be consulted.
- Provide better discharge planning for our patients into community in order to facilitate seamless transition of care.

- **Next Steps:** Further conduct qualitative research investigating the experiences of people with iMAP care plans and the care teams who co-create them (focus groups, and 1:1 interviews).