

## INTRODUCTION

High rates of inactivity, sarcopenia, frailty in people receiving dialysis.

Increasingly intradialytic exercise is used to increase physical activity, mitigate dialysis-related symptoms (such as restless legs, cramping and fatigue) and potentially improve mood.

Home Hemodialysis (HHD) patients typically have less access to intradialytic exercise programs and equipment.

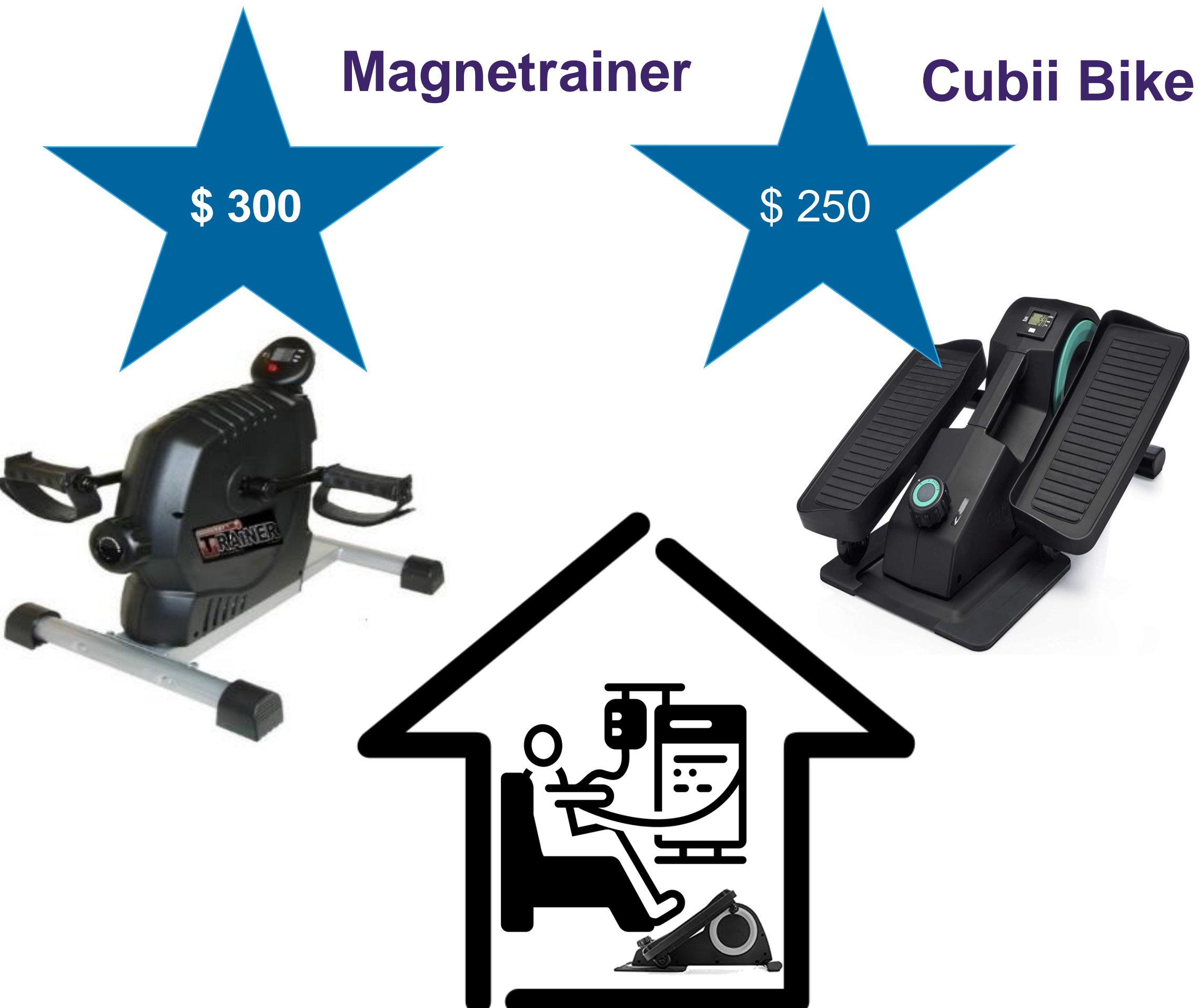
### Exercise is medicine. Biking on dialysis:

- ✓ Is safe
- ✓ Improves muscle strength
- ✓ Helps with low blood pressure on dialysis
- ✓ May decrease dialysis-related symptoms
- ✓ May have cardiac and mortality benefits

## AIM

To demonstrate the feasibility of incorporating bike loans into HHD programs.

Foot pedal bikes were purchased by the HHD program and loaned to interested patients.



## METHOD

### Home Hemodialysis Bike Loan Logic Model

**Project Objective:** To implement a pilot bike loan program for Home Hemodialysis (HHD) patients in Fraser Health (FH) in order to gain a better understanding of patterns of use (frequency, duration), impact on symptom burden, and feasibility of spread to In-centre & Community HD.

Inputs	Activities	Outputs	Immediate Outcomes	Intermediate Outcomes	Long-Term Outcomes
Resources Needed e.g., People, Skills, Physical, Budget, Knowledge, Tools, etc	Activities (Services, Processes)	Products of the Activities ( Services, Processes)	Short-Term Results	Medium-Term Results	Long-Term Results
Literature review of evidence supporting intradialytic biking Home Hemodialysis team members to implement and support patients Consultation with S. Calgary Renal Program Kinesiologist	Create forms/education material: □ Intradialytic Exercise Referral (nephrologists to sign) □ Bike Loan Info for Patients □ Bike Safety Guidelines for Patients □ Bike Record sheet □ Agreement/contract for Bike Loan □ Follow-Up Survey	# of patients using bikes Frequency of biking (per week) Duration of biking (per session) Subjective feeling of well-being (patient quotes on experience with intradialytic biking)	HHD patients - Increased awareness and motivation for physical activity in HHD patients  Increased knowledge about intradialytic biking and the types/costs of pedal bikes available	Improved understanding of the feasibility and usability of bike loan program for HHD patients in FH  Increased awareness within the FH Renal Program about intradialytic biking, resulting in promotion/initiation in other FH HD units.  Improved dialysis adequacy	Improved exercise capacity, quality of life of patients participating in intradialytic biking  Growth of intradialytic biking program at in-centre and community dialysis units in FH
Funding (\$1980.46)	Recruit users (exclude nocturnal patients) Deliver bikes ESAS pre and post loan Monthly follow-ups to see if bikes are being used and/or any questions 3 month Follow-Up Survey by phone/in-person	Project accomplishment report  Dissemination of project proposal within FH renal program and provincial dietitians			

## CONCLUSIONS

This feasibility project demonstrated that loaning bikes to HHD patients is easy to implement, improves access to exercise equipment and increases awareness about the benefits of physical activity. Within FH there is growing interest and resources dedicated towards programs such as this.

## RESULTS

- ✓ Over 12 months: 23 patients in the program received a bike to try at home, with 19 completing surveys.
- ✓ 65% of patients used the bikes 2 or more times per week, on and off of dialysis.
- ✓ Time spent on a bike ranged from 15-120 minutes.
- ✓ 47% noticed **changes in motivation towards physical activity** (not including biking).
- ✓ 37% noticed **changes in overall health or well-being** since starting to bike at home.

**Table 1: Symptom improvement on ESAS-r (renal) from HHD bike loan project (n=16 with pre and post ESAS-r)**

Symptom	Number of patients with improvement	% (n=16)	Range of score change
Restless legs	6	38%	1-9
Depression	4	25%	1-2
Feeling of wellbeing	7	44%	1-5

"I am a wee bit happier as it gives me something to do and look forward to [on dialysis]"

"I was able to be active even when feeling unwell because the biking was easy to do and right in my own home"

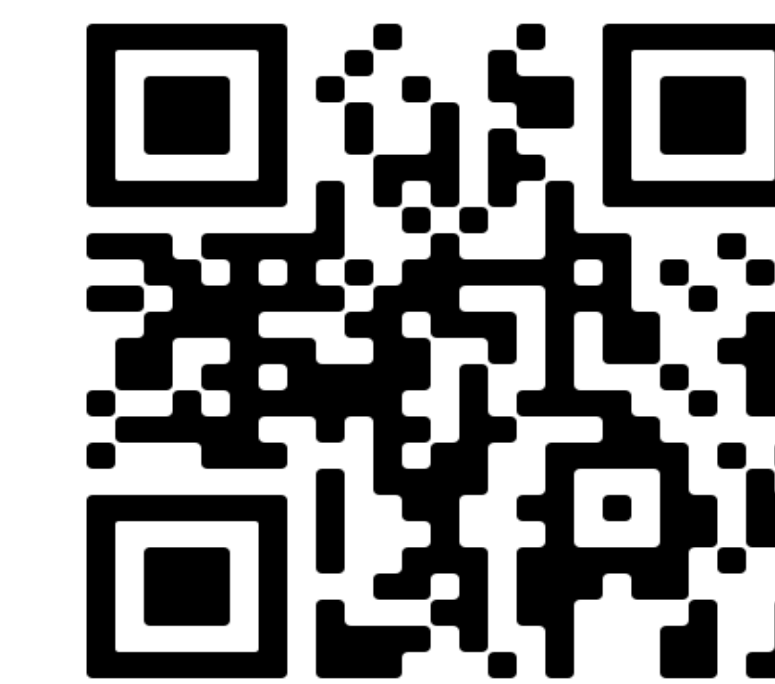
"Napped less and felt less washed out after HD"

## UNANTICIPATED BENEFITS



## Scan QR Codes

Benefits of biking on dialysis video for patients and staff



BCIT article about FH bike handles



## REFERENCES

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## ACKNOWLEDGEMENTS

We are grateful for the financial support from BC Renal, Fraser Health and the knowledge sharing from the Calgary Renal kinesiologists.

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