



WellSpring

Sharing physical activity knowledge

CENTRE FOR ACTIVE LIVING • JULY 2019 • VOLUME 30 • NUMBER 07

Big Red Ride

Promoting outdoor physical activity and social connection for health-challenged older adults

Annie Tredray, PT, PGDipPhy, Physiotherapist, Covenant Health, Banff Mineral Springs Hospital

Introduction

Demographics show indisputably that our population is aging. Strategies to keep older adults healthy and maintain their quality of life will be increasingly important in the coming decades. As a physiotherapist for the last 10 years at the Banff Mineral Springs Hospital (MSH), I have worked with Acute Care (AC) patients and Long-term Care (LTC) residents. I have been inspired by my older adult population to develop a unique community bike program called the Big Red Ride. This program is a collaboration between three community organizations and the use of a four-person, fully adaptive e-bike imported from Holland.

How was I inspired?

Witnessing LTC residents live a mostly sedentary life did not resonate well with me. I saw the effects repeatedly — deteriorating functionality and simple lack of satisfaction with daily living. Some would beg me to take them outside, and once out there, they would lament that they were no longer able to walk around and enjoy their surroundings. I realized that despite their age and often severe disabilities, they still craved opportunities to be active outdoors.

In 2015, I attended the Exercise Prescription and Aging conference where I learned some hard data about Canada’s fast-growing aging demographic. While many Canadians are living healthier into their later years, there is also an increasing number of older adults living with “frailty”. Frailty comes with more complex health challenges. Both social connectivity and physical activity are necessary components for healthy aging for any adult over 65 years, whether they are frail or not.

Based on Statistics Canada data, the number of 85-year-olds will more than double, between 2016 and 2036.¹ By 2036, 62% of all healthcare dollars will be spent on those over 65.² Several keynote speakers challenged the physiotherapists at Exercise Prescription and Aging to become “influencers” by creating innovative solutions to respond to this situation.

S U M M A R Y

While many Canadians are living healthier into their later years, there is also an increasing number of older adults living with “frailty” and, thus, more complex health challenges.

This WellSpring introduces a unique community bike program called the Big Red Ride, which enables frail older adults to get out and be active outdoors.



Cycling for long-term care residents

At MSH, our team has been using cycle ergometers in our physiotherapy gym since 2012, mainly for AC patients. Physical activity as a treatment intervention for disease prevention and maintenance is a best practice amongst physiotherapists. Through use by some LTC residents, an interesting phenomenon occurred. Despite their poor quality gait and inability to walk very far, the high quality of their lower extremity motion while pedaling was astounding. Not only that, the residents loved it!

Our team started residents on a gentle, low-dose program, as recommended by the World Health Organization, of 10 minutes for three times per week. Disabilities ranged from Parkinson's disease, chronic obstructive pulmonary disease, generalized and severe osteoarthritis, supranuclear palsy, severe hemiplegia with aphasia, types 1 and 2 diabetes, coronary artery disease, high blood pressure, dementia, osteoporosis, post pelvic fracture, post fall, and many other comorbidities.

Word spread quickly among our LTC residents, and our team often had wheelchair line-ups waiting to use the three ergometers. Within three months, some residents were biking for 45 minutes or more and would complain when their time was up for the day. An average dose for most was 20-30 minutes of gentle to moderate biking, 2-3 times per week. Our team saw improvement in their ability to perform functional activities of daily living, particularly their sit-to-stand motion, and they wanted to come back for more. Most of these residents were over 85 years of age.

After attending the 2015 Exercise Prescription and Aging conference and watching the residents joyfully bike in the gym, I was inspired to do something more to support them. I read a CBC article about an innovative Dementia Care Village in Holland called "Hogeway",³ and through this, I identified the perfect bike — a fully adaptive e-bike that seats 3 people plus a pilot. E-bikes have recently been recognized to have positive health benefits.⁴ Use of an e-bike would not only provide more residents with an opportunity to bike outdoors at one time, but would also promote social connectivity and physical activity.^{5,6}

My co-worker, Glenn Matthews, and I scoured the Internet until we found one. By the end of January 2016, our team raised \$28,000 through generous donations from the Pauw Foundation, Banff Canmore Community Foundation, Mineral Springs Hospital Auxiliary, Banff Seniors Centre, IODE, and Albert Naffin Estate. By March 30, 2016, we ordered the bike from Holland.

*Man does not
cease to play
because he
grows old.*

*Man grows
old because he
ceases to play.*

*— George
Bernard Shaw*



Community and interprofessional collaboration

Prior to the bike's arrival, I began to think about the day-to-day operations. The bike would require storage and maintenance. At the same time, there was a need to know who we could share this bike with to maximize its use, who would help us service it, and what would happen when we get a flat tire while out riding with a fully loaded bike?

According to the Canadian Frailty Network (CFN), there are 1.2 million Canadians who are 65+ living with frailty, and along with them, 2.5 million Canadians who are their caregivers and hundreds of thousands more in our healthcare workforce.⁷ The CFN's guiding framework and approach to improving the care of older adults living with frailty includes educating the next generation of care providers and by engaging with other adults and caregivers. Interprofessional collaboration is an efficient way of promoting this approach.

A collaboration between our MSH Rehabilitation Team, the Town of Banff (TOB) Municipality and Bow Valley Primary Care Network (PCN) was created, and Big Red Ride was born. The TOB agreed to store the bike and coordinate volunteers; the PCN would use the bike as one of their active living programs; and our MSH Rehabilitation team would use the bike several mornings per week for the LTC and AC residents and patients.

Bactrax Bike Shop in Banff kindly stepped up to perform regular bike maintenance and help bail us out in an emergency. Thankfully, we have only had one emergency: a tire puncture when the bike was fully loaded. A group of Banff's Assisted Living Community older adults were rescued by the Fire Chief. He drove them home with the sirens on and made their day. Many exciting conversations ensued over their dinner that night.

Where we are today

Big Red Ride is now entering its third season in the Banff community. We run four different programs using the bike, all with trained volunteers.

- MSH Rehabilitation Team uses the bike two mornings per week for AC and LTC patients and residents. Last summer, 34 rides went out with riders ranging in age from 34-101 years. Our rides vary from 15 minutes up to an hour, depending on who is riding. We usually have a healthcare professional following on their own bike, while a volunteer pilots the e-bike for additional safety, to create more awareness, and to have more fun!
- The PCN uses the bike several afternoons per week as part of their Active Living Program. Rides commence from the Seniors Assisted Living Facility and Mt. Edith House (independent subsidized housing, mostly for older adults), and they last approximately 30 minutes. Riders decide on their destination based on their energy levels, weather, and how adventurous they are feeling. Our surveys to date indicate that afterwards, they all "feel better than before the bike ride."

How to start a bike program in your community

1. Identify the need/ interest/potential riders in your community.
2. Identify existing cycle infrastructure and other rideable terrain.
3. Identify potential partners, e.g., municipality, older adult facilities, healthcare organizations, bike shops.
4. Identify funding sources.
5. Co-develop and implement a plan.
6. Monitor and adapt the program on an on-going basis.
7. Celebrate successes!



Annie Tredray graduated from Auckland Technical Institute, New Zealand in 1985, with a Postgraduate Diploma in Physiotherapy (Manipulative Therapy). Following a 25-year career in Sports Medicine (New Zealand, England, and Canada), she has worked at Covenant Health's Banff Mineral Springs Hospital since 2010.

Annie is a passionate advocate for seniors' health, and in 2017, she founded the community bike program, Big Red Ride.

- Banff family physicians, local physiotherapists, and other healthcare professionals are given referral slips and encouraged to prescribe rides for their patients.
- The TOB Family and Community Support Services Senior Support Coordinator, Sue Smythe, plays a pivotal role in coordinating the volunteers, overseeing mechanical maintenance, and accommodating riders in our most recent program, *Meaningful Rides*. This program has grown organically in response to the needs of adults of all ages who are enduring chemotherapy or other disease or illness. It became apparent that these community members had a desire to be gently active and social outdoors. Big Red Ride is an excellent fit for these individuals.

There has also been regular demand from the older adult community to use the bike for celebratory rides (e.g., Canada Day). I hope to see this area of usage grow to include events such as birthdays.

The success of Big Red Ride in Banff has inspired the expansion of the program to other communities. Recently, the Pauw Foundation confirmed that they will be generously sponsoring the cost of a new bike for Canmore. This is exciting news for older adults living in this community. A recent study by Kelly et al.⁶ has documented strong evidence that cycling in particular provides improvement in things like cardiovascular fitness, muscular fitness, body mass and composition, bone health, functional health, and cognitive function. Most older adults have deficits in all of these areas. This information strengthens my commitment to create another maximally-used Big Red Ride program for Canmore.

Conclusion

With the introduction of e-bikes and the recognized positive health benefits they can provide,⁴ the cycling culture in cities and communities across Canada is growing. The Big Red Bike program provides residents with an opportunity to engage in physical activity in an outdoor environment that provides many physical, social, and mental health benefits. Our team has witnessed first-hand, the joy, freedom and playfulness expressed by all of our older adult residents and other adults who ride together on Big Red Ride in Banff. This affirms our beliefs that the timing is perfect to include our aging population in this increasingly popular culture of biking.

To start a Big Red Ride in your community, please contact Annie through www.bigredride.ca.

References

1. Statistics Canada. Census in brief: a portrait of the population aged 85 and older in 2016 in Canada. <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016004/98-200-x2016004-eng.cfm>. Published May 3, 2017.
2. Canadian Medical Association. A policy framework to guide a national seniors strategy for Canada. https://cma.ca/sites/default/files/pdf/News/policy-framework-to-guide-seniors_en.pdf. Published August 2015.
3. Sagan A. Canada's version of Hogewey dementia village recreates 'normal' life. *CBC News*. May 03, 2015. <https://www.cbc.ca/news/health/canada-s-version-of-hogewey-dementia-village-recreates-normal-life-1.3001258>. Accessed June 10, 2019.
4. Bourne JE, Sauchelli S, Perry R, et al. Health benefits of electrically-assisted cycling: a systematic review. *Int J Behav Nutr Phys Act*. 2018;15(1):116. doi: 10.1186/s12966-018-0751-8.
5. Oja P, Titze S, Bauman A, et al. Health benefits of cycling: a systematic review. *Scand J Med Sci Sports*. 2011;21(4):496-509. doi: 10.1111/j.1600-0838.2011.01299.x.
6. Kelly P, Kahlmeier S, Gotschi T, et al. Systematic review and meta-analysis of reduction in all-cause mortality from walking and cycling and shape of dose response relationship. *Int J Behav Nutr Phys Act*. 2014;11:132. doi: 10.1186/s12966-014-0132-x.
7. Canadian Frailty Network. CFN 2018 national conference: improving frailty care benefits everyone. Canadian Frailty Network. <https://www.cfn-nce.ca/news-and-events/events/previous-cfn-conferences-and-events/cfn-2018-national-conference>. Accessed June 8, 2019.

