



Transforming and redefining MS



**University
Hospital
Foundation**

Northern Alberta has one of the highest rates of multiple sclerosis (MS) in the world. While we are far from satisfied with that fact, we are also using it to our advantage, gathering invaluable, province-wide meta-data that drives research, inspires innovation and ignites transformational change.

Powered by your generosity, the University Hospital Foundation (UHF) is committed to raising \$12 million to support individuals and their loved ones living with MS.

The hard facts



Northern Alberta has one of the highest rates of Multiple Sclerosis (MS) in the world



There are currently over 7,000 people receiving care at the MS Clinic at the University of Alberta Hospital



MS afflicts women more than men at a rate of three to one

What we're doing. What needs to be done.

Located at the University of Alberta Hospital, the MS Clinic is a one-stop shop for MS patients, bringing together neurologists, nurses, social workers, neuropsychologists, physiotherapists, occupational therapists and speech therapists. There is a nurse practitioner who works solely with people with MS as well as the state-of-the-art Doreen Lutsky Hooper Rehabilitation Clinic with specialized programs and trained practitioners in MS rehabilitation.

Still, the wait lines to gain access to care are frustratingly long, as is the process for diagnosing MS. Until researchers gain a greater understanding for what causes the disease, the quest for prevention, and a cure, will continue. That's why we are building our campaign on these two critical areas – translational research and caring for people living with MS.



DR. PENNY SMYTH
MS Neurologist

TRANSLATIONAL RESEARCH

Preventing Progressive MS - A Precision Health Strategy

Recognizing the devastating impact of MS on individual Albertans, Canadians and people worldwide, the University of Alberta and the University Hospital Foundation have come together to accelerate research in MS.

This five-year research program includes epidemiological, clinical, translational and fundamental studies focused on understanding progressive multiple sclerosis and improving its diagnosis and treatment.

Concentration on the creation and advancement of knowledge around MS will lead to prevention and improved outcomes for people with MS. By applying a precision health strategy that integrates innovative approaches with existing strengths within the MS Centre, the research conducted here in Alberta will identify the cause of MS, bolstered by new diagnostic tools and develop and implement preventative treatments for MS.

RESEARCH THEMES

1. Investigate the clinical and epidemiological factors contributing to progressive MS in the context of aging, sex, and gender.
2. Examine biomarkers associated with the development of progressive MS (P-MS).
3. Investigate the cellular and molecular mechanisms of P-MS and the associated behavioural consequences, focusing on immune and regenerative pathways and on myelin and axonal viability.

By examining the fundamental processes that contribute to MS disease progression, as well as the population-wide, clinical and socio-economic features of progressive MS, researchers expect to identify new markers of MS disease progression along with effective new treatments for MS.

CARING FOR PEOPLE LIVING WITH MS Innovation

"Innovation is the way forward," says Dr. Jodi Abbott, President and CEO of the University Hospital Foundation (UHF). "With the right people and the right resources, we can bring hope to people living with MS and make real progress towards improving their lives."

In collaboration with Alberta's world-leading Artificial Intelligence community, UHF is trail-blazing the way to creating a health data platform that will serve to measure all things relating to MS care. The end-goal is to marry the collected data with technology to create biometric devices that people living with MS can wear, providing key insight into what's happening in their lives when they're not visiting their doctor.

"Innovation can add a dimension that gives people living with MS more autonomy in terms of tracking their progress," adds Dr. Abbott.



Enhancing community outreach

Improving patient centered care will enhance the clinical experience in the healthcare system from symptom onset through to exceptional care and treatment.

Examples of care that may be supported include stimulation equipment that facilitates MS patient rehab, education and training for primary care physicians to improve diagnostic accuracy; hospital golf carts that will fit in elevators to improve on-site navigation; and specialized beds that provide monitoring or wireless sensor networks to reduce bedsores.

Coordinating care to MS patients where they live through satellite centres, telemedicine and virtual clinic visits with doctors and medical team members will help decrease acute and chronic disease burden, reduce injury occurrence, and promote better health.



The role you can play...

Nothing about MS is easy. While so much discovery and progress in drug treatment therapies has been made, it is the road ahead – seeking new ways to diagnose and prevent MS and deliver stream-lined access to the best care possible for people living with MS today – that is proving to be the most challenging.

Alberta Advantage

Thanks to our partnership with Alberta Health Services, researchers can access extraordinarily rich data that makes it possible to conduct immense epidemiological studies that can't be done elsewhere and helps ensure marginalized groups aren't excluded.

Working as one, nationally and internationally renowned researchers and clinicians at the University of Alberta Hospital's MS Clinic share insights and findings that are then applied to improve patient care in a repeating loop of research, application and further discovery. Alberta MS patients also participate in research studies – eager to contribute to improving lives.

The most critical component of our campaign, however, is you. Your support is crucial to making the level of discovery and innovation needed to transform and redefine MS.



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