
Getting involved in research

The importance of seniors

- ❑ In 2006 there were **70,265** persons over 65 in NL – 14% of the population
- ❑ In 2020, it is likely there will be **114,703** with 10,052 persons over 85
- ❑ NL is the fastest aging province in Canada; the median age is now 43
- ❑ In 2003, government established the Ministerial Council on Aging and Seniors, the Provincial Advisory Council on Aging and the Division, now the Office, of Aging and Seniors
- ❑ Goal 28 of the *Provincial Healthy Aging Policy* (2006) is:
 - Improved knowledge of aging and seniors through evidence gained by **research**

Outline

- What is research, how is it done?
- What's going on at Memorial
- How to get involved

What **is** research?

- ❑ A systematic investigation designed to develop or contribute to generalizable knowledge - theories, principles, relationships – or the accumulation of information on which these are based
- ❑ The information from research studies is published for others to confirm and to build on
- ❑ New programs, treatments and policies are generally based on this accumulated evidence.

How research is funded

- ❑ Large granting agencies – CIHR/SSHRC/NSERC
- ❑ Not for profit agencies – H&S, Cancer, Diabetes
- ❑ Government through NL Centre for Applied Health Research and the new Research and Development Corporation
- ❑ The average research grant is \$300,000 over 3 years to pay the salaries of research staff, supplies, travel
- ❑ About 20% of the grant applications submitted are recommended for funding.
- ❑ Grant applications are reviewed by a committee of peers – fellow scientists and lay persons
- ❑ The time from beginning to plan the research project to funding is about a year

How do we get the information?

□ **Records**

- Vital statistics
- Clinical records
- Workplace records
- Published surveys

□ **Observations**

- Traffic patterns
- Handwashing behaviour

□ **Animals**

- Early stages of testing new drugs
- Testing impact of behaviours on disease

□ **People**

- Testing new drugs and procedures
- Evaluating new programs
- Assessing impact of behaviour on health

Research about people

- Clinical research
 - Studies of new drugs or procedures, new programs
- Studies of blood and tissues
- Taking part in interviews
- Filling out questionnaires
- Being observed

How do we justify using people in research?

- Usefulness of the research to the individual – ***personal benefit***
- Usefulness of the research to ***society***
- Acquisition of ***knowledge for its own sake.***

How do we protect people taking part in research?

- ❑ Researchers must submit their study to a Research Ethics Board (REB)
- ❑ The REB reviews the research proposal
 - Can the research project answer the questions posed by the researcher?
 - How is the researcher protecting the safety and privacy of persons taking part in the study?
 - How will the researchers share the research results with their peers and with those that took part?
 - Does the consent document/script fully inform the potential participant?

The Research Ethics Board



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Research Ethics Boards

- ❑ REBs are guided by the *Tri-Council Policy Statement on Ethical Conduct in Research involving Humans*
- ❑ Members of REBs must include scientists, clinicians, laypersons from the community, a person who knows ethics and a lawyer
- ❑ Protection of research participants is their primary task
- ❑ Meetings are face to face with discussion of each application and its consent form
- ❑ Decisions are to approve, not approve, approve subject to changes

Guiding ethical principles

- Respect for free and informed consent
- Respect for vulnerable persons
- Respect for privacy and confidentiality
- Respect for justice and inclusiveness
- Balancing harms and benefits

What's going on at Memorial?

- Wendy Young
- Marshall Godwin
- Aimee Surprenant
- Dale Corbett
- Michelle Ploughman
- Angela Loucks-Atkinson

Dr. Marshall Godwin

Family Medicine, Faculty of Medicine

Director: Primary Healthcare Research Unit



Dr. Godwin

The Eldercare Project

- ❑ Can regular home visits by a nurse improve the health of older persons and reduce their use of formal health services?
- ❑ The project is based in the practices of family physicians – half get the ‘intervention’ and half do not.
- ❑ Patients 80 years or older in the ‘intervention’ group are visited in their home by a nurse who assesses their physical and mental health, asks about their needs and sets goals to be achieved over the one year of the study

Dr. Godwin

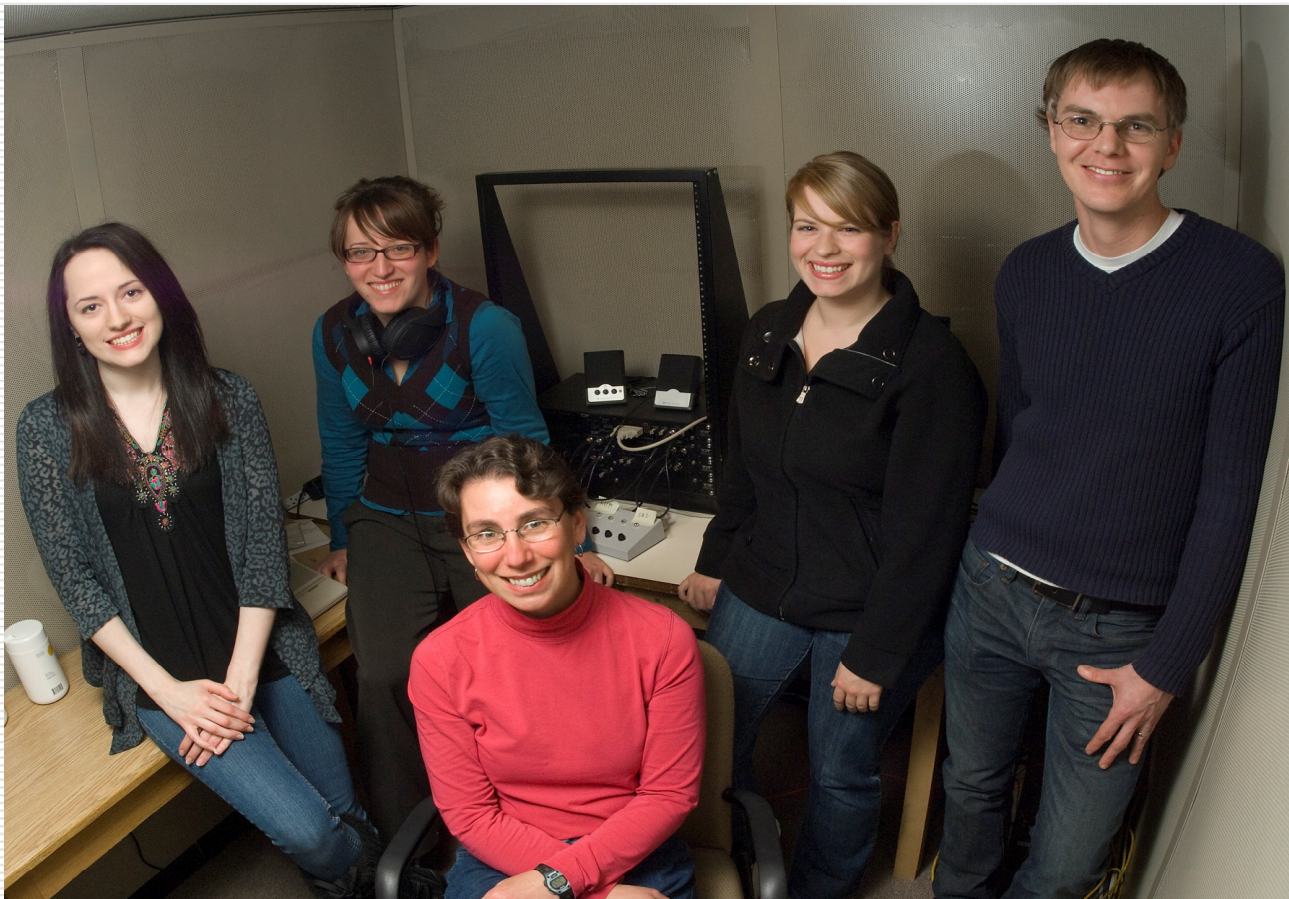
The Eldercare Project

- As needed, patients are connected with services and provided education about their health over 7 visits during a year
- The two groups will be compared in their physical health, satisfaction with care, ability to do daily tasks, and their use of health services – family physician, hospital, emergency room
- At the beginning of the study
 - 95% reported a chronic condition
 - 1/3 had been to the ER in the last year
 - 1/5 had been in hospital
 - On average, they visited their doctor 6-7 times a year

Dr. Aimee Surprenant

Psychology, Science

Co-Director, Cognitive Aging and Memory Lab



Dr. Surprenant

Hearing and cognitive function

- ❑ There is growing evidence that problems with hearing and vision can affect cognitive function
- ❑ How much of age-related decline in memory is due to the quality of the 'input' through eyes and ears?
- ❑ 11 of 40 adults over 65, with normal hearing, were tested with various levels of interfering 'noise' - memory was affected.
- ❑ Large noisy rooms, muffled speech on cellphones, etc. may decrease memory

Dr. Surprenant

Vision and cognitive function

- ❑ 56 adults aged 58-85 were tested for vision and ability to detect contrasts
- ❑ They were shown lists of related or unrelated words to remember
- ❑ Better ability to distinguish contrast resulted in better recall
- ❑ There is need to consider vision and hearing problems in testing memory in older adults

Dr. Dale Corbett

Neurosciences, Faculty of Medicine

Canada Research Chair in Stroke & Neuroplasticity



Dr. Corbett

Physical activity & cognitive function

- ❑ Inactivity is often associated with a high fat, high sugar, high salt diet and obesity
- ❑ Rats on this diet have decreased cognitive ability (reduced learning and memory)
- ❑ This diet plus inactivity lowers amounts of a brain chemical important for memory function

Dr. Corbett

Mental activity & cognitive function

- ❑ Mental activity is generally associated with lower incidence of cognitive decline
- ❑ Animals given a good diet, physical *and* mental activity show the least cognitive decline
- ❑ These animals also have less brain injury and better recovery after stroke.

Dr Michelle Ploughman

Physiotherapy, Eastern Health
Postdoctoral Student, Family Medicine



Dr. Ploughman

Physical activity and aging

- Using a rat model, an exercise and rehabilitation program was used to see the effect on recovery from stroke
- Exercise affects brain proteins apparently necessary for full recovery
- Recovery from stroke is faster and more complete with a program of intense exercise.

Dr. Ploughman

Healthy aging with MS

- ❑ Patients with MS live well into their 70s, often with significant disability
- ❑ Are there things that patients can do to live longer and healthier?
- ❑ Patients over 55y living with MS for over 20 years were interviewed and are now being surveyed in a mail-out questionnaire
- ❑ Social support and exercise seem to be key factors so far.
- ❑ The researchers want to gather evidence to develop a self-management program for older MS patients.

Dr. Angela Loucks-Atkinson

Human Kinetics and Recreation

Assistant Professor, School of Human Kinetics & Recreation



Dr. Loucks-Atkinson

- ❑ How can we help older adults be more physically fit?
- ❑ Could ‘exergaming’ (WiFit) be a way to get physical activity in the winter, in isolated areas, where people have trouble getting out of the house?
- ❑ The study will compare those who ‘do’ with those who ‘don’t’ exercise and their physical fitness, sticking to the exercise, self-perception

Dr. Loucks-Atkinson

- ❑ What makes older adults in rural areas stick to a program of physical activity?
- ❑ What are the biological and social and psychological factors that make some people stay physically active?
- ❑ How does 'culture' influence whether people take part in physical activity and stick with it?

Other research I: Faculty

- ❑ Dr. Karen Parsons (**Nursing**) – *impact of memory loss, family caregivers*
- ❑ Dr. Ken Fowler (**Psychology**) with Alice Kennedy and researchers in Eastern Health – *long term care*
- ❑ Dr. Stacey Wareham (**Psychology**) new PhD – *long term care*
- ❑ Dr. Amarjit Singh (**Education**) – *cultural influences on the health of South Asian immigrants in Canada*
- ❑ Dr. Michael Bautista (**Medicine**) – *predicting perioperative outcomes in the frail elderly*

Other research II: Faculty

- Dr. Les Cake (**Psychology, Grenfell**) – *response to relocation of persons with dementia*
- Dr. Amy Warren (**Business**) – *timing retirement*
- Dr. Delores Mullings (**Social Work**) – *long term care, work discrimination in older Caribbean women*
- Dr. Evan Simpson (**Philosophy**) – *ageism and health*
- Dr. Ian Neath (**Psychology**) – *modelling of data from vision and hearing measures*
- Dr. Brian Staveley (**Biology**) – *modelling Parkinson's disease in fruit flies*

Other research III: Graduate students

- Ms. Ellen Haskell (**Sociology**) – *‘rv’ culture*
- Ms. Sue Ann Anstey (**Medicine**) – *older home support workers*
- Ms. Gail Wideman (**Social Work**) – *community support for services needed by the elderly; support of caregivers*

Canadian Longitudinal Study on Aging (CLSA)

- ❑ A national study which will involve 50,000 Canadians aged 45 to 85 followed for 20 years, currently funded at \$34 million
- ❑ 30,000 of the group will have an in depth examination and be asked to donate blood and urine samples
- ❑ Information will be collected every 3 years
- ❑ The CLSA in NL is led by Dr. Gerry Mugford and Dr. Pat Parfrey
- ❑ Recruitment of 5000 in NL will begin this year

The Research Objectives

- To find out
 - What determines changes in physical, psychological and social function over time
 - The importance and role of genetic factors
 - Why some people stay healthy and others don't
 - If there are there things that predict the onset of dementia in later life
 - How work and family transitions affect healthy aging?

The Tomorrow Project

- ❑ Begun in Alberta in 2001
- ❑ Partly sponsored by the Canadian Cancer Research Alliance
- ❑ Atlantic Partnership for Tomorrow's Health (Atlantic PATH) coordinating recruitment in Atlantic Canada
- ❑ 300,000 Canadians 35-69 in five regions followed for 30 to 50 years, 6600 in NL
- ❑ Interviews; questionnaires; height and weight; blood, urine and toenail samples; bone density; grip strength; blood pressure

The Research Objectives

- Development of a data bank with information on health, health-related measurements and biological samples
- Promotion of its use among health researchers and graduate students

Other activities in aging research

□ **Research Affinity Group on Aging**

- A group of faculty and students, policy makers and community members sponsored by the NL Centre for Applied Health Research (NLCAHR)
- The group meets monthly to hear about research results, make contact for developing research grants and discuss research in progress

□ **Healthy Aging Research Program (HARP)**

- Grants and fellowships funded by NLCAHR

□ **Centre on Aging**

- A new effort spearheaded by Grenfell College now joined by researchers and community representatives across the province

How can you be involved?

- Taking part as a **participant**
- Sitting on a **research team**
- Sitting on a **steering committee**
- Sitting on a **research ethics board**
- Giving feedback** about research that you hear about or see in the media
- Asking questions** about research when you visit your health providers

In summary – why research matters

- ❑ Research tests new ideas, develops new questions and gives us the evidence to promote good programs and treatments and to ditch ones that don't work
- ❑ MUN researchers mentor undergraduate and graduate students and physicians in training.
- ❑ Researchers in NL hire people to support their research
- ❑ Researchers in NL belong to community organizations and talk about their results to many audiences
- ❑ Research brings opportunities for the public to be involved and to benefit from its results