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
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

January 17 2010
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

January 17 2010 Cafe Scientifique 17
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
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. 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 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.