

***The following is a presentation given by Dr. Denis Roy to the Greater Sudbury Chamber of Commerce at their President's Luncheon held Wednesday, March 31, 2010. Dr. Roy had been asked to outline his vision for the future of the HRSRH.***

Good afternoon and thank you for inviting me here today. Since arriving in Sudbury, I have met many people in the community and all have made me feel very welcomed. Thank you for this.

It is indeed an auspicious time to have arrived. Last Sunday, we witnessed the final move that has consolidated our acute care services at our main site on Ramsey Lake Road. Everything went very smoothly, thanks to the energy and care of the entire staff, including senior staff.

I know that everyone involved, our staff, physicians, volunteers, patients, and the entire community, are still filled with emotions around this move - excitement, joy, trepidation, a genuine sense of relief and perhaps also some sadness at leaving behind what are, I am sure, very good memories. But our new health centre has finally arrived, and it feels very, very good. Please note that I will not be talking about parking issues today!

This consolidation of services – our emergency department, operating rooms, intensive care unit, cardiac program, birthing centre, pediatrics, diagnostic imaging and laboratory services – will vastly improve the comfort and care of our patients, and also the efficiency with which we provide our services. Being under one roof will create synergies among departments, staff and physicians that could not be fostered on multiple sites.

Of course, in the field of health care, there is never time to rest on one's laurels. What we have now – a new building, leading-edge equipment and technology – are only the tools with which we can build our institution to even greater heights.

This is the project I am here to undertake, and I am pleased that you invited me here today to share my vision for the Sudbury Regional Hospital. My vision is simple really – I want the Sudbury Regional Hospital to become one of the most advanced academic health sciences network in Canada.

What is an academic health science network? It is a reasonable question to ask, as it is a relatively new concept for our hospital and community. An academic health science network is a specialized institution closely partnered with a university and a school of medicine. It carries five distinct missions:

1. **To provide care**, both to its proximity and the broader region. To the region, this is specialized care. To the proximity, it is serving all care needs.
2. **To teach** medical students, nursing students, all health care related learners, in their own field.
3. **To conduct research** of all types, not only with patients, but also in laboratories, and on public health issues.
4. **To perform evaluation**, such as evaluation of technology, its effectiveness for patients and how it can change the way we work.

5. **To advance prevention and health promotion** which means our mandate is not only to restore health, but also to influence and enhance one's quality of health.

This last item is very important. We have an excellent opportunity at the bedside to encourage lifestyle changes and help people make the link between their current habits and their illness.

But "no man is an island". We cannot do it alone – thus the word "network" and, thus achieving the goal of a full academic health science network will take the collective effort of each and everyone one of us and others. I want the health centre to become a place where our patients and community have confidence that they are receiving the best possible care – a place where patients choose to be treated.

I want our physicians and staff to be proud of the work they perform here. I want researchers to be well-resourced, so they are able to be productive in their endeavours. We must build and diversify our current research activity and focus on areas that will help northeastern Ontario, and ultimately, the rest of the world.

We need to strengthen the relationship with the school of medicine (NOSM), and the faculties at our other learning institutions – Cambrian College, Collège Boréal and Laurentian University. We want our students to receive the best education possible, both at the bedside, and in the labs. An interdisciplinary approach must be taken, where learners in all fields are exposed to all learning environments, including research, and this must start early while in school – not after they graduate.

This is a model to which I subscribe and will bring forth as President and CEO of the Sudbury Regional Hospital. I want to take this hospital from an institution that is moderately involved in teaching, with a research focus that is relatively limited to a specific field of cancer, to a larger state, a greater involvement.

There are very tangible ways that being an academic health sciences network can help us to address issues with which we have been struggling over the past several years. For example, we have a shortage of family physicians in our area. I envision a family practice unit -- similar to the Family Health Teams model -- where medical residents see patients, and continue to see these patients when they are done their residency. This can decrease the number of orphan patients in our community and hospital.

The presence of learners helps the existing staff. Let us not forget the rule that teachers teach learners, who in turn also teach teachers. It is often the case that learners are gathering the most current information through their studies. This is information they may share with a teacher. Further, the information being passed from teacher to learner reinforces what the teacher already knows.

The presence of researchers can also improve treatment. We know that research may modify a treatment that otherwise a patient would not be getting in a regional or large community hospital.

Cancer and cardiology are examples of this, where the testing of new medication through pilot projects may provide access to the latest drugs. For these reasons and others, the presence of research and teaching in a hospital adds value to patient care.

It will require a concerted effort on our part to ensure our centre is appropriately recognized and resourced to fulfill its mandate as an academic health sciences network. This will necessarily mean that future physicians will have to undergo additional training; nurses and other health professionals will have to also undergo specialized training in various fields.

The Northern Ontario School of Medicine is an important first step to creating this academic health sciences network, because it generates activities in which the hospital can participate.

There is a nucleus of physicians here already who are interested and committed to teaching – now we must recruit others to help support them. What I have just said about the school of medicine is also applicable to other teaching institutions. In my experience, both as an administrator and physician, an academic health sciences centre affiliated with a university and a school of medicine is one of the most powerful recruitment tools there is.

Research can greatly benefit a community, and we must increase our infrastructure to attract teams of researchers. If we look at our population in northeastern Ontario, we see many health care issues that could be better addressed through research. For example, we have high rates of diabetes, and they are even higher in our First Nations population. We have a main industry – mining – that has been studied, but it could be studied even more carefully from an epidemiological standpoint.

If we are to maximize the benefits that are available to us, and if we desire to become nationally or internationally known, research must become an area of greater focus. Institutions such as Harvard, Stanford and Yale are world renowned for their research. Research attracts talent, dollars, business creation and jobs.

As members of an agency devoted to the promotion of local business, I know you understand the economic value of research and that academic health science networks are economic drivers for a city. The spin off occurs when investigators make discoveries, get patents, and create companies. It also occurs when there is investment by funding agencies and construction for research centres and learners space.

Through discussions with the Northeast LHIN, the Ministry of Health and the City, we must find a way to finance and build space in, or very close to, our centre for people who are interested in doing research, while creating synergies with other research initiatives and institutions in the region.

According to a study conducted in 2001 by Laurentian University's Centre for Rural and Northern Health Research, the direct, indirect and induced economic effects of health care institutions and physicians in our community contributed a half a billion dollars to our local economy, and almost 14,000 full-time equivalent jobs.

This data was collected a decade ago. Since it was conducted, the Sudbury Regional Hospital has added more than 1000 jobs, the operating budget has more than doubled to \$365 million, and the hospital now stands as the second largest employer in this city. Now consider the impact hospital-based research would bring to this equation.

I have talked about the need for learners and research, but what about frontline health care? Let us turn our attention to this for a moment.

You are probably wondering about space for beds, given the fact that you have been told the one-site hospital is too small. With an increasingly aging population I understand this concern. But it is important for our community to understand, and I can tell you with certainty, that the future of medicine is in *outpatient* care delivery, ambulatory care centres, including diabetic, geriatric, heart and lung disease day hospitals.

The model already exists in our community – we have the Haven program for patients with HIV and AIDS and we have our Regional Cancer Program. We can do this for other diseases all while investing in new diagnostic imaging technology to do more outpatient surgery and better investigations.

The way we will practice medicine in the near future, which I estimate to be conservatively between 10 to 15 years, especially when you consider new and emerging technology – will be significantly different than today's health care practices.

As an example, consider nanotechnology, a major area of research and development. Imagine treating disease and practicing medicine at the molecular and atomic scale. To put that scale into better context, a nanometer is the amount a man's beard grows in the time it takes to raise the razor to his face. This is a scale smaller than the smallest bacteria.

Imagine for a moment,

- a) surgery being carried out at the level of the cell with nano instruments, for gene therapy for example;
- b) imagine drugs being delivered directly to the cancer cells, as some of them are currently, thus avoiding the painful side effects
- c) imagine synthetic substances which when injected into the appropriate tissue provide a scaffold allowing for example retinal, brain, heart, skin and bone tissue to regenerate itself
- d) imagine a device that not only measures blood sugar but delivers the appropriate amount of insulin.

I could go on and on.

Before you start thinking that Roy should be admitted into a psychiatric ward, let me tell you that the field of nanomedicine is already exploding – this is evidenced by the number of discoveries awaiting patents in the USA. The list of discoveries you see on this slide was published in 2003.

In 2009, this was the list of cancer drugs approved for nanoinjections. This is where the future will take us. Do we have an opportunity to be on the cusp of this research and lead the way? There is no doubt in my mind. If we are to carry out our role as an academic health sciences network, we must turn our attention and energy to that future. And let me be very clear: that future looks bright. A new one-site hospital, with new state-of-the-art technology, a relatively young university and school of medicine, an amalgamation that will create a new culture -- all point to the possibility of these changes being accomplished more quickly than they have happened elsewhere.

Academia is a frame of mind. If our institution and community adopt this principle, I will be pleased with that accomplishment, for it will mean that our hospital will be on its way to being an academic health sciences network with great potential.

We have a great deal upon which to build this vision. I hope you will support me in moving this goal forward. I believe we are bound only by our imaginations as to what we can make this health network.

For me, I believe we can be the Harvard of Canada. We have been afforded this opportunity. Let us make the most of it.

Thank you.