

This issue of funding – the how and how much – by the federal government remains the major first hurdle, however. Without it, there cannot be implementation of any of the HIC proposal. Thus the federal government will have to decide about the added value of this proposal, given the predictable difficulties: Which ministry should take the lead? How to ensure that provincial jurisdictions are not infringed upon? Being satisfied with an arm's-length approach, albeit with regular performance appraisals.

Previous proposals have been submitted in the past. To my knowledge, none has been fully implemented or is working very well. The HIC proposal is daring and novel in that it aims to link various Canadian regions toward a given objective – commercialization of innovation – but at the same time avoid duplication of efforts and structures whenever possible, and involve the private sector (not privatize healthcare). Its implementation will require political will, major changes in culture, a large volume of communication among stakeholders, the establishment of effective and solid partnerships, energy, trust—and the contribution of university teaching hospitals and their research centres.

I submit that the timing is right and that it should be given serious, unbiased examination.

– Dr. Denis Richard-Roy,
Directeur Général Centre hospitalier de l'Université de Montréal.

Biotechnology Commercialization: A Poster Child for the Long-Cycle Innovation Challenge

In regard to Brimacombe's proposal for CIHR's participation in biotech commercialization, and Edelson's response that the government should stick to funding basic research (see *Healthcare Quarterly* 8(3)), it seems that there are two separate considerations.

1. Is there a case for government in biotechnology commercialization? If so,
2. What form should it take?

My interest flows from assisting Dr. Friesen lead the conversion of MRC into CIHR and my subsequent work with a science commercialization company.

A feature of Paul Martin's support for CIHR was the role that a new-knowledge agency could play in an innovation economy. There is little evidence that CIHR will be effective in creating economic value. Ottawa's desire to grow the economy through

innovation, then, brings us to question one.

Is there a case for government participation in biotechnology commercialization?

Yes, for three reasons.

- 1) To reduce wasted knowledge.
 - a. CIHR researchers are at the forefront of knowledge. Unfortunately, the economic fruits of their insight are neglected. Technology transfer functions are a contributing factor in biotech under-performance. An error in tech transfer thinking is that I.P. creation is value-creation. I.P. is a cost in the innovation chain. Having a large inventory of I.P., which Canadian research facilities do, is like having a warehouse full of rotting fruit. Government needs to intervene to reduce inventory wastage.
- 2) To learn how to create growth with long-cycle innovation.
 - a. Why should government take the burden of reducing wastage?
 - i) it's public research dollars being untapped
 - ii) a desire for prosperity
 - iii) government has interest in knowing how to make economic growth happen when the time between innovation and the market is long. Biotechnology is a poster child for this long-cycle innovation challenge.
- 3) Capital market failure is a barrier to social good.
 - a. A classic reason for intervention is when there is social cost to market failure. There is capital-market failure in biotechnology because better returns are always available in other investments. Unfortunately, capital cannot be relied upon to be stupid over the long run. Without government participation, biotechnology innovation is left to rot.

What form should government participation take?

The suggestion that CIHR should participate is a non-starter. It is a research based researcher-led organization and would be distracted from its mission by a market agenda.

Government participation in commercializing should improve the risk profile of biotechnology for private investment. On the taxation side this means:

- i) tax-favoured investment pools rewarding long-cycle capital
- ii) rewritten labour-sponsored fund rules to target innovation better
- iii) expand tax-favoured investment pools into the wholesale capital market.

On the government expenditure side this means: matching investments in small to medium proof-of-concept and beta development opportunities and refundable tax credits for early-stage investors.

To reduce wasted knowledge and to learn how to commercialize innovation, let's start with what we know. Innovation needs money. Lack of investment capital reflects a risk reward calculation. Change the risk profile until the investment market responds.

– Colin Goodfellow, CEO, Kemptville District Hospital

Train Building in Ontario: The Future of Local Health Integration Networks

While it may seem vastly premature to talk about the future of Local Health Integration Networks (LHINs) in Ontario before they have been formally established and before their governing legislation has been introduced, enough is known from the experience of other provinces to firmly place LHINs in a national and provincial context.

A common analogy is to compare regionalization to a train. In the classic tradition, you first decide where you want to go and the best way to get there, given available resources and technology. Second, you design the train to fit with the job that lies ahead. Third, you build the train along with the tracks and then get it moving. The other provinces have all built trains and are moving them down the tracks, although in many cases the train (or maybe the number of cars) has been changed along the way.

In the national context, LHINs appear to be a very modest beginning down the regionalization road.

LHINs are less of a move toward regionalization than any other province has taken. It is also taking place about 10 years later than elsewhere in Canada. Ontario has chosen not to follow the traditional regionalization train-building exercise of the other provinces. Ontario is slow to change and powerful vested interests are well-entrenched. As such, the type of regionalization train Ontario has built fits with the political sensitivities and realities of the province.

So with a modest beginning, it is inevitable that there will be considerable skepticism about how much it will be able to accomplish and how long LHINs will last in their current form.

In Ontario, it would appear as if the province has jumped to step three without clearly articulating the first two.

Unlike several other provinces Ontario did not engage in a royal commission to define a future vision and analysis of the healthcare system as a whole. Such undertakings in other

provinces have served a useful role in defining for the health system, as well as the general public, the 'big' challenges and strategies to address them. LHINs have been established with only a general notion of how their role will 'fit' into the existing system and no clear statement about what the future of the health system in Ontario will look like.

So now that the LHIN train has been built (sort of) what might its future look like?

There is some room for optimism, with some obvious caveats.

First, Ontario has built a regionalization train and should be congratulated for having done so. While it's different than any build before in the country (except for the brief flirtation Quebec had with this model), it is important to acknowledge that the provincial government has recognized that the healthcare system cannot continue to be 'governed' entirely from a provincial centre.

Second, one hopes that the use of the term integration in the LHIN title is more than a word in the name. The integration agenda, especially when one delves below the surface, is exceedingly challenging and complex but is the most significant.

Third, assuming that LHINs get the tools to redirect funds and to define deliverables on a systems level, they will have the opportunity to be more than the merger of the regional offices of the Ministry of Health and Long-Term Care and District Health Councils. If they do not, then they will fall far short of what it expected. The significance of this cannot be understated. For example, if LHINs are able to set expectations and fund what is required to deliver an integrated diabetes strategy, then the organization of diabetes care in a region would look significantly different than it does today. This kind of an incentive and reward system would serve to break down organizational and service boundaries and move organizations, programs and services closer together. If LHINs cannot focus and engage in this kind of innovative and 'breakthrough' activity as their primary *raison d'être*, then what's the gain?

So what is expected of LHINs?

First of all, LHINs are expected to bring leadership and direction on a systems level and to exercise their role in a collaborative style.

Second, they are expected to bring regional leadership and adapt provincial priorities and strategic directions to the local environment.

Third, they are expected to articulate a future state for the health system within the region, in alignment with guiding principles and standards set at the provincial level.

Fourth, they are expected to be able to take this future state and craft strategies and priorities for genuine "system-building," much of which has been stated many times but never given an organizational framework within which to be realized.

On the dark side, LHINs run the risk of not being able to