



- H. DOMINIC COVVEY, EDUCATION EDITOR -

A Union of Minds: The National Health Informatics Collaboratory

In addition to pursuing his academic interests, Mr. Covvey is the President of Health/IT Advisors Inc., a Vancouver based consulting firm.

Introduction

There's something new under the sun! A new organization is in the process of forming that may be of interest to health informaticians. It's called the National Health Informatics Collaboratory (NHIC), and it is conceived as a network of Health Informatics (HI) professionals committed to stimulating, facilitating, and developing increased national capacity and capability in the areas of HI education and research.

Although all aspects of HI research and education are potentially of interest to NHIC, its initial primary focus will be on topics related to HI education, including fostering the development of professional, undergraduate, and graduate HI education programs, graduate student research projects, and research on education-related topics. To ensure NHIC's relevance in the long-term, its research objectives will be aligned with the research objectives of CIHR.

Founding Goals

The goals of NHIC are in keeping with its mission:

1. To create a gravitational center for HI teachers and researchers that catalyzes and facilitates collaboration, cooperation, the development of capacity, and the achievement of excellence. Note that NHIC embraces HI educators in all types of programs. Private sector professional educators, community college, undergraduate university, and graduate educators, and HI researchers in the academic, public, and private sectors are all welcome.
2. To provide a means for stimulating, promoting, and disseminating the results of HI research and education initiatives.
3. To work towards the creation of a Network of Centers of Excellence program in HI.
4. To facilitate the development of joint research projects among the participants. Early steps in this direction have included proposals to CANARIE and CIHR.

NHIC's Relationship to Other Organizations

NHIC will not compete with, but rather will aspire to be

NHIC's Objectives Towards These Goals

NHIC's objectives will evolve, but its initial objectives are:

1. To provide a virtual meeting space and information clearinghouse for HI educators and researchers.
2. To foster the inter-individual and inter-organizational collaboration of HI educators and researchers, thereby creating a critical mass of expertise where such is not achievable locally.
3. To create an environment that encourages regional and national multi-center HI education and research projects, and to form sub-groups to engage in such projects.
4. To facilitate the evolution of new HI solutions to address real health system issues.
5. To undertake specific research projects, such as the recently submitted CANARIE and CIHR projects.
6. To catalyze and stimulate multi-disciplinary academic research related to HI education by bringing together professionals in disciplines such as computer science, health research, clinical medicine, information science, telehealth, epidemiology and biostatistics, health administration, cognitive and behavioral sciences, information technology (IT), economics, organizational studies, and so on.
7. To encourage and facilitate the development of a critical mass of qualified Health Informatics teachers and researchers in Canada.
8. To foster a culture of policy-aware and responsive researchers who can effectively translate between HI research and practice in health settings, and provide information and advice on issues of national importance.
9. To discuss and define new frontiers in HI research to improve the Canadian health system.
10. To address the growing demand for IT leadership in health within Canada, especially in light of recent public and private investments in such areas as electronic health record and health information for the public.
11. To encourage and facilitate worthwhile collaborations between the HI research and education community and health sector groups and agencies responsible for the acquisition and implementation of information and communications technology and the development of related policy.
12. To encourage and facilitate worthwhile collaborations between the HI research and education community and clinical groups and agencies.
13. To provide a repository for documents produced by NHIC participants and made available to all.

complementary to HI membership organizations. It will endeavor to establish partnerships with existing HI membership organizations, as well as with appropriate non-HI health-sector organizations, such as hospital associations, government agencies, and health professional and administrative organizations.

Participation Criteria

NHIC is not a membership organization, but rather is a “participant-ship” organization. Participation in NHIC is open to all HI educators, researchers, students, as well as other individuals and institutions with an interest in HI research and education. On request, and given the submission of required information, the individual’s name will be added to the NHIC register. However, there is a price to remain on the NHIC register: the registrant must actively participate. The rule is that the individual’s name will be deleted from the register after one year unless the participation maintenance conditions are fulfilled (see below), but readmission may be requested after one year.

Maintenance of Participant Status

There will be no fees assessed for participation in NHIC. However, in keeping with its activist nature, each NHIC participant must play a part in organizing or supporting at least one NHIC working group, meeting or conference, project, or NHIC-associated activity during each calendar year. Each participant (or multiple participants in an institution) must submit a one page annual report summarizing NHIC-related activities. This report will be published as a communications document on the NHIC website. Listing in the participant register for the following year will be determined by the simple existence of this annual report, which will be considered a self-assessment of adequate participation. Guidelines/criteria for participation and a report template will assist the preparation of this report. Periodically the NHIC executive may elect to review the participant register and provide feedback to participants regarding their submissions.

Activities

As an action-oriented organization, NHIC will be engaged in many activities, including:

- Convening an annual meeting, preferably in association with an existing conference, to address matters of interest as defined in an agenda developed by NHIC participants.
- Stimulating, supporting, and participating in quarterly or more frequent regional think-tanks on relevant HI research and education topics in collaboration with local organizations.
- Developing and maintaining a website with content of interest to NHIC participants.
- Maintaining a register of participants, their areas of expertise, their interests and current projects, and their availability for collaboration and advice.
- Maintaining a registry of HI education programs, their foci and courses, their faculty, and potentially their students.
- Listing HI teaching and research employment opportunities.
- Maintaining a registry of HI research projects, the associated researchers, and their expected products.
- Providing access to information on sources of funding and their targeted areas.

- Maintaining a list of categorized issues and problems, with a means of collecting input on them from NHIC participants.
- Undertaking at least one collaborative project in education each year and reporting its status and results at the annual meeting.
- Undertaking at least one collaborative research project that includes health administrators and clinicians.
- Collecting key documents from NHIC participants and making these available on the NHIC website.

Benefits of Participation in NHIC

The following are some of the key benefits that will accrue to NHIC participants:

- Easy access to the entire NHIC community related to issues and opportunities that arise, such as the need for collaborators for funding proposals, potential industry partners, esoteric expertise, etc.
- Access to assistance in developing funding applications.
- Opportunities for student research projects.
- Contacts for the filling out of thesis committees in situations where local expertise is not available.
- Access to information produced by other NHIC participants on topics of interest.
- Opportunities to create and participate in think tanks and discussions on key topics.
- Registration in a repository, indexed by areas of interest, which will be accessible to other organizations and individuals seeking specialized expertise.
- Access to information on funding sources, calls for proposals, calls for papers, etc.
- Enhanced awareness of your organization’s research and education foci.
- Access to teaching and research employment opportunities.
- Better communications with and among geographically dispersed individuals with common interests.
- An easy means of communicating with the core of the HI community.

NHIC Leadership

NHIC will be managed by a core group of 4 volunteers, elected by the participants. The **NHIC Chair** will be responsible for the general leadership of the organization in consultation with NHIC participants. The **Associate Chair Education** will be responsible for developing and fostering the education-related agenda of the organization in consultation with NHIC participants. The **Associate Chair Research** will be responsible for developing and fostering the research-related agenda of the organization in consultation with NHIC participants. Finally, the **Associate Chair Operations** will be responsible for organizing interactive events and maintaining information resources. If possible, NHIC will pair each chair with a chair-elect to foster continuity and to provide back up. In addition, each project or group formed within NHIC will have a Participant Project Liaison selected by NHIC leadership.

Resources

The resources required to carry out projects will generally be provided by the collaborators either directly or using funds obtained from granting agencies. Participants will provide operational resources related to NHIC functioning through in-kind contributions. In particular, NHIC leaders will carry out their functions pro bono. Several organizations have already offered resources in support of the program, including a website and collaboration-support tools (G. Paterson, Dalhousie University), and communications support (Steven A. Huesing, HC&CC Inc.). Other proposals are welcome.

The Rationale for NHIC

HI is about the understanding, management and use of health information and the technological infrastructure for the deployment of information in support of clinical care, research, health services administration, and teaching. Since much of this information is in electronic form, HI is also about planning, design, implementation, use and evaluation of IT in health settings.

A recent survey of 45 health organizations revealed that 59% had HI/IT job vacancies, 83% expected further increase in HI/IT positions, 66% had difficulty recruiting/retaining HI/IT staff, and 52% would pay for HI training for their staff. Another survey of 224 attendees in a plenary session on future HI education at the e-Health Conference in 2001 revealed 94% of respondents agreed there is currently a need for HI education that is unmet; 43% expressed interest to enrol in M.Sc. programs and 18% in Ph.D./post-doc programs in HI if it were available now. In the last few years, the federal and provincial governments have made significant investments in IT infrastructure, health information systems, electronic health records, health information for the public, and telehealth. This has further increased the demand for highly qualified HI experts in Canada. Of particular importance are such areas as HI research methods and tools, health systems from IT/IM perspective, teaching HI, and essential computer science for HI. While there are Canadian universities that provide customized HI related graduate programs, there is a shortage of HI experts and graduate courses needed to advance the field. Not only are there few qualified Canadian HI researchers, many have gone to the United States to pursue their academic career due to lack of research opportunities in Canada. Thus, we need to create a critical mass of HI researchers to meet this growing demand on HI/IT in health¹.

Who Ordered That?²

Over the last year, Francis Lau at the University of Victoria has led a consortium of HI educators and researchers in the development of two exciting projects that promise to, for the first time, correlate and amplify the work of HI academicians across Canada. His leadership has already borne fruit: a successful grant proposal to CANARIE that will seed the development of HI course materials and technologic support for tele-learning in Health Informatics. To those of us fortunate enough to have worked with Francis, it became clear that collaborations of this type needed to become commonplace if we are to develop sustainable capacity in HI education and research and have the magnitude of impact that only collective action can realize. NHIC is the organizational personification of the collaborative spirit initiated by Francis and now supported by virtually every HI program in Canada.

Next Steps

The NHIC concept document has now been widely circulated in the HI community. It is expected that NHIC will take form in the first

quarter of 2002. Anyone who would like a copy of this document, and/or who knows someone else who might be interested in reading it and providing feedback, should e-mail me (dcovvey@sprynet.com). After general consultation with the HI community, the organization will be open to participant-ship.

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Reference

1. A pan-Canadian Health Informatics Collaboratory, Project No. 17, F.Y. Lau, et al., Proposal to CANARIE, July 2001.
2. A quotation attributed to the Nobel physicist Enrico Fermi, when he heard about the discovery of the first meson.



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Irene Podolak
(416) 643-8950