The Canadian Health Network A Division of the Public Health Agency of Canada

Quality Assurance Framework and Collection Policy Version 1.0 FINAL

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Introduction

Recent trends in consumer health informatics research indicate that the Internet has become many people's primary health information channel. In response to this trend, health information providers are developing quality assurance policies to validate their Internet-based services. Consumers want assurances that they can "trust" the information they access from these networks of health information providers; they want to be assured the health information is of a certain "quality." And although quality is an "elusive concept" that defies quantifiable, objective measurement, many methods are being developed that indirectly offer quality assurance on health information web sites (Lewis, Eysenbach & Kukafka et al, 2005).

In 2003, the Canadian Health Network (CHN) identified the requirement for a quality assurance framework for their web site as a key objective. Also influencing this priority has been the government-wide requirement for greater accountability and program performance measurements as set out by Treasury Board Secretariat.

In 2004, the CHN commissioned research on quality assurance policies in the international health information sector to establish benchmarks for best practice. A preliminary assessment of the CHN's web site collection tools and guidelines was also conducted during 2004/05.

The following quality assurance framework provides policy direction to the CHN Division and Affiliates, and through them, to the Affiliates' diverse array of network contributors. The goal of this framework is to provide Network collaborators (CHN Division, Affiliates, Network Contributors) with direction that ensures a consistent approach in the selection, presentation and evaluation of all of the site's information resources. With a consistent quality assurance approach the site will continue to be used as an authoritative consumer health information service by all Canadians.

In addition to a review of the background research, this process of developing the Canadian Health Network's quality assurance framework presented in this report also entailed a review of the equivalent collection policies and quality assurance statements from internationally recognized consumer health information agencies: the Health on the Net Foundation, the National Library of Medicine, the U.S. National Library and National Institutes of Health's MedlinePlus, the U.S. Medical Library Association's MLANet, the MedCircle Collaboration and the Commission of the European Communities¹.

The framework outlines seven quality principles on which the CHN's quality assurance approach is based: accessibility, authority, multiple perspectives, collaboration, relevancy, responsiveness and transparency. This report also presents a preliminary collection policy identifying the site's selection and de-selection criteria, and describes the collaborators' roles in building this collection. Finally, this framework identifies tools and processes that when put into place will ensure sustained information quality and continued development of the information resources.

As this quality assurance framework is applied and tested by the Canadian Health Network collaborators in the next 1-2 years and as the Internet as an information channel matures, this framework will also change and develop in response to consumers' health information needs.

1.1 The CHN mission, vision and objectives

CHN articulates their mission "to promote healthy choices by communicating trustworthy information on health promotion and disease and injury prevention through a network of expert organizations."

¹ See Appendix B – Resources consulted for complete references including site links.

To accomplish this mission, the vision of the Canadian Health Network is that "individuals and communities use the Canadian Health Network to make informed health decisions that improve their quality of life."

Putting the vision into action, the CHN leads a collaboration among major health organizations across Canada including the Public Health Agency of Canada (PHAC) to provide Canadians with an effective means of accessing and using practical health promotion and disease and injury prevention health information.

1.2 Quality Assurance: a CHN Strategic Direction

The 2004-2007 strategic direction addressing the quality of the information provided on the CHN is stated as follows:

The Canadian Health Network will improve accountability to Canadians by ensuring the provision of the CHN service and the effective and efficient use of public resources for the best possible results. (Operational Framework, 2004, p.5)

The general purpose of any quality initiative must be the protection of the consumer. In some cases, however, that general purpose is best realized through educating the user of the service while in other cases the provider of the service will be the target of the quality initiative. Incorporating both of these approaches, the quality assurance framework for the Canadian Health Network collection is intended to:

- 1. Ensure a consistent approach in the selection, presentation and evaluation of the site's information resources;
- 2. Educate the user about how the information is collected, presented, and authorized;
- 3. Assist the searcher in interpreting information on the site;
- 4. Educate third party site contributors about the quality assurance standards they are required to consistently and continually meet;
- 5. Assure health information consumers of a continuous high quality of information on the site.

1.3 Quality Assurance Framework

.1 Quality Assurance Model

As an integrated model, *Figure 1 – The Canadian Health Network Resource Collection - Quality Assurance Framework Overview* presents the critical elements that constitute the quality assurance framework and suggests their inter-dependence in the framework development process. There are seven sections that build on each other: quality principles, resource selection criteria, collection roles and responsibilities, a collection policy, selection tools and processes, collection audit and outcomes and evaluation processes.

Figure 2 - The Canadian Health Network Resource Collection – Quality Assurance Principles expands this model by defining the quality principles; the resource characteristics and selection criteria further refine these principles and suggest how they may be illustrated on the site. Together these elements then form the basis of the *Site Collection Policy* and they direct the collection's information management practices including tools and processes for implementation and methods for outcome assessment and evaluation. Also noted in *Figure 2* are the relevant tools and processes necessary to ensure that individual quality principles and policies are actionable. Italicized items indicate either that the processes or tools need to be developed or that procedures or tools are under development.

.2 Evidence-Based Information & Peer Review

Whereas the formal health care system uses evidence-based medicine from a clinical, research perspective, the CHN takes a more broadly defined evidence-based approach to all of its health promotion information resources. Practically, this means that along a health promotion information continuum from the most quantitative and clinically supported evidence provided by healthcare practitioners and research collaborators, to the most highly qualitative evidence provided by patients and health service consumers, there may be multiple instances of health information being "evidence-based."

While many reviewers are experts in their fields, especially when they are engaged for content review, 'expertness' is a continuum, and for different tasks different levels of expertise are required. The role of peer-reviewers for gateways such as CHN is to give a higher-level recommendation on whether or not to include a given resource. There is rarely an opportunity for feedback to the original content developer or to be part of the development process. CHN's peer review process supports this more inclusive definition of evidence, described in more detail in Section 1.5.

.3 Decentralized Approach

The Internet is a constantly changing, hyper-linked communications medium that resists static and centralized authority controls such as seals of approval or publisher guarantees. For this reason and because the CHN site is a collaborative effort of major Canadian health organizations and the Public Health Agency of Canada, the general approach to quality assurance being adopted in this framework is a decentralized one. All Affiliates and the CHN Division are required to have their own quality assurance process that is consistent with the quality principles articulated in this framework.²

.4 Quality Principles

This framework is intended to function as a method of organizing the QA processes. The framework establishes seven standard QA principles and associated vocabularies, and establishes common selection and collection development policies including criteria that can be practically implemented and certified by all Network collaborators.

.5 Collection Audit

To audit internally means to conduct a rigorous independent review and examination of activities in order to test the adequacy and effectiveness of procedures, to ensure compliance with established policy and operational procedures, and to recommend any necessary changes. In the CHN context, a collection audit functions as a means of verifying that the information resources on the site including resource pages, articles, FAQs, and all home page content meets the quality criteria and collection policies outlined in this framework.

An annual audit of information resources on the CHN site is to be conducted by a committee of representatives from the CHN Division, Affiliates, Network Contributors, Advisory Board, and CHN health consumers. Although this committee is not strictly comprised of exclusively external CHN reviewers, the committee composition includes wide representation from all of the Network collaborators and can function in this way as a peer resource evaluation process.

.6 Future Direction

The use of metadata and other web tools to manage the quality of the health resources collected on the Canadian Health Network site has not been fully exploited. By implementing more rigorously standardized evaluation and selection principles,

² Some CHN Affiliates have developed their own selection tools and guidelines appropriate to their particular topic or group collections. No attempt has been made to itemize these in this document.

vocabularies and practices by all Network collaborators, an information management structure will be in place towards this goal.

Figure 1 – The Canadian Health Network Resource Collection - Quality Assurance Framework Overview

The Canadian Health Network Resource Collection - Quality Assurance Framework consists of the following elements:

- Quality Principles
- Resource Characteristics
- Resource Selection Criteria
- Collection Policy Statements
- Collection Roles and Responsibilities
- Selection Tools and Processes
- Collection Audit
- Collection Outcomes and Evaluation

Resource Collection Quality Principles		Collection Policy	Collection Roles and Responsibilities	Selection Tools and Processes	Collection Audit	Outcomes and Evaluation
Quality principles	Resource characteristics	 Resource selection criteria Collection policy statements 	CHN Division Affiliates Network Contributors	Existing and those to be developed	Network committee Collection sample	Evidence of meeting user needs

CHN Web Site - Quality Assurance Framework

Quality Principles	Resource Characteristics	Resource Selection Criteria	Resource Selection Tools and Processes
Accessible The health information resources are original documents, organized to be accessible to children, youth and adult readers in Canada's official languages, via basic Internet technologies.	Original content preferred / reprinted content avoided Text-based information including FAQs, articles and links to web site pages Accessible using CHN basic Internet technologies Varying reading levels Topic resources linked to groups	 Web content Resources selected in both official languages Other media formats may be included Resources are written at appropriate literacy levels for children, youth and adult readers Intended audience groups are indicated for resources in all topics (ALL category to be added). 	 Collection Development Strategies Broken links procedure Cataloging guidelines Controlled vocabulary and metadata authority lists Equipment standards, guidelines and approval process FAQ process and style guidelines Metadata manual Resource selection: general information Search tips (guided and keyword) Site accessibility Technical tips Web CMS training manual Web site styles sheets Literacy guidelines Use of alternative formats
Authoritative Certified through a peer review system, the health information resources are current, authoritative, trustworthy and reliable, originating in and limited to, the best practices and literatures of allied health professionals and certified experts in Canada and internationally and originating exclusively from non-commercial organizations.	As current as best information available Authoritative Reliable Peer reviewed Governance membership Allied professional / expert certification	 Appropriate resources include complete citations where referenced in page text Author credentials clearly indicated Date of publication clearly indicated on all resources³ Established experts are identified where appropriate Organizational governance clearly described Peer review guidelines for CHN site Refer to Appendix A – Definitions 	 Affiliate collection development and network development strategies Call for proposals guide for applicants FAQ process and style guidelines Feature article guidelines How to find the most trustworthy health information Resource selection: general information Resource evaluation and de-selection guidelines Site authority verification procedure Sponsorship guidelines
Multiple Perspectives As a whole, each individual health information topic and group collection	Multiple perspectives in evidence in all topic and subject areas. Although individual resources may reflect only	 Refer to 1.4 Site Collection Policy Statements 	 FAQ process and style guidelines Group and topic guidelines Subject content analysis

Figure 2 – The Canadian Health Network Resource Collection – Quality Assurance Principles

 $^{^{3}}$ Where date of publication is not available, review date may fulfill this requirement.

Quality Principles	Resource Characteristics	Resource Selection Criteria	Resource Selection Tools and Processes
demonstrates comprehensiveness and diversity of perspectives.	one perspective on a subject, some indication of other, similarly authoritative perspectives should also be included.		 Controlled vocabulary criteria and guidelines
Collaborative The health information resources are material evidence of the Canadian Health Network's formal collaborations with affiliated non-commercial health organizations and their network contributors across Canada.	Source organization indicated Affiliate selection policy Site editorial policy Collection groups and topics	 All resources indicate topic and group designations Refer to 1.5 Collection Roles & Responsibilities 	 FAQ guidelines Feature article guidelines Group and topic descriptions Web content management system training manual
Responsive The health information resources constantly anticipate public health information needs and inquiries. Resources are current and are made available in a timely manner in response to new and emerging health promotion, disease and injury prevention topics within the Network's mandate.	Current Timely Responsive	 Date of publication clearly indicated on all resources⁴ Page updated information clearly identified Fits within site subject scope All resources regularly evaluated for de-selection Resources added to site within a pre- determined time frame 	 Spotlight box style guidelines Health information request guidelines Information requests guidelines and tools Search string reports Web content management system training manual User feedback and consultation process New or emerging topic request Hot topic requests Request to reconsider resources
Relevant The health information resources are within the scope of health <i>promotion</i> and disease and injury <i>prevention</i> .	Within subject scope Exclusions noted Differentiate primary, secondary, tertiary information Includes all FAQs, articles and links to web pages	 Duplication of resources is avoided. Complementarity of resource selection among all network contributors is desired. 	 Affiliate collection development and network development strategies Health promotion checklist International resource guidelines Results-based management and accountability framework Health Promotion Assessment Tool Health Promotion Definition Linking to other sites Refer to Appendix A - Definitions

 $^{\rm 4}$ Where date of publication is not available, review date may fulfill this requirement.

Quality Principles	Resource Characteristics	Resource Selection Criteria	Resource Selection Tools and Processes
Transparent The health information resources are selected, evaluated and audited according to the collection policy and guidelines described on this site.	Governance, legislative and relevant policy statements available Quality assurance statements on CHN and Affiliate sites	On site domains from which resources are selected, the following information should be clearly indicated: • Site purpose • Funding sources • Sponsorship & advertising policy • Privacy policy • Legal disclaimer statement	 Quality assurance framework and collection policy CHN Operational Framework Call for proposals guide for applicants Call for proposal evaluation framework Sponsorship guidelines

1.6 Collection Roles and Responsibilities

Three groups of collaborators participate in the collection development, management and quality assurance of the CHN health information resources.

<u>Affiliates</u> are the primary content selectors and leading content development specialists. Affiliates may work with their network contributors to identify and select content and where appropriate to develop resources such as FAQs and feature articles. Selection and de-selection of third-party content provided by network contributors in their designated topic and group areas is the responsibility of Affiliates.

<u>Network contributors</u> may be resource "owners" that provide the health information available that is posted on the CHN website. Contributors may also develop original content or review content in collaboration with Affiliates.

The <u>CHN Division</u> of the Public Health Agency of Canada is the final authority and responsible agency on all policy development and administration and on the quality assurance framework. The CHN is the site editor and has final approval of the site content.

1.7 Site Collection Policy Statement

.1 Documented Evidence

To support this broadly defined evidence-based approach, all information resources must include the minimum evidence-based criteria including any of the following elements: the names of relevant expert individuals or organizations and their affiliation, statistics or information about relevant research studies, complete references to information sources briefly mentioned or referenced. Where applicable, acknowledgement of controversy or divergent perspectives on any topic should be noted. Opinion and editorial pieces based on personal testimony or experience should be supported by references to additional evidence.

.2 Peer Review

The peer review process for CHN takes place in several ways that are elaborated more fully in the CHN *Call for Proposal Guidelines,* where each Affiliate will be expected to adhere to a standard, acceptable structure or model. The Affiliates' ability to fulfill these peer review requirements including the use of qualified experts and review teams of both internal and external peers is a mandatory requirement in the selection of Affiliates.

As the leading content developers, Affiliates employ both qualified content and information specialists to select and prepare resources for their topic and group areas on the CHN site according to the quality principles and collection policies outlined in this framework. Typically these two experts are involved in the selection.

As designated by the quality assurance process at the Affiliate level, resources that require additional review are evaluated by similarly qualified subject experts from the Affiliate's own network of information contributors. These experts are usually external to the Affiliate's organization and as such, they qualify as peers who provide their evidence on the authority of the specific information. Finally, once the information resources qualify in this peer-reviewed stage, they are then authenticated or validated by the Affiliate organization that assumes responsibility for contributing the resource to the CHN site for publication.

.3 Complementary policies

Complementing the quality principles, resource characteristics and selection criteria identified in Figure 2, the following policy statements contained in the CHN Operational Framework (2004) are referenced in all selection tools and processes.

- Site Disclaimer
- Information Request Disclaimer
- Federal/Provincial/Territorial Links
- International Resources
- Official Languages
- Privacy Notice

.4 Organizational authorship and governance

Authorship and information ownership of each selected Network resource is understood as residing with the site organization or institution hosting the individual page being referenced. The current governance or authority for all resources made available on the CHN site must be clearly described on the originating home site.

When the site authority, as indicated through a statement on organizational governance for a selected resource, is dominated by allied healthcare professionals and/or allied healthcare organizations, those representatives are understood to have officially reviewed and approved the information. Reliability, accuracy and integrity of the information are certified by the governance representatives of the host site.

However, where a site's governance authority is comprised of individuals and/or organizations that are not clearly identified as allied healthcare professionals, an additional selection criterion shall be applied. The site owner (host site organization) must be certified as a subject expert through evidence of cross-linking on peer organization sites.

To avoid perceptions of information bias and agency influence from the for-profit sector, site authorities or governing boards with representatives from that sector cannot exceed two-thirds of the total governance membership.

.5 Group and topic guidelines

Group and topic guidelines provide the detailed description of the site's scope. The CHN Division is the authority for group and topic categories. All topic resources selected shall also be linked to designated target audience or group(s) to extend access points to the health information resources.

.6 New and emerging topics

Topics described as new, emerging or particularly relevant for a limited period are identified on a case-by-case basis. Topics that while established in the field, are not yet well documented via the web, may also be included as emerging. Resources in these topics are subject to more flexible interpretation of selection criteria with opportunity for both closer scrutiny and greater latitude by all selectors. All resources that are so designated must be reviewed by an Affiliate's peer review panel.

.7 Multiple viewpoints

Where authoritative resources are available, all points of view on all topics are equitably represented and any valid controversy or divergent perspective on a particular health information subject is noted. Resources in all topic areas and groups are regularly reviewed to ensure the range of information resources reflects a topic's comprehensiveness and diversity.

.8 De-selection and collection evaluation

The CHN maintains a policy of on-going evaluation and de-selection based upon the elimination of outdated materials or materials that have been superseded by new authoritative resources. Availability of more current resources is of prime consideration. All site resources are evaluated for potential de-selection annually and/or when particularly topical to Canadians.

.9 Framework and policy review

The CHN Advisory Board shall approve recommendations, as brought forward by the management of the Canadian Health Network Division on an as-required basis, on this quality assurance framework and related policy documents in conjunction with strategic planning.

1.8 Outcomes and evaluation

This section will be developed after quality principles, policy statements, roles and tools have been reviewed and approved in a preliminary context by both the Reference Working Group and the CHN Advisory Board.

Appendix A

Definitions

Allied healthcare professionals and organizations - in development

Governance is the act of affecting government and monitoring (through policy) the longterm strategy and direction of an organization. In general, governance comprises the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern. Source: Public Health Agency of Canada. Partnership with the voluntary sector. http://www.phac-aspc.gc.ca/vs-sb/voluntarysector/glossary.html

Health promotion is the process of enabling people and communities to increase control over and improve their health. This process is based on the understanding that physical health, social conditions and personal actions all influence health. Hence, health promotion activities include and move beyond disease prevention and health education to address social change, institutional change and community change in addition to changes in personal behaviours.

Operational definition for CHN adapted from Health Promotion Ontario at http://www.hpoph.org/about/index.html).

Prevention is a method of averting health problems (e.g. disease, injury) through interventions. Preventing and reducing the incidence of illness and injury may be accomplished through three mechanisms: activities geared toward reducing factors leading to health problems; activities involving the early detection of, and intervention in, the potential development or occurrence of a health problem; and activities focussing on the treatment of health problems and the prevention of further deterioration and recurrence.

Source: Public Health Agency of Canada. Partnership with the voluntary sector: Glossary of terms. <u>http://www.phac-aspc.gc.ca/vs-sb/voluntarysector/glossary.html</u>

Primary prevention – To engage in actions that prevent the initial occurrence of disorders or diseases by focusing on risk factors or environmental conditions that can result in the diseases or disorders

Secondary prevention – To stop or slow down existing disease and its effects through action on contribution factors

Tertiary prevention – To reduce the occurrence of relapses of a chronic disease or disorder (like treatment)

Source: Health Promotion 101 presentation by Dr. Suzanne Jackson, Director of the Centre for Health Promotion, University of Toronto.

Appendix B

Resources Consulted

Internal documents from The Canadian Health Network

- Cataloging tips to get you started, 2004
- > Controlled vocabulary and metadata, Participant's handbook
- > Health Promotion Assessment Tool / Checklist
- ➢ Heller Report, 2004
- Hillwatch Report, 2004
- > How to find the most trustworthy health information Web sites
- > Operational Framework, 2004
- Quality Assurance Framework, Discussion draft, version 0.6
- Quality assurance statement
- Resource selection: General information, 2002
- Results-based management and accountability framework for CHN, n.d.
- > Visitor Pattern Analytics: Results & Recommendations, March 2005.
- WCMS, Training manual, 2005
- > Website Benchmark: Results & Recommendations, March 2005.
- > What to look for in a health promotion Web site

External resources

Cochrane Collaboration.

Commission of the European Communities. "eEurope 2002: Quality Criteria for Health related websites." <u>http://hon.ch/HONcode/HON_CCE_en.htm</u>

Government of Canada. Voluntary Sector Initiative. "A code of good practice on funding: Building on an accord between the Government of Canada and the voluntary sector." October, 2002

"Health information and the Internet: Part of the Rethinking the information highway 2004/5 study: Preliminary findings." EKOS, Spring, 2005

Health on the Net Foundation http://www.hon.ch/HONcode/

Lewis, D., Eysenbach, G., Kukafka, R. et al, eds. <u>Consumer health informatics: informing</u> <u>consumers and improving health care</u>. New York: Springer Science+Business Media, Inc., 2005.

Medical Library Association. "A user's guide to finding and evaluating health information on the web." <u>http://www.mlanet.org/resources/</u>

- U.S. National Library of Medicine. "Collection Development Manual." http://www.nlm.nih.gov/tsd/acquisitions/cdm/
- U.S. National Library and National Institutes of Health. "Medline Plus Quality Guidelines." http://www.nlm.nih.gov/medlineplus/criteria.html

Appendix C

Quality Assurance Working Group Representatives

Reference Working Group

Doris Rankin (Chair), CHN Yvonne Dionne, Child Health Affiliate Helen Haresign, Healthy Eating Affiliate Penney Kirby, Cancer Affiliate Catherine Lewis-Brown, Diabetes Affiliate Susan Murray, Complementary/Alternative Health Affiliate Carole Neron, Women's Affiliate Jill Smith, Government of Australia Pauline Poon, Active Living Margaret Quirie, Ottawa General Hospital Catherine Drew, CHN Valerie Jerabek, CHN Mary Cavanagh, Consultant

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Appendix D

Quality Assurance Framework Development Process