Capital Health
Health Sciences Library

Annual Report
2013-2014

For the period April 2013 - March 2014
TABLE OF CONTENTS

EXECUTIVE SUMMARY ........................................................................................................... 2

VALUING LIBRARY SERVICES ................................................................................................ 3

HEALTH SCIENCES LIBRARY BUDGET FISCAL 2014 .......................................................... 4

COLLECTIONS ....................................................................................................................... 4

SYSTEMS ............................................................................................................................... 4

SERVICES .................................................................................................................................. 5

  CIRCULATION ....................................................................................................................... 5
  REFERENCE QUESTIONS ..................................................................................................... 5
  INTERLIBRARY LOANS ........................................................................................................ 5
  ONLINE SEARCHES ............................................................................................................. 5
  NUMBERS TRAINED ............................................................................................................. 5
  TRAFFIC - # OF VISITORS (COUNT DIVIDED BY 2 TO ACCOUNT FOR ENTERING AND EXITING LIBRARY) ................................................................. 5
  EZ PROXY PAGE VIEWS .................................................................................................... 5
  WEBSITE PAGE VIEWS ..................................................................................................... 5
  DATABASE USAGE .............................................................................................................. 5
  E-BOOK DOWNLOADS ........................................................................................................ 5
  E-JOURNAL DOWNLOADS .................................................................................................. 5

HIGHLIGHTS ............................................................................................................................ 6

EQUIPMENT AND FACILITIES ............................................................................................. 7

PERSONNEL ........................................................................................................................... 7

INTERNAL/EXTERNAL COMMITTEES AND ACTIVITIES .................................................... 8

LOOKING AHEAD TO 2014 .................................................................................................... 10

APPENDICES ......................................................................................................................... 11
Executive Summary

The 21st-century library is a technology system, which through the activities of its staff and the environments that it creates provides access to knowledge and understanding and engages its community in the processes of learning so that new knowledge and understanding can be created in that community and beyond.¹.

This quote certainly applies to the Capital Health Libraries. The Library is now an electronic network of supports providing access to high quality resources and instruction in how to use and how to create high quality materials. The kind of work we do includes creating web pages for users for special projects. One of those projects is our partnership with Leadership Development where we share some of our Library software so that they can create easy-to-use and easy-to-manage web pages. We have done the significant brain work of creating search strings that will pull all the research in PubMed for Capital Health researchers in a researchers database – not as easy as it sounds! We support the efforts of staff to create patient pamphlets that are professional-looking, are at an appropriate reading level, and that meet all copyright requirements. Behind the scenes, we are ensuring that the patient pamphlets are regularly updated, and that outdated material is removed from the web. And, our patient pamphlets will soon be available on the Halifax Public Library catalogue – so the entire community will have another accessible place to find the health information that Capital Health experts create.

We help departments increase their knowledge of how to evaluate evidence and make sure that they are making decisions in an ordered and accountable way. Public Health came to the Library for help with this process and the result is a full-fledged program called the Evidence Gathering and Analysis Project – a true decision-support system.

The Library, of course, has journals and books, but mostly these are in electronic format. The usage of these materials is increasing - our e-book usage up by nearly 20,000 – yes 20,000 more uses over the past two years. We are including these e-resource numbers in our Services chart for the first time this year – you will see that our “circulation” of paper resources at 8756 pales in comparison with the more than 48,000 e-book uses and 90,000 e-journal articles downloaded.

We provide access to systems like RefWorks so that users can manage citations, and licenses to Lynda.com so users can access self-teaching modules about Word, Outlook and much more!

Networks R Us!

Valuing Library Services

In the table below, we show the value calculation for the Health Sciences Library of Capital Health for the last year. This calculates the Library’s ‘retail value’ of the service. That is, if Capital Health did not have a Library, what would the district have to pay ‘retail’ for the same services?

Here is a link to the calculator, and below that, the numbers for CDHA Library Services.
http://nnlm.gov/mcr/evaluation/calculator.html

<table>
<thead>
<tr>
<th>Number of Uses</th>
<th>Library Resources or Services</th>
<th>Cost of Resource or Service</th>
<th>Value of Resources or Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>55308</td>
<td>Print and e-Books used (in house, checked out or online)</td>
<td>125</td>
<td>$6,913,500</td>
</tr>
<tr>
<td>1965</td>
<td>Print journals used (in house or checked out)</td>
<td>35</td>
<td>$68,775</td>
</tr>
<tr>
<td>94942</td>
<td>E-Journal articles accessed</td>
<td>45</td>
<td>$4,272,390</td>
</tr>
<tr>
<td>19362</td>
<td>Document Delivery (Items borrowed for/delivered to users)</td>
<td>18</td>
<td>$348,516</td>
</tr>
<tr>
<td>7548</td>
<td>Reference questions Answered</td>
<td>45</td>
<td>$339,660</td>
</tr>
<tr>
<td>359</td>
<td>Mediated searches</td>
<td>75</td>
<td>$26,925</td>
</tr>
<tr>
<td>118</td>
<td>Class hours taught (Sum of students/class x hours/class)</td>
<td>30</td>
<td>$3,540</td>
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<tr>
<td>312</td>
<td>AVs used or borrowed</td>
<td>150</td>
<td>$46,800</td>
</tr>
<tr>
<td>812</td>
<td>Meeting room use</td>
<td>50</td>
<td>$30,600</td>
</tr>
<tr>
<td>8760</td>
<td>Hours of computer use (i.e. Internet, MS Word, etc.)</td>
<td>12</td>
<td>$105,120</td>
</tr>
</tbody>
</table>

TOTAL Value calculation $12,155,826

Library budget: $1,393,107
Return on Investment (ROI) calculation: Total Retail Cost of Services ÷ Library Budget $12,155,826 ÷ 1,393,107
Return On Investment for Library Services, fiscal 2014: 8.65

Put another way, for every $1 invested in Library Services, Capital Health gets $8.65 in services.
Health Sciences Library Budget Fiscal 2014

<table>
<thead>
<tr>
<th>2013-2014</th>
<th>Dartmouth General Hospital</th>
<th>Dickson &amp; Infirmary</th>
<th>Nova Scotia Hospital</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Benefits</td>
<td>$0</td>
<td>$433,148</td>
<td>$115,368</td>
<td>$548,516</td>
</tr>
<tr>
<td>Books</td>
<td>$12,360</td>
<td>$52,246</td>
<td>$11,606</td>
<td>$76,212</td>
</tr>
<tr>
<td>Journals</td>
<td>$47,080</td>
<td>$535,525</td>
<td>$103,728</td>
<td>$686,333</td>
</tr>
<tr>
<td>Supplies</td>
<td>$2,917</td>
<td>$58,694</td>
<td>$20,435</td>
<td>$82,046</td>
</tr>
<tr>
<td>Total</td>
<td>$62,357</td>
<td>$1,079,613</td>
<td>$251,137</td>
<td>$1,393,107</td>
</tr>
</tbody>
</table>

One library technician salary was removed from the Library’s budget. We received permission to take $34,000 out of the journals budget rather than take it out of personnel budget line.

Collections

The Library purchased Lynda.com this year in response to increasing demand for training on computer software like Excel and Outlook. This has been very popular with users, and means that Library staff can direct users to this product for introductory material, ensuring a known level of understanding for advanced in-person training.

The Library moved from MD Consult to Clinical Key. This gives our users access to more than 1000 top quality e-books, more than 500 journals, 15,000 videos and more than 3 million images from Elsevier.

Systems

Usage statistics for RefWorks

| # of Registered users to date | 15,703 |
| # of RefWorks Logins          | 1,124  |
| # of References Since Start (as of March 31, 2014) | 102,747 |

The statistics for RefWorks – the citation management system to which the Library subscribes - are important as they show how many references are being stored and used for research purposes. Users can create more than one account (hence the 15,703 users versus Capital Health’s 10,000 population). This shows that people are comfortable with this product, and are using it as a tool to help with their research.
## Services

### Capital Health Library Services 2013-2014

<table>
<thead>
<tr>
<th>Service</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulation</td>
<td>8,756</td>
</tr>
<tr>
<td>Reference Questions</td>
<td>7,548</td>
</tr>
<tr>
<td>Interlibrary Loans</td>
<td>19,362</td>
</tr>
<tr>
<td>Online Searches</td>
<td>359</td>
</tr>
<tr>
<td>Numbers trained</td>
<td>675</td>
</tr>
<tr>
<td>Traffic - # of visitors (count divided by 2 to account for entering and exiting library)</td>
<td>157,850</td>
</tr>
<tr>
<td>EZ Proxy Page Views</td>
<td>132,164</td>
</tr>
<tr>
<td>Website Page Views</td>
<td>50,389</td>
</tr>
<tr>
<td>Database usage</td>
<td>94,055</td>
</tr>
<tr>
<td>E-book downloads</td>
<td>48,829</td>
</tr>
<tr>
<td>E-journal downloads</td>
<td>94,942</td>
</tr>
</tbody>
</table>

Database, E-book and E-journal statistics are COUNTER compliant – (Counting Online User NeTworked Electronic Resources) – the standardized measure and reporting format for the use of electronic materials.

Traffic is calculated by dividing the total number of visitors by two, to account for each person entering and exiting library.
EZ Proxy page views are up nearly 15,000 – an increase of 12%!

EZ Proxy page views are important because they show how many of our users access Library materials from home, from their phones, their laptops or their tablets. Many of the Library’s subscriptions include apps and they are very popular!

“Traffic” continues to be high for the libraries – more than 150,000 people visited the Capital health Libraries last year – to work with others, to use the computers, or to work in a quiet place. This is all the more remarkable because most of the Library’s materials are electronic, and so are accessible from outside the Library. Yet, people continue to come to the Library as “their place”.

**Highlights**

On May 3, 2013, the Nova Scotia Hospital was the venue for a celebration of the life of Dr. William McCormick, Psychiatrist and former Medical/Clinical Director for the Nova Scotia Hospital, Professor Emeritus in the Department of Psychiatry at Dalhousie, and a great supporter of the hospital library.

In May, 2013, Chris Power came to the Infirmary Library to have a chat with Library staff about what we do, and how we feel about Capital Health. It was uplifting to have the chance to talk with the Capital Health CEO, and to ask questions about the future of the institution. We received a lovely note from Chris afterwards, thanking us for meeting with her.

The Nova Scotia Hospital Health Sciences Library in partnership with Recreational Therapy and Occupational Therapy at the Nova Scotia Hospital held a Christmas Open House for patients on Thursday, December 12, 2013. Craft materials were provided for patients to create new decorations for the Library’s Christmas tree or for the patients in an atmosphere of cheery holiday music.

The Library invested in a more powerful modem for the patient/family wireless Internet access. The strength of the signal now reaches across the foyer of the Infirmary site, and can be used by people visiting the Executive Offices. Internet access is now an essential service, and we are happy that the Library is able to help people stay connected.

**Training**

Katie McLean is the Librarian Educator for Training. Katie’s report on Training and Education is attached as Appendix A.
Patient Pamphlets

Lara Killian is the Librarian Educator for Patient Pamphlets. Lara’s Patient Education Team report is attached as Appendix B.

Equipment and Facilities

The curved couch at the Nova Scotia Hospital was reupholstered. The old covering was disintegrating and it was identified as an occupational health issue. In the process of re-covering, the couch was disassembled into 3 pieces. The 3 pieces can be hooked together to re-create the 17 foot-long curved couch, or the pieces can be used on their own. The couch is featured in Our Voice, Volume 2 (2) February 2014, on page 4 along with a photo of the Library’s cupcake day celebration.

Personnel

Laura Macdonald joined the Library staff as part-time Library Technician in June of 2013. Adam Keylor resigned in June of 2013 as the Library Technician supporting patient pamphlets. Carmen Dorey was hired into that position in August, 2013. Heather Zinn worked at the NSH until June of 2013. Kathy Keays was successful in the competition for that position, so she moved from the Dickson Library to the Nova Scotia Hospital Library in September, 2013. Katie Quinn joined the staff of the Dickson Library in October of 2013.
An article about the patient pamphlet service along with a photo of Lara Killian, Rob MacKenzie, Adam Keylor and Heather Zinn appeared in Our Voice Volume 1 (1) May 2013 page 1 and Kathy Keays and Carmen Dorey were featured as new staff at the NSH Library, in the newsletter Our Voice, Volume 1 (5) September 2013, on page 5. (see Appendix C)

Library Staff, April 1, 2014: David Barteaux, Library Technician – Dickson
Carmen Dorey – Library Technician – Nova Scotia Hospital
Bill Fancy, Library Technician – Infirmary
Vivien Gorham, Library Technician – Dickson
Kathy Keays, Library Technician – Nova Scotia Hospital
Lara Killian, Librarian Educator – Nova Scotia Hospital
Diane Lawson, Library Clerk – Infirmary
Penny Logan, Manager Library Services
Laura Macdonald, Library Technician – Infirmary
Rob MacKenzie, Library Technician – Nova Scotia Hospital
Katie McLean, Librarian Educator – Dickson
Katie Quinn, Library Technician – Dickson

Internal/External Committees and Activities

In April 2013, Gayle Graham, a student in the Masters of Library and Information Service completed her practicum by working at all three Health Sciences Libraries. The Library hosted Carmen Dorey, for her student placement from the Nova Scotia Community College from May 13, 2013 to June 7, 2013. Carmen completed several projects including creating a LibGuide called Finding a Journal Title.

The Library hosted a Micromedex demonstration with David Jones, May 7, 2013.

Darlene Chapman, Patrick Ellis and Penny Logan were asked to speak about the Nova Scotia Virtual Library at the Atlantic Provinces Library Association conference held in Charlottetown, PEI, on May 16, 2013.

In October 2013, Lara Killian worked with the Emergency Department to get the patient pamphlets on their server so they can be printed off when someone is discharged.

Katie McLean worked with the Accreditation team to develop a series of posters and notices (see Appendix D) and some new library advertising materials about the continuum of support (see Appendix E).

In September 2013, Katie McLean was asked to take on the instruction role for literature searching for those who are interested in applying for the Transferring Research Into Care (TRIC) grants which are administered by Research Services.
In September and October 2013, Lara Killian and Katie McLean were invited to present at New Grad Nurse follow-up sessions on library resources, apps, and patient pamphlets. These events are in addition to the orientations new graduate nurses participate in when they are hired at Capital Health.

We were notified in October 2013, of this kudo for the Library work of Diane Lawson and Bill Fancy:

Special appreciation to Ms Diane Lawson and Mr Bill Fancy,
Halifax Infirmary Health Sciences Library, Capital Health, QE2 Hospital, Halifax, Nova Scotia, Canada


In November, the Nova Scotia Hospital Library site was used in the shooting of the television series Seed. The NSH Library space is bright, with much natural light, and is a favourite spot for film-makers.

We worked with the Nova Scotia Community College (NSCC) to provide print copies of academic journals for teaching purposes. Instructors in the NSCC’s Library and Information Technology program use our discarded paper journals to help illustrate the difference between academic, trade and consumer/popular journals.

In January 2014, Lara Killian presented a talk titled: “Healthy searching: Finding reliable health information on the Internet” at the Podcamp Halifax ‘unconference’.

In February 2014, Katie McLean and Lara Killian were asked to assist as instructors to support the Dalhousie Undergraduate Medical Education day. This is an excellent opportunity for the Capital Health Library to work with the Dalhousie Kellogg Library staff.

In that same month, Katie McLean and Katie Quinn worked with Research services to develop a directory of Capital Health researchers along with links to their publications indexed in PubMed. This is a very involved project, and has had excellent results. The Researcher Directory is located here: http://www.cdha.nshealth.ca/discovery-innovation/researcher-directory

The Nova Scotia Virtual Health Library continues to move ahead. Wendy Stark, the consultant working on the business case and plan identified the healthcare sector as an area that needed special emphasis. In her proposal titled Nova Scotia Health Care Delivery Sector: Consolidated Library Services Proposal (see Appendix F) she states:
The findings of the review of the NS health care delivery sector indicate that there is real potential to address content and service gaps, to improve the availability and reach of current services and increase efficiency by consolidating and leveraging existing capacity with minimal additional funding and no change to existing facilities.

In September of 2013, Penny Logan and Darlene Chapman presented the Consolidated Library Services Proposal to the Council of CEOs. This group represents the CEOs of all of the District Health Authorities in Nova Scotia. The CEO’s agreed with the proposal which outlines that the District Health Authorities hire two librarians to create a shared catalogue for all of the health authorities, provide access to a core set of resources and provide offsite access to those resources.

A Service Agreement is being drafted with the help of Capital Health Legal services and we hope that the CEO’s will sign the Service Agreement in the very near future. This will give the Libraries of the Health Authorities the ability to act as one participant in the Nova Scotia Virtual Health Library.

The final consultant’s report was presented to the Academic Health Council in November 2013 (see Appendix G). The make-up of the Academic Health Council has changed, so several members have to take the proposal back to their institutions for confirmation.

**Looking Ahead to 2014**

The Nova Scotia Government has announced early 2014 that they will be moving to a two-district model. The Nova Scotia Virtual Health Library work fits well into that schema, and we look forward to working with other libraries in other districts over the coming year.

Moving the Nova Scotia Health Care Delivery Sector proposal forward is a primary concern as it can form the basis for the new government plan for services.

Penny Logan, Manager Library Services, Capital Health
Appendices

Appendix A.  Training & Education Program – 2013-2014
Submitted by Katie McLean, Librarian Educator

Appendix B.  Patient Education Team Report - 2013 -2014
Submitted by Lara Killian, Librarian Educator


Appendix D.  Accreditation poster

Appendix E.  Continuum of support

Appendix F.  Nova Scotia Health Care Delivery Sector: Consolidated Library Services Proposal

Appendix A.  Training & Education Program – 2013-2014

Submitted by Katie McLean, Librarian Educator
Capital Health
Health Science Library
Training & Education Program - April 1, 2013 to March 31, 2014
Updated November 12, 2014

Highlights

- Statistics indicate a desire for team-directed, custom learning events
  - Customized group session requests nearly tripled this year, while attendance to pre-scheduled sessions decreased overall. Total attendance remains consistent with previous years
  - Advertising pre-scheduled sessions through LMS remains important for client awareness within the organization. Online page views for Learning Opportunities (events) have almost doubled since last fiscal year
  - Lynda.com statistics indicate clients are using the resource for updating skills around productivity software (e.g. word processing, electronic calendars, and spreadsheets), time management, as well as design and layout. About 61% of clients are completing less than 25% of a given course, suggesting that Lynda.com is being used as a reference point to learn a specific skill or task that may be a part of a course. About 25% of all registered clients are completing a full course
- Online Starting Point Guides (library-produced websites) for select disciplines launched with common “look & feel”
  - Statistics for both public website and library-produced websites are included to highlight the growing trend in access to our resources and services online. An increase in access is seen across URLs when compared to previous years
- Training & Education Team collaborations with departments on projects have increased and diversified. This includes assistance with searching, citation, document formatting, and design (see New Partnerships & Resources)
- Mobile Technology interest grows
  - Library staff trained on iPads and supported apps
  - Launch of Mobile Apps, Sites & QR Codes online guide
  - Delivery of app training “on the floors” to clinical staff

Statistics Snapshot
Attendance, Occupations & Time Spent

<table>
<thead>
<tr>
<th>Total # of Sessions</th>
<th>147</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Pre-Scheduled Sessions</td>
<td>58</td>
</tr>
<tr>
<td>Total # of Custom Sessions</td>
<td>89</td>
</tr>
<tr>
<td>By Profession</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physician</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
</tr>
<tr>
<td></td>
<td>Dietitian</td>
</tr>
<tr>
<td></td>
<td>Rehabilitation Therapist</td>
</tr>
<tr>
<td></td>
<td>Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Public Health</td>
</tr>
</tbody>
</table>
Capital Health
Health Science Library
Training & Education Program - April 1, 2013 to March 31, 2014
Updated November 12, 2014

<table>
<thead>
<tr>
<th>Category</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health</td>
<td>50</td>
</tr>
<tr>
<td>Other</td>
<td>165</td>
</tr>
<tr>
<td><strong>Total Attendance</strong></td>
<td><strong>675</strong></td>
</tr>
<tr>
<td>Time Spent in Sessions</td>
<td>118</td>
</tr>
<tr>
<td>Time Spent Preparing</td>
<td>131.5</td>
</tr>
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</table>

Lynda.com Statistics Snapshot

**Usage Overview**

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td># Licenses (signed out 2 week loan per user)</td>
<td>11</td>
</tr>
<tr>
<td># of Registered Users</td>
<td>112</td>
</tr>
<tr>
<td>Total Course Views</td>
<td>230</td>
</tr>
<tr>
<td>Total Videos Viewed</td>
<td>3,398</td>
</tr>
<tr>
<td>Hours Viewed</td>
<td>228.57</td>
</tr>
</tbody>
</table>

**Certificate % Complete at End Date (Course Completion)**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25%</td>
<td>141</td>
</tr>
<tr>
<td>25-50%</td>
<td>19</td>
</tr>
<tr>
<td>50-75%</td>
<td>12</td>
</tr>
<tr>
<td>75-100%</td>
<td>58</td>
</tr>
</tbody>
</table>

**Top 10 Lynda.com Courses**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Course</th>
<th>Total Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outlook 2007: Time Management with Calendar and Tasks</td>
<td>258</td>
</tr>
<tr>
<td>2</td>
<td>Excel 2013 Essential Training</td>
<td>176</td>
</tr>
<tr>
<td>3</td>
<td>Outlook 2007 Essential Training</td>
<td>171</td>
</tr>
<tr>
<td>4</td>
<td>InDesign CS6 Essential Training</td>
<td>129</td>
</tr>
<tr>
<td>5</td>
<td>Time Management Fundamentals</td>
<td>119</td>
</tr>
<tr>
<td>6</td>
<td>Excel 2007 Essential Training</td>
<td>115</td>
</tr>
<tr>
<td>6</td>
<td>InDesign CS4: Typography</td>
<td>115</td>
</tr>
<tr>
<td>6</td>
<td>Up and Running with Prezi</td>
<td>115</td>
</tr>
<tr>
<td>7</td>
<td>Word 2013 Essential Training</td>
<td>88</td>
</tr>
<tr>
<td>8</td>
<td>Foundations of Typography</td>
<td>78</td>
</tr>
<tr>
<td>9</td>
<td>CSS: Page Layouts</td>
<td>77</td>
</tr>
<tr>
<td>10</td>
<td>Typography for Web Designers</td>
<td>75</td>
</tr>
</tbody>
</table>
## Starting Point Web Statistics (LibGuides)

<table>
<thead>
<tr>
<th>Guide</th>
<th>Launch Date</th>
<th>Page views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>2012/07</td>
<td>1,370</td>
</tr>
<tr>
<td>Physicians, Residents, &amp; Clerks</td>
<td>2012/07</td>
<td>1,526</td>
</tr>
<tr>
<td>Dietitians &amp; Dietetic Technicians</td>
<td>2012/08</td>
<td>1,101</td>
</tr>
<tr>
<td>Public Health</td>
<td>2012/08</td>
<td>413</td>
</tr>
<tr>
<td>Mental Health</td>
<td>2012/09</td>
<td>582</td>
</tr>
<tr>
<td>Occupational Therapy, Physiotherapy, &amp; Recreation Therapy</td>
<td>2012/09</td>
<td>375</td>
</tr>
<tr>
<td>Social Work</td>
<td>2012/11</td>
<td>165</td>
</tr>
<tr>
<td>Infection Control</td>
<td>2012/12</td>
<td>403</td>
</tr>
<tr>
<td>Spiritual Care</td>
<td>2013/03</td>
<td>143</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>2013/04</td>
<td>55</td>
</tr>
<tr>
<td>Pedorthics, Orthotics, &amp; Prosthetics</td>
<td>2013/11</td>
<td>154</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,287</strong></td>
</tr>
</tbody>
</table>

## Project-based, Subject and How-to Guides

<table>
<thead>
<tr>
<th>Guide</th>
<th>Launch Date</th>
<th>Page views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence Gathering &amp; Analysis Process (EGAP)</td>
<td>2013/07</td>
<td>1,782</td>
</tr>
<tr>
<td>Addictions – Evidence-based Decision Making</td>
<td>2013/10</td>
<td>421</td>
</tr>
<tr>
<td>Customer Service &amp; Patient Experience</td>
<td>2013/11</td>
<td>153</td>
</tr>
<tr>
<td>Mobile Apps, Sites, &amp; QR Codes</td>
<td>2014/01</td>
<td>514</td>
</tr>
<tr>
<td>Leadership Development</td>
<td>2014/02</td>
<td>155</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>3,025</strong></td>
</tr>
</tbody>
</table>

## Public Website Training Statistics

<table>
<thead>
<tr>
<th>Main Page</th>
<th>Page views</th>
</tr>
</thead>
<tbody>
<tr>
<td>/events</td>
<td>4,599</td>
</tr>
<tr>
<td>/health-sciences-library</td>
<td>27,992</td>
</tr>
<tr>
<td>/library-training</td>
<td>1,021</td>
</tr>
<tr>
<td>/refworks</td>
<td>994</td>
</tr>
<tr>
<td>/starting-point-guides</td>
<td>3,055</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37,661</strong></td>
</tr>
</tbody>
</table>
## Learning Opportunities (Events)

<table>
<thead>
<tr>
<th>Webpage</th>
<th>Page views</th>
</tr>
</thead>
<tbody>
<tr>
<td>/using-evidence</td>
<td>1,435</td>
</tr>
<tr>
<td>/event/ten-steps-literature-searching</td>
<td>319</td>
</tr>
<tr>
<td>/event/pubmed-essentials</td>
<td>190</td>
</tr>
<tr>
<td>/event/computer-skills-drop-halifax</td>
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<td>/event/computer-skills-drop-dartmouth</td>
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</tr>
<tr>
<td>/event/refworks-bootcamp</td>
<td>165</td>
</tr>
<tr>
<td>/event/library-and-searching-skills-administrative-assistants</td>
<td>50</td>
</tr>
<tr>
<td>/event/mobile-app-petting-zoo</td>
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<tr>
<td>/event/keeping-current</td>
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<tr>
<td>/event/getting-most-out-google</td>
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<tr>
<td>/event/patient-consumer-health-information</td>
<td>21</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>3,251</strong></td>
</tr>
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</table>

## RefWorks

<table>
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<tr>
<th># of Registered Users to Date</th>
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</tr>
</thead>
<tbody>
<tr>
<td># of RefWorks Logins</td>
<td>1,124</td>
</tr>
<tr>
<td># of References Since Start (as of March 31, 2014)</td>
<td>102,747</td>
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**NOTE:** Above RefWorks statistical categories will change moving forward. With migration from ScholarsPortal, *# of Registered Users to Date* and *# of References Added* will not be provided.

## Client Evaluations

The majority of participants either strongly agreed or agreed that sessions:

- met expectations
- were effectively organized

The majority of participants agreed that handouts were useful and that they would likely use the information they gained through sessions again.

Top additions or changes suggested by participants include:

- Faster computers; up-to-date systems and software would allow for a better use of time
- Slower presentation on some processes and more time for practice in session
More examples to “take away” and practice on own
More “steps” to follow

Participants found the instructor:
approachable
knowledgeable
helpful overall

Selected Core Session Feedback Quotes:
Will need 1-on-1 assistance later.
Found app very useful!
Great presentation style.
Great handouts.
Took away lots of tips!
Love that it [workshop] was individualized.
Good overview, but fast. Would like more time to practice.

Participants heard about training opportunities through a number of avenues. Participants cited the following top sources:

Practice Leaders/CEO/Managers
Coworkers/colleagues (specifically Nurse Educators)
Capital Health News
Intranet announcements

New Partnerships & Resources

Accreditation Standards Support

Support provided to nurse educators and managers to format, edit, and layout tip sheets focusing on individual accreditation standards. These tip sheets are to educate nursing staff around specific Accreditation Canada standards, in preparation for survey. Created documents are saved for future use, reference and updating - S:\Training Education Program\AccreditationTipSheets2013
Breastfeeding Community of Practice

- Healthy Workplace and Public Health expressed a desire to have an online resource page to direct staff to the Breastfeeding Community of Practice and trusted resources to learn more about breastfeeding. This resource page was integrated into existing Starting Point Guides for relevant clinical staff. For example -
  http://libguides.cdha.nshealth.ca/Physicians/eBooks/Breastfeeding

Cardiology Newsletters

- Support was and continues to be provided to staff in Cardiology for production of their quarterly staff newsletter. This is a provincial publication that reaches Cardiology staff throughout Nova Scotia. Training & Education Team members ensure that the “Helpful Resources” list is formatted correctly and that direct access to online material is provided when available. A note with library contacts throughout Nova Scotia was added to ensure access across districts -
  S:\Training Education Program\Formatting NewsLetters

Pharmacy – Collaborating on a Starting Point

- After launching online Starting Points for selected clinical disciplines, Pharmacy approached the Library about developing a Starting Point of its own. Working in collaboration with a Pharmacy IT Technician, feedback was solicited from Pharmacy staff. Resources were selected and organized as per the recommendations of Pharmacists and Pharmacy Technicians
  http://libguides.cdha.nshealth.ca/Pharmacy

Leadership Development

- A productive and mutually beneficial partnership was established between Library Services and Leadership Development through the Training & Education Team this year. Leadership Development came to the Library with a need to enhance their online presence and learning supports, and hired library technician Chelsey Millen as their coordinator based on the advice of the Training & Education Team. Leadership Development works collaboratively with Library staff and uses the Library’s access to LibGuides and Lynda.com
  http://libguides.cdha.nshealth.ca/LeadershipDevelopment

Interprofessional Education (Our Promise in Action Support)

- Librarian Educator – Training & Education was asked to join the Interprofessional Education Action Team in support of Innovating Health and Learning for Our Promise in Action. The main goal for this strategic stream was to increase opportunities for interprofessional research and
education by 50%. The Training & Education Team assisted with developing and deploying a survey to measure the current state of interprofessional education opportunities within the organization, and interpreting and organizing collected data. An online resource guide was also started, and continues to be developed
http://libguides.cdha.nshealth.ca/InterprofessionalEducation

**Research in Medicine** at Dalhousie – Search Instruction Support

- Librarian Educators from Capital Health offered expertise and assisted in hand-on search sessions with first-year medical students at Dalhousie University

**Custom Sessions, Research & Special Project Groups**

As a complement to regular core sessions offered, the Training & Education Team also develops and delivers custom sessions on demand. The below selected sessions developed in 2013-2014 provide an overview of the regular needs of departments, research and project groups within Capital Health.

**EMS Prehospital Evidence Based Protocols (PEP)**

- Search assistance was provided throughout the year to the PEP research team in Emergency Services. An in-depth session on searching was delivered to the multidisciplinary group of paramedics, physicians and researchers and advice was given on established search strings

**Rehabilitation Nurses - Drug & Lab Values / Anatomy & Apps**

*We appreciated the examples relevant to our field.*

- Two sessions were held for Nurses and LPNs working in Rehabilitation and Supportive Care. The first session focused on resources to check drug values and anatomy resources (AnatomyTV). The second session focused on installing and using mobile applications, specifically Micromedex and uCentral

**Translating Research Into Care (TRIC) - Search Workshop for Applicants**

- A session on searching was developed and delivered in partnership with Kellogg Health Sciences Librarian Robin Parker to assist potential applicants in searching for evidence to support grant applications

**Addictions – Evidence-based Decision Making**

*Great pace and content. Love that it was individualized.*
The Training & Education Team collaborated with Addictions Knowledge Translation Coordinator to produce a one day workshop on evidence-based decision making for Addictions staff. A web resource (LibGuide) was developed to support this session. The site provides access to core databases, ebooks, guidelines and more, as well as instruction and examples [http://libguides.cdha.nshealth.ca/Addictions-EBDM](http://libguides.cdha.nshealth.ca/Addictions-EBDM).

**iPads & Apps in the Library**

- The Training & Education team formatted and synced three iPads (one for each Library site) and delivered training to staff on basic iPad use and the apps available through the Library. A web resource (LibGuide) was also developed to assist both library staff and hospital staff in selecting, accessing, installing and using the mobile apps provided by the Library [http://libguides.cdha.nshealth.ca/MobileResources](http://libguides.cdha.nshealth.ca/MobileResources).

**EXTRA (Executive Training for Research Application) Fellows – Literature Search Training**

*I finally understand this [searching for evidence] better.*

- A custom education session focused on searching core resources, including PubMed, and filtering for quality study type was developed and delivered to EXTRA fellows in support of their project around proactively delaying frailty in seniors.

**Recreation Therapy – Access & Top Resources**

*Excellent – so helpful. Appreciate the ongoing support.*

- A custom session on searching core recreation therapy journals and accessing Library supports was developed for recreation therapists. This led to the group recommending the purchase of several high-quality recreation therapy texts that are only available in print. These texts are held at the Dickson Library for easy access to staff.

**Orientations**

The Library regularly participates in orientations for:

- New Grad Nurses
- Graduate Dietetic Internship Program
- Residents
- Clinical Clerks
The New Graduate Nurses are the newest group to request library support. Librarian Educators for both Training & Education and Patient Pamphlets collaborated on this event – delivering multiple sessions that highlighted clinical tools, mobile applications and patient education materials.

Core Session Offerings
In the past, attendees to pre-scheduled sessions opted more for introductory courses: Skills for Life, PubMed Essentials, RefWorks: Bootcamp. Regular “Core” sessions continued this year.

Current Regular Offerings (Once a month, September - June):
* Becoming a Savvy Searcher: Ten Steps to Literature Searching
  - Develop an answerable question (PICO)
  - Use Boolean logic and related search concepts
  - Navigate the Health Sciences Library web page

  *PubMed Essentials*
  - Carry out an effective search
  - Apply limits
  - Access and order articles

  *RefWorks Bootcamp*
  - Create a RefWorks account
  - Create folders and add references
  - Import and export references

Special Topic Offerings:
* Staying Current
* Mobile Apps at the Library
* Evaluating Web-based Information
* Patient & Consumer Health Information (delivered by Librarian Educator – Patient Pamphlets)

Recommendations for 2014-2015
Based on the above data collection and reflection, there are several areas that would benefit from improvement and development. The following points are provided as a suggested list of areas where work needs to be done.

- Access to Adequate Computers for Learning Events
  Training participants continue to comment on the state of computers used for learning within Capital Health. It is very difficult to instruct on computers that have very different set-ups across the organization, let alone in the same computer lab. A new issue – outdated web browsers – emerged this year. New, responsive web design will not function in the current standard on
organization computers. This will have to be monitored as many of our resources are web-based. Options for a mobile lab have been researched, and this is anticipated to be a reality in 2014.

- **Integrate Library Staff Skills/Services into Training Program**
  This year marked a notable change in the Library’s interaction with clients. Increasingly, clients are looking for library staff to assist in activities to support projects. This is a new avenue for the Training & Education team, and one that should be promoted alongside learning opportunities. The Training & Education team is equipped to deliver training around information seeking and to assist other groups in development of educational opportunities and supports.

- **Increase Flexibility of Session Topics / Integrate Awareness about Custom Sessions**
  Session customization should be a main focus of future promotion. The main avenue for advertising individual learning opportunities continues to be LMS. Adding variety to core sessions, for example, alternating between databases instruction each month, may help to draw attention to the variety of resources clients can request assistance with and training in. Each session entered in to LMS should also indicate the availability of custom sessions.

- **Finalize & Standardize Occupational Statistics Categories Across Library Resources and Services**
  Tracking of user groups by occupation has fluctuated over the years. Establishing core client occupation groups across services would enable the Library to better track the number of professionals using our services.

- **Problem-Solving Skills & Critical Appraisal Skills**
  A range of critical thinking skills are required in the hospital environment. Clients attending scheduled or requesting custom sessions are often looking for “step by step” assistance, particularly in relation to interacting with technology. On the other end of the spectrum, a niche group of clients request assistance with education around critical appraisal of literature (namely, professional practice leaders, practicum orientation coordinators, and staff involved in research). The Library must continue to provide assistance across this spectrum, and position itself as a resource for all staff to pursue lifelong learning. At the same time, opportunities to partner with existing, local experts should also be pursued.
• Increase Depth & Meaning of Web Analytics – Integrate with LibGuide Review & Edit Process
  Monitoring and drawing meaning from web analytics has become increasingly important. Statistics beyond pageviews will reveal useful information that can be used to edit, establish or discontinue specific web resources.
Appendix B. Patient Education Team report

Submitted by Lara Killian, Librarian Educator
April 1 2013 – March 31 2014

Patient Education Team report

Fiscal year 2013-2014 saw patient pamphlet work get up to full steam under in its new home at the Health Sciences Library. In May 2013, Adam Keylor, the library technician supporting patient education pamphlets, left the team for another opportunity. While on the patient education team, Adam spent considerable time checking pamphlet files and folders for missing PDFs and filling in some of the gaps in records that the Team inherited from multiple sources during the 2012-2013 transition (following closure of the Audio-visual department). This file management work was critical to getting records in order so that the true scope of the work could be understood. Around this time the team was able to ascertain that there were about 1150 pamphlets in the active collection. In August 2013, a new library technician, Carmen Dorey, joined the team. After Carmen received training in Adobe InDesign software for the layout and design of the pamphlets, she began actively maintaining the pamphlet catalogue as well as taking a lead on pursuing completion of active pamphlet projects.

In fiscal year 2013-2014, we received 177 pamphlet project requests; 116 of these were completed by the end of the fiscal year. We were also able to do some much-needed maintenance of pamphlets, archiving 228 that were out of date. This number included 141 medication info sheets originally prepared by Cancer Care Nova Scotia (CCNS) that have now been added to a regularly updated database hosted on the CCNS website. At the end of the fiscal year, we had 1052 active pamphlets following this maintenance effort.

In January and February 2014, we targeted the review and archiving of approximately 80 pamphlets in the system that were published in 2005 or earlier. This date range was chosen because it was a feasible number of pamphlets as a starting point in working toward the goal of having patient education materials reviewed every 3 years for currency. We worked with clinical nurse educators and other front-line staff across the district to take anything older than 2006 out of the system. We were able to delete 33 pamphlets that were no longer in use from 2005 and earlier. The oldest pamphlet in this batch was from 2000, as we had already pursued a few outliers from the late ‘90s in 2013. 30 pamphlets from 2005 and earlier were assessed as still needed, so we began the process of working with educators and staff in those areas to get them updated.

It is so important to proactively maintain our pamphlet collection because we know these materials are highly accessed. Dalhousie University’s Print Centre is the current pamphlet print provider. In 2013-2014, 1204 orders were placed for a total of 275,723 copies. In the same time frame, the PDFs were accessed online 258,226 times. In the 2014-2015 annual report, look for more detail on web traffic analytics, including the location of our visitors, and which pamphlets are the most popular. We are working with the web team at Capital Health to track this on a monthly basis starting in April 2014.
**2013-2014 Pamphlet orders and downloads**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Monthly average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalhousie University’s Print Centre – Print copies ordered</td>
<td>275,723</td>
<td>22,966</td>
</tr>
<tr>
<td>Web downloads – PDFs accessed</td>
<td>258,226</td>
<td>21,518</td>
</tr>
</tbody>
</table>

Staff members are able to place orders directly with the Dalhousie University Print Centre, or via an order form on the library website, after searching our catalogue for pamphlets and adding the ones they want to a shopping cart-style list. The patient education team facilitated 42 pamphlet orders in 2013-2014, just a small percentage of the 1204 total orders placed.

We had 164 inquiries for documents that staff could edit as part of the pamphlet revision process. We had a total of 328 inquiries about specific pamphlets. For example, these inquiries might mean that someone contacted us trying to find a pamphlet, that there was a problem with a specific pamphlet print order, or that someone was wondering what the revision status of a pamphlet was. We also had over 160 inquiries that were not related to specific pamphlets, but to other areas of patient education, such as reviewing policy documents for plain language, or dealing with requests to upload and schedule video content to display on the in-house hospitality network patient education channels.

Also in 2013 we began laying the groundwork for a pilot partnership project to index our up-to-date patient education pamphlet records at Halifax Public Libraries (HPL). Near the end of the 2013-2014 fiscal year, our focus was on making our catalogue software export a file format that HPL’s cataloguing software could interpret correctly. In preparation to make our pamphlets more accessible to the public by indexing them at HPL, 3 library technicians at the Nova Scotia Hospital Library pitched in to standardize the subject headings used in the pamphlet records, adding Library of Congress subject headings used by the public library to the Medical Subject Headings normally used by the Capital Health Health Sciences Library. The pilot project launched in the 2014-2015 fiscal year, so we’ll have more information on that in the next annual report.
Library Expands Team and Services

If you have a chance to drop into the Health Sciences Library, located in the Hugh Bell Service Centre at The Nova Scotia Hospital, you will find some fresh faces welcoming you inside.

The first people you will see are Rob MacKenzie and Heather Zinn. They are two of three library technicians there to assist you. Rob and Heather have both been working at the library since the summer of 2012. They are happy to help you order books, locate books in the library’s collection, search the library catalogue, facilitate document delivery of articles or get you settled at a computer station.

CDHA’s new patient education team is now located in our library. They are responsible for revising all patient education materials such as pamphlets and videos. The team consists of Lara Killian and Adam Keylor.

Lara, who started working at the library in January, is the librarian educator who manages the patient education materials process. She also serves on various patient education related committees throughout CDHA to ensure patients have access to up-to-date information about their health care in print and on the Internet.

Adam, the third library technician, is the newest staff member. He assists Lara, updates related databases, and maintains an archive of pamphlets.

The entire team would like to welcome staff, patients and members of the public to visit the library anytime and enjoy their wonderful view.

Welcome New Staff

Community Mental Health welcomes two new staff psychiatrists!

Welcome to Dr. Kulli Poder, psychiatrist at Cole Harbour Community Mental Health Clinic. Dr. Poder joined the clinic in September as a full-time psychiatrist.

Welcome also to Dr. Sonia Chehil, psychiatrist at Bayers Community Mental Health Clinic. Dr. Chehil joined the clinic in September following the recent retirement of Dr. Curtis Steele. Dr. Chehil will split her time between the Bayers Community Mental Health Clinic and Global Psychiatry where she is the Director.

Welcome to the following new staff:

- Carmen Dorey, library technician, Health Sciences Library, NSH
- Charlene Field, LPN, East Coast Forensic Hospital
- Kathy Keays, library technician, Health Sciences Library, NSH
- Taylor Rambault, Developmental Worker, Emerald Hall

Newsletter Submissions

Our Voice provides a forum for the exchange of information, ideas and items of general interest to the staff of the Capital Health Addictions and Mental Health Program.
Appendix D. Accreditation 2013 #7 July 8th.
Dangerous Abbreviations
Dangerous Abbreviations

Did you know that medication errors are the largest identified source of preventable hospital medical error and that 5% of those are attributed to unsafe abbreviation use?!

Does this say run at 25 mL/h?

This octreotide infusion was run at 25mL/h but should have been run at 5mL/h because the @ symbol was misinterpreted as a 2. This example from ISMP shows how dangerous unsafe abbreviations can be.

What can you do to help prevent harm due to unsafe abbreviations?
- Only use the ISMP approved abbreviations for medication orders
- Don’t accept unclear and/or unsafe abbreviations; ASK for a written clarification
- Report all unsafe events involving abbreviations in the Patient Safety Reporting System (PSRS)

Does Capital Health have a policy related to dangerous abbreviations?
- YES! It is: CC 04-040 Clinical Documentation in the Health Record

Other Resources Available:
- Do Not Use: Dangerous Abbreviations, Symbols & Dose Designations Pocket Card
- Risk Management Patient Safety Tips & Tools: Abbreviations put patients at risk!
Appendix E. Library Continuum of support
Appendix F. Nova Scotia Health Care Delivery Sector: Consolidated Library Services Proposal
Nova Scotia Health Care Delivery Sector:

Consolidated Library Services Proposal

Prepared by:
W. Stark
P. Logan
D. Chapman
(Revised) April 2014
Contents

Introduction ........................................................................................................................................... 3
Overview of the Current Situation ........................................................................................................ 4
  Library Service Resources .................................................................................................................. 4
  Capacity ........................................................................................................................................... 5
  Demand ........................................................................................................................................... 5
  Remote Access .................................................................................................................................. 6
  Cost .................................................................................................................................................. 6
  Efficiencies and Savings .................................................................................................................... 6
  Findings ........................................................................................................................................... 7
Proposal for Health Care Delivery Consolidated Library Services .................................................. 8
  Core Services ................................................................................................................................... 8
  Implementation ................................................................................................................................. 9
  Funding Requirements ..................................................................................................................... 10
Recommendations .............................................................................................................................. 10

Annex A: Selected Statistics of Library Use ..................................................................................... 11
Annex B: Core Client Services ........................................................................................................... 12
Annex B: Core Information Resource Funding Requirements ......................................................... 12
Annex C: Cost Allocation by Number of Beds and FTE count ........................................................ 13
Introduction

The Academic Health Council, whose members represent the health care delivery, academic and government organisations in Nova Scotia, has funded a study to examine the business case and develop a plan for a Nova Scotia Virtual Health Library (NS VHL). The NS VHL is envisioned as a province-wide consortium of library organisations that will ensure equitable access to the clinical evidence and scholarly information resources and the services that Nova Scotia health professionals need to decide on treatment options and patient care, as well as for research and continuing education. A key objective of the NS VHL is to address the deficiencies and inequities experienced by health professionals in different sectors and locations when seeking information and services.

In assessing the current situation, the NS VHL Working Group has found increasing financial pressure in the academic sector is limiting that sector’s capacity to serve health professionals outside of their core constituencies. Health sciences alumni continue to struggle to access evidence based information once they are in the workforce and no longer affiliated with their academic institutions. While some progress has been made by physicians and nurse professional associations, the majority of health professional associations do not provide these resources or services for their members\(^1\). In the Nova Scotia health care delivery sector, despite progress in some districts, significant gaps and disparities in access for health professionals to information resources and services persist\(^2\). The health care delivery sector’s historical reliance on the academic sector to provide these services is no longer tenable.

This report recommends increasing the level of collaboration and coordination of information services within the health care delivery sector as the best approach to eliminating these gaps and disparities. If approved, a consolidated library service will result in more efficient and effective information services and will also position the health care delivery sector to leverage further benefits by participating in a provincial health library consortium. The proposed approach aligns with other provincial health care delivery sector initiatives to merge services.

---

\(^1\) See, for example Health information support provided by professional associations in Canada. Health Info Libr J. 2012 Sep; 29(3):233-41. PMID:22925386

\(^2\) The health care delivery sector is defined as provincially funded organisations engaged in direct delivery of health care; specifically, the nine District Health Authorities and the IWK
Overview of the Current Situation

Library Service Resources

Table 1, *Health Care Delivery Sector Information Resource Expenditures and Library Service Capacity* shows the significant disparities in the availability of information resources and services available to health professionals in the ten organisations that comprise the provincially-funded health care delivery sector.

<table>
<thead>
<tr>
<th>Health Care Delivery Organisation</th>
<th>Estimated Employee FTE(^1)</th>
<th>Estimated Health Professional FTE(^2)</th>
<th>Library Services FTE</th>
<th>FTE / Library staff</th>
<th>Annual Electronic Info Resource Expenditures</th>
<th>Annual Electronic Info Resource Expenditure/FTE</th>
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</thead>
<tbody>
<tr>
<td>DHA 1</td>
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<td>533</td>
<td></td>
<td>5</td>
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<td>DHA 2</td>
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<td>DHA 3</td>
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<td>425</td>
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<tr>
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<td>3.2</td>
<td></td>
<td>$135,791.00</td>
<td>$96.88</td>
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<tr>
<td>Physicians(^4)</td>
<td>2,360</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>21,517</td>
<td>17,686</td>
<td>15.1</td>
<td></td>
<td>$808,335.77</td>
<td></td>
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</tbody>
</table>

Notes:
\(^1\) Estimates are based on published sources and data collected from DHAs as part of NS VHL work. Estimate excludes academic learners (e.g. residents, nursing students) and volunteers.
\(^2\) The number of health professional FTE that use Library services, estimated at 80% of the total employee FTE.
\(^3\) Payment for the Cochrane provincial licence.
\(^4\) Number of physicians registered with Doctors Nova Scotia, estimated 80% of physicians work for the health care delivery sector as contracted service personnel.

Services such as information resources acquisition and licensing, reference, training and literature searching, document location and delivery, library services for patients and patient education sheets are currently available only for IWK, Capital Health the Tri-DHA (SS, AV, SW) employees. The IWK library staff also provide audio visual equipment services.

Cape Breton and Colchester East Hants Health Authorities provide nominal services, and employees in the remaining three DHAs have no service at all.
Capacity

Outsell Inc, a leading information industry analyst firm, reports that “In healthcare... the IM function ... apportions the smallest share (32%) (of funding) to staffing, with hospital information centers having closed branches and reduced staff during the last two decades.” Consistent with this trend which is driven by the need to control health care costs, the Capital Health, and the Cape Breton District Health authorities have each reduced library staff by one FTE, and the IWK by .5 FTE. This represents an overall reduction of approximately 20% in support of capacity in the last three years.

The U.S. Medical Library Association has developed standards to ensure that hospitals have the resources and services to effectively meet the institutions’ knowledge-based information needs. The Standards for Library and Information Services in Canadian Healthcare Facilities uses the MLA’s staffing formula of total institution FTE/700=minimum library FTE. To meet this standard based on the numbers shown in Table 1, the combined number of Nova Scotia health care delivery sector library staff would need to increase from 15.1 to 22.

Demand

There are more health professionals in a broader range of disciplines demanding access to the global body of health information to support evidence-based practice and interdisciplinary health care approaches.

The Capital Health District library reports that while the volume of ready reference requests has declined due to the availability of the electronic resources, the number of complex, mediated searches has increased significantly. The average time to respond to a complex information request has increased from 1.5 hours to 3.75 hours in the last two years. (Annex A contains service and resource use statistics for the CHDA library, as no other statistics are available. The statistics also demonstrate the range of health professions that rely on these services.)

It should be noted that there are an increasing number of health information consumers and patients who are seeking trustworthy information as they take on more responsibility for their own health. Librarians perform an essential service by evaluating electronic resources to ensure that information resources are credible and valid for patients.

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3 Outsell, Inc. Information Management Trends and Benchmarks 2012 (Jan 15,2013) p.10
Remote Access
Health professionals need ‘anytime, anywhere’ access to library resources. At this time, only Capital Health provides this service, which was implemented using a low-cost proxy server solution that has been very well received. The team has consulted with HITS, who have agreed that extending access to library information resources to all DHA’s via the internet could be achieved at a very reasonable cost.

Cost
Average subscription price increases for health information resources range from 7-9 %5 every year. Library budgets are under constant pressure to deal with these increases and meet the growing demand for more electronic content.

Electronic journal subscription license terms and conditions are complex and vary widely; individual publishers, vendors and resellers use a bewildering array of pricing algorithms. For example, vendors routinely “bundle” high and low-demand journals in a single license. The content is bundled so that individual journal subscriptions cannot be cancelled, forcing the buyer to pay for unwanted content. Vendors have also re-packaged content available from a competitor and increased the price by as much as two-thirds6. Unwary consumer groups subscribing to information services without the benefit of a librarian’s expertise may inadvertently being paying higher than necessary subscription fees.

Efficiencies and Savings
Decentralised licensing of information resources can result in unnecessary duplication or too-restrictive access rights, leading to a patchwork of access which is difficult to manage. Within the same organisation, there have been cases where different groups have licensed the same content from different vendors without realising it, effectively doubling the cost. For this reason many health care organisations have centralised licensing administration. “IM functions in healthcare lead the way, with 82% of {vendor} contracts reported as enterprise-wide.”7

The opportunity exists to reduce expenditures by consolidating subscription purchases into a single site license for all DHAs and IWK and centralising administration of the licenses across the sector. In some cases, eliminating print subscriptions will also reduce cost. Finally, raising awareness of the resources available will ensure that the organisations obtain the maximum value from the licenses.

5 The Winds of Change | Periodicals Price Survey 2013, Apr 25, 2013 By Stephen Bosch & Kittie Henderson
6 For example, Up-to-Date provides the same content as Dynamed, Up-to-date prices are 2/3 higher.
7 Outsell inc. IM Trends and Benchmarks 2013, p. 10
Findings

The findings of the review of the NS health care delivery sector indicate that there is real potential to address content and service gaps, to improve the availability and reach of current services and increase efficiency by consolidating and leveraging existing capacity with minimal additional funding and no change to existing facilities. Specifically, opportunities exist to:

Achieve efficiencies by:

- eliminating redundancy and freeing more staff to serve clients by centralising administrative tasks, operating one website and one catalogue
- reducing the cost of non-library electronic information resource licenses by pooling funds and centralising the management of e-licences where it makes sense to so

Improve effectiveness by:

- sharing common client awareness and training materials, patient education materials,
- standardising common services and service levels, and by
- implementing standard performance and reporting to monitor the ongoing value and contribution of these services to the delivery of health care

Enhance services to clients by:

- Implementing a standard web-access interface to information resources,
- Implementing off-site (remote) anytime access to electronic information resources, and by
- Leveraging technology to expand self-service access to electronic resources for all DHAs and delivering information services virtually using online chat and email via the common library website
Proposal for Health Care Delivery Consolidated Library Services

Providing self-serve access to electronic information resources is the most efficient approach to meeting the demand for health information. Self service access to electronic information resources involves a variety of elements, including:

- Services and Support to use the diverse content (training, awareness of available resources, search strategy formulation,) and the
- Activities to enable discovery of the content (licensing, client registration, authentication for digital rights management, metadata indexing, data verification, link checking, etc.)
- Technology: interface devices (computers, laptops, tablets, smart phones), software and hardware infrastructure (servers, networks)

The librarians working in District Health Authorities and the IWK have identified the following core services that should be available to all health professionals working in the DHAs and IWK:

**Core Services**
1. Information service
2. Mediated Literature search
3. Online access to view all e-content
4. Request loans for all print materials
5. Access to Patient education materials
6. Document Delivery and Interlibrary Loans, including Loansome Doc (PubMed)
7. Basic training in how to access/use library materials
8. Remote access to core electronic-resources and recommended free resources.

**Core Electronic Information Resources**
Electronic information resources for which an enterprise licence is required to meet the needs of the majority of health care professionals to eliminate existing disparities are:
1. eCPS (drugs) e-therapeutics
2. CINAHL with fulltext
3. EBSCO Health Business Elite
4. Core selection of e-books
5. PsycInfo
6. Natural Standard

These resources will complement Cochrane Library, Clinical and Laboratory Standards and Micromedex which are core resources currently available to all clients.

In addition to these resources, the libraries and other groups within the DHA/IWK organisations maintain a variety of other subscriptions to meet more specialised information needs of different client groups. The funding for these subscriptions must not be affected by the proposed licensing of the common core resources.
Implementation

The following decisions and actions are required to implement the plan:

1. Consolidate library administrative services and information resource funding. All health professionals would have access to the core services online. Information services would be coordinated and delivered virtually, via online chat, email and telephone. Existing library staff, facilities and collections would remain in their current locations.

2. Increase the capacity to extend information services to currently under-served organisations by providing additional funding for two positions over the next three years.

3. Provide additional funding to extend access to core resources for all organisations, fund core information resources from a single fund and centralised management of subscription licenses in the consolidated library service. The Cochrane Library and Clinical and Laboratory Standards Institute subscriptions are administered by the libraries. The Micromedex license is funded and administered by the DHA Pharmacy Departments.

4. Implement a single library website to provide one-stop access to a shared catalogue of physical collections, electronic resources and Patient education materials, and immediate access to library staff via instant messaging service (chat).

5. Implement standard offsite/remote access to core resources for all DHA/IWK health professionals.

6. Implement an appropriate shared service governance structure and funding model, and adopt standard performance evaluation criteria and annual performance reporting for the service.
Funding Requirements

The following table outlines the costs to implement the proposed changes identifies potential savings.

Table 2: Consolidated Health Libraries Funding Requirements

<table>
<thead>
<tr>
<th>Incremental Operating Costs</th>
<th>Activity</th>
<th>Funds Required</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expand Information Services to all DHAs</td>
<td>$113,500</td>
<td>Salary for 2 FTE</td>
</tr>
<tr>
<td></td>
<td>2 Level 1 Librarian Educators @ $56,745.87 (NSGEU Healthcare sector rate)</td>
<td></td>
<td>Salary required over next three years.</td>
</tr>
<tr>
<td></td>
<td>Enterprise Licenses for core e-resources</td>
<td>$161,430</td>
<td>Details in Annex B</td>
</tr>
<tr>
<td></td>
<td><strong>Total Incremental Operating Costs:</strong></td>
<td><strong>$274,930</strong></td>
<td>Annual funding requirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation Costs</th>
<th>Activity</th>
<th>Funds Required</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Web Interface to e-resources</td>
<td>$5,000</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Anytime Web (Remote) Access : EZ Proxy Licences</td>
<td>$3,500</td>
<td>for Districts 4, 5, 6, 7 &amp; 8</td>
</tr>
<tr>
<td></td>
<td>Implement remote access</td>
<td>$2,000</td>
<td>HITS Services estimate</td>
</tr>
<tr>
<td></td>
<td>Staff and client training</td>
<td>$5,000</td>
<td>Training Materials</td>
</tr>
<tr>
<td></td>
<td>Integrated Catalogue Records</td>
<td>$5,000</td>
<td>Data migration</td>
</tr>
<tr>
<td></td>
<td><strong>Estimated Total Implementation Costs</strong></td>
<td><strong>$20,500</strong></td>
<td>One time only</td>
</tr>
</tbody>
</table>

Recommendations

Members of the DHA CEO Council are being asked to consider and approve the following:

1. Centralise responsibility for the administration of electronic resource subscriptions and undertake an inventory of subscriptions to verify the level of funds required.

2. Establish a single fund for electronic information resources and increase the annual funding amount by the figure determined from the inventory in 1. above, to cover the cost of extending licenses for core resources to all DHAs.

3. Provide ongoing funding for two additional library positions $114,000 to extend information services to all DHAs.

4. Provide one-time project funding to establish the shared, virtual information service delivery model and remote access $20,500.

5. Appoint a team of DHA library staff to implement the changes.
Annex A: Selected Statistics of Library Use

Capital Health sample usage statistics 2011:

<table>
<thead>
<tr>
<th>Health Profession</th>
<th>Searches</th>
<th>Occupation</th>
<th>Searches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>46</td>
<td>Director</td>
<td>4</td>
</tr>
<tr>
<td>Nurse</td>
<td>23</td>
<td>People services manager</td>
<td>1</td>
</tr>
<tr>
<td>Dietitian</td>
<td>7</td>
<td>Psychiatrist</td>
<td>1</td>
</tr>
<tr>
<td>Communications officer</td>
<td>2</td>
<td>Vice president</td>
<td>1</td>
</tr>
<tr>
<td>Health promotions manager</td>
<td>3</td>
<td>Public health educator</td>
<td>2</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>1</td>
<td>Infection control manager</td>
<td>1</td>
</tr>
<tr>
<td>Nurse manager</td>
<td>2</td>
<td>Discharge planner</td>
<td>3</td>
</tr>
<tr>
<td>Recreation therapist</td>
<td>9</td>
<td>Cancer Care Nova Scotia coordinator</td>
<td>1</td>
</tr>
<tr>
<td>Clinical nurse specialist</td>
<td>2</td>
<td>Physician services manager</td>
<td>1</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>10</td>
<td>Pharmacist</td>
<td>3</td>
</tr>
<tr>
<td>Student</td>
<td>6</td>
<td>Social worker</td>
<td>6</td>
</tr>
<tr>
<td>Nurse educator</td>
<td>3</td>
<td>Professional practice leader</td>
<td>1</td>
</tr>
<tr>
<td>Psychologist</td>
<td>2</td>
<td>Professional practice coordinator</td>
<td>2</td>
</tr>
<tr>
<td>Health services manager</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental health nurse</td>
<td>1</td>
<td>Total</td>
<td>150</td>
</tr>
</tbody>
</table>

Library Services and Resources Use

<table>
<thead>
<tr>
<th>Number of Uses</th>
<th>CHDA Library Resources or Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>62,793</td>
<td>E-Journal articles</td>
</tr>
<tr>
<td>32,983</td>
<td>Print and e-Books used</td>
</tr>
<tr>
<td>15,437</td>
<td>Documents Delivered</td>
</tr>
<tr>
<td>9,762</td>
<td>Reference questions Answered</td>
</tr>
<tr>
<td>8,760</td>
<td>Hours of computer use</td>
</tr>
<tr>
<td>2,066</td>
<td>Print journals used</td>
</tr>
<tr>
<td>748</td>
<td>AV materials used</td>
</tr>
<tr>
<td>525</td>
<td>Meeting room use (bookings)</td>
</tr>
<tr>
<td>292</td>
<td>Class hours taught</td>
</tr>
<tr>
<td>115</td>
<td>Mediated searches</td>
</tr>
</tbody>
</table>
Annex B: Core Client Services

1. Reference service.
   Clients of the service will have access to library staff via chat and telephone for immediate assistance as well as email. The chat and telephone service would be staffed based on a system-wide schedule, and would not require and change of location or facilities for current staff.

2. Mediated Literature search service for complex requests will be assigned to library staff based on knowledge and expertise (no change).

3. Clients will be able to request documents and Interlibrary Loans via the website.

4. A single catalogue will be created with links to all materials and made available via a single library website.

5. Standard remote/offsite access will be implemented for all DHA/IWK clients using EZ proxy and working with HITS.

6. Standard basic training in the use library materials and library subject guides will be available to all DHA/IWK clients.

Annex B: Core Information Resource Funding Requirements

Table 3 below provides a preliminary estimate or indication of the level of additional funds that are required for the enterprise licenses that would enable health professionals in all DHAs and IWK to access the core electronic content.

The amounts in Column 2, Current Estimated Expenditures are based on figures reported by the library groups Cape Breton, Tri-DHA, Capital Health DHAs, and the IWK. In some cases, vendors provided information from their records to identify the level of spending in all districts. It was not possible to identify the level of current expenditures conclusively, as funding and procurement of information resources varies significantly within these organisations, and the licences terms for specific e-book titles were not analysed for duplication due to time constraints.

The amounts in Column 3 were provided using actual price quotes from the vendors.

<table>
<thead>
<tr>
<th>Subscription</th>
<th>Current Estimated Expenditures</th>
<th>Enterprise Site Licence Estimate</th>
<th>Funds Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>eCPS (drugs) e-therapeutics</td>
<td>$15,772</td>
<td>$35,772</td>
<td>$20,000*</td>
</tr>
<tr>
<td>CINAHL with fulltext</td>
<td>$20,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Business Elite</td>
<td>$6,550</td>
<td>$168,606</td>
<td>$116,816</td>
</tr>
<tr>
<td>PsycInfo</td>
<td>$25,240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Standard</td>
<td>$9,500</td>
<td>$18,000</td>
<td>$8500</td>
</tr>
<tr>
<td>Core selection of e-books</td>
<td>$8,886</td>
<td>$25,000</td>
<td>$16,114</td>
</tr>
<tr>
<td>Total</td>
<td>$85,948</td>
<td>$247,378</td>
<td>$161,430</td>
</tr>
</tbody>
</table>

*Vendor quote based on cancellation of existing print subscriptions.
Annex C: Cost Allocation by Number of Beds (Vendor pricing formula)

These two tables provide estimates of the cost per institution for the total cost of the Enterprise Site Licences (Column 3 in Table 3, page 12). Institutions currently funding licences for these resources should deduct their current expenditures from the Annual Contribution shown.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Bed #s</th>
<th>%</th>
<th>Annual Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>District 1 (South Shore Health)</td>
<td>148</td>
<td>5%</td>
<td>$13,746.50</td>
</tr>
<tr>
<td>District 2 (South West Health)</td>
<td>232</td>
<td>7%</td>
<td>$19,245.10</td>
</tr>
<tr>
<td>District 3 (Annapolis)</td>
<td>185</td>
<td>6%</td>
<td>$16,495.80</td>
</tr>
<tr>
<td>District 4 (Colchester)</td>
<td>123</td>
<td>4%</td>
<td>$10,997.20</td>
</tr>
<tr>
<td>District 5 (Cumberland)</td>
<td>178</td>
<td>6%</td>
<td>$16,495.80</td>
</tr>
<tr>
<td>District 6 (Pictou)</td>
<td>136</td>
<td>4%</td>
<td>$10,997.20</td>
</tr>
<tr>
<td>District 7 (Guysborough Antigonish)</td>
<td>124</td>
<td>4%</td>
<td>$10,997.20</td>
</tr>
<tr>
<td>District 8 (Cape Breton)</td>
<td>466</td>
<td>14%</td>
<td>$38,490.20</td>
</tr>
<tr>
<td>District 9 (Capital Health)</td>
<td>1400</td>
<td>43%</td>
<td>$118,219.90</td>
</tr>
<tr>
<td>Izaak Walton Killam Hospital for Children</td>
<td>237</td>
<td>7%</td>
<td>$19,245.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,229</td>
<td>100%</td>
<td><strong>$274,930.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution</th>
<th>FTE</th>
<th>%</th>
<th>Annual Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>District 1 (South Shore Health)</td>
<td>850</td>
<td>4%</td>
<td>$10,997.20</td>
</tr>
<tr>
<td>District 2 (South West Health)</td>
<td>1,312</td>
<td>6%</td>
<td>$16,495.80</td>
</tr>
<tr>
<td>District 3 (Annapolis)</td>
<td>1,114</td>
<td>5%</td>
<td>$13,746.50</td>
</tr>
<tr>
<td>District 4 (Colchester)</td>
<td>700</td>
<td>3%</td>
<td>$8,247.90</td>
</tr>
<tr>
<td>District 5 (Cumberland)</td>
<td>800</td>
<td>3%</td>
<td>$8,247.90</td>
</tr>
<tr>
<td>District 6 (Pictou)</td>
<td>775</td>
<td>3%</td>
<td>$8,247.90</td>
</tr>
<tr>
<td>District 7 (Guysborough Antigonish)</td>
<td>1,000</td>
<td>4%</td>
<td>$10,997.20</td>
</tr>
<tr>
<td>District 8 (Cape Breton)</td>
<td>3,300</td>
<td>14%</td>
<td>$38,490.20</td>
</tr>
<tr>
<td>District 9 (Capital Health)</td>
<td>10,000</td>
<td>44%</td>
<td>$120,969.20</td>
</tr>
<tr>
<td>Izaak Walton Killam Hospital for Children</td>
<td>3,256</td>
<td>14%</td>
<td>$38,490.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23,107</td>
<td>100%</td>
<td><strong>$274,930.00</strong></td>
</tr>
</tbody>
</table>

FTE and bed count information was taken from Canadian Healthcare Association publication Guide to Canadian Healthcare Facilities volume 19, 201; individual DHA Websites (published information), or provided by respondents to the NS VHL Data collection request.
Appendix G. Nova Scotia Virtual Health Library (NSVHL)  
Nova Scotia Virtual Health Library (NSVHL)

Business Case and Plan Report
prepared for the
Nova Scotia Academic Health Council

Prepared by the
Nova Scotia Virtual Health Library Working Group:
Tracey Barbrick, DHW
Darlene Chapman, IWK
Patrick Ellis, Dalhousie
Penny Logan, Capital Health
Carolyn Marshall, HANS
Wendy Stark, Consultant

November 2013
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>6</td>
</tr>
<tr>
<td>Situation Assessment</td>
<td>7</td>
</tr>
<tr>
<td>Business Plan</td>
<td>10</td>
</tr>
<tr>
<td>NSVHL Operating Model</td>
<td>11</td>
</tr>
<tr>
<td>Model Options</td>
<td>11</td>
</tr>
<tr>
<td>Membership</td>
<td>12</td>
</tr>
<tr>
<td>Governance</td>
<td>12</td>
</tr>
<tr>
<td>Administration</td>
<td>12</td>
</tr>
<tr>
<td>Evaluation</td>
<td>13</td>
</tr>
<tr>
<td>Business Case</td>
<td>15</td>
</tr>
<tr>
<td>Assumptions</td>
<td>15</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>15</td>
</tr>
<tr>
<td>Electronic Resource Licences</td>
<td>15</td>
</tr>
<tr>
<td>Funding Options for Financial Support</td>
<td>16</td>
</tr>
<tr>
<td>Risk</td>
<td>17</td>
</tr>
<tr>
<td>Benefits</td>
<td>18</td>
</tr>
<tr>
<td>Implementation</td>
<td>19</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>20</td>
</tr>
<tr>
<td>Annex A: Provincial Health Knowledge Networks</td>
<td>21</td>
</tr>
<tr>
<td>Annex B: Nova Scotia Health Professionals</td>
<td>22</td>
</tr>
<tr>
<td>Annex C: Nova Scotia Health Library &amp; Knowledge Services: Current Situation</td>
<td>24</td>
</tr>
<tr>
<td>Annex D: Nova Scotia Health Professional Associations and Organisations</td>
<td>26</td>
</tr>
<tr>
<td>Annex E: Proposed core e-Resources (Provincial Licensing)</td>
<td>28</td>
</tr>
<tr>
<td>Annex F: Membership Value Proposition</td>
<td>29</td>
</tr>
<tr>
<td>Annex G: Revenue Estimates</td>
<td>30</td>
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</table>
Executive Summary

The Academic Health Council funded the development of business case and plan to establish and operate the Nova Scotia Virtual Health Library (NSVHL). This report describes the proposed business strategy and operating plan and presents the business case.

Benefits
In addition to individual financial benefits (details in Annex G), the NSVHL will provide significant province-wide benefits, such as:

- Improving health outcomes and enhancing quality care by providing health professionals in the province with consistent access to credible health information online, 24 hours a day
- Maximizing access and minimizing costs through a coordinated approach to negotiating licensing agreements that leverages purchasing power and broadens access throughout the province, eliminating inequities based on affiliation and geographic location
- Opportunities to create cost savings by coordinating e-resource licensing to eliminate unintended duplicate licensing which occurs when health professionals are licensed for access to the same resource as a result of multiple affiliations (for example: their professional association and their health authority).
- Supporting recruitment, retention and continuing education of health professionals, particularly outside major urban centers
- Supporting health research by ensuring continuity of access to evidence-based health information resources across sectors
- Leveraging existing expenditures and investments in health information delivery infrastructures

Costs

The business case analysis shows that to achieve its objective to provide access for all health professionals in the province to core electronic health information resources the NSVHL requires annual funding of $85,000 for operations and $100,500 for licence fees, for a total of $185,500.

Two options for funding the required financial support proposed. In both options, the cost to provide health information resources to the provinces unaffiliated health professional population has been assigned to the government sector. The rationale for this decision is based on the following arguments:

- The Departments of Health and Wellness and Community Services have a responsibility to ensure Nova Scotians in continuing/long term care, nursing home, residential home settings are provided with the best possible care. Providing the 27% of health professionals working in the fields of addiction
services, public health, mental health and continuing care services with access to information resources will support this objective.

- The Department of Labour and Advanced Education has an interest in supporting programs that enable graduates of college programs to continue their education and stay current in their fields. Providing access to information resources will support these objectives.

- The review of other provincial health information consortia supports the requirement for government funding. For example, the Province of Saskatchewan Department of Advanced Education funds 100% of the cost of health information for health workers in that province, and the British Columbia Department of Health provided $300K to establish the Electronic Health Library of BC (eHL-bc).

**Option 1** is based on all sectors sharing the funding of provincially licensed electronic resources and operating requirements based on FTE counts.

### Option 1 Shared Funding (By Sector)

<table>
<thead>
<tr>
<th>Funding Requirement</th>
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<th>Government (28%)</th>
<th>DHAs/IWK (49%)</th>
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<tr>
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<td>$51,940</td>
<td>$90,895</td>
<td>$185,500</td>
</tr>
</tbody>
</table>

**Option 2** is based on government funding for the salary portion of the operating requirement, and shared funding of the non-salary operating and provincially licensed electronic resources as in Option 1.

### Option 2 Government Funded (Salary Portion)

<table>
<thead>
<tr>
<th>Funding Requirement</th>
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<th>Government</th>
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<tr>
<td>Operating Subsidy</td>
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Option 2 is recommended. Funding for the NSVHL Coordinator position is essential to manage consortium operations and to attract professional associations to the consortium, a critical element of the NSVHL strategy to provide access to the unaffiliated population.

**Recommendations**

The report recommends that the Academic Health Council:

1. Approve the creation of the Nova Scotia Virtual Health Library with the mandate and operations as described in this report,

2. Agree to fund the operating costs ($85,000) and additional funding for provincial licensing of core electronic health information resources ($100,500); OR
Agree to fund the operating costs ($85,000) for a period of four (4) years, and additional funding for provincial licensing of core electronic health information resources ($100,500) for a period of three (3) years, at the end of which time:

- The Council will evaluate the progress and benefits achieved during this period
- The NSVHL will propose options for generating revenue to offset operating costs

3. Direct the NSVHL Working Group to establish the NSVHL Steering Committee and appoint a member of the Council to the Committee.

4. Consider funding provincial licences for the two new proposed electronic resources.
Introduction

The Academic Health Council funded the development of business case and plan to establish and operate the Nova Scotia Virtual Health Library (NSVHL). This report describes the proposed business strategy and operating plan and presents the business case.

Nova Scotia post-secondary institutions, district health authorities, government departments and associations of health professionals have a common interest in providing practitioners, employees, students and researchers with reasonable access to credible health information at the least possible cost.

Health libraries are limited by licensing agreements to providing access only to those individuals that are affiliated, through enrolment, employment or membership, with their institutions. Unaffiliated health professionals working in addiction services, public health, mental health and continuing care have access only to what can be found for free on the web or through their local library.

A working group has proposed the formation of a Nova Scotia Virtual Health Library (NSVHL) to provide economical, electronic access to key electronic resources for all health professionals in the province. The NSVHL aims to optimize expenditures for electronic information resources and extend access to workers in the currently without access.

The NSVHL will fill gaps and equalize access to health information by forming a consortium to share the cost of electronic resources licences (electronic journals, e-books, databases, clinical decision support tools, grey literature and drug information). A survey of 29 organisations¹, including a number of professional associations, confirmed the need for, and interest in forming a consortium to provide access for their members. Significantly, the ability to meet the costs of shared licensing was identified as the major obstacle to consortium participation.

Approach

The study team compared the information needs of health professionals with the current level of service and content access provided by health library and knowledge services in the province to identify the specific gaps and inequities that will be addressed by the NSVHL.

A review and comparison of consortia business models of other Canadian provincial health knowledge networks was undertaken in order to obtain lessons-learned, best practices and to determine whether solutions implemented in those provinces are feasible for Nova Scotia. A summary of the findings is provided in Annex A.

An operating model, a business plan with cost estimates for service and information resources, funding options and an implementation plan were developed.

Situation Assessment

Health Professional Information Needs

Throughout their careers as students, post-graduates, practitioners and researchers, all health professionals require access to credible information. The subject matter of health is vast. Information needs range from standards and practice guidelines to clinical evidence, from the latest scientific research results, to information that supports decision making in policy and program planning. Health professionals need to be able to access this information from their offices and homes, and increasingly, while they are mobile.

Exhibit 1 shows the breakdown by sector of the estimated 35,000 health professionals studying and working in Nova Scotia. ‘Private sector’ workers include workers in addiction services, public health, mental health and continuing care. Annex B contains the definition of ‘health professional’ used in this report, and the list of data sources used to calculate the health professional population.

A review of the health library and knowledge service available to health professionals in Nova Scotia was undertaken. (A summary of the current state of these services by sector is included in Annex C.)

Access and Services for Affiliated Health Professionals

The review of the health library services and information resources available to affiliated health professionals revealed:

- Gaps and inequities in access to information resources and services for workers in some District Health Authorities
- Limited or no access to information services for employees in some government departments concerned with health programs (DCS, NSHRF, HANS), and that
- Academic institutions are under pressure to reduce information resource expenditures.

During the course of the study, a proposal was prepared and has been approved by the DHA CEO Committee to coordinate the licensing of electronic resources, implement a collaborative service delivery model and standardize remote access across the province to address these deficiencies.

It is recommended that the Department of Health and Wellness consider establishing arrangements with the DHA library service for its employees, and those
in the Nova Scotia Health Research Foundation, public health and social workers in
the Department of Community Services and the knowledge workers in the Health
Association of Nova Scotia.

The post-secondary academic institutions currently participate in a number of
consortia to license electronic resources. Existing consortia purchasing
arrangements do not adequately address the need for health information. The
NSVHL will address this gap.

Access and Services for Unaffiliated Health Professionals

For unaffiliated health professionals, the review confirmed:

- Workers in continuing care (long term care/nursing homes, home care,
  residential care and community based care) have no access to electronic
  information resources, and that

- Professional associations are increasingly concerned to fill the information gap
  for their members. Notably, most of these associations have the infrastructure
to deliver access to electronic information resources for their members (e.g.
registration and websites) however they lack the funds necessary to acquire
content licences as subscriptions require pre-payment. In Nova Scotia, an
estimated 23,351 health professionals (~66.72%) have memberships in 23
provincial professional associations (CIHI 2010).

The NSVHL Opportunity

There is an opportunity to leverage the purchasing power of academic, health
authority, government and professional associations through participation in a
NSVHL consortium to negotiate province wide licences for core electronic health
information resources.

Furthermore, including professionals associations in the consortium will enable
online delivery of the content to unaffiliated health professionals, eliminating the
need for the NSVHL to create redundant technology infrastructure to support
registration, payment processing and online access.

Consortial Arrangements: Benefits and Considerations

Consortia form with the objective of participating pooling their resources to achieve
a common goal. Consortium members are autonomous and each member makes its
own decision regarding its participation.

Health Library consortia facilitate resource sharing and funding partnerships which
enable members to provide or improve access to information resources for health
professionals, manage costs more effectively and create opportunities for cost
savings. Members choose to combine their buying power to obtain better pricing, or
to obtain additional resources for the same level of expenditure.
Consortial Purchasing

Globally, health libraries and knowledge services in all sectors are challenged to meet their clients’ information needs. Average subscription price increases for health information resources range from 7-9% every year, library budgets are under constant pressure to deal with these increases and at the same time satisfy the growing demand for more electronic content.

Subscription pricing for electronic resources is based on the number of end-users, the greater the number of users, the lower the cost per use. Libraries in all sectors have formed consortia to leverage their combined purchasing power to strengthen their negotiating position with vendors and thereby obtain volume discounts. Some consortia pool funds and then allocate costs to individual member institutions based on an agreed formula, while others simply bargain together. The consortia model has proven effective in several other Canadian provinces, for both managing licence costs and extending access to more health care workers, in some cases achieving as much as a 30% reduction in licensing fees.

Minimal Redundant Licensing

In order to control legitimate use, vendors enable access to content for licensed users by the IP address of the subscribing institution. A health professional working in more than one location (for example, a student or researcher working in a hospital) must be licensed by both the academic institution and the health authority. A physician may be licensed for access by both their professional association and their health authority. This duplicate expenditure can be eliminated if health libraries coordinate licensing. For this reason Outsell Inc reports that health libraries, more than any other sector, have centralised licence administration.

Negotiating Expertise

Electronic resource license terms and conditions are complex and vary widely; individual publishers, vendors and resellers use a bewildering array of pricing algorithms. For example, vendors routinely “bundle” high and low-demand journals in a single license. The content is bundled so that individual journal subscriptions cannot be cancelled, forcing the buyer to pay for unwanted content. Vendors may also include contract terms that limit legitimate use of the material. An experienced license negotiator can obtain the best possible prices and ensure flexible contract terms.

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2 The Winds of Change | Periodicals Price Survey 2013, Apr 25, 2013 By Stephen Bosch & Kittie Henderson
3 “...healthcare lead(s) the way, with 82% of (vendor) contracts reported as enterprise-wide.” Outsell inc. IM Trends and Benchmarks 2013, p. 10
Knowledgeable Health Librarians

Vendors with similar products to their competitors have increased the price by as much as two-thirds\(^4\). These vendors target end-users, who are not likely to be aware that the same information is available at lower cost. Health Librarians play an important role in identifying, evaluating and selecting the most relevant, credible and cost-effective resources to meet their clients’ information needs. Coordinating licenses at the provincial level, across sectors, will reduce the total cost of shared licences for all and will minimize duplicate licensing.

Business Plan

Business Objective:

The Nova Scotia Virtual Health Library (NSVHL) will enable economical, electronic access to key electronic resources for all health professionals in the province by optimizing expenditures for electronic information resources and extending access to all health professionals in the province.

The Nova Scotia Virtual Health Library (NSVHL) is being formed to:

- Develop collaborations among members and other organizations to improve access to and sharing of health information resources throughout the province
- Develop, promote, and improve electronic access to health information by health professionals, and organizations providing health information to the public
- Promote awareness of, access to, and use of health information resources for health professionals, with a particular emphasis on eliminating disparities

The primary activity of the consortium is the purchase of province-wide access to selected health information resources. The arrangement involves three-year licensing agreements with e-library vendors that will provide each member organisation with access to selected electronic information resources.

Business Strategy:

Leading health library and knowledge service organisations, together with government departments and provincial health professional associations will collaborate to leverage their combined purchasing power to obtain provincial licences to a suite of core electronic health information resources. Nova Scotia health professionals will access the information via the web sites of their affiliated organisation.

\(^4\) See for example: Taylor, B. What — no UptoDate? The Regina Qu’Appelle Health Region Library replaces UptoDate with BMJ’s PointofCare \textit{JCHLA / JABSC} \textbf{30}: 147–148 (2009).
NSVHL Business Case/Plan Report

Founding members of the consortium will comprise the 9 District Health Authorities and the IWK; four post secondary institutions: Dalhousie University, Cape Breton University, St Francis-Xavier, and the Nova Scotia Community College; the Department of Health and Wellness, Department of Labour and Advanced Education and one professional association, Doctors Nova Scotia (DNS).

**NSVHL Operating Model**

The NSVHL builds upon the work of the Atlantic Health Knowledge Partnership (AHKP). The proposed operating model describes the formal structures and mechanisms that will enable different health organisations and sectors to collaborate in planning, prioritizing, negotiating and purchasing e-resource licences.

**Model Options**

**Option 1.** Licensing Agent – shared-cost formula

NSVHL members will pool their resources. NSVHL will manage the funds, negotiate and execute the licences. Licence fees and administrative costs will be allocated to members based on an agreed formula, usually calculated on the basis of FTE count and expenditure level.

Site licences, which enable access for all users identified on a single contract, are available at volume discounted rates. Provincial site licences, therefore, represent the very best value for money. The Cochrane Collection is an example of a provincially licensed e-resource. The NSVHL will coordinate the selection, negotiation and administration of provincially licensed e-resources.

**Option 2.** Licensing Agent – no cost-sharing

The NSVHL will act as the negotiation agent, leveraging the combined purchasing power of its members to obtain discounted licence agreements on behalf of individual members. Licences will be administered by the individual members and payment made directly by the member to the vendor. Members will be charged a fee for NSVHL negotiation services based on a percentage of the value of the discount or a set membership fee.

**Recommendation:** Option 1 is recommended as the option which provides the best opportunity to provide the broadest access for the lowest cost.

**Access options for unaffiliated health professionals**

**Option 1.** Personal Membership

The NSVHL could offer personal memberships. As the subscribing institution, the NSVHL will register individuals and recover some cost by charging individuals a membership fee. This option will require significant investment in a website,
registration and payment processing systems as well as salary and operating funds to enable the NSVHL to attract and support members and maintain the systems.

**Option 2:** Institutional Membership

The NSVHL could offer institutional memberships to associations of health professionals. These associations already register their members, collect membership fees and maintain web sites through which individuals could access the e-resources. This model has the advantage of leveraging existing registration, online access and payment processing infrastructure. Professional associations will benefit by adding this valuable service for their members.

**Recommendation:** Option 2 is recommended as the most cost-effective option.

**Membership**

Members are autonomous with authority over their budgetary decisions. Members must agree to a three-year financial commitment for resources. Members are required to demonstrate that they have the infrastructure and services to provide electronic access, user support and training for their respective constituencies.

Formal membership agreements are required. Samples of terms and conditions of membership, types of membership and applicable fee schedules for each type are readily available from other provincial health information consortia.

**Governance**

**Steering Committee**

The Steering Committee will determine overall strategic direction for the NSVHL. Members will consist of one representative from each of the Academic, DHAs, and government sectors, two health professionals and a representative from the Academic Health Council.

**Management Board**

The Management Board will establish priorities and ensure that objectives are met. Each Member will have one representative on the Management Board. The Chair of the management board will be elected by the members.

**Administration**

The NSVHL Coordinator will be responsible for

- Coordinating license negotiations and vendor relationships
- Administering memberships and renewals
- Promoting membership in the NSVHL to organisations in the Atlantic region

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5 For example, the [Electronic Health Library of BC Membership](#)
• Administering the service agreement with Dalhousie University for the provision of license administration and renewal services
• Tracking and reporting progress and benefits realized by the NSVHL on behalf of its members.
• Pursuing collaboration with other provincial and national consortia
• Scheduling and facilitating meetings of the Management Board and Steering Committee.
• Preparing information for the annual performance evaluation report
• Managing the administrative budget.

Dalhousie University Libraries will contract the NSVHL Coordinator on behalf of the NSVHL.

Dalhousie University Libraries will provide additional license negotiation and administration support on a cost recovery basis. Details of services are to be documented in a Service Agreement between Dalhousie University Libraries and a representative of the NSVHL on behalf of its members.

Evaluation

NSVHL will evaluate and report progress to its members and the Academic Health Council annually. The following performance evaluation plan has been identified:

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Reporting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of e-resources for which discounts are successfully negotiated and the total value of negotiated discounts.</td>
<td>Annually. The Management Committee will establish performance targets for the number and value of negotiated discounts annually.</td>
</tr>
<tr>
<td>Number of new and renewing members.</td>
<td>Annually. Performance against target growth as specified in the Operating Plan.</td>
</tr>
<tr>
<td>Number of new e-resources licence.</td>
<td>The number of new e-resources licensed annually. Growth targets will be established by the Management Committee.</td>
</tr>
<tr>
<td>Member satisfaction with services</td>
<td>Member satisfaction will be polled annually.</td>
</tr>
<tr>
<td>Client (User) Satisfaction</td>
<td>A survey of clients to determine their level of satisfaction with the quality and availability of e-resources will be conducted periodically, as determined by the Management Committee.</td>
</tr>
</tbody>
</table>
Strategy Assessment

The strategy is dependent upon the following:

1. Agreement among members of the NSVHL on ‘core’ electronic health information resources.

   The founding members of the NSVHL have selected and agreed upon a set of core electronic health information resources that are needed by the majority of health professionals and currently subscribed by the founding members. With some additional funding the NSVHL can negotiate provincial licences for these resources.

   The working group is also proposing two additional resources that are not currently subscribed. The list of resources is provided in Annex E.

2. Vendor willingness to negotiate volume discounts.

   Vendors are motivated by the potential to generate revenue on existing products by expanding the number of licences sold, by the potential to capture a market over the long term (customer retention) and by the opportunity to reduce administrative overhead related to licence administration. Based on the experiences of other provincial health information consortia, it is reasonable to expect that the NSVHL will be able to negotiate discounted pricing of between 4 and 10% overall.

3. Broadest possible participation in the consortium.

   In order to enable access to the electronic resources for the unaffiliated health professionals the NSVHL needs the participation of as many health professional associations as possible. Annex D contains a list of more than 30 candidate health professional associations. These members will also participate in consortia licensing. Many of these organisations have indicated interest in participation, however they lack the funds required to meet the initial cost of licence fees, as subscriptions require payment in advance. Lower negotiated prices will help overcome this barrier.

4. The NSVHL will require a subsidy to cover initial operating expenses.

   Operating expenses involve salary for one FTE, the NSVHL Coordinator, office expenses and licence administration fees.

   Two methods of generating revenue to offset these expenses were analysed. The NSVHL could generate revenue from membership fees, and/or could retain a percentage of the value of the discount obtained on licence fees. To evaluate the potential for revenue from membership fees, a value proposition for membership was developed together with a proposed membership fee structure and a scenario that demonstrates the estimated revenue and the member benefit that will be derived from participation in the consortium.
The analysis of these options reveals that neither revenue source will be sufficient to cover operating costs in the initial years of operation, however, both options could be considered in future years, once the NSVHL is well established and the membership base has been expanded. The full analysis is provided in Annex F.

**Business Case**

**Assumptions**

NSVHL operating costs involve e-resource licence fees and administrative costs.

1. E-resource licence fees are funded by individual members.
2. Consortial licensing will result in volume discounts sufficient to enable access to core resources for all health professionals in the province.
3. Licences will be negotiated for a three-year period. The NSVHL will set targets for achieving discounts.

**Operating Costs**

The following annual operating costs have been identified for the NSVHL. There are no implementation costs.

<table>
<thead>
<tr>
<th>Table 1: NSVHL Annual Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary NSVHL Coordinator</td>
</tr>
<tr>
<td>Licence administration (Dalhousie)</td>
</tr>
<tr>
<td>Operating (telephone, marketing, etc.)</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
</tr>
</tbody>
</table>

**Electronic Resource Licences**

The NSVHL Working Group is proposing that province-wide licences be subscribed for a suite of core resources to enable the NSVHL to achieve its objective. The estimated cost of the additional licences is $100,500 per year (Details in Annex E). Table 2 below shows the amount of additional investment required by each sector based on FTE count to fund the provincial licences.

<table>
<thead>
<tr>
<th>Table 2: Provincial License Funding Required by Sector</th>
</tr>
</thead>
<tbody>
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</tr>
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**Recommendation:**

It is recommended that the Academic Health Council approve the additional investment of $100,500 to achieve provincial licensing of core electronic resources. Note that the actual amount of additional funding required may be less depending upon final vendor quotes.
Funding Options for Financial Support

Two options for funding the required financial support proposed. In both options, the cost to provide health information resources to the provinces unaffiliated health professional population has been assigned to the government sector. The rationale for this decision is based on the following arguments:

- The Departments of Health and Wellness and Community Services have a responsibility to ensure Nova Scotians in continuing/long term care, nursing home, residential home settings are provided with the best possible care. Providing the 27% of health professionals working in the fields of addiction services, public health, mental health and continuing care services with access to information resources will support this objective.

- The Department of Labour and Advanced Education has an interest in supporting programs that enable graduates of college programs to continue their education and stay current in their fields. Providing access to information resources will support these objectives.

- The review of other provincial health information consortia supports the requirement for government funding. For example, the Province of Saskatchewan Department of Advanced Education funds 100% of the cost of health information for health workers in that province, and the British Columbia Department of Health provided $300K to establish the Electronic Health Library of BC (eHL-bc).

**Option 1** is based on all sectors sharing the funding of provincially licensed electronic resources and operating requirements based on FTE counts.

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Option 2 is recommended. Funding for the NSVHL Coordinator position is essential to manage consortium operations and to attract professional associations to the consortium, a critical element of the NSVHL strategy to provide access to the unaffiliated population.
Risk

The following financial risks and mitigation strategies have been identified:

1. The NSVHL is not able to attract and retain sufficient new members with adequate purchasing power to obtain volume discount pricing. The strategy is dependent upon recruiting health professional association organisations. The major obstacle to participation for professional associations is the subscription “entrance fee”, the ability to meet the initial cost of electronic information licence agreements.

   This risk can be mitigated by providing seed funding to health professional associations for e-licences. The British Columbia Department of Health provided $300,000 over three years to “level the playing field,” enabling smaller organisations to participate in the electronic Health Library of British Columbia (eHL-bc) consortium.

   Professional associations will be able to offer online access to their members at reduced rates. Associations can recover costs by raising membership fees or by charging a separate fee for the service.

2. Expanding membership to other provincial health networks or organisations to increase the volume of licences and maintain discounted rates.

   The New Brunswick Hospital Libraries are collaborating with Capital Health and the Pictou County Health Authority on the purchase of electronic resources (Pro-quest’s Hospital Collection). Both the New Brunswick Horizon Health Network and Vitalité Health Network could benefit from additional opportunities for cost-savings. The Newfoundland and Labrador Health Knowledge Information Network (NLHKIN) operated by Memorial University Library has expressed interest in consortia purchasing arrangements.

3. Collaborating with other provincial or national consortia to obtain more favourable pricing.

4. The NSVHL could provide licence negotiation services to private sector organisations by offering a separate membership category with a fee schedule that reflects their status as for-profit organisations. This will enable the NSVHL to increase its overall purchasing power.

5. Adjusting the number of licences and/or e-resources purchased.
Benefits

In addition to the individual member benefits noted in Annex G, the NSVHL will provide significant province-wide benefits, such as:

- Improving health outcomes and enhancing quality care by providing health professionals in the province with consistent access to credible health information online, 24 hours a day
- Maximizing access and minimizing costs through a coordinated approach to negotiating licensing agreements that leverages purchasing power and broadens access throughout the province, eliminating inequities based on affiliation and geographic location
- Opportunities to create cost savings by coordinating e-resource licensing to eliminate unintended duplicate licensing which occurs when health professionals are licensed for access to the same resource as a result of multiple affiliations (for example: their professional association and their health authority).
- Supporting recruitment, retention and continuing education of health professionals, particularly outside major urban centers
- Supporting health research by ensuring continuity of access to evidence-based health information resources across sectors
- Leveraging existing expenditures and investments in health information delivery infrastructures
Implementation Overview

Next Steps - Pre-Implementation

1. Obtain approvals and funding for selected options.
2. Establish Service Agreement with Dalhousie
3. Recruit NSVHL Coordinator.
4. Establish Steering and Management Committee membership and operations.
5. Establish financial arrangements.
6. Establish membership agreements for founding members.
7. Identify and recruit new members (i.e. professional associations)

Year One

1. Finalize core e-resource selections, develop negotiating strategy,
2. Negotiate and execute core resource license agreements
3. Establish membership agreements with (5) new members.
4. Identify and confirm member licence funding.
5. Identify, negotiate and execute additional e-resource license agreements

Year Two

1. Establish membership agreements with (5) new members.
2. Identify and confirm member licence funding.
3. Identify, negotiate and execute additional e-resource license agreements
4. Pursue inter-provincial and national collaborative and consortia opportunities

Year Three

1. Establish membership agreements with new members
2. Identify, negotiate and execute additional e-resource license agreements
3. Pursue inter-provincial and national collaborative and consortia opportunities
4. Prepare for core e-resource licence renewals.
5. Investigate opportunity for collaborative training.
6. Prepare and submit program evaluation report.
Recommendations:

Based on the research and analysis into the business case, and the proposed business plan, it is recommended that the Academic Health Council:

5. Approve the creation of the Nova Scotia Virtual Health Library with the mandate and operations as described in this report,

6. Agree to fund the operating costs ($85,000) and additional funding for provincial licensing of core electronic health information resources ($100,500); 

   OR

   Agree to fund the operating costs ($85,000) for a period of four (4) years, and additional funding for provincial licensing of core electronic health information resources ($100,500) for a period of three (3) years, at the end of which time:

   - The Council will evaluate the progress and benefits achieved during this period
   - The NSVHL will propose options for generating revenue to offset operating costs

7. Direct the NSVHL Working Group to establish the NSVHL Steering Committee and appoint a member of the Council to the Committee.

8. Consider funding provincial licences for the two new proposed electronic resources.
Annex A: Provincial Health Knowledge Networks

Health knowledge networks operate in all Canadian provinces, with the exception of Nunavut, PEI and the Yukon. All consortia involve the post-secondary academic sector, and government-funded health care delivery organisations and in most cases, provincial government health departments. Participation of professional associations and regulatory bodies varies by province.

Business Models

In provinces such as Newfoundland and Labrador (NLHKN), Manitoba (MHIKNET) and Saskatchewan (SHRIP) a post-secondary institution hosts and administers the services for the entire province.

In Alberta the Universities of Calgary and Alberta provide services (AHKN).

In British Columbia, the Electronic Health Library of British Columbia (e-HLbc) operates as a member-owned consortium.

In Ontario, member libraries of the Consortium of Ontario Academic Health Libraries (COAHL) are de facto part of their Academic Health Science Centres (AHSC). Relationships with local health libraries or health institutions are formalized through the full or community affiliation agreements of their parent institutions, by financial agreements and/or membership in health library consortia. These smaller partnerships are then leveraged at the provincial level through COAHL.

Quebec’s Consortium des ressources électroniques du RUIS de l'Université de Montréal is similar to the Ontario model, where health care delivery organisations and academic institutions are partnered within a provincial network.

Funding Sources

With the notable exception of Saskatchewan, consortia operate on a cost recovery basis, funding operating costs from membership fees and/or by retaining a percentage of the value of the discount on subscriptions they obtain for their members.

The Saskatchewan Health Information Resources Partnership (SHIRP) is funded by the Government of Saskatchewan’s Ministry of Advanced Education, Employment and Immigration as part of directed funding for the University of Saskatchewan’s College of Medicine accreditation initiatives. Funding is provided for subscriptions and interlibrary loans, library services staff in several health regions and at the University of Saskatoon, and general operating costs.

The British Columbia Department of Health provided three year start-up funding for the 44 member Electronic Health Library of BC (e-HLbc) and the program is now self-sustaining.
Services

- E-resource license negotiation and administration
  
  All consortia negotiate the purchase of electronic health information resources on behalf of their members. In some consortia, members agree to subscribe to a core, common suite of resources. In others, consortia staff will also facilitate partnerships among members for specific resources, and negotiate individual licences on request (boutique licensing).

- Training
  
  Most consortia offer information sessions, assistance and training for health professionals using the services.

Members may also collaborate to deliver other services, such as document delivery, reference services and shared catalogues, often in conjunction with existing provincial library networks.

Access to e-resources

In most cases the members continue to deliver online access and service through their own organisations. In cases where one university provides the services (NFLD, Manitoba, Saskatchewan), access to the resources and services is provided through the University’s library.

Access to electronic resources is restricted to individuals affiliated with member organisations. The right to access the e-resources is established through a registration process, and electronic access rights are validated through IP address and email authentication.

Memorial University (NLHKIN) offers fee-based corporate and personal memberships for library services, and the University of Manitoba (MHIKNET) serves physicians in the province service for a fee. Private sector clients do not have access to electronic resources online due to the licensing restrictions.

Alberta Health Knowledge Network (AHKN)
Electronic Health Library of BC (e-HLbc) (British Columbia)
Manitoba Health Information and Knowledge Network MHIKNet
NFLD & Labrador Health Knowledge Information Network
Saskatchewan Health Information Resources Partnership (SHIRP)
Réseau Universitaire Intégré pour la Santé (RUIS) (Quebec)

Ontario:
Southwestern Ontario Health Information Network (SOHLIN)
Northern Health Information Network (NOHIN)
Western Ontario Health Knowledge Network (WOKN)
Health Science Information Consortium of Toronto (HSICT)
Consortium of Ontario Academic Health Libraries (COAHL)

Annex B: Nova Scotia Health Professionals
This report uses the generic term ‘Health Professional’ to encompass the Health Canada definition of health care professionals, The Canadian Institute for Health Information (CIHI) twenty-three health care professions, and practitioners identified various provincial health Acts as well as:

- Academic personnel: Students, faculty, science and social science researchers, (e.g. policy analysts and epidemiologists), clinical instructors.
- Public health workers and health care system administrators
- Provincial health authorities, regional and community administrators, health care facilities managers
- Legislators, policy analysts, program developers economists, members of the public service, independent / semi-independent regulators
- Professional association staff

Specifically excluded from the target audience are health information consumer, who are defined members of the general public seeking information on health matters for personal use.

Data Sources for Calculation of Number of Health Professionals

2. Canadian Institute of Health Information (CIHI) Health Personnel Database (HPDB). Nova Scotia: Number of Health Personnel in Selected Health Professions, by Registration Status, 2010. HPDB data represents aggregated counts (head counts) by province/territory and year for 27 selected groups of health care professionals in Canada
4. FTE Data collected directly from DHA’s and Universities.
Annex C: Nova Scotia Health Library and Knowledge Services: Current Situation

Academic Libraries

Dalhousie University’s W.K Kellogg Health Sciences Library, Nova Scotia’s and the Atlantic region’s foremost medical library, provides service to 5,000 students, faculty and staff. The library also provides essential document ordering services for other health libraries, and through its outreach service, to unaffiliated health professionals and other health organizations. Increasing financial pressure is limiting the library’s capacity to fund resources and serve health professionals outside of their core constituencies. The formation of a cross-sectoral provincial consortium is a key element in Kellogg’s strategy to mitigate the impact of recent budget reductions. Other post-secondary institutions, such as the Cape Breton University, Nova Scotia Community College and St. Francis-Xavier University, with smaller health programs, will benefit from the volume discounts possible through consortium purchasing.

Health Care Delivery Sector

During the course of this work, the team found a significant gap in access to information resources and services for workers in some District Health Authorities (DHAs). A proposal has been approved to provide a core set of e-resources, implement a collaborative service delivery model and standardize remote access across the province to address these deficiencies. These changes will improve the availability and reach of current services by leveraging existing capacity with minimal additional funding and no change to existing facilities. By consolidating funding and administration of e-resource licences the DHAs will optimise expenditures on electronic resources and ensure that health professionals and research staff working in health care delivery sites have access to core electronic information resources. This initiative by the DHAs will improve and extend access to health professionals in this sector, and will also ensure that health professionals moving from the academic environment into practice will continue to have access to needed information resources. The changes have also positioned the DHAs to participate as an equal partner in the NSVHL.

Government

Employees in key provincial health agencies, such as the Department of Community Services (DCS), the Nova Scotia Health Research Foundation (NSHRF), and Health Association of Nova Scotia (HANS) currently have no access to health information resources. The Department of Health and Wellness, responsible for formulating and implementing evidence-informed health policies and health care services, recently closed its library service, however the Policy Branch continues to subscribe to key resources and Emergency Health Services subscribes to essential information resources.

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6 The health care delivery sector is defined as provincially funded organisations engaged in direct delivery of health care; specifically, the nine District Health Authorities and the IWK
resources for Paramedics. DHW’s approach is consistent with health ministries in most other provinces. A recent Canadian study of the availability of scientific journals and library services in Canadian health ministries and a review of the membership of other provincial health information consortia confirms that provincial health departments most often obtain these services through agreements with other health libraries.

The NSVHL working group therefore recommends that DHW, DCS, the NSHRF and HANS consider participation in the NSVHL as the most cost-effective approach to acquiring health information, and consider establishing arrangements with the DHA library service for inter-library loan and document delivery services.

**Health Professional Associations**

Healthcare professionals in the province have varying levels of access to information resources depending on their institutional and professional affiliations, yet access to current health information is critical for all. With the exception of access to the Cochrane Library collection, unaffiliated/independent health professionals in Nova Scotia face significant barriers in accessing health information resources.

Most health professional associations do not provide access to health information resources or services for their members; cost being the major barrier. Professionals associations are typically charged premium subscription rates and costs are passed on to members. At the National level, the Canadian Nurses Association and the Canadian Medical Association provide access to health information resources for their members.

The NSVHL working group has identified more than twenty five professional associations currently operating in the province. Of these, Doctors Nova Scotia provides the services of a librarian and online access to a limited set of electronic resources for its members, the Pharmacists Association (PANS) and Nova Scotia Association of Clinical Laboratory Managers (NSACLM) subscribe to specialist resources on behalf of their members.

The NSVHL could provide two key benefits to professionals associations; better subscription rates through participation in a province-wide purchasing consortium, and access to the services of expert license negotiators.

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7 Leon, et al., Assessing availability of scientific journals, databases, and health library services in Canadian health ministries: a cross-sectional study, *Implementation Science* 2013, 8:34

8 Health information support provided by professional associations in Canada. *Health Information and Libraries Journal* 2012 Sep; 29(3):233-41.
Annex D: Nova Scotia Health Professional Associations and Organisations

1. Association of Psychologists of Nova Scotia (APNS)
2. Caregivers Nova Scotia
3. College of Registered Nurses of Nova Scotia (CRNNS)
4. Continuing Care Association of Nova Scotia (CCANS)
5. Doctors Nova Scotia (CMA)
6. Family Practice Nurses Association of Nova Scotia [FPNANS]
7. Massage Therapist' Association of Nova Scotia
8. Massage Therapists' Association of Nova Scotia (MTANS)
9. NADACA: Native Alcohol and Drug Abuse Counselling Association ...
10. Nova Scotia Association of Health Organizations
11. Nova Scotia Association of Medical Radiation Technologists (NSAMRT)
12. Nova Scotia Association of Naturopathic Doctors (NSAND)
13. Nova Scotia Association of Social Workers (NSASW)
14. Nova Scotia Child and Youth Care Workers Association
15. Nova Scotia College of Respiratory Therapists
16. Nova Scotia Dental Assistants' Association (NSDAA)
17. Nova Scotia Dental Association (NSDA)
18. Nova Scotia Dental Technicians Association
19. Nova Scotia Dietetic Association (NSDA)
20. Nova Scotia Health Information Management Association
21. Nova Scotia Hospice Palliative Care Association
22. Nova Scotia Society of Diagnostic Medical Sonographers
23. Nova Scotia Society of Dispensing Opticians
24. Nova Scotia Association of Osteopaths (NSAO)
25. Nurse Practitioners' Association of Nova Scotia
27. Pharmacy Association of Nova Scotia (PANS)
28. Public Health Association of Nova Scotia (PHANS)
29. Speech & Hearing Association of Nova Scotia (SHANS)
30. The Nova Scotia Association of Optometrists
31. The Nova Scotia Association of Reflexology Practitioners
32. The Nova Scotia Physiotherapy Association (NSPA)
33. The Nova Scotia Podiatry Association

Other Health Organisations

AIDS Nova Scotia
AIDS Coalition of Cape Breton
Alzheimer Society of Nova Scotia
Amyotrophic Lateral Sclerosis Society of Canada-Nova Scotia Branch
Arthritis Society-Nova Scotia Division
Atlantic First Nations AIDS Task Force
Autism Society of Nova Scotia
Canadian Anaesthetists' Society-Nova Scotia Division
Canadian Cancer Society-Nova Scotia Division
Canadian Dermatology Association-Nova Scotia Office
Canadian Diabetes Association-Nova Scotia Division

NS VHL Business Case And Plan Final Report-V5_2013.Docx
Canadian Hemophilia Society - Nova Scotia
Canadian Institute of Senior Centres
Canadian Liver Foundation- Halifax Chapter
Canadian Psoriasis Foundation-Halifax-Dartmouth Metropolitan Chapter
Canadian Thoracic Society-Nova Scotia
Cancer Treatment & Research Foundation of Nova Scotia
Cape Breton Cerebral Palsy Association of Nova Scotia
Cardiac Prevention Research Centre
Chinese Medicine & Acupuncture Association of Canada-Maritime Chapter
Cohn’s & Colitis Foundation of Canada-Maritime Regional Office
Epilepsy Association of Nova Scotia
Halifax Regional Cerebral Palsy Association
Heart & Stroke Foundation of Nova Scotia
Kidney Foundation of Canada-Nova Scotia Branch
Learning Disabilities Association of Nova Scotia
Lung Association Nova Scotia
Nova Scotia Dietetic Association
Nova Scotia Hearing and Speech Foundation
Parkinson Foundation of Canada-Sidney Chapter
Psoriasis Society Canada
Annex E: Proposed core e-Resources (Provincial Licensing)

### Proposed additional (new) electronic resources:

**Dynamed**

$129,637

Physicians have a need for point of care tools to support rapid diagnosis. One of the premier products in this line is Dynamed. Dynamed, although a North American product, is provided to all practitioners in the United Kingdom; it is continually updated and offers very high quality, evidence-based information. In a best case world, all practitioners will look for at least three sources to be sure they are getting a well-rounded answer. In the real world, practitioners often are looking for one place to look for reassurance that their current understanding of a condition/disease is correct, and to see if there are recent changes. If all practitioners had access to Dynamed there will be a shared understanding of the latest evidence, and everyone will become efficient at using this resource saving time and effort finding the ‘best’ answer. Only Dalhousie has Dynamed at this time. Working together as the NSVHL will bring down the price to an affordable level so that access to this product is accessible to all.

**Mosby’s Nursing Skills** ($ TBA)

Currently, each District Health Authority creates their own learning modules for nursing procedures. Products like *Mosby’s Nursing Skills* provide evidence-based nursing learning modules for nursing skills including assessments and the ability to create reports showing who has taken the course. Working as the NSVHL we could purchase a product like this, then each district could use these modules saving the huge amount of time that each district currently allocates to this task. The result will be uniform and consistent understanding and application of nursing skills, better patient care and skills that are easily transferrable amongst the District Health Authorities.
Annex F Membership Value Proposition

The NSVHL will establish following categories of members:

- **Full Members**: subscribe to the full suite of core e-resources
- **Affiliate Members**: subscribe to selected e-resources
- **Corporate/Private Members**: Use the services of the NSVHL to negotiate and administer licence agreements on their behalf. The for-profit sector will be pay fees to cover processing costs.

**Membership Fees**

Membership fees will be reviewed annually and adjusted as required.

As shown in Table 4 below, membership in the NSVHL will return a net benefit.

In this example Full Member fees are set at $.75 per FTE. Affiliate Membership fees are set at $1.00/FTE. There is a minimum membership fee of $400 and a maximum membership fee of $5,000. The NSVL has successfully negotiated an overall 10% discount for e-resources licences.

<table>
<thead>
<tr>
<th>#</th>
<th>Member</th>
<th># FTE</th>
<th>Member Fee</th>
<th>E-resource Budget</th>
<th>Member Net Benefit (Discount-Member Fee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dalhousie</td>
<td>5000</td>
<td>$5,000</td>
<td>$400,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>2</td>
<td>DHAs/IWK</td>
<td>8000</td>
<td>$5,000</td>
<td>$500,000</td>
<td>$45,000</td>
</tr>
<tr>
<td>3</td>
<td>DHW (NSHRF, HANS)</td>
<td>500</td>
<td>$400</td>
<td>$22,000</td>
<td>$1,800</td>
</tr>
<tr>
<td>4</td>
<td>NS CC</td>
<td>400</td>
<td>$400</td>
<td>$33,000</td>
<td>$2,900</td>
</tr>
<tr>
<td>5</td>
<td>St F-X</td>
<td>800</td>
<td>$600</td>
<td>$10,000</td>
<td>$400</td>
</tr>
<tr>
<td>6</td>
<td>Cape Breton U</td>
<td>800</td>
<td>$600</td>
<td>$8,000</td>
<td>$200</td>
</tr>
<tr>
<td>7</td>
<td>DNS (Affiliate member)</td>
<td>1000</td>
<td>$1,000</td>
<td>$150,000</td>
<td>$14,000</td>
</tr>
<tr>
<td></td>
<td>Total(s)</td>
<td>16,500</td>
<td>$13,000</td>
<td>$1,123,000</td>
<td>$99,300</td>
</tr>
</tbody>
</table>

The level of financial benefit will vary according to member circumstances.

Non-financial benefits will include the following:

- Capacity to provide access to additional health information resources
- Optimal value for money
- Opportunities for benefits through the collaboration, such as
  - Collaborative support for training programs, and training for users of electronic resources
  - Collaborative exploration of linkages between the electronic health record, electronic research and clinical decision support point of care tools that libraries can provide.
### Annex G: Revenue Estimates

#### Estimate of revenue from membership fees:

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Members</strong></td>
<td>7</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td><strong>Operating Expenditures</strong></td>
<td>$85,000</td>
<td>$85,000</td>
<td>$85,000</td>
</tr>
<tr>
<td><strong>Membership Fee Revenues</strong></td>
<td>$13,000</td>
<td>$18,000</td>
<td>$20,000</td>
</tr>
<tr>
<td><strong>Surplus (Deficit)</strong></td>
<td>$(72,000)</td>
<td>$(67,000)</td>
<td>$(65,000)</td>
</tr>
</tbody>
</table>

*Fees are calculated based on estimated number of new members.*

#### Estimate of revenue from retained value of licence fee discounts:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual E-Resource Licence Fees</strong></td>
<td>$1,123,000</td>
</tr>
<tr>
<td><strong>Value of negotiated discount (10%)</strong></td>
<td>$112,300</td>
</tr>
<tr>
<td><strong>NSVHL retained discount (10%) to recover annual operating costs</strong></td>
<td>$11,230</td>
</tr>
</tbody>
</table>

*The retained discount will reduce the net member benefit*

#### Total estimated revenues based on $1,123,000 licence fee expenditure and 18 members:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Membership Fees</strong></td>
<td>$20,000</td>
</tr>
<tr>
<td><strong>Retained value of negotiated discount</strong></td>
<td>$11,230</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$31,230</td>
</tr>
<tr>
<td><strong>Operating Expense</strong></td>
<td>$85,000</td>
</tr>
<tr>
<td><strong>Deficit</strong></td>
<td>$(53,770)</td>
</tr>
</tbody>
</table>