

**MINISTRY OF HEALTH
INFORMATION BRIEFING NOTE**

Cliff # 1030656

PREPARED FOR: Honourable Terry Lake, Minister - **FOR INFORMATION**

TITLE: 2015/16 Health Authority Planning Guidelines

PURPOSE: To provide an overview of the 2015/16 health authority planning guidelines.

BACKGROUND:

Each year, health authorities receive guidance regarding government expectations for planning and performance reporting. In previous years, this communication has occurred through government letters of expectation (now known as health authority mandate letters). In 2015/16, planning guidelines will precede health authority mandate letters.

DISCUSSION:

The planning guidelines convey government's strategic priorities and performance expectations as set out in *Setting Priorities for the B.C. Health System* and the *Taxpayer Accountability Principles*. The guidelines articulate the roles and responsibilities of each health authority with respect to planning, administration, delivery and monitoring of health services.

The 2015/16 health authority planning guidelines outline government's expectations regarding the following three service planning requirements:

- 2015/16 – 2017/18 Service Plan
- 2015/16 Detailed Service and Operational Plan
- 2014/15 Annual Service Plan Report

Annual service plan reporting is a new requirement for health authorities for 2014/15, and arises from requirements under the *Taxpayer Accountability Principles*.

Templates for health authority service plans and annual service plan reports will be sent to health authorities through a separate, staff-level process. These templates are based on templates provided by central government.

Budget instructions are sent to health authorities under a separate process.

NEXT STEPS:

The Minister review and provide feedback on the draft 2015/16 health authority planning guidelines. Once any requested feedback has been received and incorporated, the final will be distributed to the health authority board chairs. A draft email transmittal message is also provided for review.

The following table summarizes key health authority planning dates and activities:

Deadlines	Activity
February 17, 2015	Ministry of Health 2015/16 – 2017/18 Service Plan published
March 2015	Planning guidelines and templates sent to health authorities
April 30, 2015	Draft Health Authority 2015/16 – 2017/18 Service Plans due to Ministry
April 30, 2015	Draft Health Authority 2015/16 Detailed Service and Operational Plans due to Ministry
May 2015	Mandate letters sent to health authorities
June 30, 2015	Board approved Health Authority 2015/16 – 2017/18 Service Plans due to Ministry
June 30, 2015	Health Authority 2015/16 Detailed Service and Operational Plans due to Ministry
June/July 2015	Ministry of Health 2014/15 Annual Service Plan Report published
October 30, 2015	Health Authority 2014/15 Annual Service Plan Reports due to Ministry

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Date: March 9, 2015

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**MINISTRY OF HEALTH
INFORMATION BRIEFING NOTE**

Cliff# 1027112

PREPARED FOR: Honourable Terry Lake, Minister of Health - **FOR INFORMATION**

TITLE: A GP for Me Provincial Implementation Update, February 2015

PURPOSE: To provide an update on the provincial A GP for Me initiative.

BACKGROUND:

A robust primary care system leads to better health outcomes for patients, better equity, lower mortality rates and lower overall costs to the health care system.^{1,2} In British Columbia and across Canada, lack of access to longitudinal primary care delivered by a family physician (FP) has been identified as an important public issue. In June 2010, the BC government committed that every citizen who wants an FP, will have one by 2015.

'A GP for Me' was announced in February 2013, by the government and the Doctors of BC. The goals of the initiative are: to confirm and to strengthen the FP-patient continuous relationship, including better support for the needs of vulnerable patients; to enable patients who want a FP to find one; and to increase the capacity of the primary health care system. Funding for "A GP for Me" is provided by the General Practice Service Committee. GPSC is a partnership between the Doctors of BC and the Ministry of Health to aid physicians delivering health care services. GPSC has budgeted s.17 over three fiscal years (2013/14 to 2015/16) to deliver the two key components of A GP for Me: practice level attachment incentives, and community level Divisions of Family Practice (Divisions).

Practice level attachment incentives include additional fees available to FPs for the intake of unattached complex patients, for the care for frail patients, for telephone management, and conferencing. s.17

s.17 As of December 31, 2014, 3,549 distinct FPs provided 750,335 practice level attachment related services for 415,464 unique patients. Approximately \$31.0 million has been paid to FP for these attachment incentives.⁴

Community level Division of Family Practice (Division) supports include funding to local divisions to enable assessment of local attachment needs, and to develop and implement community driven attachment strategies in partnership with stakeholders. s.17

s.17 As of January 2015:

- 33 of 34 divisions have formally indicated their intent to participate in the initiative
- 10 divisions are in the assessment and planning phase
- 20 divisions are implementing their local attachment strategies, and;
- 3 prototype divisions are in the sustainability phase

¹ Atun, R. (2004). What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services? WHO Regional Office for Europe, 10.

² Starfield, B., Shi, L., Macinko, J. (2005) Contribution of Primary Care to Health Systems and Health. The Milbank Quarterly Vol. 83, No. 3 pp. 457

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Provincial and

local evaluations are in place to measure the impacts, learnings and outcomes of A GP for Me. s.1
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DISCUSSION:

Besides the attachment of over 54,600⁸ previously unattached vulnerable patients through the use of the complex patient attachment incentive fee, one of the early successes of A GP for Me is that it has enabled a unique opportunity to gain a deep understanding of the complex nature of the attachment problem in BC, and therefore is facilitating more comprehensive and targeted solutions. For example, primary local data collection has revealed anticipated retirements in some communities of up to one quarter of the current FP compliment in the next five years. Without active intervention, 'downstream unattachments' resulting in potentially larger public health issues would likely occur. By collecting this data in a timely manner, Divisions have been able to take a more comprehensive approach to defining the broader primary care capacity issues and include strategic approaches to address in their local implementation plans, as well as inform areas where provincial policy and guidelines can be leveraged.

Similarly, a key learning to date has been that while it is important to ensure that any citizen who wants a FP can find one, adding more patients to FP practices must be balanced with an equally central need to ensure quality care for existing patients. A strong relationship that meets both patient and provider needs across the quality dimensions of accessibility, acceptability, effectiveness and appropriateness, is critical to achieve the full benefits of patient attachment. Therefore it is not enough to just match patients with FPs - implementation strategies are addressing quality as part of the overall approach and with particular attention to the vulnerable patient population.

Through the first 20 Divisions' implementation plans, five high level strategic focus areas have been established as critical to advancing the goals of A GP for Me including: retirement, recruitment and retention of FPs; interprofessional collaboration, integration with community and HA services, and team based care; introduction of physician-patient matching mechanisms; office practice efficiencies; and health promotion and public education. In general these strategies and activities are seen as part of a longer term sustainable shift to how primary care is conceived and delivered in the future to meet patient needs.

ADVICE:

Government's public commitment in 2010 set the stage for the aspirational goals of the A GP for Me initiative. Over the past five years, progress has been made and positive results and valuable learnings have been generated in an environment of physician leadership, health authority and community partnerships, and commitment to an improved system of primary care. Due to the complex nature of the attachment problem, it is anticipated that every patient who wants a FP will not gain access to one. However, Government is committed to evaluation and application of key learnings in order to move forward in its objective of ensuring equitable access to the benefits of longitudinal primary care for all British Columbians. s.13

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Date: March 5, 2015

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⁸ General Practice Services Committee, A GP for Me Practice Level Quarterly Incentives Report to December 31, 2014.

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Population without a Regular Medical Doctor, BC and Canada - 2003 to 2013
(no data for 2004 and 2006)

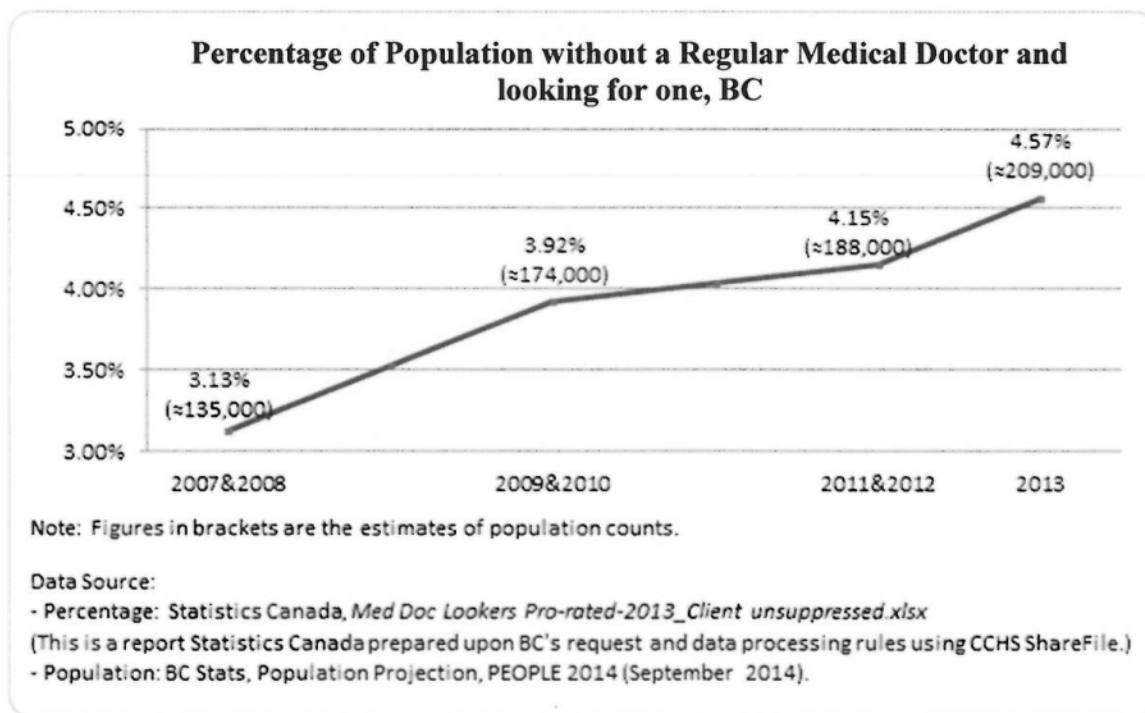
Year	BC Population	Population without a regular medical doctor, BC	Percentage of population without a regular medical doctor, BC	Percentage of without a regular medical doctor, Canada
2003	4,123,937	437,137	10.6%	14.1%
2005	4,195,764	457,338	10.9%	14.3%
2007	4,290,988	510,628	11.9%	15.1%
2008	4,349,412	574,122	13.2%	15.6%
2009	4,410,679	582,210	13.2%	15.1%
2010	4,465,924	638,627	14.3%	15.2%
2011	4,499,139	625,380	13.9%	15.3%
2012	4,543,308	636,063	14.0%	14.9%
2013	4,581,978	710,207	15.5%	15.5%

Data Source:

- Percentage: Statistics Canada, Canadian Community Health Survey, CANSIM Table 105-0501
- Population: BC Stats, PEOPLE 2014 (September 2014)

Please note that the data on the table are based on annual estimates, but the percentage, 13.8% of British Columbian who did not have a regular medical doctor quoted in the Background section, is based on 2009 and 2010 two-year period estimates.

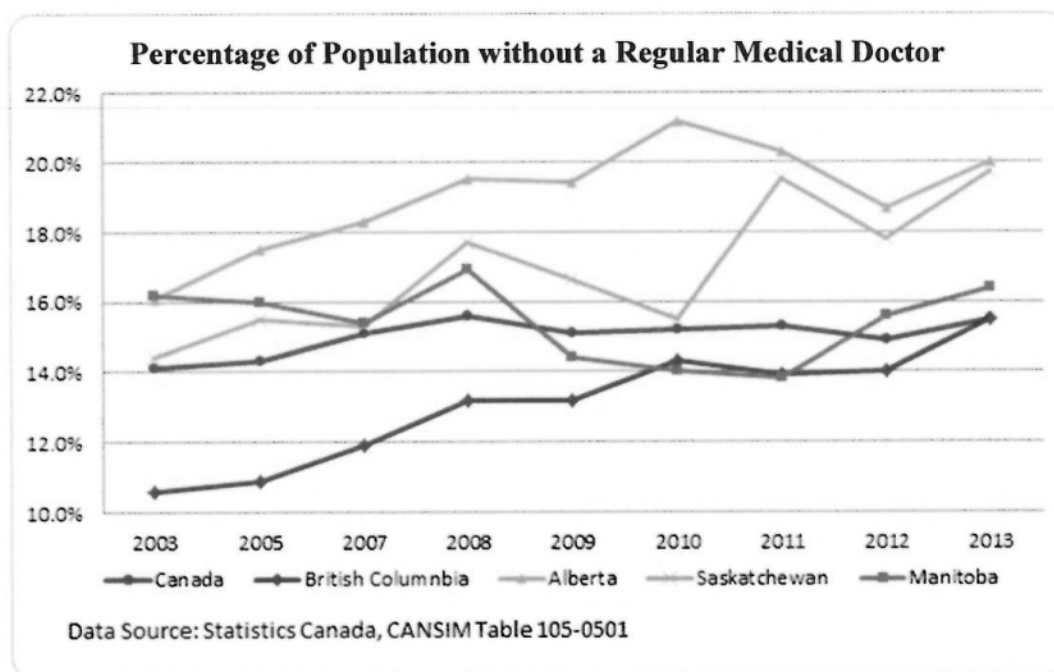
1.2 Population without a Regular Medical Doctor and looking for one, BC - 2007 & 2008 to 2013



Note: the 2009&2010 rate and estimated population above (3.92%) differs from that stated on page 3 (3.96%) because of different source files; Statistics Canada, Med Doc Lookers Pro-rated 2013 versus Statistics Canada Share File.

1.3 Comparison with other provinces

Estimates of Unattached Western Provinces and Canada, 2003 to 2013



Population Without a Regular Medical Doctor by Province/Territory and Within Canada - 2003 to 2013 (no data for 2004 and 2006)

Jurisdiction	2003	2005	2007	2008	2009	2010	2011	2012	2013
British Columbia	10.6%	10.9%	11.9%	13.2%	13.2%	14.3%	13.9%	14.0%	15.5%
Alberta	16.1%	17.5%	18.3%	19.5%	19.4%	21.2%	20.3%	18.7%	20.0%
Saskatchewan	14.4%	15.5%	15.3%	17.7%	16.6%	15.5%	19.5%	17.8%	19.7%
Manitoba	16.2%	16.0%	15.4%	16.9%	14.4%	14.0%	13.8%	15.6%	16.4%
Ontario	8.2%	8.8%	9.5%	9.0%	8.5%	9.2%	9.1%	8.8%	8.8%
Quebec	25.8%	24.9%	26.4%	27.3%	26.7%	24.9%	25.5%	24.8%	25.1%
Prince Edward Island	7.5%	10.1%	12.0%	13.8%	8.9%	8.9%	12.6%	12.3%	12.4%
Nova Scotia	5.1%	5.4%	5.8%	5.8%	7.2%	6.4%	6.5%	8.9%	9.7%
New Brunswick	7.6%	6.6%	8.1%	9.2%	7.9%	7.6%	7.5%	7.0%	8.0%
Newfoundland and Labrador	14.2%	12.7%	11.7%	12.7%	13.0%	10.5%	8.9%	8.6%	12.0%
Yukon	18.3%	26.2%	22.1%	20.9%	22.2%	23.2%	20.6%	28.6%	26.7%
Northwest Territories	54.1%	51.2%	59.1%	62.6%	62.2%	96.0%	63.6%	60.3%	58.1%
Nunavut - 10 largest communities	70.8%	84.0%	86.6%	87.6%	88.2%	86.8%	84.5%	82.1%	84.6%
Canada	14.1%	14.3%	15.1%	15.6%	15.1%	15.2%	15.3%	14.9%	15.5%

Data Source: Statistics Canada, Canadian Community Health Survey, CANSIM Table 105-0501

2 Appendix B - Patient Attachment Mechanisms across Canada

Patient Attachment Mechanisms by Province	
Alberta	http://www.albertahealthservices.ca/709.asp , references online tool through the College of Physicians of Alberta, as well as Primary Care Networks and their contact information
Saskatchewan	http://www.health.gov.sk.ca/find-a-doctor , directed to health regions to help find out which physicians are taking new patients.
Manitoba	http://www.gov.mb.ca/health/primarycare/providers/pcn/roadmap.html http://www.gov.mb.ca/health/familydoctorfinder/about.html Register by phone or online, provide basic information including first and second choice of location and type of provider – family doctor or nurse practitioner.
Ontario	Health Care Connect: Unattached patients can call or go online to www.ontario.ca/healthcareconnect to register with the program. To successfully register, unattached patients must have a valid OHIP card and complete a health questionnaire to determine their need for family health care services. Priority is given to individuals who have greater health needs. http://www.health.gov.on.ca/en/ms/healthcareconnect/public/ , for the public http://www.health.gov.on.ca/en/ms/healthcareconnect/pro/ , for professionals
Quebec	http://www.santemonteregie.qc.ca/portail/services/besoimedecin.en.html CSSS (health and social services centre) will only assist those who are over 70 years old, have chronic illnesses, are pregnant, or recently discharged from a hospital.
New Brunswick	Patient Connect NB - http://www.nbms.nb.ca/patients-2/finding-a-family-doctor/ Patient Connect NB is a provincially managed, bilingual patient registry for New Brunswickers without a family doctor. New Brunswickers without a family doctor can register with Patient Connect NB and will be assigned to a doctor on a first-come, first-serve basis.
PEI	Provincial Patient Registry: http://www.healthpei.ca/patientregistry

	<p>The Patient Registry Program is a coordinated service to assist people find a family physician when they move to Prince Edward Island or relocate within the province.</p> <p>At the same time the Registry assists interested family physicians with more orderly introduction of new patients into their practice.</p>
Nova Scotia	<p>Nova Scotia directs their citizens to the District Health Authority as a source for assisting patients find a family doctor.</p> <p>http://novascotia.ca/dhw/physicians/</p>
Newfoundland	<p>Newfoundland currently does not have a mechanism to assist in patient attachment to family physicians. The following link directs Newfoundland residents to the College of Physicians and Surgeons of Newfoundland as a reference point for locating a physician who is taking new patients.</p> <p>http://www.familynavigator.ca/index.php/relocation/st_johns/st_johns_medical_care</p>
Yukon	<p>Directs Yukon residents to the Health and Social Services of Yukon for a list of clinics currently accepting new patients.</p> <p>http://www.yukonmedicalcouncil.ca/find_doctor.html</p>
NWT	<p>The Northwest Territories directs their patients to the Northwest Medical Association's Patient Hot-Line, the Yellowknife Primary Care Centre or the Frame Lake Community Health Centre for a list of physicians currently accepting patients.</p> <p>http://www.familynavigator.ca/index.php/relocation/yellowknife/yellowknife_medical_care</p>
Nunavut	N/A

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4.2 Patients Served and Physician Uptake of Incentives

Practice Level Attachment Incentives Patients Served and Physician Uptake of Incentives Progress as of September 30, 2014

Fee Codes	Description	Number of patients who received services	Number of General Practitioners that provided services
14070	FP Participation Code	n/a	3,100 ¹
14074	Unattached Complex (high-needs) Patient Intake Fee	54,600	1,900
14075	Expanded Access to Complex Care Fee – Frail Patients	17,600	1,640
14076	Telephone Visit Fee	326,000	3,300
14077	Conferencing Fee	64,000	2,550

¹ This figure only include FPs who have submitted a 14070. It also does not include FPs who submitted 14071 as it is used by FPs providing locum coverage for a host physician who submitted a 14070. There were about 580 locums for this period.

5 Appendix E - Divisions of Family Practice in British Columbia

Divisions of Family Practice	Communities
Abbotsford	Abbotsford
Burnaby	Burnaby
Campbell River & District	Campbell River Oyster River Quadra Island Sayward Gold River Black Creek
Central Interior Rural	100 Mile House 108 Mile Ranch 150 Mile House Lac La Hache Lone Butte Tatla Lake Williams Lakes
Central Okanagan	Kelowna West Kelowna Oyama Peachland Westbank Lake Country
Chilliwack	Agassiz Boston Bar Chilliwack Harrison Hope
Comox Valley	Comox Cumberland Courtenay Denman Island Hornby Island Cobble Hill
Cowichan Valley	Chemainus Cowichan Valley Crofton Duncan Lake Cowichan Ladysmith Mill Bay Shawnigan Lake Malahat Penelakut Island
Delta	North Delta Tsawwassen Ladner Tilbury Annis Island
East Kootenay	Cranbrook Creston Elk Valley Ferne Kimberley Golden

Divisions of Family Practice	Communities
	Invermere
Fraser Northwest	Coquitlam New Westminster Port Coquitlam Port Moody
Kootenay Boundary	Castlegar Christina Lake Fruitvale Grand Forks Greenwood Kaslo Midway Nakusp Nelson New Denver Rossland Salmo Trail Rock Creek
Langley	Langley Fort Langley Aldergrove
Mission	Mission
Nanaimo	Nanaimo
North Peace	Fort St. John Hudson's Hope
North Shore	North Vancouver West Vancouver Lions Bay Bowen Island
Oceanside	Coombs Parksville Qualicum Errington
Powell River	Lund Powell River Texada Island Savary Island
Prince George	Prince George
Richmond	Richmond
Ridge Meadows	Albion Haney Hammond Maple Ridge Pitt Meadows Ruskin Whonnock
Rural & Remote (Island Health CSC)	Salt Spring Island North Island Alert Bay Mount Waddington Port Alice Port Hardy Port McNeil Gabriola Island

Divisions of Family Practice	Communities
Shuswap North Okanagan	Armstrong Coldstream Enderby Lumby Salmon Arm Sicamous Sorrento Vernon
South Island	Colwood Central Saanich Langford Metchosin North Saanich Saanichton Sidney Sooke Brentwood Bay
South Okanagan Similkameen	Summerland Naramata Penticton Okanagan Falls Oliver Osoyoos Keremeos Princeton Caws ton Hedley
Sunshine Coast	Earl's Cove Gibsons Langdale Madeira Park Pender Harbour Robert's Creek Sechelt Halfmoon Bay Egmont Port Mellon
Surrey/North Delta	Surrey North Delta Fleetwood Cloverdale Whalley/City Centre Guildford Newton
Thompson Region	Kamloops Chase Scotch Creek Barrier Cache Creek Ashcroft Logan Lake
Vancouver	Vancouver
Victoria	Greater Victoria (Including Oak Bay and Esquimalt)
White Rock/South Surrey	White Rock/South Surrey
Total – 34 Divisions	Total – 230 + Communities

Source: – Doctors of BC

6 Appendix F - Description of Implementation Activities for Selected Divisions of Family Practice

- **Central Okanagan:** establish a mobile assessment unit that prepares patient information for transfer to available family doctors; recruit new doctors to the community and educate patients about community support networks, particularly for seniors.
- **Chilliwack:** set up a hotline to assess patients in urgent need of a family doctor; expand the Hope Clinic and Fraser Canyon Outreach programs to provide care to more Aboriginals, seniors and expecting mothers; education for the community on how to use and access primary care; and a coordinated recruitment strategy.
- **East Kootenay:** educate patients about healthy lifestyle choices; developing and implementing a recruitment strategy; expanding team-based care to connect with community services, and improve care for patients with chronic and complex conditions.
- **Fraser Northwest:** identify and connect high needs patients with a family doctor; develop mentoring programs for new family doctors in partnership with UBC; provide in-home team-based care for frail, homebound patients; better integrate other health care practitioners; and recruit new family doctors.
- **Kootenay Boundary:** implement team-based care model for complex patients; increase recruitment and retention; create patient registry to acquire accurate record of attached patients and pilot a team-based care model that integrates registered nurses and social workers to better support patients with complex needs.
- **Langley:** improve care for frail and elderly patients by integrating community supports; and strengthen recruitment strategies to bring more family doctors and other primary care providers to Langley.
- **North Peace:** bring more family doctors to the region with a focus on international recruitment opportunities; connect 100% of expecting mothers to a family doctor at 32 weeks and ensure they have a family doctor after delivery; provide primary care for all residents without a family doctor through an unattached patient clinic.
- **Ridge Meadows:** improve services at the Maternity Clinic; increase support for homeless and mentally ill patients by adding more nurse practitioners; establish multi-disciplinary team care in the region; and bring new family doctors and locums to the region.

- **South Island:** create an inter-disciplinary care centre; establish a robust recruitment process; develop team-based models of care targeting the Aboriginal population and support retiring doctors in succession planning.
- **Surrey-North Delta:** \$ improve patient care through the development of new models of practice; expansion of multi-disciplinary care programs; implement recruitment and retention strategy; and provide health education to the community.
- **Thompson Region:** attract new family doctors to the region; help current doctors prepare for succession; provide mentoring for new family doctors; help new patients find an available family doctor; and build practice models that include registered nurses.
- **Vancouver:** develop a streamlined approach to connecting patients with available family doctors; introduce interdisciplinary care teams in family doctor clinics and make it easier to see a GP after regular business hours; and help recruit new family doctors.

7 Appendix G – Case Studies of Divisions

7.1 Case study – Chilliwack Division

Chilliwack Division of Family Practice Patient Attachment Mechanism – A Case Study

The Chilliwack Division of Family Practice (CDoFP) represents 101 physicians and six Nurse Practitioners (NPs). It serves a population of 105,236. Of this population, currently s.13 of patients are unattached, of whom s.13 indicated that it was important to have a family physician.

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s.13 The population is also expected to increase by another 16,511 by 2023. Based on these numbers the CDoFP needs to recruit s.13 in order to improve the physician to patient population ratio.

To assist with patient attachment, the Division is developing and implementing a Patient Attachment Mechanism. The Patient Attachment Mechanism will serve as a single point of contact system for patients looking for a primary care provider.

This single point of contact mechanism is the “A GP for Me Hotline”. Unattached patients contacting the “A GP for Me Hotline” will be given an intake form. Once completed, with the help of a Patient Attachment Coordinator (if required), the Patient Attachment Supervisor would either 1) attach the patient to one of the primary care clinics in Chilliwack, Agassiz-Harrison or Hope (if in need of immediate care); or 2) directly to a community Family Physician using G14074 where appropriate. s.13

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For the start-up phase of the Patient Attachment Mechanism, the Division has hired an Evaluation Coordinator, an Attachment Coordinator and a Patient Attachment Supervisor. These three positions are responsible for 1) triaging new patients; 2) attaching patients to the appropriate Primary Care Clinic; 3) communicating with FPs to determine who is accepting patients and types of patients they are able to accept, and, 4) attaching patients into the community. In addition to these three positions, the Division has assigned a Communications Coordinator to develop a communications plan to promote the “A GP for Me Hot-Line” as the one point of contact to find a family physician.

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In the November 2014 CDoFP newsletter, the Division reported that for the month of November, the Hot-Line received 62 calls, with 58 patients completing the intake form and 18 A GP for Me Patients referred out. As at November 2014, the Division had 27 family physicians with the capacity to take on new patients.

7.2 Case studies of Divisions – Thompson Region Division

Thompson Region Division of Family Practice (TRDFP) **Physician/Patient Incubator Program (Pilot Project) – Case Study**

The Thompson Region Division of Family Practice (TRDFP) is a mixed rural-urban area with 40 physicians in full time practice, 12 in part time practice in Kamloops and six physicians in the rural communities providing services to approximately 112,000 citizens.

Community assessment results indicated challenges in running a sustainable family practice, practice attrition, a shortage of graduating family physicians combined with practices at or above optimum capacity resulting in^{s.13} of the population being unattached.

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7.3 Case studies of Divisions – Vancouver Division

Vancouver Division of Family Practice Patient Attachment – A Case Study

The Vancouver Division of Family Practice (VDoFP) serves an estimated population of 690,000 (2014). s.13

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The Vancouver population is young and growing, challenged with a complexity of health and social needs including issues of low income and homelessness, and a high prevalence of mental health conditions and addictions and substance abuse.

There are approximately 1,000 family physicians practicing in Vancouver, over 800 belong to the VDoFP. 25 percent of physicians are under the age of 40, while 26 percent of physicians are over 60 s.13

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Through an engagement process which involved citizens, FPs, Health Authorities, the City of Vancouver and other stakeholder groups, the Division has identified three strategies to address patient attachment: 1) recruitment and retention; 2) Practice Modelling; 3) Connecting Patients.

To assist with the recruitment and retention aspect of continuity of care, a “dedicated Resource Team, facilitated by Divisional staff will be assigned to address the needs of FPs planning to transition out of practice in the next five years and the needs of interested/new FPs considering moving into these practices”.

The second strategy of Practice Modelling is intended to strengthen FP-patient relationships and increase capacity in practices through: increasing practice efficiencies and clinic optimization; developing a model that allows better integration of interdisciplinary care teams into FP clinics; improve patients’ access to FP clinics after regular office hours; collaborate with the VDoFP Strategic Communication Campaign to educate and improve the understanding of patients and citizens on the importance of a strong FP-patient relationship; and, Develop FP Networks to encourage FPs to share common resources and facilitate FP peer mentoring.

The final strategy, through partnership between the Division and the Vancouver Coastal Health Authority and Providence Health Care is to connect patients with the appropriate care providers through a streamlined approach. This will be achieved through a number of steps including: identifying FPs and partners who are able to accept new patients, develop an assessment and triage process to understand the care needs of unattached patients; increasing overall capacity of the primary care system and building stronger FP-patient relationships.

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A GP for Me

Prepared for Honourable Terry Lake,
Minister of Health
TBD, 2015



June 2010 Commitment

***“... provide every British Columbian
who wants a family doctor
with one by 2015”***

Benefits of having a longitudinal relationship
with a family doctor - better health outcomes,
better experience of care, and potential for
system savings



Problem/Issue: Many people in BC without a family doctor and looking

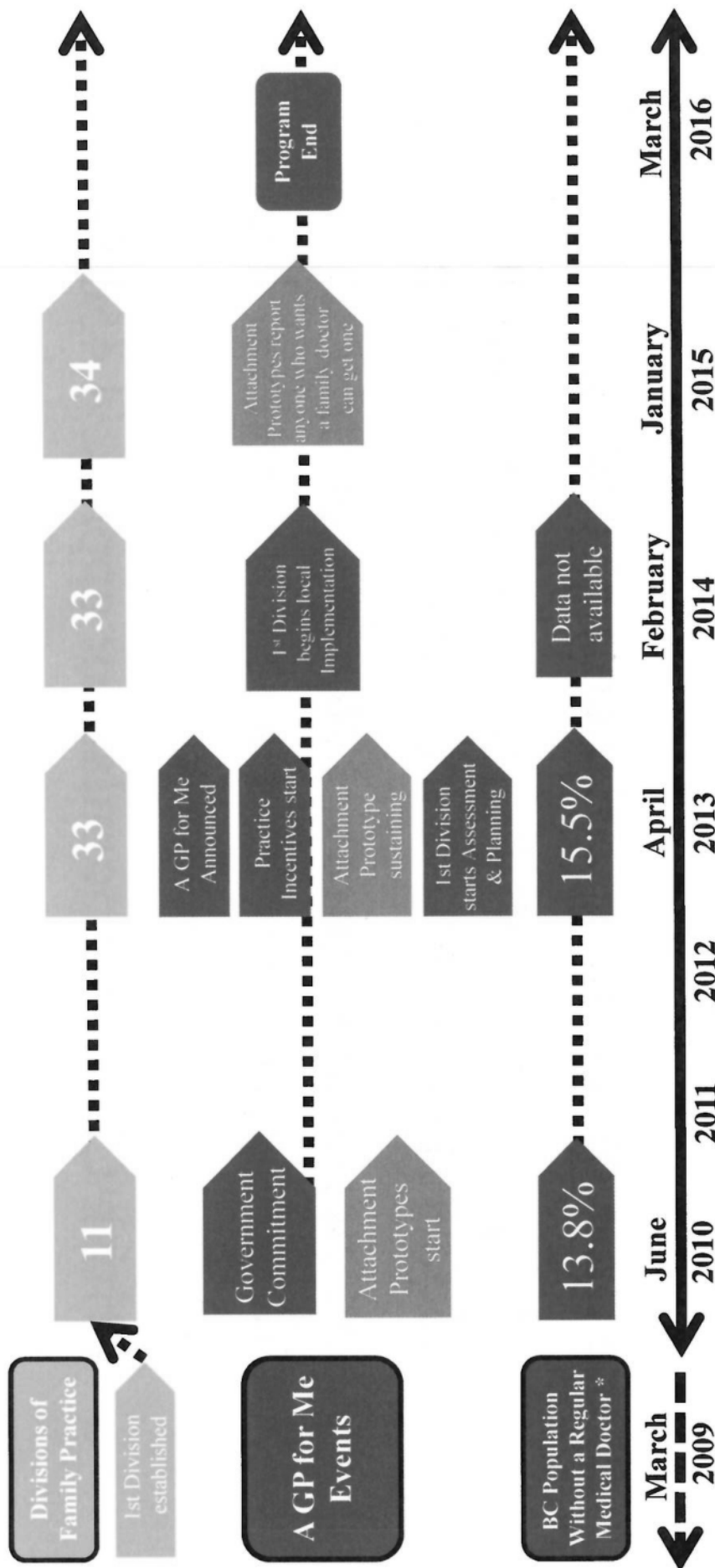
At the time of the June 2010 commitment:

- ❑ **13.8 per cent** of British Columbians (**approx. 615,000**) did not have a regular medical doctor
- ❑ **3.96 per cent (approx. 176,000)** of British Columbians did not have a regular medical doctor and were looking for one.
- ❑ **British Columbia population: approx. 4,456,900**



A GP for Me

Chronology 2010 – 2016



* Data Source: Statistics Canada, CANSIM Tables



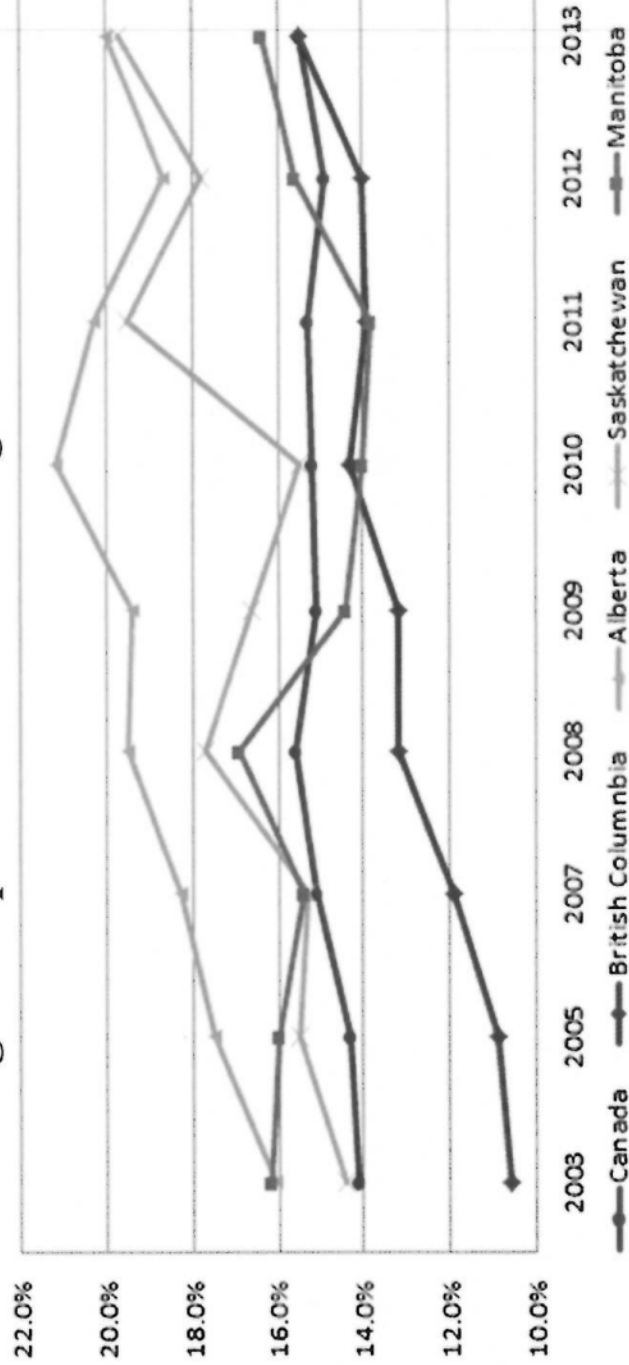
Demand has increased since 2010

	Number of People in BC Without a Family Doctor	Number of People in BC Looking for a Family Doctor
2010 (Pop approx. 4,456,900)	13.8 per cent (approximately 615,000)	3.96 per cent (approx. 176,000)
2013 (Pop approx. 4,582,000)	15.5 percent (approx. 710,000)	4.57 per cent (approx. 209,000)



Similar issues exist across Canada

Percentage of Population without a Regular Medical Doctor

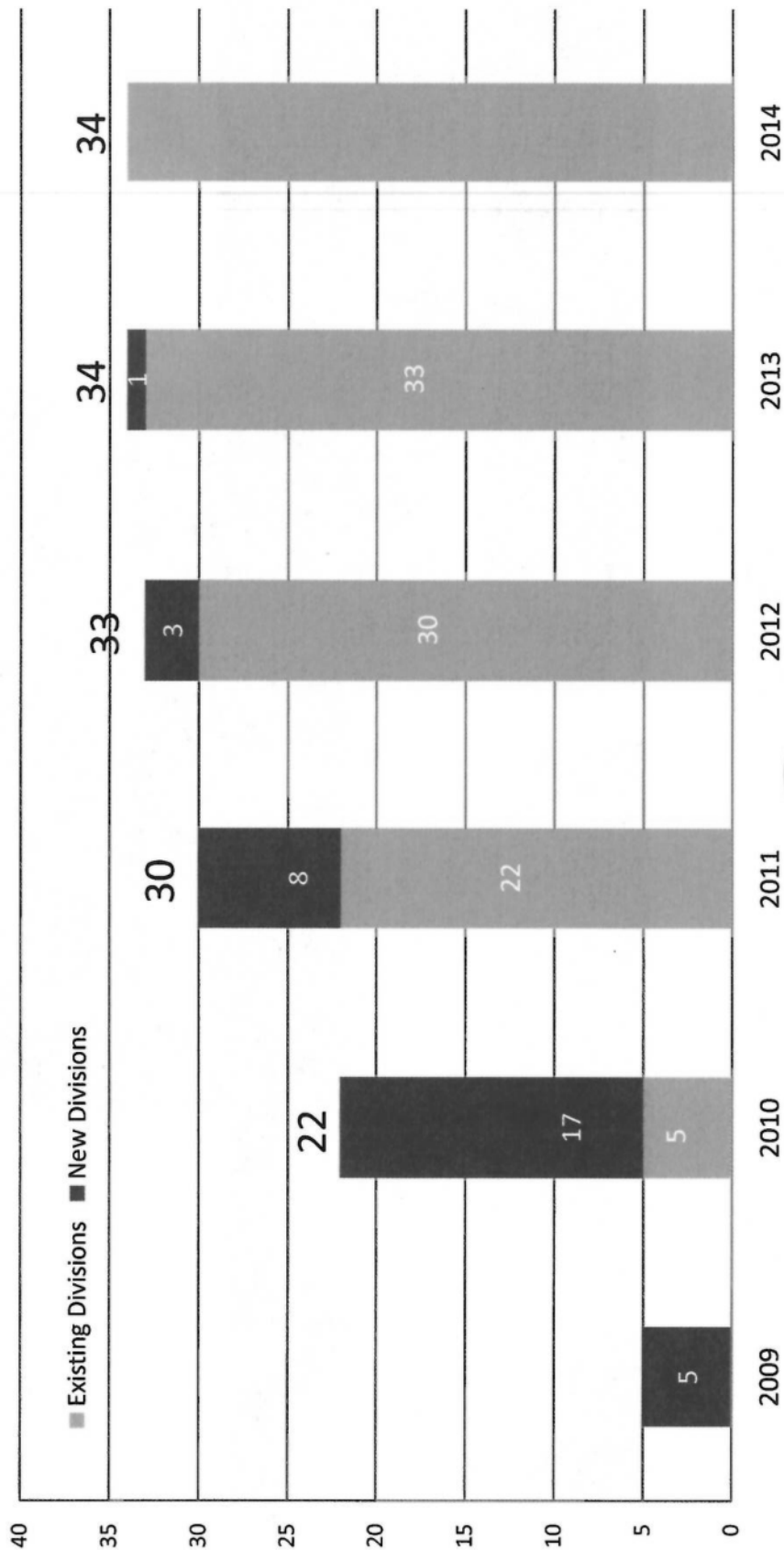


Data Source: Statistics Canada, CANSIM Table 105-0501



Divisions of Family Practice

Growth - 2009 to current



A GP for Me was prototyped in three Divisions of Family Practice



Prototyping from 2010 to 2013



Prototype results – 2010 to 2015

- More than 9,400 patients were matched with primary care providers (2013)
- Created new local programs to meet specific community primary care needs

**Today these Divisions report that
anyone that wants a family
physician can get one in their
community, through the Division.**



A GP for Me - Announced 2013



A province-wide initiative funded jointly by the Government of BC and Doctors of BC to strengthen the primary care system.



Goals of A GP for Me

1. Enable patients who want a family physician to find one
2. Strengthen and support the family doctor - patient continuous relationship, including better support for vulnerable patients
3. Increase capacity of the primary health care system



Approach is multi-pronged and mutually reinforcing

1. **Practice level patient attachment incentives**
2. **Community level GP for Me supports** through bulk funding to Divisions of Family Practice
3. **Integration, alignment, and leveraging** of existing health authority, ministry, joint clinical committees, and partner initiatives, programs and policies (through funding principles and parameters)
4. **Patient and public engagement and education**



A GP for Me budget

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Practice Level - attachment incentives

- Four new family physician fees were introduced to help increase the efficiency of individual practices and develop their capacity to take on new patients. The fees are for:
 - Attaching unattached vulnerable patients;
 - Compensates for the often time consuming and intensive process of integrating a new patient with high needs.
 - Managing care for frail patients;
 - Involves development of a care plan with the patient.
 - Providing patient care over the telephone for all patients;
 - Intended to increase an individual physician's capacity.
 - Conducting patient conferences with other health care providers for all patients.
 - Intended to increase an individual physician's capacity.



Practice level results to date*

3,101 family physicians have 'signed-up' to participate in A GP for Me locally via their Division of Family Practice.

- 75% of full service family physicians.

More than 415,000 patients have received attachment related services

\$31.0 million has been paid for these services



**Based on services from April 1, 2013 to December 31, 2014, paid to December 31, 2014*

Practice level results to date*

- Practice level incentives have enabled family physicians to:
 - Attach **54,600 *unattached patients*** with complex health needs (to almost **1,900** family physicians)
 - Provide telephone care to **326,000 *patients*** (by **3,300** family physicians)
 - Provide enhanced care to **17,600 *frail patients*** (by more than **1,640** family physicians)
 - Hold conferences with other health care providers about the shared care of **64,000 *patients*** (by over **2,550** family physicians)



*Based on services from April 1, 2013 to Dec 31, 2014, paid to Dec 31, 2014

Community level supports:

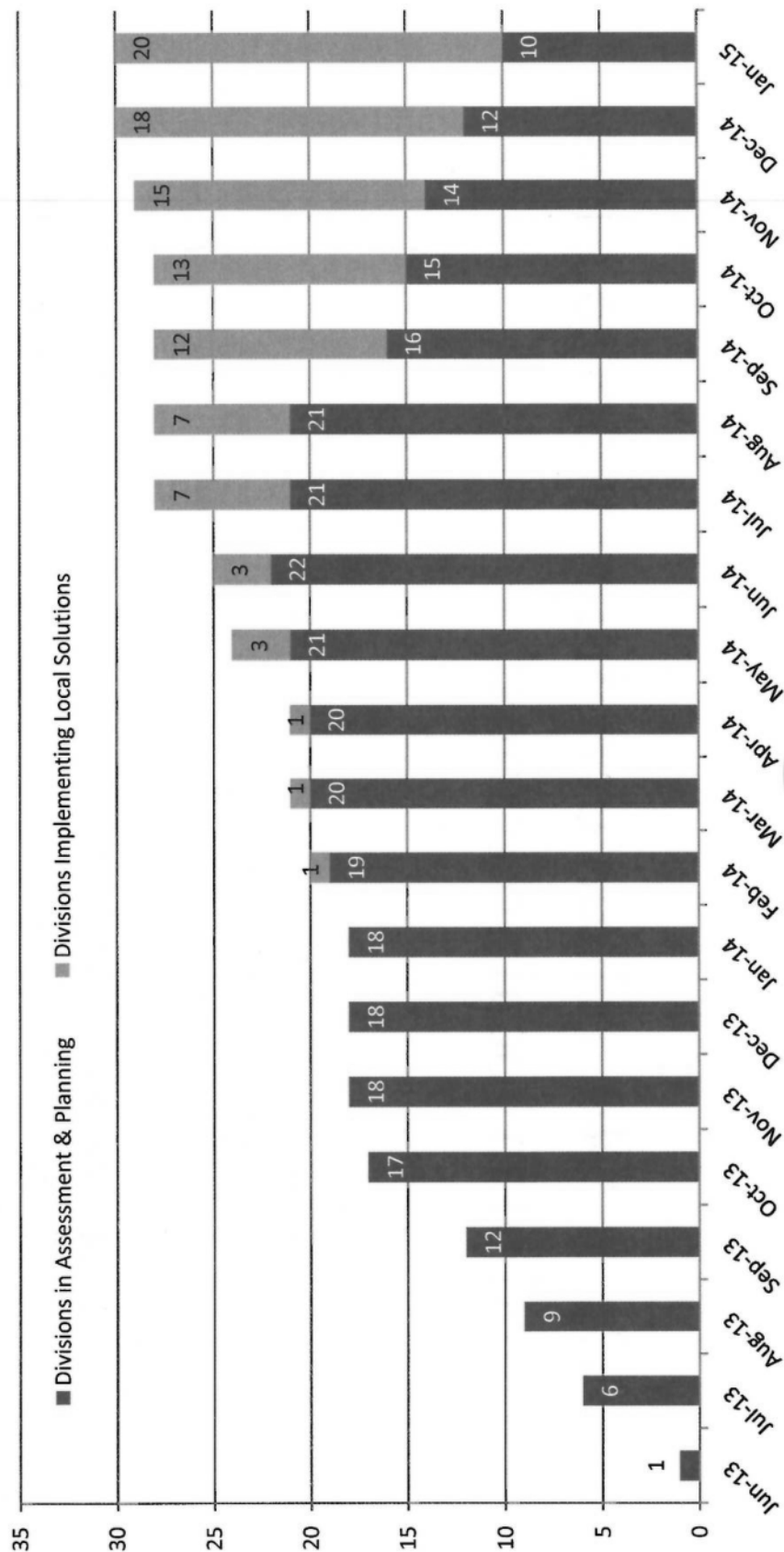
Local divisions of family practice

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- ☐ Assess:
 - community and patient needs (data, surveys, etc.);
 - local family doctor needs; and
 - strengths and gaps in local primary care resources.
- ☐ Plan local and deliver solutions:
 - for improving local primary care capacity, including finding doctors for patients who want one.

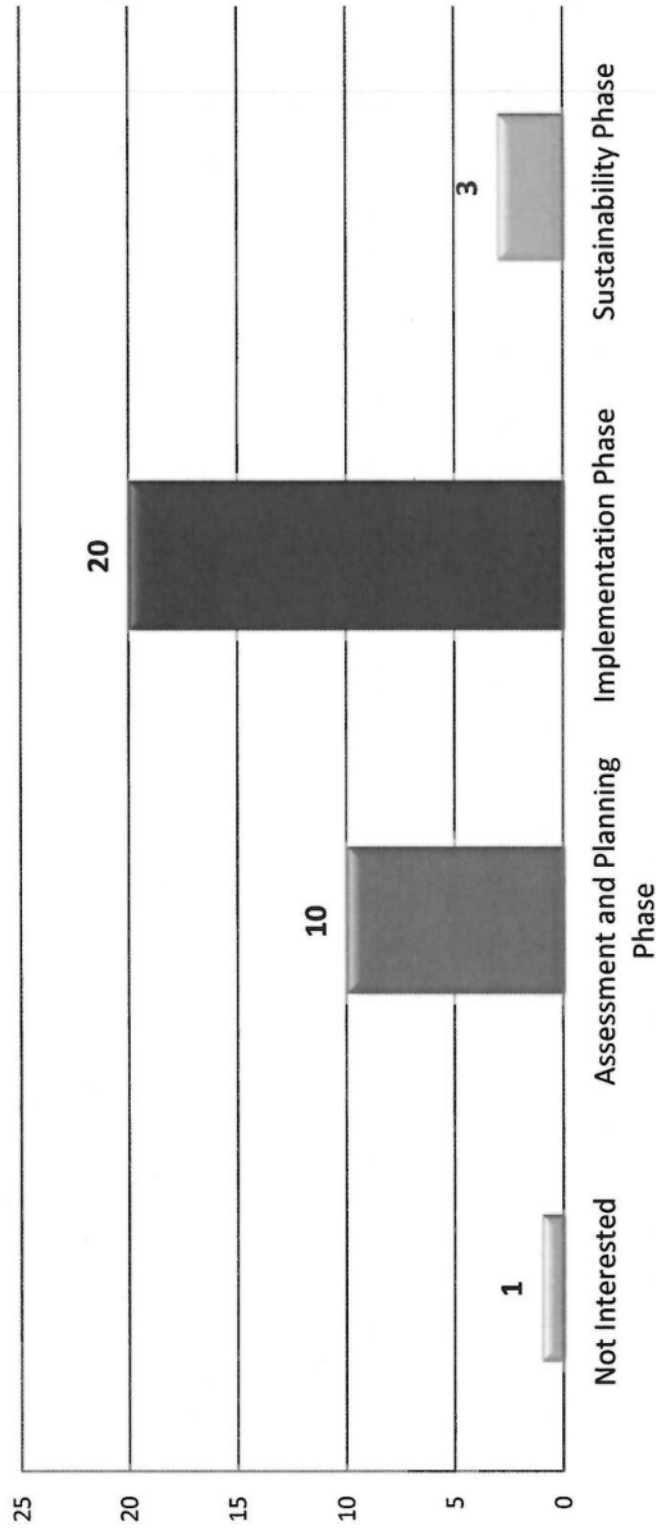


Divisions Progress from Assessment & Planning to Implementing



Community level results to date

Divisions' Participation in Attachment - Jan 2015



	Planning and Assessment	Implementation	Total
Expenditure as of December 2014	\$10,746,231	\$7,832,000	\$18,578,231



Community level results: assessment and planning activities

- Division engagement activities included:
 - meetings with stakeholders such as physicians, MOAs, allied health professionals, patients, local and provincial government representatives, community service providers, Collaborative Services Committees, local industry (e.g. oil sector in North Peace)
 - attending public events such as hockey games and community fairs to engage the public (e.g. Chilliwack);
 - public forums, telephone polls (e.g. Kootenay Boundary) and surveys - 17 of first 24 Divisions have conducted a total of 32 surveys to date:
 - 7 patient surveys
 - 14 provider surveys
 - 11 public surveys



Community level results: assessment and planning learnings

- Engagement has resulted in two way communication, trust, and transparency ➡ better relationships
- More established culture and readiness to collaborate; foundation for system improvement
- Increased understanding of the local problem and shared role in solving ➡ targeted & customized solutions
- Community wide focus on the issue; physicians looking beyond their individual practices into the community and broader health needs



Community level – Division Implementation Strategic Areas of Focus

- ❑ Recruitment, Retirement and Retention
- ❑ Inter-professional team based care
- ❑ Attachment mechanism /Registry
- ❑ Office Practice Efficiency and Clinical Improvement Supports
- ❑ Public Education and Health Promotion



Recruitment, Retention, Retirement

- Support for solo family doctors to move to group practice
- Mentorship for new grads (incubator model)
- Locum coordination, resources and supports
- Retooling practices to make them attractive to new grads
- Retirement transition activities to ensure downstream patients attachment and leveraging of family physicians as they move to part time.



Inter professional Team Based Care

- Examples of added team functions include:
- Clinical care coordination, behavioural counselling, psycho-social assessments, medication reviews, chronic disease management support etc.
- Via community social workers, community pharmacists, psychiatric nurse, primary care nurse, nurse coordinator, 'super' medical office assistants, mental health rehab, etc.



Patient Attachment Mechanism

- Example - Central OK Divisions of Family Practice
- In partnership with Interior Health and local community service agencies - establish a new Mobile Assessment Unit (MAU) that will work with community groups to reach the vulnerable seniors. The unit will travel throughout the region to meet with seniors at locations convenient for them.
- A patient/doctor matching registry will help seniors find a suitable family doctor as space becomes available. The MAU will connect high-risk seniors – and those who may benefit from existing programs – directly with Interior Health services.



Patient Attachment Mechanism

Don't have a family doctor or nurse practitioner?
Looking for one in your community?

CALL PAM

(Patient Attachment Mechanism)

9 am to 3 pm Monday to Friday
1-844-795-0034 Hope and the Fraser Canyon
604-795-0034 Chilliwack, Agassiz, and Harrison

If you do not have a primary care provider, call PAM to get the process started.



 **Chilliwack**
Division of Family Practice
A GPSC Initiative

 **doctors**
of **bc**
British Columbia Medical Association

A GP for Me



Evaluation Plan

- Framed by GP for Me goals and the Triple Aim
- Evidence-Informed
- Two-tiered approach to meet stakeholder needs –
(1) community-based frameworks
(2) provincial-level framework
- Mixed-methods approach to include:
 - physician and patient surveys - experience
 - Quantitative measures including practice level attachment incentive billing
 - Qualitative interviews and focus groups



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Opportunities and Successes

- Significant partnerships and trust developed locally – foundation for improvement and system change
- First attachment prototype divisions report patients wanting one can get a family doctor in their community
- Over 97 percent of Divisions are participating directly and providing local leadership to advance the goals of A GP for Me; and 75% of family physicians have ‘signed up’ to participate individually



Opportunities and Successes

- Recognized need and commitment to focus on more than one to one patient – family physician matching to address downstream un attachments, quality of care for all patients and sustainable system changes locally – expanded definition of success
- Local innovation and new models actively being tested and will inform what comes after A GP for Me
- Evolution of the provincial Practice Support Program to better support Divisions – practice coaching to increase efficiencies



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2010 Public Commitment - Assessment

It is anticipated that we will not see every patient who wants a family physician gain access to one within the publicly committed timeframe of 2015.

see timeline slide



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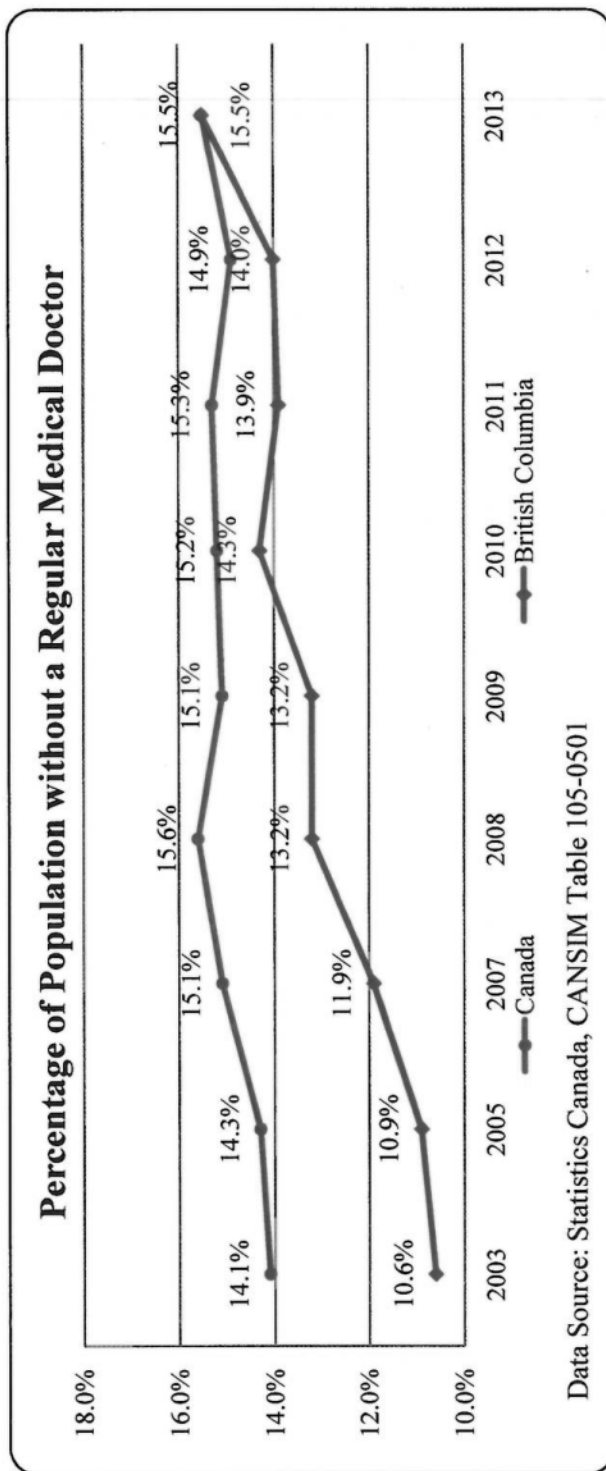
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Optional Slides

- For Minister's briefing



The number of people without a family doctor is rising

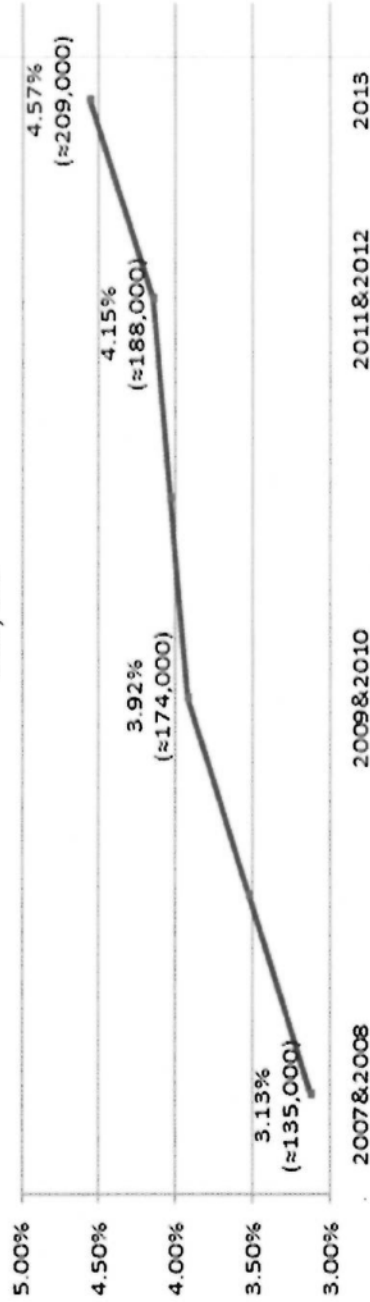


- ❑ Data is only available up to 2013 when A GP for Me started so do not have data to see any impact.



More people are looking for a family doctor

Percentage of Population without a Regular Medical Doctor and were looking for One, BC



Note: Figures in brackets are the estimates of population counts.

Data Source:

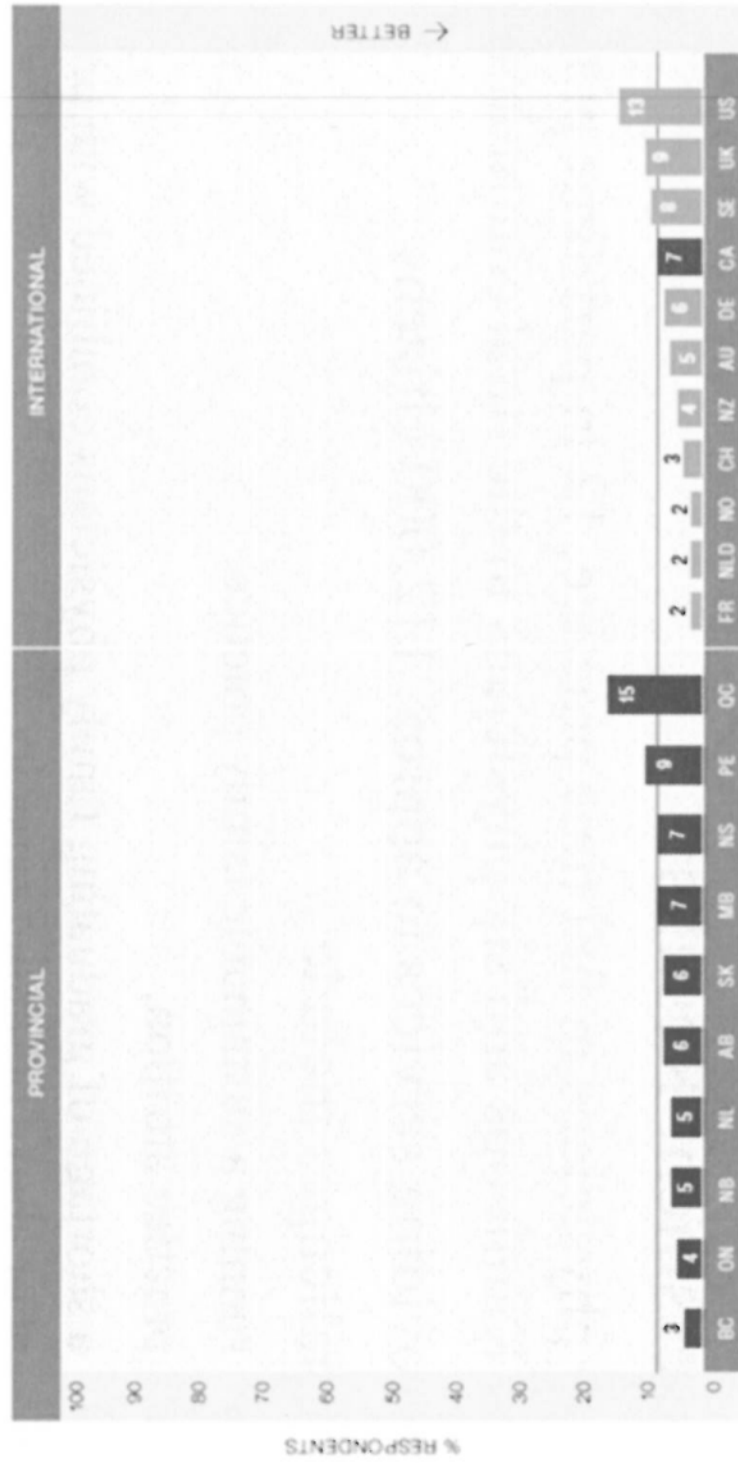
- Percentage: Statistics Canada, *Med Doc Lookers Pro-rated-2013_Client_unsuppressed.xlsx* (This is a report Statistics Canada prepared upon BC's request and data processing rules using CCHS ShareFile.)
- Population: BC Stats, Population Projection, PEOPLE 2014 (September 2014).

- ☐ Data is only available up to 2013 when A GP for Me started so do not have data to see any impact.



British Columbia ranked best in the 2013 Commonwealth Fund Survey

Response categories presented: No regular doctor/No regular place of care



Data Source: Where you live matters: Canadian views on health care quality – Results from the 2013 Commonwealth Fund International Health Policy Survey of the General Public by Health Council of Canada, January 2014.



Thompson Region

Division of Family Practice

- Assessment Results:
 - 40 physicians in full time practice, 12 in part-time practice in Kamloops and six physicians in the rural communities
 - providing services to approx. 112,000 citizens

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Thompson Region

Division of Family Practice

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-
- A GP for Me is about quality patient care. A robust primary care system—centered on longitudinal doctor patient relationships and where patient needs are met in community —results in healthier outcomes for patients.
 - Patients have an important role to play as partners in their health care
 - Partnerships are the key to success. Collaboration between physicians, health authorities, and other health care and community partners will help us achieve our goals and make our programs sustainable.
 - In 2015 we will see what by when ...[examples of what will be accomplished locally and opportunities to align policy provincially]
 - The goals are to increase capacity and access so that patients who want a doctor will be able to get one, and to strengthen the doctor-patient relationship.



**MINISTRY OF HEALTH
INFORMATION BRIEFING NOTE**

Cliff # 1029364

PREPARED FOR: Honourable Terry Lake, Minister - **FOR INFORMATION**

TITLE: Update on Implementation of the Alcohol Pricing Recommendations from Liquor Policy Review

PURPOSE: To provide an update on work with the Ministries of Justice and Finance to implement the alcohol pricing recommendations in the *BC Liquor Policy Review: Final Report*.

BACKGROUND:

Throughout the fall of 2013, Government held consultations on transforming British Columbia's "outdated liquor laws by enhancing convenience, sparking the economy, creating new opportunities for businesses and continuing to protect health and public safety".¹

In January 2014, government announced its full support of all 73 recommendations contained in the *BC Liquor Policy Review: Final Report*.² The report acknowledges that alcohol accounts for approximately 10 percent of the burden of disease in BC; and that in 2011, there were an estimated 21,542 hospitalizations and 1,191 deaths due to alcohol. While most of the report's recommendations relate to enhancing customer convenience and streamlining business processes for industry, a number of recommendations are pertinent to advancing public health and safety, including:

- #17 – Liquor Distribution Branch (LDB) should review its minimum pricing policy as it applies to all categories of liquor so that minimum prices are set at an appropriate level; and
- #18 - LDB should consider tying minimum prices to the amount of alcohol (e.g., a beer with seven percent alcohol would have a higher minimum price than a beer with four percent alcohol).

The robust body of global and Canadian evidence indicates that pricing policies are the most powerful measures for reducing alcohol-related harm and costs.³

¹ Ministry of Justice. January 31, 2014. *B.C. Liquor Policy Review-Final Report*. <http://engage.gov.bc.ca/liquorpolicyreview/>

² BC Newsroom. Liquor report out: removes beer garden, festival barriers. Accessed on February 12, 2015 from: <http://www.newsroom.gov.bc.ca/2014/01/liquor-report-out-removes-beer-garden-festival-barriers.html>.

³ Giesbrecht et al. March 2013. *Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Comparison of Provincial Policies*. Toronto: Centre for Addiction and Mental Health.

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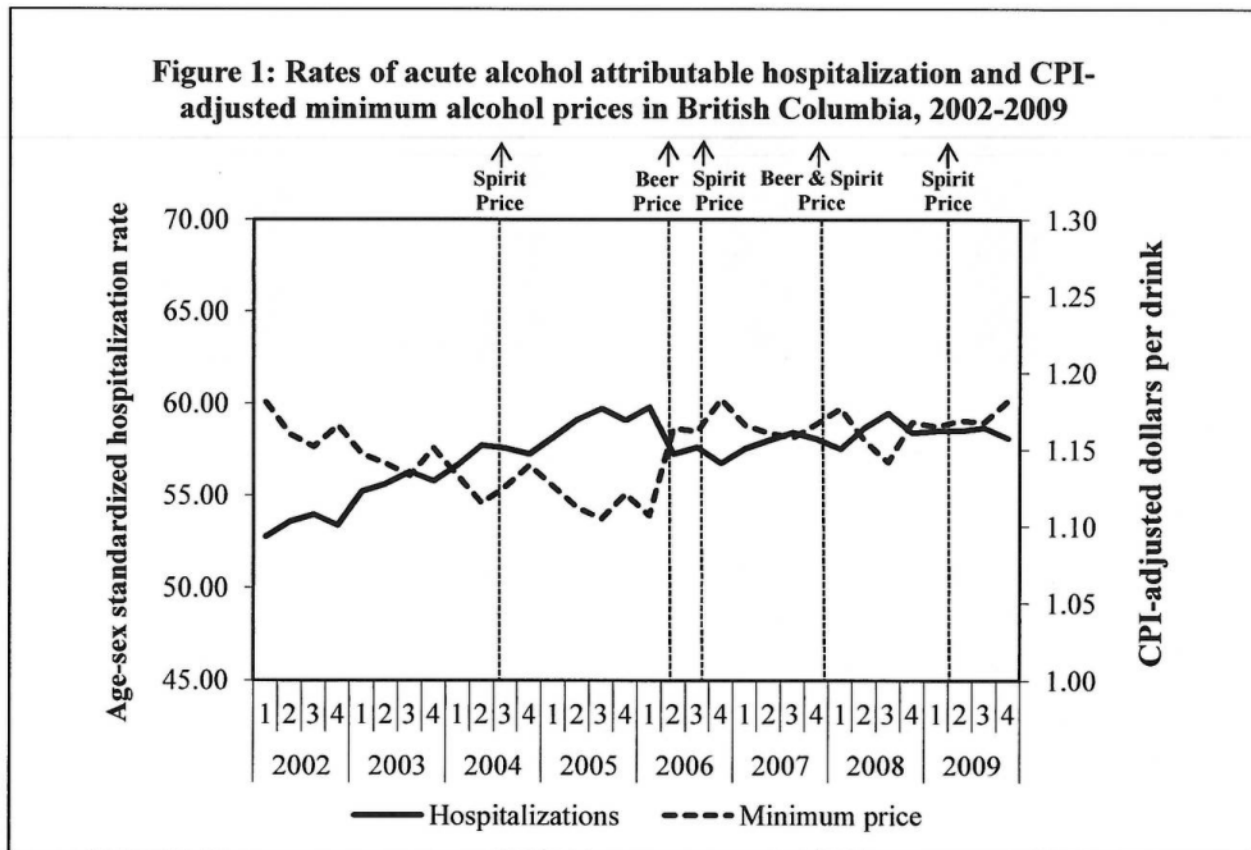
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CONCLUSION:
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Drafter: Manik Saini and Gerald Thomas, Healthy Populations and Development Branch
Date: March 9, 2015

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Increases in alcohol prices reduce hospitalizations in BC



Source: Stockwell, T., Zhao, J., Martin, G., Macdonald, S., Valance, K., Treno, A. et al. (2013). Minimum alcohol prices and outlet densities in British Columbia, Canada: Estimated impacts on alcohol-attributable hospitalizations. *American Journal of Public Health*, 103(11):2014-20 (Open online access: <http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2013.301289>)

- Five small government alcohol price increases were analyzed by a team of international researchers to determine effects on alcohol-related hospitalizations in BC.
- A 10% increase in price correlated with an immediate 8.95% reduction in hospitalizations for acute alcohol-related causes, and, 2 to 3 years later, a 9.22% reduction in hospitalizations for alcohol caused chronic illnesses.
- To inform the implementation of the price recommendations in the BC Liquor Policy Review, estimated annual reductions in alcohol-related hospitalizations across three potential minimum price policies¹ (Figure 2), and cumulative reductions in hospitalizations over 10 years (Figure 3) were developed.

¹ **Note:** Based on estimated increases in revenue from alcohol sales, in 10 years (by 2024) the \$1.25/sd policy will increase BC government revenues by \$370 million, the \$1.35/sd policy by an additional \$400 million, and the \$1.45/sd policy by an additional \$450 million (Thomas et al., 2011).

Figure 2: Estimated reductions in average annual alcohol-related hospitalizations due to minimum prices, British Columbia

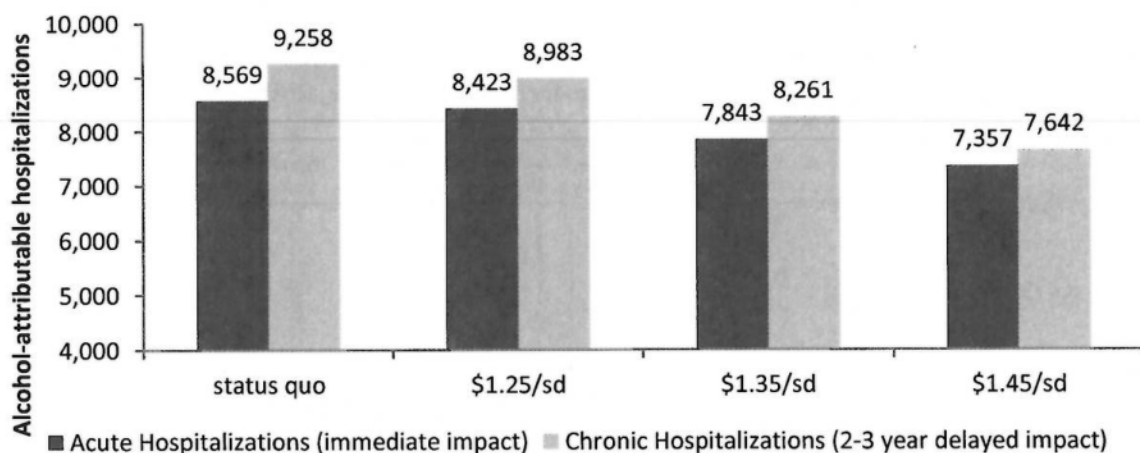
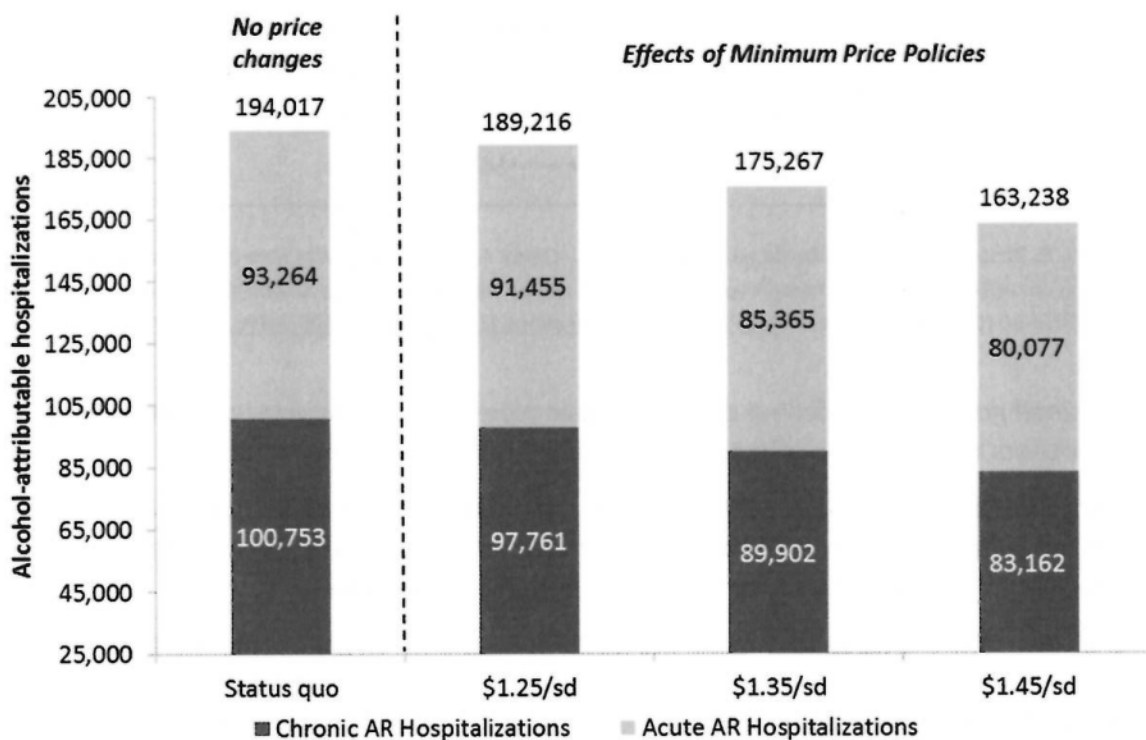


Figure 3: Estimated reductions in alcohol-attributable hospitalizations from minimum price policies over ten years (to 2024)



- In ten years, a minimum price of \$1.25/standard drink implemented in 2015 is expected to reduce AR hospitalizations by approximately 4,800, a minimum price of \$1.35 is expected to reduce hospitalizations by 18,750, and a minimum price of \$1.45 is expected to reduce hospitalizations by 30,800.

**MINISTRY OF HEALTH
INFORMATION BRIEFING NOTE**

Cliff # 1031882

PREPARED FOR: Honourable Terry Lake, Minister - **FOR INFORMATION**

TITLE: Human Health Risk Assessment on Northeast Oil and Gas Development

PURPOSE: Provide update on the Northeast Oil and Gas Human Health Risk Assessment Project prior to media release on March 25, 2015.

BACKGROUND:

The Human Health Risk Assessment (HHRA) on Northeast Oil and Gas Development is a three-phase project led by the Ministry of Health to identify, explore and assess concerns about human health risks relating to oil and gas activities in northeastern British Columbia. The Phase 1 report, summarizing concerns raised by the public and stakeholders in the region, was released in June 2012. Phase 2 was initiated in November 2012 and key deliverables, undertaken by Intrinsik Environmental Sciences (Intrinsik), include a literature review, screening level risk assessment (SLRA), detailed human health risk assessment, a review of the regulatory framework and a recommendations report. Phase 3, yet to be initiated, is the public release of the Phase 2 results.

The detailed HHRA followed a standard scientific process (recognized by Health Canada and the US Environmental Protection Agency) to estimate the nature and probability of adverse health effects in humans who may be exposed to chemical contaminants in environmental media. It focused on continuous air emissions from gas processing plants and production facilities, which were identified as priority exposure scenarios through a screening level risk assessment (SLRA). The results of the detailed HHRA suggest a low probability of adverse health impacts from exposures to air contaminants related to oil and gas activity (see Appendix A for more details).

The Review of the Regulatory Framework aimed to identify areas for improvement in the Province's existing oil and gas regulatory framework as it relates to the protection of human health. Findings suggest that the existing framework is extensive and broadly protective of health but indicates there is room for improvement in selected areas (see Appendix B for more details).

The Recommendations Report, finalized in November, is based on the findings of Phases 1 and 2, the study team's collective experience and the concerns raised by stakeholders throughout the project. They do not consider feasibility, enforcement, future regulations, responsibility, or economics. They are intended for government's consideration. The recommendations (see Appendix C for more details) relate to:

Public Safety (Emergency Management and Setbacks)

- Update methods for calculating hazard distances and emergency planning zones.
- Update land use and setback provisions and consider equal application to both oil and gas and land development activities.

Flaring, Venting and Fugitive Emission Management

- BC Ambient Air Quality Objectives should guide the development of regulations, directives and policies pertaining to flaring, venting, and fugitive emissions.

Hydraulic Fracturing

- Consider baseline pre-drilling groundwater testing requirements.
- Consider refining the fracturing fluid disclosure process.

Legacy Sites

- Use Provincial Site Classification Tool and Contaminated Sites Regulation framework together in the assessment and management of legacy sites.

Information Management

- Review objectives and efficiency of various databases managing permits, facility information, wells and flares data.

Environmental Monitoring and Health Surveillance

- Continue to follow principles outlined in the Framework for the BC Air Monitoring Network and use the results of the HHRA to inform its expansion, including monitoring of additional contaminants.
- Verify air quality predictions and human health risks as new monitoring data becomes available.
- Expand aquifer and vulnerability mapping.
- Expand study of groundwater and surface water interactions within shallow aquifers and ground water flow conditions to assess potential contaminant fate and migration.
- Expand environmental monitoring to include other media, such as biota, soil and water quality
- Tailor health surveillance to study health outcomes in areas with highest predicted air concentrations.

Standards Development

- Review and update various BC's Ambient Air Quality Objectives, including consideration of other chemicals of potential concern.

An HHRA project steering committee (including representatives from Northern Health, the Oil and Gas Commission, and Ministries of Natural Gas Development, Environment, Aboriginal Relations and Reconciliation, Transportation and Infrastructure) has met regularly to provide technical input and comment on the study design and findings.

DISCUSSION:

There is a public commitment to publicly report out on the Phase 2 findings and recommendations. The communications plan for Phase 3 includes pre-briefings (March 23-25) with industry, local governments, Northern Health, and First Nations; a media session on the day of the public release (March 26); a public information session (March 31) and follow-up information sessions in the coming months. The BC Oil and Gas Commission and responsible Ministries have prepared initial responses to the recommendations and the Ministry of Health will be following up to ensure the recommendations are addressed.

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Drafter:
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Brenda Janke, Director
Mary Cameron
March 25, 2015

APPENDIX A: QUANTITATIVE HUMAN HEALTH RISK ASSESSMENT (EXECUTIVE SUMMARY)

The Ministry of Health (MoH) has contracted a team led by Intrinsik Environmental Sciences (Intrinsik) to complete Phase 2 of the Human Health Risk Assessment (HHRA) of oil and gas activities in northeastern British Columbia (NE BC). In addition to Intrinsik itself, the companies that make up the study team include: RWDI Air, Matrix Solutions and Skystone Engineering. The team also includes a three member Advisory Panel to provide an independent perspective on the design and approach of the Phase 2 HHRA project, and the interpretation of the results. In accordance with the terms of reference compiled by the MoH, the Phase 2 HHRA is intended to investigate the potential impact of oil and gas activities on human health in Local Health Areas 59, 60 and 81 (the Region).

This report presents the detailed HHRA component of the Phase 2 project. The objectives of this HHRA are to provide a comprehensive and focused assessment of potential health risks that may exist for people living in proximity to oil and gas activities in NE BC.

A Screening Level Risk Assessment (SLRA) was completed with the objective of guiding the scope of work for the detailed HHRA. As part of this SLRA, a qualitative risk-ranking exercise was completed for 50 different oil and gas emission scenarios. From this analysis, two air emission scenarios were selected for further evaluation in the detailed HHRA:

1. Continuous air emissions from gas processing plants.
2. Continuous air emissions from production facilities.

These two scenarios and the numerous associated emission sources within each category are considered together to represent continuous emissions from oil and gas activity within this detailed HHRA. By combining the emissions from the gas processing plants and production facilities into a single emission scenario representing oil and gas activities, the potential influence on air quality (and consequently human health) was addressed on a cumulative basis. In addition, information regarding potential emissions from regional sources from other non-oil and gas activities was incorporated into the detailed HHRA.

The HHRA used a widely accepted approach for assessing environmental risks that has been endorsed in the past by regulatory agencies throughout Canada and across the globe. The HHRA was performed step wise following a conventional paradigm and involved the following main steps:

- Problem formulation
- Exposure assessment
- Toxicity assessment
- Risk characterization

A large study area (150 km by 176 km) was defined for the purposes of the HHRA, and was selected such that the most densely populated areas and several First Nations in the NE BC

region were included, and also the most concentrated oil and gas development in the region was captured. The major communities in the study area include Fort St. John, Dawson Creek and Chetwynd, along with smaller communities and First Nation lands.

A comprehensive emission inventory of the continuously emitting oil and gas facilities was compiled for the study area. This inventory incorporated several thousand individual emission sources. In addition, to further characterize air quality on a cumulative basis and in order to compare air quality associated with oil and gas activities with those associated with non-oil and gas emission sources, two scenarios were considered in the HHRA:

1. **Oil and Gas Scenario:** includes all on-going emissions from gas processing plants and various production facilities within the HHRA study area. These sources include, but are not limited to significant emitters such as, sweet and sour gas plants, compressor stations, and fugitive emissions from tank storage.
2. **Cumulative Scenario:** includes the oil and gas sources from the oil and gas scenario, as well as emissions from background sources such as other industries (*e.g.*, forestry and mining), transportation, and community activities (*e.g.*, residential wood burning).

A total of 26 community locations were evaluated individually within the HHRA along with the maximum predicted ground-level concentrations of each chemical of potential concern (COPC) (*e.g.*, the maximum point of impingement or MPOI).

A brief review of existing health status in the region conducted as part of the HHRA revealed that there are a number of possible sensitive sub-populations in the area.

To account for potential differences in exposures between individuals in the area, consideration was given to differences in exposure parameters (*e.g.*, body weight, types and amounts of foods consumed) between age groups and community type (*e.g.*, residents in Aboriginal, rural/agricultural, or more urban communities).

Results were presented and described for inhalation on a short-term and long-term basis, and for all possible routes of exposure on a long term basis. The predicted risk estimates involved the comparison of estimates of exposure with health-based exposure limits developed by various regulatory organizations (*e.g.*, Health Canada, United States Environmental Protection Agency, World Health Organization). Separate assessments were completed for short-term and long-term exposures, and for carcinogenic and non-carcinogenic COPC.

A brief summary of the results is as follows:

- In general, the predicted short-term air concentrations of the COPC were less than their health based exposure limits. As well, the potential combined risks of these COPC were not predicted to result in adverse health effects in people living or visiting the study area. However, the predicted exposures at some locations were found to exceed exposure limits for certain individual COPC (acrolein, formaldehyde, NO₂, SO₂, PM_{2.5}) and the mixtures that these COPC were part of (the eye, nasal and respiratory irritants). The exceedances for formaldehyde, NO₂ and SO₂ were found to be attributable to Oil and

Gas emission sources, with some contributions from other sources in the area. Due to the rare nature of these exceedances and the margin of safety built into the HHRA, these exposures are not expected to result in adverse health effects.

- Overall, long-term inhalation exposures to the COPC were predicted to be associated with a low potential for adverse health effects. For fine particulate matter (PM_{2.5}), exceedances of the BC Ambient Air Quality Objective were predicted for only the Cumulative Scenario at two remote locations where people are unlikely to be regularly exposed. For formaldehyde, potential cancer risks were predicted for a remote location in close proximity to an oil and gas site. However, further analysis of this exceedance indicating that the probability for people to be exposed to formaldehyde concentrations at the predicted level over a lifetime was very low. When the potential combined, additive effects of the COPC were evaluated, nasal and respiratory irritant mixtures were predicted to have elevated risk estimates. However, given the locations of where the maximum concentrations for these chemicals were expected to occur (*e.g.*, formaldehyde), and the degree of conservatism incorporated into the assessment, the potential mixture risks were determined to have a low potential for adverse health effects.
- In the assessment of potential exposures to the COPC that people in the area might receive over the long term through the consumption of locally-grown foods, drinking water, *etc.*, it was determined that the potential for adverse human health effects is low.

The overall findings of the detailed HHRA of oil and gas activity in NE BC suggest that, while there is some possibility for elevated COPC concentrations to occur at some locations, the probability that adverse health impacts would occur in association with these exposures is considered to be low.

APPENDIX B:

REVIEW OF REGULATORY FRAMEWORK (EXECUTIVE SUMMARY)

This report presents the results of a review of the existing statutory, regulatory, and policy framework that contributes to the protection of health for individuals living in proximity to oil and gas development and/or activities in northeastern British Columbia (NE BC). The objective of this review was to offer an overview of the relevant regulations with respect to oil and gas in NE BC and to identify any potential deficiencies in the existing regulatory framework as it relates to the potential influence of oil and gas development on public health in NE BC.

The scope of oil and gas activities considered in this review includes potential emissions to air and water from operational sites, historical sites and transportation of both products and waste. For these activities, regulations related to both normal operations and emergency scenarios were reviewed based on their potential to protect human health. How these regulations and policies compare to those in related jurisdictions (e.g., Alberta, United States) as well as to best management practices recommended by the Canadian Association of Petroleum Producers (CAPP) and the American Petroleum Institute (API) are also discussed.

In general, this review demonstrates that the existing policy framework in BC is extensive and broadly protective of human health. However, some policy and regulatory measures were identified that may warrant further consideration with respect to their potential to strengthen the Province's capacity to prevent and mitigate human health impacts from oil and gas activities. The proposed measures for consideration include:

- Ensuring that air quality objectives are reviewed regularly with consideration of new information on exposure and toxicity, public concerns, and regulatory decisions made by other agencies.
- Clarifying the linkage between permitted emissions to air from oil and gas activities and compliance with existing BC air quality objectives.
- Updating the methods used to calculate hazard distances and emergency planning zones in BC.
- Implementing requirements for predrilling water well testing under an expanded number of scenarios.
- Refining the fracturing fluid disclosure process to ensure that designated authorities and health professionals are provided with needed information about fluid ingredients without compromising confidential business information.

Note, some of these measures may already be addressed in practice under the permitting process described in the Oil and Gas Activities Act, which authorizes the BC Oil and Gas Commission (BC OGC) to impose conditions on oil and gas activity permits that the Commission considers necessary (including conditions that maintain public safety and health). The Province should evaluate each measure in light of existing practices, pending or proposed regulatory changes (not considered in the present review), and province specific factors (e.g., geography, economy, level of activity in various oil and gas sectors) in order to determine which measures are likely to result in a meaningful increase in health protection in the Province.

APPENDIX C: RECOMMENDATIONS REPORT (SUMMARY)

The overall findings of the Phase 2 HHRA indicate that the health risks associated with oil and gas activity in NE BC are generally low. A review of the Province's existing statutory, regulatory and policy frameworks was completed in tandem with and as an adjunct to the detailed HHRA. The primary objective of the review was to identify potential deficiencies in the existing regulatory framework as it relates to the potential influence of oil and gas development on public health. Overall, the review found that the existing regulatory framework in BC is extensive and broadly protective of human health. However, some policy and regulatory measures were identified that warranted further consideration with respect to their potential to strengthen the Province's capacity to prevent and mitigate health impacts from oil and activities.

Along with the health-related concerns that were shared during consultation on the Project, the final recommendations are based on the findings of the detailed HHRA and the Review of the Regulatory Framework. The final recommendations put forward to the Province include:

Recommendation 1: The tools applied to the calculation of EPZs representing the range of hazards associated with oil and gas infrastructure and activities should be updated and use scientifically supportable methods and emergency-based consequence endpoints.

Recommendation 2: Land-use and setback provisions applied in BC should be updated and use scientifically supportable methods along with individual and societal risk-based endpoints consistent with accepted risk norms, guidelines and standards applied in other developed industrialized countries. Further, it is recommended that these land-use and setback provisions be applied equally to both oil and gas and land development activities.

Recommendation 3: The BC Ambient Air Quality Objectives should guide the development of regulations, directives and policies pertaining to venting, fugitive emissions, flaring limits, flaring notification and reporting, and flaring performance requirements. This should be done in a transparent manner that demonstrates how the objectives are considered.

Recommendation 4: The implementation of baseline, pre-drilling ground water testing requirements for oil and gas activity in BC should be considered. Whenever possible, the process for collecting the information should be transparent, and the results publicly available, and reviewed on a regular basis. To facilitate the interpretation of results, it may also be beneficial to encourage the collection and reporting of well information in addition to sample data.

Recommendation 5: The Province should consider refining its fracturing fluid disclosure process so that designated authorities and health professionals can gain access to needed information about fluid ingredients, without compromising confidential business information.

Recommendation 6: When possible, the site classification tool and the existing framework for the management of contaminated sites should be used together in the assessment and management of legacy sites in NE BC.

Recommendation 7: The overall objectives and efficient use of the various databases that manage permits, facility information, wells and flare data should be reviewed, with the aim of identifying means to make the systems more accessible and user-friendly.

Recommendation 8: The Province's on-going air monitoring program in NE BC should continue to follow the principles outlined in BC MoE's Framework for the British Columbia Air Monitoring Network. Consideration should be given to the air quality contour maps provided in the detailed HHRA in the placement of future air quality monitors. As well, the identification of specific air contaminants for inclusion in the air monitoring program should consider the findings of the detailed HHRA.

Recommendation 9: Once additional data for the NE BC region are available from new monitoring stations or are made available from regulatory submissions, the air quality predictions and human health risk estimates from the detailed HHRA should be revisited.

Recommendation 10: While some aquifer mapping has been completed in NE BC, it is recommended that the existing aquifer mapping (and vulnerability mapping) be expanded for the NE BC region to help enhance the protection of groundwater resources in relation to oil and gas development. This information would aid in regional and site-specific assessments of potential risks to groundwater. As one of the limitations with the current aquifer mapping relates to an overall absence of subsurface data, it is suggested that surficial geology mapping (on an appropriate scale) for the region be completed as well.

Recommendation 11: Additional study of groundwater and surface water interactions within shallow aquifers and local ground water flow conditions in the NE BC region should be completed. This information could contribute to a better understanding of potential contaminant fate and migration. As well, studies could be carried out to investigate the location and sources of groundwater recharges.

Recommendation 12: Consideration should be given to the overall goals of the existing environmental monitoring programs for soil, water, and biota, along with the presentation and quality of these data within the existing databases, specifically as these relate to the value that these data could provide with respect to human and environmental health.

Recommendation 13: The Province should explore tailoring their health surveillance to determine whether or not there are any differences in disease rates in those areas identified in the HHRA with the highest predicted air concentrations. If possible, such future health surveillance would help verify the conclusions of the HHRA.

Recommendation 14: The BC air quality objectives should be reviewed and updated based on the existing provincial framework for developing air quality objectives.