RURAL HEALTH SERVICES IN BC: A POLICY FRAMEWORK TO PROVIDE A SYSTEM OF QUALITY CARE

CROSS SECTOR POLICY DISCUSSION PAPER 2015
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Executive Summary

Strategic Context

The focus of this paper is on the wide variety of challenges and strategies to improve access to health care in rural and remote communities. While there are many benefits to rural life, living in rural British Columbia clearly presents some unique challenges of providing appropriate access to health care. These challenges stem from multiple factors: geographic remoteness, long distances, low population densities, less availability of other providers and inclement weather conditions. The presenting challenge is how best to meet the range of health service needs for rural and remote communities.

*Rural Health Services in BC: A Policy Framework to Provide a System of Quality Care* is a planning and action framework that will be used to enable a consistent approach to addressing health service priorities through a rural lens. Policy directions will be built around four categories: understanding population and patient health; developing quality and sustainable care models; recruiting and retaining engaged, skilled health care providers; and supported by enabling IT/IM tools and processes that together will allow innovation and flexibility in responding to the diversity of geographies across the Province of British Columbia.

The goals and objectives of the planning and action framework align with the strategic direction for the health system in *Setting Priorities for the BC Health System* (Priorities 2, 3, 4, and 7) and the areas of focus set out in the *BC Health System Strategy Implementation: A Collaborative and Focused Approach* published in April 2014 by the BC Ministry of Health. They also align with the three overarching goals of the *Triple Aim* (developed through the Institute of Health Improvement):

1. Improving the health of populations;
2. Improving the patient experience of care (including quality and satisfaction), to which B.C. has recognized the additional requirement of improving the experience of delivering care for providers and support staff as critical to patient-centred care built on efforts of those who deliver and support health services; and
3. Reducing the per capita cost of health by focusing on quality (especially effectiveness and appropriateness) and the efficiency of health care delivery.

The Case for Change

The health care needs of the population in BC are grouped into four areas: Staying Healthy, Getting Better, Living with Illness or Disability, and Coping with End of Life. The presenting challenge is how best to meet the range of health service needs set out above for rural and remote communities.

Generally speaking, individuals who reside in predominantly rural communities tend to have
comparatively poorer health outcomes and socioeconomic status compared to their urban counterparts. The populations of rural British Columbia are often small, dispersed, and fluctuating in number. Rural British Columbia is home to many First Nations communities and Aboriginal peoples, and a large percentage of the rural population identifies as Aboriginal.

Against this health status backdrop, three specific service challenges stand out in the context of rural and remote communities: ensuring access to quality primary care services; ensuring pathways to accessing specialized perinatal, medical, and surgical services when they are required; and how best to support aging in place. Access to specialized acute care services and access to ancillary health services is especially challenging, so residents are often required to travel for care.

The unique character and demands of rural life require that health services are guided by a common set of quality dimensions as well as some specific service delivery principles:

- Population Health Need
- Shared Responsibility
- Flexibility and Innovation
- Team Based Approaches
- Close to Home
- Cultural Safety

Health authorities will need to structure their services more consistently with the framework for the rural/small rural/remote areas for specific community designations across the health authorities and be required to outline pathways for patients that enable access to higher levels of care in larger population centres.

Health Authorities have a key accountability to provide public health and primary care services that improve the health of the population and to work with individuals and communities to foster healthy behaviours.

Integrated primary and community care practice is the foundational building block to providing care services in rural and remote areas. This model has the capacity to: address longitudinal health care needs; meet the needs of specialty populations (including perinatal care, chronic medical conditions, frail elderly, cancer care, mental illness, substance use, and palliative care); and respond effectively to urgent and emergency care where required for short periods of time with effective clinical pathways and linkages to higher levels of services.

The integrated primary and community care practice model – with the right skill mix and number of health providers - has a number of implications:

1) The need for generalist health care providers
2) The providers have linkages to specialized expertise at regional or provincial service centres
3) The providers facilitate patients’ access to high quality perinatal care
4) The providers facilitate patients’ access to specialized geriatric and psychogeriatric services and home and community care residential care services
5) There are efficient patient-centred pathways to medical and surgical services
6) There is access to emergency services.

The need for a generalist practice in rural and remote communities is a practical reality and must be balanced against the requirement for quality and safety of those services. In order for generalist health service providers to be appropriately supported in rural communities, access to specialist consultations and services in both planned and emergent situations is critical to enabling quality and safety in service delivery.

Primary maternity care in rural and remote communities is complex, involves a variety of disciplines and scopes of practice in providing services, and it involves unique issues that must be addressed as part of an effective rural health services strategy including:

- Recruiting, training and retaining qualified staff to provide community-based perinatal care in rural and remote communities;
- Ensuring access to emergency delivery through C-section where there is lack of general practitioner/surgeon and/or general practitioner/anaesthetist;
- Ensuring access to pre and post natal specialist services for at risk women and infants.

With an aging population in many rural and remote communities, there are more people having difficulty coping with activities of daily living because of health-related problems or a life-threatening illness. They require access to a number of publicly subsidized services including home support, adult day services, and residential care. In this context, it is essential to determine what is the practical capacity to provide access to specialized geriatric or psychogeriatric services and home and community care services in rural, and especially, remote communities and in their absence, what are realistic, innovative, and flexible local solutions and/or pathways for patients to access services elsewhere.

Access to trauma services in rural and remote British Columbia is a particular concern given the prevalence of resource-based industrial employment and the incidence of transportation-related injuries. In rural and remote communities, the following are critical considerations:

- Clear patient transfer pathways to trauma care centres bypassing centres that do not have the capacity to provide the necessary trauma care
- Access to pre-hospital care, stabilization, and patient transportation to higher levels of care as quickly as possible
- Access to specialized knowledge and expertise to guide and support generalist health care providers.

The pathways to access these specialized services must be clear and reliable, whether the services are accessed within the health authority’s regional health service delivery system or through provincial centres within the tertiary/quaternary care and academic health science centre system.
For patients that require medical and surgical care that can only be provided in an acute care hospital environment, the immediate focus of the rural strategy will be:

- Clarifying and publicizing the regional distribution of hospital services and any plans for changes
- Clarifying referral pathways and timelines
- Focusing on and reporting the level of and quality of services provided in rural hospitals

Regional health authorities will adopt a consistent process across their rural communities to enable local community level partnerships between local health authority leadership, physicians, health professionals, patients, caregivers and community leaders to design Integrated Primary and Community Care Practices across rural and small rural communities.

Critical to this approach is the combining of the right skill mix and numbers of health providers to meet the primary health care needs set out above including Family Physicians, Nurse Practitioners, Community Care Nurses, Allied Health staff, Home Health Support staff, Mental Health and Substance Use staff, and Public Health staff, as well as specific issues such as:

- Physicians: The identified need to define the role of a rural physician and to ascertain the distinctive skills required when working in smaller communities.
- Nurses: The need to: meet current and future demands; improve access to education; consider a clinical component; and, for a learning assessment for RNs who have worked in remote communities outside of BC. The integration of Nurse Practitioner roles into BC’s health system needs to be accelerated.
- Physicians, Nurses, and Allied Health Professionals: The integration into rural remote areas and support and incentive programs.

Given the current challenges to providing care in rural areas, technology innovations can help rural communities to improve their health and health care. To maximize benefits, health professionals working in rural areas are already engaged in effecting change. Interdisciplinary teams supported by Information Management and Technology (IM/IT) enabled tools can bring value to underserved rural communities.

The electronic medical record (EMR) is essential to improve the quality of care provided within the primary care environment.

Telehealth requires setting out a system wide approach; a plan for the use of telehealth in rural and remote areas; and, standardizing its usage in rural areas.

**The Next Steps - Focusing and Re-energizing the Commitment to Rural Health Care**

The recommendations put forward in this paper push the boundaries of what we have been doing so far and emphasize a need for timely, short and longer term action. I want to emphasize that we are putting
forward a range of proposed actions that we think will improve our health services in a number of important areas and better position our health system to meet increasing demand from key patient populations. The actions proposed would be undertaken opportunistically building on initiatives and innovative service delivery already underway across B.C., but also will require a systematic approach to change that builds a truly patient-centred system of care (The British Columbia Patient-Centered Care Framework – hyperlink).

You may have different views on the proposed action, how to improve the system or how to implement these recommendations and that is precisely what we are testing out by posting these papers. Your feedback will be part of a healthy and thoughtful discussion of these recommendations. Over the coming three months my aim is for us to achieve a good level of consensus across key partner and stakeholder groups of what the final set of specific actions should be; and then, for us to move forward collaboratively to figure out the detail, the how and the timing of implementation linked to better meeting current and emerging needs in a timely way. Patients as Partners will be an important part of this process.

I want to assure you the implementation of the final set of recommendations will allow enough flexibility for a diversity of implementation approaches across communities but that I also intend to push us to create a truly integrated system of health care that works for patients and not just for us. Your input, creativity and innovation in shaping and implementing the final set of recommendations at the local, organizational and provincial levels will bring new solutions and enrich our B.C. health system.

In moving forward, the Ministry of Health of Health is assigning specific policy directions to the practice level, organizational level, and provincial level of the health system. The following policy directions apply specifically to the communities classified as rural, small rural and remote by Regional Health Authorities (see Appendix A). These policy directions build on and add to work currently underway and will be implemented as part of the formal Regional Health Authority working plans starting April 2015. The First Nations Health Authority will be a key partner in working with the Regional Health Authorities to apply these directions to close health gaps for First Nations communities.

1. Practice Level - Service Delivery

1.1 Health Promotion and Disease Prevention: In 2015/16, Regional Health Authorities will develop three year local community plans for all rural and remote communities to create environments that foster healthy behaviours and programming that improves the health of the population. These plans will be developed in collaboration with local communities. The plans will be referenced in their Service Plans, be available on the health authority web site, and attached to their Detailed Service and Operational Working Papers. The first set of community plans will start 2016/17, be refreshed every three years with updates on progress provided annually. These plans will:

• Provide health status profiles for individual communities that will be refreshed every three years to assist in planning, targeting efforts and tracking progress.
• Identify specific areas where they are working with communities, departments across government and other partners as they undertake work to address broad determinants of health, such as education, housing, healthy infrastructure, and food security.
• Identify specific actions and initiatives to promote healthy behaviours in collaboration with communities to promote and support individual responsibility for health and healthy living.
• Reference specific actions and initiatives that are being undertaken in collaboration with Aboriginal communities to close health status gaps and efforts to encourage holistic approaches to health and wellness that incorporate traditional Aboriginal healing and wellness practices.

1.2 Primary and Community Care: Regional Health Authorities will implement an integrated, multidisciplinary primary and community care practice in each of the rural and small rural communities (based on population size it is recognized that certain rural communities may need more than one practice) that has:

• the capacity to address the episodic and longitudinal health care needs of the community/catchment area;
• the capacity to meet the needs of specialty populations (including maternity care, chronic medical conditions, frailty home support, cancer care, mental illness, substance use, and palliative care);
• for specialty populations, key service elements consistently applied across communities will include effective attachment and intake to the practice; assessment; case planning; case coordination; and rapid mobilization of services;
• services will include primary and community care; and
• the capacity to respond effectively to 24/7 urgent and emergency care where required for short periods of time with effective linkages to higher levels of services.

This will be done in collaboration with physicians and through the vehicle of Collaborative Services Committees to enable local community level partnerships between local health authority leadership, physicians, health professionals, patients, caregivers and community leaders to design Integrated Primary and Community Care Practices across rural and small rural communities. Where practical, these will also act as the hub, outreach and support to remote rural community services.

The multidisciplinary team will be, where possible, co-located. Ideally, physicians will be fully incorporated into the teams but where this is not agreeable to existing physicians, they will be virtually linked with full incorporation being achieved gradually through replacement when they leave or retire or through the recruitment of new additional physicians to the community. The organizational delivery model can be health authority operated, provider-led by contract; or delivery through establishing a not-for-profit agency.

Where teams are located in a community with a hospital, the team will be fully linked into providing services in the hospital as appropriate.

The practice team will be augmented by visiting and virtual tele-health services with consultations for both patients and providers and where appropriate shared care between providers and specialists for
patients.

Where appropriate, these teams will be built in partnership with the First Nations Health Authority and incorporate traditional models of wellness in primary, maternity and mental health services.

By September 30, 2015, each of the Regional Health Authorities will provide an assessment of the status of primary and community care services across all rural, small rural and remote communities and a specific three year plan on how they intend to move forward with this policy direction as a region. This plan will be referenced in their Service Plans, be available on the health authority web site, and attached to their Detailed Service and Operational Working Papers. It is recognized that this process will take time and engagement. The objective is for these services to be fully put in place over a three year period from April 1 2015/16 through September 30, 2017/18 with subsequent continuous improvement and refinement. The Regional Health Authorities will report out on progress against the plan to the Ministry of Health and on their website starting spring 2016.

2. Organizational Level – Operationally-Based Enabling Supports to Rural Health

2.1 Practice Support Teams: Regional Health Authorities in collaboration with other service partners will put in place designated Practice Support team(s) by June 30, 2015 to enable the implementation of integrated, multidisciplinary primary and community care practices across their rural and remote communities. The teams will support the establishing Collaborative Support Committees and then support these committees and the providers through the practice design and implementation phases of the work. These teams will also play a critical role in supporting the assignment and/or recruitment of health professionals to the practices as required.

2.2 Home Support and Residential Care in Rural Communities: In collaboration with communities and patients, Regional Health Authorities will initiate work on exploring innovative and cost effective service options to better support aging in place but also clarity on residential care options for when they are required to allow active preplanning by older adults and their families. This work will be reported in their Service Plans, be available on the health authority web site and attached to their Detailed Service and Operational Working Papers starting 2015/16.

2.3 Access to Specialist Consultation and Support: The Regional Health Authorities in collaboration with the Provincial Health Authority will establish a formal regional, and where appropriate, provincial network of specialized teams available by telephone, telepresence or visits with rapid mobilization capacity to support primary and community care practices across rural and remote communities. These networks will be established by the end of fiscal year 2015/16 and reported out in their Service Plans, be available on the health authority web site and attached to their Detailed Service and Operational Working Papers starting 2016/17.
2.4 Emergency Health Services and Access to Higher Levels of Emergency Health Care:

BC Emergency Health Services (BCEHS) will conduct a comprehensive strategic and operational review of inter-facility patient transfers that occur by ground ambulance to improve emergency response capacity and ensure timely, quality pre-hospital care in rural and remote communities. The review will examine appropriate deployment of BC Ambulance Services (BCAS) transportation resources and be complete by October 2015 and reported to the Ministry of Health and be available on the BCEHS and Regional Health Authority websites.

BCEHS will report out no later than October 2015 on its demand analysis and deployment modelling to ensure air ambulance resources and critical care paramedics are optimally located and deployed to deliver timely, quality patient care.

BCEHS in collaboration with the Ministry of Health will pursue changes to the regulatory framework and expand roles for paramedics to enable effective use of Advance Care Paramedics in rural and small urban communities. This will be also linked to the introduction of a minimum of 80 new FTEs in community paramedicine at the Primary Care Paramedic or Advanced Care Paramedic level over the period April 1, 2015 to March 31, 2018.

2.5 Rural Hospitals: Regional Health Authorities on their websites will provide information for their communities on the range of hospitals available across their region, the level of care provided by those hospitals, pathways to accessing care at those hospitals linked to their primary and community care practices, and establish a rolling three year plan for those hospitals that gives clarity to patients and community around service directions. No later than April 2016/17, quality indicators will be routinely reported on hospitals through the Ministry of Health and on the Regional Health Authority’s web site.

Provincial Level – System-Based Enabling Support

3.1 Health Human Resources Planning and Management: A range of specific actions will be taken by the Ministry of Health to contribute to improved services for rural and remote communities:

- Develop and implement funding and compensation mechanisms to support health professional staffing models for the primary and community care practices in rural and remote communities, as well as the formal regional and where appropriate, provincial network of specialized teams. This will be done incrementally as the strategy is implemented in 2015/16 and be fully completed no later than March 2016 and be undertaken as appropriate in consultation with health authorities, the Doctors of BC and relevant unions.

- Optimize scope of practice, skill mix, and skill flexibility to support the rural primary and community care practice model. The Ministry of Health in consultation with the Regional Health Authorities, Colleges and Associations actively review scope of practice linked to the enhancing generalist practice while utilizing specialist skills sets linked to each of the primary and community care health provider groups. As the models
develop on the ground in the communities, the Ministry of Health will actively work to enable appropriate
and safe changes in support of improved rural care.

- Work with the Doctors of BC, the Joint Standing Committee on Rural Issues, the Rural Coordination Centre
  of BC, the University of British Columbia Faculty of Medicine and Continuing Professional Development
  department and others, to better elaborate and support through training generalist models of physician
  practice in rural communities throughout the province.

- In 2015/16, complete a review and make recommendation for improvements and additions to
  incentive and support programs for health human resources in rural and remote communities linked
  to the evolving practice models. Specifically review and improve upon existing physician recruitment
  and retention incentive programs and supports by introducing more flexibility to better respond to
  community service needs, and implement a provincial Practice Ready Assessment program that will
  prepare internationally-educated physicians for practice in rural and remote settings in the province.
  Develop incentive programs and supports specifically for nursing and allied health care professionals
  to enable inter-professional models of care, and implement a provincial Nursing Community
  Assessment Service to enable internationally-educated registered nurses, licensed practical nurses
  and care aides to enter the workforce in our province. Work with other provinces and the federal
  government to address barriers to recruitment resulting from changes to the Temporary Foreign
  Worker program.

- Working with HEABC, the Ministry of Health will focus on improving timely recruitment and
  deployment of health professionals to rural and remote communities. The work will include
  developing an evidence-based and survey informed provincial forecast and resource planning model
  linked to regional and local resource plans for rural and remote communities to allow increased
  practice recruitment and deployment of health professionals in advance of retirements or leaving,
  including allowance for overlap and duplication of services over transition periods to increase
  continuity of service provision. The work will also include the development of a provincial approach to
  best practices in marketing and recruiting health professionals to work in rural and remote
  communities. Finally the work will also develop, in collaboration with Regional Health Authorities,
  contingency service action plans for high risk communities with very small numbers of health
  professional staff to better mitigate service loss due to retirements or when staff leave to take other
  roles. The work and recommendations for action will be ready for deployment April 2016.

- In 2015/16, the Ministry of Health will review opportunities for expansion and distribution of
  education and training programs specifically for nursing and allied health care workers within Interior,
  Northern and Island Health Authorities, in order to support education and training of individuals
  closer to their own communities, and work with professional associations and unions, educators,
  health authorities and other partners to reach out to students in local communities to promote career
  opportunities in health care.
• In 2015/16, the Ministry of Health will examine policy tools available for government and health authorities to have more effective influence on distribution of health care professionals throughout the province. This will include consultation with the Doctors of BC and health unions. Recommendations will be brought forward in the fall of 2015.

3.2 **Accountability and Implementation:** The Ministry of Health through the Health Service Policy and Quality Assurance Division will establish public reporting, monitoring and impact/outcome assessment mechanisms for deployment starting April 2015.
Introduction

*Rural Health in British Columbia* is a planning and action framework that will be used to enable a consistent approach to addressing health service priorities through a rural lens. Policy directions will be built around four categories: understanding population and patient health; developing quality and sustainable care models; recruiting and retaining engaged, skilled health care providers; and supported by enabling IT/IM tools and processes that together will allow innovation and flexibility in responding to the diversity of geographies across the Province of British Columbia.

This framework will be used by the regional health authorities to work in collaboration with its key partners and stakeholders to improve the design and delivery of rural health services in the province and to support residents of rural British Columbia to live healthy lives with access to a system of quality health care services working with the realities of providing those services in rural BC. The policy framework will be used by the staff, physicians and managers who lead implementation and as such there is a strong need to engage the implementers in understanding the policy framework and further contributing and developing the policy framework over time. A key partner for the regional health authorities in this effort will be the First Nation’s Health Authority.

*Rural Health in British Columbia* was collaboratively created by the British Columbia Ministry of Health, health authorities, with additional input from the First Nations Health Authority and key stakeholders such as rural physicians, nurses, midwives; as well as mayors, municipal council members, and regional district directors attending the Union of British Columbia Municipalities 2014 Convention.

Strategic Context

Seven health authorities have the responsibility to plan and deliver health services in the province of British Columbia. Five geographically based regional health authorities deliver a broad continuum of health services to meet population health needs within their respective regions. These five include Vancouver Coastal Health, Fraser Health, Interior Health, Island Health, and Northern Health. The Provincial Health Services Authority, in collaboration with the regional health authorities, manages the quality, coordination and accessibility of province-wide health services and programs. The newest health authority is the First Nations Health Authority which plans, designs, manages and funds a range of First Nations Health programs.

In February 2014, the Ministry of Health set out a refreshed strategic direction for the health system in *Setting Priorities for the BC Health System*. In April 2014, the Ministry of Health published *BC Health System Strategy Implementation: A Collaborative and Focused Approach*. This follow-up document set out three key areas of focus linked to the eight priorities:

- Delivering patient-centred services and care.
- Driving performance management through continuous improvement across service and operational accountabilities.
- Driving a cross sector focus on five key patient population and service delivery areas linked to
the eight priority areas.

The paper also set out a five-phase, systematic approach for implementing the change agenda:

- **Phase 1**: Policy Development (including stakeholder consultation and engagement)
- **Phase 2**: Accountability, Action Planning and Communication
- **Phase 3**: Implementation
- **Phase 4**: Reporting and Monitoring
- **Phase 5**: Impact and Outcome Assessment

Over the summer and fall of 2014 the Ministry of Health initiated Phase 1, producing the first set of policy papers that set out policy direction arising from the eight priorities from *Setting Priorities* linked to evolving population and patient needs: strengthening primary and community services; better meeting surgical demand; implementing a health human resource planning and management strategy; better using enabling IM/IT and technology to support improved services; realigning funding strategies to better meet emerging health care needs. The policy directions align with the three overarching goals of the *Triple Aim* (developed through the Institute of Health Improvement):

1. Improving the health of populations;
2. Improving the patient experience of care (including quality and satisfaction), to which B.C. has recognized the additional requirement of improving the experience of delivering care for providers and support staff as critical to patient-centred care built on efforts of those who deliver and support health services; and
3. Reducing the per capita cost of health by focusing on quality (especially effectiveness and appropriateness) and the efficiency of health care delivery.

The release of these papers positions the Ministry of Health to move into the stakeholder consultation and engagement portion of Phase 1 before moving into Phase 2 in the spring and fall of 2015. This builds on work that is currently underway across the regional health authorities but will bring additional clarity and focus to that work.

**A Rural Policy Lens**

This policy paper brings a rural lens to these policy directions by joining the elements into a go forward rural strategy. Much of British Columbia is rural which introduces unique challenges that must be addressed if the BC health system is to achieve its strategic vision to *systematically and opportunistically improve the health of the population through effective public health and healthy living strategies while increasing the value for patients based on providing patient-centred, quality services (access, acceptability, appropriateness, safety) that achieve health outcomes known to accomplish intended results and that matter to patients and their families (effectiveness)*.

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Understanding Population Health and Patient Health Care Needs of Rural British Columbia

Rural British Columbia is a unique, diverse, and vital element of this province. People of a wide range of backgrounds, cultures, and traditions call rural British Columbia their home. About 95% of the provincial land base is non-urban. Rural BC is a significant driver of British Columbia’s overall economy through agriculture, mining, forestry, energy development, and tourism. From 2001-2010, the natural resources from non-urban British Columbia produced 69.7% of British Columbia’s manufactured exports annually. A strong sense of place characterizes rural British Columbia and impacts the way in which health care providers carry out their work. The nature of rural service delivery requires partnerships across multiple sectors, innovation and creativity to meet the needs of both communities and the individuals who live in these communities.

Rural British Columbia Demographics

The populations of rural British Columbia are often small, dispersed, and fluctuating. Many areas of the province have less than five people per square kilometre (Figure 1).

Figure 1: British Columbia Population per Square Kilometre

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such as the forestry, silvicultural, agricultural and mining industries influence population fluctuations year to year, and even month to month in some areas. For example, several mines have recently opened or expanded in Central British Columbia, the Kootenays and the Cariboo regions, and growth in the mining sector is expected to increase with five new mines under construction, and seven mines approved for major expansions in the near future.  

Also, several mines have recently opened or expanded in Central British Columbia, the Kootenays and the Cariboo regions, and growth in the mining sector is expected to increase with five new mines under construction, and seven mines approved for major expansions in the near future.  

Oil and gas development is expected to increase economic investment and job growth in rural communities in the coming years. The Government of British Columbia’s vision is for three liquefied natural gas facilities in operation by 2020, which is estimated to create thousands of jobs in construction, engineering, and skilled trades in the Northeast and Northwest of the province.

Other economic drivers are expected to slow population growth or even contribute to declines in some areas. For example Mountain Pine Beetle infestation has impacted forestry across 18.3 million hectares, killing an estimated cumulative total of 723 million cubic meters of timber.

Growth rates across rural British Columbia have historically fluctuated and will continue to do so in the coming years. Although in some cases the absolute changes are small, the impact of these changes on the sustainability of economies and services in rural communities can be profound. Often these population shifts are punctuated by dramatic demographic changes. In many areas, younger generations leave rural communities to find other economic or educational opportunities, leaving behind disproportionately more elderly residents. These elderly residents are left with limited supports, making it even more difficult to overcome transportation barriers and access health services. In practice, community infrastructure has developed and evolved around a relatively young population in many rural communities. As the population ages, the readiness of communities to support aging is emerging as a potential issue.

**Rural British Columbia and Aboriginal Peoples**

Rural British Columbia is home to many First Nations communities and Aboriginal peoples, and a large percentage of the rural population identifies as Aboriginal (see Figure 2). Approximately 11.3% of the rural population self-identifies as Aboriginal, compared to 3.7% of the urban British Columbia

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population.  

Figure 2: Percent of Population Identifying as Aboriginal in British Columbia  

Some rural communities include more than triple the rural Aboriginal population average. Overall, First Nations and Aboriginal peoples tend to be a younger population with higher birth rates and greater health disparities, which require focused attention to designing and delivering culturally safe services that meet the particular needs of this population. First Nations and Aboriginal peoples hold a holistic view of health and many are increasing their understanding of traditional cultural healing practices.

The First Nations Health Authority is a relatively new organization that funds some health programs and services, and works to address service gaps through new partnerships, closer collaboration, and health system innovation. As the First Nations Health Authority evolves, they will contribute significantly to addressing the health and health service needs of British Columbia’s First Nations and Aboriginal populations.

Population Health Status and Trends of Rural British Columbia

To understand the population’s health and health care needs, the Ministry of Health groups BC residents according to their major health concern in a given year. The population is first divided into the four

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11 First Nations Health Authority (2014) About the FNHA. Accessed online at: http://www.fnha.ca/about/fnha-overview
major groupings: Staying Healthy, Getting Healthy, Living with Illness and Chronic Conditions, and Towards the End of Life. These are further divided into smaller patient population groupings as follows:

**Staying Healthy**
- Healthy Non User
- Healthy/Minor Episodic Health Needs
- Maternity and Healthy Newborns

**Getting Better**
- Major or Significant Time Limited Health Needs (<18 years)
- Major or Significant Time Limited Health Needs (adults)

**Living with Illness and Chronic Conditions**
- Mental Health and Substance Use Needs
- Population with Cancer
- Low Complex Chronic Conditions
- Medium Complex Chronic Conditions
- High Complex Chronic Conditions (without Frail Assisted Daily Living Supports)

**Towards the End of Life**
- Frail Population Living in the Community
- Frail in Community with High Complex Chronic Conditions
- Living in the Community with Palliative Needs
- Frail Population Living in Residential Care

The presenting challenge is how best to meet the range of health service needs set out above for rural and remote communities.

Generally speaking, individuals who reside in predominantly rural communities tend to have poorer socioeconomic status compared to their urban counterparts, which evidence shows is strongly linked to poorer health status:

**Employment:** A significant driver of employment in rural BC is the resource sector resulting in a number of factors that influence health – income earners working away from home and community leaving family members for significant periods of time; employment industries where there is a higher risk for injury.

**Poorer socio-economic status:** rural residents of British Columbia often have lower educational attainment, lower income and employment rates, crowded or unsafe housing, etc. (see Figure 3).  

**Lifestyle:** many rural residents exhibit less healthy behaviours. Smoking, lack of physical activity, lack of healthy diets, and obesity rates are all significantly higher among rural residents compared to their urban counterparts.  

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12 BC Stats.
**Chronic disease:** unhealthy behaviours significantly contribute to chronic diseases such as diabetes and chronic obstructive pulmonary disease. Positive behaviours can reduce the incidence and impact of chronic diseases, while unhealthy behaviours can increase their risks and effects. The risk of dying prematurely from circulatory diseases is higher among people living in rural and remote areas.  

**Maternal health:** perinatal indicators are poorer in some rural areas. For instance, infant mortality rates from 2006-2011 were high in the Alberni, Queen Charlotte and Bella Coola Valley Local Health Areas.\(^{-17}\) Rural mothers also frequently have very different birth experiences compared to urban mothers, and are more likely to have long travel times to give birth, more likely to experience a hospital transfer, and more likely to have their birth attended by a family physician rather than an obstetrician or gynecologist.\(^{-18}\)

**Mortality:** overall mortality of Canadians due to all injuries, poisonings and motor vehicle accidents is higher as rurality increases. Residents in rural areas are also more likely to commit suicide (with boys under age twenty 4.3 times and girls under twenty 6.5 times more likely to commit suicide than their urban counterparts).\(^{-19,20}\) The all-cause mortality rates (age-standardized mortality rates) of both Canadian men and women of all ages increases with increasing remoteness of place of residence.\(^{21,22}\) Likewise, Potential Years of Life Lost to external causes of death (including motor vehicle accidents, drowning, falls and poisonings) increase with rurality (with the Nisga’a, Bella Coola Valley, Kootenay Lake, Vancouver Island North and North Thompson areas having some of the highest rates).\(^{-23}\)

**Life expectancy:** in the most rural areas of British Columbia, life expectancy can be over five years lower than life expectancy in some urban areas. For example, the Saanich Local Health Area has a life expectancy of 83.4 years whereas the Nisga’a Local Health Area has a life expectancy of 75.4 years which is well below the British Columbia average of 82.3 years.\(^{-24}\)

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15 Canadian Institute of Health Information (2006).
18 Canadian Institute for Health Information (2013) *Hospital births in Canada: A focus on women living in rural and remote areas.* Accessed online at: [https://secure.cihi.ca/free_products/Hospital%20Births%20in%20Canada.pdf](https://secure.cihi.ca/free_products/Hospital%20Births%20in%20Canada.pdf).
21 Canadian Institutes of Health Information (2006).
Against this health status backdrop, three specific service challenges stand out in the context of rural and remote communities: ensuring access to quality primary care services; ensuring pathways to accessing specialized perinatal, medical, and surgical services when they are required; and how best to support aging in place.

The first two of these areas have been the focus of much of the rural health efforts over the past two decades. However the aging population is a more recent challenge. British Columbia now has the fastest growing seniors population in Canada. The number of seniors in BC is expected to almost double by 2036, and the 75+ population will grow by almost 130 per cent over the same time. While the majority of seniors are comparatively healthy and have few serious health concerns, others within this age cohort are not as fortunate. Frailty (complex care needs necessitating assistance with activities of daily living)

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increases with age, especially after a patient reaches the age of 75 and then into their 80s or 90s, along with the prevalence of dementia and other forms of cognitive decline. How to address this need in rural and remote settings is particularly challenging.

While there are many benefits to rural life, living in rural British Columbia also clearly presents some unique challenges. There are practical deficits such as the lack of transportation infrastructure and broadband access that create challenges to individuals accessing health services. Studies have also shown some citizens in rural areas report more feelings of social isolation and lack of support that can also impact overall health status.  

The next section will now look at the scope and challenges of addressing population and patient health needs in rural and remote settings.

**The Case for Change - Strengthening Current Service Delivery and Capacity**

**The Scope and Challenge of Providing Health Care Services in Rural British Columbia**

Health services in British Columbia are guided by a common set of quality dimensions established by the British Columbia Patient Safety and Quality Council (effectiveness, appropriateness, accessibility, and safety). The outcome of actions recommended in this paper must be to sustain or improve these quality dimensions through the provision of health services that are focused on the patient, person or population.

Beyond the overarching quality dimensions, it has been proposed by those consulted for this paper that the unique character and demands of rural life require some specific service delivery principles. These principles are identified and described in Table 1: Rural-Specific Service Delivery Principles.

**Table 1: Rural-Specific Service Delivery Principles**

<table>
<thead>
<tr>
<th>Population Health Need</th>
<th>Service delivery will be based on the population health needs of local communities. Emphasis is placed on promoting the health of the population.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Responsibility</td>
<td>Responsibility for a healthy population is shared between individuals, the community and health service providers.</td>
</tr>
<tr>
<td>Flexibility and Innovation</td>
<td>Flexibility and innovation will shape service delivery models. Emphasis will be placed on sharing and spreading innovative approaches.</td>
</tr>
<tr>
<td>Team Based Approaches</td>
<td>Services will be delivered in a team-oriented, integrated way.</td>
</tr>
<tr>
<td>Cultural Safety</td>
<td>Individuals will be treated in a respectful and culturally safe manner.</td>
</tr>
<tr>
<td>Close to Home</td>
<td>Services will be provided as close to home as possible. As services become increasingly specialized, quality and sustainability become balancing considerations.</td>
</tr>
</tbody>
</table>

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Together these quality dimensions and rural-specific service delivery principles will guide how rural services are planned, designed and implemented in British Columbia. These principles will provide a reference point for how health organizations can collaborate to meet the changing health needs of rural populations, and will outline for decision-makers the important considerations and potential opportunities available in rural British Columbia.

In more specific terms, health service delivery can be broken down into four main key service types:

1. Public Health and Health Promotion Services
2. Community Health Services
   - Primary Health Care Services
   - Medical Specialist Services
   - Specialty Population Health Services (including perinatal care, chronic medical conditions, frailty home support, cancer care, mental illness, substance use, residential and palliative care)
3. Diagnostic and Pharmacy Services
4. Hospital Care

In many rural areas, it is either not practical or there are constant struggles to maintain a “critical mass” of services across the main service types, which has both sustainability and quality implications for service delivery. For many procedures and treatments, health providers must regularly treat enough patients to maintain their competencies or meet quality standards. In addition, the low volumes, so often a part of rural healthcare service delivery, generally have higher per-capita costs. Although this in itself should not imply that the service cannot or should not be provided, it presents challenges to recruitment and sustainability of health care providers.

This is especially challenging for specialized acute care services such as obstetrics, critical care, and urgent/emergency care, and for residential care services. For these services, there is a need to balance local access to service with the need for a critical mass of procedures or services to meet quality standards or cost effectiveness. These services often require access to physician specialists who may not be readily available in rural communities.

Access to ancillary health services, such as dental care and physiotherapy, can also be challenging in rural and remote areas. Research from the Canadian Institute of Health Information demonstrates that dental surgery to treat cavities and severe tooth decay is the leading cause of surgery for preschool-aged children in Canada, and surgery rates are three times higher for children from rural neighborhoods (compared to urban neighborhoods). Dental day surgery rates are nine times higher for children from areas with high Aboriginal populations (compared to areas with low Aboriginal populations).

Distance and geography impact access as rural residents are often required to travel for care. In some circumstances, this travel may be required frequently depending on the need for specialized treatments.

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such as cancer care or renal care. This travel may be over long distances across challenging terrain, a situation exacerbated in the winter months. Many coastal communities depend on ferries to access higher levels of service available in neighbouring communities, which run on periodic schedules with limited to no overnight service. Inclement weather (such as high winds, snow, avalanches) can block access to some communities for a few hours to even a few days.

**Structuring Service Delivery Structure for Rural British Columbia**

The practical reality in providing health services in rural and remote communities therefore requires a different approach than that of large metro or urban centres. In the future, health authorities will need to structure their services more consistently with the framework outlined in Figure 4 and will be required to outline pathways for patients that enable access to higher levels of care in larger population centres.

**Figure 4: Province-Wide Health Service Categories**

<table>
<thead>
<tr>
<th>Community Category</th>
<th>Level of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Population Density</td>
<td></td>
</tr>
<tr>
<td>Large-Urban</td>
<td>Highly specialized care, with subspecialties, to meet tertiary care needs of surrounding community and health authority, wide referrals</td>
</tr>
<tr>
<td>Urban-/Small-Urban</td>
<td>Specially medical, surgical, and intensive care to meet regional care need of broad referrals from across a large health area. General inpatient care and some specialized services (such as general surgery, critical care, and inpatient psychiatry), diagnostics, mental health available</td>
</tr>
<tr>
<td>Rural</td>
<td>Some specialty acute services (such as perinatal and day surgery), residential care and assisted living generally available in all communities</td>
</tr>
<tr>
<td>Limited general inpatient care to meet basic acute care needs of local population, public health, mental health and substance use services available in community, residential care and assisted living services available in some communities</td>
<td></td>
</tr>
<tr>
<td>Small-Rural</td>
<td>Primary and community care that meets most health needs of the population, with potential for urgent and basic emergency care in some locations. Emergency transportation mechanisms are crucial. Visiting child, youth and family, and mental health and addictions outreach services</td>
</tr>
<tr>
<td>Remote</td>
<td>First aid and physician or nurse led care to meet immediate needs of remote population. May include facilities for itinerant primary and community care that meets basic health needs</td>
</tr>
<tr>
<td>High Community Isolation</td>
<td>Community too small and dispersed to sustain local health services. Health service needs addressed in neighbouring communities or through outreach services</td>
</tr>
</tbody>
</table>

Notes:
- See Appendix A for specific community designations across the health authorities.
- Facilities that are within an hour of a higher level of care, in most cases, would have fewer services than typically expected in a community of comparable size due to their proximity to a larger centre.
- Each category typically includes everything in the categories below.

Each of the main service types need to take into account the rural, small rural and remote classification:
Population Health and Health Promotion
As identified above, the comparatively poorer health status of communities in rural and remote areas of BC is a concern. Health authorities have a key accountability to provide public health and primary care services that improve the health of the population and to work with individuals and communities to foster healthy behaviours. They also have a critical role to play in collaborating with local communities, non-governmental organizations, and other departments of government as they undertake efforts to improve the health status of the community linked to the broader social determinants of health in areas such as education, housing, healthy infrastructure, and food security. Such collaborative efforts require a sustained longitudinal effort to change key health indicators.

Integrated Primary and Community Care Practice as the Key Building Block for Rural Health Services
The foundational building block to providing health care in rural and remote areas is a resilient primary and community care service delivery model that has the capacity to: address longitudinal health care needs; meet the needs of specialty populations (including perinatal care, chronic medical conditions, frail elderly, cancer care, mental illness, substance use, and palliative care); and respond effectively to urgent and emergency care where required for short periods of time with effective clinical pathways and linkages to higher levels of services.

This will require both flexibility and innovation in collaboration with patients, providers and local communities to design and structure these services. This paper proposes that regional health authorities adopt a consistent process across their rural communities to enable local community level partnerships between local health authority leadership, physicians, health professionals, patients, caregivers and community leaders to design Integrated Primary and Community Care Practices across rural and small rural communities. Where practical these will also act as the hub for outreach and support to remote community services. Partnership with the First Nation’s Health Authority will provide key opportunities to leverage access and services.

Critical to this approach is the combining of the right skill mix and numbers of health providers to meet the primary health care needs set out above including Family Physicians, Nurse Practitioners, Community Care Nurses, Allied Health staff, Home Health Support staff, Mental Health and Substance Use staff and Public Health staff (this will be further discussed in the section on health human resources later in this paper).

Developing an approach to skill mix and number of health providers requires a broader vision of resource planning and linkages, in order to map out the issues and develop a strategy to tackle them. In practical terms this requires an assessment and understanding of the need for generalist health care providers. It also requires ensuring those generalists to have linkages to specialized expertise at regional or provincial service centres.

People living in rural and remote areas should have access to high quality perinatal care and specialized geriatric and psychogeriatric services; home and community care residential care services and emergency services. In addition, efficient patient-centred pathways to medical and surgical services
should be put in place to serve this population.

(1) Generalist Health Care Providers

The need for a generalist practice in rural and remote communities is a practical reality and must be balanced against the requirement for quality and safety of those services. In practice there are two Health Human Resource (HHR) deployment approaches that can be pursued in terms of a focus on staff mix and a focus on skill management.

The most common approaches for optimizing staff mix are adjusting the number of personnel, mixing qualifications (i.e., basic versus advanced credentials), balancing junior and senior staff members (i.e., experience), and mixing disciplines (i.e., inter-professional care teams). In general, there is evidence that richer staff mix approaches may be associated with better outcomes and fewer adverse events. Ultimately, there is no clear guidance from the literature on what the ideal mix of health professionals might be, let alone what that might be in rural practice settings. Staff-mix within primary care teams typically includes nurses, physicians, specialists, pharmacists and (more rarely) social workers, non-clinical staff and volunteers.

In addition to addressing staff mix, there are approaches for skill management of individual health service providers and distributing tasks between them:

Role enhancement involves expanding an individual’s skills within their scope of practice through new, non-traditional roles. Examples include nursing specialists, nurse managers of primary care clinics and adoption of community paramedics. In some jurisdictions, role enhancement for pharmacists has included patient education, health promotion, health monitoring and, in some cases, prescribing services. Evidence of the impact of role enhancement is limited and mainly focused on nursing. However, the research limitations are due, in part, to the difficulty in separating the effect of role enhancement from the interventions delivered to the patient.

Role enlargement involves expanding the scope (breadth) and diversity of the worker’s skills. This is already a key aspect of rural strategy in BC, especially for physicians with GP psychiatry, GP pediatrics, GP obstetrics, GP anesthesia, GP surgery, GP oncology.

Skill flexibility refers to the capacity of providers to switch from one role to another. Two strategies are used to promote skill flexibility in healthcare: role substitution and role delegation.

30 ibid.
31 ibid.
32 ibid.
Role substitution extends scopes of practice by working across traditional professional boundaries. Provided the necessary training and quality checks are in place, role substitution can result in care that is equal in quality and efficacy to that which has traditionally been provided.

Role delegation is the final component of skill management.\(^{33}\) Role delegation involves transferring specific responsibilities from one profession to another or from one grade within a profession to another grade.

Both of these approaches (staff mix and skill management) need to be systematically and opportunistically pursued as part of the rural health strategy and will be addressed in more detail in the section on health human resources later in this paper.

(2) Linkages to Specialized Regional or Provincial Service Expertise

In order for generalist health service providers to be appropriately supported in rural communities, access to specialist consultations and services in both planned and emergent situations is critical to enabling quality and safety in service delivery. The pathways to access these specialized services must be clear and reliable, whether the services are accessed within the health authority’s regional health service delivery system or through provincial centres within the tertiary/quaternary care and academic health science centre system. This has both a health human resource and technology component and will be addressed in more detail in the sections on health human resources and technology later in this paper. The robustness of these linkages to specialized services is a key building block to supporting front line health professionals in rural and remote communities, building the confidence necessary to provide quality and, in some cases, enhanced generalist services while avoiding professional isolation when meeting the broad range of health needs of rural patients and communities.

(3) Perinatal Care

Perinatal care is a foundational component of the health care system and includes care from conception through to postpartum for the mother, the baby, and the family. Primary maternity care is complex and involves a variety of disciplines and scopes of practice including family physicians, midwives, nurse practitioners, nurses and obstetricians, nutritionists, and social workers. It is also supported by support personnel, and services such as diagnostic imaging, laboratory testing, and blood banks, appropriate and functional equipment, and effective transport systems across large distances in all types of weather.

Ensuring the adequacy of services for pregnant women who live in Canada’s rural and remote areas can be a challenge for health planners. Communities with few births may not be able to support the array of complex care required by mothers and their newborns. Pregnant women in such communities often face the prospect of travelling great distances to deliver, especially if

\(^{33}\) ibid.
identified risk factors suggest they will need intervention by a specialist.

Several issues are unique to rural and remote communities, including First Nations communities, that must be addressed as part of an effective rural health services strategy including:

- Recruiting, training and retaining qualified staff to provide community-based perinatal care in rural and remote communities;
- Ensuring access to emergency delivery through C-section where there is lack of general practitioner/surgeon and/or general practitioner/anaesthetist;
- Ensuring access to pre and postnatal specialist services for at risk women and infants.

(4) Home and Community Care and Access to Residential Care

In BC, care and support are available from both publicly subsidized and private-pay service providers for people having difficulty coping with activities of daily living because of health-related problems or a life-threatening illness. Publicly subsidized services include: home support, adult day services, residential care, and more.

Publicly subsidized home and community care services are intended to provide a range of health care and support services for people who have acute, chronic, palliative or rehabilitative health care needs. These services are designed to complement and supplement, but not replace, efforts to care for individuals with the assistance of family, friends and community. Home and community care services can assist individuals on a short-term or long-term basis depending upon the care needs. These service offerings include:

- support individuals to remain independent and in their homes for as long as possible by providing services at home that would otherwise require admission to hospital or a longer stay in the hospital;
- provide assisted living and residential care services for those who can no longer be supported in their own homes; and,
- provide services that support individuals, and their families, who are nearing the end of life, at home, in an assisted living residence or a residential care facility, which includes hospice.

With an aging population in many rural and remote communities, this service area will present an increasing challenge. Several issues are unique to rural and remote communities, including First Nations communities, that must be addressed as part of an effective rural health services strategy including:

- Determining what the practical capacity is to provide access to specialized geriatric/psychogeriatric services and home and community care services in rural, and especially, remote communities and in their absence what are realistic, innovative and flexible local solutions and/or pathways for patients to access services elsewhere.
- In rural and remote communities that may not have local access to a hospital, assisted living, or a residential care facility what are the practical, innovative and flexible local solutions and/or pathways for patients to access services elsewhere.
As set out at the beginning of this section, the immediate and foundational goal is to build interprofessional primary care teams made up of family physicians, nurses, physiotherapists, occupational therapists, social workers, paramedics, health care assistants and other allied health workers who can play an expanded role in meeting community health needs in home and community settings in collaboration with the patients, their family and broader community.

(5) Emergency Health Services and (6) Access to Higher Levels of Emergency Health Care

British Columbians who live in rural/remote and northern communities face greater challenges in accessing emergency health services.

Access to trauma services in rural and remote British Columbia is a particular concern given the prevalence of resource based industrial employment and the incidence of transportation related injuries. Quality trauma services are guided by the Trauma Association of Canada standards and are inclusive of a continuum of services from injury prevention through to treatment and rehabilitation. In rural and remote communities, the following are critical considerations:

- Clear patient transfer pathways to trauma care centres bypassing centres that do not have the capacity to provide the necessary trauma care.
- Access to pre-hospital care, stabilization, and patient transportation to higher levels of care as quickly as possible.
- Access to specialized knowledge and expertise to guide and support generalist health care providers.

Health Authorities are working with the Trauma Association of Canada and PHSA’s Trauma Services BC to achieve the appropriate levels of accreditation.

BC Emergency Health Services (BCEHS) has the legislated mandate to provide British Columbians with access to pre-hospital emergency health care. With the consent of BCEHS, First Responder agencies (local volunteer and professional fire departments) also respond to medical emergencies and provide basic life-saving techniques while awaiting the arrival of an ambulance at the emergency scene.

BCEHS provides direct service through BC Ambulance Service (BCAS) and BC Patient Transfer Network (BCPTN). There are 121 rural/remote stations:

- 74 are staffed solely with paramedics scheduled to standby at the station or on pager from the community,
- 47 are staffed with a combination of full-time paramedics and paramedics scheduled on-call or standby[^34].

Historically, the BCEHS staffing model is based on call volumes. The call-based model poses barriers to recruitment and retention of paramedics in rural and remote communities as they may not have

[^34]: BCEHS Internal Databases as of September 2014.
the call volumes to support higher staffing levels. Lower call volumes also mean it is more difficult to maintain health care skills. The Ministry of Health has recently committed to the introduction of Community Paramedics that will both enhance the number of full time paramedics in rural and remote communities and also provide additional health human resources in support of the primary care team. This will be discussed in the section on health human resources later in this paper.

Issues of distance to medical facilities, combined with limited local health care resources have led to a redesign of the service model. BCEHS is working with paramedics, Health Authorities, municipal leaders/regional districts, Band Councils, the Coast Guard, fire departments, and local health care providers to improve inter- and pre-hospital patient care in rural & remote communities. A number of actions are already underway or planned for the near future:

- BCEHS will conduct a comprehensive strategic and operational review of inter-facility patient transfers that occur by ground ambulance to improve emergency response capacity and ensure timely, quality pre-hospital care in rural and remote communities. The review will examine the appropriate deployment of BCAS transportation resources and will be complete by October 2015. Inter-facility transfers by ground ambulance reduce the capacity to respond to emergency calls in rural and remote communities that have only one staffed ambulance and where travel time to the receiving facility may be significant. In these circumstances, emergency response coverage may be provided by geographically re-deploying ambulances from surrounding communities. The objective in reviewing inter-facility transfers that occur by ground ambulance will be to determine approaches that would minimize the impact on emergency pre-hospital care in rural and remote communities.

- BCEHS entered into a partnership with the Northern Health Authority in January 2014 to operate a Low Acuity Transport Unit to service the communities of Burns Lake, Fraser Lake, Vanderhoof, Fort St James and Prince George. The Unit transports Low Acuity Patients into UHNBC for scheduled appointments with same day return of the patient to their home facility. The effectiveness of this service will be evaluated in the coming months.

- In August 2014, BCEHS established a multi-stakeholder Working Group on Haida Gwaii to improve access to services and examine new models of service delivery for rural and remote communities across BC employing community development and community resilience principles. The Working Group’s early recommendations include the establishment of community coordinators and partnerships with local business, industry, health organizations, First Nations and others to provide paramedic training and permit paramedics to be “on-call” and available for ambulance calls while working for their primary employer.

- BCEHS is undertaking demand analysis and deployment modelling to ensure air ambulance resources and critical care paramedics are optimally located and deployed to deliver timely, quality patient care. BCEHS currently has dedicated air ambulance resources located in Vancouver, Kelowna, Kamloops, Prince George and Prince Rupert. There are 79 Critical Care Paramedics (including the Infant Transport Team) stationed in Vancouver, Kelowna, Kamloops, Prince George and Nanaimo.
• The distribution of Advance Care Paramedics in rural communities is both an issue and a challenge. Currently ACPs are used in the following communities outside of the Lower Mainland/Victoria:
  Kelowna: 14 ACPs
  Kamloops: 10 ACPs
  Prince George: 10 ACPs
  Nanaimo: 10 ACPs
  Trail: 1 ACP

Annual patient contact requirements for ACP licensure have to date precluded the establishment of ACP positions in communities with low call volumes for emergency pre-hospital care. However, the introduction of expanded roles for paramedics and changes to the current regulatory framework will provide opportunities to introduce ACPs into rural and/or small urban communities (serving surrounding smaller communities). A key action for the rural strategy will to change the regulatory framework and expand roles for paramedics to enable effective use of Advance Care Paramedics in rural and small urban communities.

**Hospital Services in Rural Communities**

The integrated primary and community care service delivery system is responsible for providing longitudinal, comprehensive care in the community for those with particular chronic and complex health conditions. On occasion, patients require medical and surgical care that can only be provided in an acute care hospital environment. Acute hospital care is the largest and most expensive sector within the health system. There is considerable variation between hospitals and between health authorities in planning approaches, service models, service levels, and the best use of clinical, staffing, operational and management practices. In general terms, hospital services in the province are classified using a one through five level of care description (see Figure 5 below):

  Level 1: Community Health Centre (Day time hours to 24/7 hours of service)
  Level 2: Small Hospital with Capacity for Stable Patients (24/7 hours of service)
  Level 3: Small Community Hospital (24/7 hours of service)
  Level 4: Hospital with Limited Specialty Services (24/7 hours of service)
  Level 5: Regional Hospital (24/7 hours of service)

As noted the range of staffing, service mix and support services may vary in practice but in general, Figure 5 sets out the basic range linked to the five levels.

**Figure 5: Hospital Classifications**
<table>
<thead>
<tr>
<th>Health Centre</th>
<th>Shared call arrangements if present</th>
<th>Chronic disease management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Capacity for Stable Patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Level 2) e.g. Kitimat General</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>24x7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Emergency care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Physician call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Trauma stabilization and transport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ambulance service – remote</td>
<td></td>
</tr>
<tr>
<td>deployment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1 plus:</td>
<td>• Some acute beds for stable patients – stable patients + hold &amp; transfer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Long Term Care beds integrated into mix</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Phlebotomy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Stat and POC lab testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Basic imaging with remote reading through PACS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Telehealth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Emergency care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Physician call</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 24 hour observation of acutely ill patients</td>
<td></td>
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<tr>
<td></td>
<td>• Visiting specialists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ambulance service – rural</td>
<td></td>
</tr>
<tr>
<td>deployment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2 plus:</td>
<td>• Acute inpatient care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Long Term Care facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Short stay inpatient and day surgery</td>
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<tr>
<td></td>
<td>• Maternity, c-section support</td>
<td></td>
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<tr>
<td></td>
<td>• Observation Mental Health</td>
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<tr>
<td></td>
<td>• Phlebotomy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Stat and POC lab testing</td>
<td></td>
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<tr>
<td></td>
<td>• Basic imaging and ultrasound with remote reading through PACS</td>
<td></td>
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<tr>
<td></td>
<td>• Telehealth</td>
<td></td>
</tr>
<tr>
<td><strong>Large Hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Limited Specialty Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Level 4) e.g. Cowichan District</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>24x7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Critical care; stabilize and recover adult patients (stabilize and transfer for children) – trauma “level 5”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Physician call with on-site or response commitment</td>
<td></td>
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<tr>
<td></td>
<td>• Some specialist surgery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Some specialized RNs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• General surgical call coverage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ambulance service - urban</td>
<td></td>
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<td>deployment</td>
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<td>Level 3 plus:</td>
<td>• Critical/step-down care capacity</td>
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<td>• Internal medicine</td>
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<td>• General and some specialty surgery</td>
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<td>• Inpatient psychiatry</td>
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<td>• Inpatient rehabilitation services based on regional population need</td>
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<td>• Phlebotomy</td>
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<td>• POC, stat and high volume lab testing</td>
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<td>• Basic imaging, ultrasound, echo and CT</td>
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<td>• Digital offsite &amp; visiting on-site reading</td>
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<td>• Nuclear medicine for population need</td>
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<td>• Some diagnostic procedures</td>
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<td>• Telehealth</td>
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<td><strong>Regional Hospital</strong></td>
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<td>(Level 5) e.g. Kelowna General</td>
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<td><strong>24x7</strong></td>
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<td>• Trauma centre – trauma “level 3”</td>
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<td>• ICU/NICU/PSCU</td>
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<td>• General and specialty second call</td>
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<td>• Ambulance Service – urban</td>
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<td>deployment</td>
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<tr>
<td>Level 4 plus:</td>
<td>• Specialty medical &amp; surgical day &amp; inpatient services</td>
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<td>• Inpatient rehab services</td>
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<td>• Systemic &amp; radiation cancer centre</td>
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<td>• Specialized day &amp; inpatient mental health &amp; addiction services</td>
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<td>• Basic imaging, ultrasound, echo and CT</td>
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<td>• On-site reading and diagnostic procedures</td>
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As noted in the Setting Priorities document (February 2014, p. 32), there is an urgent need to revisit and rethink the role and scope of hospitals in the entire regional health continuum, including rural. Such a process will require community engagement and debate with the presentation of models of care that provide rural residents with confidence that they will have sensible access to quality emergency services whether provided in a traditional hospital setting or in the community. This will take time. The immediate focus of the rural strategy will be:

- Clarifying and publicizing the regional distribution of hospital services and any plans for changes
• Clarifying referral pathways and timelines
• Focusing on and reporting the level of and quality of services provided in rural hospitals

Health Human Resources in Rural British Columbia

The ability to attract and retain physician, nursing and allied health care workers in rural and remote communities is an ongoing challenge for health authorities as it is for most jurisdictions across Canada.

The challenge of rural and remote recruitment and retention is shared by many countries with low population density and there has been a lot of research into the factors that attract or deter health professionals from rural practice. Much of this research comes from Australia, which has the third lowest population density in the world (Canada is eighth).35

Research shows that poor professional development opportunities are a major disincentive to working in rural and remote communities.36 Roots and Li found professional development to be an important factor for occupational therapists and physiotherapists in deciding whether to locate, stay or leave rural practice.37 However, a Canadian study found access to professional development through telehealth and other distance technologies may have a positive effect on rural and remote retention and recruitment for occupational therapists.38

Financial incentives appear to have a mixed effect on recruitment and retention.39 While these incentives may draw some health service providers to rural practice, they are not always enough to cause them to stay. On the other hand, autonomy (independence) is a major incentive for working in rural and remote communities. In particular, decision-making autonomy is highly valued by all health professionals. What is missing however, is the opportunity to learn from others and develop confidence when part of a bigger team.

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35 Campbell, McAllister, & Eley (2012).
36 ibid.
37 Roots & Li (2013).
38 Wielandt & Taylor (2010).
39 Campbell, McAllister, & Eley (2012).
Physicians (Public Health, Family Physicians, Specialists)

On initial examination, the numbers for physicians practicing in rural BC look strong. Between 2005 and 2013, the number of rural doctors has increased from 1294 to 1582, a 22%\(^\text{40}\) increase (see Figure 5). From 2006 – 2011, the rural population in BC saw a 1.2% increase.\(^\text{41}\) Additionally, since 2009, there are more rural communities who have either seen an increase (39%) or have maintained the same number of physicians (42%) than the number of rural communities who have seen a reduction (23%) in the number of physicians living and working in their community\(^\text{42}\) (see Figure 6).

Figure 5: Rural Doctors in BC, 2005-2013

![Graph showing increase in rural doctors from 2005 to 2013.]

Figure 6: Changes in Physician Counts in Rural Communities from 2009-13

![Bar chart showing changes in physician counts in rural communities from 2009 to 2013.]


\(^{42}\) ibid.
Agreement for Physicians in Rural Practice (RSA) between the BC Government, the Doctors of BC (DoBC) and the Medical Services Commission (MSC) aims to enhance patient care and availability of physician services in rural and remote areas of BC, by addressing unique and difficult clinical circumstances encountered by rural physicians. The BC Ministry of Health, in collaboration with the Doctors of BC, has established a comprehensive portfolio of programs to attract and retain rural physicians through the Joint Standing Committee on Rural Issues (JSC) under the current subsidiary agreement. The JSC has representatives from rural BC physicians, health authorities, Ministry of Health and Doctors of BC staff.

BC’s goal of distributing and expanding medical education throughout the province is intended to prepare future practitioners for the challenges and benefits of medical practice in a variety of settings, including rural, remote, and other underserved communities. There is an identified need to define the role of a rural physician and identify and address the distinctive skills required when working in smaller communities (e.g., dealing with issues not routinely seen but must be addressed quickly for patient survival). Some of the challenges that affect our ability to successfully educate rural family practitioners include the lack of an agreement or social pact with physicians that could clarify expectations regarding their leadership and educator roles, and the need for adequate supports to be provided to rural physicians who educate, preceptor, and mentor students.

Overall, while the Society of Rural Physicians of Canada has indicated that BC has one of the best supplies of rural physicians in Canada, there are still many challenges to consider going forward: the fragility of the service delivery system in a number of rural communities based on the small number of physicians; pending physician retirements; the increasing reluctance of international medical graduates to stay in the community once their return of service commitment has been fulfilled; the feeling of isolation in practice; coverage for leave; and, on-call. Additionally, at a macro level, the distribution is a challenge.

**Nurses**

Since the 1950s, there have been nurses caring for people and communities using advanced practice skills in various rural and remote settings in Canada. Many nurses have had additional training to do their jobs and provided the bulk of primary health care in remote and isolated settings. There are a number of learnings from the Nursing Practice in Rural and Remote Canada II study led by the University of Northern BC that is focused on nurses working in rural and remote areas of Canada.

Over the last 12 years, BC has more than doubled the number of nurse training spaces, adding more than 4,600 new spaces to train Registered Nurses (RNs), Psychiatric Nurses, specialty nurses, nurses re-entering the workforce, Licensed Practical Nurses, and nurses with graduate degrees. Since 2009, the number of rural nurse full time equivalent (FTEs) positions (excluding nurse practitioners)

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43 Canadian Nurse Practitioners Initiative, Nurse Practitioners in Rural and Remote Communities; [http://cna-a lic.ca/.../CNA/Page-Content/PDF-EN/information_sheet_3_e/en/1](http://cna-a lic.ca/.../CNA/Page-Content/PDF-EN/information_sheet_3_e/en/1)
44 University of Northern BC. Nursing Practice in Rural and Remote Canada II. Accessed at: [http://ruralnursing.unbc.ca/wordpress/](http://ruralnursing.unbc.ca/wordpress/)
within Interior, Northern and Island Health have increased from 6631 FTEs to 6859 FTEs, a 3.4% improvement (see Figure 7).46

Figure 7: Rural Nurses FTEs in BC 2009-2013

![Nurses in BC](image)

**Certified Registered Nurses**
In BC, nurses who use the title Registered Nurse (Certified) or RN(C) have an expanded scope of practice. Certified practices are carried out independently and the RN(C) is accountable for the diagnosis and treatment of their client. These RNs provide primary care as set out in decision support tools and can diagnose and treat some diseases and disorders and carry out some restricted activities (including administering, compounding or dispensing Schedule I medications) without a doctor’s order.

Remote Nursing Certified Practice occurs in communities where there are no doctors or nurse practitioners living in the community (but they visit occasionally and are available to provide consultation to the registered nurse).

RN First Call is occurs in small rural acute care hospitals, diagnostic and treatment centres and other settings where physician or nurse practitioner service is available in the community. Registered nurses who complete College of Registered Nurses of BC certification are able to diagnose and treat minor acute illness including the administration, compounding, or dispensing certain medications without a doctor’s order.47 This program was first developed in BC and in 2005, there were 230 nurses across 12 rural communities working in the program.48

The Ministry is working closely with the First Nations Health Authority and other stakeholders to address a number of challenges around Certified Practice. The challenges cited by stakeholders, particularly the First Nations Health Authority, concerning Remote Certified Practice include: the

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46 HEABC Data.
ability to meet current and future demands; the need to improve access to education; the need to consider a clinical component; and the need for a prior learning assessment for RNs who have worked in remote communities outside of BC.

**Nurse Practitioners**

In BC, Nurse Practitioners are Master’s-prepared. They practice as independent health professionals, with a high degree of responsibility, autonomy and expertise, and work collaboratively with members of the interdisciplinary health care team.

Nurse practitioners were introduced to BC in 2005 to assist in improving patient access to primary health care services and often work in rural communities, in community health centres, in primary care clinics, and with aboriginal communities (e.g., Bella Bella, Enderby). They autonomously provide nursing services within a prescribed scope of practice and are specifically trained to diagnose, treat, prescribe medications, order testing, and make referrals to specialists.

Since 2009, the number of rural nurse practitioner full time equivalent (FTEs) positions within Interior, Northern and Island Health more than doubled from 24 FTEs to 53 FTEs, a 120% improvement (see Figure 8).

**Figure 8: Rural Nurse Practitioner FTEs in BC 2009-2013**

![Graph showing the increase in rural nurse practitioner FTEs from 2010 to 2013](image)

This doubling in numbers can be attributed to the Nurse Practitioners for British Columbia (NP4BC) program, which was implemented in 2012 to support the optimized use of Nurse Practitioner skills and competencies for primary health care by providing opportunities for Nurse Practitioners to be utilized as independent health practitioners, in collaborative inter-professional relationships with physicians and other health care providers.

The integration of Nurse Practitioner roles into BC’s health system supports increased access to primary health care services for high need priority populations and enables local gaps in care to be reduced – frail elderly, chronic co-morbid, mental health and substance use, maternity, and

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49 HEABC Data.
unattached patients. Of the 121 positions currently approved through the NP4BC program, 39 (32%) support aboriginal communities.  

Allied Health Professionals

Allied health professionals are trained experts who work in a specific medical field and provide health care support to patients. Allied health professions include: physiotherapists, occupational therapist, midwives, pharmacists, social workers, speech language pathologists, medical laboratory and radiography technologists, and dietitians.

In order to support northern/rural recruitment and retention of key allied health professionals, the Ministry of Health, working with the Ministry of Advanced Education (AVED) has been able to expand the number of seats for several key professions:

- In 2010, first year Physiotherapist (PT) spaces at UBC doubled to 80. In order to enhance northern/rural retention, the AVED funded the establishment of the first Northern and Rural Cohort in 2011. With the first intake in 2012, 20 students received academic training at the University of British Columbia (UBC), but completed most clinical placements in northern/rural communities, with University of Northern BC serving as a clinical education hub for students and continuing education for professional PTs.
- Midwifery: Starting in 2012/13, UBC was funded to expand its Midwifery program from 10 first year spaces to 20 first year spaces in 2013/14 (an additional 5 first year spaces in both 2012/13 and 2013/14).  
- Medical Laboratory (ML): Between 2001/02 and 2012/13, 239 new education spaces have been added in ML programs at UBC, BCIT, and the College of New Caledonia (CNC) – 205 for medical laboratory technology and 34 for medical laboratory science.
- Medical Radiography Technology (MRT): Between 2001/02 and 2012/13, 212 new spaces have been allocated to MRT diploma programs. In 2011, a new MRT program at CNC began with its first cohort of 16 first year students. The Province has provided almost $3.4 million to Camosun College for start-up costs and will continue to provide approximately $591,000 annually for a new two-year MRT diploma program that started in 2012, with an annual intake of 16 students.

Nursing and Allied Health Professionals Incentives and Supports

Unlike physicians, who have a variety of rural incentive programs available, recruitment and retention incentives for nurses (excluding Nurse Practitioners) and allied health professionals are limited to loan forgiveness (BC Government forgives outstanding BC student loan debt at a

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50 BC Ministry of Health Fact Sheet.
52 Email from Paul Clarke, AVED, January 14, 2014.
53 Email from Paul Clarke, AVED, January 14, 2014. (Further expansion is dependent upon clinical capacity).
rate of 33.3% per year for eligible health care providers who practice in underserved communities) and isolation allowances that are in accordance with their perspective collective agreements.

**Information Management and Technology**

Health care organizations strive to implement clinical information systems that enable them deliver high quality and error free 21st century medical services. Creating a single health record for each patient will promote high quality care and improve health outcomes by ensuring clinicians have a greater level of accurate and consistent patient information. A single electronic health record per patient across the continuum of care (acute, ambulatory, and residential integrated with lab, medical imaging, health information, and pharmacy) will streamline the care process, improve the safety and efficiency of patient care, and provide clinicians with a longitudinal view of a patient’s medical history for better care decisions.

The BC health authorities have started working on a couple of projects to establish a common standardized, integrated, end-to-end clinical information system and environment which are using the Cerner software, including the Clinical and Systems Transformation project – initiated by the Provincial Health Services Authority, Vancouver Coastal Health Authority and Providence Health Care – and the iHealth project of the Vancouver Island Health Authority. They will enable the standardization of administration functions, such as referrals, scheduling, and registration. They will also enable the health organizations to better manage and measure wait times as well as provide comparable and timely data for efficient resource management.

These projects aim to deliver real-time health information to clinicians and researchers in a way the current heterogeneous systems do not. In time these and similar projects will be expanded to allow British Columbia to better manage future health care costs while improving the quality of patient care.

In creating a vision for delivering healthcare to rural and remote communities, the health sector has an opportunity to develop a new model of care significantly centered on connectedness. The advancement of technology for communications and information sharing has vastly improved over a very short time and can be leveraged to significantly improve the delivery of health services in rural areas.

While there will be a continued focus to encourage and support primary care providers to practice in rural areas, they can now do so with a host of additional supports. Already in place is the ability to access specialist expertise and phone consultations through a RACE (Rapid Access to Consultative Expertise) line. They participate in distributed distance continuing medical education without needing to travel. Physicians can take part in the Rural and Remote Division of Family Practice which gives local physicians an opportunity to work collaboratively with the Health Authority, the GPSC, and the Ministry of Health to identify health care needs in the local community and develop solutions to meet those needs. Members will have an opportunity to work together as a Division as well as within their own smaller chapters throughout BC to collaborate with other rural colleagues in helping guide and improve rural
health service delivery. Some examples of issues they are working on are physician engagement and recruitment and retention specific to rural and remote communities. The practice of delivering rural medicine and participating on committees necessitates some of those team members participating virtually.

Technology also provides an opportunity to improve the delivery of patient-centered care to the rural patient. Rather than asking a patient to navigate and find their way into a metro or urban care stream, technology will enable us to bring many more services to the patient. This includes remote monitoring and videoconferencing. The Ministry of Health will support the development of novel strategies for appropriate delivery of care in the community, including in rural communities. Leveraging models such as the Community Oncology Network, the traditional role of the hospital will be repositioned, allowing for innovative, decentralized care delivery. While not appropriate for all care, the Ministry of Health will work with our partners to identify areas where care delivery can be shifted and delivered in new ways. It will be supported by new roles such as community paramedics that can support transitions out of acute care and avoid unnecessary hospital admissions. The goal will be assisting patients to stay close to home to receive safe and effective care.

A new rural health strategy offers a significant leap forward in delivering health care to rural and remote areas. It acknowledges and leverages the important relationship of provider and patient and surrounds it with new supportive resources. It acknowledges that accessing treatment can and should happen in a patient’s community where possible. Through deploying technology effectively, it expands and enhances access to care traditionally only available in large urban centres. It provides the patient with a broader and more diverse healthcare team that includes both remote expertise as well as local, on the ground resources such as nurse practitioners and community paramedics.

**Electronic Medical Record (EMR)**

The electronic medical record is a critical tool that is foundational to quality and quality improvement in primary care. The information available through the electronic medical record enables primary care providers to analyze and understand the needs of their patients and to monitor and evaluate how they are doing in providing quality primary care to their patients. These efforts, in turn, improve the quality of care provided to patients and ultimately improve outcomes for patients. Two-way communication and connectedness between the Electronic Medical Record and other clinical information systems that attends to issues of confidentiality and protection of patient information is essential to facilitating the use of the electronic medical record as a mechanism to improve the quality of care provided within the primary care environment.

The use of the information available through the electronic medical record also ensures that primary care providers understand the demographics and health needs of a panel of patients within a particular practice/s and enables the primary care providers to work with the inter-professional team to plan and deliver services that best meet the needs of the patients to be served and their families. Expanding the analysis to improve understanding of the characteristics of the patient population in the aggregate at the community level enables the inter-professional team to work with community leaders and other partners
to address population health needs and to mobilize prevention and health promotion action.

**Telehealth**

Telehealth is an overarching term\(^5\) used to describe information and communication technologies used to connect health care providers, patients and educators over distance, to enable:

- clinical consultation; health care management;
- general health promotion; and,
- continuing professional education.

Today, there are three broad categories of telehealth technologies: store-and-forward, remote monitoring, and (real-time) interactive services, including the use of video conferencing technologies.

Telehealth services in British Columbia delivered via videoconferencing began with a principle of enabling care from a distance with services provided in health authority facilities. Developing services in this manner allowed for controlled growth, provision of support by multidisciplinary teams, and the capacity to fulfill privacy and security requirements by operating within the HA technical infrastructure. That noted, there are six telehealth programs operated by each of the regional and the provincial health authority with no common, provincially endorsed standardized approach to telehealth to support inter-health authority telehealth. Its evolution to date might therefore be best characterized as ‘pilot project driven’ across a range of clinical areas (e.g., TeleMental Health; TeleThoracic; TeleOncology; TeleStroke; First Nations Telehealth; and, Home Health Monitoring).

Recently, there has been growth in internet-based telehealth options for physicians to provide Medical Services Plan insured telehealth services from anywhere, to patients located anywhere in the province. The largest changes have been related to the frequency of use of billing codes for General Practitioner (GP) Telehealth services which increased 42%, 180% and 617% in year over year growth between 2011 and 2013. The number of consults has increased from 140 delivered in 2011 to 3,999 in 2013 and 5,636 in the first 3.5 months of 2014.\(^5\)

A key direction going forward is to both set out a system wide approach and go forward plan to using telehealth in rural and remote areas and then standardize its usage across rural areas. The policy direction arising from this paper will be to build an efficient and agile provincial program integrating telehealth across the continuum of care, using a privacy and security standard mandated by the Ministry of Health and Executive Leadership Council; that is clinically driven and aligns with strategic priorities; supported by a single governance model involving all major stakeholders; and to do this by evolving collaboratively with telehealth stakeholders into a new provincial service. This will be balanced with

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\(^{5}\) Telehealth is different from telemedicine because it refers to a broader scope of remote healthcare services than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services. Source: HealthIT.gov (2015). What is telehealth? How is telehealth different from telemedicine? Accessed on January 10, 2015 at: [http://www.healthit.gov/providers-professionals/faqs/what-telehealth-how-telehealth-different-telemedicine](http://www.healthit.gov/providers-professionals/faqs/what-telehealth-how-telehealth-different-telemedicine).

\(^{5}\) BC Ministry of Health MSP Data.
leaving room for innovation and creativity in this space and working with the realities of existing technological barriers including access to broadband.

**The Next Steps**

The recommendations put forward in this paper push the boundaries of what we have been doing so far and emphasize a need for timely, short and longer term action. I want to emphasize that we are putting forward a range of proposed actions that we think will improve our health services in a number of important areas and better position our health system to meet increasing demand from key patient populations. The actions proposed would be undertaken opportunistically building on initiatives and innovative service delivery already underway across B.C., but also will require a systematic approach to change that builds a truly patient-centred system of care (*The British Columbia Patient-Centered Care Framework* – hyperlink).

You may have different views on the proposed action, how to improve the system or how to implement these recommendations and that is precisely what we are testing out by posting these papers. Your feedback will be part of a healthy and thoughtful discussion of these recommendations. Over the coming three months my aim is for us to achieve a good level of consensus across key partner and stakeholder groups of what the final set of specific actions should be; and then, for us to move forward collaboratively to figure out the detail, the how and the timing of implementation linked to better meeting current and emerging needs in a timely way. Patients as Partners will be an important part of this process.

I want to assure you the implementation of the final set of recommendations will allow enough flexibility for a diversity of implementation approaches across communities but that I also intend to push us to create a truly integrated system of health care that works for patients and not just for us. Your input, creativity and innovation in shaping and implementing the final set of recommendations at the local, organizational and provincial levels will bring new solutions and enrich our B.C. health system.

In this section, specific policy directions are assigned to the practice level, organizational level, and provincial level. These policy directions apply to the communities classified as rural, small rural and remote by Regional Health Authorities (see Appendix A) while linking to higher levels of care within an overall regional health services strategy. These policy directions build on and add to work currently underway and will be implemented as part of the formal regional health authority working plans starting April 2015. The First Nations Health Authority will be a key partner in working with the Health Authorities to apply and shape these directions to close health gaps for First Nations communities.

**1. Practice Level - Service Delivery**

**1.1 Health Promotion and Disease Prevention:** In 2015/16, Regional Health Authorities will develop three year local community plans for all rural and remote communities to create environments that foster healthy behaviours and programming that improves the health of the population. These plans will be developed in collaboration with local communities. The plans will be referenced in their Service Plans, be
available on the health authority web site, and attached to their Detailed Service and Operational Working Papers. The first set of community plans will start 2016/17, be refreshed every three years with updates on progress provided annually. These plans will:

- Provide health status profiles for individual communities that will be refreshed every three years to assist in planning, targeting efforts and tracking progress.
- Identify specific areas where they are working with communities, departments across government and other partners as they undertake work to address broad determinants of health, such as education, housing, healthy infrastructure, and food security.
- Identify specific actions and initiatives to promote healthy behaviours in collaboration with communities to promote and support individual responsibility for health and healthy living.
- Reference specific actions and initiatives that are being undertaken in collaboration with Aboriginal communities to close health status gaps and efforts to encourage holistic approaches to health and wellness that incorporate traditional Aboriginal healing and wellness practices.

1.2 Primary and Community Care: Regional Health Authorities will implement an integrated, multidisciplinary primary and community care practice in each of the rural and small rural communities (based on population size it is recognized that certain rural communities may need more than one practice) that has:

- the capacity to address the episodic and longitudinal health care needs of the community/catchment area;
- the capacity to meet the needs of specialty populations (including maternity care, chronic medical conditions, frailty home support, cancer care, mental illness, substance use, and palliative care);
- for specialty populations, key service elements consistently applied across communities will include effective attachment and intake to the practice; assessment; case planning; case coordination; and rapid mobilization of services;
- services will include primary and community care; and
- the capacity to respond effectively to 24/7 urgent and emergency care where required for short periods of time with effective linkages to higher levels of services.

This will be done in collaboration with physicians and through the vehicle of Collaborative Services Committees to enable local community level partnerships between local health authority leadership, physicians, health professionals, patients, caregivers and community leaders to design Integrated Primary and Community Care Practices across rural and small rural communities. Where practical, these will also act as the hub, outreach and support to remote rural community services.

The multidisciplinary team will be, where possible, co-located. Ideally, physicians will be fully incorporated into the teams but where this is not agreeable to existing physicians, they will be virtually linked with full incorporation being achieved gradually through replacement when they leave or retire or through the recruitment of new additional physicians to the community. The organizational delivery model can be health authority operated, provider-led by contract; or delivery through establishing a not-for-profit agency.
Where teams are located in a community with a hospital, the team will be fully linked into providing services in the hospital as appropriate.

The practice team will be augmented by visiting and virtual tele-health services with consultations for both patients and providers and where appropriate shared care between providers and specialists for patients.

Where appropriate, these teams will be built in partnership with the First Nations Health Authority and incorporate traditional models of wellness in primary, maternity and mental health services.

By September 30, 2015, each of the Regional Health Authorities will provide an assessment of the status of primary and community care services across all rural, small rural and remote communities and a specific three year plan on how they intend to move forward with this policy direction as a region. This plan will be referenced in their Service Plans, be available on the health authority web site, and attached to their Detailed Service and Operational Working Papers. It is recognized that this process will take time and engagement. The objective is for these services to be fully put in place over a three year period from April 1 2015/16 through September 30, 2017/18 with subsequent continuous improvement and refinement. The Regional Health Authorities will report out on progress against the plan to the Ministry of Health and on their website starting spring 2016.

2. Organizational Level – Operationally-Based Enabling Supports to Rural Health

2.1 Practice Support Teams: Regional Health Authorities in collaboration with other service partners will put in place designated Practice Support team(s) by June 30, 2015 to enable the implementation of integrated, multidisciplinary primary and community care practices across their rural and remote communities. The teams will support the establishing Collaborative Support Committees and then support these committees and the providers through the practice design and implementation phases of the work. These teams will also play a critical role in supporting the assignment and/or recruitment of health professionals to the practices as required.

2.2 Home Support and Residential Care in Rural Communities: In collaboration with communities and patients, Regional Health Authorities will initiate work on exploring innovative and cost effective service options to better support aging in place but also clarity on residential care options for when they are required to allow active preplanning by older adults and their families. This work will be reported in their Service Plans, be available on the health authority web site and attached to their Detailed Service and Operational Working Papers starting 2015/16.

2.3 Access to Specialist Consultation and Support: The Regional Health Authorities in collaboration with the Provincial Health Authority will establish a formal regional, and where appropriate, provincial network of specialized teams available by telephone, telepresence or visits with rapid mobilization
capacity to support primary and community care practices across rural and remote communities. These networks will be established by the end of fiscal year 2015/16 and reported out in their Service Plans, be available on the health authority web site and attached to their Detailed Service and Operational Working Papers starting 2016/17.

2.4 Emergency Health Services and Access to Higher Levels of Emergency Health Care:

BC Emergency Health Services (BCEHS) will conduct a comprehensive strategic and operational review of inter-facility patient transfers that occur by ground ambulance to improve emergency response capacity and ensure timely, quality pre-hospital care in rural and remote communities. The review will examine appropriate deployment of BC Ambulance Services (BCAS) transportation resources and be complete by October 2015 and reported to the Ministry of Health and be available on the BCEHS and Regional Health Authority websites.

BCEHS will report out no later than October 2015 on its demand analysis and deployment modelling to ensure air ambulance resources and critical care paramedics are optimally located and deployed to deliver timely, quality patient care.

BCEHS in collaboration with the Ministry of Health will pursue changes to the regulatory framework and expand roles for paramedics to enable effective use of Advance Care Paramedics in rural and small urban communities. This will be also linked to the introduction of a minimum of 80 new FTEs in community paramedicine at the Primary Care Paramedic or Advanced Care Paramedic level over the period April 1, 2015 to March 31, 2018.

2.5 Rural Hospitals: Regional Health Authorities on their websites will provide information for their communities on the range of hospitals available across their region, the level of care provided by those hospitals, pathways to accessing care at those hospitals linked to their primary and community care practices, and establish a rolling three year plan for those hospitals that gives clarity to patients and community around service directions. No later than April 2016/17, quality indicators will be routinely reported on hospitals through the Ministry of Health and on the Regional Health Authority’s web site.

3. Provincial Level – System-Based Enabling Support

3.1 Health Human Resources Planning and Management: A range of specific actions will be taken by the Ministry of Health to contribute to improved services for rural and remote communities:

- Develop and implement funding and compensation mechanisms to support health professional staffing models for the primary and community care practices in rural and remote communities, as well as the formal regional and where appropriate, provincial network of specialized teams. This will be done incrementally as the strategy is implemented in 2015/16 and be fully completed no later than March 2016 and be undertaken as appropriate in consultation with health authorities, the Doctors of BC and relevant unions.
• Optimize scope of practice, skill mix, and skill flexibility to support the rural primary and community care practice model. The Ministry of Health in consultation with the Regional Health Authorities, Colleges and Associations actively review scope of practice linked to the enhancing generalist practice while utilizing specialist skills sets linked to each of the primary and community care health provider groups. As the models develop on the ground in the communities, the Ministry of Health will actively work to enable appropriate and safe changes in support of improved rural care.

• Work with the Doctors of BC, the Joint Standing Committee on Rural Issues, the Rural Coordination Centre of BC, the University of British Columbia Faculty of Medicine and Continuing Professional Development department and others, to better elaborate and support through training generalist models of physician practice in rural communities throughout the province.

• In 2015/16, complete a review and make recommendation for improvements and additions to incentive and support programs for health human resources in rural and remote communities linked to the evolving practice models. Specifically review and improve upon existing physician recruitment and retention incentive programs and supports by introducing more flexibility to better respond to community service needs, and implement a provincial Practice Ready Assessment program that will prepare internationally-educated physicians for practice in rural and remote settings in the province. Develop incentive programs and supports specifically for nursing and allied health care professionals to enable inter-professional models of care, and implement a provincial Nursing Community Assessment Service to enable internationally-educated registered nurses, licensed practical nurses and care aides to enter the workforce in our province. Work with other provinces and the federal government to address barriers to recruitment resulting from changes to the Temporary Foreign Worker program.

• Working with HEABC, the Ministry of Health will focus on improving timely recruitment and deployment of health professionals to rural and remote communities. The work will include developing an evidence-based and survey informed provincial forecast and resource planning model linked to regional and local resource plans for rural and remote communities to allow increased practice recruitment and deployment of health professionals in advance of retirements or leaving, including allowance for overlap and duplication of services over transition periods to increase continuity of service provision. The work will also include the development of a provincial approach to best practices in marketing and recruiting health professionals to work in rural and remote communities. Finally the work will also develop, in collaboration with Regional Health Authorities, contingency service action plans for high risk communities with very small numbers of health professional staff to better mitigate service loss due to retirements or when staff leave to take other roles. The work and recommendations for action will be ready for deployment April 2016.

• In 2015/16, the Ministry of Health will review opportunities for expansion and distribution of education and training programs specifically for nursing and allied health care workers within Interior, Northern and Island Health Authorities, in order to support education and training of individuals closer to their own communities, and work with professional associations and unions, educators,
health authorities and other partners to reach out to students in local communities to promote career opportunities in health care.

- In 2015/16, the Ministry of Health will examine policy tools available for government and health authorities to have more effective influence on distribution of health care professionals throughout the province. This will include consultation with the Doctors of BC and health unions. Recommendations will be brought forward in the fall of 2015.

3.2 **Accountability and Implementation**: The Ministry of Health through the Health Service Policy and Quality Assurance Division will establish public reporting, monitoring and impact/outcome assessment mechanisms for deployment starting April 2015.
# Appendix A – Community and Hospital Classification Framework

<table>
<thead>
<tr>
<th>Category</th>
<th>Population (Approximate Community and Catchment Area)</th>
<th>Level of Care</th>
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<tbody>
<tr>
<td>Large Urban</td>
<td>175,000+</td>
<td>Highly specialized care, with subspecialties, to meet tertiary care needs of surrounding community and health-authority wide referrals</td>
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<tr>
<td>Urban</td>
<td>75,000 – 175,000</td>
<td>Specialty medical, surgical, and intensive care to meet regional care needs of broad referrals from across a large health area</td>
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<tr>
<td>Small Urban</td>
<td>20,000 – 75,000</td>
<td>General inpatient care and some specialized services (such as general surgery, critical care, and inpatient psychiatry), diagnostics, mental health team available</td>
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<tr>
<td>Rural</td>
<td>3,500 – 20,000</td>
<td>Some specialized acute services (such as perinatal and day surgery), residential care and assisted living generally available in all communities</td>
</tr>
<tr>
<td>Small Rural</td>
<td>1,000 – 3,500</td>
<td>Limited general inpatient care to meet basic acute care needs of local population, public health, mental health and substance use services available in community, residential care and assisted living services available in some communities</td>
</tr>
<tr>
<td>Remote</td>
<td>0 – 1,000</td>
<td>Primary and community care that meets most health needs of the population, with potential for urgent and basic emergency care in some locations. Emergency transportation mechanisms are crucial. Visiting child, youth and family and mental health and addictions outreach services.</td>
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</tbody>
</table>

First aid and nurse-led care to meet immediate needs of remote population. May include facilities for itinerant primary and community care that meets basic health needs. Community too small and dispersed to sustain local health services. Health service needs addressed in neighboring communities.

Community too small and dispersed to sustain local health services. Health service needs addressed in neighboring communities.
### Communities by Health Authority Classified as Rural, Small Rural and Remote

<table>
<thead>
<tr>
<th>Category</th>
<th>FHA</th>
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<td>Regional Hospital (251+ beds)</td>
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Notes:
- Royal Jubilee (448 beds) is Level of Care 4 since it is not a level 3, 2 or 1 trauma centre; Mount St. Joseph (101 beds) and Richmond (197 beds) are Level of Care 3 since they are not level 5 or 4 trauma centres.
- Initial assessment based on: Level 1 (0 beds); Level 2 (1-20 beds); Level 3 (21-100 beds); Level 4 (101-250 beds); Level 5 (251+ beds).
- Information on service levels to be confirmed.