ESQUIMALT COMMUNITY HEALTH NEEDS ASSESSMENT

FINAL REPORT

May 21st, 2019

PeplerGroup

Smart Systems for Better Outcomes

TABLE OF CONTENTS

1.0 Executive Summary

Overview

The Fraternal Order of Eagles, with support from the Mayor and Council of the Township of Esquimalt (the Township), contracted the services of Pepler Consulting Group to conduct a Community Health Needs Assessment (CHNA) for Esquimalt and surrounding communities including CFB Esquimalt, Songhees Nations, Esquimalt Nations, Victoria West and Admirals Corner of View Royal. The aim of the Study was to better understand the impact on the community of the closure, in December 2018, of the Esquimalt Medical Center and the ongoing provincial and regional challenges of attracting and retaining family physicians, and other health care service providers needed to meet the community's current and future demand for primary health care services.

Esquimalt is experiencing population growth. This growth, combined with the municipality's unique location of being surrounded by water, four bridges and a major highway combined with the potential risk of existing Walk-in clinics in other geographic locations closing, and physicians from across the region retiring from practice, has made enhanced primary care service integration in this community a priority. While residents of the Esquimalt catchment area currently do have reasonable access to family physicians, mostly outside community boundaries, ensuring retention and sustainability of those family physicians is an ongoing challenge provincially and nationally. Similar recruitment challenges exist across the full spectrum of primary health care professionals, with mental health professionals, nurse practitioners, and physiotherapists, being identified as particularly difficult to recruit.

The project process included an analysis of demographic trends, inventory of existing Primary Health Care (PHC) resources and services available to residents in the Esquimalt catchment area, identification of current service gaps, future health service needs, and an identification of suggested improvement opportunities and recommendations. The process also included a detailed analysis of available demographic and primary health care utilization data as well as an extensive stakeholder consultation process. Following the compilation of the CHNA project, using a population health approach, Pepler Group analyzed and prioritized the catchment area's health issues and developed three plausible 'what if' scenario solutions with suggested next steps to address prioritized community-needs for moving forward.

Key Findings

- **Population Growth**: The Township, with a current population of 17,650 (Census 2016), is projected to grow significantly over the next five to ten years, with an estimated catchment area population of 42,000, including the Songhees and Esquimalt Nations, Canadian Forces Base (CFB) Esquimalt, Victoria West and Admirals Corner. Fluctuations in population growth due to economic conditions, the number of construction workers, and increasing levels of people seeking affordable housing, provide significant challenges for maintaining sustainable health care services. The population swells by 5,000 to 8,000 people per day, owing to the CFB Esquimalt and Graving Dock.

- **Esquimalt Catchment Area**: The Esquimalt catchment area, for purposes of this report, includes Esquimalt, CFB Esquimalt, Songhees Nations, Esquimalt Nations, Victoria West and Admirals Corner. The population for the Esquimalt health care catchment area is currently estimated at 30,755 (CRD Estimates 2018) and is expected to grow to 42,000 by 2035 (CRD Estimates 2018).

- **Health Indicators and Disease Burden**: In general, the population in the Esquimalt catchment area is similar to the Canadian and British Columbia population with respect to disease burden and health indicators with the exception of the following: the catchment area population has a higher incidence rate of smoking, drinking, obesity, arthritis, high blood pressure and anxiety/mood disorders.

- **Access to Family Physicians**: Due to the recent closure of one of the two Esquimalt medical clinics and the relocation of a physician to a clinic in Victoria, there are approximately 4,000 to 7,000 additional residents seeking access to a primary care physician. The number is expected to grow within the next two to three years, owing to the demand on the existing 2 full-time equivalent (FTE) family physicians.

- **New Facility Sites for Medical Services**: The Township can increase its physician recruitment chances by ensuring that it has suitable clinic space to house new physicians within a team-based model of care environment, underpinned by the necessary infrastructure (Electronic Medical Record/Tele-Health and administrative support) and community support services (e.g. social workers, dieticians, paramedical).

- **Relationship Building**: Efforts are underway to engage key stakeholders in setting a clear vision, mandate, and service priorities for primary health care (PHC) as a foundation upon which to build the required cooperation, trust and mutual support necessary for the provision of accessible, quality services.

- **Service Enhancement Priorities**: The highest priority areas for PHC service improvements identified by stakeholders were: mental health and substance use services, community-based pharmaceutical/medication reviews, access to technology-enabled healthcare solutions (e.g. virtual care at home, mobile technology for ease of access), chronic disease prevention and management, therapy services (physiotherapy, occupational therapy and speech pathology), adult day programs, timely referrals to surgical services, diagnostic imaging (e.g. CRT/X-ray) and social care supports.

- **PHC Service Plan**: Implementing a collaborative planning process that appropriately engages key stakeholders (e.g. community partners, Island Health) could be an effective vehicle for building commitment and support for a shared vision, mandate, priorities, service delivery model and accountability framework for PHC services.

- **Human Resources**: Similar to many other areas across British Columbia, the Esquimalt catchment area experiences significant challenges recruiting physicians and other health care professionals. Comprehensive targeted recruitment and retention strategies are required to engage physicians, the municipality, the South Island Division of Family Practice (SIDFP), Victoria Division of Family Practice, Island Health, Ministry of Health, the Doctors of BC, the Canadian Medical Association and the community.

- **Communications and Public Awareness**: Transparent timely messages need to be delivered to the community regarding PHC services available, key roles and responsibilities for service delivery, PHC mandate and services provided and priorities and progress being made on key PHC service initiatives.

Recommendations

1. **Primary Health Care Service Plan**: The SIDFP, in collaboration with the Township and other key stakeholders, should consider leading the development of a comprehensive PHC Services Business Plan that builds on the work completed in the CHNA. The planning process should include the development of a Framework designed to reach agreement on the vision, mandate, services, funding priorities, roles and responsibilities, service delivery mechanisms and performance measures.

2. **Short-Term Solution (next 6 months**): The Township, in collaboration with SIDFP, should immediately pursue options and incentives that will address the need for primary care services, costs and funding mechanisms to support the recruitment of physicians, nurse practitioners, administrative support resources and appropriate infrastructure needs.

3. **Long-Term Solution (12 to 24 months):** The Township, SIDFP and other key stakeholders should implement the options and incentive strategies for attracting new Family Physicians to Esquimalt, that include working collaboratively with local developers to provide suitable clinic space to house these providers.

4. **Priority Service Enhancements**: The Township needs to make targeted investments in selected high priority service areas, including mental health and substance use, chronic disease prevention and management, community-based medication reviews, therapy services, and surgical services required to support pediatric and seniors care, and chronic disease management.

5. **Human Resources Recruitment/Retention**: The Township, working with SIDFP, should develop and implement a comprehensive resource strategy to enhance their ability to attract and retain family physicians and other health care professionals. Establish a sustainable physician recruitment process that clarifies the roles and responsibilities of the various partners.

6. **Establish and Affirm Governance, Decision-Making and Accountability Structures**: The seamless delivery of primary health care services will require clarification of roles and responsibilities of PHC

service delivery partners in the Esquimalt catchment area. It will be important to reach agreement on the governance, decision-making and accountability structures with regards to primary health service delivery that respects the role of the Township in improving population health for the residents of Esquimalt, and the legitimate responsibilities and accountabilities of each of the partner organizations.

7. **Existing Legislation, Political or Contractual Barriers**: Barriers currently exist in the system (e.g. geographical boundaries and funding challenges) which prevent the leveraging and optimization of local health care providers, especially Family Physicians. In Esquimalt's catchment area, this will require a more significant role for the Township, in working closely with SIDFP, Ministry of Health, SIDFP, Island Health, First Nations Health Authority and local partners. To address these barriers, new ways of working must be explored and developed, to allow enhanced collaboration and sharing of knowledge which successfully test population funding models and are aimed at increasing access and improved outcomes for all Esquimalt catchment residents.

8. **Explore Potential Population-Health Models of Care**: In collaboration with key partners and stakeholders, propose scenarios that have been informed by extensive modelling of current and anticipated future activity, using computer models to test the proposed population health-based funding and service delivery systems, targeted to reduce the current and future capacity and demand pressures, and the ongoing provider shortages.

9. **Performance Measurement and Evaluation**: Develop and implement formal measures to monitor and mechanisms to evaluate the success of the primary health services delivery model in Esquimalt and catchment area.

10. **Wider-community Stakeholder Engagement and Communications**: The Township needs to develop and implement mechanisms and processes to effectively engage and communicate with internal and external stakeholders as it moves forward with implementation.

Conclusion

At the time of writing, the Township has been given verbal approval by the Ministry of Health for 3.2 FTE Family Physicians to provide services to a total of 4,000 residents. The findings from the CNHA study suggest that these new resources combined with the implementation of the proposed scenarios for new ways of delivering services in Esquimalt, has the potential to release significant clinical resource capacity back to the wider health care system. This release includes the reduction of the number of emergency department, outpatient clinic and hospital visits, and reduced hospital stays thus releasing a significant number of bed days, thus impacting physician costs associated with seeking care from multiple providers.

The study's findings may also help to inform the discussions between the Township and SIDFP in exploring options and incentives to attract and retain physicians and other health care professionals to the community. In addition, ensuring the physicians have access to facilities and mechanisms that provide the

infrastructure required to easily set up a practice, is seen as a major asset in supporting physician recruitment.

Moving Forward

The assessment of the Township community needs has identified strategic areas for improving access to primary health care for the residents living in the catchment area. The findings of this study provide the members of the Township's Council the information necessary to explore strategic improvement opportunities and to develop a service delivery model that directly addresses the core problems set out in this report. The following steps have been modified to incorporate the feedback from the April 15th, 2019 Town Council presentation:

- Engage external consultant to work with the Township in developing a business case and operational plans to implement the recommendations set out in the CHNA study to support a long-term solution to funding and resources to meet the primary health care needs of the Esquimalt catchment population.
- Move forward on a short-term solution with the Ministry of Health and SIDFP on funding and resource needs, facility type and location to address the Esquimalt catchment area's immediate need for primary health care services.
- The Council to continue to work with community developers to incorporate health and wellness in all new developments and agree to a long-term solution that addresses the catchment area's future clinical resource needs.
- The Township Council should seek further information as to the municipality's abilities in offering incentives to entice practitioners and developers of medical facilities to the Township.
- The Township staff to work with the external consultants to scope out the initiatives and collaboratively develop the plan for implementing the recommendation set out in the CNHA study. A full understanding of the extent of the issues identified in this report will assist in identifying the risks and barriers associated with implementing a primary care model.
- Identify key stakeholders and develop a community-wide partnership engagement strategy and plan including the development of a communication strategy to engage community-wide partners and others at all stages of the project.
- Agree and explore with SIDFP and Island Health the potential for a Shared Care Community Model (Scenario Solution 1) and develop the concept in collaboration with community partners and others. Agree to the Shared Care Community model (e.g. 'Hub and Spoke') responsibilities and identify the factors associated with success and failure for Scenario 1. Reflect on the Township's capacity and financial resources to respond to these factors.

2.0 Introduction

Project Context and Background

This report, and the information contained herein, is the result of a six-month consulting engagement sponsored by The Fraternal Order of Eagles, with support from the Esquimalt Mayor and Councillors. The purpose of the project was to: conduct a review of demographic trends, inventory existing primary health care services available to the residents of Esquimalt and surrounding area, identify health services gaps and project future health service needs, identify areas for improvement, and propose potential options to consider within the context of work already undertaken in order to improve primary care by organizing services and value around patients' needs.

Island Health is responsible for delivering health care services to the people living in Esquimalt, Victoria West, retired veterans and the family members of the men and women who work for the Department of National Defence located at CFB Esquimalt. Island Health Authority (VIHA), in partnership with the First Nations Health Authority, provides services to the Indigenous Peoples living on the Songhees Nations and the Esquimalt Nations communities (see Figure 1).

Figure 1 Health Area 411

The SIDFP and Island Health, through the local Collaborative Services Committee (a local working Group made up of leadership from the Divisions of Family Practice and Island Health) jointly plan Primary Care Services (PCS) for the Western Communities, including Esquimalt, View Royal, Colwood, the District of Metchosin, Langford, Sooke Langford, and the First Nations communities of Esquimalt, and the Songhees Nations.

This report focuses on the population of the Township of Esquimalt and Victoria West which borders on the east side of Esquimalt (See Figure 2). The unique location of being surrounded by water, four major bridges (Johnston St., Bay St., Craigflower Road and Admirals Road) and the Trans-Canada highway, make these neighborhoods a priority population for the Government of BC and its partners, to expand primary care services and access to physician resources. It was previously stated that the Esquimalt catchment area for purposes of this report includes the Township of Esquimalt, Victoria West, CFB Esquimalt, the Songhees Nation, Esquimalt Nation and Admirals Road the adjacent corner overlapping with View Royal.

Figure 2 Esquimalt and Surrounding Communities

Project Scope and Objectives

Scope

The purpose of the project was to complete an assessment of current and anticipated demand for primary health care services in the Esquimalt catchment service area. The CHNA was conducted within the context of, and was aligned with, the PBC Ministry of Health's Primary Health Care Framework, the Doctors of BC, General Physicians Service Committee, SIDFP, and Island Health's Primary Care Network (PCN) strategic vision for delivering integrated and coordinated patient center care. The scope of the assessment was limited to primary health care services as defined in the Primary Care General Policy Directive (see Glossary of Terms). The review did not include an assessment of acute care and long-term care service requirements.

Objectives

The specific objectives of the project were to:

- Confirm the Esquimalt catchment area for primary health care services;
- Inventory existing primary health care programs and services, activity levels and related supports;
- Determine day and night volumes of Emergency Department use for family practice, primary care sensitive conditions;
- Assess demographic data, identifying the current and projected populations for the community and surrounding area;
- Identify the rate of disease burden for the current population and projected population;
- Identify strengths, weaknesses and major issues relating to access to primary health care services including the attraction and retention of family physicians within Esquimalt;
- Engage physicians, other health care providers, the public, the First Nations communities, nurse practitioners, dentists, police, fire department, paramedics and other key stakeholders in identifying

primary health care services issues to be addressed and potential solutions;

- Identify options and recommend strategies to improve the planning, delivery and sustainability of primary health care services;
- Increase the understanding of the roles and responsibilities of Island Health, South Island Division of Family Practice, the municipality and local stakeholders; and
- Make recommendations for moving to implementation of a primary care network in Esquimalt.

Project Approach

The CHNA was comprised of both quantitative and qualitative data components. A brief synopsis of the project approach is included below with further details provided throughout the document. See Appendix A for a full description of the project work plan and the project team member's biographies.

Quantitative Data

- A secondary statistical data profile depicting population and household statistics, education and economic measures, morbidity and mortality rates, incidence rates and other health statistics for the Township of Esquimalt was prepared by Island Health's Planning Department to identify needs for primary care services in Esquimalt. This analysis does suggest the need to prioritize Esquimalt for net new General Physicians identified in the Westshore Primary Care Network Service Plan.

- On-Street market research was conducted with Esquimalt, Victoria West and Esquimalt Nations community residents, with a sample size of 295 individuals, which gives a 95% confidence level (based on recognized market research methodology). The survey was modeled after the Ministry of Ontario's Health Council's Needs Assessment Tools for advancing improvement in primary care, which assesses health status, health risk behaviours, and health care access primarily related to understanding the attached and unattached population in the Esquimalt catchment area, and the health care needs of residents living with multiple health conditions.

- Data collection sessions were conducted with household residents in four neighborhoods, two day-care centers in Esquimalt and with the Esquimalt Nations community to ensure broad participation from diverse groups, including residents living alone, members of medically underserved, low income and minority populations. Forty residents living in the catchment area took an abbreviated version of the customized survey tool. Responses were completed manually by residents and tallied using data analysis tools.

Qualitative Data

- Key informant Interviews were conducted with community leaders. In total, 75 people participated, representing a variety of sectors including health authority, family practice groups, medical services, nurse practitioners, social organizations, children and youth agencies, mental health support groups and the business community. In addition, 2 focus groups were conducted with 22 community members These key informants represented the broad interests of the community served.

Community engagement and feedback was an integral part of the Community Health Needs Assessment process (CHNA). Pepler Group sought community input through focus groups with community members, key informant interviews with community stakeholders and inclusion of community partners in discussions of the prioritization and implementation planning process.

Members of the Western Communities Primary Care Network, SIDFP, Island Health and the BC Ministry of Health, community-based General Physicians, and health care professionals shared knowledge and expertise about primary care health issues. Leaders and representatives of the Fraternal Order of Eagles, the Township of Esquimalt's Council and representatives of non-profit and community-based organizations provided insight on the community served by the Esquimalt catchment area including people living with multiple and complex chronic conditions, high-risk and at-risk population groups, as well as low income and minority populations.

Secondary Data Profile Overview

One of the initial undertakings of the CHNA was a review of secondary data—data obtained from existing resources. The data presented in this study comes from the 2016/17 BC Health Services Matrix Population Dataset v9, Island Health Greater Victoria Local Health Area Profile, July 2018, First Nations Health Status and Health Services Utilization: Summary of Key Findings Report 2008/09-2014/15, Community Household Survey 2011, and Statistics Canada Census Data for 2011/12 and 2016/17.

The Health Service Systems Matrix population data reporting on the health services and hospital utilization at the local level for the Township, excluding Victoria West and Esquimalt Nations, was prepared by the BC Ministry of Health for the SIDFP and used with permission by the Pepler Group project's analytics team.

Note that Pepler Group was not involved in the data tabulation or gathering and simply served in an advisory role to interpret the key points of the secondary data profile. The local-level data is compared to Greater Victoria and Provincial averages.

Data Limitations

- Population health data specific to the Township of Esquimalt was difficult to source as Esquimalt population data is grouped with View Royal in the Western Communities Primary Care services utilization data, and with the Greater Victoria Area in the Local Health Area (LHA) demographic data and in BC Ministry of Health's Community Health Service Area (CHSA) demographics for Esquimalt/View Royal.
- Ministry of Health Service Matrix (HSM) hospital and services utilization data was provided by SIDFP. This dataset was a high-level breakdown divided into 13 health status groups (see Glossary of Terms for definitions and groupings) for Esquimalt/View Royal population. For purposes of this report, the CHSA data provided to the Pepler Group focuses only on the population of Esquimalt and does not include Victoria West or the Songhees and Esquimalt First Nations.
- Data prepared by Island Health, Ministry of Health and the Western Communities Primary Care Network geographically differ owing to the boundary challenges set by the individual groups and the time period selected for the dataset.

- Postal code data for Esquimalt was not available to the consultants allowing for evaluation of how the residents of Esquimalt utilize emergency department or ambulance services.
- Demographic, emergency, hospital and service utilization data specific to Victoria West and CFB Esquimalt was not available at the time of writing this report.
- Chronic conditions data, and/or long-term conditions data at the individual resident level, was not available, making it difficult to determine the complexity of case and physician panel sizes.
- Difficult integration of multiple data sources and disparate systems led to overlapping data content, resulting in multiple versions of the same analysis.
- Population data breakdowns were inconsistent. For example, Local Health Area age groupings differ from the BC Ministry of Health Service Matrix age groupings. The HSM grouping does not allow for an analysis of the breakdown of the age groups for children, youth or emerging populations.
- Chronic conditions dataset—if a person uses multiple walk-in centers, owing to wait times and convenience, and has different encounters at each clinic with different physicians, the data would not necessarily be linked for a 'whole-system' snapshot.
- Siloed databases between provider groups (e.g. Community-Based Physician Databases, Chronic Disease Registry and the Cancer Register is separate from Ministry of Health and Island Health) make it difficult to link cancer 'patient journey' data to gain a true picture of utilization, services and costs.

3.0 Overview of Geography and Population

Esquimalt and the surrounding communities of CFB Esquimalt, Victoria West, Songhees Nations and Esquimalt Nations and Admirals Corner, is included in the Western Communities Community Health Service Areas (CHSA): 4112 Esquimalt/View Royal. The Western Communities also includes: Colwood, Metchosin, Langford/Highlands, Sooke and Juan de Fuca with a total population of 109,833 residents and is served by 27.4 Full Time Equivalent Family Physicians.

The area faces challenges to the provision of primary care services including significant mental health and substance use, an aging population with increase complex care issues, a geographically different population, and a notable number of children and youth facing mental health challenges. This picture paints a community in a dire situation and unless significant patient attachment occurs, it is anticipated that the number of unattached residents in the Western Communities will grow to an estimated 50,000 residents by 2022.[3]

Characteristics of Esquimalt's Surrounding Communities

Victoria West Population

Victoria West, commonly known as Vic West, borders on the east side of Esquimalt and is has been included in the Esquimalt catchment area. Vic West is home to 9% of the City of Victoria's population (2016 Census). It is located in the west portion of the City of Victoria and is connected to the rest of Victoria by the Johnson Street Bridge and the Galloping Goose Trail.

Figure 3 Victoria West Geographic Boundaries

While Vic West is an established neighbourhood of approximately 6,800 residents, it is a diverse and rapidly growing area. Over the next 20-25 years, Vic West is expected to grow by an estimated 5,200 residents. This includes the 3,200 residents identified to be moving into the new master planned areas of Dockside Green, Railyards and Bayview. An estimated 1,725 residents are expected to move into other parts of Vic West outside of the master planned area. Vic West similar to Esquimalt, is surrounded by water and bridges (see Figure). Many residents within the Township of Esquimalt travel to Vic West for diagnostic/laboratory services.

Similar to the residents of Esquimalt, many people living in Vic West seek services from their primary care provider located in Esquimalt and/or in the City of Victoria. Therefore, it is prudent to look not only at the Township of Esquimalt when conducting the analysis of the service needs, but also Greater Victoria (Local Health Area 411) as a whole, in order to get the complete picture of the current and future demand for services for this population group.

CFB Esquimalt

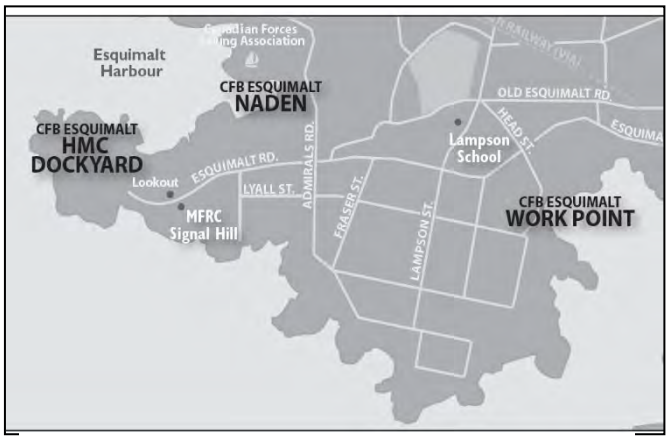


Figure 4 CFB Esquimalt Location

CFB Esquimalt is primarily a naval base which employs an estimated 4,300 military members and 2,000 civilian personnel. Military personnel, as well as their dependents are included in the Census population count. Additionally, at any given time, there can be an additional 2,600 people at CFB Esquimalt for training. These trainees are not likely to be included in the Census population count owing to their short- term residency in Esquimalt. The Base has several locations (see Figure 4) spread over 25 kilometers in different communities surrounding Victoria.

There is one medical clinic on the base for military personnel only. When the clinic is closed, military personnel will obtain medical services off the base. Veterans, family members and civilians are expected to seek publicly-funded services for their primary care needs. Many of these individuals will seek services inside or outside the boundaries of the Township.

Esquimalt Nations and Songhees Nations Communities

The Esquimalt Nations village was historically located closer to Victoria proper, but today their main reserve is on the north shore of Esquimalt Harbour, adjacent to View Royal. The Esquimalt Nation community is a small nation with approximately 150 members living in the community and another 100 living outside the community. Members not living in the community live in Victoria, in other parts of Vancouver Island and BC, Alberta, and in a number of communities in Washington State.

A Nurse Practitioner operates clinics in the Esquimalt Nation. These are weekly clinics and operate for 3.5 hours every Monday. There is also a Community Health Nurse who is employed by Esquimalt Nations. The Indigenous Health Diabetes Nurse Educator (DNE) also provides services in the community to serve the clients who have been referred. The DNE works with Island Health's Diabetes Education Center to support connections in the community for gestational diabetes.

The Songhees Nations Community, according to the 2016 Census, had approximately 535 band members, with three quarters of them living in the Songhees Community. Apart from the additional health resources (i.e. nurse practitioner, dietician, nurse), the residents of these two communities would access primary care services in Esquimalt, or from a Walk-in clinic or attend at the Victoria General, Royal Jubilee or Saanich Peninsula Emergency Departments.

Given the dramatic shifts in population demographics, aging and the burden of chronic diseases, having access to community-based primary care services is crucial to responding to the unique needs and diversity among the Esquimalt and Songhees Nations to achieve improved health outcomes.

Numerous studies have documented the disproportionately high burden of chronic diseases in the population of these two communities (e.g. diabetes, depression, mental health, addictions, substance us e, heart, kidney and lung disease. The prevalence of these chronic diseases is shown to significantly contribute to the greater morbidity and premature mortality. These factors often result in Indigenous People presenting to health services late, during the course of their disease, which in turn leads to significantly higher rates of complication and death. Addressing these chronic health problems can be addressed by providing equitable and timely access to primary and urgent care services in the Esquimalt catchment area.

4.0 Major Findings

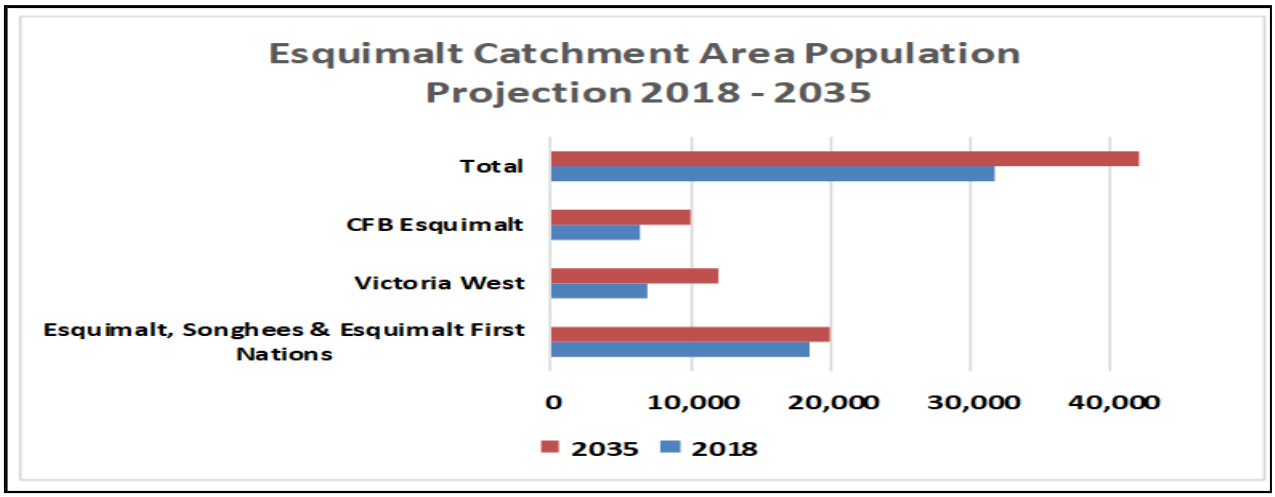
Community Profile –Demographic Trends

An understanding of the make-up of the population in the Esquimalt primary health care catchment area and a study of the population growth patterns, are important factors to consider for effective planning. The data paints a vivid picture of a growing region. Important to this growth is a municipality that has accessible primary health services, appropriate resources, a centralized site and an infrastructure to deliver a continuum of health and social care services, from prenatal to seniors.

Patterns of Population Growth

The growth in Esquimalt has been well documented. According to the 2016 Census by Statistics Canada, the Township of Esquimalt currently has a population of 17,655 - an increase of 8.9% (1600 people) from the 2011 Census. The current population for the Esquimalt catchment area (i.e. Esquimalt, Victoria West, CFB Esquimalt, Songhees Nations and Esquimalt Nations) is estimated at 31,600 residents, with a projected annual growth rate of 2.5%to 2035, as shown in Figure 5. Based on these projections, the Esquimalt catchment area is estimated to have a population of 42,000 in 2035.

Figure 5 Projected Population Growths for Esquimalt Catchment Area



To analyze the resources needed to meet the demand for primary health care services in the Esquimalt catchment area, it is necessary to define the population this system would serve. Table 1 shows the current and projected healthcare service catchment area population demand as defined by the Western Communities medical service boundaries. See Figure 2 and Section 2, for a detailed explanation of the area included in the Esquimalt catchment calculations. The ebbs and flows of the population growth, and the unique location of the catchment area offers distinct challenges for the municipality and its partners in developing a service delivery system that addresses the specific needs of this population group. Namely, access to physician and nursing resources, increased number of people attached to a patient medical home, and digital care to enable continuity of care for people living with complex care and mental health issues.

Table 1 Population Projections for Esquimalt Primary Health Care Catchment Area

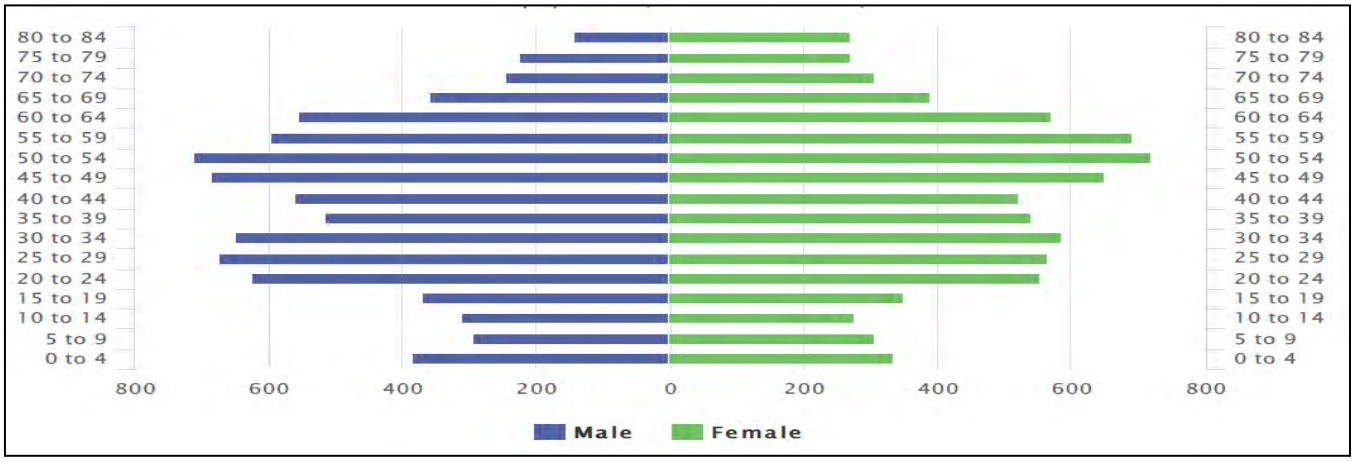
Region	2018	2035
Esquimalt, Songhees & Esquimalt First Nations	17,655	20,000
Victoria West	6,800	12,000
CFB Esquimalt	6,300	10,000
Total	**30,755**	**42,000**

Source: Census 2016, CRD Estimates of Population Revised Capital Region 2018

Characteristics of Community Resident Population

It was previously stated that the age distribution of the Esquimalt primary health care catchment area population is generally older than that of the province, with 16% being over the age of 65 years, versus 14% in British Columbia (BC Stats, 2016). The median age is 43.4 years which is also slightly older than the province at 38.2. Esquimalt's catchment area has a higher concentration of individuals aged 15-19 and 45-49 and men outnumber women in more age ranges, apart from those 70 years and over[14]. This spread is also slightly represented in the Esquimalt catchment area but skewed to the right (see Figure 6), with marginally more people aged 20-34 and 50-59. Gender is equally divided in the Esquimalt catchment area with 50% of the population being male, 50% female .

Figure 6: Esquimalt Population by Age and Gender 2016/17

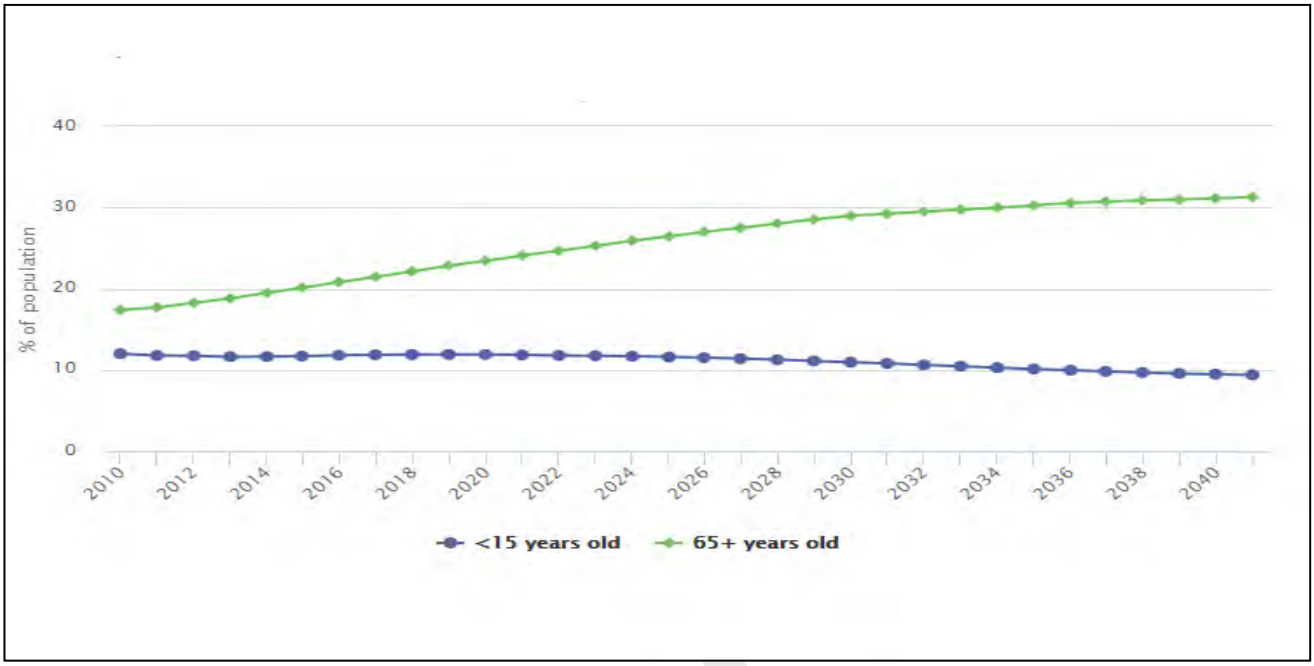


The population growth by age group (see Figure 6) highlights that people aged 65 years and older in the Township, was 48% between the 2011 and 2016 Census. Between 2008 and 2013, the population growth of 1.5% is similar to the growth rate in other communities on Vancouver Island, and in British Columbia. The Esquimalt catchment's aging population, both the median age and the percent of the population over 65 years of age, will increase from 22.1% in 2018 to 30.3% in 2040 (see Figure 7). The median age will increase to 60.4 in 2040[17].

This factor has significant implications for planning the demand for physician and nursing resources, especially in terms of the type of services to people living with complex chronic conditions. This suggests there will be a significant demand for investment in seniors care and chronic disease management, presenting an opportunity to rethink services, programs, activities in daily living, day programs, and mental health supports for people living beyond age 65.

Much of the pressure on future health systems funding and resources is a result of the aging of the population and the increasing prevalence of chronic conditions. In this context, as shown in Figure 7, it is essential that services are well planned and have the capability and flexibility to respond to the evolving population changes within the Esquimalt catchment area. Especially, the consideration of the type, location and delivery mechanisms to address the attachment to family physicians and shortage of primary care services in this community.

Figure 7 Projected Seniors and Youth Population 2018 to 2040



Source: Greater Victoria Local Health Area Profile, Island Health, July 2018

Understanding the Population and Service Delivery Environment

The purpose of the following sections is to understand the population's health status and the services they access. It is important to understand the population and the adequacy of existing services (public sector, private sector and other) in supporting health needs to determine efficiency, effectiveness and the gaps for resources and services.

This comprehensive view at the population level ensures that relevant information is used to inform the development of strategies to address the access to physicians, nurse practitioners and health services. Moreover, it aims to consider all the factors that may influence the current and future design of service directions, objectives and strategies and their implementation in this community.

Population Health Status

The following health status indicators were highlighted in the Esquimalt catchment area, excluding Victoria West, compared to the Greater Victoria Area and the Province of BC.

- Visible minorities, new immigrants and indigenous peoples make up an estimated 16.3% of the population.
- Higher percentage of total population with a mood/anxiety disorder.
- Higher proportion of single-female households.
- Higher percentage of children living in single-family households.
- Higher percentage of adults with high school diplomas, trade certification and college diplomas.
- Lower percentage of adults with Bachelor's degrees, graduate degrees or professional degrees.
- Lower median household income.
- Lower unemployment rate.
- Potential years of life lost related to behaviours of alcohol, drug and tobacco use is significantly higher than BC.

A summary highlighting how Esquimalt is doing, compared to the provincial average, is shown in Appendix B.

Esquimalt Catchment Area's Primary Care Service Delivery Environment

Residents living in the Esquimalt catchment area require access to primary and urgent care services within their community. For a variety of reasons, a growing number of community residents find themselves unattached to primary medical homes and unable to access needed medical services within the community.

At present, community-based primary care service delivery in the Esquimalt catchment area is eroding and the Government of BC is to be applauded for its recognition of the importance of community-based primary care and the recent actions undertaken to support this need. Island Health and the SIDFP, by extension of the BC Ministry of Health, are exploring models of care and the necessary resources to address the specific needs of individual communities. For example, the launch in November 2018, of the Westshore Urgent Primary Care Center provides same day access to team-based primary care and a range of services to the people living in Langford and surrounding communities.

Residents of the Esquimalt catchment area require a similar model to address access to primary urgent care within their community. The closure of the medical office at 918 Esquimalt Road at the end of December 2018 combined with the remaining center, the Esquimalt Medical Center, having a full practice and not accepting new patients, is forcing a very large number of people to find medical care outside of their community. However, service availability and accessibility will become more competitive for catchment residents as they find themselves competing with impending medical clinic closures, the shift of service delivery away from unattached walk-in patients, and the significant population growth in the Victoria downtown core who will also be seeking medical care at some point.

As evidenced in the foregoing, many residents of the catchment area, seeking medical services for the complete spectrum of primary care from urgent to chronic and complex health issues, will continue to find themselves unattached to primary medical homes and unable to access care in a timely manner, with many people ending up in the Emergency Department or being admitted to hospital, or staying home without care, all shown to affect negatively on the quality of their life.

The Importance of the Patient and Physician Relationship

There are three goals in the BC government's family practice transformation. First is the creation of Patient Medical Homes (PMH) defined as patients seeing physicians in the areas in which they live. Second, is to ensure that each patient who wishes to have a primary family care provider can have one. The third, is to have better access to primary urgent care outside the emergency department—more after-hours care, same day care, and within 24-hour care. The Patient Care Network (PCN), one of which is the Western Communities PCN, is the mechanism to bring together PMHs with Island Health, community service resources, and Divisions of Family Practice groups to provide greater service access and increased patient attachment.

Due to the recent closure of one of the two Esquimalt medical clinics and the relocation of one physician to a clinic in Victoria, an estimated 4,000 additional patients have been added to the approximately 32,000 patients who are looking for a family physician in Esquimalt and across the Western Communities. This number is expected to grow to about 55,000 by 2022. At the request of the Ministry of Health, the SIDFP along with its health care partners, reviewed the demand in Esquimalt for physician and clinical resources and agreed that the need to replace and expand resources in the community was critical.

Access to Health Care

Two major factors shown to affect an individual's health are access to a family doctor/Patient Medical Home and continuity of care. These factors are an important element in the delivery and organization of primary health care in British Columbia. It has been consistently shown to be associated with increased patient and doctor satisfaction and may positively affect other health outcomes, such as adherence to treatment, uptake of preventive services, decreased hospitalizations, self-care management and decreased medications.

Patients without access to a Family Physician and/or Nurse Practitioner may use other services such as Walk-in clinics or Emergency Departments as a substitute for primary care. While the majority of patients using Walk-in clinics may have a regular family doctor, there is some suggestion of lower attachment rates among visitors to Walk-in clinics.

This fact is supported by the data collected from the On-Street survey, that showed 76.5% of respondents stated they did not have a family doctor, and many stated it had been over 2 years since they had a regular family doctor. Eighty-five percent of respondents living in Victoria West stated they did not have a family doctor, and 65% of Esquimalt Nations residents reported they have been without a doctor for more than

18 months. Although some Walk-in clinics are connected to a Family Doctor's practice/Primary Medical Home, most do not have the capacity to accept new patients, and on most days the Walk-in clinic is at full capacity. As with emergency departments, the substitution of Walk-in clinics is related to a patient's perceptions of access to timely health care.

'Attached and Unattached' Population

The Ministry of Health attachment system identifies a patient's attachment status by identifying the practice or practitioner who provided the majority of a patient's recent care. A patient is considered 'attached' if five or more of their visits during the last year were made to the same doctor or family practice. For example, if a patient had five or greater visits in the most recent fiscal year, to a particular clinic, they are considered "attached" whereas if a patient was seen less than five times a year in the same clinic, or if they are seen in different clinics, they are considered 'unattached' to a GP.

Moreover, if a patient routinely visited the same Walk -in clinic three of five times a year, but does not see the same practitioner each time, the patient is considered 'attached' at the practice level, but not at the practitioner level. This form of patient and physician 'attachment' relationship, however, would come without the benefit of having access to continuity of care with the same provider, access to individual and family records, longer consultations or the resources to manage complex chronic conditions, especially the time for medication reviews.

Although the majority of British Columbian residents have access to regular medical doctors, BC government estimates in 2016/17 show well over 700,000 people were unattached and could not find a primary care practitioner[26]. In Greater Victoria, the unattached patients' population is estimated to range between 60,000 to 70,000. Owing to the closure of the Esquimalt Treatment Center, which was the medical home to approximately 4,000 patients, the number of Esquimalt's 'unattached' patient population is estimated in 2019 to range between 4,000 to 7,000.

Patients 'unattached' to a GP/NP/GP Practice/Primary Medical Home are an important concern for the Ministry of Health and others, from a population, policy and financial perspective. There are a growing number of community members in the Esquimalt catchment area who find themselves 'unattached' to a primary health care provider (GP or Nurse Practitioner), and unable to access timely and needed medical services within the community. Instead, they seek care from a number of different Walk-in clinics whose service features vary by locality and physician and clinical resources, or already overburdened Emergency Departments.

Medical evidence shows that patients who consistently see the same physician and care team have better health outcomes, higher satisfaction with their health care, and use fewer healthcare resources resulting in lower cost. Continuity of care enables physicians and teams to provide and demonstrate better clinical care, achieve greater efficiency, and increase their professional satisfaction. While episodic care or single visits may be acceptable for temporary illness, continuity of care is clearly better for chronic diseases.

Although previous patient attachment and service integration efforts have achieved a number of improvements to primary care access provincially, many British Columbians who were previously unattached have gained attachment to a family physician/Primary Medical Home. However, it is still a significant challenge for many and the demand for primary and community care services is exceeding current capacity.

Demand for Walk-in Clinic Services is Strong

As previously stated, the closing of the Esquimalt Treatment Center (918 Esquimalt Road) at the end of December 2018 has left significant unmet patient needs in this community. The existing medical clinic, the Esquimalt Medical Center, is the only Family Practice clinic remaining in the Township and these 2 General Physicians are not accepting any new attached patients. Most days this clinic is operating at full capacity and not able to absorb any Walk-in clinic clients. This situation forces many residents in the Esquimalt catchment area to seek medical services outside their community boundaries.

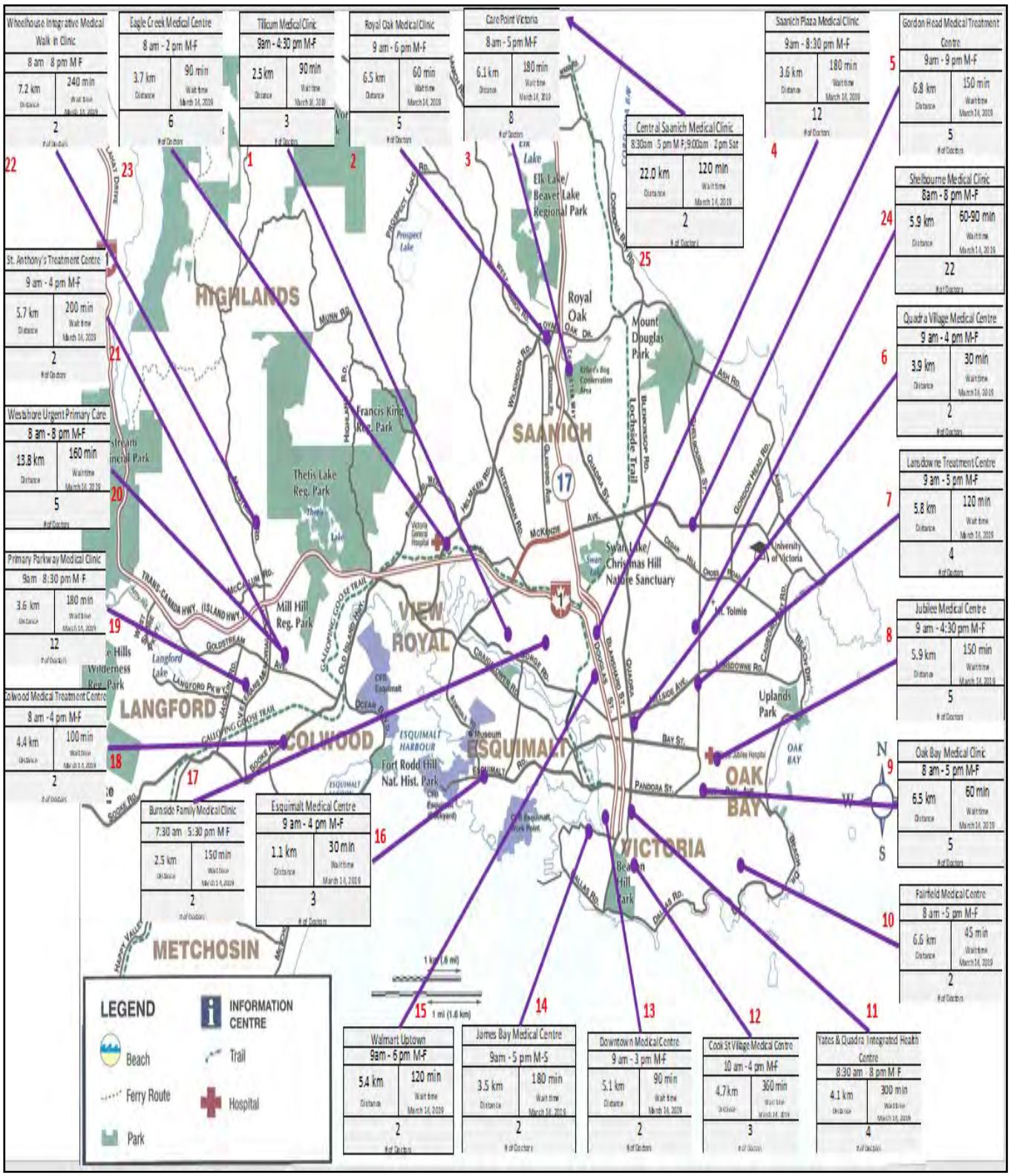
Our research identified 25 Walk-in centers operating in Esquimalt and in the surrounding communities. A list of these is provided in Table 2. Figure 8 illustrates the twenty-five Walk-in clinics or physician offices geographically located within 20-25 km from the Township center.

The map, (see Figure 8) also provides a picture of the travel time for Esquimalt residents accessing primary or urgent care or emergency care at the Saanich Peninsula Hospital, Royal Jubilee Hospital, Victoria General Hospital or the newly opened Westshore Urgent Primary Care Center. Additionally, residents of the Esquimalt catchment area living with COPD can access respiratory education centers located in Victoria or obtain a referral to Island Health's Home Health monitoring program from their health care provider. Due to demand, however, this program is currently not accepting new patients. The estimated wait time for Island Health's Tele-Heart Home Monitoring Program ranges from 3 to 6 months and requires a referral from a primary care provider.

Table 3 lists the hours of operation and patient wait times (as of March 14, 2019), highlighting the variety of hours, with a notable gap in over-night access to services, and reduced hours over the weekend. Patient wait times at most clinics is shown to range from one hour to four and a half. Several On-Street survey participants repeatedly stated they were at the clinic before it opened, often waiting only to be told there was a 30-to 60-minute wait. Many others stated they often were told the clinic was at capacity, or they could see a doctor if they returned 2 or 3 hours later.

Additionally, Figure 8 depicts the complexity and the distances many people living in the Esquimalt catchment area have to travel just to get access to medical services. Additionally, the On-Street survey highlighted that people living in the Esquimalt Nation community needing primary care services stated they will often find themselves unable to find transportation, and, given the long wait times at most Walk-in clinics (see Figure 9), may return to the clinic and continue to wait or attend at the emergency department.

Figure 8 Twenty-five Walk-In Clinics Available to Esquimalt Catchment Area Residents



"I live across from Country Grocers and use a walker to get around. Once a week I walk from Country Grocers to Pandora Street and Vancouver Street to get my Opioid shot. Sometimes I have to wait so I go for a coffee and return for the shot and walk home…….It would be nice if I could get my shot in Esquimalt"…….survey respondent, Esquimalt, male, 61.

"I am a family doctor who practices in the Greater Victoria Area. I do think there is a role for walk-in clinics in our system, especially if it is to fill gaps in access. I agree with patients that in the context of an existing patient-physician relationship, the lack of continuity between walk-in clinics and being attached to a Primary Medical Home, can lead to the wrong conclusion if a patient's history is not available and they continue to visit multiple Walk-in clinics"….Key Informant interview.

Table 4 Walk-in Clinics, Hours of Operations and Travel Distance

Map No.	Walk-in Clinic	Hours of Operation	Travel Distance (km) One-way	Clinic Wait Time (minutes)
1	Trillium Medical Center	M-F 9:00 – 4:30	2.5	1 ½ - 2 hrs
2	Royal Oak Center Medical Clinic	M-F 9:00-6:00 pm	6.5	1 - 2 hrs
3	Care Point Victoria	M-F 8:00-5:00 pm	6.1	1-1 ½ hrs
4	Saanich Plaza Medical Center	M-F 9:00-8:30 pm	3.6	1–2 hrs
5	Gordon Head Medical Treatment Center	M-F 9:00-9:00 pm	6.8	W/I at capacity
6	Cook St & Quadra Village Medical Clinic	M-F 9:00-4:00 pm	6.2	1-1 ½ hrs
7	Lansdowne Walk-in Clinic	M-F 9:00-5:00 pm	5.8	1 ½-2 hrs
8	Jubilee Medical Clinic & Treatment Center	M-F 9:00-4:30 pm	6.5	2-3 hrs
9	Oak Bay Medical Center	M-F 8:00-5:00 pm	5.8	1-1 ½ hrs
10	Fairfield Medical Clinic	M-F 9:00-5:00 pm	6.6	1 ½-2 hrs
11	Yates & Quadra Integrated Health Center	M/F 9:00-3:00 pm T/W/Th 8:30-8:00 pm S & S 9:00-4:00 pm	4.0	1 -2 hrs w/e 1-1 ½ hrs
12	Cook Street Village Medical Center	M-F 10:00-4:00 pm	4.7	2-3 hrs.
13	Downtown Medical Center	M-F 8:30-5:00 pm Closed W/S/S	3.8	4 ½ hrs.
14	James Bay Medical Treatment Center	M-S 9:00-5:00 pm	3.5	1 ½ - 2 hrs
15	Walk-in Clinic at Walmart Victoria by Jack Nathan Health	M-F 8:00-6:00 pm Saturday 10:00-4:00 pm	5.7	1 ½-2 hrs
16	Esquimalt Medical Center	M-S 9:00-5:00 pm		W/I at capacity
17	Burnside Family Medical Clinic	M-F 7:30-5:30 pm	2.5	2-3 hrs
18	Colwood Medical Treatment Center	M-F 8:00-4:00 pm	4.4	1-1 ½ hrs
19	Primary Parkway Medical Clinic	M-F 9:00-4:00 pm	6.9	1 ½ -2 hrs
20	West Shore Urgent Primary Care Center	S-S 8:00-8:00 pm	13.8	60-90
21	Eagle Creek Medical Center	M-F 8:00-2:00 pm	3.7	50-80
22	Wheelhouse Integrative Medical Clinic	M-F 8:00-8:00 pm	7.2	1-2 hrs
23	St. Anthony's Treatment Center	M-F 9:00-4:00 pm	5.7	1-1 ½ hrs
24	Shelbourne Medical Clinic	M-F 8:00-8:00 pm	5.9	60-90
25	Central Saanich Medical Clinic	M-F 8:30-5:00 pm Saturday 9:00-2:00 pm	22.0	W/I at capacity

Time and Costs Seeking Care

Patients' time and costs seeking primary health care services, or during illness and treatment, are relevant aspects to include in a complete analysis of the social costs of not being attached to a GP Physician/Nurse Practitioner or Primary Medical Home. The estimated 15,000[33]people who travel outside Esquimalt's boundaries for medical care spend a significant amount of private time and money travelling for services.

For example, in our On-Street survey, a patient with rheumatoid arthritis stated he had frequent contact with a GP and other providers and did not have a regular doctor who he accessed on a regular basis (unattached) and travelled by public transport twice a week to attend a Walk-in clinic in Oak Bay. He stated that he always arrived at the clinic when it opened at 8:00 am and was frequently given a wait time of 1 to 2 hours. The travel distance from the Township offices to the medical center is approximately 5.8 km one way (see Line 9, Table 4), a travel time of 15 minutes by car, or an estimated 25 to 45 minutes by public transport, depending on the time of day. The estimated travel time, frequency and travel costs for this patient will equate to 2 contacts to the Walk-in clinic, with an average travel time of 63 minutes and a cost of $2.50 per bus fare or $5.00 for a day pass, corresponding to a total of 2.1 hours and a $5.00 day pass or $10.00 (single fare) if the patient returned to the clinic from home.

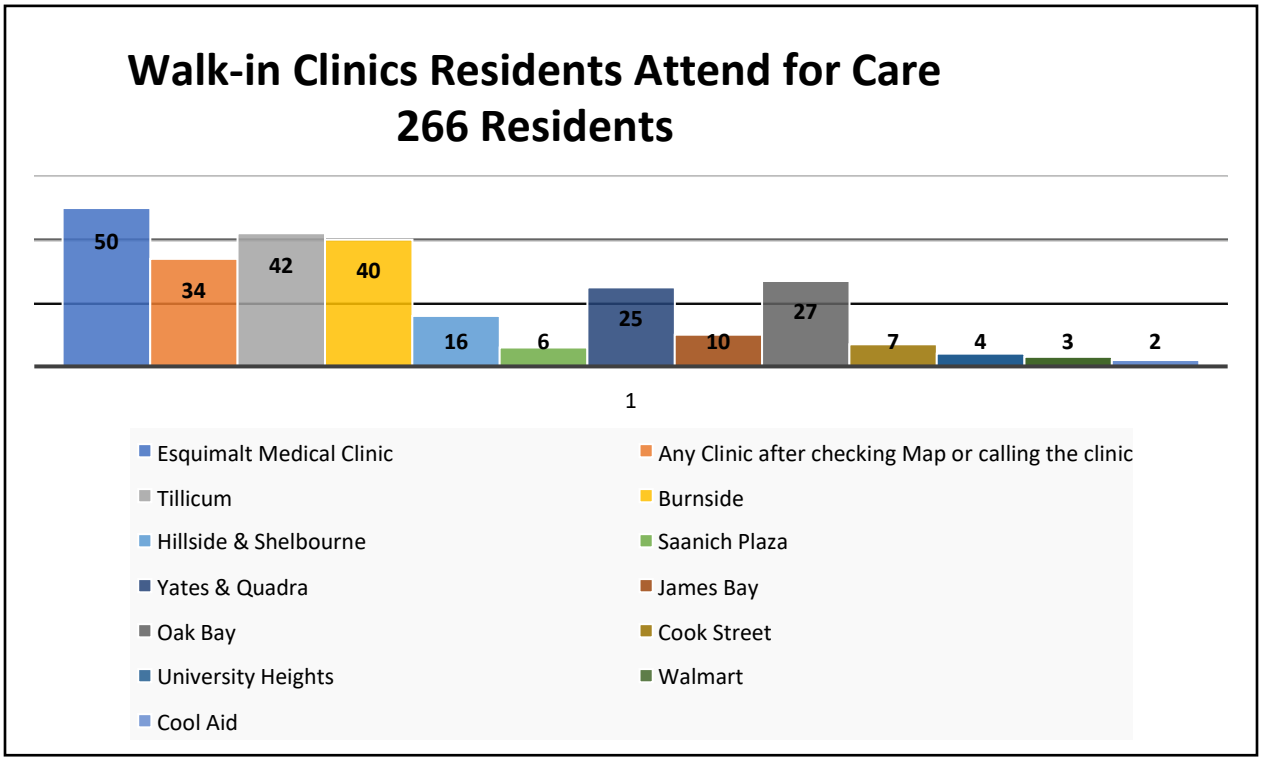
This example demonstrates that 'unattached' patients seeking care outside the Esquimalt catchment area can spend significant private time and money on travelling. This is an important consideration when considering opportunities for establishing a Primary Care Center/Patient Medical Home in this community, given that an estimated 11 patients stated they go to the Oak Bay Walk-in clinic (see Figure 9).

It was beyond the scope of this study to explore the frequency of contacts with the different Walk-in providers, or Walk-in clinics, and assess travel time and costs per return visit. However, it is suggested further research is needed, as clinic wait times, travel time and costs, could be shown to have an impact on patients' health outcomes, and social costs.

Patients' time and costs during illness and health care treatment are relevant aspects to include in an analysis of the social costs of accessing services for their primary health care. Travel time and costs vary for the individual patient, depending on the type of treatment provided, the frequency of visits or encounters with health care providers, the traveled distance, and the mode of travel. While the need to include travel time and costs are widely accepted, most often they are not included in the discussions of patient experience and/or outcomes or used to determine location of new primary care facilities.

Many of the Walk-in clinics highlighted in Figures 8 and 9, and in Table 4, have tailored their centers to reflect local needs and priorities. As a result, many key features of Walk-in clinics such as where they are located, opening hours, skill-mix of staff, the range of services provided, and the degree of co-location with other health and social care services, vary by Walk-in clinic. Since there is currently no central repository containing data and information about Walk-in clinics specific to the Esquimalt catchment area, our overview of Walk-in clinics is based on our compilation of publicly available information, data and some information received from the SIDFP and providers, and conversations with stakeholders. It was beyond the scope of this project to review Walk-in clinics or evaluate services, programs and their effectiveness.

Figure 9 Walk-in Clinics Frequented by Esquimalt Catchment Residents



Alternative Service Options to Walk-in Clinics

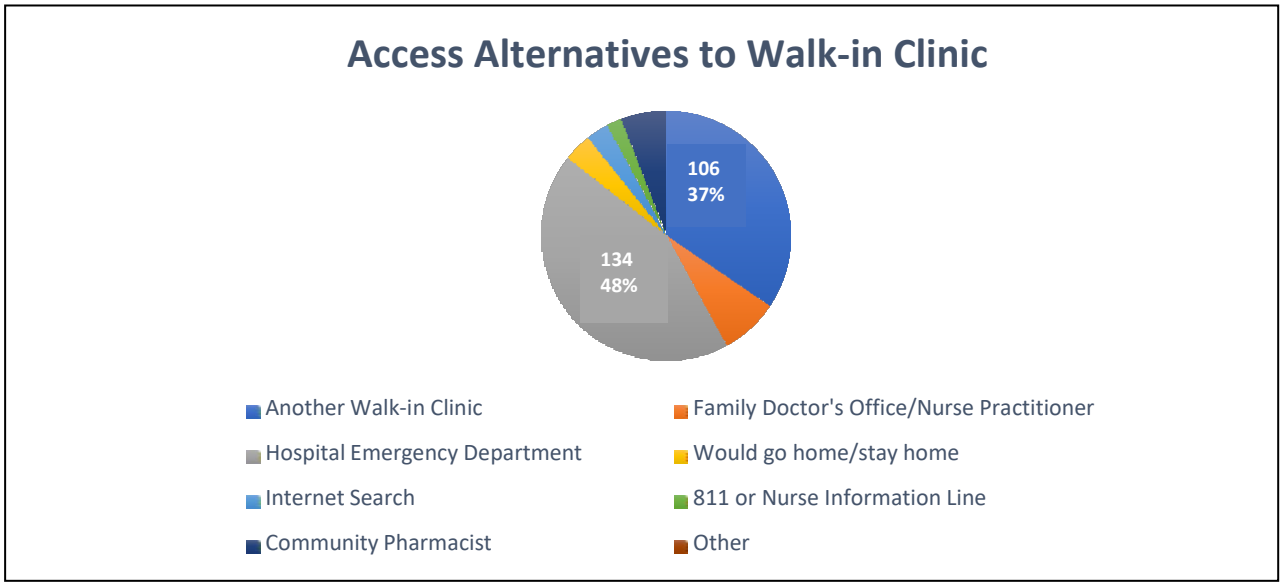
The list of operating hours in Table 4 suggests that a number of medical centers and Walk-in clinics are now operating with reduced opening hours owing to a shortage of physicians. Services provided vary and may depend on whether a Walk-in clinic is nurse-led or GP-led. However, many of these centers provide advice and treatment for minor illnesses and injuries and some prescription renewals. Based on the types of services available at different Walk-in clinics, a number of alternatives to Walk-in clinics are available within Esquimalt's catchment area for people needing medical services. These include:

- Another Walk-in clinic
- Family Doctor's office
- Hospital Emergency Department
- Go home/stay home (self-care and self-management)
- Internet search
- Community Pharmacy Services
- 811 or Nurse Information Line
- Other

In our 'On-Street' survey, when participants were asked what option they would choose in place of the Walk-in clinic they had attended if it were not available, 48% indicated they would go to the Emergency Department and 37% said that they would go to a different Walk-in clinic.

Only 11 participants indicated that they would stay home or attempt self-care. Even fewer people indicated they would go to a Nurse Practitioner, visit a pharmacist or the helpline (see Figure 10). This result is consistent with survey results we saw in the global literature review, which suggested that if a patient's Walk-in clinic was closed, around 30-40% of patients say they would visit an Emergency Department, and 20-40% attend another Walk-in clinic (see Figure 10).

Figure 10 Alternatives to Walk-in Clinics



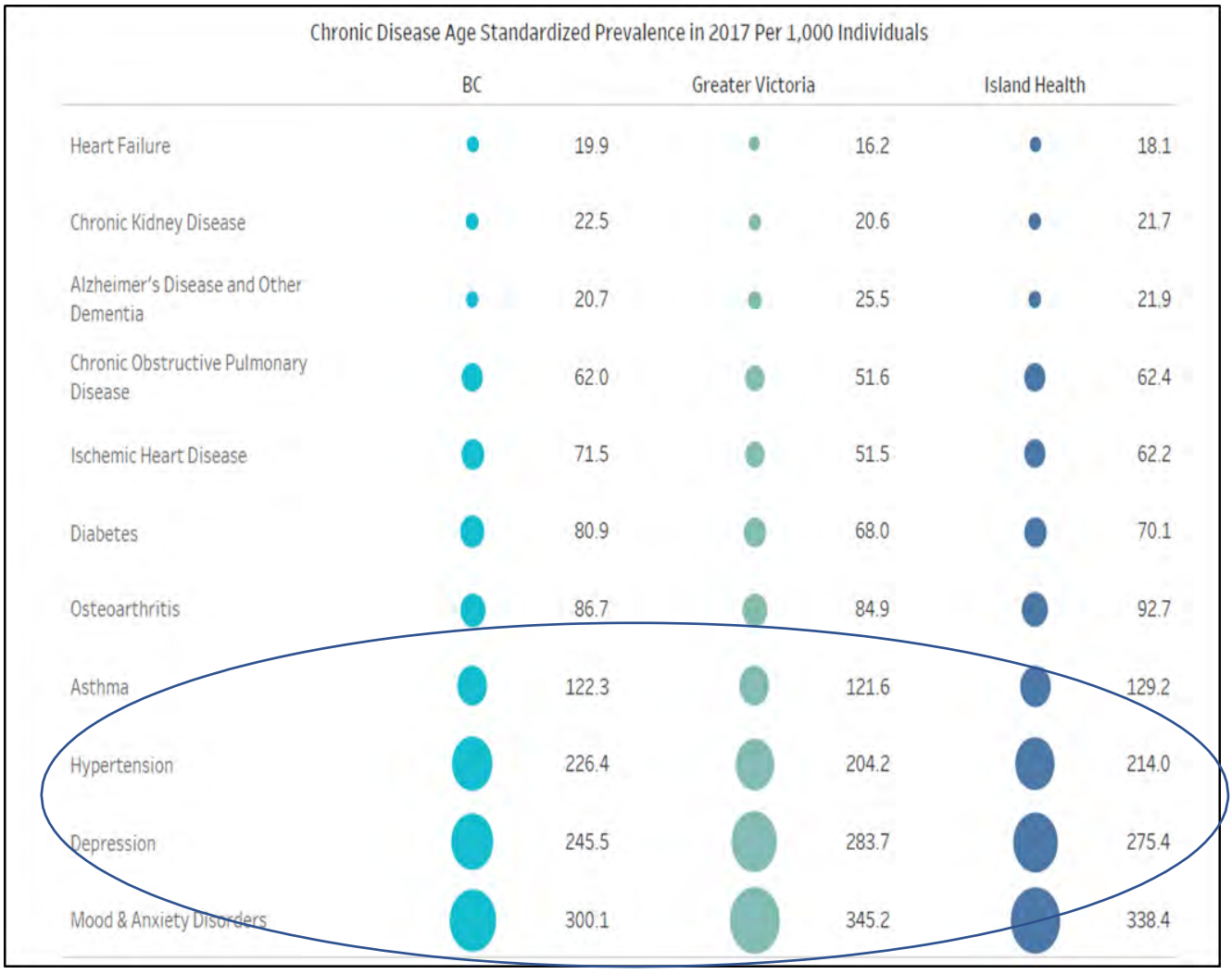
Chronic Conditions and Complex Care

Chronic diseases are a significant problem in Canada accounting for many of the most prevalent and costly illnesses that affect Canadians. An estimated 44% of adults aged 20 and over have at least 1 of 10 common chronic conditions. These conditions include hypertension, arthritis, mood and/or anxiety disorders, cancer, cardiovascular (heart) disease, depression and diabetes. These are only a few of many chronic illnesses that negatively impact the lives of Canadians.[34]Not surprisingly, chronic diseases have become the leading cause of death and disability in Canada. Seven out of every ten deaths are attributable to chronic disease and illnesses like heart disease and cancer top the list of most common causes of death. Minority populations are often disproportionately impacted by chronic disease, with Indigenous Peoples 1.5 to 2 times more likely to have a certain chronic condition than other residents.

Chronic disease prevalence rates for Alzheimer's disease and other dementia across the Greater Victoria Local Health area is higher than Island Health and British Columbia rates. Depression, mood and anxiety disorders, asthma, hypertension chronic obstruction pulmonary disorder (COPD) and diabetes are higher in Esquimalt than in Greater Victoria and in comparison to the rest of British Columbia but similar to Island Health overall (see Figure 11). The incidence rate of chronic diseases and the prevalence increases as the population ages. Age-standardized rates, as shown in the graph, allow for a comparison of chronic diseases to BC, Greater Victoria and Island Health, regardless of an aging population.

One of the biggest challenges that the Township will face in the future in achieving its strategic goal of a community focused on health and well-being, will be working in partnership with Island Health to implement prevention and self care management and behavioural programs for reducing the incidence and prevalence of COPD, heart failure, respiratory illnesses, high blood pressure, depression and anxiety and mood disorders. Understanding the population's health concerns and the demand for primary health care, may help the Township in its discussions with Island Health and other key partners to set community-based priorities.

Figure 11 Chronic Disease Age Standardized Prevalence in 2017 per 1000 Individuals



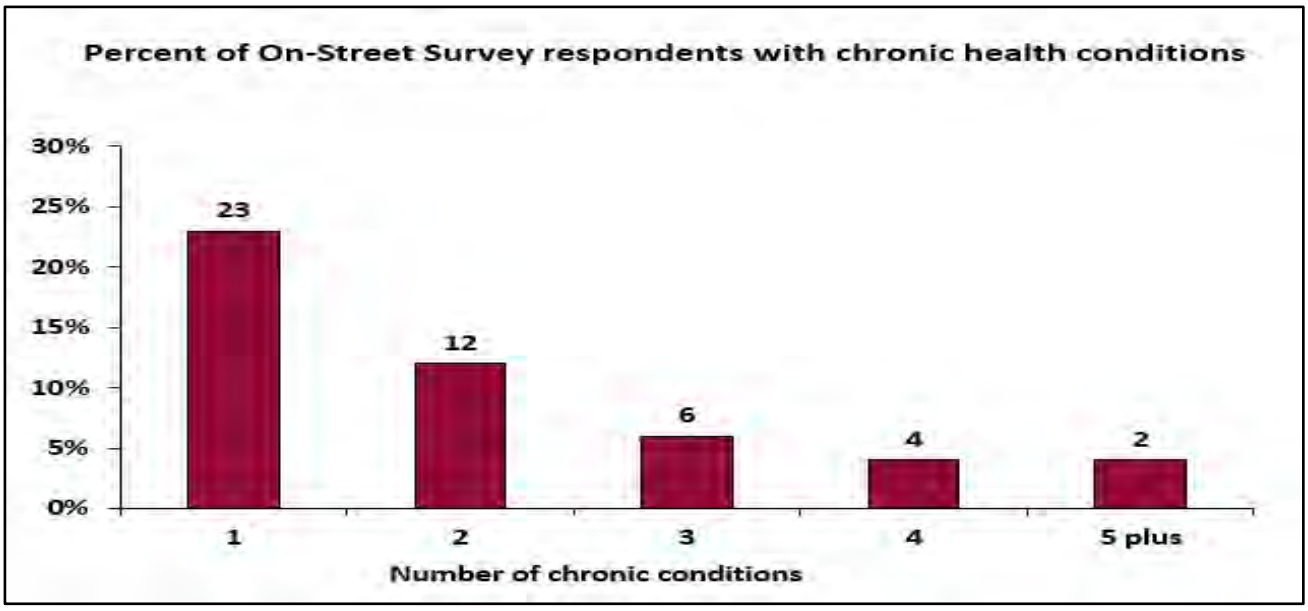
How Many People in the Catchment Area Live with Multiple Chronic Conditions

As shown in Figure 9, demand and cost pressures are likely to increase in the Esquimalt catchment area over the next five years. This increased demand is largely due to two factors: the aging population and a rise in the number of Esquimalt residents living with chronic conditions such as diabetes, cardiovascular, respiratory illnesses and mental health disorders.

Data from the On-Street Survey question about chronic conditions (see Figure 12), showed that of the 295 people who responded to the survey, 23% (n=68) have 1 condition, 12% (n=35 have 2 conditions, 6% (n=18) are living with 3 conditions, 4% (n=12) are living with 4 conditions, and 2% (n=6) are living with 5 or more chronic conditions. Hypertension and pain were the most common conditions reported by participants. When people talked about the impact of their conditions on their daily lives, some reported a loss of mobility, resulting in isolation. The demands of their conditions sometimes do not allow them to remain in their jobs, leading to financial hardship impacting their ability to pay for transportation to get to their medical appointments. However, as the population ages and the number of people with multiple chronic conditions (e.g. medication-related problems, mental health issues) increases in Esquimalt, meeting the complex care needs of these people will be one of the biggest challenges facing the Township as it moves forward with planning and implementing a service delivery system to meet the primary care needs of its residents.

Although strategies to improve healthcare often have a single disease focus, the Township may also have to consider future initiatives which consider the care of people with multiple conditions to enable health and well-being. This may, owing to the current physician shortage challenges, include exploring new models of care, which leverages resources across all geographic boundaries and optimizes technology to enable timely access to care and increases the number of patients attached to a GP/NP or group practice.

Figure 12 Many residents living in the Esquimalt catchment area have more than one chronic health problem

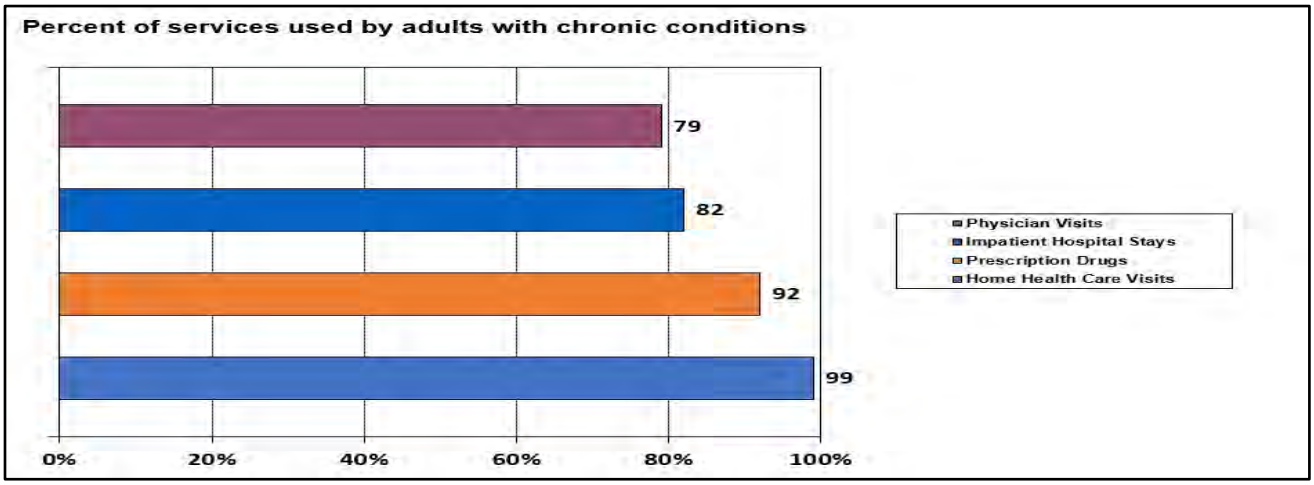


Source: On-Street Survey Data February/March 2019

Complex Care Needs of People Living with Multiple Conditions

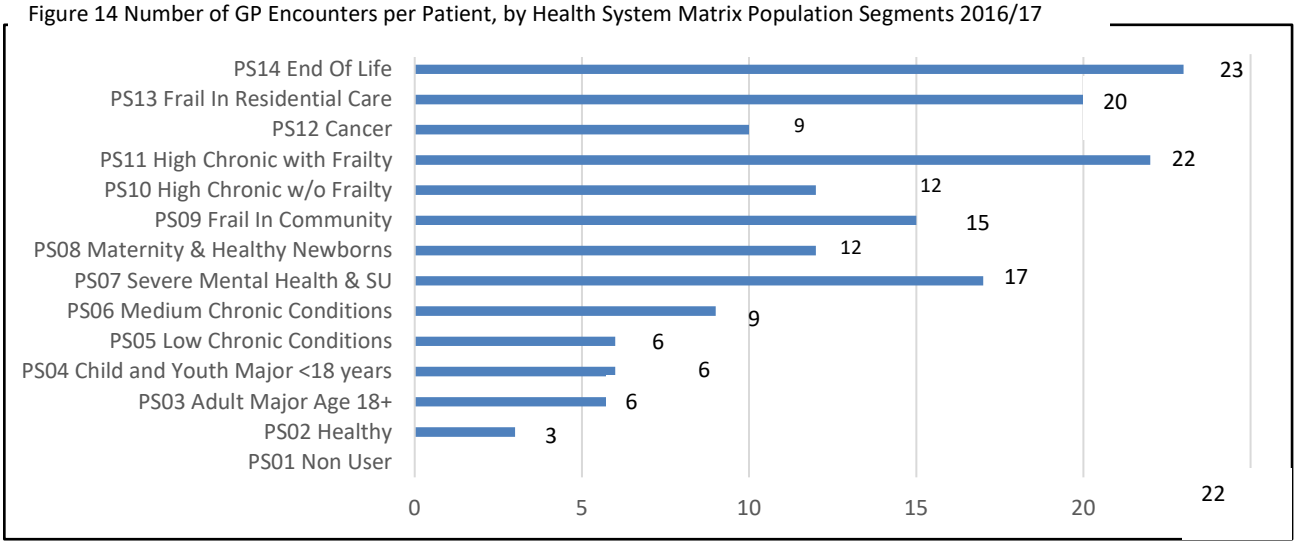
The care of people living with chronic conditions is often complex. Complex care is defined as patients with a combination of multiple chronic or long-term conditions mental health issues, medication-related problems and may be socially vulnerable. Complex care, as shown in Figure 13, is delivered by many parts of the health care system including physician visits, inpatient hospital stays, prescription drugs and home health care visits.

Figure 13 Adults 18+ living with chronic conditions are the major users of healthcare services



The chart below illustrates the average number of GP encounters per patient by population group. Figure 14 highlights that the average for all population segments is 6 GP encounters that may take place with any GP in any location (e.g. communty practitioner's office, hospital or emergency department). The high percentage of encounters for end of life care, frail in residential care, frail in the community, severe mental health, medium chronic conditions and low chronic conditions may support the fact that majority of catchment residents without a Primary Medical Home use physician services more often.

Figure 14 Number of GP Encounters per Patient, by Health System Matrix Population Segments 2016/17



Top 10 Chronic Conditions Presenting Emergency Departments

Secondary data suggests that the top chronic conditions presenting at Island Health Emergency Departments (see Table 5) could be treated at a community-based health clinic resulting in a significant reduction in hospitalization admissions, reduced wait times for patients, and improved continuity of care.

Table 5– Top Chronic Conditions Presenting at Island Health Emergency Departments (2015/16)

		Alzhiemer's Disease and other Dementia	Asthma	Chronic Kidney Disease	COPD	Mood and Anxiety Disorder	Depression	Diabetes	Heart Failure	Hypertension	Ischemic HD	Osteoporosis
Greater Victoria	61	2.2%	12.1%	1.6%	5.1%	30.8%	25.3%	5.3%	1.1%	16.6%	3.9%	6.3%
Saanich	63	1.6%	12.0%	1.6%	3.5%	28.4%	23.4%	4.8%	1.0%	17.2%	3.8%	6.7%
Gulf Islands	64	1.5%	11.3%	1.3%	4.6%	28.3%	21.4%	3.4%	1.0%	14.1%	3.8%	7.4%
Cowichan	65	1.7%	13.5%	1.6%	10.3%	32.3%	26.5%	5.6%	1.3%	18.7%	5.1%	7.5%
Lake Cowichan	66	0.9%	13.5%	1.6%	11.4%	32.5%	26.4%	6.1%	1.3%	19.5%	5.4%	7.9%
Ladysmith	67	1.9%	15.6%	1.5%	7.5%	31.4%	27.1%	5.6%	1.4%	18.8%	5.3%	7.9%
Nanaimo	68	2.1%	13.8%	1.8%	6.6%	29.8%	22.7%	5.7%	1.4%	16.8%	5.5%	6.8%
Qualicum	69	1.9%	13.2%	1.6%	5.4%	29.3%	22.9%	4.9%	1.2%	17.1%	5.4%	7.1%
Alberni	70	2.0%	13.6%	1.8%	7.0%	30.1%	25.9%	7.0%	1.7%	18.9%	4.9%	7.9%
Courtenay	71	1.8%	12.6%	1.8%	6.1%	29.9%	25.5%	4.6%	1.3%	17.4%	5.0%	6.2%
Campbell River	72	1.8%	14.3%	1.8%	7.8%	31.2%	24.7%	6.2%	1.7%	18.0%	6.1%	8.1%
Vancouver Island West	84	1.0%	14.0%	1.8%	4.8%	22.4%	17.5%	6.3%	1.6%	16.1%	5.7%	7.0%
Vancouver Island North	85	1.6%	16.3%	2.1%	9.7%	28.5%	22.9%	6.9%	2.3%	20.1%	6.3%	8.5%
Vancouver Island		**1.9%**	**13.0%**	**1.7%**	**6.1%**	**30.2%**	**24.6%**	**5.4%**	**1.3%**	**17.4%**	**4.7%**	**6.9%**
Median		**1.7%**	**13.5%**	**1.6%**	**6.4%**	**30.0%**	**25.0%**	**5.7%**	**1.3%**	**17.7%**	**5.2%**	**7.2%**

The profile shown in Table 5 reflects regional-level data (local health area (LHA), which is the most detailed emergency department information available. The data states that in 2008/09, one in 10 patients admitted to hospital as an emergency had 1 condition. In 2015/16 the figure was 2+ conditions. Moreover, literature suggests that the top chronic conditions presenting at Island Health Emergency Departments (see Table 5) could be treated at a community-based primary health care clinic resulting in a significant reduction in hospitalization admissions and health system costs[39].

Island Health considers the highest priority chronic conditions in the Greater Victoria Local Health Area (LHA), which includes the Esquimalt catchment area to be (in alphabetic order):

- Alzheimer's Disease and other Dementia
- Arthritis
- Asthma
- Chronic obstructive pulmonary disease
- Coronary artery disease
- Depression
- Diabetes
- Heart Failure and Hypertension

Although Figure 11 chronic conditions data compares Greater Victoria to Island Health and Provincially, the specific chronic conditions and/or combination of chronic conditions (diabetes and mood/anxiety disorders, osteoarthritis and hypertension) in Esquimalt is shown to be comparable to other communities.

Figures 11 and 12 show the top chronic diseases presenting to the Victoria General Hospital and Royal Jubilee Hospital Emergency Departments, and Figure 13 highlights the number of services utilized by people with chronic conditions. Appendix D provides additional information on the priority population groups, the services they seek and utilize, physician and hospital services and utilization rates by age group.

Data to analyze these conditions, and the prevalence rates for the Esquimalt catchment area including the Songhees and Esquimalt Nations communities was not available to the project team. Secondary data published by the First Nations Health Authority for the period 2008/09 to 2014/15 stated that prevalence rates for 17 chronic conditions for Indigenous Peoples were higher than other residents. In the majority of these conditions, the difference between the two population groups was stable for the reporting period in four conditions: diabetes, osteoarthritis, COPD and chronic kidney disease. Only in three conditions –asthma, dialysis and epilepsy—did the prevalence rate increase for indigenous peoples. Information related to the health of the population, and the impact of aging is critical to understanding the primary health care needs of a community.

In moving forward, it is recommended that the Township seek to obtain health status and services utilization for the Esquimalt catchment area including the Songhees Esquimalt Nations communities and include this data in the population planning for primary health care.

Hospital Utilization and Service Capacity

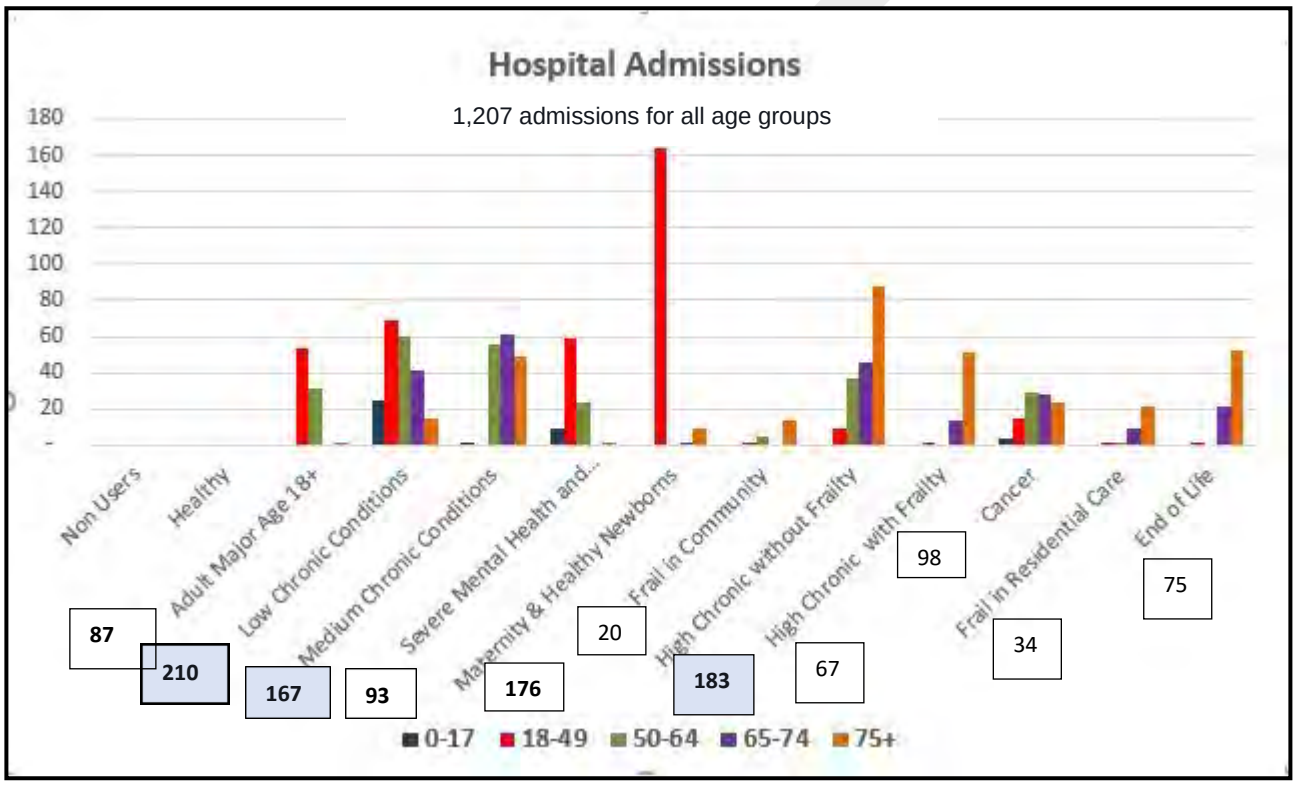
Perhaps the most telling statistic in assessing the accessibility and responsiveness of the health care system is that of the Emergency Department and other performance indicators, such as accessibility to physicians, nurse practitioners, services and supports aligned to community needs.

The graphs in sections 3.8.1 to 3.8.5, depict the number of visits to the emergency department and outpatient visits indicating a need for, or enhanced citizen education/awareness around, primary health care services. It is also indicative of the fact that owing to a shortage of family physicians and/or access to medical services, the emergency department is considered the only access to a physician. These results are consistent with the findings from the On-Street survey data. The number of people presenting with mood and anxiety disorders, depression, hypertension and asthma, accounts for an estimated 90.1% of all emergency department visits.[40] While acute care is not part of the scope of this assessment, this data helps to form a picture of the health needs that are present in the Esquimalt catchment area. Medical admissions are most common, as opposed to surgical admissions, and relate to the age demographics of the population.[41]

Hospital and Surgical Services

The chart below presents a view of the number of Esquimalt residents admitted for hospital inpatient care (e.g. Royal Jubilee, Victoria General and Saanich Peninsula) by age and population groups in 2016/17[42]. While acute care is not part of the scope of this assessment, the data presented in this section helps the Township to form a picture of the existing health needs in the catchment area. See Appendix C for additional information on the BC Ministry of Health's health service population groupings (e.g. low, medium and high chronic conditions), hospital and surgical data definitions.

Figure 15 Hospital Admissions by Health Services Matrix Population Groups (2016-2017)



In Figure 15, people are counted in the population segment that represents their 'highest' need in the year. For example, the graph shows that people with Low Chronic Conditions , Medium Chronic Conditions and High Chronic Conditions without Frailty, had the highest number of hospital admissions accounting for 46% (n=560) of the 1,207 admissions, for this health service group. Maternity & Healthy Newborns accounted for 176 hospital admissions, which reflect that the majority of patients are women between the ages of 18 to 49. Other than newborns, the remaining top admissions were more common among people over 50 years of age, as per the chart above. The definitions of the High, Medium and Low chronic conditions shown in Figure 16 are defined in Appendix C [43].

Figure 16 Chronic Conditions: Defining High, Medium and Low Complex Chronic Conditions Sub

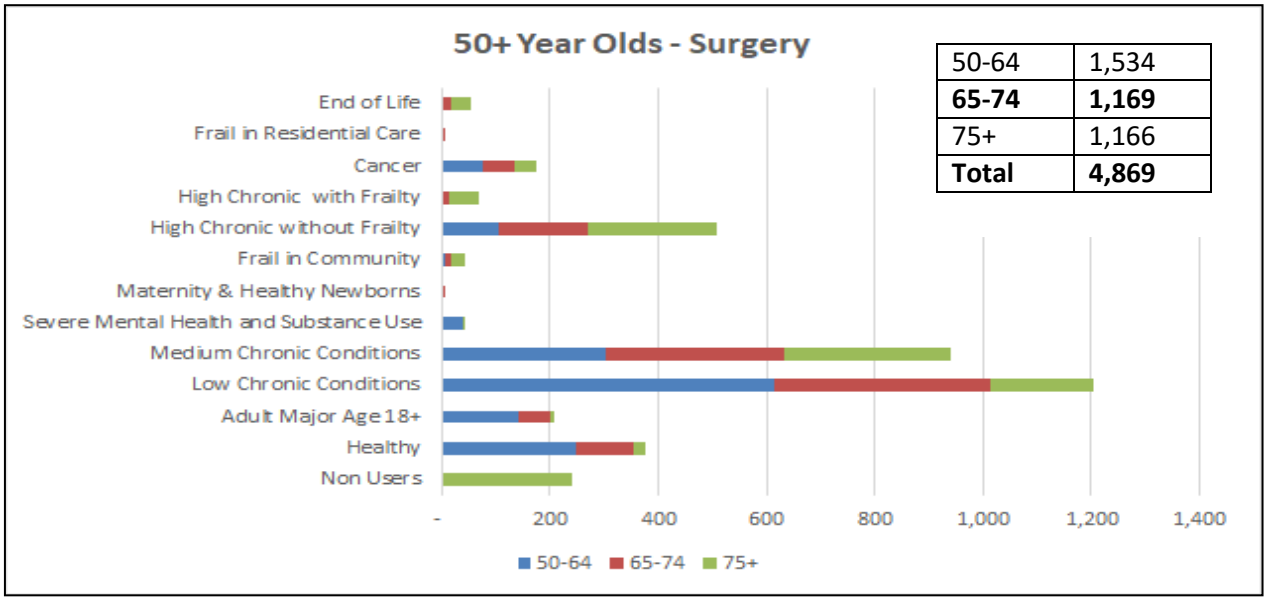
High Complex Chronic Conditions	Medium Complex Chronic Conditions	Low Complex Chronic Conditions
Has Diagnosis of this Condition		
Dementia Alzheimer's Heart Failure Kidney Transplant Cystic fibrosis (PharmaCare Plan D)	Pre-dialysis Chronic Kidney Disease Chronic Obstructive Pulmonary Disease (COPD) Angina Rheumatoid Arthritis Multiple Sclerosis Parkinson's	Diabetes Hypertension Osteoporosis Osteoarthritis Depression Asthma Epilepsy
Had this Event or Intervention		
Stroke Chronic Kidney Disease on Dialysis	Coronary Artery Bypass Graft Acute Myocardial Infarction (AMI) Intervention Cardiac Procedure PCI	
Has this Combination of Conditions		
Angina and COPD AMI & Pre-dialysis Chronic Kidney Disease Rheumatoid Arthritis & Osteoporosis Diabetes, Hypertension, Osteoarthritis	Osteoporosis and Osteoarthritis Osteoporosis and Hypertension Diabetes and Depression Osteoarthritis and Hypertension	

The data provided to the project team was for the Community Health Service Area, Esquimalt/View Royal. This data did not allow for a count of the true number of Esquimalt catchment area cases for specific chronic conditions. It is difficult to determine how many people in Esquimalt were admitted for acute care or emergency department care, for hypertension, episodic depression, asthma, chronic obstructive pulmonary disease (COPD), stroke or chronic kidney disease. Nor did the data allow for an understanding of the health care needs of people with a combination of conditions or multiple health conditions. For example, most common additional conditions for people with COPD may include coronary heart disease, diabetes, chronic kidney disease, depression/anxiety, asthma and perhaps hypertension.

Access to the Chronic Conditions Registries data to allow for this evaluation is critical when comparing Esquimalt's population with other communities in the region. Moreover, this data is required to determine the percentage of people needing complex care case management, and to project current and future workforce requirements for the community. Additionally, having access to this information will inform the Township's strategic planning especially in working with community developers in selecting medical facility sites.

While Figure 17 also focuses on surgery, the majority of Esquimalt residents aged 50 years of age and older were admitted to hospital for Low and Medium Chronic Conditions that may include angina, COPD, pre-dialysis chronic kidney disease, rheumatoid arthritis, or a combination of conditions such as diabetes and hypertension. Without knowing the admitting diagnosis and the number of procedures, it is difficult to relate this data to primary health care needs in terms of diagnosing patients and investigating symptoms, planning resources and funding investment.

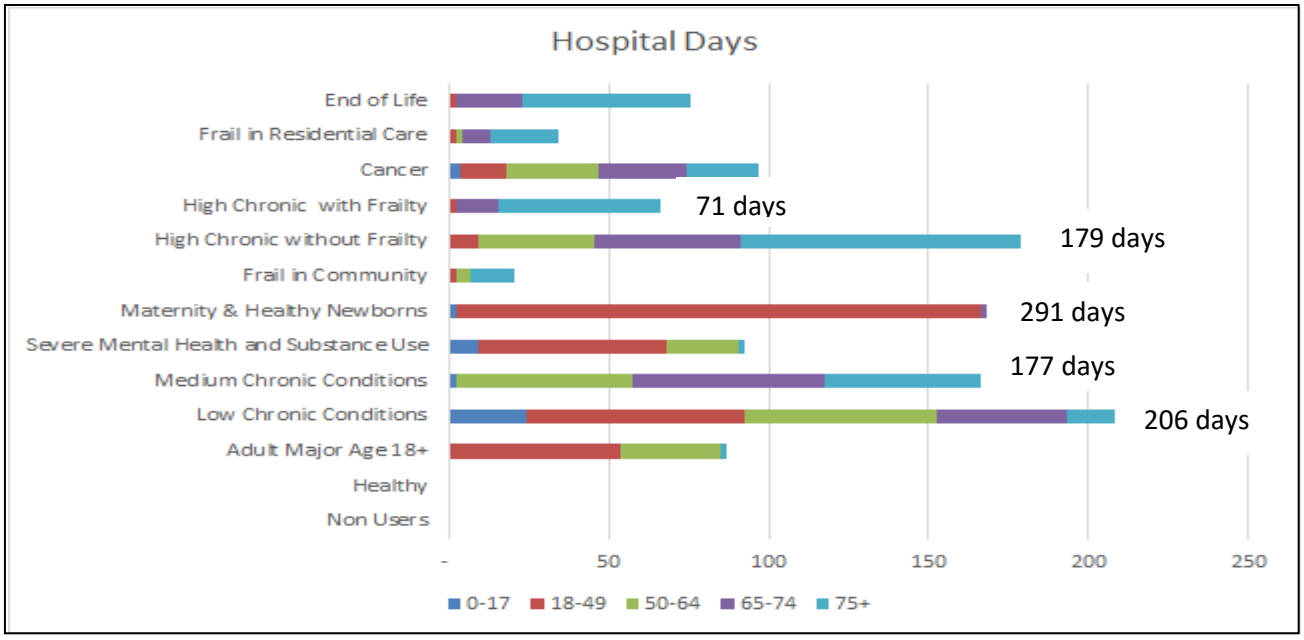
Figure 17 Esquimalt Residents aged 50 to 75+ years – Surgical Encounters



50-64	1,534
65-74	**1,169**
75+	1,166
Total	**4,869**

Although, Figure 18 shows the number of hospital days, a lack of data did not permit an analysis of the length of stay, the unit type, reason for admission to acute care bed, or the transfer/discharge disposition. This data is necessary to determine the costs associated with avoiding a hospitalization, as it relates to primary health care needs. For example, the data suggests residents between the ages of 50 to 75 utilized 840 bed days, with the majority of hospital days in the Low Chronic, Medium Chronic, High Chronic Conditions without Frailty and End of Life population segments. These findings suggest opportunities for long-term benefits of sustainable and timely access to primary health care.

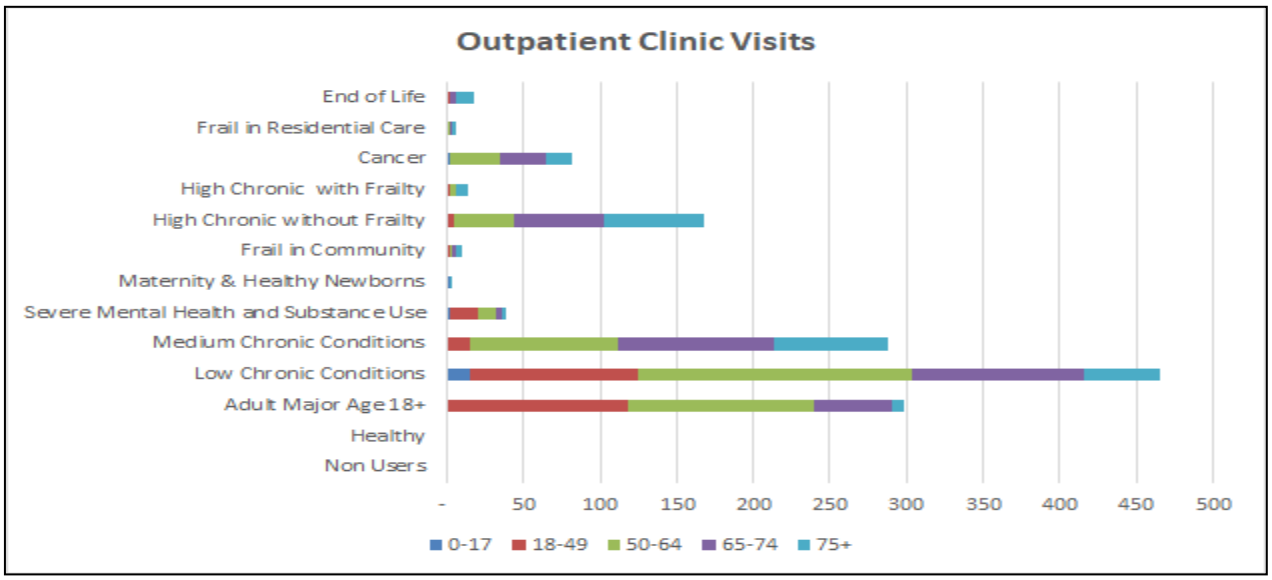
Figure 18 Residents Utilization of Hospital Days 2016-17



Outpatient Clinics

The data in the chart below relates specifically to outpatient clinic visits for Esquimalt. It does not include Victoria West, CFB Esquimalt, Songhees or Esquimalt Nations. The number of outpatient visits shown in Figure 19 shows that the group between 50 to 74 years of age had a total of 854 outpatient visits (see Table 4). The Adult Major Age group 18+ (18 to 49) accounts for 24.2% (n=273) of the visits to hospital-based outpatient clinics. The data did not specify the type of outpatient clinic, the reason for presenting, the final diagnosis, or the discharge/transition diagnosis. Having access to this information would have allowed the analysts to identify the number of visits which could be avoided, or the number of people who could have their care transferred to a community provider, instead of being seen in a hospital setting avoiding the associated costs.

Figure 19 Outpatient Visits (2016-2017)



Outpatient Clinic Visits														
	Non Users	Healthy	Adult Major Age 18+	Low Chronic Conditions	Medium Chronic Conditions	Severe Mental Health and Substance Use	Maternity & Healthy Newborns	Frail in Community	High Chronic without Frailty	High Chronic with Frailty	Cancer	Frail in Residential Care	End of Life	Total
0-17	-	-		15	-	2	2	-	-		2			21
18-49	-	-	119	110	15	18	-	2	5	2	-	-	2	274
50-64	-	-	121	178	97	12	-	2	39	4	33	2	-	488
65-74	-	-	51	114	101	4	-	2	59	-	30	2	5	367
75+	-	-	7	50	75	2	2	4	65	8	16	2	11	241
Total	-	-	298	451	288	36	2	10	168	14	79	6	18	1,391

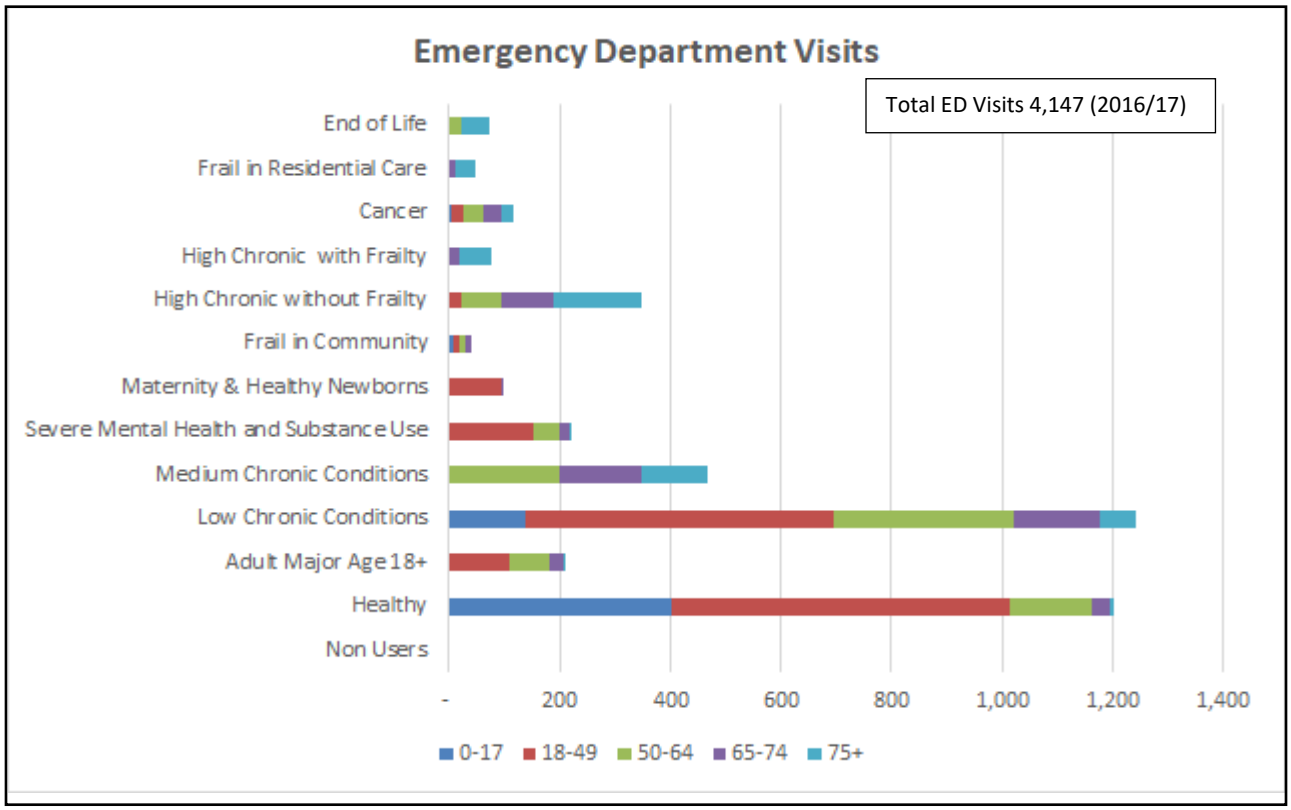
Figure 19 and the chart above, highlights the need for a primary health care delivery model in Esquimalt. A model that is team based with community and in-hospital services working together to manage patients is shown to improve patient outcomes while reducing the number of outpatient clinic visits. Implementing community integrated teams ensures the necessary resource capacity to provide case management and co-ordination of care for all attached patients who are at risk or vulnerable and who require multiple hospitalizations. It is suggested this model of care may potentially reduce the number of patients seeking outpatient visits and re-admissions to hospital.

As previously stated, with Walk-in clinics operating with fewer hours and with no evening and/or weekend availability, people are forced to attend the emergency department or a hospital-outpatient clinic. Although everyone recognizes the long-term benefits of access to extended and week-end hours for primary care, many people are still forced to use the hospital's outpatient clinics or emergency department, even though it is not the most cost effective or best use of resources or patient experience.

Emergency Department Services

One of the opportunities for improvement recommended in this analysis is the reduction in the rate of Emergency Department (ED) usage within the Esquimalt community. Figure 20 shows the per cent of ED visits by each population segment group, expressed as a percentage of the total number of ED visits from the Esquimalt population. This data highlights the fact that, for Esquimalt, the highest numbers of users of the ED are the populations with Low Chronic conditions, the Healthy and those with Medium Chronic Conditions. These population segments are also shown to be the largest population groups in Esquimalt. The breakdown of percentages for ED visits by population segments is similar across other Island Health communities.

Figure 20 Emergency Department Visits



Source: BC Ministry of Health System Services Matrix v9.

Figure 20 indicates that the majority of patients presenting at the ED are between the ages of 18 to 49 (see Table 6). It was previously stated that chronic conditions - depression, mood and anxiety disorders, asthma, diabetes and hypertension episodes - are the top 10 reasons for presenting at the ED. This factor would indicate that additional preventative health measures and mental health supports/services are required in the catchment area.

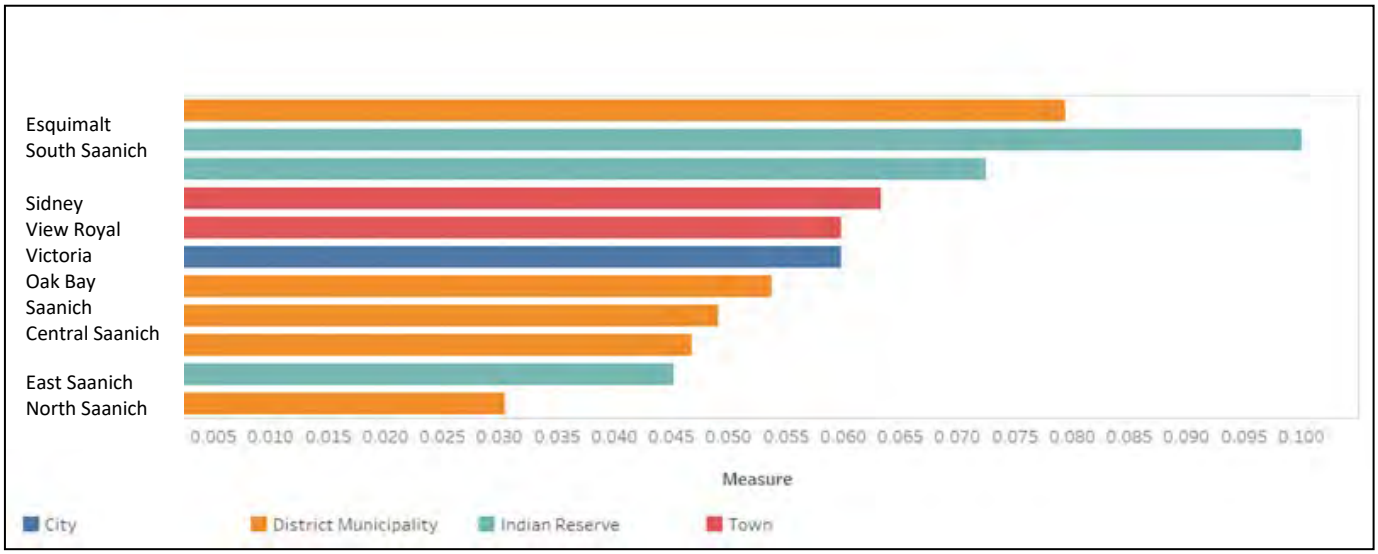
Research also states that those over 65 years of age have a higher cost associated with their visits, especially if they attend at the ED, owing to the need for complex care, continuity of care and the lack of timely access to a nurse or physician in their community.

Table 6 Emergency Department Visits by Age and Population Segments 2016/17

Emergency Services														
	Non Users	Healthy	Adult Major Age 18+	Low Chronic Conditions	Medium Chronic Conditions	Severe Mental Health and Substance	Maternity & Healthy Newborns	Frail in Community	High Chronic without Frailty	High Chronic with Frailty	Cancer	Frail in Residential Care	End of Life	Total
0-17	-	403		139	2	-	-	8	-		3			555
18-49	-	610	111	556	-	153	96	10	21	2	22	2	2	1,585
50-64	-	150	73	326	196	48	-	11	74	-	37	-	22	936
65-74	-	33	22	156	149	17	2	12	95	16	32	11	-	545
75+	-	7	3	65	122	2	-	-	160	61	24	34	51	527
Total	-	799	209	1,103	467	220	98	32	350	79	115	46	75	4,147

The patient costs associated with 4,147 emergency department visits using Canadian Institute of Health Information's (CIHI) patient estimator of $1,030 per visit, suggests that an estimated $4,271,410 in costs could potentially be avoided if timely access to primary health care and patient medical homes was available to residents living in Esquimalt. An in-depth assessment and evaluation of the Esquimalt utilization of emergency, outpatient and hospital bed days is needed to determine the opportunity costs associated with reducing acute care emergency department visits and admission costs.

Figure 21 Emergency Department Visits per 1000 population (ACSC Rate)



Ambulatory care sensitive conditions are medical services that can be performed on an outpatient basis, without admission to a hospital or other facility. Hospitalization for an ambulatory sensitive condition is considered to be a measure of access to appropriate primary health care. While not all admissions for these conditions are avoidable, it is assumed that appropriate primary or ambulatory care could prevent the onset of may conditions, control an acute episodic illness or condition, or manage a chronic disease or condition. A disproportionately high rate is presumed to reflect problems in obtaining access to primary care.

Figure 21 shows that the Ambulatory Care Age Standardized (ACAS) acute care hospitalization rate for Esquimalt is higher than compared to other communities. This indicates there is significant opportunity in the community to make positive differences in primary care utilization. In the Esquimalt catchment area, the primary drivers of the ACSC are grouped into Medium Complex Chronic Conditions and Low Complex Chronic Conditions. See Appendix C for additional information on the BC's Health System population segments and data definitions.

This section on Emergency Department Services speaks to the performance of a health system in terms of accessibility, patient satisfaction and other key indicators. Perhaps the most telling statistic in assessing the accessibility and responsiveness of the need for a primary health care system, is how the population uses hospital emergency departments. The data in this section identifies the potential opportunity to implement change strategies which target the high percent of less urgent and non-urgent outpatient visits (see Section 3.8.2).

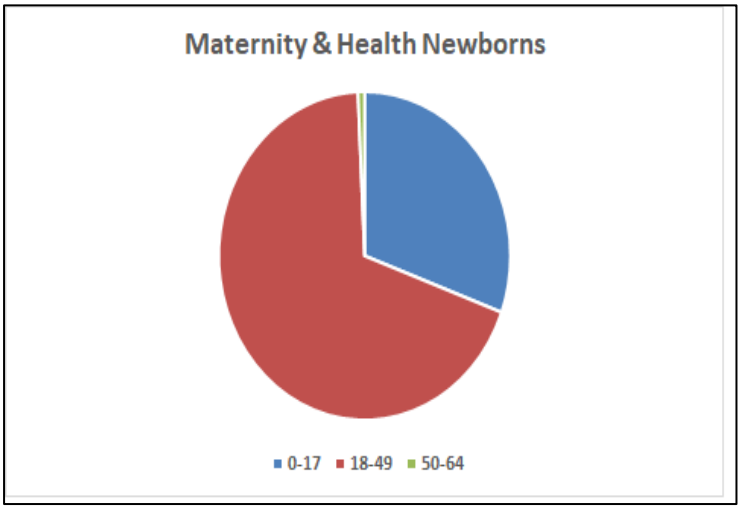
Additionally, the findings from the review of hospital utilization data also highlights the need for, or enhanced, citizen education/awareness around accessing primary and urgent care services. Moreover, the findings from the review of the On-Street survey data shown in the Walk-in Clinic (Section 3.2.6), suggests that during the peak periods of demand there was a shortage of family physicians.

Women and Children's Health

As evidenced by the demographic data and the stakeholder survey data, there is a need for women and children's health services (including newborn, neonatal and pediatric). The number of births has increased, and most births or planned deliveries are referred to physicians out of the catchment area due to a lack of physicians located in the Esquimalt catchment area who are trained in, or prepared to support, an obstetrics practice and/or anesthetic administration.

As depicted in Figure 22, the number of Esquimalt catchment residents delivering outside the area is substantial. The majority of these births are taking place in the Greater Victoria Area (Royal Jubilee Hospital specialty clinics).

Figure 22 Esquimalt's Maternity and Newborns Rates (2016-17)



Data did not permit for an analysis for the project team to determine the pre and post natal type of services and clinics currently offered to the residents of Esquimalt, or the number of positions in the surrounding communities which provide maternal/child services to families living within the Esquimalt catchment area.

Mental Health and Addictions

It was previously stated that depressive orders are among the top ten reasons for admissions to the Victoria General and Royal Jubilee hospitals. Furthermore, the prevalence of alcohol abuse is higher in parts of the Esquimalt catchment area, specifically when compared locally and to the province. The five-year average for mental health and substance use clients in Esquimalt is projected to increase given the aging population and the number of people living with anxiety/mood disorders and depression (see Section 3.7, Figure 11).

The diagram in Figure 23 and in Table 7 highlights that people aged 18 to 49 years of age are shown to account for 28% (n=1057) of the physician visits and services. The data did not permit for a deeper dive into this group. For example, what was the mental health and service usage by people aged 18 to 25, or 26 to 49? This information would highlight how the two groups access services, where they access services, what services did they access and what are the key supports needed for the patient to prevent or avoid a hospitalization.

Figure 23 Esquimalt Resident's Utilization of Mental Health & Substance Use Services (2016/17)

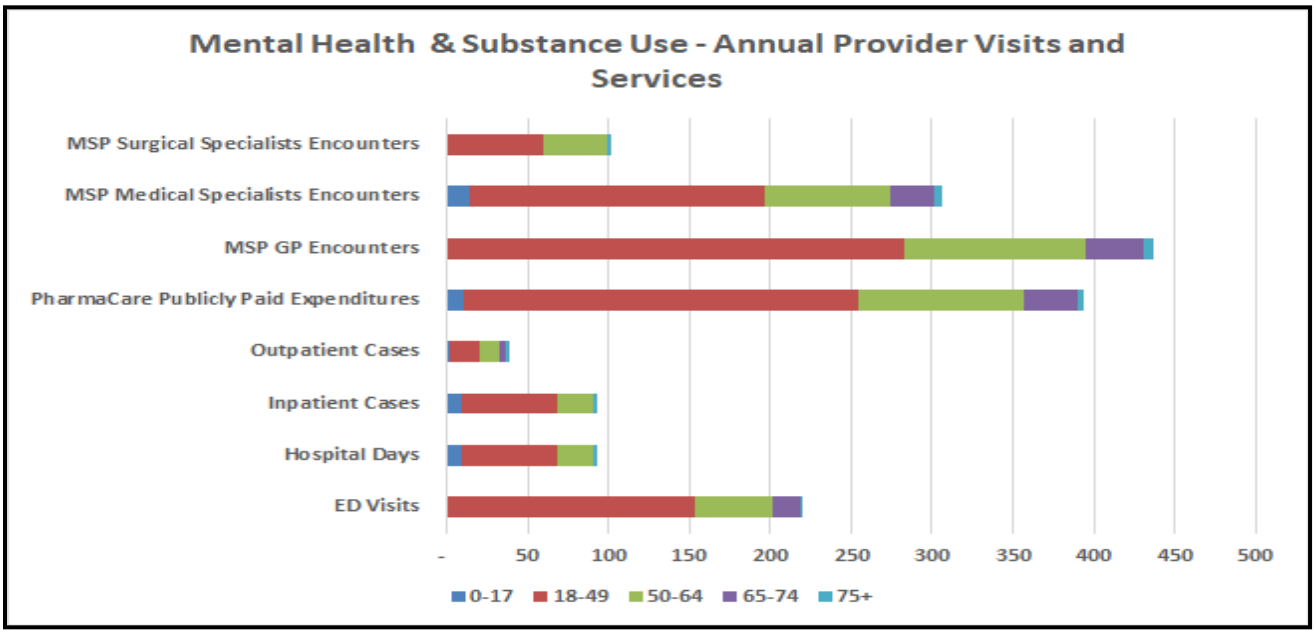


Table 6 Mental Health and Substance Abuse: Annual Number of Visits to Providers and Services[44]

	ED Visits	Hospital Days	Inpatient Cases	Outpatient Cases	PharmaCare Publicly Paid Expenditures	MSP GP Encounters	MSP Medical Specialists Encounters	MSP Surgical Specialists Encounters	Total
0-17	-	9	9	2	10	-	14	-	44
18-49	153	59	59	18	244	282	182	59	1,057
50-64	48	22	23	12	103	112	78	40	438
65-74	17	-	-	4	33	36	28	-	117
75+	2	2	2	2	4	7	5	2	25
Total all age groups	**220**	**92**	**93**	**38**	**394**	**437**	**306**	**101**	**3,785**

Physician Numbers and Utilization

A growing population places demands on the health care system to respond to the changing needs of the community. Of special interest to this study is the number of family physicians and nurse practitioners available to meet the needs of the residents of the Esquimalt catchment area. The secondary data provided to the project team on the number of people 'attached and unattached' to GP/NP varied significantly.

Previously, it was stated that based on the Emergency Department usage and the attachment rates of Esquimalt, the current and future population projections warrant further investigation. In 2017, it was suggested that Esquimalt had a lower overall rate of population attached to a GP or NP compared to other communities. However, it is suggested the numbers would be skewed to 'attached' given the operational definition of attachment and the Esquimalt catchment area's demand for Walk-in clinic services.

This report has stated that the erosion of service delivery across many of Esquimalt's surrounding communities, a growing and aging population, and the significant addition of new residential developments in Esquimalt and in Victoria, has created a wider gap in the attached and unattached population. The closures of the Esquimalt clinic and two other downtown Victoria Walk-in clinics for unattached patients in the past twelve months has created an environment of access competition for patients searching for a new medical home outside of the community.

Figures 24 to 26 depict the number of GP, Medical Specialist and Surgical Specialist encounters, highlighting the opportunity for integrated team based primary health care services. Care teams supported with virtual and digital technology-enabled solutions are shown to reduce the number of physician encounters and patient travel time and costs. It is important to note that an analysis of the reason for referral, the diagnosis referrals, treatment intervention and discharge/transition deposition data is required to identify the number of residents who could benefit from being attached to a physician and accessing primary health care services and supports in their community.

The Healthy and Low Chronic Conditions population segments accounts for an estimated 70% (n=10,997) General Physician encounters with people aged 18 to 49 years old, followed by the 50 to 64 years age group, shown to seek out GP services more frequently. The population segments of Healthy and Low Chronic Conditions warrants further investigation to understand the age-related differences of the 18-25 and the 26 to 49-year age groups and the resources used.

Figure 24 General Physician Encounters by Esquimalt Residents

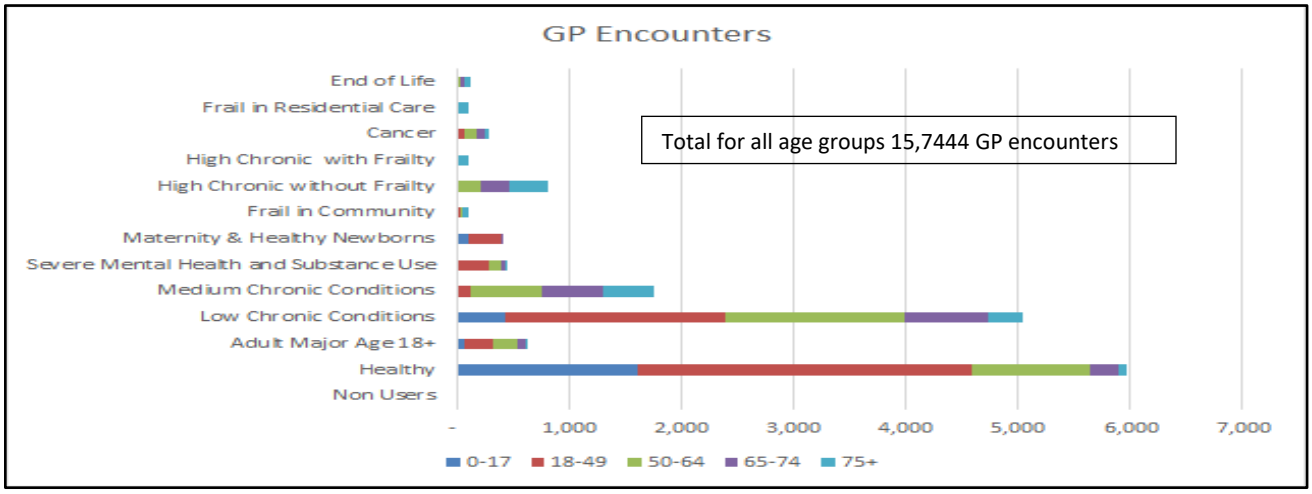
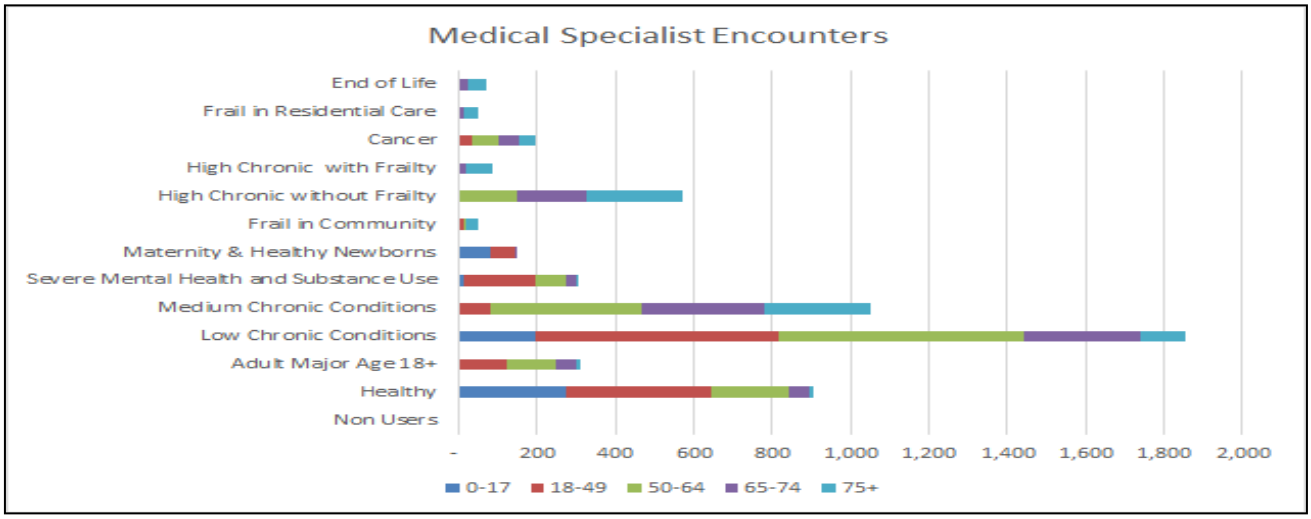


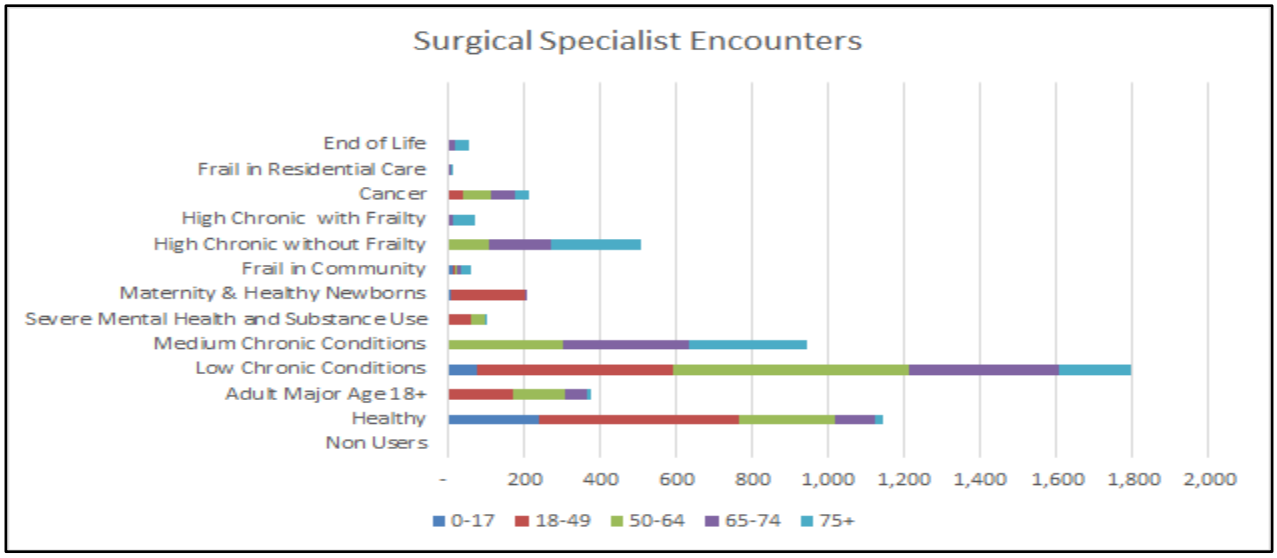
Figure 25 highlights the Healthy Low Chronic Conditions and Medium Chronic Conditions population segment groups access Medical Specialists. The 50 to 64-year aged group accounts for 1,635 encounters or 29.2% of all visits, followed by 18.3% (n=1027) for people aged 65 to 74 years. These three population segments warrant further analysis as to the reason for referral, diagnosis, treatment/interventions and the disposition for follow-up care. It is also suggested there is an opportunity to explore implementing virtual care to save time for patients and providers, to improve quality and help prevent costly events such as hospital admissions or readmissions.

Figure 25 Surgical Special Encounters by Esquimalt Residents



Esquimalt residents accessing surgical specialists is shown in Figure 26. An estimated 39.5% of all visits (n=4,210) were for people aged 18 to 49 and 50 to 65. The lack of data did not allow for a clearer understanding of the reasons for referral, diagnosis, and/or if the surgical encounter resulted in an acute care hospitalization or follow-up care. Moreover, the lack of data did not allow for analysis of the number of visits/encounters per patient or if this care could be delivered at an urgent primary care center warranting further investigation. Postal code data was also not available which would identify population groups at the individual and community level.

Figure 26 Surgical Specialist Encounters for Esquimalt Residents



In addition, findings from the stakeholder engagement sessions and secondary data provided by SIDFP and the Western Communities Primary Care Steering Committee (WCPCN), suggests that the attached population number in the catchment area has been declining over time, leading to a re-prioritization from Phase 2 to Phase 1 funding for medical resources for Esquimalt.

Recently, approval was granted by the Ministry of Health to the WCPCN and SIDFP to move Esquimalt into Phase 1/Wave 1 funding for the appropriate primary care resources and infrastructure, that will result in a higher percentage of the population being attached in 2020.

4.0 Key Findings: On-Street Research Survey

Background

In order to inform planning and the Township's Mayor and Council on health system performance and on primary care issues within Esquimalt, it was determined that a Community Resident Survey be conducted. Surveys were completed during February to March 2019.

To better understand the impact on how hospital, emergency and health services are accessed and utilized, the On-Street research survey captured six measures of primary care access: the number of people who have (attached), and who do not have (unattached) a regular family doctor; family doctor utilization for routine care; reasons for seeking services; Walk-in clinic utilization emergency department utilization; and, the wait time to see family doctors for immediate care. All utilization measures were based on one or more visits to a family doctor in the previous 12 months.

Methodology

A total of 295 people participated in a four-week study. Participants were randomly selected from a variety of locations within the Esquimalt catchment area. The locations included:

- Esquimalt (Country Grocers),
- Victoria West (Save-On Foods)
- Esquimalt Nations community
- Saxe Point and McCauley Point (10 homes)
- McCauley Lodge
- 66 Songhees Road (10 Condos)
- Daycare Centers (2)

Summary of Findings

Following is an overview of the key findings from the On-Street survey:

- Access to a family doctor close to their home or community is important to participants. Ninety-eight respondents stated they had a doctor, and 67% (n=197)of the survey participants stated they not have a doctor and want a family doctor.

- Asked if their immediate family had a family doctor, 39% of the respondents stated their families had a doctor outside Esquimalt, and 43% responded there was an immediate need for access to a family doctor.

- The survey question related to patient reasons for seeking services generated 413 responses. Prescription renewals (40.5%) was the primary reason recorded for visiting a doctor, followed by visits for sudden onset of pain, discomfort or illness and/or chronic health issues.

- 48.4% (n=143) of the survey respondents reported visiting their family doctor at least one to three times, within a twelve-month period, with twelve participants stating they had more than 10 visits within the past year.

- When asked where they would go if the doctor's office was closed, 143 participants stated they would go to another Walk-in clinic, and 154 people stated they would go to the hospital emergency room.

- Fewer than 20 participants responded they would see a Nurse Practitioner, while 30 stated they would call the 811 Nurses Helpline.

- Of those who participated in the survey, 284 people responded to the question of using the emergency department. The results are displayed in the table below. These findings are consistent with the hospital utilization and service data reported previously in this report.

Rank	How many times have you used the ED in the past 12 months	Number of Respondents who stated use of the ED w/I 12 months
1	Did Not Attend	110
2	2-3 times	87
3	1 time	58
4	3-5 times	19
5	6 times or more	10

- The second part of this question concerned their arrival at the Emergency Department. The majority of respondents arrived by themselves and 48 participants called 911, while another 68 had a family member drive and wait for them. Only 2 stated they took the bus. One participant used his scooter to travel to the Royal Jubilee's emergency department.

- 62% of people stated they were in very good to fairly good health.

- The top five chronic conditions stated by survey participants included heart disease, asthma, diabetes and hypertension.

- 18% of respondents identified no health issue.

Key Learnings – On-Street Resident Survey

There are three goals in family practice transformation which the BC Ministry of Health Primary Care Network strategic initiative is trying to address. First, is the creation of Patient Medical Homes(PMH) with patients seeing physicians in the areas in which they live. Second, is to ensure that each patient who wishes to have a primary family care provider can have one. The third is to have better access to urgent care outside the emergency rooms—more after hour care, same day care and within 24-hour care with longer consultation hours. The PCN is the unifying concept that links together PMHs with Health Authority and community service resources and may provide through Urgent Care Clinics (UCC) greater service access in the short term and increased attachment.

The implementation of the Patient Medical Homes, for the Westshore of which Esquimalt is part, face a fundamental challenge---the family physician capacity for primary care services is insufficient to provide the actual services received by the patient population in this area. Another challenge is that of attachment on the basis of geography—people living in the Esquimalt catchment area receiving their services or have existing relationships with physicians outside the area. It is for this reason, the questions of do you now have a family physician, if not, do you want one and do you want a doctor in your community, were included in the On-Street Survey. The findings from this survey showed the majority (82%) want a doctor in their community as distance was seen as a severe obstacle to seeking services.

The On-Street Resident Survey results provided important information about the current access issues, health status and health behaviours of the residents in the Esquimalt catchment area suggesting an opportunity to focus on patients who are unattached, currently receiving services from Walk-in clinics and emergency department physicians. A review of the On-Street Resident Survey results yields several areas of opportunity for the local community.

Suggested Areas of Opportunity:

- Recruit clinical provider resources who share the Township's community values of health and wellness.
- Improve access to primary health care services by exploring options to work differently with key stakeholders and partners (e.g. Ministry of Health, SIDFP, Nurse Practitioners Association, Island Health and other community partners).
- Increase patient physician relationships in the community using population health data analytics to align the 6-Rs (right provider, right location, right service, right time, right outcome and right cost).
- Focus on identifying demand and implement mental health supports and self care management programs in the community addressed at meeting current and future need using virtual care technology and digital patient tools to increase access 24/7/365.
- Identify population groups at risk or people living with Diabetes and Asthma to ensure they have access to a Patient Medical Home and ongoing case management and self-care support programs.

5.0 Key Themes Emerging from Stakeholder Consultation

Time did not permit for an extensive stakeholder consultation process, however, we obtained Input from more than seventy-five stakeholder representatives through a combination of activities including:

- Facility Tours
- Island Health – Key Informant Interviews
- South Island Division of Family Practice—Key Informant Interviews
- Mayor of Esquimalt—Interview
- Township Councillors--Interviews
- Esquimalt Physicians—Key Informant Interviews
- Westshore Physicians—Interview
- Victoria Physicians—Interviews
- Residents/retail store owners—Interviews
- Community Service Agencies—Focus Group
- Community Nurse Practitioners—Interviews
- Esquimalt First Nations Clinical and Administrative Resources—Interviews
- Community Pharmacists—Shadowing/Interviews
- Diagnostic Center---Interview

Key themes emerging from the consultation process are documented in the following section of this report.

Primary Health Care—Strengths, Challenges and Service Gaps

Stakeholder representation identified the following as strengths, challenges and service gaps of the current primary health care service in the Esquimalt catchment area:

Primary Health Care Current Strengths

- **New construction site:** New construction sites currently underway, and the potential of upcoming sites at Head Street and Esquimalt Road, provide an important part of the infrastructure required to attract and retain physicians and allow access to the Esquimalt catchment area.

- **Good working relationships**: The Township has developed good working relationships with the SIDFP, Island Health and the Ministry of Health and should continue the discussions related to resourcing a primary health care center in Esquimalt.

- **Access to Services**: Currently the Esquimalt Medical Center continues to provide good access for Esquimalt residents who are attached to this clinic. For example, it was noted that patients are able to get an appointment within 24 hours if urgent. However, physician recruitment efforts have been quite unsuccessful and, as local access to primary health care services increase and the population continues to grow, additional physician/nurse practitioner resources will be required.

- **Primary health care employees working within the Esquimalt catchment area are skilled**, dedicated and work well together and with physicians, nurse practitioners, nurses, community-based pharmacists and other provider groups.

- **Specialist Referrals:** Family Physicians have reasonable access to specialists outside of the Esquimalt catchment area to whom they can refer patients when required.

- **Specific Program Strengths**: Specific primary health care services identified as working well included:

    - Nurse Practitioners: the availability of Nurse Practitioners on the Esquimalt and Songhees Nation communities and in Esquimalt (Island Health Community Center) has taken some of the pressure off family physicians and Walk-in clinics.

    - Home Care Services: Access to home care services helps to keep patients in their home, reduce hospital admissions rates and reduce bed days.

    - Specialty Clinics: Residents limited access to specialty clinics such as the diabetic, respiratory, and pain clinics as most of these services are outside the community with long wait times.

Primary Health Care Current Challenges

- **Erosion of service delivery in the Esquimalt Catchment area**: Esquimalt residents have limited access to a family doctor. Most of the residents within the Township of Esquimalt, and surrounding boundaries, access primary care providers outside of the boundaries of Esquimalt. Similarly, primary care providers within Esquimalt are likely to offer services to individuals who live outside of the Township.

- **The community-based, primary urgent/patient medical home delivery model** is currently shifting as a result of medical center closures, service delivery changes, physicians retiring out of practice or reducing their work- days to two or three days a week, and the shortage in physicians.

- **Collaborative Planning**: Most stakeholders noted that better collaborative planning that engages the Township with funders and providers and other community agencies is required. This could help to establish clear priorities, results to be achieved and related strategies for population health.

- **Interdisciplinary primary care team development**: increasing efforts to improve continuity and coordination of care by developing and utilizing an interdisciplinary team approach to primary care service delivery was identified as a priority, especially the increased utilization of Nurse Practitioners.

- **Women's Health and Obstetrical services**: Most stakeholders identified the lack of access to obstetrical services (e.g. mid-wife) as a major service gap in local access for pre and post natal care.

- **Chronic Disease:** There is a high chronic disease load in the Esquimalt catchment area. While chronic disease prevention and management is a priority for physicians and Island Health, it was noted that increased investments in this area—resources, educational programs, screening, monitoring, etc. would pay huge dividends in terms of reduced use of emergency and acute care facilities, and quality of life for patients.

- **Mental Health**: Access to mental health services could be improved significantly, particularly support services for mood and anxiety disorders, depression, crisis intervention, senior's mental health and substance use.

- **Extended Clinic Access**: There is a need for extended clinic and weekend hours to accommodate residents who can't access medical services during the workday. This would contribute to reducing visits to the emergency department.

- **Pediatric Services**: Access to pediatric services is limited in the catchment area. Identified areas of concern included therapy services for children's mental health, and speech language pathology.

Other Issues and Concerns: Other less frequently noted areas of concern included:

- Public education on the benefits of having a Nurse Practitioners as a primary care provider.

- Development of a population health model incorporating the needs of people living with 4+ complex conditions. This new model would include a fee structure that allows longer consultation hours, case management and medication reviews.

- Increased access in the Esquimalt catchment area to some diagnostic imaging modalities (e.g. CT and MRI) was identified by some as a priority.

- An Electronic Health Record/Electronic Medical Record to support effective data sharing and service coordination is lacking.

Highest Priority Primary Health Care Service Gaps

Study participants identified the following as the most significant primary care service gaps/priorities within the Esquimalt catchment area:

- Access to a suitable facility within Esquimalt is a key priority for moving forward.

- Sustainable Family Physician Services: There is a need to ensure the recruitment/retention and sustainability of family physician services.

- There is a large volume of unattached patients seen through Walk-in clinics who have mental health issues. Significant opportunity exists for the needs of this population group to be better managed within the Patient Medical Home model.

- There is a significant and growing number of unattached patients in the Esquimalt catchment area with two or more complex medical conditions. These patients would best be managed in their community within a population health model (e.g. Primary Care interdisciplinary team).

- There is a view that, with changing reimbursement models, growing patient demand, and advances in digital technologies, virtual care is a must-have for the Esquimalt catchment area. A primary health care system that embeds virtual care will help to optimize finite physician resources.

- Public education is needed about what services are available and how to access these services in the Esquimalt catchment area.

- Many participants had limited knowledge about the current processes used to establish Primary Health Care service priorities for the Esquimalt catchment area. Most noted they were not aware of the existence of a formal Primary Care Network Steering Committee or regional plans for the delivery of healthcare services in this area.

- The roles and responsibilities of the multiple partners involved and a lack of clarity who had accountability to resolve issues or make decisions for ensuring physicians and nurse practitioners are recruited for the catchment.

Vision for Primary Care

Study participants identified the following as key elements of their vision or 'preferred future' for primary health care services in the Esquimalt catchment area:

- **Population health model**: Develop and test a new way of working embedding a shared care approach to delivering services, regardless of geographic boundaries, linked by virtual care and mobile technology enabled solutions to leverage services and optimize local and regional physician and nurse practitioner resources.

- **Sustainable Physician Practices**: The physician complement for a population health model is matched appropriately to demand for services to ensure practices in Esquimalt are sustainable from a workload and financial perspective. The compensation model accommodates population funding and alternate payment plans for physicians.

- **Patient-Centered Services**: All patients and their families including Esquimalt and Songhees Nations communities and vulnerable at-risk population groups are at the center of primary health care services.

- **Evidence-Based**: Programs and services are based on demonstrated community needs.

- **Service Continuity**: A continuum of services is provided for people throughout the patient's life cycle. This is supported by a 'one-stop' navigation service that enables people to see the 'right provider at the right time at the right location' to achieve the right outcomes for patient and provider.

- **Primary Health Care Center**: A Primary Health Care Center/Patient Medical Home facilitates access to primary health care services 7 days/week/365 days a year with extended access and virtual care for a variety of services including 'regular' physician services, nurse practitioner services, therapies, as well as alternate care services.

- **Collaborative Interdisciplinary Teams**: Effective use is made of collaborative interdisciplinary teams working to their full scope of practice to support comprehensive team-based care with Family Physician leadership.

- **Human Resources Expertise**: An adequate complement of appropriate skilled physicians and other health workers are located or accessible to all who live in the catchment area, to support program and service delivery based on community needs.

- **Collaborative Service Planning**: A collaborative planning process is used that engages physicians, front-line staff, and other health care stakeholders working with the Township and community members in setting primary health care service priorities for Esquimalt**.**

- **Public Awareness**: The public understands what primary health care/Patient Medical Home is and are knowledgeable about the services available, and where best to access these services.

Summary of Major Findings

- **Population Growth**: The Township, with a current population of 17,650 (Census 2016), is projected to grow significantly over the next five to ten years, with an estimated catchment area population of 42,000, including the Songhees and Esquimalt Nations, Canadian Forces Base (CFB) Esquimalt, Victoria West and Admirals Corner. Fluctuations in population growth due to economic conditions, the number of construction workers, and increasing levels of people seeking affordable housing, provide significant challenges for maintaining sustainable health care services. The population swells by 5,000 to 8,000 people per day, owing to the CFB Esquimalt and Graving Dock.

- **Esquimalt Catchment Area**: The Esquimalt catchment area, for purposes of this report, includes Esquimalt, CFB Esquimalt, Songhees Nations, Esquimalt Nations, Victoria West and Admirals Corner. The population for the Esquimalt health care catchment area is currently estimated at 30,755 (CRD Estimates 2018) and is expected to grow to 42,000 by 2035 (CRD Estimates 2018).

- **Health Indicators and Disease Burden**: In general, the population in the Esquimalt catchment area is similar to the Canadian and British Columbia population with respect to disease burden and health indicators with the exception of the following: the catchment area population has a higher incidence

rate of smoking, drinking, obesity, arthritis, high blood pressure and anxiety/mood disorders.

- **Access to Family Physicians**: Due to the recent closure of one of the two Esquimalt medical clinics and the relocation of a physician to a clinic in Victoria, there are approximately 4,000 to 7,000 additional residents seeking access to a primary care physician. The number is expected to grow within the next two to three years, owing to the demand on the existing 2 full-time equivalent (FTE) family physicians.

- **New Facility Sites for Medical Services**: The Township can increase its physician recruitment chances by ensuring that it has suitable clinic space to house new physicians within a team-based model of care environment, underpinned by the necessary infrastructure (Electronic Medical Record/Tele-Health and administrative support) and community support services (e.g. social workers, dieticians, paramedical).

- **Relationship Building**: Efforts are underway to engage key stakeholders in setting a clear vision, mandate, and service priorities for primary health care (PHC) as a foundation upon which to build the required cooperation, trust and mutual support necessary for the provision of accessible, quality services.

- **Service Enhancement Priorities**: The highest priority areas for PHC service improvements identified by stakeholders were: mental health and substance use services, community-based pharmaceutical/medication reviews, access to technology-enabled healthcare solutions (e.g. virtual care at home, mobile technology for ease of access), chronic disease prevention and management, therapy services (physiotherapy, occupational therapy and speech pathology), adult day programs, timely referrals to surgical services, diagnostic imaging (e.g. CRT/X-ray) and social care supports.

- **PHC Service Plan**: Implementing a collaborative planning process that appropriately engages key stakeholders (e.g. community partners, Island Health) could be an effective vehicle for building commitment and support for a shared vision, mandate, priorities, service delivery model and accountability framework for PHC services.

- **Human Resources**: Similar to many other areas across British Columbia, the Esquimalt catchment area experiences significant challenges recruiting physicians and other health care professionals. Comprehensive targeted recruitment and retention strategies are required to engage physicians, the municipality, the South Island Division of Family Practice (SIDFP), Victoria Division of Family Practice, Island Health, Ministry of Health, the Doctors of BC, the Canadian Medical Association and the community.

- **Communications and Public Awareness**: Transparent and timely messages need to be delivered to the community related to availability of PHC services, key roles and responsibilities PHC mandate and services provided and priorities and progress being made on key PHC service initiatives.

7.0 Development of Scenarios to Deliver Future Primary Health Care Services in Esquimalt

A number of challenges and issues identified in this report call for disruptive innovation on the part of all stakeholders in partnership aimed at finding solutions to successfully address the primary health care needs of the residents living in the Esquimalt catchment area.

Success in achieving improved access to primary health care for residents living in the Esquimalt catchment area will require a shift away from the 'traditional' primary care delivery models to a shared community care model that leverages and optimizes local provider resources. Such a model would integrate new ways of working, adoption of digital technology to increase access, the tools to measure patient and provider satisfaction while aligning funding with clinical outcomes. This new model would have the potential to reduce costs to the wider health care system for individual patients and for those specific groups of patients living with multiple chronic conditions or mental health and substance challenges.

For example, Shared Care Community Model, also known as a 'Hub and Spoke' model, is an organizational design that arranges service delivery assets into a network. This network consists of an anchor establishment (hub) which offers a full array of services, complemented by secondary facilities (spokes), that offer more limited service offerings, or routing patients needing more intensive or complex care.

See Appendix E for an illustration of a high-level Shared Care Community Model. Appendix F illustrates a plausible improvement solution for providing expanded and weekend hours by offering patients 24/7/365 access using technology-based solutions.

The following section sets out three potential scenarios designed to achieve a rethinking of the system for delivering primary care in Esquimalt. In exploring these three scenarios, the strategic goals and principles of a population primary health care model informed the conceptual 'what if' development set out below. The three scenarios are in early stages of prototype and require further development by the Township and SIDFP.

Development of the Scenarios

The proposed scenarios are plausible solutions targeted to address the problem of patient attachment and address the short-term and long-term physician and clinical resource recruitment and retention challenges. These conceptual scenarios are underpinned by the provincial and local enablers. The provincial 'must dos' include: the provision of PCNS collaboratively working together to connect various providers and patients using technology-enabled solutions.

What if? Scenario Questions: Rethinking the Service Delivery Model

Scenario Question 1:	**What if?** The current delivery model was redefined, deconstructed, and redesigned to improve performance?
Scenario Question 2:	**What if?** The delivery model was reshaped to optimize local resources and facilities?
Scenario Question 3:	**What if** patients had options such as accessing healthcare in convenient locations, rather than travelling across town to a Walk-in clinic or a family practice?
Scenario Question 4:	**What if?** Esquimalt shifted towards a population health initiative—a hub and spoke or shared model of care and piloted this approach to deliver primary health care in its community?
Scenario Question 5:	**What if?** A Shared Care Community (hub and spoke) Model is implemented in Esquimalt leveraging and optimizing regional resources regardless of geographic and/or professional boundaries?

Building the Scenarios: Plausible Options for Esquimalt

Scenario 1: What if? Divisions of Family Practice (South Island and Victoria) together with the Township entered into collaboration with Ministry and Island Health and other organizations, to develop and implement a Shared Care Community Model, within the political boundaries of SIDFP? **Risks long-term:** delivers locally, a primary health care system focused on achieving increased access, patient and provider satisfaction and cost-effective services. **Implementation**: Phased-in approach to achieve short-term wins.

Scenario 2: What if? SIDFP, the Township, the Ministry of Health and Island Health considered an expansion of existing clinical services and a redesign of its incentive and reimbursement models for current physicians and new physicians, with a new investment in its current infrastructure, (e.g. technology), and a commitment to virtual care to allow patient options in location and scheduling of services. **Risks: medium term solution**. There is a risk of slipping back into 'business as usual'.

Scenario 3: What if? The primary care delivery model and providers stayed with the status quo – sticking with the familiar or business as usual. **Risks:** short term/short sighted**, increasing costs, decreasing health of residents, and decreased access to residents.**

Planning for Scenarios

It is suggested that SIDFP and the Township together with other key stakeholders agree to explore more fully the options set out in this report. The next step is to collaboratively develop a robust Business Case for the proposed Shared Care Community Model, with associated costs, risks and benefits and an implementation roadmap.

The Business Case detail will need to include a description of the service model, Shared Care Hub specifications, Shared Care Spoke specifications, finance and operating costs, technology and infrastructure requirements, quality and an Agreement Framework on partnership roles, responsibilities and outcomes.

8.0 Recommendations

1. **Primary Health Care Service Plan**: The SIDFP, in collaboration with the Township and other key stakeholders, should consider leading the development of a comprehensive PHC Services Business Plan that builds on the work completed in the CHNA. The planning process should include the development of a Framework designed to reach agreement on the vision, mandate, services, funding priorities, roles and responsibilities, service delivery mechanisms and performance measures.

2. **Short-Term Solution (next 6 months**): The Township, in collaboration with SIDFP, should immediately pursue options and incentives that will address the need for primary care services, costs and funding mechanisms to support the recruitment of physicians, nurse practitioners, administrative support resources and appropriate infrastructure needs.

3. **Long-Term Solution (12 to 24 months):** The Township, SIDFP and other key stakeholders should implement the options and incentive strategies for attracting new Family Physicians to Esquimalt, that include working collaboratively with local developers to provide suitable clinic space to house these providers.

4. **Priority Service Enhancements**: The Township needs to make targeted investments in selected high priority service areas, including mental health and substance use, chronic disease prevention and management, community-based medication reviews, therapy services, and surgical services required to support pediatric and seniors care, and chronic disease management.

5. **Human Resources Recruitment/Retention**: The Township, working with SIDFP, should develop and implement a comprehensive resource strategy to enhance their ability to attract and retain family physicians and other health care professionals. Establish a sustainable physician recruitment process that clarifies the roles and responsibilities of the various partners.

6. **Establish and Affirm Governance, Decision-Making and Accountability Structures**: The seamless delivery of primary health care services will require clarification of roles and responsibilities of PHC service delivery partners in the Esquimalt catchment area. It will be important to reach agreement on the governance, decision-making and accountability structures with regards to primary health service delivery that respects the role of the Township in improving population health for the residents of Esquimalt, and the legitimate responsibilities and accountabilities of each of the partner organizations.

7. **Existing Legislation, Political or Contractual Barriers**: Barriers currently exist in the system (e.g. geographical boundaries and funding challenges) which prevent the leveraging and optimization of local health care providers, especially Family Physicians. In Esquimalt's catchment area, this will require a more significant role for the Township, in working closely with SIDFP, Ministry of Health, SIDFP, Island Health, First Nations Health Authority and local partners. To address these barriers, new ways of working must be explored and developed, to allow enhanced collaboration and sharing of knowledge

which successfully test population funding models and are aimed at increasing access and improved outcomes for all Esquimalt catchment residents.

8. **Explore Potential Population-Health Models of Care**: In collaboration with key partners and stakeholders, propose scenarios that have been informed by extensive modelling of current and anticipated future activity, using computer models to test the proposed population health-based funding and service delivery systems, targeted to reduce the current and future capacity and demand pressures, and the ongoing provider shortages.

9. **Performance Measurement and Evaluation**: Develop and implement formal measures to monitor and mechanisms to evaluate the success of the primary health services delivery model in Esquimalt and catchment area.

10. **Wider-community Stakeholder Engagement and Communications**: The Township needs to develop and implement mechanisms and processes to effectively engage and communicate with internal and external stakeholders as it moves forward with implementation.

9.0 Moving Forward

The assessment of the Township community needs has identified strategic areas for improving access to primary health care for the residents living in the catchment area. The findings of this study provide the members of the Township's Council the information necessary to explore strategic improvement opportunities and to develop a service delivery model that directly addresses the core problems set out in this report. The following steps have been modified to incorporate the feedback from the April 15th, 2019 Town Council presentation:

- Engage external consultant to work with the Township in developing a business case and operational plans to implement the recommendations set out in the CHNA study to support a long-term solution to funding and resources to meet the primary health care needs of the Esquimalt catchment population.
- Move forward on a short-term solution with the Ministry of Health and SIDFP on funding and resource needs, facility type and location to address the Esquimalt catchment area's immediate need for primary health care services.
- The Council to continue to work with community developers to incorporate health and wellness in all new developments and agree to a long-term solution that addresses the catchment area's future clinical resource needs.
- The Township Council should seek further information as to the municipality's abilities in offering incentives to entice practitioners and developers of medical facilities to the Township.
- The Township staff to work with the external consultants to scope out the initiatives and collaboratively develop the plan for implementing the recommendation set out in the CNHA study. A full understanding of the extent of the issues identified in this report will assist in identifying the risks and barriers associated with implementing a primary care model.
- Identify key stakeholders and develop a community-wide partnership engagement strategy and plan including the development of a communication strategy to engage community-wide partners and others at all stages of the project.
- Agree and explore with SIDFP and Island Health the potential for a Shared Care Model (Scenario Solution 1) and develop the concept in collaboration with community partners and others. Agree to the Shared Care Community model (e.g. 'Hub and Spoke') responsibilities and identify the factors associated with success and failure for Scenario 1. Reflect on the Township's capacity and financial resources to respond to these factors.

Glossary of Terms

- **Acute Care:** providing or concerned with short-term medical care especially for serious acute disease or trauma (Medline Plus, 2017)
- **Catchment Area:** area that is included in the health care boundaries of a defined communities.
- **Complex Care Teams:** provide effective, high quality and coordinated care to people with the most complex needs in their own home, keeping them as independent as possible and out of hospital if they don't need to be there.
- **CMG:** case mix groups are a classification system for patients with similar characteristics
- **Care Continuum, continuity of care, continuum of care:** an interrelated array of services from primary to tertiary care, from community and secondary services to institution services and back. Terms such as seamless, integrated and coordinated are commonly associated with references to continuum of care and all are used to emphasize the importance of connectivity among the parts
- **Emergency Department:** hospital-based department deals with life-threatening emergencies
- **Emergency Care:** care for life threatening injuries or illnesses
- **Encounter:** contract between a patient and a provider who is responsible for the assessment and evaluation of the patient as a specific contact, exercising independent judgment; contact may be face to face or per phone, electronic, e-mobile, or other communication medium, professional contact between a patient and a provider during which services are delivered.
- **Hub and Spoke Model of Care:** The words 'hub' and 'spoke' create a pretty vivid image of how this system works. A hub is a central airport that flights are routed through and spokes are the routes that plans take out of the hub airport. Most major airlines have multiple hubs.
- **Inpatients:** a hospital patient who receives lodging and food as well as treatment
- **Multi-disciplinary Team:** A group of doctors and others concerned with the treatment and care of patients with a particular type of chronic condition, mental health or cancer, who meet regularly to discuss patient treatment and care
- **Outpatients:** an ambulatory clinic which support and manage a significant proportion of emergency patients on the same day without admission to a hospital bed
- **Patient Medical Home Model: PMH** is a family practice defined by its patients as the place they feel most comfortable presenting and discussing their personal and family health and medical concerns. The PMH can be grouped into three themes: foundations, functions and ongoing development (Canadian College of Family Physicians of Canada, 2019)
- **Population Health Approach:** is an approach that aims to improve the health of the entire population…so reducing health inequities among and between population groups, acting on a broad range of factors and conditions that are shown to have strong influence on health. It looks at capacity and resources rather than just health status.
- **Scenario Management (Scenarios): '**what if' scenarios are structured stories constructed to explore organizational contexts and to better understand opportunities, threats and challenges. Often, scenarios are deployed to evaluate current options for action, and to develop new ones.
- Telehealth/Virtual Care Service is defined as a medical practitioner delivered health service provided to a patient via live image transmission of those images to a receiving medical practitioner at another approved site, through the use of video technology/virtual technology. Video technology means the recording, reproducing and broadcasting of live visual images, utilizing a direct interactive video link with a patient**.**

References

1. Office of the Premier, Ministry of Health, BC Government's Primary Healthcare Strategy focuses on faster team-based care (news release), Victoria, BC Government of British Columbia 2018
2. Message from the President and CEO, Kathy MacNeil, Island Health President & CEO, Island Health Magazine, Winter, 2019, p.3, Island Health Communication's and Public Relations, Victoria, BC
3. Greater Victoria Local Health Area Profile, Island Health, July 2018
4. BC Community Health Profile, Esquimalt 2017, Provincial Services Health Authority, Vancouver, BC
5. BC Community Health Profile, Esquimalt 2014, Island Health, Health Families BC, Provincial Health Services Authority, 2014
6. Statistics Canada, http://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-projections Accessed February 5, 2019
7. Greater Victoria Local Health Profile, July 2015
8. Sources of Potentially Avoidable Emergency Department Visits, Report, November 2014, Health Systems Publication, Canadian Institute for Health Information
9. Understanding the Health Care Needs of the British Columbia Population through Population Segmentation, The Health System Matrix 6.1, February 2015, Health Sector Planning and Innovation Division, The BC Ministry of Health, Victoria, BC
10. Understanding the Health Care Needs of the British Columbia Population through Population Segmentation, The Health System Matrix 9.0, February 2015, Health Sector Planning and Innovation Division, The BC Ministry of Health, Victoria, BC
11. The Cost of Hospital Stays: Why Costs Vary, Canadian Institute for Health Information, 2009, Ottawa, ON
12. Western Communities Primary Care Gap, June 23, 2018, Prepared by Health Sector Information Analysis and Reporting Division for M. Bhalla, South Island Division of Family Practice
13. South Island Division of Family Practice Internal Communication to Mayor Desjardins, March 25, 2019'
14. Working Together to Improve Aboriginal Access to Health Services, Health Canada 2015
15. First Nations Health Status & Health Services Utilization Summary, November 2018, First Nations Health Authority, West Vancouver, BC
16. First Nations Health Authority Tripartite Agreement, 2913, First Nations Health Authority, West Vancouver, BC
17. BC Statistics 2016-2017, accessed from the BC Ministry of Health
18. BC Ministry of Health PEOPLE Stats, 2018-2040
19. Census of Population, Statistics Canada 2017
20. Canadian Community Household Survey, 2015/16
21. Township of Esquimalt Official Community Plan, June 25, 2018, p.9-11
22. BC Community Health Profile, Esquimalt PSHA, 2015/16
23. C.Hay, M. Pacy & N. Ains, Understanding the Unattached Population in Ontario: Evidence from the Primary Care Access Survey, (PCAS) Healthcare Policy, Vol. 6, No. 2, 2010, p.37-47
24. College of Family Physicians of Canada: A New Vision for Canada—Family Practice: The Patient's Medical Home, 2019, Mississauga, ON, College of Family Physicians, 2019
25. D. Izenberg & F. Buchanan, In Ontario: Do Walk-in Clinics Complete or Compete—with Primary Care? Healthy Debate, April 5, 2018
26. Howard J. Goetzen et al., Emergency Department and Walk-in Clinic Use in Models of Primary Care in Different After-Hours Accessibility in Ontario, Healthcare Policy, 4th Edition, August 2008, p.73-88

27. Towards Optimized Practice, Coordinated Approach to Continuity, Attachment in Primary Care, March 2015, Canadian Healthcare Policy, Ottawa, ON
28. MD shortage crisis demands urgent attention: Desjardins—Loss of treatment centers leaves Esquimalt with one walk-in clinic, Reporter Lindsay Kines, Times Colonist, Friday January 18, 2019 pA1-4
29. Esquimalt Demographics Profile, 2019, data provided to South Island Division of Family Practice by Ministry of Health, Western Communities, Primary Care Gap Analysis, January 2019
30. Chronic Conditions 2017, Stats Canada, Health Fact Sheets, Released November 24, 2019
31. Alberta Health Services, Auditor General Review of Chronic Conditions, 2016, Edmonton, AB
32. Alberta Health Services, Three-Year Review of Urgent Care Centers, 2016, Calgary, AB

Appendix A – Work Plan & Project Team Bios

The work plan for this project included the following key tasks:

- **Task 1: Establish Working Committee**: A project working committee was established comprising of representatives from the Fraternal Order of Eagles, the Mayor, Councillors, and members from the Esquimalt Nations community, as well as other key stakeholders to provide overall direction to the project.
- **Task 2: Confirm Project Objectives and Approach**: Initial meetings were held with the Project Working Committee to confirm project objectives scope, key deliverables, work plan and timelines. Responsibilities for internal and external communications were also established.
- **Task 3: Document Review**: Relevant documents and reports were reviewed to provide a context for the project including:
    - Demographic and statistical data for Esquimalt and surrounding catchment area;
    - Provincial government's strategic frameworks: Primary & Community Care in BC: A Strategic Policy, Executive Summary, Primary & Community Care: A Strategic Framework, and Achieving High Performing Primary & Community Care;
    - The existing strategic primary care networks, and patients' medical home model service and business plans for Vancouver Island;
    - Implementation of the Integrated System of Primary and Community Care: Team-based care through Primary Care Networks Guidance to Collaborative Services Committees;
    - The College of Family Physicians of Canada's Patient's Medical Home 2019;
    - British Columbia's Ministry of Health's strategic directions of contracting 200 GPs into primary care networks;
    - Utilization data for primary health care and physician services including Esquimalt Demographic Health Data Analysis prepared by Island Health, and BC's Health System population data for Esquimalt/View Royal, and Vancouver Island's First Nation communities;
    - South Island Division of Family Practice PCN submission process documents.
- **Task 4: Key Informant Interview Program**: Interviews were conducted with key representatives and decision-makers to help provide context, identify issues and help inform recommendations. Interviewees included:
    - The South Island Division of Family Practice Executive Director
    - Island Health Sooke/West Shore/Esquimalt PCN Clinical Service Medical and Clinical Leads
    - Selected municipal leaders
    - First Nations Leaders and selected members of their community
    - Physicians from Esquimalt Family Practice
    - Physicians from Victoria Division of Family Practice
    - Mental health support groups
    - CFB Esquimalt Leader
    - Nurse Practitioners (Island Health and Private Practice)
    - Victoria Cooperatives Executive Director
    - Community Pharmacists (Esquimalt and Victoria)

- **Task 5: Inventory Primary Health Care Services**: The Esquimalt catchment area for primary health services was established, and an inventory of primary health care programs and services currently available in the Esquimalt catchment area was created including:
    - The number of FTE physicians, nurses and allied health professionals working in primary health care, mental health/substance use and chronic disease management;
    - The volume of primary care services being provided;
    - After hours volumes of emergency department use for family practice primary care sensitive conditions (CTAS 4-5);
    - A determination of the number of attached/unattached patients.
- **Task 6: Using Secondary Data Assess Current and Anticipated Demand:** Available utilization data and demographic data was collected and analyzed to provide historical background on growth rates and project population growth rates for the period 2020 to 2035. This included establishing the primary health related disease burden for the Esquimalt catchment area, compared with Western Communities and provincial benchmarks, and identify the top ten chronic conditions and associated workforce resources.
- **Task 7: Focus Groups:** To broaden the base of input, a number of stakeholder groups were conducted. These sessions provided an overview of the project, and engaged participants in a discussion of four or five key questions, e.g., strengths, weaknesses, issues to be addressed, best ideas for potential strategies, etc.
- **Task 8: Resident Survey Overview:** Esquimalt catchment residents completed surveys from three sites (e.g., Esquimalt, Victoria West and Esquimalt Nations).
- **Task 9: Documentation of Findings:** The results from the preceding tasks were documented in the form of a draft report which was used as the database to support the development of the draft recommendations.
- **Task 10: Project Working Committee Review of Findings and Potential Options:** A Working Committee meeting was held at which the preliminary findings were presented and reviewed; feedback on potential recommendations was solicited.
- **Task 11: Draft PowerPoint Presentation of Findings:** The consultants prepared a power point presentation incorporating study objectives, approach, key findings and short-term and long-term recommendations.
- **Task 12: Finalization of the Draft Report**: The consultants incorporated feedback from the review session into a Final Draft Report.
- **Task 13: Project Working Committee Review:** The Draft Report was reviewed by the Project Working Committee and any suggested modifications or enhancements noted.
- **Task 14: Final Report**: The report was finalized and submitted to the Project Working Team, and the Township Council.

Eileen Pepler, MSc, PhD | The Pepler Group| Adjunct Professor, Centre for Innovative Management, Athabasca University, MBA Programs, Faculty of Management, Adjunct Professor, MBA Program, Richard Ivey School of Business, Adjunct Professor, Factor-Inwentash Faculty of Social Work

Dr. Pepler is a leading scholar, researcher and consultant with extensive global and national expertise in health and social care. She has extensive experience in designing, executing, facilitating and delivering strategic initiatives on a number of levels—international, national, provincial and regional. More specifically, Eileen's academic credentials in systems thinking, data analytics project management, economic costing, information management and technology, health and care service delivery design, outcomes management, simulation and computer modelling, make her a thought leader and specialist in design thinking and large-scale change management. She applies scenario management, population health forecasting modelling associated with age-banded populations with disease prevalence, to predict likely demand into the system year on year, and the impact on costs, activity, resource and outcome as the demand flows through the system. Eileen uses population demographics, community health survey data to link costs and outcomes in mental health, addictions and substance use, homeless, vulnerable populations and high-risk groups to facilitate future capacity/demand projections. Her expertise in working with journey mapping across a broad spectrum of population groups has led to the development of effective health and social care innovation changes aimed at improving decision-making, costs, outcomes and wait times.

Dr. Pepler is an expert in engaging various stakeholders in the not-for-profit, organizations and professional and public sector provider groups including the Aboriginal communities to collaboratively facilitate the necessary shifts in our health care system on a number of levels to benefit patients. Her research and academic career also focuses on patient centered care initiatives which promote patient self-management and improved experiences of care. Eileen has conducted an engagement aimed at exploring new service models, aimed at integrating food banks, health providers, social services and other key community partners to improve the lives of single mother families, and the implications on the future of long-term use of food insecurity to seniors, frail elderly, children and youth with mental health. Additionally, her expertise was used as a panel member to explore recovery, resilience and housing options for people living with mental health and substance use challenges. Moreover, Dr. Pepler is evaluate valuate provincial health human resource tools and determine the gap when utilizing these tools for projecting future workforce and resources to align with future demand.

Eileen was instrumental in a provincial investment for change in mental health for children and youth. This was a result of the findings from a seven-year cross-sector government research project, focused on increasing access, improving the client experience, and mechanisms to reduce fragmentation, duplication of resources and result in a re-investment of funds back into the system to improve wait times for families with children and youth seeking mental health or addiction/substance programs and services.

Eileen has worked and lived for the past fifteen years in BC. She has worked across the BC landscape with healthcare and social service providers, and with not-for-profit agencies and senior residential facility owners. Dr. Pepler has a strong understanding of today's health and social care issues and the importance of community engagement to achieving the triple aim—patient experience, quality, costs—and executing on solutions that are shown to sustain the health care system for future generations.

Years of Experience:	25+ Years

Appendix B Comparison to BC

The summary below highlights how Esquimalt is doing compared to the provincial average. The graph displays the BC average as a black line and Esquimalt's data as a coloured bar on either side. The length of the bars represent percent difference between community data and provincial average. Data is compiled by Provincial Health Services Authority (www.phsa.ca/communityhealth) and data is based on Census

Income (dollars, 2016)	**Community**	**BC**	**Differential**
Average household income	$72,453	$90,354	-19.8%
Affordable housing (per cent, 2016)	**Community**	**BC**	
Owners spending >30% income on shelter	21.6	20.7	-4.3%
Renters spending >30% income on shelter	44.1	43.3	-1.8%
Education (per cent, 2016)	**Community**	**BC**	
High school diploma or higher education	86.7	84.5	2.7%
Employment (per cent, 2016)	**Community**	**BC**	
Unemployment rate	6.5	6.7	3.0%
Active Transportation (per cent, 2016)	**Community**	**BC**	
Population walk to work	11.1	6.8	63.2%
Population bike to work	8.7	2.5	255.1%
Life expectancy at birth (years, 2011-2015)	**LHA**	**BC**	
Total	82.4	82.6	-0.2%
Female	84.3	84.6	-0.5%
Male	80.4	80.6	-0.2%
Chronic disease (age-standardized prevalence rate) (per cent, 2015)	**LHA**	**BC**	
Asthma	12.1	12.1	0.5%
COPD	5.1	6.2	16.8%
Diabetes	6.9	8.0	14.7%
Heart failure	1.6	2.0	19.1%
High blood pressure	20.7	22.8	9.3%

Chronic disease (age-standardized incidence rate) (per 1,000, 2015)	LHA	BC	Differential
Asthma	6.1	6.1	-0.5%
COPD	6.4	7.6	15.7%
Diabetes	4.9	6.1	19.5%
Heart failure	3.0	3.2	6.9%
High blood pressure	16.7	19.8	15.7%
Maternal and infant health (per 1,000 live births, 2011-2015)	**LHA**	**BC**	
Infant mortality rate	5	4	-35.5%
Low birth weight rate	53	58	7.9%
Students eating 5 or more servings of fruits and vegetables per day (per cent, 2015-2016)	**LHA**	**BC**	
Grade 3/4	48	51	-5.9%
Grade 7	46	46	0.0%
Grade 10	47	43	9.3%
Grade 12	42	42	0.0%
Students who are physically active (per cent, 2016-2017)	**LHA**	**BC**	
Grade 3/4	39	38	2.6%
Grade 7	56	55	1.8%
Grade 10	58	54	7.4%
Grade 12	50	48	4.2%
Students who do not use tobacco or nicotine (per cent, 2016-2017)	**LHA**	**BC**	
Grade 7	96	95	1.1%
Grade 10	80	78	2.6%
Grade 12	74	72	2.8%
Vulnerability in early childhood (per cent, 2013-2016)	**LHA**	**BC**	
One or more areas of vulnerability	28	32	13.0%

Note: Measures and trends should be interpreted with caution. Data is 2011/12 and significant changes in the community may/not have transpired in relation to health behaviours and safety. It is also important to note the student groupings may have changed given the aging of this population since 2011/12 and the community's strategic goals related to population health and wellness.

Appendix C BC's Health System Matrix

BC's Health System Matrix divides the BC population into 13 health status groups:

Label	Definition
PS01	**Non-User** BC residents who did not use publicly funded health services included in Health System Matrix.
PS02	**Healthy** BC residents who were low users of publicly funded services and did not have any health conditions which would assign a person to a higher acuity population segment. They used up to $1,500 of physician services and up to $1,000 of prescription drugs (PharmaNet expenditures which includes both government-paid and out-of-pocket / extended benefits prescription drugs); did not use any other health care services; and were alive at the end of the year.
PS03	**Adult Major Age 18+** BC residents age 18 years and older with major health conditions other than those which assign a person to a higher acuity population groups and if residents used more than $1,500 of physician services; or used more than $1,000 of prescription drugs (PharmaNet expenditures which includes both government paid and out-of-pocket / extended benefits prescription drugs)l; or used any other health care services; or died during the year.
PS04	**Child and Youth Major <18 years** BC residents under the age of 18 with major health conditions other than those which assign a person to a higher acuity population groups and if residents used more than $1,500 of physician services; or used more than $1,000 of prescription drugs (PharmaNet expenditures which includes both government paid and out-of-pocket / extended benefits prescription drugs); or used any other health care services; or died during the year. The unhealthy newborns were included in this population segment.
PS05	**Low Chronic Conditions** BC residents with one or more low complex chronic conditions (asthma, mood / anxiety disorder including depression, diabetes, epilepsy, hypertension, osteoarthritis, or osteoporosis), as defined by the Chronic Disease Registries.
PS06	**Medium Chronic Conditions** BC residents with one or more medium chronic conditions (angina, COPD, multiple sclerosis, Parkinson's, pre-dialysis chronic kidney disease, or rheumatoid arthritis), or have had a major cardiac event or intervention (CABG, AMI, PTCA), or have a specific combination of chronic conditions (diabetes & mood / anxiety disorder, osteoarthritis & hypertension, osteoporosis & hypertension, osteoporosis & osteoarthritis), as defined by the Chronic Disease Registries.
PS07	**Severe Mental Health & Substance Use** BC residents who were hospitalized with a specific range of conditions recorded as the Most Responsible Diagnosis in the hospital abstract for mental health conditions such as schizophrenia, mood disorders, drug addiction, etc. in the last 5 fiscal years; or received methadone treatment in the fiscal year; or used PharmaNet Plan G in the fiscal year.
PS08	**Maternity & Healthy Newborns** BC residents who received maternity or obstetric services from a physician or a midwife (MSP fee-for-service billings) or a hospital (DAD) in the fiscal year.

P S09	**Frail in Community** BC residents who live in the community and receive professional home care services or publicly funded services to assist with activities of daily living. The following services reported in the Continuing Care Data Warehouse and/or the Home and Community Care Minimum Reporting Requirements Data Warehouse are used to identify this population: 1. Professional home care services provided by the health authorities and delivered to clients in the community by registered nurses and rehabilitation therapists. 2. Home support services that provide personal assistance with the activities of daily living to seniors and adults with disabilities living in their homes, such as bathing, dressing, grooming and, in some cases, light household tasks that help maintain a safe and supportive home. These services include CSIL (Choice in Supports for Independent Living) which is a program in which the client can independently manage their publicly funded home support services. 3. Adult Day programs for seniors and adults with disabilities that assist with daily activities or give clients a chance to be more involved in their community. They include personal care services, therapeutic recreation, social activities, and caregiver respite. 4. Assisted living residences provide housing and a range of supportive services for seniors and people with disabilities, including personalized assistance with activities of daily living. 5. Case Management services. 6. Short-term residential care including transitional care, convalescent care (usually following a hospitalization), and respite care. For children age 18 and under: The Ministry of Children and Family Development provides community-based, family-style care for severely handicapped children age 18 or under who would otherwise become reliant on institutional care. The Frail in Community population segment identifies these children and youth through registration in the PharmaCare At Home Program of the Ministry of Children and Family Development (Plan F).
PS10	**High Chronic w/o Frailty** BC residents who do not receive support services from health authorities for activities of daily living and who have one or more high chronic conditions (Alzheimer's, dementia, cystic fibrosis, heart failure, or organ transplant), had stroke or are on dialysis, or have a specific combination of chronic conditions (AMI & pre-dialysis chronic kidney disease, angina & COPD, diabetes & hypertension & osteoarthritis), as defined by the Chronic Disease Registries.
PS11	**High Chronic with Frailty** BC residents who do receive selected support services from health authorities for activities of daily living and who have one or more high chronic conditions (Alzheimer's, dementia, cystic fibrosis, heart failure, or organ transplant), had stroke or are on dialysis, or have a specific combination of chronic conditions (AMI & pre-dialysis chronic kidney disease, angina & COPD, diabetes & hypertension & osteoarthritis), as defined by the Chronic Disease Registries.
PS12	**Cancer** BC residents with cancer identified via administrative data using a similar approach as the Ministry's chronic disease registries. Specifically, the Matrix assigns people to this population segment if during the current or previous fiscal year they had specific malignant diagnoses recorded on at least two physicians' MSP fee-for-service billings within 365 days or at least one hospitalization. It is important to note that the people undergoing active treatment for cancer would be more comprehensively identified using the cancer registry maintained by the BC Cancer Agency. However, the Ministry does not have access to this cancer registry.

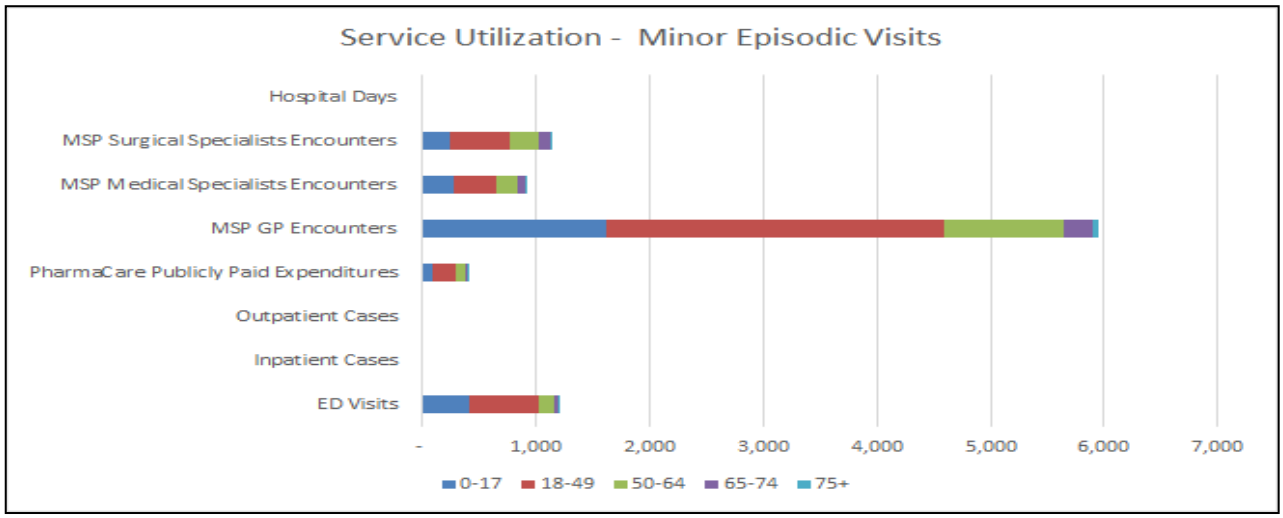
PS13	**Frail in Residential Care** BC residents in residential care facilities that provide 24-hour nursing care and assistance with activities of daily living. These residents are identified as follows: 1. Registered with PharmaCare's Plan B (which covers prescription drugs for Permanent Residents of Licensed Residential Care Facilities) or 2. Long-term residential care clients (as reported by Health Authorities to Continuing Care Data Warehouse and the Home and Community Care Minimum Reporting Requirements Data Warehouse).
PS14	**End-Of-Life** BC residents who received palliative care services from physicians (based on physicians' MSP fee-for-service billings for palliative care), were hospitalized specifically for palliative care, received palliative services from health authority's home and community care programs, or were registered in PharmaNet's BC Palliative Care Benefits Program (Plan P).

Appendix D Priority Population Groups

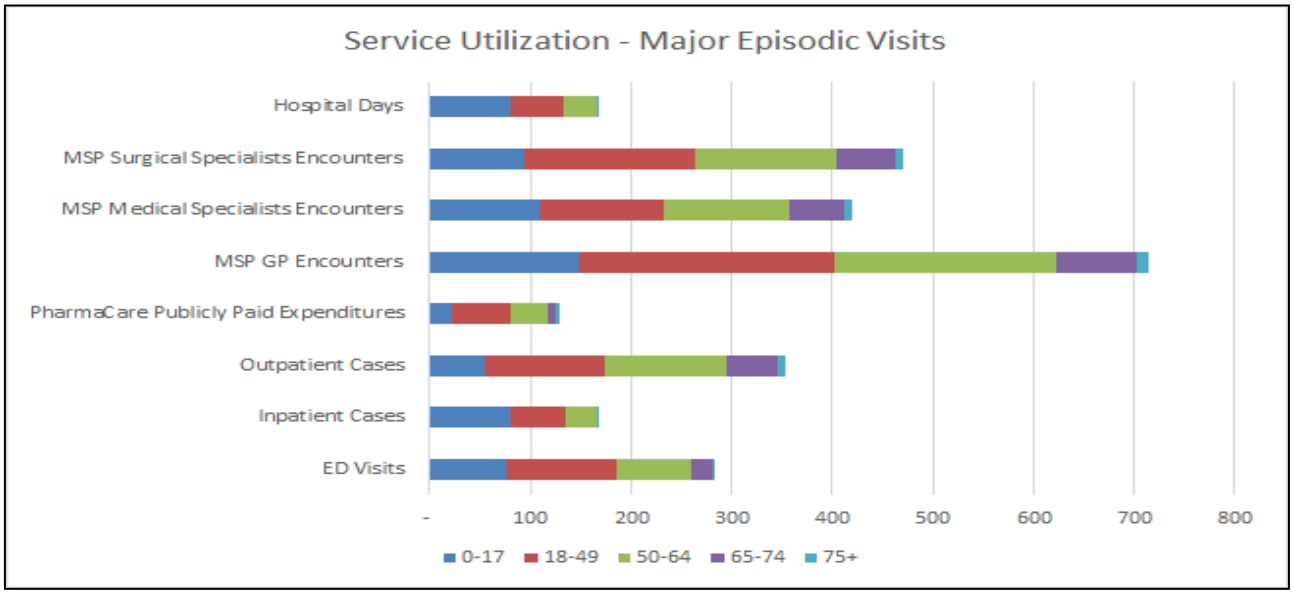
Priority Population Groups & Health Service Utilization

The following charts provide important insights on who uses health care services and the conditions that drive the need for this care. (See Appendix C on BC Ministry of Health's Services System Matrix (HSM) terms and population segment terms).

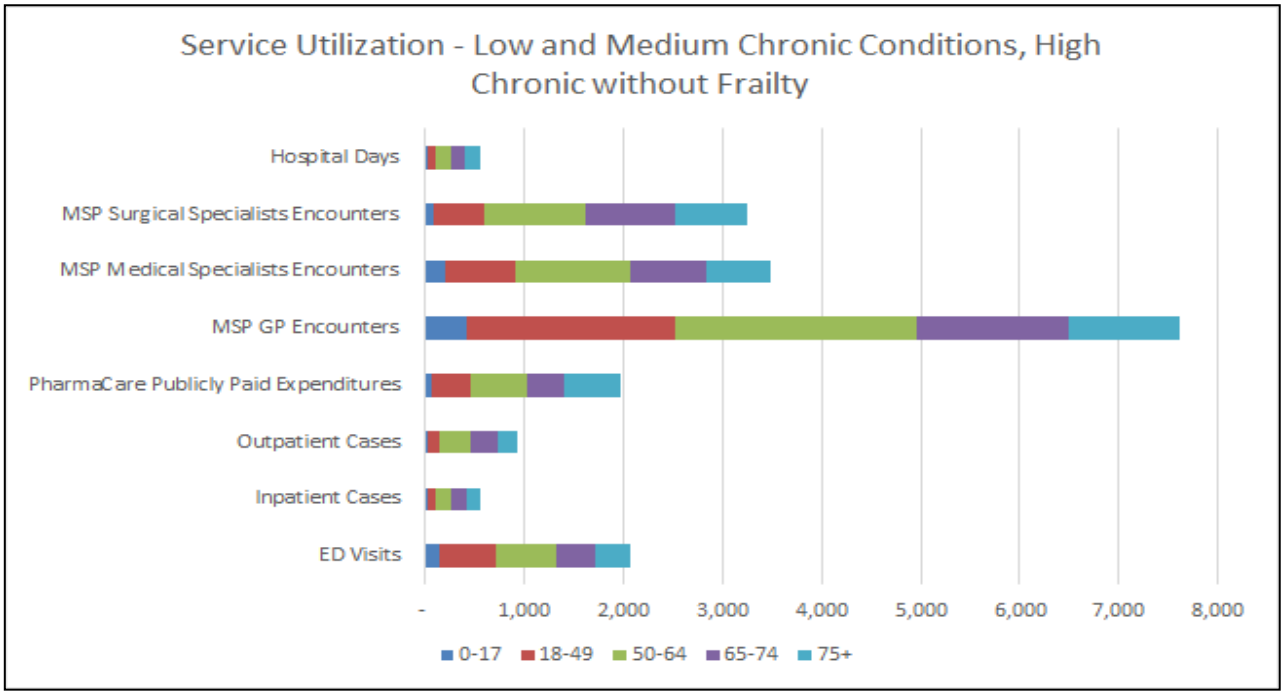
Healthy & Low User Health Service Utilization – Minor Episodic Visits (2016/17)



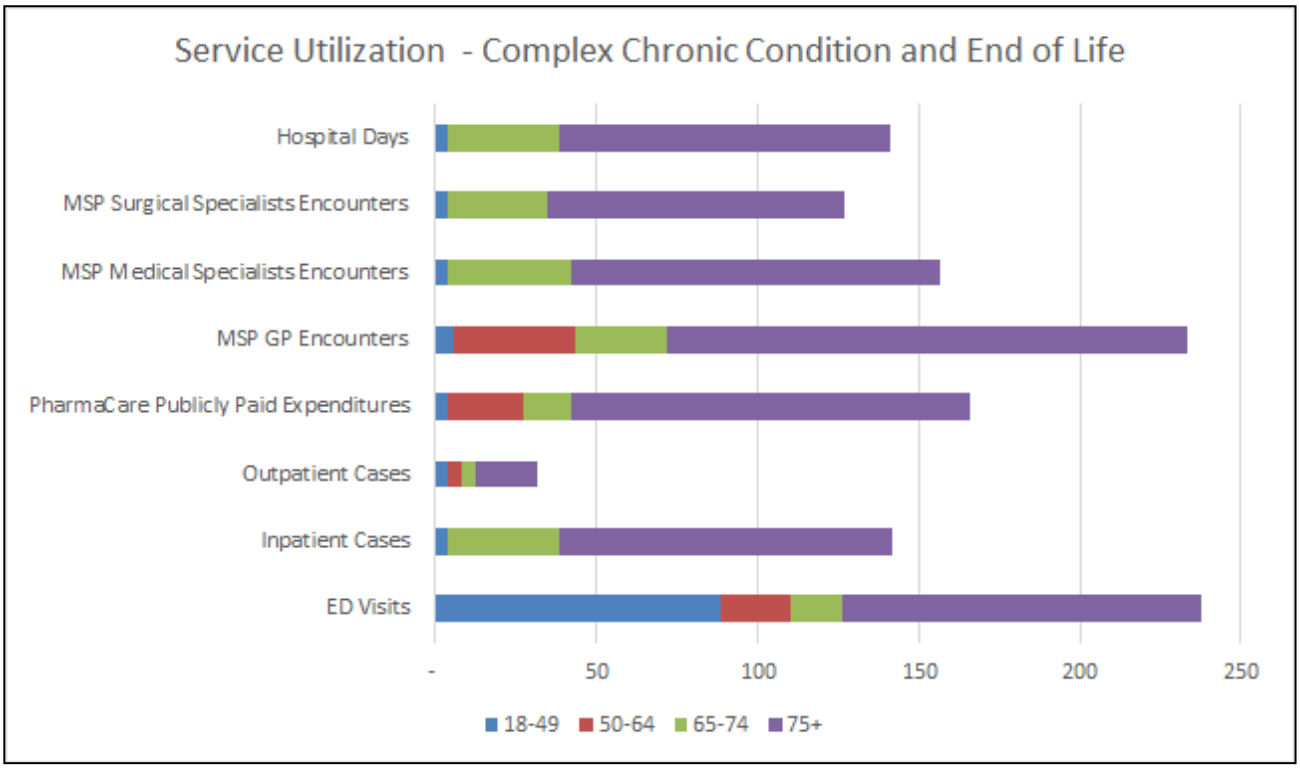
Adults 18+ and Child/Youth <18 Service Utilization – Major Episodic Visits (2016/17)



Service Utilization – People living with Low & Medium Chronic Conditions, High Chronic w/o Frailty (2016/17)

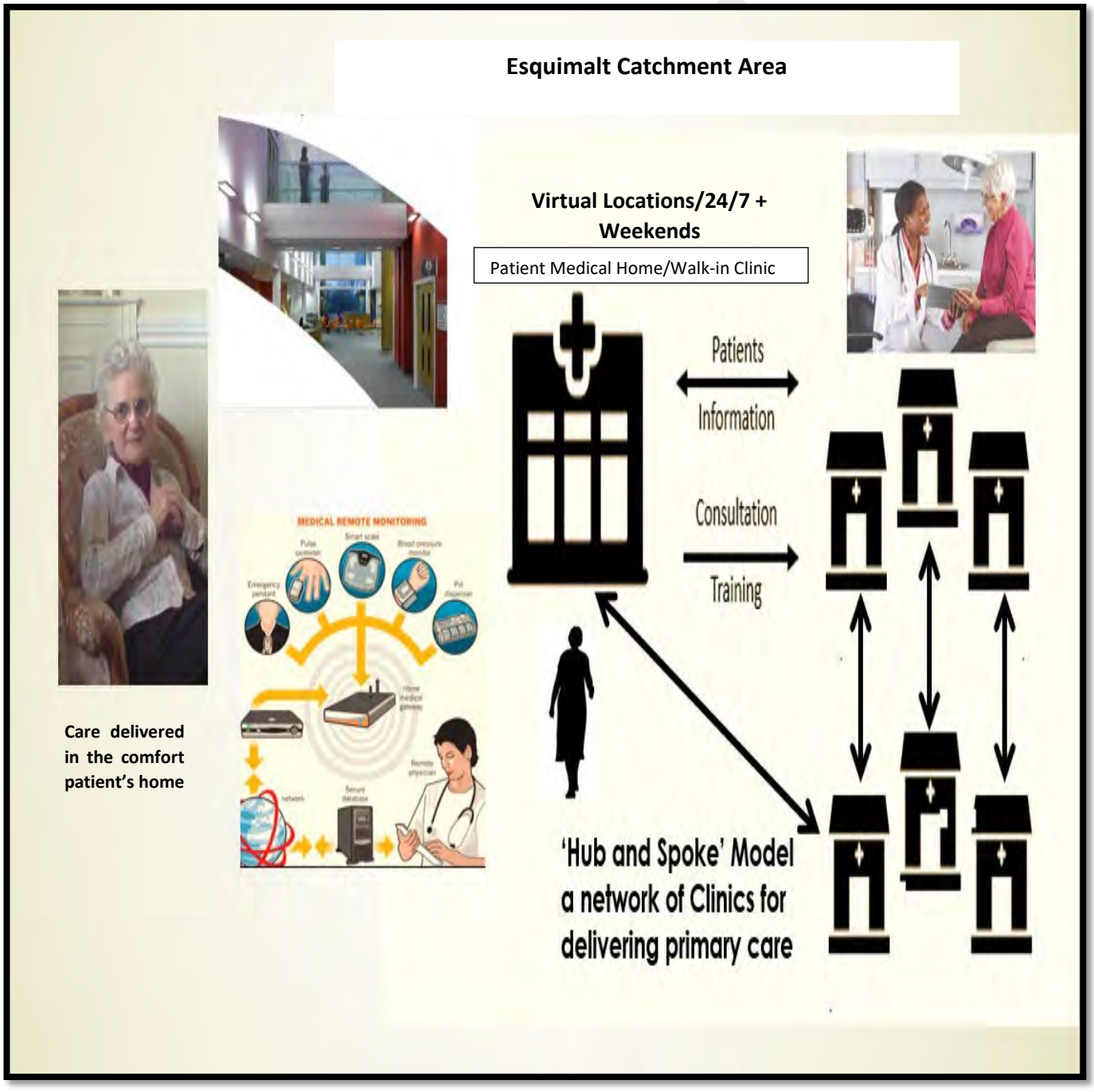


Service Utilization – Complex Chronic Conditions and End of Life (Palliative)



Appendix E What if? Esquimalt Shared Community Model of Care

(Hub and Spoke a service delivery model to link communities)



PeplerGroup
Smart Systems for Better Outcomes

Appendix F What if? Access 24/7 + Weekends

24 Hour Hotline to Healthcare in Esquimalt