

Transformational Roadmap
2018-2021

Respiratory Health Strategic Clinical Network



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A Word from our Leadership Team

For many Albertans, the struggle to breathe is a reality of everyday life. A dedicated group of clinicians, supported by partners such as Alberta's Universities, Alberta Health, and The Lung Association of Alberta & Northwest Territories, pursues better health and prevention of lung disease through the Respiratory Health Strategic Clinical Network™. Helping to make care better is why Strategic Clinical Networks were created. In the Respiratory Health SCN, we are focused on supporting clinical effectiveness research and enabling teams that want to design and implement innovative care. This focus spans the entire spectrum of care from prevention to end of life.

The Respiratory Health SCN's 2018-2021 Transformational Roadmap (or strategic plan) is a foundational document that guides our work by elaborating on areas of priority for the coming years. The development of this plan provided an opportunity for us to critically look at what is working well in relation to respiratory disease prevention and management, as well as to think about what could be improved. It reviews what we have accomplished since our formation in 2014 and offers the pillars and strategies that will guide our activities over the next few years. This strategic plan was developed through consultation with our Core Committee, clinicians, patients and family members, researchers, community colleagues, partners, and strategic leaders.

Our network assumes leadership in many areas, including the development of clinical care pathways aimed at improving Chronic Obstructive Pulmonary Disease (COPD) and childhood asthma care, developing innovative models of care for sleep disorders, and the safe delivery of care across other respiratory therapies and conditions. We are committed to supporting improvements to the health care system through a critical examination of current practices, learning from research, and identifying groundbreaking approaches to tackle the most important issues facing patients and their families within the foreseeable future.

We welcome your views and ideas, and look forward to working with you along the transformational journey of the Respiratory Health SCN.

Dale Lien, MD
Senior Medical Director
Respiratory Health SCN

Shelley Valaire
Senior Provincial Director
Respiratory Health SCN

Michael Stickland, PhD
Scientific Director
Respiratory Health SCN

Executive Summary

Since our launch in January 2014, the work of the Respiratory Health Strategic Clinical Network has become increasingly embedded within the respiratory community across Alberta. Reflecting on the past four years, this refreshed TRM builds on the work that has been completed since the launch of the SCN and looks forward to the next three years (2018-2021). The work outlined within this document represents areas that we believe will have a significant impact across the respiratory continuum, including wellness through to living with a chronic condition and end-of-life care. As our SCN pursues the work to come, we will partner with a number of key stakeholders within our community to ensure success.

The **mission** of the RHSCN is “**The Respiratory Health Strategic Clinical Network will facilitate optimal respiratory health through implementation of innovative, patient-centered, evidence-informed and coordinated services.**”

While there are a number of areas within the respiratory community where we could focus our efforts, through the opinion of our clinicians and patients and supported by literature and research, we are concentrating on four pillars of work that provide both challenge and opportunity. These foundational pillars of our work are:

- COPD
- Asthma
- Sleep Disorders
- Oxygen Therapy

Within these foundational pillars, we are committed to concentrating on three overarching focus areas. These focus areas and their corresponding priorities are intended to transform respiratory care across the province, improve the patient experience and population health outcomes and ensure respiratory services are providing the health care system with excellent value for money. These focus areas and top priorities are:

Care across the continuum:

- Prevention and early detection
- Clinical pathways towards integration

Strengthen and integrate evidence:

- Measurement and evaluation
- Science and innovation

Policy and practice:

- Provincial standards
- Quality improvement

By focusing on these focus areas and priorities within our foundational pillars, we know the RHSCN will be well on our way to achieving our mission to facilitate optimal respiratory health.

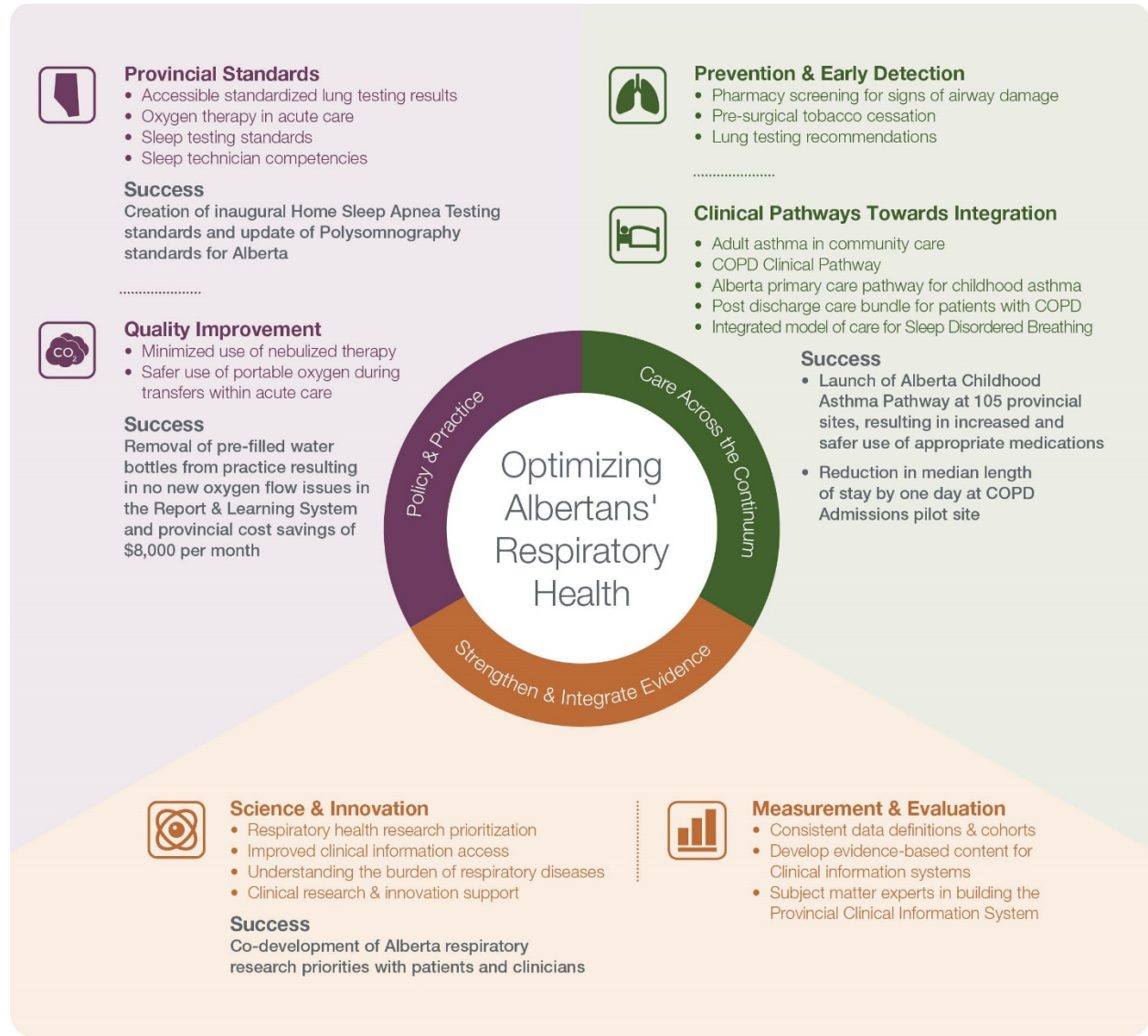
Celebrating our Successes

Since the launch of the Respiratory Health SCN in January 2014, the clinical community of practice within the province has rallied to the cause. Showing flexibility and resilience, the members of the Core Committee, in partnership with our broader respiratory health community, have defined priority areas of work, have responded to organizational needs, and have remained committed to completing legacy projects. Over the past four years, the Respiratory Health SCN has achieved a number of successes, including:

- Launch of Alberta Childhood Asthma Pathway at 105 provincial sites, resulting in increased and safer use of appropriate medications. Substantial improvements in the use of all evidence-based therapies has been realized in both the ED and inpatient units, with utilization of optimal therapies improving by 80%.
- Standardized COPD admission order set was created as part of a broader strategy to enhance patient management and decrease length of stay. This reduced median length of stay by one day at our pilot site, without affecting the rate of readmission. The provincial spread in use of these order sets was approved and supported by AHS Executive.
- Consultation with more than 27 patients and families in 2017.
- Creation of inaugural Home Sleep Apnea (OSA) Testing (Level III) standards and update of Polysomnography (Level I) standards for Alberta, to improve quality and safety of diagnostic services.
- Removal of pre-filled water bottles from practice across the province resulted in no new oxygen flow issues in Reporting and Learning System (RLS) for Patient Safety.
- Co-development of Alberta respiratory research priorities with patients and clinicians.
- The development and implementation of mitigation strategies for Air Oxygen Misconnections has allowed us to significantly reduce this risk across our acute care facilities and to use safer, more efficient methods of medication delivery.
- Completion and approval of a provincial policy to mitigate patients' loss of oxygen therapy during transfers within acute care facilities. This involved significant engagement among several disciplines and sites across the province, and the development of a communication tool (chart form called a 'transfer ticket') with a comprehensive orientation toolkit.

Did you know?
Launch of Alberta Childhood Asthma Pathway at 105 provincial sites, resulting in increased and safer use of appropriate medications.

Summary Graphic



Introduction

Strategic Clinical Networks™ (SCNs™) are province-wide teams bringing together the experiences and expertise of health care professionals, patients and families, researchers, government, administrators, communities, non-governmental organizations, and other partners to improve our health care system. To achieve this, SCNs are responsible for generating or implementing innovation, implementing best evidence into practice, and utilizing change management strategies to improve the quality of care and outcomes and ensure long-term sustainability and success of all initiatives. They also build capacity with and within operations, using local improvements to drive system innovation. As a major stakeholder in health service delivery, the work of the SCNs is aligned with Alberta Health Services' (AHS') four foundational strategies, and the quadruple aim approach (Figure 1). SCNs are the mechanism through which AHS empowers and supports physician and clinical leaders both within AHS and the community to work with patients and their families to develop and implement evidence-informed health improvement strategies across Alberta.

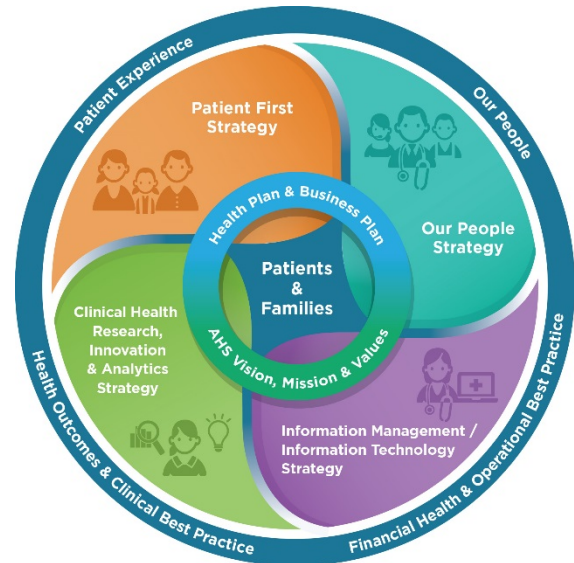


Figure 1: AHS' Four Foundational Strategies

About the Respiratory Health SCN

Building on a rich history of collaboration within the respiratory community, the original Respiratory Clinical Network was launched in March of 2010, focusing on legacy work in the areas of COPD and Asthma. The network re-launched in January 2014 as a Strategic Clinical Network. This network is led by a Leadership Team and a Core Committee, which has representation from a wide-range of multi-disciplinary stakeholders across the province with a keen interest in respiratory health. They work together to set priorities, plan, and stimulate activities of the network. Our Core Committee includes senior clinicians, operations and strategy leaders, policy makers, researchers, key business partners, frontline staff, patients and families. The 'Core' actively works with academic and research partners to create new knowledge and translate it into measurably improved health and health care for Albertans. We also have a number of working groups, sub teams, and project teams that include front-line staff who are responsible for the development and implementation of priority projects, and without whom this work would not be possible. A complete list of our Leadership Team and Core Committee membership can be found in Appendix A.

Our Mission:

“The Respiratory Health Strategic Clinical Network will facilitate optimal respiratory health through implementation of innovative, patient-centered, evidence-informed and coordinated services.”

Development of our Transformational Roadmap

Transformational Roadmaps (TRMs) serve as the strategic plan for each SCN and guide future work. By ensuring we understand the current state of services and the health needs of Albertans and identifying best practices, we have been able to develop our focus areas and prioritize the work of our SCN. The creation of this TRM was a collaborative effort that involved internal and external consultations led by the Respiratory Health SCN (RHSCN) Core Committee, gathering feedback from across the province. This document will guide our work over the next 3 years (2018-2021), and outlines our focus areas and corresponding priorities that we will undertake to improve the respiratory health of patients and families in Alberta.



Figure 2: RHSCN Leadership Team in a Strategic Planning Session



“To me, the RHSCN means excellence in respiratory care. The inter-professional approach the SCN takes to the improvement of patient-centered respiratory care across the province is invaluable.”

- Raymond Acheron, Nurse Practitioner, Airways Working Group Member

Challenges within our Population

The four pillars outlined in Figure 3 below provide both a challenge and an opportunity for the respiratory community. While there are other areas within respiratory disease we could focus, these four areas remain foundational to our community. The data and evidence surrounding these four areas suggest Alberta has room to improve clinical processes and policy, and given incidence and prevalence, there is the greatest opportunity within these four foundational pillars to have positive impact on our system.

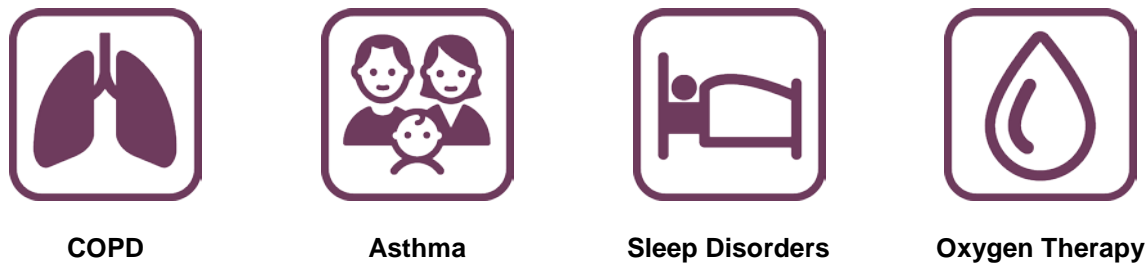


Figure 3: The RHSCN Foundational Pillars

We know that the use of tobacco products is a common cause of respiratory conditions, and Alberta's prevalence of tobacco use is fourth highest in Canada at 15.8%, higher than the national average of 13%, and that respiratory medicines are not consistently prescribed according to best practice guidelines. Even though many patients are under the care of a specialist, we know that few respiratory patients receive routine follow-up appointments to support optimal control of their disease which includes the creation and adherence to a written self-management action plan. Access for patients to self-management education and other community supports is still quite limited, and health professionals are unsure about whose role it is to dialogue with families about end of life care issues and often lack the necessary skills and confidence to address patients and families about end of life care.

Chronic Obstructive Pulmonary Disease (COPD)

Objective – To increase earlier and more accurate diagnosis, and reduce the impact of exacerbations on the overall health and quality of life for those with COPD.

- COPD is responsible for the highest number of patient hospitalizations in Alberta.
- By 2030, the World Health Organization expects COPD to be the third most common cause of death and disability.
- The Institute for Health Economics has identified the annual expenditure for COPD in Alberta to be 253 million dollars.

Did you know?
One in five
Canadians has
some form of lung
disease

- Patients are often given a diagnosis without use of the recommended objective measures of lung function testing and diagnoses are unnecessarily made with delay or inaccuracy; COPD and asthma are commonly mistaken for each other.
- Pulmonary rehabilitation is strongly supported in the clinical evidence to have a significant impact on quality of life, acute care utilization, and progression of COPD, yet access to pulmonary rehabilitation programs remains extremely low.
- There is lack of coordinated care and follow up post hospitalization for a COPD or asthma exacerbation. This is also a challenge across the spectrum of airways disease care.
- COPD is a progressive illness with a complex and variable trajectory. Breathlessness can cause anxiety and fear for both patients and families. A patient-centered approach including comfort measures and caregiver support may improve the experience for patients, families and care providers.

Asthma

Objective – To increase more accurate diagnosis, and improve the outcomes for those with asthma by reducing the risk of complications and unscheduled use of specialty and acute care.

- One in three Canadians will be diagnosed with asthma sometime in their life.
- Improper use of inhalers and other treatment devices (together with other factors) contribute to increased health care utilization for COPD, asthma, and sleep apnea (OSA).
- Asthma is the most common treatable chronic disease in children and continues into adulthood where 10% of the adult population suffers from ongoing challenges.
- It is estimated that an asthma patient enters Alberta's Emergency Departments (EDs) every 16 minutes.
- It is estimated that 1/3 of patients diagnosed with asthma do not actually have the disease.

Sleep Disorders

Objective – To improve the quality, consistency, and safety of care for those with suspected or diagnosed sleep disorders.

- Over 100,000 Albertans have a diagnosis of Obstructive Sleep Apnea (OSA), and studies suggest that 25% of the population has some form of sleep disorder. Up to 80% of cases in our province are

Our Guiding Principles

- Care for respiratory diseases will be consistent, safe and accessible throughout the province.
- Continuous engagement with patients and families and use of the principles of patient and family-centered care will help guide continuous quality improvement and innovation.
- Barriers to successful prevention, management, and care practices will be addressed (e.g. social, economic, environmental, and cultural determinants of health).
- Flexibility and responsiveness to evolving needs based on research evidence and clinical knowledge will be paramount. This knowledge will continue to develop, grow and be refined.
- Respiratory health services across the continuum of care will be delivered by healthcare practitioners that are knowledgeable and skilled.

undiagnosed due mainly to accessibility issues for both diagnostic testing and treatment.

- There is varied financial coverage for sleep apnea (OSA) testing and treatment, as well as other therapies such as inhaled corticosteroids.
- Public awareness of sleep disorders remains low and symptoms are often mistaken for other things, including normal aging.

Oxygen Therapy

Objective – To reduce variance in the delivery of oxygen therapy, supporting the safest and most consistent care.

- Patients are at risk for an inadvertent discontinuation of oxygen or a change in clinically prescribed flow because an interruption in oxygen flow may not be immediately recognized; this can occur when connections are being made to wall outlets and while patients are transferred within the facility on a portable supply.
- Within acute care settings, variability of practice and outdated practice guidance is resulting in instances across the province of unsafe or inappropriate use of oxygen therapy.

Our Focus Areas

In this section, we've outlined our focus areas and priorities for 2018-2021 that will support our efforts to improve outcomes at the patient, provider, and system levels. While we are invested in all three focus areas, our work is not equally weighted across each of these areas, and has the potential to change over time. The work outlined represents areas that we believe will have a significant impact across the respiratory continuum of care. Our goal is to engage broadly and continually grow our 'family', so we will partner with stakeholders across public and private sectors – including regulatory colleges, non-profits, academia, and community-based diagnostic and service providers.



Figure 4: The RHSCN Focus Areas

Focus Area: Care across the Continuum

The RHSCN is committed to improving and standardizing the diagnosis, treatment, and management of respiratory conditions across the continuum of care. This includes all stages of disease, from prevention and early detection, through to disease treatment and management and onto end of life.

Our Priorities:



Clinical pathways
towards integration



Prevention and early
detection

Clinical Pathways towards Integration: Better Together

Rationale:

Clinical Pathways are a critical support to standardized, efficient health care and are a top priority for all SCNs. To be successful, the SCNs must partner with primary healthcare and community partners to co-design clinical pathway solutions that are sustainable and support patients and their care across the continuum. These care pathways offer clinicians a comprehensive, standardized path to care across Alberta for patients experiencing similar health concerns. With COPD, asthma, and sleep disorders impacting a large number of Albertans, the RHSCN is currently focused on building clinical pathways for these disease areas. In partnership with several other groups, we will implement, measure and sustain the use of best evidence through pathways. Integrated practice and improved patient care is our North Star.

No one group can be successful in building and implementing successful pathways alone. We are pleased to be leading or supporting pathway work in the following areas:

Initiatives:

- COPD Clinical Pathway - With an eye to creating and implementing a clinical pathway for the treatment of COPD, work has begun to implement segments along that pathway in partnership with a number of groups. On the acute care side, standardized admission order sets have been completed and piloted with plans for implementation started within 4 of 5 zones. Critical partnerships have been forged with groups, particularly primary care networks, in other segments including care in the community and palliative / end of life care.

Did you know?
COPD is responsible
for the highest
number of patient
hospitalizations in
Alberta.

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- A Post-Discharge Care Bundle for Patients with COPD (PRIHS II) – This project will adapt, implement, and assess a post-discharge clinical pathway for patients with COPD to facilitate smooth transition from hospital, and help prevent return visits to the emergency department and perhaps another hospitalization.
- Alberta Primary Care Pathway for Childhood Asthma (Partnership for Research and Innovation in the Health System grant - PRIHS II) – This research project aims to implement and evaluate an innovative clinical pathway for managing childhood asthma through the use best care guidelines embedded in their electronic medical record and supported by web-based learnings.
- Adult Asthma in Community Care – A combination of strategies to improve the diagnosis, follow-up and associated quality of life indicators for adults receiving care from their pharmacist and primary health care clinic. Strategies include implementation of provincial clinical practice for ages 5+ for family physicians and expanded clinical education roles for pharmacists.
- Integrated Model of Care for Sleep Disordered Breathing (SDB) – We will develop an integrated model of care that will empower Primary Care Providers (PCPs) to deliver timely and effective diagnosis and management of SDB within the patient’s medical home. Consistent with the focus of “Enhancing Care in the Community” this project aims to create partnerships between primary care and specialty care to decrease care fragmentation, streamline diagnosis and improve time to appropriate treatment. Secondly, the project will facilitate efficient system navigation by PCPs by standardizing the clinical pathways used to establish a diagnosis of SDB and initiate treatment.

Prevention and Early Detection

Rationale:

Albertans often underestimate the impact of air quality and lifestyle factors on exacerbations of asthma and COPD. As well, half of all ex-smokers expect there will be little to no impact of their past smoking behaviour on future health. The SCN is committed to partnering on prevention efforts such as encouraging healthy lifestyles and wellness and decreasing use of and exposure to tobacco products and combustibles. By focusing on prevention and the early detection of respiratory conditions, the RHSCN can help prevent the development or progression of lung diseases.

Initiatives:

- Lung Testing Recommendations – Addressing a gap in the evidence, we will develop and implement provincial guidance for the types and frequency of tests required for the various diagnostic and management purposes.
- Pharmacy Screening for Signs of Airway Damage – We will develop and pilot test a screening program in northern rural community pharmacies to identify the prevalence of airflow limitation in current smokers and their experiences with support for smoking cessation.
- Pre-Surgical Tobacco Cessation – There are pockets of success across Alberta where support for patients preparing for surgery has resulted in reduction or cessation of smoking; the RHSCN will partner with the Surgery SCN to adapt and test a provincial approach for such a service in all surgical settings.



“The RHSCN allows me to be an active participant in the health care system. Rather than simply receive medical treatment for my illness, I am now actually part of the overall health solution. Patients often feel that “the doctor knows best” and that their own experiences and observations about their illness are not relevant. This SCN shows that I am an important component in the health system as a whole, and in the management of my own health in particular. Patients can make a difference to the health care system.

I think this SCN has the potential to change the way we manage health care in this province. Bringing front-line medical personnel and researchers together with everyday people who have important first-hand experiences managing their own illnesses, we will be able to greatly improve healthcare outcomes for the patients, while bringing costs of treatment down in the long-term. This SCN is crucial to an efficient, patient-focused healthcare system.”

- Dean Powell, Airways Working Group Member

Focus Area: Strengthen and Integrate Evidence

Another key focus area of the RHSCN is in the area of research and innovation. In partnership with the SCN's Scientific Office, comprised of a Scientific Director and Assistant Scientific Director, we are committed to continuing to strengthen the existing clinical evidence in the field of pulmonary medicine and integrating that new evidence into patient care across Alberta.

Our Priorities:



Measurement and
Evaluation



Science and Innovation

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Did you know?
Over 100,000
Albertans have a
diagnosis of
Obstructive Sleep
Apnea.

Measurement and Evaluation

Rationale:

In order to validate how we are doing as an SCN, we need to measure and evaluate our work. A first step for the RHSCN is to ensure we are defining and measuring respiratory conditions and outcomes consistently across the province, and that all Albertans have access to evidence-informed accurate information relevant to their needs. A key objective for AHS is to “Build One Health System” focusing on an optimized workforce, evidence informed clinical knowledge, and the use of technology and sustainable

funding. The SCNs and programs within the Chief Medical Information Office are partnering to create and maintain clinical knowledge that will support and maximize the efficacy of the Clinical Information System.

Initiatives:

- Data Definitions – Developing consistent data definitions, to ensure analysis of datasets is as accurate and comparable as possible.
- Baseline Statistics – Applying consistent data definitions for respiratory diseases, to determine incidence, prevalence, and all-cause mortality of those diseases in Alberta.
- Clinical Information System (CIS) Content – Creating evidence-based content for the CIS, with an initial focus on childhood asthma, adult asthma, COPD, and community-acquired pneumonia, followed by use of oxygen and positive airway pressure therapies within acute care.
- Key Performance Indicators - Many members are acting as “Subject Matter Experts”, helping to build the provincial Connect Care Clinical Information System; this includes development of the common metrics used to determine effectiveness of our work as outlined in this document.

Science and Innovation

Rationale:

Through our Scientific Office, the RHSCN is committed to growing the research community across the province focused on conditions of the respiratory system, in the hope of continuing to learn more about these diseases, implementing innovative best-practices, and ultimately decreasing the burden these diseases have on Albertans.

Initiatives:

- Respiratory Health Research Prioritization – The research prioritization process is led by a steering committee of patient advisors and clinicians. The team has recently completed a survey of patients, caregivers, and health care professionals to identify their research questions related to respiratory health and sleep. The steering committee will use this information to explore the academic literature to identify the questions that are unanswered. A series of engagement opportunities will be held to finalize the list of research priorities. This list will be used to guide the scientific office for the upcoming 3-5 years.
- Understanding the Burden of Respiratory Diseases – Using validated case definitions, the data management working group has collaborated with our team in health analytics to determine the prevalence, incidence, and all-cause mortality for individuals in Alberta living with either COPD or asthma. These dashboards will be used to enhance our understanding of the burden of respiratory disease in Alberta, to better understand the health needs of our population, and to identify specific populations that may require additional supports. The working group endeavors to pursue similar data for sleep disordered breathing in Alberta.
- Clinical Research and Innovation Support – Assist the respiratory research community with the development, implementation and evaluation of research and innovation projects across Alberta. This includes offering methodological support, providing letters of support, and connecting researchers with our clinical community to build research capacity in Alberta.

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- Clinical Knowledge Access – Support efforts to build and review clinical content for new provincial clinical information system. By partnering with clinical knowledge work groups, the scientific office can link this work with recent best evidence and research results.



“The RHSCN is a provincial clinical resource that brings together front-line health care providers from across the province to analyze complex clinical problems. We provide a venue to inform policy that is broad based and have expertise from many different types of health care providers, including urban and rural perspectives and both public and private providers.”

- Dr Irvin Mayers, Adult Respiriologist, RHSCN Core Committee Member and Sleep Disorders Working Group Member

Focus Area: Policy & Practice

Our final focus area over the next three years (2018-2021) is on quality improvement and standardization of clinical practice. Through the development of provincial standards and policy, we will strive for high-quality respiratory care across Alberta.

Our Priorities:



Provincial Standards



Quality Improvement

Provincial Standards

Rationale:

The RHSCN is proud to provide a bridge between optimal care and system challenges by leveraging provincial clinical expertise and rapid access to best evidence and supportive data. The RHSCN believes that all Albertans should have equitable, accessible, timely, and high-quality testing for respiratory conditions that is then accurately assessed for severity and treated appropriately. By developing consistent practice standards across the province, we can better ensure clinicians have access to the same information and patients are receiving the best care possible, regardless of where they are located in the province.

Initiatives:

- Accessible Standardized Lung Testing Results – By connecting interpreted testing reports, across both the public and private sectors, to make test results visible to all clinicians within Netcare; this

is expected to result in earlier and more accurate diagnoses, and more timely follow-up care for patients who have chronic lung disease.

- Oxygen Therapy in Acute Care – There are important opportunities and benefits to be realized by standardizing provincial practice involving oxygen therapy, particularly for patient safety and quality care within acute care settings. Over the next three years through to 2021, the RHSCN will be focusing on criteria for the ordering and application of oxygen therapy, guidance for who, when, and how oxygen is initiated and discontinued, and requirements for who, when, and how to monitor and titrate patients on oxygen.
- Sleep Technician Competencies – There are several options for training and skills development for technologists who perform sleep testing. By developing standardized provincial competencies, both regulated and unregulated technologists can practice in an environment that is safe for both patient and provider.

Quality Improvement

Rationale:

A major objective of the SCNs is to improve the quality of healthcare in Alberta. With oxygen, positive airway pressure, and inhaled therapy being major treatments for patients with respiratory conditions, the RHSCN is focusing our efforts around optimizing the safe and appropriate delivery of these therapies within acute care.

Initiatives:

- Minimized Use of Nebulized Therapy – Rather than using medical air to deliver nebulized therapies (and risking the chance of ongoing misconnections), the use of metered-dose inhalers with spacers produces outcomes that are at least equivalent (if not better) for most patients in the emergency department and inpatient settings. Additional benefits to this province-wide therapeutic interchange include reduced risk of infection spread and fewer adverse effects for patients and staff.
- Safer Use of Portable Oxygen During Transfers Within Acute Care – To ensure continuation of oxygen therapy while patients are being transferred within acute care on portable supply, a provincial policy has been created as well as a supporting communication form and other tools. Focus of the SCN is now on supporting teams to deploy this policy across the province.

Did you know?
It is estimated that an asthma patient enters Alberta's Emergency Departments every 16 minutes.

How we will know we are successful

As a network, we have a wide and diverse group that make up our community of practice and for each, the definition of success can vary. We are extremely proud that through the network we have a provincial forum for patients, providers, and researchers to debate and discuss what it would mean to improve the respiratory health of Albertans. Success for us will be achieved when all members within our health system see the value of working together across operational, academic, and geographic divides. Where everyone and anyone can participate and their contribution is welcome and valued. Led by our Scientific Office, we are currently developing members' consensus on Quality Indicators within our four foundational pillars. Our network's success will be evaluated by the achievement of measureable outcomes; options may include: decreased smoking rate prior to surgery, shorter number of days in hospital for those who suffer an exacerbation of COPD, and better acute exacerbation experiences for those with asthma. Achieving safer healthcare has already been delivered through our policy and practice change initiatives aimed at safer use of oxygen. We will continue to pursue the availability and use of good clinical data in decision making and building content and support together with providers across the continuum, most notably primary care. When we reach the stage that every one of us across the respiratory health system asks ourselves first and foremost 'What can I do to best meet the needs of my patients - not from my perspective, but from theirs', we will know we are successful.

Partnerships and Consultation

In order to be successful as an SCN, we know we need to partner with teams across the continuum of care – acute, community, and primary health care. As our SCN continues to pursue the work outlined in this document, we will continue to partner with our colleagues within AHS and Covenant Health, patients and families, academic partners (Universities and training schools), regulatory colleges from Alberta as well as those from other provinces, The Lung Association of Alberta and Northwest Territories, Alberta Health, Alberta Medical Association, Primary Care Networks, and community-based clinicians. The Respiratory Health SCN will also continue to seek opportunities to collaborate on projects with other SCNs where appropriate.



Figure 5: RHSCN Partnerships

The SCN also provides clinical expertise and advice to a number of groups within and outside of AHS. These opportunities vary in scope and commitment, but provide innovative thought and experience to decision makers both locally and system wide. Our members have been widely involved in building clinical content for the clinical information system, provided the expert group that guided the respiratory phase of accreditation and has advised the Ministry of Health on a number of issues.

**see appendix A for Core Committee membership list.*

Research and Innovation

Through our Scientific Office, we are developing a provincial research strategy for respiratory health that will bring together researchers and academic partners from across Alberta and address critical gaps in the knowledge and evidence needed to improve care. As outlined by our Scientific Office's six pillars of activity in Figure 6 below, the RHSCN partners directly with researchers to increase communication and collaboration, support and champion research projects, build capacity for research in the health system, translate knowledge generated from research into the clinical setting. We will continue to seek initiatives that develop and support ongoing health care system improvement and sustainability. Through 2018-2021, we will continue to work collaboratively with established research teams across the province to identify knowledge gaps, design research studies aimed at closing these gaps, bring research into practice, and publish our findings for use by others.



Figure 6: Six Pillars of Activity of the SCN Scientific Offices



"It is a pleasure to be involved with the Respiratory Health SCN. The work of its Sleep Disorders Working Group (SDWG) as a partner in the development of the new sleep medicine accreditation standards has been invaluable, saving countless days of work. This was a huge value add and the current method of SDWG engagement works really well!"

- Dr Willis H. Tsai, Respiriologist, Sleep Disorders Working Group Member



"I see the RHSCN as a team- and action-oriented voice; advocating, empowering and reinforcing the commitment of our lung health community to improve the lives of those living with respiratory health conditions.

The RHSCN has developed and piloted novel approaches and implemented province-wide, evidence-based best practice, such as programs for childhood asthma and chronic obstructive lung disease (COPD). I have been particularly impressed with the professionals working to identify priorities through wide-reaching discussions with patients, scientists such as myself, clinicians, and other key partners."

- Dean Befus, Airways Working Group Member, and Data Management Working Group Member

Communication & Engagement

Becoming the best in respiratory health and transforming care in Alberta will require specific attention to key enablers of change, including effective communication within and outside of the SCN. Some specific communication strategies employed by the SCN include:

- Listening to the patient voice. It is more than just telling a story, experiences inform both areas for improvement and areas we can build on a foundation of excellence. The SCN strives to ensure that patients and their families have a voice in developing strategies and guiding work. We will continue to actively recruit patient and family advisors who have experience with respiratory health services
- Communicating good news stories from our members or broader community
- Utilizing social media to tap into community-based and partner accomplishments
- Engaging our wide ranging stakeholder community, including patients, on a routine and meaningful basis, to support a continuously improving and high performing respiratory health system

The respiratory community in Alberta has traditionally been close and functioning with a provincial lens. As the delivery of care has become more complex, so have the types of providers and their needs. The network is committed to broadening our engagement with both public and private providers outside of Alberta Health Services.



"The partnership between the RHSCN and Health Professions Strategy and Practice (HPSP) has resulted in significant impacts on the health system. 'We are better together' are words that resonate when I think of our work to date. A tangible example of the impact is the removal of pre-filled water bottles and the significant practice change that resulted from our collaboration with the private sector as well as our AHS clinical areas. The RHSCN offers the opportunity to involve a wide range of additional sources of expertise to create synergistic change."

- Roberta Dubois, RHSCN Core Committee Member, Co-Chair of Provincial Oxygen Practice Working Group, Co-Chair of the Sleep Disorders Working Group, and Airways Working Group Member

Conclusion

This document represents and holds us accountable to our commitment; this commitment includes integrating learnings from research and identifying innovative approaches within clinical care across Alberta and beyond. We will do this by working together with a broad spectrum of partners including front line providers, researchers, patients and families to support better health through better care and better outcomes. We appreciate and acknowledge the patients and families who participate with us to focus on improving patient experience, and to achieve the best healthcare outcomes within a sustainable healthcare system.

Glossary

Accreditation Standards	Accreditation Canada's standards allow health service organizations to embed practical and effective quality improvement and patient safety initiatives into their daily operations. The standards focus on organizational support to meet the needs of patients and clients across the continuum of care.
Adherence	The extent to which a person's behavior (e.g. taking medication) corresponds with mutually agreed recommendations from a health care provider.
Airflow limitation	Refers to a state resulting from increased resistance and/or decreased elastic recoil of the lung passages that move oxygen and carbon dioxide in and out of the body.
Air Oxygen Misconnections	Above most hospital beds, there are outlets for both medical air and oxygen; they look similar and inadvertent connections may occur.
Asthma	A chronic lung disease that can be controlled and typically starts early in life, often characterized by shortness of breath, cough, wheeze, and/or a tight chest in response to allergic and/or irritant triggers.
Best evidence	Best evidence, also known as primary evidence, usually denotes an original writing, which is considered the most reliable proof for the existence and/or content for a particular topic (e.g., Gastroenterology and Hepatology). It is one of the components in Evidence Based Practice, the other two being clinical expertise and patient preferences and values.
Best Practice	Systematically developed statements of recommended practice in a specific clinical or work environment, they are based on best evidence, and are designed to provide direction to practitioners and managers in their clinical and management decision-making.
Chronic Condition	A chronic condition is a human health condition or disease that is persistent or otherwise long-lasting in its effects.
Chronic Obstructive Pulmonary Disease (COPD)	A chronic lung disease that develops over time and includes chronic bronchitis or emphysema, often characterized by shortness of breath, chronic cough, spitting up mucus, and colds that last a long time.
Clinical Information System	An electronic database that houses patients' details, recommended actions for health professionals, and information (e.g. test results) to assist in standardized patient care.
Clinical Pathway	A description of evidence informed, clinician validated interdisciplinary care to help a patient with a specific health condition or concern move progressively toward optimal health outcomes.
Clinician	Any health care provider who is involved in the treatment and observation of patients, as distinguished from one engaged in research.
Combustibles	Any substance that is burned in order to be inhaled into the lungs, such as nicotine (cigarettes) and cannabis (marijuana).

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Continuum	The delivery of services across sectors by different healthcare providers in a coherent, logical, and timely fashion.
Dashboards	An electronic database that provides health system data from a number of sources through an electronic database.
Equitable	Every Albertan must have equal access to health care, based primarily on medical need, no matter who they are, what they do or where they live.
Evidence-based practice	It is the use of current best evidence in making decisions about the care of the individual patient. It is the integration of: (a) clinical expertise/expert opinion, (b) external scientific evidence, and (c) client/patient/caregiver perspectives to provide high-quality services in an equitable fashion.
Evidence-informed	Using best evidence to identify the potential benefits, harms and costs of health care decisions intervention.
Exacerbation	Otherwise known as a flare-up, this is when symptoms of a chronic disease worsen and require treatment.
Health Professions Strategy & Practice (HPSP)	The provincial department within Alberta Health Services that supports health professionals to work collaboratively and to the highest quality of care.
Home Sleep Apnea Testing standards	Home sleep apnea testing is a portable device (aka Level 3) used to diagnose sleep apnea in adults; the College of Physicians and Surgeons of Alberta have provincial standards that guide decision making regarding diagnosis and treatment.
Innovation	A device, drug, technique, method, system or a service which provide opportunities to improve the delivery of care.
Metered-dose inhalers with spacers	Medicines for the lungs that are propelled from a hand-held device (metered-dose inhaler) into a holding chamber (spacer) for quick and effective delivery to control (prevent) or manage (rescue) symptoms.
Nebulized Therapy	Certain medicines can be mixed with water to create a mist that can be more readily delivered to the lungs when a person cannot inhale well enough.
Oxygen	Added as therapy from either a fixed (e.g. wall outlet) or portable (e.g. cylinder) source when a person's saturation rate falls below the appropriate range for their condition.
Partnership for Research and Innovation in the Health System (PRIHS)	Grants awarded to SCNs and researchers from Alberta Innovates (formerly Alberta Innovates Health Solutions).
Polysomnography Standards	Polysomnography is in-facility equipment (aka Level 1) used to diagnose sleep disorders; the College of Physicians and Surgeons of Alberta has provincial standards to oversee the safest and most accurate use of this diagnostic option.
Pre-filled Water Bottles	Attached to oxygen tubing in certain circumstances to create humidity for improved comfort.

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Primary Care Networks	The term given for a formalized group of local physicians and other health care professionals who together provide comprehensive care to Albertans within their local community.
Primary Care Providers (PCPs)	The term given for family physicians, nurses, dietitians, pharmacists, and others who provide health care for Albertans within their local community.
Pulmonary Rehabilitation	A combination of focused education and exercise specifically for people with lung diseases; research shows that it has positive impact on improving health outcomes and quality of life.
Pulmonology	The study or care of lungs and breathing.
Quadruple Aim	The four aims in the AHS Health Plan which focuses on the areas of: improving health of the population, patient experience, provider and staff experience, and value for money.
Quality	The extent to which an organization meets patient needs and exceeds their expectations.
Quality Improvement (QI)	A continuous process which includes identifying issues and opportunities, applying best evidence and innovative solutions and then continuous learning from the process and resulting outcomes.
Reporting and Learning System (RLS)	AHS single, province-wide system for patient safety reporting.
Scientific Office	Consists of the Scientific Director and the Assistant Scientific Director of the SCN. It leads the promotion, adoption, and diffusion of innovation as well as the creation and use of evidence to drive decision making in respiratory health.
Obstructive Sleep Apnea (OSA)	One type of sleep disorder that is characterized by loud snoring and periods when a person stops breathing during sleep, typically caused by excessive relaxation of the tube leading to the lungs.
Sleep Disordered Breathing (SDB)	Refers to a spectrum of sleep-related breathing conditions, causing partial or complete cessation of breathing, which can occur several times throughout a person's sleep cycle.
Sleep Disorders	Comprised of many different types, this is a condition or disease that chronically interferes with a person's ability to sleep well.
Strategic Clinical Networks (SCNs)	Networks developed by Alberta Health Services comprised of people who are passionate and knowledgeable about specific areas of health, challenging them to find new and innovative ways of delivering care that will provide better quality, better outcomes and better value for every Albertan.
Sustainability	Incorporation of measures intended to ensure the ongoing maintenance of initiatives once project funding has ended.
Transformational Roadmap (TRM)	The strategic plan of a Strategic Clinical Network that outlines how they will transform health care over a three year time period. Includes vision and mission statements, foundational principles, and strategic pillars with corresponding priorities.

Appendix A: Respiratory Health SCN - Core Committee

Leadership Team	
Shelley Valaire	Senior Provincial Director, RHSCN
Dale Lien, MD	Senior Medical Director, RHSCN; Professor of Medicine, UofA; Director, Alberta Lung Transplant Program
Jim Graham	Executive Director, RHSCN
Michael Stickland, PhD	Scientific Director, RHSCN; Professor of Medicine, UofA; Director, G.F. MacDonald Centre for Lung Health, Edmonton
Heather Sharpe, PhD	Assistant Scientific Director, RHSCN; Adjunct Assistant Professor, UofC
Eileen Young	Manager, RHSCN
Core Committee Members	
Alison Morin, RN	Senior Director Operations, Misericordia Hospital, Edmonton, Covenant Health
Andrew Cave, MD	Physician, Edmonton West PCN; Professor of Family Medicine, UofA
Brandie Walker, MD	Physician, Respirology; Clinical Assistant Professor, UofC; Medical Director, Calgary COPD & Asthma Program, AHS
Brenda Ashman, RN / Catherine Johansen, RRT	Director Nursing, Critical Care and Medicine, Medicine Hat Hospital, AHS Manager Cardio-Respiratory Therapy, Medicine Hat Hospital, AHS
Brent Douglas Seefried, RRT	Unit Manager, Respiratory Therapy and Clinics, Alberta Children's Hospital, Calgary, AHS
Brian Rowe, MD	Physician, University of Alberta Hospital; Professor of Emergency Medicine, UofA
Craig Hollingshead, RRT	Respiratory Therapist II, Red Deer Regional Hospital, AHS
Dalique Van Der Nest, OT	Executive Director Allied Health, North Zone, AHS
Darlene G	Patient Advisor
Darrel Melvin, RRT	Program Consultant, Tobacco Reduction Program, AHS
Doug Kremp, RRT	Respiratory Professional Practice Lead, North Zone, AHS
Douglas Faulder, MD	Physician and Medical Director Continuing Care, Edmonton Zone, AHS
Eric Wong, MD	Physician, Respirology; Associate Professor of Medicine, UofA
Harissios Vliagoftis, MD	Physician, Clinical Immunology & Allergy; Professor of Pediatrics, UofA
Irvin Mayers, MD	Physician, Respirology; Professor of Medicine, UofA; Medical Director, Respiratory Benefits Program, AHS
Jana Ambrogiano, RN	Executive Director ED, ICU, Cardiac, Medicine and Respiratory, Calgary Zone, AHS
Jennifer Shiu, BSP	Clinical Practice Lead, Pharmacy, AHS
Kathy Hayward, BSP / Cindy Slack, RRT	Certified Respiratory Educators, Calgary COPD & Asthma Program, AHS

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Core Committee Members	
Kim Simmonds, PhD / Nathan Klassen	Executive Director, Health Evidence & Policy, Alberta Health
Leigh Allard	President & CEO, The Lung Association of Alberta & NWT
Marcy Speers, RRT	Manager, Respiratory Therapy, Royal Alexandra Hospital, Edmonton, AHS
Mary Noseworthy, MD	Physician, Pediatrics, Alberta Children's Hospital, AHS
Michelle Pemberton, RRT	Program Manager, Respiratory Equipment and Services Program, AHS
Mohit Bhutani, MD	Physician, Critical Care Medicine and Respirology, UofA
Piush Mandhane, MD	Physician, Pediatrics; Division Director and Associate Professor of Pediatrics, UofA
Roberta Dubois, RRT	Senior Practice Lead, Respiratory, Health Professions Strategy & Practice, AHS
Ron Damant, MD	Physician, Respirology; Division Chief and Associate Professor of Medicine, UofA
Sandra Beida, RN / Chris Simpson, RRT	Manager Respiratory Department, Queen Elizabeth II Hospital, Grande Prairie, AHS Clinical Coordinator, Respiratory, Queen Elizabeth II Hospital, Grande Prairie, AHS
Shawna McGhan, MN	Senior Planner, Primary Health Care, AHS
Shobhit Maruti, MD	Medical Officer of Health, Office of the Medical Officer of Health, Edmonton
Tracey Bryan, MD	Physician, Respirology, Grey Nuns Hospital, Edmonton, Covenant Health
Ward Flemons, MD	Physician, Respirology; Division Head and Professor; UofC
Supporting Members	
Andrew Fong / Deborah Katz / Saiful Kabir /	Clinical Analytics, AHS
Arianna Waye, PhD	Health Economist, AHS
Chantal Atwood, PhD	Senior Analyst, RHSCN
Gerry Ison / Jason Scott	Information Management and Technology, AHS
Mina Sisodiya	Senior Consultant, RHSCN and CvHS SCN
Tracey Geyer	Senior Health Planner, AHS

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Appendix B: Work of the RHSCN (2018-2021)

Respiratory Health SCN Committed Work 2018-2021:		2018/19	2019/20	2020/21
COPD	COPD Clinical Pathway	◆	◆	◆
	Quality Improvement for Pulmonary Function Testing, including reporting on Netcare	◆	◆	◆
Asthma	Alberta Childhood Asthma Pathways for IP, ED, UCC	◆	◆	
	Clinical Practice Guideline for Ages 5+ for Family Physicians	◆		
	Clinical Education Roles for Pharmacists	◆	◆	◆
Sleep Disorders	Content for Clinical Information System (Connect Care)	◆	◆	◆
	Provincial Competencies for Sleep Technicians	◆	◆	
	Integrated Model of Care for Sleep Disordered Breathing	◆	◆	◆
	Process for Provincial Data Access	◆	◆	◆
	Clinical Practice Guideline for Sleep Apnea for Family Physicians	◆	◆	◆
Provincial Oxygen Projects	Content for Clinical Information System (Connect Care)	◆	◆	◆
	Provincial Practice Change for Air/Oxygen Misconnection	◆	◆	
	In-facility Transfer of Patients Using Oxygen	◆	◆	
	Reducing Variance in Oxygen Administration Practices	◆	◆	◆
Science and Innovation (PRIHS)	Childhood Asthma Pathway for Primary Care	◆	◆	◆
	COPD Discharge Care Bundle	◆	◆	◆
	Standardized Data Definitions and Cohort Development; Analysis of Incidence, Prevalence, and Mortality of Lung Diseases in Alberta	◆	◆	◆
	Research Prioritization	◆	◆	◆
Tobacco Use	Pharmacy Screening Pilot for Early Signs of Disease	◆	◆	◆
	Pre-Surgical Tobacco Cessation	◆	◆	◆
	Advocacy on the Impact of Combustibles on Lung Health	◆	◆	