Performance-Improvement Plan
VIHA Air Quality Program

Model Core Program Planning

As part of BC's commitment to public health care renewal and improvement, the Ministry of Health has produced the **Core Public Health Functions Framework**. The framework defines a key set of public health services (core functions) that BC's health authorities will provide to strengthen the link between public health, primary care, and chronic disease management in a comprehensive, province-wide health care system. It provides a tool for health authorities to strengthen their public health infrastructure by reviewing their existing programming with 21 core programs defined in the framework. This performance-improvement process will result in increased consistency, capacity and quality of public health services across the province.

Under the Core Public Health Functions Framework, BC's health authorities and the Ministry of Health have developed the **Model Core Program Paper: Air Quality**. The Vancouver Island Health Authority (VIHA) will use this evidence-based paper to determine opportunities to improve air quality in VIHA's service area. Achieving a successful air-quality program will depend on health authorities, all levels of government, and community partners working together and sharing accountability.

Introduction to Air Quality

Air quality is an important public health issue. Air pollutants can cause respiratory diseases (influenza, asthma, cardio-vascular disease), cancers and poisonings. Outdoors, use of energy sources (burning gas, oil, coal, wood), industry, and automobile emissions all contribute to air pollution. Indoor pollutants include tobacco smoke and carbon monoxide.

While VIHA's service area has experienced substantially lower levels of ambient air pollutants than other regions, some VIHA areas report relatively high rates of respiratory problems, which may be related to air quality. Traditionally, air quality has not been a

point of concern at a regional level on Vancouver Island, although local concerns have arisen periodically; and provincially, the Ministry of Environment (MOE) has not assessed the impact of pollution on health, or monitored indoor air-quality or pollution at the neighbourhood level. VIHA and MOE have begun preliminary discussions about their respective roles in air monitoring.

Air Quality Performance-Improvement Planning

The performance-improvement planning process uses best-practice evidence from the model core program papers to identify opportunities to improve core public health program activities.

VIHA has traditionally had a limited role in air-quality monitoring by participating in groups such as the CRD Air Quality Working Group. Using the Model Core Program Paper: Air Quality as a standard, VIHA completed a gap analysis to identify areas for improvement in its air-quality services. This information, along with baseline benchmarks and best-practices data, was used to develop a performance-improvement plan for air quality. Several potential roles for health authorities have been identified:

- Surveillance and monitoring of air quality
- Identifying key air pollutants and sources, and assessing public health impact
- Remediation
- Public education

In defining its new, expanded role, VIHA is coordinating its efforts with MOE, municipalities, community groups, the Capital Regional District (CRD), and academia; and is participating in a number of community-based initiatives. Collaboration and communication among these stakeholders are essential in planning and providing improved air quality.

Baseline Assessment

VIHA assessed current air-quality activities against best practices, as defined in the model core program paper, to determine if current VIHA practices fall below, meet or exceed expectations.

VIHA's air-quality monitoring activities are currently limited to three areas of focus:

- Indoor air quality in VIHA hospitals
- Exposure to second-hand smoke
- Wood-smoke levels in CRD neighbourhoods

VIHA's 2007 annual report of the Chief Medical Health Officer examines environmental determinants of health, including air quality, and provides baseline indicators that will be updated on an annual basis.

Environment Canada, MOE, and the CRD maintain a network of air-quality monitoring stations in VIHA's service area. To increase its capacity to establish baselines and estimate health impacts of air quality, VIHA is helping develop and implement the Air Quality Health Index (AQHI) and Air Quality Benefits Assessment Tool (AQBAT) which translate data from those stations into probable health effects.

Main Opportunities for Improvement

The baseline assessment and gap analysis identified key opportunities for improvement:

- Collaborate with local governments to implement smoke-free indoor-air legislation throughout VIHA's service area.
- Review current radon guidelines.
- Develop a systematic approach to identify pollution hotspots at the neighbourhood level throughout VIHA's service area.
- Further develop partnerships with regional stakeholders.
- Formalize VIHA's role in partnership with MOE to develop community air-quality management plans.
- Inventory best-management practices in facilities housing vulnerable populations.
- Further develop electronic tracking and strategies to reduce indoor air contaminants.
- Increase public awareness and education about air quality and health.

Key Strategies and Action Plan

Key Strategies	Action Plan		
	Year 1 (2007-2008)	**Progress**	**Year 2 (2008-2009)**
Regulate and enforce ETS reduction strategies	Develop a strategic plan to implement provincial legislation.	**In Progress:** VIHA Smoke Free Premise Policy became effective March 1, 2008. Resources were developed and distributed to all VIHA sites. Physicians and other community partners have been informed. Cessation supports are in place for both staff and patients/clients. The Provincial Tobacco Control Act is effective March 31, 2008. Staff training was conducted in February. Active education and monitoring of businesses will begin in April 2008.	Implement the strategic plan.
Radon Abatement Program	Conduct a review of current radon guidelines with the Radiation Protection Branch of BCCDC.	**Completed:** Radon guidelines have remained unchanged and continue to show lack of problem in VIHA catchment area. The results of the original monitoring of radon levels do not need to be updated	Implement results.

Key Strategies	Action Plan		
	Year 1 (2007-2008)	Progress	Year 2 (2008-2009)
Test air quality and assess health impacts of key ambient air pollution at the neighbourhood level Develop a systematic VIHA-wide approach to identify local hotspots.	Create an air-quality advisory committee.	**In Progress:** The need for a formal air quality advisory committee on central and north island has not yet been established. It appears that a more informal network that can be consulted on a regular basis is more appropriate. A consultant is now discussing this issue with potential participants. VIHA will continue to participate in the CRD's Air Quality Advisory Committee on south island.	Identify local hotspots at the neighbourhood/municipal level. Develop an air monitoring strategic plan Implement the strategic plan. (Year 3)
Work collaboratively with other sectors to reduce the concentration of ambient air pollution (PM) Develop partnerships outside of CRD.	Perform an environmental scan of air-quality activities in other regional districts.	**Completed:** Activities of Regional Districts have been identified and documented. Report is available through the Public and Population Health Observatory	Develop air-quality working groups in the central and north Island.
Develop community air quality management plans Formalize the role of VIHA in partnership with MOE.	Meet with MOE to identify VIHA's role.	**Completed**: Collaborative role between VIHA and the MOE has been articulated. VIHA will collaborate with the MOE on the identification of local issues while the MOH will continue in its primary role of air quality monitoring on the regional level.	Develop a strategic plan to implement VIHA's role.

Key Strategies	Action Plan		
	Year 1 (2007-2008)	**Progress**	**Year 2 (2008-2009)**
Test and assess health impacts of poor ventilation and air contaminants in buildings that house vulnerable populations Inventory best management practices in those facilities.	No actions planned for Year 1 (2007/2008).		Conduct a survey of schools, licensed care facilities, child-care centres and jails to identify deficiencies. Develop a strategic plan to address deficiencies. Implement the strategic plan. (Year 3)
Develop proactive measures to reduce indoor air contaminants Develop a systematic VIHA-wide approach to identify indoor air-quality issues.	Perform a gap analysis on methods used to track air-quality complaints. Identify changes to the database required to track information electronically.	**Completed**: All regional Health Protection offices that handle air quality complaints completed a survey. The results of the survey are tabulated in a report that indicates: a) the different methodology being used to track complaints and b) what changes to the current data base would be required in order to use this as a tracking tool.	Modify the database (HealthSpace) to better capture and analyze indoor air-quality issues. Develop a strategic plan to reduce indoor air contaminants.

Key Strategies	Action Plan		
	Year 1 (2007-2008)	Progress	Year 2 (2008-2009)
Public awareness and education about air quality and health	Publish the 2007 Annual Report.	**Completed**: Baseline air quality measures incorporated into CMHO report. Report will be available from PPHO website or the Office of the Chief Medical Health Officer Spring 2008	Perform annual updating.
	Implement AQHI Island-wide.	**In progress**: Pilot testing still underway by the Ministry of the Environment and AQHI has been extended to Nanaimo, in addition to the original site in Victoria. Potential for expansion to Campbell River on 2008, depending on evaluation of pilot project.	
	Implement AQBAT.	**Completed**: AQBAT implemented and staff trained. Will integrate into work of CRD Air Quality Working Group in 2008.	