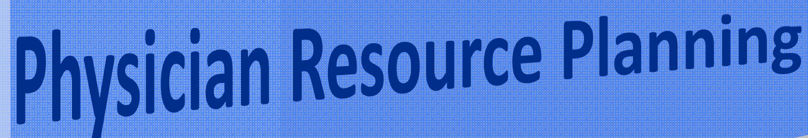
Social Sector Metrics Inc. and Health Intelligence Inc.

EXECUTIVE SUMMARY of FINAL REPORT, January 31, 2012
submitted to
the Nova Scotia Department of Health and Wellness.



A Recommended Model
and
Implementation Framework

EXECUTIVE SUMMARY

Introduction

In its report Better Care Sooner, the Government of Nova Scotia committed to developing a physician resource plan. The Government of Nova Scotia Department of Health and Wellness engaged Social Sector Metrics Inc. in association with Health Intelligence Inc. (the 'Consultant') to design and deliver a plan that identifies the number, mix and distribution of physicians needed by the population over the next ten years.

The Consultant presents this report to the Government of Nova Scotia for consideration in managing its physician resources. The report provides a recommended model and implementation framework for physician resource planning for the province. The report and recommendations are evidence-based and forecast an appropriate, affordable, equitable, detailed description of need for physician resource planning for ten years (2012-2021).

The project has resulted in two reports:

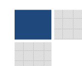
- An **Environmental Scan** that provides a detailed evidence-based review and analysis of physician resources and utilization in Nova Scotia, along with comparative national figures and analysis, a research based review of physician resource planning methodologies, results, and key trends in Canada and abroad, and interview findings from a broad base of Nova Scotia stakeholders.
- A Final Report, ***Physician Resource Planning – A Recommended Model and Implementation Framework,*** that includes a summary of key findings, describes the forecast methodology and design, provides a ten-year forecast by physician specialty under three scenarios, and concludes with a series of recommendations, and future planning and implementation considerations. The Final Report serves as a roadmap for charting a course to guide future physician planning and the overall management of physician resources. It sets a framework for planning and decision-making, and provides direction for reaching the future destination. The planning model and the forecasts are not static or fixed in time. The model is flexible and can be adjusted as required over time as new information arises or changes occur in physician supply and population demand factors. In other words, forecasts will require course corrections along the way, but the path forward is set.

This document is an Executive Summary of ***Physician Resource Planning – A Recommended Model and Implementation Framework***. It provides a high level snapshot of selected key findings, forecast results, recommendations and conclusions in the Final Report. It does not cover all elements of the report, nor does it describe the forecasting methodology and planning variables. The reader is strongly encouraged to read the entire report, ***Physician Resource Planning – A Recommended Model and Implementation Framework,*** to benefit fully from the comprehensive scope of the research findings and analysis.

Project Approach

The key guiding principles for the physician resource plan were:

- Appropriate to population need;
- Affordable now and sustainable into the future;



- Equitable across the geographic distribution of the population;
- Preserve and enhance quality of care;
- Support appropriate access to needed services;
- Aligned with appropriate inter- and intra-professional, innovative, delivery models;
- Designed in context of government and stakeholder strategic priorities and plans for the health system;
- Appropriate to academic clinical mandate;
- Inclusive of relevant determinants of current and future physician supply;
- Based on productive, sustainable, quality, benchmarked workload.

The key stakeholders involved in the project included the Department of Health and Wellness, the District Health Authorities (DHAs), Izaak Walton Killam Health Centre (IWK), Doctors Nova Scotia (DNS), Dalhousie Faculty of Medicine (DFM), and College of Physicians and Surgeons of Nova Scotia (CPSNS).

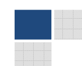
The Consultant was guided by two project committees: a Provincial Project Advisory Committee comprising senior executive representatives from each key stakeholder and a Technical Working Group comprising individuals skilled in physician data analysis and interpretation.

The project research and analysis phase included three components:

- **Interviews:** More than eighty separate interviews involving more than two hundred participants, including sessions with Medical Advisory Committees, Medical Staff Associations, the College of Registered Nurses of Nova Scotia and with the senior leadership of each key stakeholder.
- **Literature review**: Grey and peer-reviewed literature review from within the province, across Canada, and selected countries.
- **Data Collection and Analysis**: Extensive collection, analysis, validation and summarization of national and provincial data, including data on the Canadian medical education system, health system utilization, physician service utilization, fee-for-service billing and alternative payment data, physician registry lists, physician surveys, population health indicators, provincial program information, geographic and service access times, and benchmarking.

Highlights of Key Findings

- Nova Scotia is well supplied with physicians in general terms. The province has more physicians per population when compared nationally, after adjusting for full-time equivalency (FTE), Atlantic province referral workload, and relative population age and gender. In 2009/2010, there were 2,215 active physicians equating to 1,988 full-time equivalent (FTE) physicians in Nova Scotia.
- While Nova Scotia does have a sufficient number of physicians, the mix of family physicians to specialists does not align with population need. The provincial mix is 42% family physicians and 58% specialists; the national ratio is 50%-55% family physicians and 50%-45% specialists. The mix between family and specialist physicians, between generalists and subspecialists, and within



specialties, must change. More generalists, including family physicians, and fewer subspecialists are required.

- The geographic distribution of physicians, particularly generalists, is uneven and does not align with population need. Provincial planning is required.
- Thirty one percent (31%) of the current physician workforce will likely retire by 2021, comparable to national profiles. This projected turnover will provide opportunities for changing the mix and distribution of physicians over time.
- Nova Scotia relies on Dalhousie Faculty of Medicine to meet a significant portion of its workforce needs. The province retains 58% of Dalhousie graduates, and 47% of all practicing physicians in the province are Dalhousie graduates.
- Nova Scotia has also relied upon International Medical Graduates (IMGs) to meet workforce requirements. An average of 45 IMGs have entered practice annually during the past ten years and have filled approximately 40% of vacancies and new positions. Nationally 65% of IMGs are continuously active five years later in their initial practice jurisdiction. In Nova Scotia the average retention is only 36%.
- Since 2000, there has been a 57% increase in medical school training positions in Canada, averaging 6.3% annually. This significant increase is disproportionate to the population growth (averaging 1.15% per annum). Canadian medical education is currently overly sub-specialized and will likely result in a continued shortage of generalists, including family physicians, across the country and a growing surplus of subspecialists. National planning and timely provincial action is required.
- Nova Scotia's population is expected to remain fairly stable over the next ten years. The healthcare system, however, will feel the effects of an ageing population with high chronic disease prevalence. The population over the age of 60 will increase from 23.4% to 30.5% by 2021.
- The prevalence of chronic disease in Nova Scotia is at or near the highest among Canadian provinces. Physician service utilization increases as the effects of chronic illness become more pronounced in an aging population.
- Nova Scotia is a national leader in advancing alternate payment models with 49% of its physician payments being non-fee-for-service, compared to 27% nationally. A continued shift to performance-based contracting will benefit the population and providers.
- National trends impacting physician planning include the following:
  - Primary care as the foundation of a quality health care system;
  - Core service models, enabling timely access for all residents to a defined range of primary and secondary care services within local communities or regions, while centralizing or provincially managing tertiary and quaternary services;
  - Collaborative, team-based delivery of care;
  - Regionalization and consolidation of governance entities;
  - Changes in health care technology;
  - Changes in health care policy in a system with finite resources.

Future Direction

To achieve a more sustainable, quality, accessible, and innovative health care system, the province needs to pro-actively manage and carefully reshape the physician workforce over the next ten years. The physician plan provides a strategic framework and direction to adjust the mix and distribution gradually through an approximate 7% change in the mix. The majority of changes to mix and distribution can be accomplished through planned and targeted turnover replacement. Detailed clinical planning and the re-organization of local/regional services and provincial services are required to optimize physician resources.

The status quo contains significant risks. Across Canada, the growing national supply of physicians will result in more new physicians entering the workforce than in the past. Provinces will find already taxed health care systems under even greater pressure as new physicians, including international medical graduates (IMGs), will be looking across the country for opportunities to enter the workforce. Without change in how physician resources are managed, more physicians than are needed will join the Nova Scotia workforce as the national medical graduate and IMG supply increases. This growth in Nova Scotia will have the continued same inappropriate mix and distribution, resulting in similar outcomes for the population.

Provinces such as Nova Scotia that take important steps to proactively manage the number and type of physician positions available in their health care system will have an opportunity to match physician supply with population need in a strategic and planned manner.

Forecasting Model and Results

Three 10-year forecast scenarios were developed using an Adjusted Population Needs-Based Model. The forecasts provide a range, over ten years, to guide physician planning. The forecasts are meant to serve as low, base, and high planning ranges and not as fixed numbers, as they are subject to change as variables in the model change or are updated over time, or as health policy and planning variables impact physician supply. The base case forecast is the recommended scenario.

Annual and 10 year Forecasted Changes in Physician FTEs

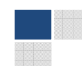
Forecasts	Annual % FTE Change	Annual # of FTEs	Total FTE impact over 10 years
Low Case	Reduction of 0.26%	5.2 less FTEs	52 less FTEs
Base Case	**Increase of 0.95%**	**18.7 more FTEs**	**187 more FTEs**
High Case	Increase of 1.91%	37.8 more FTEs	378 more FTEs

Summary of Recommendations

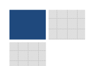
The Final Report provides a series of detailed recommendations on how the province can manage its physician workforce over a ten year horizon. The recommendations are closely interrelated. For example, implementation of a core service model cannot occur without province-wide planning and direction on all other specialty services. Without core service and province-wide planning, the physician

workforce mix, distribution, and quantity cannot be effectively changed with a result that raises quality and improves sustainability. The following is an overview of selected recommendations.

CATEGORY	DESCRIPTION	OUTCOME
Implementing the Plan	• The Base Case physician resource plan serve as the strategic framework, direction, and plan for physician resources, with the Low and High forecasts as the upper and lower planning boundaries. • Implementation occur under the auspices of a broader Health Human Resources mandate and with the advice, input and participation of all relevant stakeholders.	A systemic evidence-based approach to planning the physician workforce
Implementing the Plan - Clinical Services Planning	• The department develop a Clinical Services Plan and that the plan be designed to enable implementation of benchmarks in physician resource planning.	Enhanced system integration
Implementing the Plan - Changing Physician Mix	• The province, by the combined impact of collaborative care and core services implementation along with planned replacement recruitment, change the current mix of family to specialist physicians from 42% family physicians to 49% primary healthcare providers by 2021 at the latest. (Note: this also includes Nurse Practitioner positions.) • The province change the current mix from 61% generalist to 67% generalist by 2021 at the latest.	Improved alignment between mix and population need
Defining and Implementing Core Services	• The province adjust the geographic distribution and mix of physicians over time to reflect a core services model defined as local or regional access to comprehensive family practice, emergency care, general internal medicine, general surgery and anaesthesia, general psychiatry, general paediatrics and general lab and radiology. • The province optimize physician resources for call coverage, system of peer support, professional development, etc.	Appropriate local and district access to primary and selected secondary care
Defining and Implementing Provincial Services	• The province should define as provincial services those services that are not provided locally or regionally. For example, cardiac, neuro, thoracic and vascular surgery, as well as complex urologic, gynaecologic, plastic, otolaryngology, and orthopaedic procedures. • The tertiary/quaternary portion of provincial inpatient surgical services should only be provided at one or possibly two designated facilities in the province. • Provincial services should be programmed, planned and governed provincially, and managed and operated at a DHA/IWK and site level.	A more rationalized, efficient, quality system of secondary and tertiary care services.



CATEGORY	DESCRIPTION	OUTCOME
Expanding Collaborative Primary Care	• The province include a collaborative primary care model as a policy variable in physician planning. • The goal is a ratio of 2,100 to 2,300 people per 3.0 FTE (comprised of physician, nurse practitioner and other health professional).	Patient-centric primary care. Role optimization of multi-disciplinary health care team
Influencing the Future National Supply and Managing the Future Provincial Supply	• The Department of Health and Wellness take the lead in advocating at provincial/territorial and pan-Canadian levels for ongoing review and monitoring of the national supply of physicians. • The Department establish a provincial 'Centre for Workforce Intelligence modeled after the U.K. England NHS. • The Department maintain the Francophone medical seats it currently sponsors. • The Department and Dalhousie University Faculty of Medicine: – Jointly review the size of the undergraduate and postgraduate medical programs – Inform medical students in UGME year 2 and 4 of Nova Scotia's workforce requirements for career counselling purposes – Ensure that curriculum is keeping up with research in collaborative care in interprofessional teams. – Revise the specialty allocation of postgraduate residency programs – Develop a strategy to significantly reduce the number of post year 3 PGME trainee positions – Review International Medical Graduates programs – Review and revise the approach to attracting applicants from visible minorities	Future supply that aligns with population need
Maintaining/ updating the Model	• The Department should approve, implement, and maintain the Physician Resource Plan model with an assigned lead. • The Department should update information gaps and forecasts annually, and create and maintain a robust physician database. • The Department should systematize quality improvement of essential physician resource planning.	Systematized quality management of physician resource planning



Summary Conclusions

In summary, Nova Scotia has an adequate number of physicians now but the mix and distribution does not align with the health needs of the population. The province is well-positioned to achieve its objective of changing the geographic distribution and the mix of physicians over time through planned implementation of the report recommendations, and strategic recruitment and replacement activities.

The change in mix from 42% family physicians and 58% specialists, to 49% primary healthcare providers (family physicians and nurse practitioners) and 51% specialists, will strengthen local access to comprehensive primary health care. Provincial implementation of collaborative primary health care will optimize family physicians and nurse practitioners, both functioning to full scope of practice. Careful clinical planning and the implementation of a core services model will geographically redistribute generalist specialists services to better match local population need. Province-wide, rather than DHA/IWK- based, planning for sub-specialty services is critical to achieve a balance between family physicians and specialists and to optimize program delivery.

Nova Scotia has distinct advantages upon which it can build, while creating a more sustainable, quality health care system and a strong physician resource:

- It is already a national leader in alternative non-fee-for-service payment systems and contracts and can mitigate some of the growing supply pressure as long as it continues the shift to alternative payment systems and performance-based contracts for service.
- It is in a position of relative strength in physician numbers when compared to other provinces and benchmarks.
- It has taken the important step of creating a framework for provincial physician planning. By doing so, Nova Scotia can proactively shape the future system rather than simply react to external events. Being in a position to proactively manage physician resources means that change can be brought to the system in a consultative, carefully planned manner rather than hastily and reactively.

Nova Scotia's advantages are numerous and the opportunity is there to create a win-win-win outcome for patients, providers and taxpayers.