

# IMPROVING ACUTE ACCESS BEHIND INNOVATIVE PATIENT FLOW PRACTICE

Strata Study Analysis™ within the Fraser Health Authority – BC - Canada  
*Extract from Study commissioned by Fraser Health Authority: May'06*

## A. Significant Access Challenges Exist Across Canadian Health System

Across Canada, access to acute services has become increasingly challenged, and under the public magnifying glass as an example of a public health system under challenge.

A highly demanding and rapidly aging population combined with increasing aged longevity behind successful complex chronic disease management is putting both emergency and planned access to Canadian acute care under enormous challenges.

Therefore, this study was commissioned to deliver a clear planning document for the client to assess current process around access and client transition from acute to the many community care streams, and to determine if an implementation of Strata PathWays™ would deliver sustainable benefits to access across the client care continuum.

Based on this Study by Strata Health, Fraser Health Authority chose to implement Strata PathWays™ as a 'best practice' component of its Access and Client Flow Strategy with deployment launching on October 10, 2006.

### Fraser Health Necessity of Change:

System access continues as one of the fundamental core challenges facing global health systems today – whether public or private. This issue fundamentally impacts all constituents of a health system:

- acutely ill clients requiring life-saving access to acute resources
- clients whose acute episode is past – but await an appropriate community service
- families looking to optimize care and comfort for loved ones within system
- clinicians who working within an increasingly stressful health system environment
- administrators who must manage today and innovate a system for tomorrow

*"Plans are only good intentions unless they immediately degenerate into hard work."*  
Peter F. Drucker

Data and experience existed across the client jurisdiction highlighting the necessity for improving access as a priority:

- 34,000 acute access days lost to residential ALC (ALC-R/ALC-EAR) in 05/06 negatively impacting ED access (both emergency & planned)
- patients are routinely spending extended periods in ED awaiting admission: over 50% of FHA clients currently await admission to a hospital bed for over 10 hours (vs 8 hour MOH standard)
- transition process managing patient transition to complex web of community supported living options was highly evolved, but completely manual depending on accumulated knowledge of aging clinicians within central placement team.
- significant year over year population growth of Fraser Health is putting pressure on central placement team to scale and retention issues are accelerating.
- manual process limited delivery of client placement choice (28% client placements achieved choice) and saw inconsistent and subjective implementation of Fraser Health policy including challenging '1<sup>st</sup> available bed placement' edict.
- Performance management and communication with contracted community Providers (for profit & not-for-profit) was inconsistent based on manual nature of data capture.
- Provincial MOH Minimum Reporting Requirements (MRR) were becoming more sophisticated without tools to comply
- Incremental Community Supported Living investment planned – but limited data exists to determine placement and program (ie ethnicity & clinical specialties) for strategic community resource expansion in out years.
- RAI – HC assessment Provincially mandated, but limited ability to provide tool in real time to Providers during decision to accept admission ... creating frustration & delay.

## B. Overview of Study Partners

Fraser Health Authority ([www.fraserhealth.ca](http://www.fraserhealth.ca))

- Oversees the operation of 12 acute care hospitals, with about 2,000 acute care beds
- Treated 407,000 people in our Emergency Departments in 2004/05
- Provided more than 115,000 surgical procedures in 2004/05
- Maintains 7,000 residential complex care beds alongside hospitals or in community
- Is working with BC Housing to develop 1,176 assisted living units, with more than 600 now available and the rest to be completed by mid 2007
- Employs about 21,000 people
- Works with about 2,200 physicians
- Manages a budget of \$1.8 billion (2005/06)

By integrating all health care services in our large geographic region, we can plan and coordinate our resources to provide you with the best and most cost-efficient range of services where they are most needed.

The integrated approach allows us to play an important role in enhancing the quality and longevity of life. Through public education and the promotion of good health practices, we encourage you to take personal responsibility for your health and to lead a healthy lifestyle. In collaboration with local governments and school districts, we shape public policy to create a healthy environment and prevent disease with services such as the monitoring of safe

drinking water and child immunizations. But, when you need the care of a hospital or residential care facility, we're there for you with highly skilled health specialists and services.

We're constantly striving to achieve our vision — Better health. Best in health care. What it means is better health for the residents we serve, and best in health care through the services we provide. It's our promise to you.

Strata Health Solutions Inc.( [www.stratahealth.com](http://www.stratahealth.com) )

Incorporated in 2000, Strata Health Solutions' key purpose is to deliver critical patient flow practices – achieving real and dramatic benefits for patients, their families and the world's devoted front line caregivers.

Strata PathWays™ a new way of thinking about patient flow management. It's "pull" instead of "push." It works with the reality that the best opportunities for improving patient flow lay not at Emergency Department Admissions, but downstream, at acute care discharge.

*An online, real-time waitlist optimization system.* Connected to care providers in the community, Strata PathWays™ provides front line clinicians with real-time information on appropriate bed availability for post-acute patients. The system radically reduces the time that patients occupy acute care beds after they have been assessed for release into alternative supported living facilities - including care centres, assisted living, sub-acute and palliative...even adult day programs.

*Proven.* Strata Pathways is now significantly reducing wait times and opening up acute care resources in Health Regions supporting over 4 million people in Western Canada. For example, before the Calgary Health Region adopted PathWays™, their post-acute patients lay in bed up to 19 days longer than required. That's how long it took to locate an appropriate facility in the community. After implementation of PathWays™, the average placement flow dropped to 6 days - a drop of 68%. Over 25,000 acute ALC (Alternate Level Care) days were removed from the Calgary system ... a 50% improvement vs. pre-PathWays. Indeed, during the December 2005 Accreditation Survey – Calgary Health's Acute ALC blocked beds were calculated at only 1% ... the lowest Canadian score in 2005.

*Manages workloads at the front-line.* The focus of Strata PathWays™ technology is to empower the world's devoted, but overburdened front line caregivers. As an automated system, it makes obsolete the manual labour they struggle with each day. At the touch of a keyboard, it provides them with real-time information on bed availability throughout the community – relieving them of the endless phone calls, faxes and overall inefficiency inherent to their current paperwork-heavy systems. Strata PathWays™ empowers front line professionals – allowing them to focus their energy and experience on compassionate and 'difficult to place outlier' clients.

Honors patient choice and family dialogue. Pathways' decision logic and intelligent algorithms ensure that the specific circumstances and preferences of the patient and family are taken carefully into account when seeking community placement. In the Capital Health Region of Edmonton, existing clients successfully transferring to their location of choice increased 300% in 2005. In the first quarter of 2006 at the Vancouver Island Health Authority, 95% of clients were placed to their geographical preference: vs. less than 50% in the previous year's same period. Families benefit from PathWays as well. Together with the patient, they have been faced with what may be a life-altering event. The lack of objective information that paper-based systems provide about bed availability can be immensely frustrating to all stakeholders. The family can often only hope that their loved one will end up in a facility of choice. In contrast, PathWays provides real-time, objective information about community availability: permitting the patient and family to have a meaningful dialogue based on facts, not hope.

Improves care for all acute and post-acute patients. Taking a "pull" approach to patient flow doesn't just benefit clients with post-acute status. It also improves care for new acute-care patients by providing faster access to emergency departments and acute wards. PathWays ensures that no post-acute care clients 'slip through the tracking cracks' as they can in manual systems. Real-time and escalating alerts ensure clinicians are kept abreast of the status of each and every transitioning client – significantly improving client safety at each stage of the transition to supported living placement.

Eases administration and spurs continuous improvement. Adoption of Strata PathWays™ benefits Health Administrators immediately and in the future. Installation is turn-key, allowing the Jurisdiction to maintain its focus on existing strategic imperatives. Each day, patients will be assigned to the community with placement protocols that ensure consistency and objectivity based on health policy. PathWays' store of objective data permits benchmarking in the aid of continuous improvement, and promotes fact-based management against performance markers like Balanced Scorecards and Provider Contracts. And looking forward, an integrated platform for future scalability is being established by streamlining manual administrative processes in front of the accelerating client and health professional aging demographic curves.

Proven results throughout western Canada combined with detailed consulting in various international forums puts Strata Health in the unique position to assess and implement bleeding edge patient flow initiatives such as Strata PathWays™.

### **C. Overview of Fraser Health Strata PathWays™ Study**

This paper summarizes the findings of a May 2006 study undertaken within British Columbia's (Canada) Fraser Health Authority with the purpose of defining sustainable benefits and structure for a Strata PathWays™ deployment within the health region.

The goal of the Study was to deliver a clear planning document to:

- map care stream process creating a fundamental common view of existing protocol
- assess the Authority's current patient flow process vs. requirement

- map integration current and future requirements based on Fraser Health EHR vision
- present considerations for patient flow automation that would maximize sustainable system benefits while minimizing risk

When deployed Strata PathWays™ would support Fraser Health's 12 hospitals and growing cadre of Community supported living resources across an expanding population of 1.5M people with the 75+ aged demographic projected to grow from 5.7% to 15.7% by 2010 ... almost double total population growth.

Goals for Fraser Health System Capacity Management were:

- I. Improving access for emergency and planned surgery admission behind more efficient/consistent flow through and out of acute system to community alternatives
- II. Optimizing patient outcomes within system including safety, choice, quality of care and efficiency across patient journey
- III. Expanding future efficiency/scalability/objectivity of existing manual patient transition processes addressing ongoing significant population growth with limited clinician pool
- IV. Aiding front line clinicians by reducing administrative burden and therefore increasing time to focus on the patient need ... improving clinician retention and outcomes
- V. Expanding data capture and integrity of reporting improving clinician daily support management tools and long-term executive/Ministry strategic planning

Scope / Range of Study:

The study engaged both management and front line clinicians across the spreading Fraser Health jurisdiction in 18 focus groups over 10 working days to ensure the underlying processes and realities of the day-to-day environment were captured versus reliance on published policy – program and practice.

Participating groups included:

- *Management & Sponsors*
- *Access Coordinators*
- *Clerical / reporting*
- *Home health case managers*
- *Hospital liaisons*
- *IM/IT*
- *Inter RAI*
- *Acute Directors*
- *DOC's - various facilities*
- *Residential Partnerships*

## D. Project Observations:

During the study, 11 key observations were noted:

- I. The organizational structure of the FHA's Access Coordinators (AC's) (community clusters within the central intake model) has achieved significant system efficiencies and has made meaningful strides towards regional standardization. Note: variations do exist among the community sectors and will be discussed further into the study document.  
  
The systems that are in place have been derived from an evolution of processes and procedures and are supported by firm policy & guidelines.
- II. These systems, though highly evolved in content are highly manual, extremely labor intensive and not scalable to future needs.
- III. The key operational drivers within the system – the Access Coordinators (AC's) are expected to fully consider all system decision factors (the decision tree and placement guidelines) for each client placement. This expectation is based on the existing and highly evolved policy. The delivery of this expectation, though bona-fide, is difficult to achieve on a consistent basis due to the manual nature of the system as well as the pressures placed on the decision makers. This becomes a significant contributing factor towards AC fatigue and may impede optimal placement decisions or associated *escalation level responses*.
- IV. Patient choice is limited within the FHA. Though one preference option can be documented within the case managers assessment, clients are not presented with a comprehensive list of suitable facilities and solutions to where they may best be suited. This negatively affects patient/client perception of the health system.
- V. Teaming is core to the AC team's organizational culture and is further supported by a *shared decision making policy*. During full team attendance, this interaction is both effective and rewarding, however, is neither seamless nor transparent. Much of the system's operational effectiveness is made up of acquired human knowledge and non-standardized summaries and/or communication. This represents a significant risk to the organization relative to sick days, turnover or attrition.
- VI. FHA clearly realizes the benefits associated with objectively reporting data and currently supports an emerging infrastructure to access this information. Further, FHA is making progress towards added accountability among stakeholders. The metrics captured to measure this accountability in FHA are among the most refined in Canada. The methods by which these metrics are captured however, are (again) extremely manual, labor intensive, and time consuming. This detracts clinicians from spending critical time with clients, and forces them toward compiling reports and shuffling paper.

- VII. As Fraser Health continues to refine these metrics they have identified additional key indicators not currently reported on including: transition time intervals, facility discharge destinations and facility length of stay (LOS) metrics to name a few.
- VIII. Current reports are manually generated and are largely ineffective in proactively managing system effectiveness due to their lack of timeliness. Essentially, they report on what *has* occurred and hence might add some insight for future consideration, but not for hands on efficacy of health delivery.
- IX. FHA's overall work rate remains at consistently high levels, however effectiveness / accuracy cannot always be maintained. The following examples obtained during our sessions help explain this comment:
1. A manually compiled report contained simple math errors
  2. A client placement was not matched to client preference or best regional outcome because human nature intervened and placed the client elsewhere (path of least resistance)
  3. Facilities noted they have called in the past to confirm that central intake had received the fax/phone call 2 days ago regarding their vacant bed. It was unclear if this original communication actually had occurred or was might have been lost in the transfer of information.
- X. The 'mix' of community resources was noted to be 'out of balance' with emerging client needs (Assisted Living versus Residential Care). Ethnic considerations and emerging program eligibilities (special needs, VETS) are also areas that require objective long term strategic planning to ensure resources meet client needs.
- XI. Clear roles and responsibilities and true team cohesiveness are present within FHA. These facts give rise to an increased likelihood of success in change management and further evolution towards true best practice.

## E. Study Recommendations:

From these 11 key observations, the following 15 recommendations were formulated:

- I. Continue standardizing best practice within FHA using the successful central intake model.
- II. Automate the manual access and transition process through enhanced information sharing with all service providers and in particular the amalgamate operators. Timeliness of information and reduction or elimination of manual processes such as faxing and telephone calls would be a considerable benefit,

while leveraging off of the information already collected within existing systems to reduce data entry. This automation would be facilitated via PathWays as a broadly accessible & scalable web-based solution.

- III. Enhance work-rate and effectiveness of the access team (AC's) through clear policy on match considerations/decisions which have been published and supported by FHA executive AND potentially also signed off by the Ministry of Health. These considerations would be automated within PathWays thus providing best match options for clinicians to finalize in a timely, well thought out, and consistent process. Consideration of all possible placement options could be guaranteed once automated, with clinicians having more time to handle the difficult outliers and strive toward better client outcomes overall.
- IV. Establish clear policy to follow as competing priorities (ie specific acute centre discharge focus) shift within the region - from day-to-day and even hour-to-hour. Through automation and therefore reduced workload, enable access to redirect their resources to these priorities. This redirection needs to be simple, fast, and accurate. Furthermore FHA must be able to report on the outcomes of this redirection (acute focus).
- V. Use robust, real time MMR reporting to enable future strategic planning around capacity development and to effectively influence provincial funding.
- VI. Compile best practice considerations from all FHA community clusters / geo areas to produce a consistent and standardized delivery model that can then be communicated with all stakeholders. The process maps developed by Strata Health Solutions during this study will be of assistance with this process in further identifying differing practices.
- VII. Once best practices are confirmed and embraced by all stakeholders, client-bed matches would be objectively delivered, without bias and in a fair and equitable manner with support from all levels within the region as well as the Ministry of Health. The ability to deliver consistent client outcomes AND reduce the burden of justification from an Access Coordinators perspective is significant. This also enables these Coordinators to focus a greater amount of their time on hard to place clients and compassionate placements, again positively impacting outcomes.
- VIII. Increase client outcomes by building a framework for success around client/patient choice. By facilitating case managers in quickly accessing appropriate facilities from a dynamic list that has been filtered by a client's base matching criteria (care needs), case managers can be educated in all facility offerings (dynamically if facility bed capabilities truly change or are limited). Case Manager access to this list would enable a client to participate in selecting multiple preference locations. This process would dramatically increase the probability of successfully placing that client into a 'preferred' facility.

- IX. Track facility denials and the reasons for those denials in real time. Real time information on facility declinations would allow the region to provide support, in terms of equipment or staff training (for example), to those providers that require it to accept certain clients. This is critical for ensuring that matches result in suitable placements for clients.
- X. Ensure operational data is collected and used to guide daily decisions. Innovate on the metrics that are captured to effectively run the FHA access operations. Automation of such information is critical to ensure that regular and core competencies of any job role can be completed (versus compiling reports). Redeploy administrative FTE's to enhance system output and accuracy. Report use must become part of the system culture to deliver on automation potential.
- XI. Report accurately and in a timely manner. Accurate reporting relative to operations and /or to the Ministry of Health is the only way to reflect progress within the region and attract the appropriate funding and support. Anecdotal statements typically do not influence policy or drive funding – accurate, verified information will.
- XII. Make data collection part of the process. Simple things like making a discharge from a facility create a vacant resource ensure that data is entered to the system as part of the process. This then leads to finding the best client for that available resource in a consistent and timely manner.
- XIII. Enhance overall communication through seamless and transparent process. Ensure front line workers can both do their job AND have the answers for clients and families when the tough questions are asked. The ability to answer these questions combined with the attitude of these front line clinicians will reflect directly on the public perception of the health care system.
- XIV. Ensure scalability. Plan for future resources via objective reports by need, by clinical population and by community cluster.
- XV. Embrace the strong collaboration within the FHA and lead progressive change to how Canadian Health care is delivered.

## F. Outcomes:

Fraser Health Projected Outcomes of Strata PathWays™ Implementation:

### Fraser Health Impacts:

- 35% reduction in Acute ALC days lost within Region's 12 hospitals over 12 months post implementation to deliver a minimum of 2,000 incremental admissions
- Scalable infrastructure to manage expanding care options in support of access
- Entrenching data integrity and reproducible processes across infrastructure
- Enabling fact-based decision support & strategic planning via dynamic data reporting

- Delivering MOH MRR reporting consistently – accurately and on schedule to standard
- Improved performance management dialogue with Community Providers
- Ability to manage specific performance goals against internal Balanced Scorecard

Client Impact:

- Placement decisions consistently reflective of policy in 100% of transactions
- Delivery of client choice to a Preferred community location in 80%+ of placements
- Formal family feedback on placement status delivered
- Documentation & review of resolution performance within compassionate placements

Community Provider Impact:

- Expanded access to client data (ie RAI) in real time at point of placement decision
- Reduced manual administration of client placement
- Improved capacity management & performance reporting in real time

## **G. Current Project Status:**

To date a 5 year Agreement has been completed, Project Charter detailed, reviewed and signed off along with mandatory PIA (privacy impact assessment) and FHA Software Assessment.

FHA is currently engaged in detailed planning sessions with Strata Client Services to configure the Strata PathWays™ application as required by the region.

All 15 recommendations are at various stages of implementation.

The Tier 1 hosting environment has been established and XML/HL7 integration will commence test data trials in early 2007.

Region wide deployment is scheduled for March 16, 2007.