Health and Safety in Action

Safe and Healthy Workplaces for BC's Health Care Workers

Provincial Reporting and Data Management – Initiative #1

Final Report

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EXECUTIVE SUMMARY

The Provincial Reporting and Data Management Initiative was one of four major health and safety initiatives which were part of a provincial program called Health and Safety In Action (HSIA). HSIA was imitated from an acute care contribution surplus of $37 million identified by WorkSafeBC and it was agreed by the health authority Board Chairs and CEOs to invest these funds in health and safety initiatives in the health authorities. The goal of HSIA is to create safe and healthy workplaces and to achieve measureable value of $50 million by 2015. All HSIA initiatives were facilitated by the Health Employers Association of BC (HEABC) through a project management office (PMO), in partnership with WorkSafeBC, Healthcare Benefit Trust (HBT), the BC health authorities and Providence Healthcare.

Within the overall HSIA program objective of improving work place health and safety in health authorities (HA), a key component is having quality information available in a timely manner to support decision-making. The initiative objective of Provincial Reporting & Data Management initiative (HSIA #1) is to create a standardized provincial health and safety information base, built on common definitions, methods of calculation and data entry processes. This platform will have the ability to provide reports based on Industry Recognized Practices (IRP's) and Key Performance Indicators (KPI's) to support operational and strategic decisions pertaining to work place health and safety in BC Healthcare.

HSIA #1 is a foundational project that aims to finalize the implementation of a British Columbia Occupational Health and Safety database for health authorities and other key organizations such as healthcare unions and insurers. The database will provide the key information needed to support sound and timely occupational health and safety decisions to improve workplace safety for workers and to enable OHS services and programs such as Return to Work and disability management processes to be more effective.

To accomplish the objectives of HSIA#1, the following six projects were undertaken:

1. Transfer VCH and PHC from existing Parklane systems to WHITE.Net
2. Establish and Confirm WHITE.Net Charting Standards
3. Implement WHITE.Net Charting Standards
4. Manage Ongoing Compliance of WHITE.Net Charting Standards
5. Establish Provincial KPIs and Standardized Reporting
6. Optimize WHITE.Net for the Provincial Call Centre

All projects in HSIA #1were successfully implemented with the final project, optimization of WHITE.Net for the Provincial Call Centre, implemented on June 18th, 2013.

- January 2012: Implementation of WHITE.Net at VCH and PHC
- October 2011: Confirmation of WHITE.Net Charting Standards
- July 2012: Implementation and Adoption of WHITE.Net Charting Standards
- June 2012: Implementation of tools to support Ongoing Compliance of WHITE.Net Charting Standards
- January 2013: Established Provincial KPIs and implementation of Standardized Reporting
- June 2013: Optimization of WHITE.Net for the Provincial Call Centre

The completion of Project #1, the transition of PHC and VCH from using Parklane Systems to WHITE.net, marked the provincial adoption by all BC Health Authorities to use a common platform for data capture in workplace health and safety, the first of its kind in Canada.

Project # 2 conducted an analysis of the current WHITE.Net data entry practices across health authorities and identified the changes required to achieve compliance with the provincial standards at

each health authority. By establishing agreement on the coding and charting standards for data entry, this information was used to develop an implementation plan which formed the basis for Project #3.

Project #3 focused on the implementation of the provincially recognized WHITE.Net coding and charting standards. In addition, compliancy tools were implemented to ensure that data quality, coding and charting standards were maintained. These tools were developed as part of Project #4 and were implemented in conjunction with the implementation of standards conducted as part of Project #3. Upon completion of Project #3 and Project #4 the use of WHITE.Net is now consistent across all of the BC Health Authorities.

Project #5 built on the successes of Projects#1- 4 to establish a data framework that details key performance indicators determined through consultation with the OHS directors and subject matter experts. As a result, a provincial data management platform has been developed. This platform will in future support improvements in the development and distribution of all OHS reports and will enable all participating health authorities to leverage tools and metrics developed throughout the province. The improved reporting, based on better quality data, will further guide decision making required to identify and implement required improvements in workplace health and safety for all health care workers across BC.

Project #6 built on the efficiencies identified in HSIA initiative #2 by optimizing WHITE.Net to support the Workplace Health Call Centre (WHCC) changes implemented. WHITE.Net was redesigned and customized to better support its use in the call centre environment. These changes have enhanced system functionalities to measure determined outcomes and produce flexible reporting to evaluate the WHCC.

The successful implementation of these six projects has formed the foundation from which Workplace Health and Safety in healthcare can now measure, evaluate, respond and modify practices to meet ongoing demands, pressures, and processes in their industry. More specifically, this initiative has enabled each health authority to use WHITE.Net to allocate scarce resources to high risk areas, compare and contrast workplace health and safety information across health employers, identify intervention opportunities (and evaluate them) and gain a local and provincial perspective on worker health. It is through this foundation of data and standardized metrics that Workplace Health and Safety in healthcare has the opportunity to utilize the systems to make informed decision and drive positive change.

INTRODUCTION

HSIA Initiative #1: Provincial Reporting and Data Management Program

The Provincial Reporting and Data Management Initiative was one of four major health and safety initiatives which were part of a provincial program called Health and Safety In Action (HSIA). HSIA was imitated from an acute care contribution surplus of $37 million identified by WorkSafeBC and it was agreed by the health authority Board Chairs and CEOs to invest these funds in health and safety initiatives in the health authorities. The goal of HSIA is to create safe and healthy workplaces and to achieve measureable value of $50 million by 2015. All HSIA initiatives were facilitated by the Health Employers Association of BC (HEABC) through a project management office (PMO), in partnership with WorkSafeBC, Healthcare Benefit Trust (HBT), the BC health authorities and Providence Healthcare.

Within the overall HSIA project objective of improving work place health and safety in health authorities (HA), a key component is having quality information available in a timely manner to support decision-making. The overall objective of Provincial Reporting & Data Management initiative is to create a standardized provincial health and safety information base, built on common definitions, methods of calculation and data entry processes. This platform will have the ability to provide reports based on Industry Recognized Practices (IRP's) and Key Performance Indicators (KPI's) to support operational and strategic decisions pertaining to work place health and safety in BC Healthcare.

In 2010, the Workplace Health Indicator Tracking and Evaluation application (WHITE™), developed by the Occupational Health and Safety Agency for Healthcare in BC (OHSAH), was found to be industry standard for workplace health and safety data management in healthcare in British Columbia. OHSAH also developed a centralized provincial data warehouse drawing de-identified data from all health authority WHITE.Net applications provincially providing a robust platform for provincial Key Performance Indicators for health and safety in BC. WHITE.Net, along with the centralized provincial data warehouse, thus served as the foundational platforms for the Provincial Reporting and Data Management Initiative (HSIA #1).

Although the WHITE.Net™ application has been accepted as an industry standard in BC, its use is not yet standardized. During the preliminary planning phase of this program, data and information issues were identified as barriers to improving work place health and safety. Some of the major considerations included:

- Each HA currently uses WHITE.Net with some process and definitional variations;
- Each HA has a discrete set of WHITE.Net data and there are variations in modes of calculation which make comparisons between HAs difficult;

Other organizations such as HBT, WSBC, healthcare unions (i.e. BCNU, HEU, BCGEU, and HSA), and HEABC may also utilize the data at a provincial and health authority level, however access to quality data has been limited.

HSIA #1 is a foundational project that aims to finalize the implementation of a British Columbia Occupational Health and Safety database for health authorities and other key organizations such as health unions and insurers. The database will provide the key information needed to support sound and timely occupational health and safety decisions to improve workplace safety for workers and to enable OHS services and programs such as Return to Work and disability management processes to be more effective.

To accomplish the Provincial Reporting & Data Management Program objectives, the following six projects were undertaken:

1. Transfer VCH and PHC from existing Parklane systems to WHITE.Net
2. Establish and confirm WHITE.Net Charting Standards
3. Implement WHITE.Net Charting Standards
4. Manage Ongoing Compliance of WHITE.Net Charting Standards
5. Establish Provincial KPIs and Standardized Reporting
6. Optimize WHITE.Net for the Provincial Call Centre

Objectives

The overall objectives of the Provincial Reporting and Data Management Initiative were to:

- Finalize the implementation of a common provincial health authority work place health and safety data platform using WHITE.Net
- Create provincial reporting utilized by all HA's building on existing materials wherever possible
- Support planning for improving future electronic data movement and expansion
- Assess legal, regulatory and other requirements to ensure compliance with data sharing, privacy, confidentiality, and other requirements of all participating organizations.

Scope

The high-level scope of this initiative included:

- Standardizing Provincial Reporting & Data Management among BC Heath Authorities;
- Create, test and evaluate compliance audit and quality tools, and implemented these tools;
- Complete WHITE& provincial health database planning support for providing enhanced access or for linking and/or electronic interfacing with insurers and other organizations which require regular use for the provincial WHITE database;
  - HBT
  - WSBC
  - Health Unions
  - HEABC
- Create with the Call Centre a comprehensive and prioritized list of Call Centre requirements from WHITE that are required to improve data entry efficiency, minimize reporting time and ensure consistent high quality data capture;
- Reviewing and making recommendations if appropriate for enhancing provincial health database governance, management and key practices; and,

The scope of this initiative excluded:

- Adding other organizations to the provincial HA data system;
- Any aspect of how the data are used by the internal HA processes at this time except as appropriate in support of MSIP and VPP;
- Creating electronic linkages not already established with Patient Safety, Security and other sources of facility workplace safety;

- Establishing and implementing IM/IT systems specifications for data and voice systems standards required for consistent performance of WHITE, absence services and the Call Centre;

- Internal HA hardware and other systems requirements needed to ensure reasonably similar user experience in using the Call Centre, Absence service and WHITE;

- Technical requirements for data management, storage, security and other IT/IM elements including exploring options for continuing decentralized hosting, moving to a single host data warehouse, or some hybrid model; and,

- Retroactive data corrections required in each HA or to the WHITE data warehouse to enable retrospective comparisons.

DELIVERABLES

To fulfill the initiative objectives, the Provincial Reporting & Data Management Program was divided into six integrated projects based on scope and manageability of work. Each project comprised of specific goals and objectives that complemented the inputs or outputs of all projects. The following deliverables were delivered at the completion of each project:

Project 1: Transfer VCH and PHC from Parklane Systems to WHITE.Net

Goals and Objectives

- Bring VCH and PHC in line with standardized provincial business systems and processes and to enable a provincial health and safety reporting platform
- Support efficient, cost effective business processes within Disability Management and Safety
- Enable ready access to quality data to support continuous business improvement
- Support information and business needs that are foundational for quality care provision, and staff and patient safety

Deliverables

- Implementation of local WHITE.Net instances at VCH and PHC

- User training for all Workplace Health and Safety Teams

- Retirement of legacy systems (i.e. Parklane)

- Data conversion and migration from Parklane to WHITE.Net.

- Interfaces (i.e. Healthcare Worker Import from PeopleSoft, WSBC CMS integration, FogBugz for WHITE.Net support)

Project 2: Establish and Confirm WHITE.Net Charting Standards

Goals and Objectives

- Produce provincial WHITE.Net coding and charting standards based on the existing standards developed by FHA and NHA/IHA
- All HA's mutually accept the use of a common group of data definitions, modes of calculation and data entry processes, that are understood, and shared with, other data users including health unions, HBT, WSBC, and HEABC
- Report on the current WHITE.Net data entry practices of each Health Authority

- Identify the gaps between current WHITE.Net data entry practices and those required for compliance with the WHITE.Net coding and charting standards
- Identify key strategic resources at each Health Authority that can assist with obtaining buy-in for the required to implement the WHITE.Net standards

Deliverables

- Incident Management Module (IMM) charting and coding standards review and acceptance
- Claims Management Module (CMM) charting and coding standards review and acceptance
- Disability Management Module (DMM) charting and coding standards review and acceptance
- Employee Health Module (EHM) charting and coding standards review and acceptance
- Provincial commitment to use a common, specific set of WHITE.Net coding and charting standards at all health authorities
- Analysis of the current coding and charting practices at each health authority
- Summary of record changes to current coding and charting practices at each health authority to comply with the designated WHITE.Net coding and charting standards

Project 3 and 4: Implement and Manage Ongoing Compliance of WHITE.Net Charting Standards

Goals and Objectives

- Develop a data quality auditing, coding, and charting compliance mechanism that can be used at each health authority
- Develop and implement WHITE.Net coding and charting standards, compliance monitoring, and change management plan for each health authority
- Work with local change champions and the WHITE.Net training resource centre to execute implementation and change management plans developed
- Conduct a data quality audit to ensure implementations have been successful at each health authority

Deliverables

- Implementation and change management plan for each health authority
- Complete records defined for Incident Management Module (IMM)
- Complete records defined for Claims Management Module (CMM)
- Complete records defined for Disability Management Module (DMM)
- Complete records defined for Employee Health Module (EHM)
- Data quality audit process and tools developed
- Implementation of provincial WHITE.Net coding and charting standards and audit process at each health authority
- Acceptable data quality audit post implementation at each health authority

Project 5: Establish Provincial KPIs and Standardized Reporting

Goals and Objectives

- Identify Provincial high-level outcome measures to be reported at regular intervals
- Design provincial data replication and reporting environment
- Obtain security and privacy approval from each health authority
- Create provincial WHITE.Net data warehouse

- Produce a provincially accessible report library for the data warehouse

Deliverables

- Provincially approved process, outcome and situational (KPIs)
- OHS data warehouse: design, development and launch
- Development of a provincial report library
- Automation of regular production and distribution

Project 6: Optimize WHITE.Net for the Provincial Call Centre

Goals and Objectives

- Adapt the Incident Module user interface to support data collection within a call centre environment where scripted dialogue is used to gather employee incident details.
- Develop a communicable disease event management tool within WHITE.net to allow for better tracking and reporting of communicable disease outbreaks
- Provide contact management functionality to maintain all contacts with the employee pre and post incident / case.

Deliverables

The following deliverables were delivered at the completion of this project:

- Revised IIM screens
- Communicable Disease Management sub-system and reports
- Employee Contact Management sub-system and reports

IMPLEMENTATION

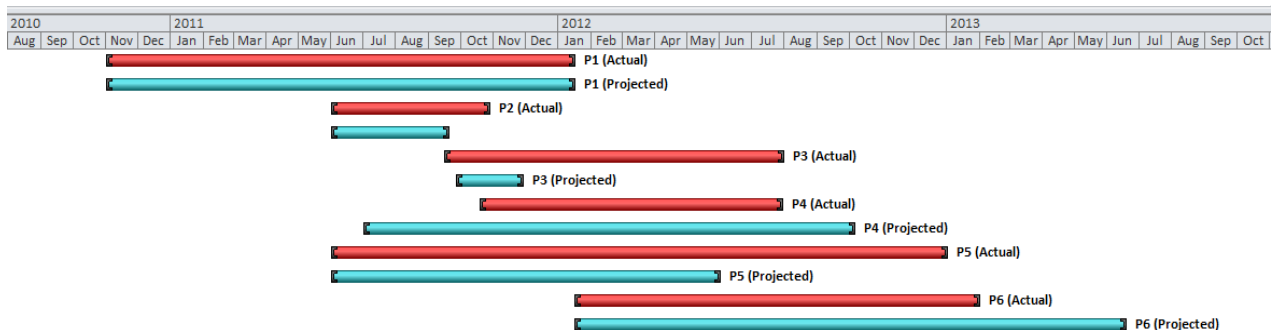## Project Completion Timelines

All projects in HSIA #1were successfully implemented with the final project, Optimization of WHITE.Net for the Provincial Call Centre, implemented on June 18th, 2013.

Table 1: Projected vs. Actual Project Completion Dates

Project	Projected		Actual	
	Start	**End**	**Start**	**End**
Project 1: Transition of VCH/PHC from Parklane to WHITE.Net	01 Nov 2010	16 Jan 2012	01 Nov 2010	16 Jan 2012
Project 2: WHITE.Net Coding and Charting Standardization	01 Jun 2011	19 Sep 2011	01 Jun 2011	28 Oct 2011
Project 3: WHITE.Net Coding and Charting Standards	26 Sep 2011	28 Nov 2011	15 Sep 2011	31 Jul 2012
Project 4: Ongoing Compliance of WHITE.Net Charting Standards	01 Jul 2011	05 Oct 2011	19 Oct 2011	29 Jun 2012
Project 5: Provincial KPIs and Standardized Reporting	01 Jun 2011	01 Jun 2012	01 Jun 2011	01 Jan 2013
Project 6: Optimizing the WHITE.Net application for Call Centre Use	16 Jan 2012	31 Jan 2013	16 Jan 2012	18 Jun 2013

Figure 1: Projected vs. Actual Project Completion Dates (Gantt)

* All extensions on project end dates were managed and approved through the Change Request Advisory Board for HSIA Initiative #1.

BUDGET

HEABC: HSIA Initiative #1 - Provincial Reporting & Data Management Program

The following table summarizes the final statement of expenditures as of February 28, 2014.

	Budget	Actual	Variance
Project #1: Transfer VCH and PHC from Parklane to WHITE.Net	260,021	194,235	65,786
Project #2: Establish and Confirm Provincial WHITE.Net Coding and Charting Standards	173,118	143,276	29,842
Project #3: Implement Provincial WHITE.Net Coding and Charting Standards & Project #4: Develop WHITE.Net Data Quality Monitoring and Manage Ongoing Compliance	583,866	414,308	169,558
Project #5: Establishing Provincial KPI's and Standardized Reporting	655,098 *	650,753	4,345
Project #6: Optimize WHITE.Net for Provincial Call Centre Use	627,897 *	667,973	(40,076)
Subtotal Initiative #1 Manager Budget	**2,300,000**	**2,070,545**	**229,455**
Contingency (WHITE.Net)	172,085	172,122	(37)
Total Initiative #1	**2,472,085**	**2,242,667**	**229,418**

* Amounts reflect the transfer of $50K to the Project 6 budget, per approved change request ID #003.

OUTCOME

Each of the HSIA Initiative #1 projects built upon the successes of the other projects to achieve the goals of the initiative. The completion of Project #1, the transition of PHC and VCH from using Parklane Systems to WHITE.net, marked the provincial adoption by all BC Health Authorities to use a common platform for data capture in workplace health and safety, the first of its kind in Canada.

Project # 2 conducted an analysis of the current WHITE.Net data entry practices across health authorities and identified the changes required to achieve compliance with the provincial standards at each health authority. By establishing agreement on operating procedures, definitions, coding and charting standards for data entry, this information was used to develop an implementation plan which formed the basis for Project #3.

Project #3 focused on the implementation of the provincially recognized WHITE.Net coding and charting standards. In addition, compliancy tools were implemented to ensure that data quality, coding and charting standards were maintained. These tools were developed as part of Project #4 and were implemented in conjunction with the implementation of standards conducted as part of Project #3. Upon completion of Project #3 and Project #4 the use of WHITE.Net is now consistent across all of the BC Health Authorities.

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Project #6 built on the efficiencies identified in HSIA initiative #2 by optimizing WHITE.Net to support the Workplace Health Call Centre (WHCC) changes implemented. WHITE.Net was redesigned and customized to better support its use in the call centre environment. These changes have enhanced system functionalities to measure determined outcomes and produce flexible reporting to evaluate the WHCC.

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