B188 Organizational Structure and Service Delivery: Matching Analytical Capacity to the Demand for Forensic DNA

Johanne Almer, MSc, Roger Frappier, MSc, Andrew Greenfield, MSc, Cecilia Hageman, PhD, John M. Laird, MSc, and Jonathan Newman, BSc, Centre of Forensic Sciences, 25 Grosvenor Street, Toronto, Ontario M7A 2G8, Canada*

The goal of this presentation is to deliver a novel approach to the re-structuring of forensic DNA operations in a mid to high throughput laboratory. The presentation will describe the impact of a re- organization on productivity and staff engagement. Attendees will be provided with change management strategies that can be employed in a forensic DNA laboratory.

This presentation will impact the forensic community and/or humanity by affording the forensic community the opportunity to discover and implement best practices regarding management of laboratory operations that have been developed from real life experiences.

Learning Objective and Outcome: To provide an awareness of the impact of Business Process Re-Engineering (BPR) on re- organization and service delivery in a forensic DNA laboratory.

BPR has been described as a fundamental rethinking and radical redesign of business processes to bring about dramatic improvements in performance (Michael Hammer[1]). It is the examination and change of five components of the business; strategy, processes, technology, organization and culture

To be able to make significant improvements with emphasis on expansion of services coupled with a reduction in turnaround times the Biology Section of The Centre of Forensic Sciences undertook a comprehensive examination and re-engineering of its work processes.

The approach taken during this initiative was in accordance with a framework and methodology for project management in the Ontario Public Service. There are five phases within this framework; concept, definition, planning, implementation and closeout

Concept Phase: The vision was to create a working environment that maximized productivity and efficiency while maintaining the job satisfaction of all staff and to increase management accountability and authority by clearly defining program areas.

In 2003 management proposed a 5-unit organizational structure comprised of two service units: DNA and case screening and three case management units responsible for the processing and reporting of one of three case types: high volume (HV), sexual assault (SA) and major crime (MC). In 2004 Process Re-Engineering Teams (PRETs) comprised of members of staff from the Biology Section developed processes and recommendations regarding the most efficient means of delivering forensic services within the proposed organizational structure.

Assault, robbery, and break and enter are examples of the types of cases that were classified as high volume and the HV PRET recommended processes required to maximize the throughput of items to facilitate rapid entry of DNA profiles onto the National DNA Data Bank of Canada (NDDB) and the rapid reporting of results to investigators. Processes encompassed case assessment, roles of reporting scientists, the use of automated systems and the communication and management of “hits” generated from the NDDB.

The SA PRET re-engineered processes and workflow in recognition of the generally standard format of submissions in these cases. Concepts promoted included the use of staged examination process for the targeting of relevant items, and the use of Y-STRs as a screening tool to replace conventional body fluid identification.

Homicide, Attempt Murder, Hit and Run are examples of major cases, the MC PRET recommended a process that recognizes the need for a tailored approach to major cases. The process included a formalized case consultation service utilizing a dedicated Scientific Advisor.

Definition: Upon implementation of these re-engineered processes, it was anticipated that the section will be better able to meet current demands, and will be poised to meet future demands for service delivery. Internally, the Section will be clearly structured in accordance with its objectives and managers will have increased accountability for service delivery. Staff would work in groups mandated to meet objectives and performance targets specific to their program area.

Planning Phase: In the spring of 2005 the re-organization occurred allowing operations to continue while implementation of team specific re-engineering recommendations proceeded according to a plan established during the year. The implementation plan continues to be overseen by a Project Management Team comprised of a cross-sectional representation of staff and management from within the Biology Section who are the Team Leads for each of the identified areas of change.

Implementation Phase: The re-engineering change initiatives have been planned to occur over an approximately two-year period that commenced at the end of 2005. At the end of the first year the impact on service delivery of the section re-organization and re-defined management accountability that occurred in the spring of 2005 was already being realized.

The performance indicator for the section is the time from item submission to release of a report. For the fiscal year 2004 / 05 the percentage of cases reported within 90 days was 78% for high volume cases, 58% for sexual assault cases, and 62% for major cases. For the first quarter of the fiscal year 2006/07 the percentage of

cases reported within 90 days was 97% for high volume cases, 81% for sexual assault cases, and 65% for major cases.

Re-engineering is ongoing and as part of a change management process strategies are in place to provide formal and informal mechanisms to support change. Staff training initiatives have focused on team building skills, including team training, Myers Briggs Type Indicator, and conflict styles inventory. The section has also initiated a staff engagement survey that is designed to identify and offer outlets for dealing with morale issues such as job satisfaction, stress, workload, communication, and management.

Summary: In summary, the key to successful achievement of any project is the blend of consideration for the needs of the product or service being developed, the people, and the organizations involved and affected. Proper scoping, definition, and planning for the project requires the participation of those involved and affected. Regular consultation, participation, and communication promote trust, and allow the building of relationships necessary for project success.

References:

1 Michael Hammer and James Champy, Re-engineering the Corporation. Harper Collins.

Change Management, Organizational Structure, Forensic DNA

 ** Presenting Author*