

## 288: THE COMPRU QUALITY MANAGEMENT SYSTEM AN INTEGRATED APPROACH TO QUALITY MANAGEMENT IN HEALTH CARE

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### Objective:

The objective was to design a care model that integrates a diverse interdisciplinary team of professionals from multiple institutions in an environment that was patient centered and supported continuous quality improvement.

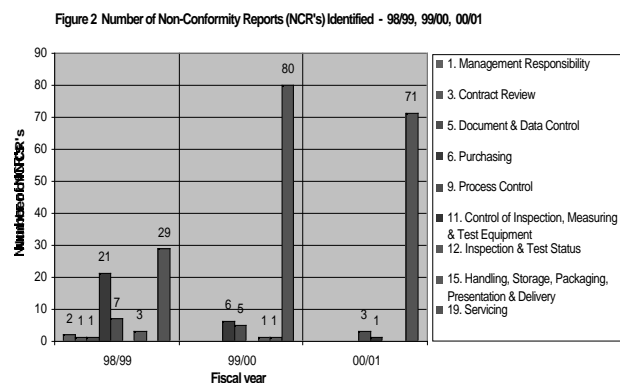
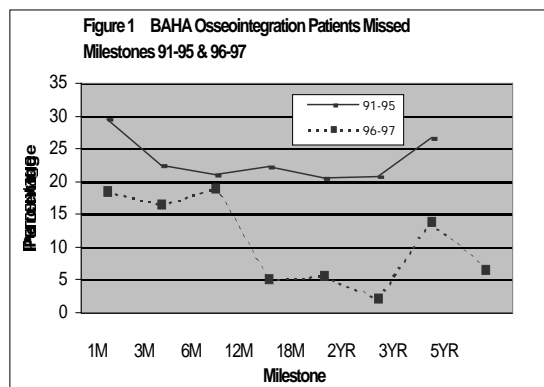
### Methods:

The Craniofacial Osseointegration and Maxillofacial Prosthetic Rehabilitation Unit (COMPRU) in Edmonton, Alberta, Canada, is a center of excellence for reconstruction and rehabilitation of patients with defects of the head and neck. A major focus of the unit's work is the use of osseointegrated implant biotechnologies that support prosthetic rehabilitation of defects resulting from cancer, trauma and congenital etiologies. Since its inception in 1993, COMPRU has based its development on a philosophy of quality management. The goal was to design a care model that would integrate a diverse interdisciplinary team of professionals from multiple institutions in an environment that was patient centered and supported continuous quality improvement. Also, given the constrained resources and increasing demand within the Canadian healthcare sector, COMPRU must optimize cost and cycle time efficiencies without compromising quality of care. Since COMPRU was established as a clinical and research centre, it was expected that improvements would accrue from research and development (R & D), however, it was also recognized that opportunities for improvement were much broader. The ongoing management of *quality*, defined as meeting or exceeding stated and implied needs of COMPRU patients, was considered a prerequisite for steady incremental improvement, to supplement gains realized through R & D.

COMPRU's quality management system has been developed around three key elements: the team, treatment process management and an ISO 9000 compliant framework for overall operational functions. While each element is of value, the synergy realized from their integration has been key to optimizing system effectiveness. The fundamental building block of any quality initiative is the team. Fiscal constraint and the resulting philosophy of "do more with less" often work against developing an effective team of motivated, committed people. Culture, leadership and a carefully structured operating environment have been essential to achieving and sustaining a high performing team. To improve services, it is also necessary to examine and improve the basic processes intrinsic to them. COMPRU uses the Juran methodology of Business Process Quality Management (BPQM) to optimize treatment process design and performance. Similar to Quality Function Deployment used in manufacturing, the design of the process is customer driven and involves the entire interdisciplinary team. Advancements from R & D activity are incorporated into ongoing process design. COMPRU's framework for overall operational functions is based on the ISO 9000 series of quality standards. In November 1997, COMPRU became the first publicly-funded health care program in Canada to register a quality management system to the ISO 9000 standard. The ISO 9000 standard provides a comprehensive, internationally recognized framework for the management and improvement of service quality that can be effectively applied to health care programs.

### Results:

While the principles supporting quality management must emanate top down, the system must work from the bottom up to be fully effective. Team development and staff involvement in all aspects of the quality system have engendered the ownership and commitment necessary. Disciplined implementation of carefully planned treatment processes has resulted in improved operational efficiency (Figure 1) and the availability of data for evaluation of treatment outcomes. System data also identifies trends in problem areas and helps to direct process improvement initiatives (Figure 2). Our experience has identified the critical need for data management resources, the absence of which leaves much of the improvement potential unrealized.



**Conclusions:**

Development of a quality management system takes time and patience and is not an overnight solution to pressures in the health care environment. For COMPRU, quality management is a long-term strategic initiative.