Ontario Report

Globalization and the Future of Canadian Dental Technology

For several years there have many discussions among RDTs on the future of dental technology and the emerging presence and marketing practices of foreign laboratories. Opinions among RDTs were mixed in terms of whether these labs were able to meet similar quality standards, delivery times etc… Of greater importance was whether these labs would indeed pose a challenge to the safety and effectiveness of domestically produced appliances, and would they ultimately gain marketshare away from Ontario laboratories and impact pricing for basic products?

In the summer of 2005, discussions among board members of the ADTO focused on these questions. These discussions also co-incided with the ADTO's submission to the Health Professions Regulatory Advisory Council) (HPRAC) for 'Risk of Harm'. The question the board wanted to resolve was whether these laboratories posed a challenge to domestic labs. Initial investigations indicated that there was currently no information available from the industry or government that examined and commented on the products and services from foreign laboratories. To gather the necessary information to make a qualified opinion based on quantitative facts, as opposed to industry bias, the board commissioned a clinical study of 6 foreign labs to be undertaken.

In the fall of 2005, a pilot study was undertaken to secure PFM crown specimens from six foreign laboratories. Objectives for the study were determined, a project plan drafted, and resources budgeted. Several logistical and technical barriers presented themselves to ensure that the specimens were comparable, and solicited from the labs in an ethical, but unprejudiced ('blind') manner. Further, subsequent clinical testings would also have to ensure an unprejudiced result.

The plan for the 6 specimens required a 'generic' prescription (a semi-precious alloy), and 6 identical impressions for issue to six labs. It was decided that the ADTO would provide a free PFM crown to a patient expressing a dental need, but unable to afford the crown, in exchange for 6 additional impressions. A dentist was located on a fee basis who was willing to participate in the project, identify a patient and forward the six impressions.

Foreign labs were sought through internet marketing sites. The premise for approaching the labs was that an Ontario laboratory wanted to evaluate their lab for overflow work on the basis of quality, logistical ease of business and price. Where necessary, accounts were established, courier companies identified and timing established for an initial PFM crown. It was interesting to note that one lab rejected are initial inquiries since they would only consider shipments of 50 or more cases at a time.

The six labs selected were in Mexico, India, Thailand and China (3). We were made aware through some discussions with CDTs in the US that there were many other foreign labs operating that did not have an internet marketing effort, but were rather created to serve selected groups of dentists and dental labs in the US.

In March 2006, six impressions were couriered seperatelyto the six foreign labs. Upon their return, they would be submitted to the following tests:

1. From their original packaging – clinical testing for sterility (bio-load)
2. Peer panel quality review (control specimen provided)
3. Chemical analysis for alloy composition, and comment from a dental alloy expert

Of interest in this study, was the ease of which some of the China/Mexico based labs used US based courier hubs to consolidate and expedite the case. These labs looked after all the necessary foreign export paperwork required by foreign customs. With two exceptions, the labs

required that the sender pay for the initial courier costs to their lab, and they would pay (or include on their invoice) the return courier costs. Several of the labs requested payment (via wire transfer or VISA) prior to return delivery. Communication was by email, and generally very smooth. Every lab had some degree of English language literacy.In correspondance, they all expressed a keen interest in our needs, and a desire to provide excellent service.

The returned specimens were submitted to an accredited, third party medical materials testing facility, and a select panel of experts for a clinical review using RDT certification criteria.

The findings identified that the foreign lab product was cosmetically comparable to the domestic control specimen. The study concluded that there are several large, well managed, laboratories available to service the North American market. Prices for crowns ranged in the $54 to $165 (Cdn) range (pre-courier costs), and were delivered within 7-10 business days. The least cost lab provided a premium alloy of 45.4% gold. It was concluded that foreign labs could secure an economic advantage over domestic labs for basic products.

An important fact noted by the peer panel review, and materials testing results, was the verification of correct manufacture of the specimens, nor could the clinical review process ascertain or certify the processes used in the fabrication of the crowns.

Given these facts and findings, the ADTO board believes that efforts to assert the RDT's role in the supervision of the laboratory are necessary, and further expand the service role and scope of the RDT in the dental market to remain competitive. The ADTO believes these efforts need to be addressed through public information, member development and regulatory controls, and is formulating initiatives in these areas.

The complete technical results of this study are available on the ADTO website, or you may request a copy of the report from the ADTO offices.