



Forensic Odontology Unit

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Submission: February 20, 2014; **Published:** March 28, 2017

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Abbreviations: AOANJRR: Australian Orthopaedic Association National Joint Replacement Registry; TGA: Therapeutic Goods Administration; ACMD: Advisory Committee on Medical Devices.

Letter to Editor

The Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) was set up in 1999 to monitor the placement as well as the replacement of hip and knee implants. It has been proved to be a success in identifying clusters of failing or faulty implants, including the metal on metal DePuy implants that required recalling [1]. The public can be reassured that there is rigid monitoring of quality assurance for a reasonably low cost to the federal government. As a secondary benefit, the AOANJRR provides Coronial investigators details in identifying deceased individuals that cannot be visually identified. As a registered specialist forensic odontologist with the University of Adelaide, my research investigations have a particular focus on identification, dental implants, hip and knee implants with cooperation with the AOANJRR. Dental implants have become an extremely popular form of permanent treatment for tooth loss [2]. An identity website has 805 different types currently on record [3]. Rather than restricted to specialist oral maxillary facial specialist placement, there are many specialists and general dental practitioners that now place dental implants permanently within bone. This popularity has led to many companies entering the Australian dental implant market. My concern is that there is no registry for dental implants.

Trusting the dental implant companies to maintain their own quality control is fraught with danger as vested interest may cloud ethical judgements. Lack of early detection of faulty implants that may be harmful to patients, which could lead to substantial costs and anger directed to the government. It makes common sense that a dental implant registry would be an effective quality control mechanism giving reassurance to the public. The secondary benefit is that those dental implants are extremely robust, as titanium will withstand chemical attack and extremely high temperatures [4]. I have published in peer reviewed international journals the retrieval of numbers

within dental implants even after cremation [5]. As events such as terrorist events, aircraft accidents and bushfires can lead to victims being "burnt beyond recognition" the detection of implants can lead to speedy accurate identification with the appropriate record keeping such as a dental implant registry. As with any new protocol there are hurdles to overcome. Who will maintain the registry? Who will pay for maintenance of the registry? How do we serially identify dental implants? Compliance with dental practitioners would also need to be looked at. As the AOANJRR already exists, it might be prudent to add dental implants to their list with the appropriate extra support in funding.

The state Disaster Victim Identification coordinator has indicated that this is what he would prefer as it provides a single centre for implant identification enquiries. If the AOANJRR declines the offer then I have approached the Australian Society of Forensic Odontology president who is also the deputy chair for the scientific group in INTERPOL Disaster Victim Identification, and he has agreed in principle that they might take on the task with federal government support. With regard to the serial identification of all dental implants, the Straumann company (which is the second largest producer of dental implants) does already laser etch their implants with a batch number. Nobel Biocare, (which is the largest dental implant manufacturer), has corresponded to me that it is considering direct marking of implants. Straumann has proven that the marking of implants can easily be managed and I have had discussions with the University of South Australia and they have nano-technology that could be utilised with minimal costs. The reluctance of companies to place identification marking would indicate that they are not a good corporate citizen and may indeed have something to hide. Compliance with dental practitioners would require some regulatory direction. I believe once privacy issues

are addressed I cannot foresee a problem with the initiation of reporting. As Minister of Health could you please contact the Therapeutic Goods Administration (TGA) Advisory Committee on Medical Devices (ACMD) as the regulatory authority to begin instigating the setting up of a dental implant registry.

References

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DOI: [10.19080/JFSCI.2017.02.555595](https://doi.org/10.19080/JFSCI.2017.02.555595)

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