

Soren Blau,¹ Ph.D.; Anthony Hill,¹ B.D.S., Dip.For.Od.; Christopher A. Briggs,^{1,2} Ph.D.; and Stephen M. Cordner,¹ B.Med.Sc., F.R.C.Path., F.R.C.P.A. D.M.J.

Missing Persons—Missing Data: The Need to Collect Antemortem Dental Records of Missing Persons

ABSTRACT: The subject of missing persons is of great concern to the community with numerous associated emotional, financial, and health costs. This paper examines the forensic medical issues raised by the delayed identification of individuals classified as “missing” and highlights the importance of including dental data in the investigation of missing persons. Focusing on Australia, the current approaches employed in missing persons investigations are outlined. Of particular significance is the fact that each of the eight Australian states and territories has its own Missing Persons Unit that operates within distinct state and territory legislation. Consequently, there is a lack of uniformity within Australia about the legal and procedural framework within which investigations of missing persons are conducted, and the interaction of that framework with coronial law procedures. One of the main investigative problems in missing persons investigations is the lack of forensic medical, particularly, odontological input. Forensic odontology has been employed in numerous cases in Australia where identity is unknown or uncertain because of remains being skeletonized, incinerated, or partly burnt. The routine employment of the forensic odontologist to assist in missing person inquiries, has however, been ignored. The failure to routinely employ forensic odontology in missing persons inquiries has resulted in numerous delays in identification. Three Australian cases are presented where the investigation of individuals whose identity was uncertain or unknown was prolonged due to the failure to utilize the appropriate (and available) dental resources. In light of the outcomes of these cases, we suggest that a national missing persons dental records database be established for future missing persons investigations. Such a database could be easily managed between a coronial system and a forensic medical institute. In Australia, a national missing persons dental records database could be incorporated into the National Coroners Information System (NCIS) managed, on behalf of Australia’s Coroners, by the Victorian Institute of Forensic Medicine. The existence of the NCIS would ensure operational collaboration in the implementation of the system and cost savings to Australian policing agencies involved in missing person inquiries. The implementation of such a database would facilitate timely and efficient reconciliation of clinical and postmortem dental records and have subsequent social and financial benefits.

KEYWORDS: forensic science, forensic odontology, missing persons, dental records, database, identification, Australia

The subject of missing persons is of great concern to the general community with numerous associated emotional, financial, and health costs. Based on the most recent data available (statistics collected between 1995 and 1997), it is estimated that approximately 30,000 people each year are reported missing in Australia (1). In most cases, individuals reported missing are found within the first week and of the remainder, the majority reappear within a month from the date they are reported missing (1). The search techniques employed when a missing person is not located will vary depending upon the individual case and how it is assessed by the police formulating the report.

Each of the eight Australian states and territories has its own Missing Persons Unit operating within distinct state and territory legislation. In the case of the State of Victoria, for example, a disappearance may constitute a “suspected death” (Coroners Act—Victoria 1985). If so, this is sufficient for a coroner to require a dentist to produce the relevant records. There is a lack of uniformity within Australia about the legal and procedural

framework within which investigation of missing persons are conducted, and the interaction of that framework with coronial law procedures.

In order to overcome some of the problems encountered with this lack of uniformity, the National Missing Persons Unit (NMPU) (coordinated in Canberra) was established in 1995. The aim of the NMPU is to provide operational support to jurisdictions in the form of a national database for cases outstanding after 60 days or where the person has disappeared under suspicious circumstances (1). While police throughout Australia are able to access police resources and emergency services personnel to search for missing people, there remain obvious problems with the current investigative approach. One of the main problems is the lack of forensic medical, particularly, odontological, input.

Specialist human identification techniques lie at the heart of forensic medical practice. Forensic odontology is one specialist discipline that has a long history of use in the forensic sciences (2–4). Dental comparisons provide a timely and conclusive form of identification, being more definitive than identifications based on personal effects and more rapid, administratively and legally easier, and less physically intrusive than identification based on DNA analysis (5). Some of the limitations of the national tracking of missing persons in Australia are best illustrated by cases where investigations into missing persons whose identity was uncertain or unknown were delayed as a result of not including forensic odontological data.

¹ Centre for Human Identification, Victorian Institute of Forensic Medicine, Southbank, 3006 Vic., Australia; Department of Forensic Medicine, Monash University.

² Department of Anatomy and Cell Biology, The University of Melbourne, Melbourne, Vic. 3010, Australia.

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Case 1: Ms. C. R. (6 Months Between Reported Missing and Identification)

In March 2004, a 39-year-old Australian citizen, C. R., discharged herself from a Sydney hospital's psychiatric unit and travelled interstate to Queensland. Various reports claimed Ms. C. R. was disoriented and that she maintained she was a German national calling herself various German names. Although C. R. was never charged with an offence, she remained in a Brisbane detention center for approximately 6 months. C. R. underwent a psychiatric assessment at a Brisbane hospital, which failed to recognize the schizophrenia for which she had previously been receiving treatment and medication. C. R. claimed to be a German citizen who had entered Australia on a temporary visa. In November 2004, she was mistaken for an illegal immigrant and transferred to an immigration detention center in South Australia.

C. R. was reported missing in August 2004 by her family. The day after she was listed as missing, NSW police passed her details to the Department of Immigration, which failed to make a connection with the woman in its Brisbane detention center. Her identity and residential status were, however, not confirmed until February 2005, that is, 6 months after she was first reported missing. The unnecessary detention of a mentally ill person sparked a confidential Commonwealth inquiry into mental health issues and detention policies. One of the central issues addressed by the inquiry was the circumstances, actions and procedures which saw C. R. remain unidentified for so long (6).

Case 2: Mr. G. B. (8 Years Between Death and Identification)

In 1995, a 29-year-old male, G. B., arrived in Sydney from Austria. On 5 June 1996, he travelled from Sydney to Melbourne. In late July 1996, G. B.'s parents reported him missing to the NSW police. On 10 July 1996, a male was found drowned at Port Melbourne. An inquest was held on 17 February 1997, following which the unidentified remains were interred at a local cemetery.

A further request from G. B.'s mother was received in NSW on 22 January 2004 and passed onto the Victoria Missing Person Unit on the same date. As a result of a preliminary comparison of antemortem and postmortem photographs, it was thought that G. B. may be the unidentified individual buried at the local cemetery. On February 2004, a request for exhumation was granted and on 18 June 2004, a positive identification based on examination of antemortem and postmortem dental records was made.

Case 3: Ms. S. I. (17 Years Between Death and Identification)

On October 1986, Mrs. E. I. reported her 23-year-old daughter, S. I., missing. On 12 June 1987, skeletal remains were found in bushland 500 m off the Pacific Highway, 25 km south of Taree, NSW. The remains were mostly skeletonized with fractures to the skull and to the ribs as well as evidence of animal scavenging. The remains were identified as those of a young male, 16–18 years of age, 171 cm tall, who had sustained a major head injury. The case was re-opened in 1997 following the discovery of a shallow grave at the same location containing women's underclothes and jewelry. A second examination was performed in 1997 that indicated the remains were in fact those of a female aged approximately 20–25 years at the time of death. DNA taken at this time confirmed the sex to be female. In 1999, a facial reconstruction was undertaken and many members of the public phoned to suggest possible names, one of which was that of S. I. In 2003, S. I.'s

nephew recognized the facial reconstruction and following comparison of DNA samples from S. I.'s mother, a positive identification was made.

Discussion

The three cases outlined above clearly exemplify the ways in which identifying missing persons in Australia are significantly delayed when forensic odontological data are not included in missing persons' investigations. Such problems are, however, not unique to Australia with similar observations being made, for example, in some states in the US (7). In order to address some of these problems, we suggest the implementation of an Australian national missing persons dental records database.

National Dental Records Database

As early as 1977, the benefit of computer-assisted identification programs incorporating dental records to assist in the investigations of missing and unidentified persons was recognized (8). Since this time, dental databases have been established in various states of the U.S. [including California (9), Maryland (10), and Washington (7)] to assist in missing persons investigations, and are employed by the Central Identification Laboratory (Hawaii) to identify missing American servicemen (11–13). In 1997, the FBI created what is effectively a national dental database (14). Although many countries have yet to address this issue in relation to missing persons' investigations (15), the benefits of developing such a system have been acknowledged in countries such as Ireland (16) and Canada (17).

In Australia, forensic odontology has been employed in numerous cases where identity is unknown or uncertain. These include cases where remains were skeletonized (18), incinerated (19–21), or partly burnt (22). The routine employment of the forensic odontologist to assist in missing person inquiries, has however, been ignored. This is despite the fact that various Australian forensic odontologists have advocated the establishment of a national database of dental records (based upon the Interpol DVI data forms) for all reported cases of missing persons in Australia (23). In addition, Australian dental practitioners have supported the move towards legislation in all states and territories to impose a minimum standard for dental data recording and preservation of those records (21).

The successful outcome of a missing person's investigation utilizing a national dental records database necessitates the coordination of two phases: the acquisition of clinical dental records of those reported missing; and the collection of dental data from individuals whose identity is uncertain or unknown.

The formation of a national dental database would require storing reported missing persons clinical dental information within a specified time after an individual is reported missing. Provided the missing person has attended a dentist, relevant records may be filed at one or more dental surgeries. All dental information must be gathered, collated, interpreted, translated, and transcribed onto a database to allow access by all relevant policing and coronial agencies. The importance of dentists and dental laboratories retaining dental records cannot therefore be overstated (21). In order to avoid inaccurate information being entered into the database, the task of collecting and transcribing dental information (both from the living and the deceased) should be undertaken by a forensic odontologist, rather than police personnel who may be unfamiliar with dental terminology and scribing (5,10). Collecting information from living individuals whose identity is uncertain,

particularly those in care or detention, could be undertaken as part of routine health care assessment (as would have been the case with Ms. C. R.). The data is, however, most frequently derived from unknown deceased individuals who cannot be visually identified.

If a national missing persons dental records database was established in Australia, a rapid and accurate comparison of missing persons' dental information and unknown deceased or displaced individuals could be undertaken. This would require the database to be freely accessible to all state and territory missing persons units and Coronial Offices. Although there have been suggestions of developing and testing a national missing persons database using the CrimTrac agency, which provides DNA, fingerprints, and other evidentiary support to all of Australia's police forces, the act of linking missing persons to criminal activity is fraught with ethical and legal problems (24).

A database of clinical dental information could be easily managed and harmonized between a coronial system and a forensic medical institute. Such a relationship would ensure synergy between the legal and medical aspects of missing persons' investigations. For example, in Australia, a national missing persons dental records database could be incorporated into the NCIS (25) managed, on behalf of Australia's Coroners, by the Victorian Institute of Forensic Medicine. The existence of the NCIS would ensure operational collaboration in the implementation of the system and cost savings to Australian policing agencies involved in missing person enquiries. The time and resource frustrations felt by Australian police in relation to missing persons' inquiries have been noted (23). The ability to rapidly scan a database of reported missing persons' dental information against the dental records obtained from unidentified living or deceased individuals would drastically reduce investigation time and improve investigation outcomes. In North America where dental databases have been implemented, times of 2–3 days have been quoted from the discovery of the missing individual to the release of the body back to the family (5). Improvements in the investigation time and efficiency also have obvious social benefits, significantly reducing the emotional costs experienced by families.

If a national missing persons dental records database was currently available in Australia, the issue of uncertain identity at the time of Ms. C. R.'s detention would have prompted an examination of her dentition. Once reported missing, C. R.'s clinical dental records could have been sought and entered into a dental database. Confusion about her identity could have been immediately eliminated by the database, which would have compared C. R.'s clinical dental records with those taken while she was in care.

Both G. B. and S. I. were identified only after long and protracted investigations many years after they had been reported missing (8 years in the case of G. B. and 17 years in the case of S. I.). Both cases involved costly investigations (and exhumation in the case of G. B.), and large emotional burdens on the deceased's families. If a national missing persons dental records database had been in existence at the time G. B. was reported missing, a comparison between his antemortem records and the postmortem dental information from the unknown deceased person recovered in Melbourne could have been made. G. B. would have been identified in a timely manner and immediately repatriated to his family in Austria. Similarly, dental records may have been available at the time S. I. went missing. Recent examinations of S. I.'s dentition indicate particular dental anomalies for which she would have visited a dentist. Had S. I.'s records been accessed through a national database of antemortem dental records, S. I.'s identity would have been established in a timely manner.

Conclusion

While precise statistics for unidentified remains are difficult to obtain, reports of over 200 unidentified individuals in the state of NSW alone have been cited in the literature (26). In order to address these statistics, current missing persons' investigations within Australia require more detailed forensic medical, specifically odontological, input. In 1995, the Australian Police Commissioners Conference examined the feasibility of a National Missing Person Data Base (23). In 2005, Australia still does not have a national database of missing persons. While there have been complaints about missing persons investigations (27), the case of C. R. sparked national outrage leading to a Commonwealth inquiry (28). The cases presented in this paper highlight the vital need for a national missing persons dental database to be developed in Australia to help identify otherwise unidentified human remains and more immediately whose identity is uncertain.

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Additional information and reprint requests:
 Soren Blau, Ph.D.
 Centre for Human Identification
 Victorian Institute of Forensic Medicine
 57-83 Kavanagh Street
 Southbank, 3006 Vic.
 Australia
 E-mail: sorenblau@vifm.org