

COMMENTARY

The Future of Forensic Anthropology Practice and Education: Competencies, Certification, and Licensure

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ABSTRACT

Forensic anthropology must embrace standards and credentialing that align with other medicolegal disciplines, such as forensic pathology and forensic odontology. This involves establishing itself more firmly as an essential specialty in the medicolegal system and limiting practice to qualified professionals. Without educational or professional requirements to practice forensic anthropology, the competencies of those involved in medicolegal cases vary, despite the potentially serious legal impact of errors. Negligent work can impede decedent identification or wrongly convict or free a suspect. Erroneous and unprofessional work also misrepresents the field and may deter agencies from utilizing forensic anthropologists. This commentary aims to convey the need to further professionalize forensic anthropology through the standardization of education, qualifications, and practice. Differences between certification and licensure and their implications are discussed. Recent and upcoming developments in the field highlight progress, including the development of a multi-level certification system and list of core competencies by the American Board of Forensic Anthropology (ABFA). Additionally, the Anthropology subcommittee of the Organization of Scientific Area Committees for forensic science (OSAC) is developing a standard for qualifications in forensic anthropology. These developments emphasize the importance of certification and standardization in education and training for the advancement of forensic anthropology. Standardization efforts such as these will foster a cohesive, respected practice to serve the evolving needs of the medicolegal system.

Forensic anthropology in the United States grew from a confluence of expertise in anatomy, anthropology, and osteology as medicolegal death investigation personnel requested assistance in examining skeletal remains (Passalacqua and Clever 2024). Forensic anthropologists assist in the search and recovery of

human remains, identification of unknown decedents, and contribute information about the circumstances of death. This led in 1972 to the creation of the Physical Anthropology section (now the Anthropology section) of the American Academy of Forensic Sciences (AAFS), and the establishment of the American Board

of Forensic Anthropology (ABFA) as a certifying body in 1977. Nevertheless, a decade later Işcan (1988) bemoaned:

It was hoped that official certification would elevate and standardize the credentials of anthropologists who serve as consultants and expert witnesses. However, even now many members of the criminal justice system as a whole do not really understand that all physical anthropologists do not have the proper background or credentials and are thus not qualified to serve in a forensic capacity. This confusion is further compounded by uncertified anthropologists who “assist” law enforcement agencies instead of referring cases to or at least consulting their more appropriately trained colleagues. This is a very serious problem since their involvement can impede proper identification of unknown remains, or worse yet, affect the outcome of a trial.

(Işcan 1988, 204)

Since then, forensic anthropology has become increasingly professionalized (Passalacqua and Pilloud 2021), but still struggles with a lack of awareness and appreciation by many other anthropologists and medicolegal death investigation professionals (e.g., Langley et al. 2023).

These issues are not unique to forensic anthropology and may originate from the piecemeal and underfunded United States medicolegal death investigation system (e.g., Kemp 2014; Passalacqua et al. 2020; Zaychik 2024; National Institute of Justice 2019). In an effort to strengthen forensic science in the United States, the National Research Council (2009) provided 13 recommendations. A key recommendation states: “Laboratory accreditation and individual certification of forensic science professionals should be mandatory, and all forensic science professionals should have access to a certification process” (National Research Council 2009, 25). The report also stresses the importance of establishing quality assurance and quality control procedures.

Multiple factors hinder these goals and standardization in forensic anthropology, including the diversity of settings in which it is practiced (e.g., academic consultants, human rights, and government agencies), differences in the availability of resources to practitioners, variation in education and training programs, and broader resistance to standardization in anthropology (e.g., Fluehr-Lobban 2003). Unfortunately, lack of standardization in learning outcomes and competencies leads to practitioners with disparate (and potentially deficient) skills. As a result, stakeholders often have an incomplete or false understanding of what forensic anthropologists do and how to assess their qualifications.

As forensic anthropology grows to meet the needs of the United States medicolegal system and the recommendations of the 2009 NRC report, the conversation regarding professionalization is gaining momentum, particularly concerning the development and implementation of core competencies, certification, and

licensure. However, many in the broader biological anthropology community are unaware of this move toward professionalization and standardization in forensic anthropology. As such, the goal of this commentary is to review the latest efforts to further professionalize forensic anthropology, including developments in competencies, certification, and licensure.

1 | Current State

The ABFA has offered certification for forensic anthropologists with a doctoral degree since 1977 and became an accredited Conformity Assessment Body in 2004 after review by the Forensic Specialties Accreditation Board (Boyd et al. 2020). The ABFA is the sole certifying body for forensic anthropologists in the United States and the only accredited certifying body for forensic anthropology in the world. Currently, ABFA certification is only eligible for individuals with a doctoral degree in anthropology or a closely related discipline. Individuals must submit a formal application demonstrating their qualifications and pass a rigorous examination with written and practical components. Presently, there are 123 active ABFA-certified forensic anthropologists, referred to as Diplomates of the ABFA. Active Diplomates complete recertification every 3 years; inactive Diplomates may be retired, deceased, or decertified. Recertification stipulates that Diplomates be in good standing (e.g., current on dues and signed ethics acknowledgements) and meet a threshold for activity in the discipline, to include casework, teaching, research, and continuing education in forensic anthropology. For more information on the ABFA and certification, see (www.theabfa.org).

Forensic anthropologists work in various settings: Federal, state, and local government laboratories, medical examiner and coroner offices, federal agencies (e.g., Federal Bureau of Investigation, Defense POW/MIA Accounting Agency, National Transportation Safety Board), universities, and non-government organizations (e.g., the International Committee for the Red Cross). Certification ensures practitioners are competent in undertaking medicolegal casework (the competencies assessed by the ABFA's certification exam are available at: <https://www.theabfa.org/multilevel>). It also provides stakeholders with a public, objective means of assessing forensic anthropology qualifications, as the ability to identify forensic anthropological expertise solely from communication with potential practitioners (i.e., interactional expertise) has been shown to be subjective and unreliable (Passalacqua et al. 2023). Unqualified practitioners present risks to decedents and their families, the reputation of the discipline, and trust in the medicolegal death investigation system. Recent media reports of egregious errors and unethical behaviors of individuals without the requisite training (e.g., Passalacqua and Pilloud 2021; Stelloh 2023) underscore why forensic anthropology practitioners must understand the legal responsibilities of their work (Galloway et al. 1990). Unqualified individuals may not understand how to operate within medicolegal jurisdictions and are not trained in evidence handling procedures, quality assurance programs, best practices, forensic report writing, discovery requirements, and court proceedings.

Certification binds professionals to a code of ethics and conduct. An ABFA ethics committee reviews possible infractions

and may mandate censure, suspension, or decertification. Non-certified practitioners are not subject to a forensic anthropology-specific ethical code and may not be subject to professional consequences for unethical behavior (e.g., Passalacqua and Pilloud 2021; Ebersole 2022). Forensic anthropologists often are members of other professional organizations with ethical codes, but these codes are not specific to medicolegal practices (e.g., do not mention service fees, agency/client confidentiality, or impartial reporting of case conclusions).

ABFA certification is different from licensure. Certification is regulated by an accredited oversight body but is not legally required to practice. Licensure represents a statutory regulation of an individual's disciplinary qualifications and is legally required to practice. Licenses typically are created and regulated through state laws and oversight bodies (Hogan 1983). License-regulated professions enforce legal consequences for practicing without a license. Numerous professions require licensure, including medicine, dentistry, cosmetology, electricians, chiropractors, mechanics, insurance agents, plumbing, acupuncturists, and nursing. Over half of the AAFS sections require licensing for their forensic professionals (7 out of 12 sections). Despite the legal implications of forensic anthropology practice (e.g., court proceedings, medicolegal investigations), no federal or state laws, or licenses, except for Texas, exist for practice¹.

Like certification, a license serves as a formal recognition of expertise, ensuring practitioners meet standards of knowledge and skill, increasing public trust and credibility, and promoting ongoing education and professional development. Licensure provides a layer of assurance for stakeholders by establishing a legal framework for the ethical practice of a discipline. This protects professionals and the public from malpractice. It also enhances job opportunities and career advancement. Many employers prefer or require licensure for applicable positions, recognizing it as a mark of professionalism and commitment to one's discipline. Forensic anthropologists are discussing the possibility of licensure, but concerns include the small number of certified practitioners and lack of establishment of forensic anthropology as a medicolegal necessity.

Forensic anthropology must establish itself more firmly as an essential practice within the medicolegal system. Many states fund legislatively established state archeology offices and require the use of those offices (e.g., archaeological skeletal material). Only three states have laws listing required qualifications and use of an anthropologist in modern forensic skeletal cases (Texas, Louisiana, and Washington) (Carter et al. 2022). The National Association of Medical Examiners (NAME) accreditation program indicates forensic death investigation systems/offices should have access to an ABFA-certified forensic anthropologist. This is a Phase I standard, however, which is considered a non-essential requirement; full accreditation can be attained with 15 Phase 1 deficiencies (National Association of Medical Examiners 2023). Few medical examiner's offices are NAME accredited, further highlighting issues with standardization, accreditation, and funding within the forensic sciences. In 2021 the ABFA surveyed medical examiner and coroner offices via the NAME email distribution list to gather information about how agencies utilize forensic anthropologists. The survey received 19 responses, and 36.8% ($n = 7$ out of 19) reported

having a forensic anthropologist on staff; of these staff anthropologists, 57.1% ($n = 4$ out of 7) were ABFA-certified (Langley et al. 2023). The remaining agencies ($n = 12$ out of 19) consult with an external forensic anthropologist as needed, with 46% of these agencies reporting their consultants were ABFA-certified. Ten responding agencies (52.6%) indicated their office considers ABFA certification important. These survey results, although limited, indicate a need to increase the utilization of board-certified forensic anthropologists in medical examiner settings.

2 | Progress and Future State

The medicolegal system needs access to a larger forensic anthropology workforce that is properly educated, trained, and certified (Pilloud et al. 2022). Defined, standardized competencies will guide education and training programs in preparing graduates to work in the rapidly evolving medicolegal system (Langley and Tersigni-Tarrant 2020). Currently, forensic anthropology educational programs are not accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC) or any other accrediting body. Few programs offer a degree in forensic anthropology, and many offer forensic anthropology education within a broader degree program (e.g., anthropology or forensic science degrees, which may or may not have formal concentrations in forensic anthropology). Consequently, no standardized forensic anthropology curriculum exists for students to gain the skills and experience in all areas required for certification (Passalacqua and Pilloud 2020; Galloway and Simmons 1997).

Recently, the ABFA released competencies with the rollout of a new multi-level certification program (www.theabfa.org/multi-level). The ABFA's certification processes (i.e., application, examination, recertification) are aligned with these competencies, which may serve as a guide for educators and mentors who train forensic anthropologists. Aligning curricula with the competencies outlined by the ABFA would be a significant step toward standardization and preparing graduates and trainees to enter the workforce as certified practitioners. The competencies published on the ABFA website also provide stakeholders with information about the skills of certified practitioners.

The multilevel certification program provides a mechanism for individuals with a minimum educational requirement of a master's degree to become certified as Analysts. Analyst certification will require an application demonstrating education and training in forensic anthropology followed by a competency-based examination. After 2025, individuals must be certified as an Analyst before being eligible for Diplomate certification, which will still require a doctoral degree and separate certification exam. The primary difference is that Analysts are certified to perform technical and analytical skills, whereas Diplomates are certified to perform analytical skills and interpretive tasks. For example, the ABFA competencies specify that an Analyst shall be able to "describe classic characteristics of major classes of skeletal trauma," while a Diplomate shall be able to "interpret skeletal defects associated with the various trauma types, including possible trauma mechanisms" (www.theabfa.org/multi-level). This tiered, competency-based certification system aims to provide stakeholders with access to a larger pool of certified practitioners.

Standards documents (e.g., Best Practice Recommendations, Standards, Guidelines, and Technical Reports) are also being developed to provide a framework for consistency, reliability, and quality across practitioners in a forensic discipline (Academy Standards Board 2022). The need for standardization of practice was emphasized in the 2009 NRC report (National Research Council 2009). The United States federal government answered by creating and funding The Organization of Scientific Area Committees for forensic science (OSAC), which is administered by the National Institute of Standards and Technology (NIST). The OSAC plays a pivotal role in developing and promoting the implementation of discipline-specific forensic science standards documents, as does the American Academy of Forensic Sciences Standards Board (ASB), which is an accredited Standards Development Organization (SDO). The OSAC and ASB collaborate in creating standards documents that outline minimum requirements, best practices, standard protocols, and terminology to promote valid, reliable, and reproducible forensic practice and results (OSAC Registry 2024). The Anthropology Consensus Body of the ASB has published several standards (e.g., sex estimation, pathological conditions/anomalies, age estimation, population affinity estimation, taphonomic observations, resolving commingled remains, medicolegal significance, stature estimation, personal identification, skeletal trauma, and scene detection and processing), all available on the ASB website (<https://www.aafs.org/search/standards>). The ABFA certification examination requires knowledge of ASB and OSAC standards.

The OSAC Anthropology subcommittee is developing a “Standard for Qualifications for Forensic Anthropology Practitioners.” This standard delineates minimum qualifications for forensic anthropology practitioners in the United States, including education, training, competency areas, experience, certification, ethics, and professionalism. This crucial step toward standardizing the discipline will provide stakeholders with a list of qualifications to assess practitioners, but no means of enforcing these qualifications exists aside from identifying deficiencies in court (Plourd 2023).

3 | Conclusions

Forensic anthropology has changed since its formal creation in the 1970s, and must continue to adapt to meet the expectations and needs of the forensic sciences and their stakeholders. Implementation of standards and emphasis on certification are key steps toward quality control and the advancement of forensic anthropology. The lack of standardization leaves the discipline vulnerable to unacceptable and unethical practices by unqualified individuals. Certification has never been more accessible, and we argue it should be a requirement to practice forensic anthropology as a means to demonstrate competency and professionalism, and to have ethical oversight. Inadvertent errors or unprofessional interactions misrepresent the discipline at large. Key steps toward further professionalizing the discipline include: (1) the ABFA’s new multi-level certification program, (2) the upcoming OSAC standard for forensic anthropology practice and qualifications, and (3) discussions surrounding the benefits of certification and licensure of forensic anthropology practitioners.

Author Contributions

Natalie R. Langley: conceptualization (equal), investigation (equal), writing – original draft (lead), writing – review and editing (equal). **MariaTeresa A. Tersigni-Tarrant:** conceptualization (equal), investigation (equal), methodology (equal), writing – original draft (supporting), writing – review and editing (equal). **Nicholas V. Passalacqua:** conceptualization (equal), investigation (equal), writing – original draft (equal), writing – review and editing (equal). **Christian M. Crowder:** conceptualization (equal), writing – original draft (supporting), writing – review and editing (equal). **Heather M. Garvin:** writing – original draft (supporting), writing – review and editing (equal). **Wendy E. P. McQuade:** writing – original draft (supporting), writing – review and editing (equal). **Miriam Soto Martinez:** writing – original draft (supporting), writing – review and editing (equal). **Marin A. Pilloud:** conceptualization (supporting), writing – review and editing (supporting).

Ethics Statement

The authors confirm that this research adheres to all ethical standards, including obtaining informed consent from all human participants, maintaining confidentiality of data, and following relevant institutional and national guidelines for research involving human subjects.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

Endnotes

¹ The Texas Forensic Science Commission offers a general forensic analyst license that is not specific to forensic anthropology and currently is voluntary for forensic anthropologists. (<https://fsc.txcourts.gov/LicenseePublic/Overview>).

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