

G12 A Biometric Identification System and Border Control: A Proposal for the Integration of Digital Orthopantomograms (OPGs) and Odontogram Data of Migrants

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After attending this presentation, attendees will better understand the standards and procedures applied when legal/illegal migrants cross borders in Italy, Spain, and Saudi Arabia.

This presentation will impact the forensic science community by presenting the results of the possible integration of dental evaluation and panoramic X-ray in the border control system for asylum seekers for the identification of illegal migrants and for age estimation.

The increase in migration across countries has led to a range of problems in public health, border control, and human rights. An investigation into border controls for asylum seekers was performed in Italy, Spain, and Saudi Arabia to evaluate the procedures in place for identification, age assessment, and general health of migrants. A result of this investigation was the proposal that dental and odontological examinations should be included in the checks performed at national borders.

For non-European Union (EU) nationals entering Europe and Saudi Arabia, entrance is controlled by passports and fingerprints. In Spain and Italy, fingerprints are taken when there are doubts about a person's identity. Those without identification documents follow a different legal path because of the need for identification and the implications for public health. Migrants are taken to a hosting center where they are lodged until they are identified. The migrants receive humanitarian assistance and health care during their stay at the hosting center, including general health evaluations, medical examinations, X-rays, blood chemistry tests, and microbiological analysis. In Saudi Arabia, all visitors must have their fingerprints taken when applying for a visa and they are checked at border control. Saudi Arabia recently introduced a campaign to fight illegal immigration (Violators Of Residence And Work System (VORAWS)) through collaboration between the Ministry of the Interior, the Ministry of Foreign Affairs, the Ministry of Labor, the Ministry of Social Services, the Ministry of Health, and the Border Agency. Migrants are held in a center while the process of extradition and/or identification takes place. Similar health controls as those described above are performed to evaluate migrant health status.

Age estimation of unaccompanied minors arriving at the borders of Spain, Italy, and Saudi Arabia is not performed using a standardized protocol. Age estimation procedures can include a physical examination and interview, wrist X-ray, panoramic OPGs, and a Computed Tomography (CT) scan of the proximal clavicle, but only at the discretion of the medical examiner. Dental age estimation methods are not always included in the age assessment protocols and judicial procedures. The preliminary results of this study indicated that dentistry and odontology are not included in the general health evaluation and forensic assessment of migrants, although dental care often seems to be requested by migrants (depending on their length of stay at the hosting centers).

The analyses of this study suggest that dentistry and dental radiology should be performed as part of the general health evaluation of migrants, and the dental fitness scores suggested by the North Atlantic Treaty Organization (NATO) and the International Criminal Police Organization (INTERPOL) should be applied. This also could help substantiate relevant identification data through the development of a database of odontographs and digital OPGs. Migrant dental records also could help identify those attempting to enter using an alias or with false, incomplete, or altered fingerprints. Dental data could additionally be used for a complete age estimation procedure for unaccompanied minors. Emphasis should be placed on the inclusion of dentistry and dental radiology in the general health evaluation of migrants. This proposal would lead to an archive of dental data that would allow better medical/dental care and provide forensic opportunities for positive identifications and age assessments.

Migrants, Age Estimation, Human Identification