Methodology for Developing the American Dental Association Office Database

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The American Dental Association (ADA) masterfile, which includes a census of all professionally active dentists in the United States, was used as the primary source of business addresses for the dentist office database. Addresses in the masterfile are provided to the ADA via the ADA Distribution of Dentist Survey, the ADA Survey of Dental Graduates, state dental societies, and local dental associations. State licensure databases are routinely used to update the masterfile. Along with business addresses, the ADA masterfile[1] includes dentist name, dental specialty, date of birth, gender, year of graduation, and dental school of graduation. The masterfile serves as the core database upon which the dentist office database is built. For any given year, the dentist office database uses a snapshot of the masterfile as of November of that year.

We supplemented the masterfile with data from the National Provider Identifier (NPI) dentist registry. The NPI registry is maintained by the Department of Health and Human Services' (HHS) Centers for Medicare and Medicaid Services (CMS) for all healthcare providers who submit insurance claims electronically.[2] The NPI database includes fields such as individual dentist NPI number – a unique identification for an individual dentist – and a business address. The NPI data for a particular year are taken during the fall months of that particular year.

We incorporated data from Insure Kids Now (IKN), a website that identifies dentists that participate in Medicaid or the Children's Health Insurance Program (CHIP) for child dental care services. The IKN website is maintained by CMS.[3] Through a data use agreement, CMS provided raw data to HPI for all states. The purpose of the IKN website is to help families in each state locate Medicaid or CHIP dental providers for their children. For each state, CMS provided a full roster of Medicaid or CHIP providers for three months covering the fall of that particular year. We removed duplicate observations and used exact and fuzzy matching methods to merge IKN records to the ADA masterfile. In some cases, IKN only

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provides the address of a dental office participating in Medicaid or CHIP, but no dentist information. In those instances, we considered all dentists working at that address as participating in Medicaid or CHIP. The shortcomings of the IKN database have been documented,[4] but it remains the best available source of data nationwide on dental care providers participating in Medicaid or CHIP. HPI's analysis of these data is considered to be the most sophisticated and thorough.[3]

We incorporated data on dentist affiliation with dental service organizations (DSOs). DSOs are entities that provide compliance, accounting, billing, supply, inventory and management services to dental practices. DSO affiliation status is based on a list provided by the Association of Dental Support Organizations (ADSO).[5] We collected data on dental office locations from the website of each ADSO member based in the U.S. We do this during the fall months. We also included data from three large DSOs that are not members of ADSO: Western Dental, Kool Smiles, and American Dental Partners. The data included dentist name and office address. Using exact and fuzzy matching methods, we matched dentists from the DSO database into the masterfile. We also collected data on group practices that are not affiliated with ADSO via web searching. These group practices are not considered as DSO-affiliated in our analysis, although in practice they may mimic the ADSO member companies.

We incorporated data from HRSA on Federally Qualified Health Center (FQHC) provider sites during the fall of the relevant data year.[6] Based on dentist address data in the ADA masterfile, NPI dentist registry, DMSO tables and IKN database, we were able to map dentists into specific FQHCs. These locations are included in the office database.

Using these methods, we were able to assign at least one office address to 98 percent of dentists within the ADA masterfile. Finally, we used Melissa Data Services and Microsoft Bing to geocode office addresses.

References

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