THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

Department of Health Policy and Management

Analysis of the Impact of Dental Assignment of Benefit Laws

Report to the American Dental Association and Fleishman Hillard

Leighton Ku, PhD, MPH
Erin Brantley, PhD, MPH

December 2, 2020

Summary. This brief provides a simple, but imperfect, analysis of the number of total dentists participating in insurers' Preferred Provider Organization (PPO) networks in four states that passed Assignment of Benefit laws between 2009 and 2017 (Tennessee, New Jersey, Mississippi and South Dakota). We use data for the years from 2007 to 2019, reported by the National Association of Dental Plans (NADP) in a series of reports about dental networks. The analysis finds that the number of total dentists participating in PPO networks in the states did not decline, but actually rose, following the adoption of AOB laws.

We note, however, that the analysis is imperfect because (1) we are unable to identify the number of dentists participating in specific insurance networks (e.g., Delta Dental, Aetna, Cigna, etc.) in each state by year and (2) the NADP data about dentists in insurance networks were measured inconsistently across years, so the trends may not be accurate. At the end of this report, we discuss our original research plan for this report and the difficulties encountered in trying to conduct more definitive analyses.

Background on Assignment of Benefits. A fundamental aspect of dental insurance is the development of dental provider networks: dentists who agree to treat patients covered by the insurance plan under contractual terms, including terms about reimbursement rates, cost-sharing, dental benefits covered, and other details. Dentists (or their practices) who agree to participate with a given insurance plan sign contracts or agreements and can be listed as participating dental providers by the insurance plan. Participating dentists who care for members of those insurance plans may submit bills directly to the insurer for payment under pre-established terms and the patients are responsible for paying the dentist the authorized cost-sharing amounts, which may include deductibles, copayments or coinsurance. When dentists join insurance networks, they believe that it may help them increase the volume of patients, even if reduces their practice autonomy somewhat.

A common business practice is Assignment of Benefits (AOB). Under AOB, a policy holder (the patient) may permit a third-party (i.e., a non-participating dentist) to bill the insurance plan directly and collect authorized reimbursement from the insurer, while the patient pays the dentist the balance of their bill. Non-participating dentists do not need to limit their rates to contractual levels and patients may pay higher cost-sharing amounts. Some states, including the four states discussed later, require that dental insurers permit AOB. In states that lack state AOB laws, insurers have discretion about whether to use AOB or not; some permit it, while others do not and only reimburse dentists participating in the plan networks.

Milken Institute School of Public Health
950 New Hampshire Avenue, NW | 6th Floor | Washington, DC 20052
t 202-994-4100

Using a hypothetical example, let's say that under an insurance plan, the total authorized fee for a simple dental amalgam filling is $100, of which the patient is responsible for 20%. An in-network dentist who normally charges $150 for a filling may collect $80 from the insurance plan and $20 from the patient. If AOB is in effect, a dentist who does not participate in that insurer's network can bill the insurer for $80 and may seek up to $70 from the patient. Without AOB, the dentist may not directly bill the insurer and seek to collect the $150 fee from the patient, although the patient may be able to receive $80 reimbursement from the insurer. (In practice, the dentist may have discretion about collecting cost-sharing amounts from patients and may accept smaller amounts in some cases.)

Some insurers object to AOB and believe it deteriorates the strength of their provider networks, can increase costs to patients (since patient costs are likely higher with out-of-network providers) and may reduce the quality of patient care, since non-participating providers need not agree to quality-related terms established in contracts. Advocates for AOB believe that it improves provider autonomy, expands patient choice and helps both clinicians and patients since the dentists can bill insurers directly, reducing the patient's initial out-of-pocket payment and easing paperwork.

Analysis of NADP Data on Total Size of Dental Networks. For many years, the National Association of Dental Plans (NADP), often in collaboration with Delta Dental Plans Association, has published statistics about the total number of dentists participating in at least one insurance network in each state.[1] These statistics do not show the number participating in specific plans (e.g., Delta, Aetna, Cigna, etc.), just the overall number participating in insurance networks in the state.

The data collection methodology and the number of plans which are included in the NADP reports have changed over the years. For example, in the 2009 report, NADP surveyed 11 dental plans about their dental networks (dentists participating in HMO and PPO plans) and analyzed data submitted, equivalent to data from their published provider directories. Later reports indicated that data collection was contracted to the Ignition Group, which surveyed 23 networks for 2013, 27 for 2014 and 23 for 2015 (not the same 23 as in 2013) and also collected information for 75 networks (which partially overlapped the firms surveyed) using Netminder, apparently collecting information from online provider directories. The 2019 report was conducted by Zelis Network Analytics (which purchased the Ignition Group); the report did not discuss the data collection methodology, but a representative mentioned that it continued to abstract information from online provider directories. We note that data contained in provider directories are not always correct: a listed dentist may have left the plan or retired but the directory was not updated, or a dentist who joined the network recently is not yet listed in the directory.

In our analyses we focus on PPO networks, which are far larger than HMO networks. In all the years, NADP or its contractor took steps to "unduplicate" dentists who participate in multiple plans, so that the total is the number of unique dentists participating in PPO networks in at least one plan. That is, if a dentist participates in three dental networks, he or she is only counted once for the overall state total.

In Table 1 (below), the final column shows the year-over-year annual growth in the national number of participating dentists. The substantial fluctuations suggest serious data inconsistencies over time,

[1] National Association of Dental Plans. Network Statistics, Provider Networks and similar titles. Published in 2009, 2011, 2012, 2013, 2014, 2015, 2017, 2019. Made available to us from the American Dental Association.

although we believe that there is an overall increase over time because dentists have become more willing to accept dental insurance over time and participate in insurance networks.

Table 1 (below) presents changes in the number of total dentists participating in PPO networks in four states (Tennessee, New Jersey, Mississippi and South Dakota as well as nationally) that adopted AOB laws between 2007 and 2017. (West Virginia adopted an AOB law in 2020, but we lack data for 2020 or 2021 networks). If AOB laws caused dental provider networks to shrink, we might expect to see fewer dentists participating in networks in the years after AOB laws were passed. In all four states, the total number of dentists participating in PPO networks increased over the years. In the next to last row, we show the percentage gain in participating dentists since the AOB law was passed. For example, the number in Tennessee network appeared to grow by 159% between 2007 – when its AOB law was enacted – and 2019.

As noted above, the dental network data appears flawed due to changes in methodology. To try to compensate for this problem, we made a simple adjustment by dividing the change in each state's network size from the AOB year to 2019 by the equivalent changes in the national number of dentists from the AOB year to 2019, called the Adjusted Gain, shown in the last row. This roughly compares the change in the state network size to national network changes over the same period. Even after this adjustment, the number of participating dentists in Tennessee grew by 82% from 2009 to 2019. In Tennessee, New Jersey and Mississippi, there was substantial growth in the number of total dentists, even after reporting adjustments, between the year their AOB laws were enacted to 2019. In South Dakota, there was a small gain from 2017 to 2019.

Table 1. Changes in Total Dentists Participating in PPO Plans After Assignment of Benefit Laws Adopted, by Year (Based on data reported to the National Association of Dental Plans)

Data Yr	Rept Yr	Tennessee	New Jersey	Mississippi	South Dakota	United States	Ann Growth
Year of AOB law		**2009**	**2012**	**2013**	**2017**		US
2008	2009	2,120	6,862	639	122	132,003	
2009	2011	2,085	5,707	526	44	148,347	12.4%
2010	2012	2,258	6,299	667	128	116,978	-21.1%
2011	2013	2,781	6,615	722	152	158,079	35.1%
2012	2014	2,713	6,711	740	134	158,463	0.2%
2013	2015	2,430	6,603	780	205	158,121	-0.2%
2014	2015	3,275	8,124	958	222	193,370	22.3%
2015	2016	4,636	10,991	1,559	508	211,371	9.3%
2016						missing	
2017	2017	5,242	14,597	2,225	558	220,027	4.1%
2019	2019	5,395	15,105	2,404	583	210,304	-4.4%
Gain from AOB Yr to 2019		**159%**	**125%**	**208%**	**4%**	**na**	
Adjusted Gain*		**83%**	**70%**	**132%**	**9%**	**na**	

* The state-specific gain from the AOB year to 2019, divided by the national change in that period.

In Table 2, we present similar data for general dentists, the largest dental specialty, who provide routine preventive and acute dental care, excluding specialists like endodontists and orthodontists. The results are similar to those for total dentists; the number of participating general dentists grew after AOB laws were enacted.

Table 2. Changes in General Dentists Participating in PPO Plans After Assignment of Benefit Laws Adopted, by Year (Based on data reported to the National Association of Dental Plans)

Data Yr	Rept Yr	Tennessee	New Jersey	Mississippi	S Dakota	United States	Ann Growth
Year of AOB law		**2009**	**2012**	**2013**	**2017**		US
2008	2009	1,640	5,159	518	104	112,630	
2009	2011	1,567	4,157	432	40	118,082	4.8%
2010	2012	1,665	4,532	613	110	89,590	-24.1%
2011	2013	2,141	4,757	571	133	123,186	37.5%
2012	2014	2,018	4,853	592	119	122,715	-0.4%
2013	2015	1,919	5,003	643	177	126,105	2.8%
2014	2015	2,524	6,159	769	195	153,531	21.7%
2015	2016	3,579	8,123	1,238	413	196,071	27.7%
2016						missing	
2017	2017	3,798	8,210	1,390	454	203,916	4.0%
2019	2019	3,977	8,260	1,408	471	196,651	-3.6%
Gain from AOB Yr to 2019		**154%**	**70%**	**119%**	**4%**	**na**	
Adjusted Gain*		**52%**	**6%**	**40%**	**8%**	**na**	

* The state-specific gain from the AOB year to 2019, divided by the national change in that period.

Again, we note that these analyses have significant limitations. Ideally, we would like to know the number of dentists participating in each dental plan in each year, measured consistently, but these data were not available (see below). It is plausible that the total number of unduplicated dentists in a state could grow, even if the average membership in each plan shrank.[2] The lack of information about membership in specific plans means that we cannot assess the impact of AOB for a specific insurance plan. Moreover, the completeness of reporting appeared to vary substantially from year to year, so the trends may not be accurate.

Original data collection and analysis plans. The goal of this project was to estimate the effect of state-level AOB laws in the size of insurance plans' dental networks. Four states were of particular importance because they had enacted AOB laws in the past several years, including Tennessee in 2009,

[2] Imagine a simple hypothetical case involving 8 dentists (Dentist A, B, C, D, E, F, G and H) in a state and two networks, Plan 1 and Plan 2. In the first year, Plan 1 includes dentists A, B, C, D and E, while Plan 2 has dentists A, B, C, D and F; the total statewide number of participating dentists is 6 in the first year and each plan has 5 dentists. In the second year, Plan 1 includes dentists A, C, D and H while Plan 2 has dentists B, E, F and G. The total number of participating dentists statewide rises to 8, even though each plans' network declined from 5 to 4. While this is an unlikely scenario, it demonstrates that changes in the number of total statewide dentists and changes in the number of dentists in each plan might not be consistent.

New Jersey in 2012, Mississippi in 2013 and South Dakota in 2017. Ideally, we wanted to find data about the number of participating dentists in each plan in those states in years before and after AOB laws were passed. If we had complete time series data about dental participation and state AOB laws, we could have conducted difference-in-difference analyses that let us examine changes in the size of insurers' dental networks after AOB laws were enacted. Unfortunately, this was not feasible due to the lack of data.

We contacted representatives of dental insurers about the availability of dental network data and their company policies. We learned about the data collected for NADP and were referred to Zelis Network Analytics, which collected those data. A Zelis representative said that we could purchase data about current insurance networks, but that historical data was not available because their computer systems had changed. NADP offered to sell us aggregate data from their annual reports, but we learned that these reports were already available from the American Dental Association, so we could get them without charge for this project.

We also considered the possibility that information about dental networks might be available in readiness documents that insurance plans file to participate in health insurance marketplaces. The readiness documents include data about insurers' provider networks, but we found that the documents just generally just linked to plans' current online provider directories, so they would only have the current 2020 directories even if we wanted to find listings for earlier years. That is, they are not a good resource for historical data.

An analytical alternative we considered, but which was less robust and which became infeasible, was to just use current network information from Zelis. We considered comparing the size of current dental networks in states that had vs. lacked AOB laws for insurers that do vs. do not permit AOB in states where they have the option. In principle, the combination of information about state laws and insurers' AOB policies could let us estimate the effect of state AOB laws.

We contacted a number of other dental insurers about their AOB policies, but the majority did not agree to describe their policies. Based on experience with other insurers, we suspect that this is viewed as proprietary business information which they do not choose to divulge. Delta Dental agreed to speak with us and explained that its corporate policy was to not permit AOB in order to strengthen the position of its provider networks and to provide better consumer protections through its contracts, although they comply with state laws that require AOB. They indicated that they, or their state representatives, sometimes engaged with state legislatures about this policy topic.

After pursuing these data for several months, we determined that it was not possible to get the appropriate data for an analysis that met our research standards. We were able to conduct a very simple analysis of existing data, described above, but understand its limitations.

It is regrettable that it was so difficult to get information about dental insurance networks, including data about the size or composition of networks or even qualitative information about dental insurance policies. In 2018, researchers from the American Dental Association's Health Policy Institute published an article titled "Why we need more data on the dental insurance market."[3] It is important to

[3] Vujicic M, Gupta N, Nasseh K. Why we need more data on the dental insurance market. *Journal of the American Dental Association*. 149(1): 75-77.

understand how dental insurance plans are functioning, providing access to patients and promoting quality and competition. Unless there is greater transparency and availability of data about dental insurance networks, it will be difficult to assess how effective insurance plans are in promoting access to care for their patients.