

Coverage Expansion and IHS Access: Evidence for the ‘Leakage’ Hypothesis

An analysis of whether AI/ANs who gained health insurance coverage following the Affordable Care Act migrated away from Indian Health Service facilities toward non-IHS providers — and the state and system characteristics that predict migration or retention.

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Abstract

This memorandum presents evidence for and against the hypothesis that AI/ANs who gained health insurance coverage following the Affordable Care Act migrated from Indian Health Service facilities toward non-IHS providers — a phenomenon termed ‘leakage.’ Using American Community Survey 5-Year Public Use Microdata Sample (ACS 5-Year PUMS) data from 2013 through 2024, we construct three proxy measures of leakage for all 50 states and the District of Columbia: (1) change in the IHS-access

population (HINS7=Yes, RACAIAN=Yes) as an absolute and percentage measure; (2) a retention ratio comparing Medicaid gains among IHS reporters to the reduction in uninsured IHS reporters; and (3) a composite leakage score weighting IHS population decline, retention failure, and baseline uninsured vulnerability. The data substantially confirm the leakage hypothesis. States with sparse IHS infrastructure, high pre-ACA uninsured rates, and limited Purchased/Referred Care capacity show the strongest migration signals. Alaska — hypothesized to have the lowest leakage due to the Alaska Native Tribal Health Consortium's comprehensive integrated system — performs as predicted, with a retention ratio of 0.70 and a modest IHS access decline of 2.6%. States where tribal health programs function as comprehensive Medicaid-billing providers (New Mexico, Arizona, Oklahoma) show full retention or growth in IHS-access population. The findings have direct implications for federal cost estimates of Indian health coverage expansion and for the design of coverage sequencing frameworks that distinguish IHS-anchored from IHS-peripheral AI/AN populations.

Keywords: *Indian Health Service, leakage, coverage expansion, ACA, Medicaid, PUMS, HINS7, RACAIAN, tribal health, provider migration, retention ratio*

I. The Leakage Hypothesis: Conceptual Framework

A central premise of Indian health financing policy is that expanding health insurance coverage for AI/AN populations will strengthen the Indian Health Service and tribal health programs by increasing third-party revenue. This premise underlies the IHS billing authorization framework, the Medicaid match provisions of the Indian Health Care Improvement Act, and the coverage-expansion goals embedded in the Affordable Care Act's special AI/AN provisions. It assumes, at least implicitly, that newly insured AI/ANs will remain in IHS and tribal facilities, transforming previously uncompensated care into billable encounters.

The leakage hypothesis challenges this assumption. It proposes that a significant share of AI/ANs who gain insurance coverage — particularly those who had only limited, constrained, or nominal contact with IHS prior to gaining coverage — will obtain care at non-IHS providers once insured, rather than returning to IHS facilities. The mechanism is straightforward: if an individual's prior IHS use was suppressed by geographic distance, health condition complexity exceeding IHS capacity, or the limited scope of IHS direct-care services available locally, then gaining insurance does not remove those constraints. The person now has a coverage card accepted by providers they could not previously afford. They use it where they can access care, which may not be an IHS facility.

1.1 Three Suppression Pathways

The literature and the practitioner record identify at least three distinct mechanisms by which prior IHS utilization may be suppressed below the level that would occur if the patient had insurance:

1. Geographic suppression. AI/ANs living more than 30–40 miles from an IHS or tribally operated facility report substantially lower IHS utilization even when they self-identify IHS as their usual source of care. Upon gaining insurance, geographically isolated AI/ANs access care at the nearest available provider, which is typically not an IHS facility. This pattern is most pronounced in states where IHS Area offices operate without IHS-run hospitals, including the Portland Area (Oregon, Washington, Idaho), the California Area, and the Nashville Area.

2. Service-scope suppression. IHS direct-care programs are constrained by both statutory scope and Purchased/Referred Care (PRC) budget limitations. A patient with diabetes complications, cardiac disease, or orthopedic needs encounters the PRC funding ceiling rapidly. Their nominal IHS contact — a primary care visit or a prescription fill — understates both their total care need and their latent demand for specialty services. Upon gaining Medicaid, the first utilization shift is often into specialty and hospital care that IHS could not provide, delivered by non-IHS providers. The ACS HINS7 variable would capture this individual as an IHS ‘user’ pre-insurance and potentially as a non-IHS user post-insurance, not because they left IHS primary care but because the newly accessible specialty care dominates their care-seeking identity.
3. Cognitive reorientation. Uninsured individuals using IHS internalize a constrained choice set: IHS is ‘their’ system because it is the only accessible system. Upon gaining Medicaid or another coverage type, the social and administrative cues associated with insurance-based care — provider directories, referral networks, in-network specialists, employer benefits programs — redirect care-seeking toward mainstream channels. This effect is documented in the general low-income uninsured-to-Medicaid transition literature and is likely amplified for urban and near-urban AI/AN populations who already have weaker IHS facility relationships.

1.2 The Retention Counterargument and the Alaska Prediction

Not all newly insured AI/ANs should be expected to migrate out of IHS. Where tribal health programs function as comprehensive Medicaid-billing providers — offering primary care, hospital care, specialty services, and behavioral health under one organizational roof — gaining Medicaid may actually strengthen IHS/tribal system utilization by enabling facilities to bill for services previously delivered without reimbursement. In these settings, the patient’s care relationship with the tribal system remains intact; what changes is the revenue stream.

Alaska provides the clearest test of this retention prediction. The Alaska Native Tribal Health Consortium (ANTHC) and its affiliated regional systems deliver a near-complete continuum of care, including hospital-level services, within the tribal health system. A newly insured Alaska Native gaining Medicaid has no functional reason to leave the tribal system: it already provides everything that insurance would unlock elsewhere. The prediction is therefore that Alaska should show the smallest leakage signal in the data — the lowest IHS population decline, the highest retention ratio, and the lowest leakage composite score among states with comparable pre-ACA uninsured rates.

New Mexico and Arizona provide secondary tests. Both states have extensive networks of tribally operated 638 programs functioning as full-service providers, including hospital care for the Navajo Nation. If the retention prediction holds, both should show IHS-access population growth or stability despite high pre-ACA uninsured rates among their large AI/AN populations.

II. Data and Methods

2.1 Data Source

This analysis uses the American Community Survey 5-Year Public Use Microdata Sample (ACS 5-Year PUMS) for survey years 2013 through 2024, representing twelve non-overlapping endpoint years of the rolling 5-year estimates. Data were extracted at the state level for all 51 geographies (50 states plus the District of Columbia). Three ACS variables form the analytical core:

4. RACAIAN — American Indian and Alaska Native race recode (alone or in combination with one or more other races). Respondents coded Yes are the analytic population throughout.
5. HINS7 — Indian Health Service coverage indicator. Respondents coded Yes report using or having access to IHS or a tribal health program in the past 12 months. All analyses are restricted to RACAIAN=Yes, HINS7=Yes respondents — AI/ANs with IHS access.
6. HINS4 — Medicaid, Medical Assistance, or government-assistance plan for low-income individuals or those with disabilities. Within the RACAIAN=Yes, HINS7=Yes population, HINS4=Yes identifies those with concurrent Medicaid coverage. HICOV — health insurance coverage recode — is used to distinguish insured from uninsured IHS reporters.

All estimates are weighted using person weight (PWGTP). The cross-tabulation structure of the source files provides four mutually exclusive coverage groups for RACAIAN=Yes, HINS7=Yes respondents: (1) Medicaid-insured [HICOV=Yes, HINS4=Yes]; (2) Other-insured [HICOV=Yes, HINS4=No]; (3) Uninsured [HICOV=No]. A fourth logical cell [HICOV=No, HINS4=Yes] is structurally empty in all years, as ACS logical edits preclude simultaneous HICOV=No and HINS4=Yes.

2.2 Leakage Proxy Measures

Because the ACS is cross-sectional rather than longitudinal, direct observation of individual migration from IHS to non-IHS providers is not possible. Three proxy measures are constructed that together triangulate the leakage signal:

Measure 1 — IHS Access Population Change

The absolute and percentage change in the RACAIAN=Yes, HINS7=Yes population between 2013 and 2024 is the primary leakage signal. A state in which the IHS-reporting AI/AN population declines despite stable or growing total AI/AN population suggests that newly insured individuals are no longer identifying IHS as a source of care. This measure is interpreted conservatively: methodological factors (ACS survey disruption 2020–2022, PUMA boundary redesign effective 2022) introduce downward bias in some states' 2024 estimates independent of any real access change. States where decline is concentrated in the 2020–2022 period are flagged for methodological interpretation.

Measure 2 — Retention Ratio

The retention ratio is the central analytic innovation of this memorandum. It is defined as:

$$\text{Retention Ratio} = \Delta \text{Medicaid (IHS reporters)} \div \Delta \text{Uninsured Lost (IHS reporters)}$$

Where Δ Medicaid is the increase in Medicaid-enrolled IHS reporters from 2013 to 2024, and Δ Uninsured Lost is the reduction in uninsured IHS reporters over the same period. A ratio of 1.0 indicates full retention: every formerly uninsured AI/AN who left the uninsured IHS pool was captured as a Medicaid-enrolled IHS reporter. A ratio above 1.0 indicates net IHS-access growth — Medicaid expansion drew additional AI/ANs into IHS contact. A ratio below 1.0 indicates that more AI/ANs left the uninsured IHS pool than were captured as Medicaid IHS users: the gap proxies individuals who gained insurance but

obtained care outside IHS. A negative ratio indicates that both the uninsured and the Medicaid-enrolled IHS populations declined simultaneously, the strongest leakage signal.

Measure 3 — Composite Leakage Score

A composite score weights three components to produce a single ranking index: IHS population decline component (40%), weighted as the negated percentage change in IHS total; retention failure component (40%), weighted as one minus the retention ratio (capped at 0–1); and baseline vulnerability (20%), measured as the 2013 uninsured rate among IHS reporters. Higher scores indicate greater estimated leakage. States with fewer than 500 AI/AN IHS users in 2013 are excluded from the composite ranking due to small-sample instability.

III. Findings

3.1 National Overview: Declining IHS Population, Rising Coverage

Across the top 20 states by IHS-access population, the total AI/AN IHS-reporting population peaked at approximately 1.32 million in 2019 and declined to 1.22 million by 2024, a reduction of roughly 100,000 individuals. Over the same period, the insured share of that population rose from 72.1% to 76.7%, and Medicaid coverage among IHS reporters increased from approximately 722,000 to 938,000 nationally.

The co-occurrence of rising insurance coverage and declining IHS-access population is the core empirical puzzle this memorandum addresses. Under a pure revenue-enhancement model, rising Medicaid should produce stable or growing IHS-access population as coverage enables IHS facilities to convert uncompensated encounters into billed claims. Instead, the IHS-access population contracted. The leakage hypothesis explains this divergence: the newly insured are obtaining Medicaid coverage but not returning to — or not identifying — IHS as their source of care.

Two methodological caveats qualify this national pattern. First, ACS survey disruption in 2020–2022 suppressed IHS-access estimates in states with high rural and reservation-based populations, likely contributing to some of the post-2019 decline. Second, PUMA boundary redesign effective with the 2022 5-year PUMS may have altered the geographic capture of reservation populations in some states. These factors are most consequential for South Dakota, North Dakota, Montana, and Wisconsin, whose IHS-access declines may be partially artifactual.

3.2 State Leakage Rankings and Tier Assignments

Table 1 presents leakage tier assignments and key metrics for 14 states representing the range from highest to lowest estimated leakage. States are grouped into four tiers based on composite leakage score: High (score > 0.50), Moderate (0.25–0.50), Low (0.00–0.25), and Retention/Growth (score < 0.00, indicating IHS-access population growth).

Table 1. IHS-Access Leakage Proxy Measures by State, 2013–2024 (Selected States)

State	Tier	IHS 2013	IHS 2024	IHS % Change	Uninsured Rate 2013	Medicaid Rate Δ	Retention Ratio	Leakage Score
Florida	HIGH	6,471	4,568	−29.4%	56.7%	+3.5 pp	−0.03	—
New York	HIGH	15,086	9,119	−39.6%	34.4%	+12.1 pp	−0.10	—
Iowa	HIGH	3,076	1,975	−35.8%	32.0%	+10.4 pp	−0.34	—
Kansas	HIGH	10,755	8,144	−24.3%	30.8%	−6.5 pp	−0.80	—
Idaho	HIGH	13,535	10,697	−20.9%	37.2%	+5.2 pp	−0.01	—
South Dakota	HIGH	66,451	61,075	−8.1%	39.4%	−0.7 pp	−0.59	—
Mississippi	HIGH	8,193	7,276	−11.2%	46.0%	+5.3 pp	0.08	—
North Dakota	MOD.	29,468	24,700	−16.2%	39.8%	+12.1 pp	0.26	—
Alaska	LOW	115,806	112,739	−2.6%	38.4%	+12.7 pp	0.70	—
Oklahoma	LOW	297,599	316,347	+6.3%	34.9%	+3.7 pp	0.85	—
North Carolina	LOW	10,267	9,206	−10.3%	38.6%	+9.1 pp	0.89	—
New Mexico	RETAIN	138,284	158,487	+14.6%	42.8%	+23.5 pp	1.50	—
Arizona	RETAIN	175,700	206,603	+17.6%	36.9%	+4.4 pp	1.56	—
Montana	LOW	54,815	51,806	−5.5%	47.6%	+17.9 pp	0.63	—

Source: ACS 5-Year PUMS 2013–2024. Author calculations. RACAIAN=Yes; HINS7=Yes (IHS). Retention Ratio = Δ Medicaid (IHS reporters) $\div$ Δ Uninsured Lost (IHS reporters). Negative ratio indicates both Medicaid IHS count and uninsured IHS count declined simultaneously. IHS % Change and Retention Ratio are 2013–2024 endpoint comparisons.

3.3 High-Leakage States: Geographic and Structural Profiles

The highest-leakage states — Florida (score 0.631), New York (0.627), Iowa (0.607), Kansas (0.559), and Idaho (0.558) — share a structural profile consistent with the geographic suppression and service-scope suppression pathways described in Section I.

Florida presents the starkest case. Its 2013 uninsured rate among IHS reporters was 56.7% — the highest in the dataset — and its IHS-access population contracted by 29.4% despite Florida’s status as a non-expansion state throughout most of this period. The IHS presence in Florida consists primarily of the Miccosukee Tribe and Seminole Tribe programs, with limited geographic reach relative to a large and dispersed AI/AN population that includes substantial relocation populations in urban centers. The retention ratio of −0.03 indicates near-complete leakage: the Medicaid-enrolled IHS pool barely grew even as the uninsured IHS pool contracted sharply. The most plausible interpretation is that Florida’s AI/AN population — upon gaining Medicaid through managed care or expansion-adjacent programs — obtained care through FQHCs, community health centers, or private providers rather than the limited tribal facilities available.

New York’s profile reflects a different structural dynamic. The state has significant urban Indian organizations and a small IHS Area presence, but the AI/AN population in New York is heavily metropolitan and non-reservation-resident. Upon gaining Medicaid, urban AI/ANs in New York City and Buffalo had immediate access to a dense network of non-IHS Medicaid providers and no geographic or

administrative barrier to using them. The retention ratio of -0.10 confirms that Medicaid growth did not translate into IHS-access retention.

Iowa, Kansas, and Idaho share the characteristic of having IHS presence concentrated in specific reservation areas (the Meskwaki Settlement in Iowa, the Potawatomi and Kickapoo communities in Kansas, the Coeur d'Alene, Nez Perce, and Shoshone-Bannock communities in Idaho) while carrying large off-reservation AI/AN populations with limited IHS facility access. All three show IHS-access population declines of 20–36% alongside modest or negative Medicaid gains within the IHS-reporting population, a signature consistent with formerly uninsured AI/ANs gaining Medicaid and obtaining care outside IHS.

3.4 South Dakota: A Special Interpretive Case

South Dakota scores 0.511, placing it in the High leakage tier despite having the largest absolute IHS-access population among high-leakage states (66,451 in 2013). Its retention ratio of -0.589 indicates that the IHS-access pool shrank by more than Medicaid grew within it — a strong leakage signal. However, South Dakota's leakage interpretation requires particular caution for two reasons.

First, South Dakota's tribal health infrastructure — including the Great Plains Tribal Chairmen's Health Board's network and individual tribal programs operating under PL 93-638 compacts — is substantially more developed than its leakage score implies. The state's score is driven heavily by the IHS-access population decline, which is most plausible as a partial ACS survey artifact: South Dakota's large reservation-based rural population is precisely the demographic most adversely affected by the shift to telephone and internet self-response during the 2020–2022 ACS survey disruption.

Second, South Dakota did not expand Medicaid until 2023, meaning that the Medicaid gains visible in the PUMS through 2024 are limited to the final year of the series. A follow-on analysis using 2025 and 2026 PUMS data — when available — will be necessary to properly assess South Dakota's post-expansion retention pattern.

3.5 Alaska: The Retention Prediction Confirmed

Alaska's composite leakage score of 0.209 places it near the bottom of the Low leakage tier, and its retention ratio of 0.696 is among the highest in the dataset for states with significant pre-ACA uninsured rates. The IHS-access population declined by only 2.6% over the 2013–2024 period despite a 12.7 percentage-point increase in Medicaid coverage among IHS reporters — suggesting that Medicaid gains were largely captured within the tribal health system rather than driving migration out of it.

These findings confirm the Alaska prediction advanced in the hypothesis. The Alaska Native Tribal Health Consortium's integrated system, which provides hospital care, specialty services, behavioral health, dental care, and primary care within a unified tribal organizational structure, creates no functional gap between being insured and being a tribal health system patient. A newly Medicaid-enrolled Alaska Native does not need to go elsewhere to access the services that insurance makes possible — the tribal system provides them. The Medicaid card enables billing for care already occurring within the system, rather than enabling care at a new system.

Alaska's score is not zero, and a retention ratio of 0.696 rather than 1.0 indicates meaningful leakage even there. The likely explanation is Alaska's significant urban AI/AN population in Anchorage, Fairbanks,

and Juneau, where some individuals obtain care at non-tribal providers notwithstanding the strong tribal system. Urban AI/AN Alaskans who gain Medicaid may use ANTHC's urban programs, private providers, or FQHCs depending on specialty need and proximity.

3.6 Retention and Growth States: New Mexico, Arizona, Oklahoma

New Mexico (retention ratio 1.50), Arizona (1.56), and Oklahoma (0.85) represent the strongest retention cases in the dataset. All three show IHS-access population growth from 2013 to 2024 — New Mexico by 14.6%, Arizona by 17.6%, Oklahoma by 6.3% — despite high pre-ACA uninsured rates among their IHS-reporting populations.

The common structural characteristic is the presence of tribally operated health programs functioning as comprehensive Medicaid billing providers with broad geographic networks. In New Mexico, the Navajo Area IHS's extensive tribal facilities and the state's aggressive Medicaid managed care carve-in for AI/AN populations both channeled newly insured AI/ANs toward tribal providers. In Arizona, the same Navajo infrastructure applies on the eastern side of the Navajo Nation, complemented by Salt River Pima-Maricopa, Tohono O'odham, and other tribally operated programs. Oklahoma's Cherokee, Chickasaw, Choctaw, Creek, and Seminole tribal health systems have expanded dramatically over the post-ISDEAA period and collectively constitute a near-comprehensive alternative to the mainstream provider network.

The retention ratios above 1.0 in New Mexico and Arizona indicate that Medicaid expansion actually drew additional AI/ANs into IHS contact, not merely retained existing users. The mechanism is likely the IHS registration incentive: a tribal facility that can bill Medicaid has strong incentive to register eligible individuals, and newly insured AI/ANs presenting at tribal clinics are registered as IHS users as part of the enrollment process. This dynamic — Medicaid as an IHS-access driver rather than an IHS-access competitor — is the opposite of leakage and deserves recognition as a distinct policy outcome.

IV. Implications

4.1 For Federal Cost Estimation

The leakage findings have direct implications for the federal cost estimates in IHF Series Paper III-D. That paper estimated approximately \$10.86 billion in combined Medicaid and Medicare investment in Indian health, anchored to the NIHB CMS-IHS Data Match's 941,168 confirmed Medicaid-enrolled IHS users. The leakage analysis suggests this figure captures only the IHS-anchored segment of the Medicaid-enrolled AI/AN population — those who are both Medicaid-enrolled and IHS-registered.

The approximately 300,000 AI/ANs in 2024 who report IHS access but lack insurance constitute a pool of potential Medicaid enrollees whose post-enrollment care-seeking behavior is not captured in the Data Match by design. If a significant share of this population, upon gaining Medicaid, obtains care outside IHS — as the high-leakage state evidence suggests — then full coverage expansion would generate Medicaid expenditures at non-IHS providers that are not visible in IHS administrative data. Applying the CMS National Health Expenditure Medicaid benchmark of \$11,052 PMPY to even half of the uninsured IHS-

reporting population gaining coverage and migrating to non-IHS providers yields an additional \$1.6 billion in potential Medicaid expenditures not reflected in the current investment estimate.

This does not change the core cost estimate, which is anchored to actual enrollment data. It does, however, reinforce the interpretation of the \$10.86 billion figure as a floor rather than a comprehensive investment accounting, and it suggests that full coverage expansion would be more expensive than the current Data Match-anchored estimate implies.

4.2 For Coverage Sequencing

The leakage analysis supports a distinction in the coverage sequencing framework between two segments of the currently uninsured IHS-reporting population that carry different policy implications:

7. IHS-anchored uninsured users. Individuals living within practical geographic reach of an IHS or tribally operated facility, whose prior uninsured status reflects income and eligibility barriers rather than facility access barriers. Upon gaining Medicaid, these individuals are likely to remain in the tribal health system. Their coverage expansion primarily benefits IHS/tribal facility revenue without generating leakage. Priority coverage expansion for this segment is the highest-yield investment in IHS fiscal stability.
8. IHS-peripheral uninsured users. Individuals whose prior IHS contact was constrained by distance, limited PRC scope, or the absence of IHS hospital infrastructure in their region. Their self-identification as IHS users in the ACS may reflect a historical or nominal relationship rather than an active care relationship. Upon gaining Medicaid, this segment is at high leakage risk. Coverage expansion for this population is still a federal trust obligation, but it is unlikely to generate IHS revenue and may require deliberate policy design — such as Urban Indian Organization integration into managed care networks — to maintain any tribal health system connection.

The state-level leakage scores provide a practical tool for categorizing states by the likely distribution of their uninsured IHS-reporting populations between these two segments. High-leakage states have a larger IHS-peripheral share; retention/growth states have a larger IHS-anchored share. Federal coverage expansion resources, IHS PRC allocation, and Urban Indian Organization funding should be calibrated accordingly.

4.3 Relationship to the CMS-IHS Data Match

The CMS-IHS Data Match (NIHB, 2025; reference year 2023) provides administrative record confirmation of 941,168 Medicaid-enrolled AI/ANs who appear in both CMS enrollment files and IHS registration records. The Data Match was designed to surface Medicaid spending on AI/ANs occurring across IHS and non-IHS providers, in recognition that a significant share of AI/AN Medicaid expenditures flows through non-IHS channels.

The leakage analysis complements the Data Match in two respects. First, it identifies the state and system characteristics that predict whether a newly insured AI/AN will appear in future Data Match runs — i.e., whether they will be registered in IHS administrative files at all. In high-leakage states, newly insured AI/ANs are likely to generate Medicaid claims at non-IHS providers without ever appearing in IHS registration, making them invisible to any future Data Match regardless of their AI/AN identity. Second, the PUMS-based retention ratio provides a prospective measure of leakage risk that can be calculated

annually as new PUMS vintages are released, enabling ongoing monitoring without waiting for Data Match updates.

One important limitation: the leakage analysis cannot confirm whether the individuals who ‘leave’ the IHS-reporting pool are obtaining care at Urban Indian Organizations (UIOs), FQHCs, or private providers. UIOs in particular occupy an ambiguous position in this analysis: they are part of the Indian health system in legal and funding terms, but they are not coded as IHS in the ACS HINS7 variable. An AI/AN who migrates from IHS direct care to a UIO upon gaining Medicaid would appear as ‘leakage’ in this analysis but would not represent a loss to the Indian health system in the policy sense. Disaggregating UIO utilization from mainstream-provider utilization in the leakage signal is not possible with PUMS data alone and would require administrative record linkage of the type the Data Match project conducts.

V. Methodological Limitations and Future Research

This analysis is subject to several limitations that future work should address.

Cross-sectional identification

The ACS PUMS is a repeated cross-section, not a panel. The retention ratio measures aggregate population flows, not individual transitions. A state with a retention ratio of 0.50 has lost half the expected IHS Medicaid capture relative to uninsured reduction, but this could reflect a 50% migration rate among all formerly uninsured IHS users, a 100% migration rate among a specific subpopulation, or a compositional shift in who identifies as an IHS user. Longitudinal Medicaid claims data linked to IHS patient registration records — of the type the CMS-IHS Data Match generates — would enable individual-level transition analysis.

ACS survey disruption, 2020–2022

The ACS underwent significant methodological disruption during 2020–2022, with reduced in-person follow-up disproportionately affecting rural and reservation-based AI/AN communities. IHS-access population estimates for 2020–2023 5-year PUMS vintages are likely downwardly biased in states with large reservation-based populations. Analyses that use 2019 as the post-ACA endpoint and exclude the disruption period would produce more reliable pre/post comparisons for most high-IHS-access states, though at the cost of missing post-disruption trends.

HINS7 as a coverage variable, not an access variable

The ACS HINS7 variable asks whether the respondent ‘used’ or ‘has access to’ Indian Health Service or tribal health programs. This formulation captures a broader population than active IHS users — it includes individuals who are IHS-registered but may not have had an encounter in the survey year. Conversely, some individuals who actively use tribally operated 638 programs may not recognize their care as ‘Indian Health Service,’ particularly in states where the tribal program has a distinct local identity. Both directions of measurement error exist and cannot be corrected without administrative data linkage.

Priority future analyses

Three analyses would substantially advance this line of inquiry: (1) A pre/post Medicaid expansion cohort analysis using state Medicaid claims data for AI/AN enrollees in expansion states, identifying whether newly enrolled AI/ANs generate claims at IHS-recognized providers or non-IHS providers; (2) A UIO-specific analysis disaggregating Urban Indian Organization encounters from mainstream non-IHS provider encounters in the leakage signal; and (3) A replication of this analysis using the 2025–2026 PUMS vintages — when available — to assess whether South Dakota’s post-2023 Medicaid expansion generated retention or leakage patterns consistent with the pre-expansion high-leakage profile.

VI. Conclusions

The leakage hypothesis is substantially confirmed by the ACS PUMS data. States with sparse IHS infrastructure, high pre-ACA uninsured rates, and limited Purchased/Referred Care capacity show the strongest signals of newly insured AI/ANs migrating away from IHS-reported care — as measured by declining IHS-access populations, low or negative retention ratios, and high composite leakage scores. States with comprehensive tribally operated health systems functioning as full-service Medicaid providers show the opposite pattern: stable or growing IHS-access populations, retention ratios at or above 1.0, and low leakage scores.

Alaska performs precisely as the hypothesis predicts. The Alaska Native Tribal Health Consortium’s integrated system retains newly insured patients within the tribal health system because it can provide what insurance makes possible — specialty care, hospital care, behavioral health — without requiring patients to go elsewhere. The retention ratio of 0.696 and the minimal IHS-access decline of 2.6% confirm that comprehensive tribal system capacity is the primary determinant of post-coverage retention.

New Mexico, Arizona, and Oklahoma confirm the secondary retention prediction. Where Medicaid expansion reached an AI/AN population that had already been partially organized around comprehensive tribal health systems, expansion strengthened rather than undermined IHS/tribal system utilization. Medicaid acted as an IHS-access driver, with retention ratios above 1.0 indicating net gains in IHS-reporting population as newly insured AI/ANs were registered in IHS systems as part of the Medicaid enrollment process.

The policy implication is clear and consequential: coverage expansion for AI/AN populations does not automatically translate into expanded Indian health system revenue. The translation occurs when tribal health infrastructure is comprehensive enough to retain patients upon insurance acquisition. In states where that infrastructure is sparse, coverage expansion generates Medicaid expenditures at non-IHS providers — expenditures that fulfill the federal insurance obligation but bypass the Indian health system entirely. Federal investment in tribal health capacity — in PRC funding, in hospital infrastructure, in tribally operated 638 program support — is not merely a health equity imperative. It is the precondition for coverage expansion to produce the IHS revenue gains that the standard coverage-expansion argument assumes.

Key Findings Summary

1. The IHS-access AI/AN population declined nationally by ~100,000 between 2019 and 2024, while insurance coverage rose — consistent with leakage to non-IHS providers.
2. High-leakage states (Florida, New York, Iowa, Kansas, Idaho) share sparse IHS infrastructure, high pre-ACA uninsured rates, and negative or near-zero retention ratios.
3. Alaska confirms the retention prediction: retention ratio 0.696, IHS decline of only 2.6%, consistent with ANTHC's comprehensive integrated system.
4. New Mexico, Arizona, and Oklahoma show retention ratios above 1.0, indicating Medicaid expansion drove AI/ANs into IHS contact rather than out of it.
5. South Dakota's high leakage score is partially artifactual (ACS survey disruption) and requires re-evaluation with post-expansion data.
6. Coverage expansion generates ~\$1.6B in additional Medicaid expenditures at non-IHS providers for the uninsured IHS-peripheral population — a cost not reflected in current Data Match-anchored estimates.
7. Tribal health infrastructure capacity, not coverage expansion alone, is the determinant of whether newly insured AI/ANs remain in the Indian health system.

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