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Postnatal Family Planning Service and Documentation Gaps in Ondo and Kebbi States, Nigeria: A Four-Year Retrospective Analysis of Counselling, Recorded Acceptance, and Method Mix, 2022–2025 Running head: Postnatal family planning counselling and acceptance gaps in Nigeria

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Abstract

Background

The postpartum period creates repeated opportunities to prevent unintended and closely spaced pregnancies, yet routine information systems often record counselling and contraceptive provision incompletely. We assessed postnatal family planning counselling, recorded contraceptive acceptance and method mix in public facilities in two contrasting Nigerian states.

Methods

We conducted a retrospective analysis of facility-month aggregate National Health Management Information System records from 23 public facilities in Ondo and Kebbi States, January 2022-December 2025. The primary counselling-to-acceptance ratio used months with both indicators recorded, more than zero women counselled, and acceptors not exceeding women counselled. Method mix was restricted to months in which all four recorded methods (IUD, Implant NXT, Jadelle and Depo-Provera) were present and their sum equalled the acceptor count. We reported counts, percentages, Wilson 95% confidence intervals and data-completeness indicators; no causal comparisons were undertaken.

Results

The analytic dataset contained 988 facility-months. Counselling was recorded in 902/988 (91.3%) and acceptors in 595/988 (60.2%). After excluding 10 internally inconsistent months and 117 paired zero/zero months from rate estimation, 456 months contributed 20,284 counselled women and 3,810 acceptors, a pooled ratio of 18.8% (95% CI 18.3–19.3). The ratio was 23.2% in Kebbi and 15.2% in Ondo, but acceptor reporting was substantially lower in Kebbi (219/556; 39.4%) than Ondo (376/432; 87.0%). Recorded annual ratios varied from 3.9% to 41.9% in Kebbi and from 7.4% to 19.4% in Ondo. Among reconciled complete method records, Ondo recorded 1,586 methods: IUD 35.8%, Implant NXT 32.0%, Jadelle 31.2% and Depo-Provera 1.0%. Kebbi contributed only 49 reconciled methods, precluding stable inference about its method mix.

Conclusions

Routine records indicate a substantial gap between documented counselling and recorded contraceptive acceptance, marked facility heterogeneity, and severe state- and level-specific incompleteness. The findings support integrating method provision with counselling, protecting contraceptive choice and commodity availability, and making completeness and internal consistency visible in routine dashboards.

Introduction

The first year after childbirth is a period of high reproductive-health need and repeated contact with health services. Ovulation and sexual activity may resume before menstruation, and many women who wish to delay another pregnancy do not start an effective contraceptive method promptly. Closely spaced pregnancies are associated with adverse maternal, fetal and infant outcomes, while timely postpartum family planning (PPFP) can help women and couples achieve their reproductive intentions [1–4]. The value of postpartum family planning therefore extends beyond

the prevention of unintended pregnancy. PPFP links respectful reproductive choice with the wider maternal, newborn and child-health continuum.

The World Health Organization defines postpartum family planning as the prevention of unintended and closely spaced pregnancies during the first 12 months after childbirth and recommends that contraceptive information and services be integrated across antenatal, childbirth, postnatal and child-health contacts [5, 6]. Current clinical guidance emphasises informed choice, method-specific eligibility, safe initiation and continuity rather than promotion of a single method [7–9]. Immediate postpartum provision before discharge is a recognised high-impact practice when women receive voluntary, high-quality counselling and a broad range of methods [10]. However, counselling alone does not guarantee uptake as women may defer a decision, lack partner support, fear side-effects, encounter provider bias or find their preferred method unavailable.

Nigeria has made family planning a policy priority through the Nigeria Family Planning Blueprint, national integration plans and commitments to expand access and method choice [11]. Nevertheless, national surveys and recent analyses continue to show low and unequal modern contraceptive use, with strong geographic, socioeconomic and service-access gradients [12–15]. Postpartum women face additional constraints because service contacts may focus narrowly on the newborn or obstetric recovery, counselling may occur without same-day provision, and follow-up is often fragmented. Studies from Nigeria have reported wide variation in postpartum use and method preferences across settings, reflecting differences in demand, counselling, availability and facility practices [16, 13, 17].

Most evidence from Nigeria on postpartum contraception comes from household surveys or cross-sectional studies of individual women. These sources are essential for estimating population use and identifying individual determinants, but they do not show how consistently facilities record counselling, acceptance and method provision month by month. Routine service statistics can reveal operational patterns more rapidly and at lower cost, yet incomplete registers, inconsistent zero-versus-missing coding and aggregation errors can produce misleading rates [18, 19]. A facility that records many counselling contacts but leaves acceptor or method fields blank may appear to have low uptake, while a facility that records method counts without a common denominator may appear to have a broad method mix. Valid interpretation therefore requires explicit denominator construction and concurrent reporting of completeness.

Ondo State in south-west Nigeria and Kebbi State in the north-west differ in how health-system is organized, service utilisation and sociocultural context. Analysis across both states offers an opportunity to examine whether routine postnatal family planning patterns are consistent across contrasting settings. We aimed to: (1) describe the completeness and volume of recorded postnatal family planning counselling and acceptance; (2) estimate annual, state-level, facility-level and facility-level-of-care counselling-to-acceptance ratios using internally valid denominators; (3) describe the recorded contraceptive method mix where method counts have been reconciled with acceptor totals; and (4) identify data-quality patterns that should inform service improvement and routine monitoring.

Methods

Study design and setting

We conducted a multi-facility longitudinal retrospective analysis of routine aggregate health information from January 2022 through December 2025. The parent protocol registry defined the eligible facility frame before outcome analysis. The extraction file also contained four one-month records from facilities outside that frame. These were excluded from the final analysis. Twenty-three protocol-listed facilities had eligible records and formed the analytic cohort (nine

in Ondo and 14 in Kebbi). Ondo datasets included primary, secondary and tertiary care while Kebbi included primary and secondary/referral facilities. The facility-month was the unit of analysis.

Data sources and extraction

We used an eligibility-based census of usable facility-month records from the prespecified cohort. Facility selection was purposive and designed to span service levels. We therefore interpret state estimates as patterns within participating facilities rather than population contraceptive prevalence. Data sources include postnatal register, supplemented by the Monthly Summary Form where source registers were unavailable or incomplete. Facility identifiers, state, local government area, level of care, calendar year and month were retained. The study variables include the number of postnatal women counselled on family planning, the number recorded as postpartum family planning acceptors, and counts of four methods namely intrauterine devices (IUDs), Implant NXT, Jadelle and Depo-Provera. Live births were used only for a secondary service-output ratio. Trained data collectors applied National Health Management Information System definitions and counting rules [20].

Outcome definitions

The primary service indicator was the recorded counselling-to-acceptance ratio. We calculated this by dividing the total number of postpartum family planning acceptors by the total number of postnatal women counselled and multiplying by 100. We included a facility-month when both fields had recorded values, the number counselled was greater than zero, and the number of acceptors did not exceed the number counselled. We excluded months where acceptors exceeded women counselled because these records were internally inconsistent. Months reporting zero for both counselling and acceptance remained in the dataset as evidence of reporting but did not contribute to the ratio denominator. The ratio represents recorded acceptance among women reported as counselled. It should not be interpreted as a population contraceptive prevalence rate. The aggregate data also do not allow us to confirm that counselling and acceptance referred to the same women or occurred during the same visit. For method mix, we included only facility-months with complete data for the total number of acceptors and all four contraceptive method fields. We also required the sum of the four method counts to equal the recorded number of acceptors. For these reconciled months, we calculated each method's share of all methods recorded. This approach ensured that method-specific estimates used a consistent denominator.

As a secondary measure, we calculated recorded acceptors per 100 live births for facility-months where both variables were available. We treated this as a service-output ratio rather than a measure of contraceptive coverage because women receiving postpartum family planning services may have delivered elsewhere and the dataset did not record time since delivery.

Data completeness and consistency assessment

We assessed data completeness by state, year, facility level and individual facility. We calculated the number and proportion of facility-months with recorded counselling and acceptor data, months with both fields available, internally inconsistent records, and months eligible for the primary analysis. We assessed method data separately by examining whether all four method fields were complete and whether their combined total matched the recorded number of acceptors. We reviewed free-text descriptions of data sources descriptively because facilities did not use a consistent structure for recording source categories.

Statistical analysis

We summarised the data using aggregate counts and pooled percentages. We calculated Wilson 95% confidence intervals for the counselling-to-acceptance ratio. These intervals describe uncertainty around the recorded counts under a binomial approximation; they do not account for repeated observations within facilities, changes in client characteristics, systematic missingness, or measurement error. We therefore used the estimates descriptively and did not conduct hypothesis testing or causal regression. We interpreted differences across years and facilities as patterns in recorded service activity rather than population-level differences. We conducted the analysis using reproducible Python scripts applied to the cleaned facility-month dataset.

Ethical considerations and reporting

The study used de-identified aggregate routine health data and involved no direct contact with patients. The study received ethical approval from the National Health Research Ethics Committee of Nigeria, Protocol No. NHREC/01/01/2007-23/05/2026 and Approval No. NHREC/01/01/2007-22/06/2026, dated 22 June 2026. We reported the study with reference to the RECORD guidance for research using routinely collected health data [21].

Results

Analytic coverage and completeness

The final dataset included 988 unique facility-months from 23 facilities (Table 1). Kebbi contributed 556 facility-months from 14 facilities, while Ondo contributed 432 months from nine facilities. Primary facilities accounted for 539 months, secondary facilities for 353 months, and tertiary facilities for 96 months. Counselling data were available for 902 facility-months (91.3%), while acceptor data were available for 595 (60.2%). Both indicators were recorded in 583 months (59.0%). Among these paired records, 10 months reported more acceptors than women counselled and 117 reported zero for both indicators. After applying the prespecified eligibility criteria, 456 facility-months contributed to the primary counselling-to-acceptance analysis.

Table 1
Completeness and pooled postnatal family planning indicators by state and facility level.

State/level	Facility-months	Counselling recorded, n (%)	Acceptors recorded, n (%)	Evaluable months	Women counselled	Acceptors	Acceptance ratio, % (95% CI)
Kebbi - all	556	493 (88.7%)	219 (39.4%)	159	9,036	2,099	23.2% (22.4–24.1)
Kebbi - primary	299	249 (83.3%)	2 (0.7%)	2	94	0	0.0% (-0.0-3.9)
Kebbi - secondary	257	244 (94.9%)	217 (84.4%)	157	8,942	2,099	23.5% (22.6–24.4)
Ondo - all	432	409 (94.7%)	376 (87.0%)	297	11,248	1,711	15.2% (14.6–15.9)
Ondo - primary	240	228 (95.0%)	232 (96.7%)	205	5,741	351	6.1% (5.5–6.8)
Ondo - secondary	96	93 (96.9%)	94 (97.9%)	47	1,511	0	0.0% (0.0-0.3)
Ondo - tertiary	96	88 (91.7%)	50 (52.1%)	45	3,996	1,360	34.0% (32.6–35.5)

Note: The acceptance ratio includes months with both indicators recorded, counselling > 0 and acceptors not exceeding counselled women. Blank fields were not treated as zero. The ratio is a facility-recorded service indicator, not population contraceptive prevalence.

Documentation of acceptor differed by state. Kebbi recorded counselling in 493/556 months (88.7%) but acceptors in 219/556 (39.4%). Ondo recorded counselling in 409/432 months (94.7%) and acceptors in 376/432 (87.0%). In Kebbi primary facilities, only two of 299 months had an acceptor value and only two months were rate-evaluable. In Ondo, acceptor reporting ranged from 87.5% in secondary facilities to 96.7% in primary facilities, but only 52.1% of tertiary facility-months contained an acceptor value.

Recorded counselling and acceptance over time

Across all valid months, 20,284 women were recorded as counselled and 3,810 as acceptors, yielding a pooled counselling-to-acceptance ratio of 18.8% (95% CI 18.3–19.3). Kebbi contributed 9,036 counselled women and 2,099 acceptors, a ratio of 23.2% (95% CI 22.4–24.1). Ondo contributed 11,248 counselled women and 1,711 acceptors, a ratio of 15.2% (95% CI 14.6–15.9) (Table 2).

Table 2
Annual completeness, counselling-to-acceptance ratios and acceptor service-output ratios, 2022–2025.

State	Year	Facility-months	Acceptors recorded, n (%)	Evaluable months	Women counselled	Acceptors	Acceptance ratio, % (95% CI)	Acceptors per 100 live births
Kebbi	2022	97	22 (22.7%)	20	1,271	49	3.9% (2.9–5.1)	3.3
Kebbi	2023	155	72 (46.5%)	54	2,819	655	23.2% (21.7–24.8)	20.7
Kebbi	2024	153	60 (39.2%)	44	2,787	1,169	41.9% (40.1–43.8)	35.1
Kebbi	2025	151	65 (43.0%)	41	2,159	226	10.5% (9.2–11.8)	7.3
Ondo	2022	108	81 (75.0%)	43	1,582	117	7.4% (6.2–8.8)	5.2
Ondo	2023	108	92 (85.2%)	65	2,515	489	19.4% (17.9–21.0)	15.4
Ondo	2024	108	97 (89.8%)	87	3,301	507	15.4% (14.2–16.6)	15.1
Ondo	2025	108	106 (98.1%)	102	3,850	598	15.5% (14.4–16.7)	15.1

Note: Acceptors per 100 live births uses months with both acceptor and live-birth values and is a service-output ratio, not population coverage. Annual changes should be read alongside changing completeness and facility contributions.

In Kebbi, the annual ratio was 3.9% in 2022, 23.2% in 2023, 41.9% in 2024 and 10.5% in 2025. Acceptor documentation was available in 22.7%, 46.5%, 39.2% and 43.0% of facility-months, respectively. In Ondo, the ratio was 7.4% in 2022, 19.4% in 2023, 15.4% in 2024 and 15.5% in 2025; acceptor recording increased from 75.0% of months in 2022 to 98.1% in 2025 (Fig. 2). The acceptor-per-100-live-births service-output ratio ranged from 3.3 to 35.1 in Kebbi and from 5.2 to 15.4 in Ondo.

Facility-level patterns

The recorded ratio varied widely across facilities (Table 3). In Kebbi, the highest ratios were at Aliero General Hospital (553/1,176; 47.0%), Bunza General Hospital (572/1,482; 38.6%) and Mayama General Hospital (969/2,602; 37.2%). General Hospital Gwandu recorded 1/84 (1.2%), SYMH Birnin Kebbi recorded 4/2,163 (0.2%), and Aisha Muhammed Buhari General Hospital recorded 0/1,435. Six Kebbi facilities had no rate-evaluable month. In Ondo, FUTATH recorded 1,253/3,438 (36.4%) and Federal Medical Centre 107/558 (19.2%). Ratios among primary facilities ranged from 0.8% at CHC Oke-Ijebu to 14.4% at BHC Orita-Obele. Both included secondary hospitals recorded zero acceptors in their evaluable months.

Table 3
Facility-level completeness and recorded counselling-to-acceptance patterns.

State	Level	Facility	Months	Acceptors recorded, n (%)	Evaluable months	Women counselled	Acceptors	Ratio
Kebbi	Primary	Alwasa PHC	48	1 (2.1%)	1	45	0	0.0%
Kebbi	Primary	Ambursa PHC	17	0 (0.0%)	0	-	-	Not estimable
Kebbi	Primary	Dikko PHC	48	1 (2.1%)	1	49	0	0.0%
Kebbi	Primary	Felande PHC	44	0 (0.0%)	0	-	-	Not estimable
Kebbi	Primary	Gulma PHC	48	0 (0.0%)	0	-	-	Not estimable
Kebbi	Primary	Lailaba PHC	48	0 (0.0%)	0	-	-	Not estimable
Kebbi	Primary	Tungar Zazzagawa PHC	46	0 (0.0%)	0	-	-	Not estimable
Kebbi	Secondary	Aisha Muhammed Buhari General Hospital	27	26 (96.3%)	26	1,435	0	0.0%
Kebbi	Secondary	Aliero General Hospital	36	36 (100.0%)	33	1,176	553	47.0%
Kebbi	Secondary	Bunza General Hospital	36	36 (100.0%)	33	1,482	572	38.6%
Kebbi	Secondary	General Hospital Argungu	36	0 (0.0%)	0	-	-	Not estimable
Kebbi	Secondary	General Hospital Gwandu	36	36 (100.0%)	4	84	1	1.2%
Kebbi	Secondary	Mayama General Hospital	48	48 (100.0%)	28	2,602	969	37.2%
Kebbi	Secondary	SYMH (Birnin Kebbi)	38	35 (92.1%)	33	2,163	4	0.2%
Ondo	Primary	BHC Alade	48	48 (100.0%)	39	1,139	19	1.7%

Note: Not estimable indicates no facility-month met the primary denominator rules. Zero ratios may reflect true recorded zero acceptance, incomplete capture, unavailable methods or other service factors; aggregate data cannot distinguish these explanations.

State	Level	Facility	Months	Acceptors recorded, n (%)	Evaluable months	Women counselled	Acceptors	Ratio
Ondo	Primary	BHC Orita-Obele	48	43 (89.6%)	41	672	97	14.4%
Ondo	Primary	CHC Arakale	48	48 (100.0%)	41	2,316	215	9.3%
Ondo	Primary	CHC Isolo	48	46 (95.8%)	39	753	13	1.7%
Ondo	Primary	CHC Oke-Ijebu	48	47 (97.9%)	45	861	7	0.8%
Ondo	Secondary	General Hospital Owo	48	48 (100.0%)	26	916	0	0.0%
Ondo	Secondary	GH Idanre	48	46 (95.8%)	21	595	0	0.0%
Ondo	Tertiary	Federal Medical Centre	48	11 (22.9%)	11	558	107	19.2%
Ondo	Tertiary	FUTATH	48	39 (81.2%)	34	3,438	1,253	36.4%

Note: Not estimable indicates no facility-month met the primary denominator rules. Zero ratios may reflect true recorded zero acceptance, incomplete capture, unavailable methods or other service factors; aggregate data cannot distinguish these explanations.

Recorded contraceptive method mix

All four method fields and the acceptor field were jointly recorded in 349 of 988 facility-months. Of these, 328 months had method counts that summed exactly to the acceptor total and were included in the method-mix analysis (Fig. 3). Ondo contributed 287 reconciled months and 1,586 recorded methods namely IUD 567 (35.8%), Implant NXT 508 (32.0%), Jadelle 495 (31.2%) and Depo-Provera 16 (1.0%). Kebbi contributed 41 reconciled months but only 49 methods namely IUD 11 (22.4%) and Jadelle 38 (77.6%); no Implant NXT or Depo-Provera was recorded in these reconciled months.

Discussion

This four-year analysis shows a clear difference between what facilities documented about postnatal family planning counselling and what they recorded about contraceptive acceptance and method provision. Counselling appeared in more than nine in ten facility-months, while acceptor data appeared in only six in ten. After applying the denominator rules, 456 of 988 facility-months contributed to the primary analysis. In these months, 3,810 of 20,284 women recorded as counselled were also recorded as acceptors, giving a pooled ratio of 18.8%. Kebbi had a higher pooled ratio than Ondo, but sparse acceptor reporting in Kebbi primary facilities and large year-to-year shifts limit direct comparison. Facility ratios ranged from zero to almost one-half. Method records were sufficiently complete mainly in Ondo, where IUDs, Implant NXT and Jadelle each accounted for about one-third of reconciled methods. These findings describe recorded service activity rather than population postpartum contraceptive use.

The difference between counselling and recorded acceptance fits a wider body of evidence showing that counselling alone does not ensure postpartum contraceptive uptake. Studies from Nigeria and multiple countries have

documented missed opportunities after childbirth, while systematic reviews suggest stronger uptake when counselling was the basis of choice of preferred method [4, 22–24]. Other studies from Nigeria also associate postpartum contraceptive use with knowledge, previous contraceptive experience, partner communication, education, household resources and access to method choice [13, 14, 16]. Our aggregate data do not capture these individual factors. The counselling-to-acceptance ratio therefore serves as a service-record indicator rather than a measure of individual demand.

A woman who does not accept a method after counselling does not necessarily represent a service failure. She may choose to delay contraception, rely on lactational amenorrhoea, prefer a method outside the four fields extracted for this study, or obtain contraception elsewhere. Other women may encounter stock-outs, limited provider skills, concerns about side-effects, misinformation about breastfeeding, partner opposition, cost or weak follow-up. Our data do not separate informed non-use from missed opportunities. Quality improvement should therefore examine whether services provide accurate information, privacy, voluntary choice, an adequate range of methods and a clear route for follow-up, rather than treating acceptance alone as the measure of success.

The wide differences between facilities deserve attention. Three Kebbi general hospitals and two Ondo tertiary facilities accounted for much of the recorded acceptance, while several facilities recorded many women counselled but few or no acceptors. Higher-level facilities often have trained family planning providers, insertion equipment, broader commodity availability and longer contact with clients. Immediate postpartum IUD and implant services also depend on provider competence, infection-prevention systems, reliable supplies and consent processes that ideally begin during antenatal care [10, 25, 26]. Documentation may explain part of the concentration. Before interpreting zero or near-zero ratios as poor clinical performance, facilities would need to first reconcile postnatal registers, family planning registers, commodity records and monthly summaries.

Kebbi illustrates why completeness must accompany every service ratio. Its annual counselling-to-acceptance ratio rose from 3.9% in 2022 to 41.9% in 2024 and then fell to 10.5% in 2025. Acceptor reporting remained sparse and the facilities contributing data changed over time. A more stable pattern has been observed in Ondo state after 2023, although acceptor reporting at tertiary level was also incomplete. Studies of routine maternal and newborn data in Nigeria have shown discrepancies across registers, summary forms and DHIS2, and improvements following targeted data-quality interventions [18, 19]. Routine family planning dashboards should therefore show uptake measures alongside completeness, denominator volume, facility contribution and internal-consistency flags. Service statistics are most useful when users see these limitations alongside the reported rate [27].

The reconciled method mix in Ondo state also differed from national survey patterns, where short-acting and traditional methods contribute to the wider contraceptive profile [15]. This difference is expected. Our denominator included only methods recorded among facility acceptors and did not include pills, condoms, sterilisation or lactational amenorrhoea. The similar shares of IUD, Implant NXT and Jadelle may reflect the service mix at tertiary and selected primary facilities. Depo-Provera accounted for only 1% of reconciled methods, but this should not be read as evidence of low statewide injectable use because some injections may have been recorded in separate family planning registers. Recent evidence from Nigeria also shows variation in postpartum contraceptive use by delivery context [17], which reinforces the need to interpret facility method patterns within the services from which they arise.

Kebbi contributed only 49 methods to the reconciled method-mix denominator, despite larger method-specific counts in months with incomplete records. Combining those counts would have produced a misleading distribution because the reporting denominators differed and method totals often did not match the number of acceptors. Restricting the analysis reduced the amount of usable information but strengthened the validity of the comparison. This denominator discipline is an important practical finding. Routine reporting systems should distinguish between a method count

entered somewhere in the record and a complete method mix that reconciles with the total number of acceptors. Paper and electronic summary tools should be able to flag months when method totals do not equal acceptors or when acceptors exceed the number of women counselled.

The findings support national and global recommendations to integrate voluntary family planning across antenatal, childbirth, postnatal, immunisation and community contacts [11, 5, 6]. Facilities should start counselling before labour where appropriate, offer a chosen method during the same contact when clinically suitable, or provide a documented referral when immediate provision is unavailable. Services also need a reliable range of methods, providers who are competent in insertion and removal, and respectful support for side-effects, switching and discontinuation. Current WHO guidance should inform method initiation according to timing after childbirth, breastfeeding status, clinical conditions and individual preference [7–9]. Performance measures should therefore consider informed choice, continuity, equity and client experience alongside uptake.

This study has several strengths. It covers four years of routine data from two contrasting states and includes primary, secondary and tertiary levels of care. We preserved missing values, documented duplicate resolution and applied explicit denominator rules before calculating rates. These steps make the limits of the routine data visible rather than hiding them inside pooled estimates. The study also has important limitations. The facilities were purposively included. Aggregate counts cannot longitudinally link counselling, acceptance and method provision to the same woman, establish when contraception occurred after birth, or adjust for clinical and socioeconomic characteristics. Facilities may also have applied definitions differently, and some women may have appeared at more than one service contact. The dataset did not capture several contraceptive methods, stock-outs, provider availability, informed choice or continuation. Missingness was substantial and likely non-random. Future work should validate routine records against commodity data, standardise denominators and follow women prospectively to assess timing, choice, continuation, satisfaction and equity.

Conclusions

Across 23 public facilities in Ondo and Kebbi, postnatal family planning counselling was widely documented, but acceptor and method records were incomplete and highly concentrated in particular facilities. In the valid primary denominator, fewer than one in five recorded counselled women were recorded as acceptors, with large annual and facility variation. The reconciled method records from Ondo state showed a balanced distribution across IUD, Implant NXT and Jadelle, whereas Kebbi's method data were too sparse for stable interpretation. The central implication is twofold. First, facilities need to close the operational gap between voluntary counselling and access to a chosen method, and second, routine monitoring must make missingness and internal consistency visible. Improving postpartum family planning requires better service integration, commodity and provider readiness, respectful choice and a data system capable of distinguishing genuine performance from incomplete documentation.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the National Health Research Ethics Committee of Nigeria (NHREC), Protocol No. NHREC/01/01/2007-23/05/2026 and Approval No. NHREC/01/01/2007-22/06/2026, dated 22 June 2026. The study used de-identified aggregate routine health information and accessed no individual patient records. The relevant state authorities granted permission for use of routine facility data.

Consent for publication:

Not applicable.

Financial Disclosures

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Declaration of Competing Interest

The authors declare that they have no competing interests.

Author Contribution

Proposed CRediT statement, to be confirmed by all authors before submission. VAA: Conceptualization, Data curation, Formal analysis, Methodology, Writing - original draft, Writing - review and editing. MOA: Conceptualization, Methodology, Supervision, Validation, Writing - review and editing. QESA and KDG: Validation, Interpretation, Writing - review and editing. All authors read and approved the final manuscript

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Data Availability

All data supporting the findings of this study are available within the paper and its Supplementary Information. Microsatellite primer sequences are provided in Supplementary Table 2, along with original reference describing the microsatellites used in this study

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Figures

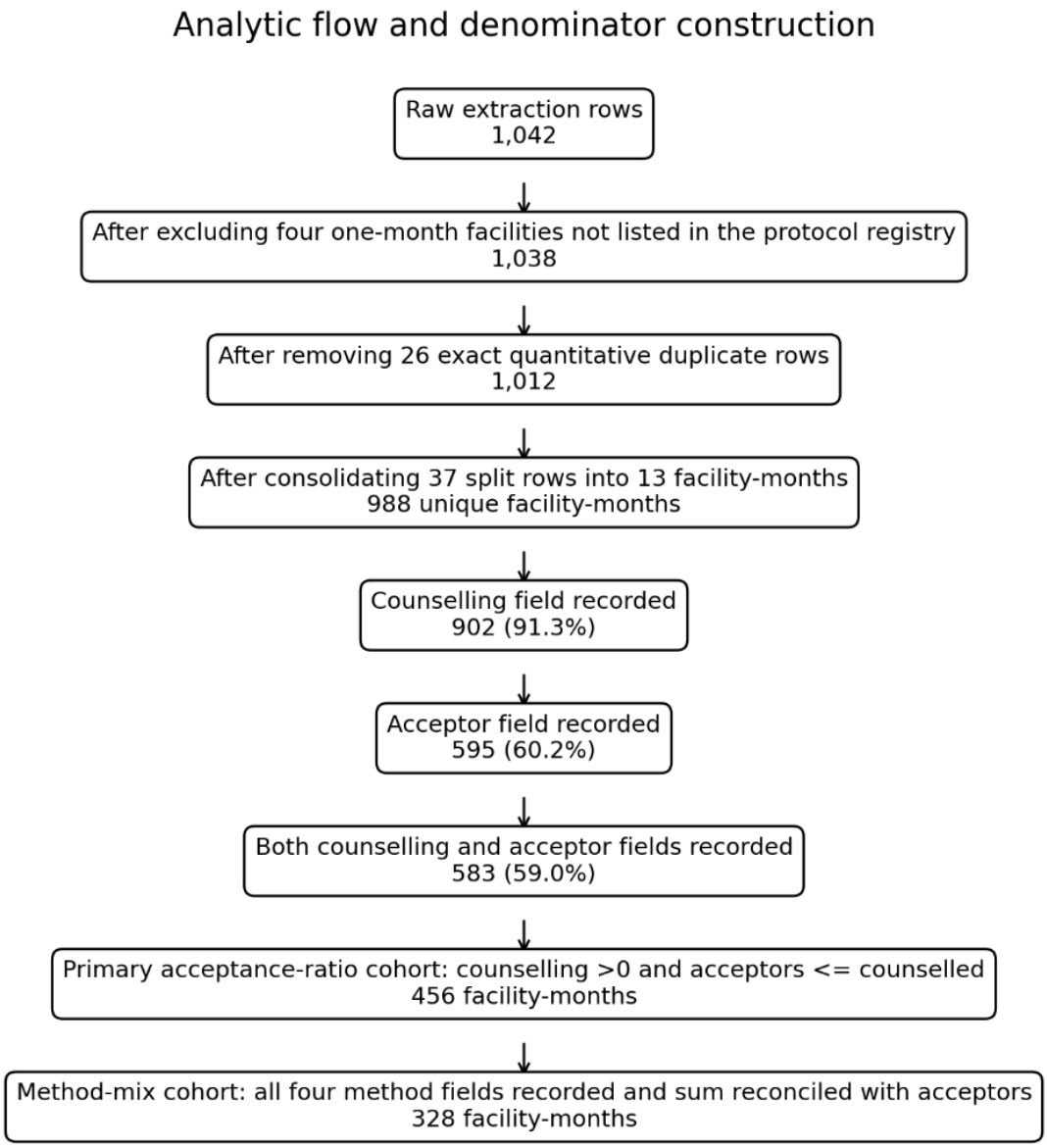


Figure 1

Analytic flow and construction of counselling, acceptance and method-mix denominators.

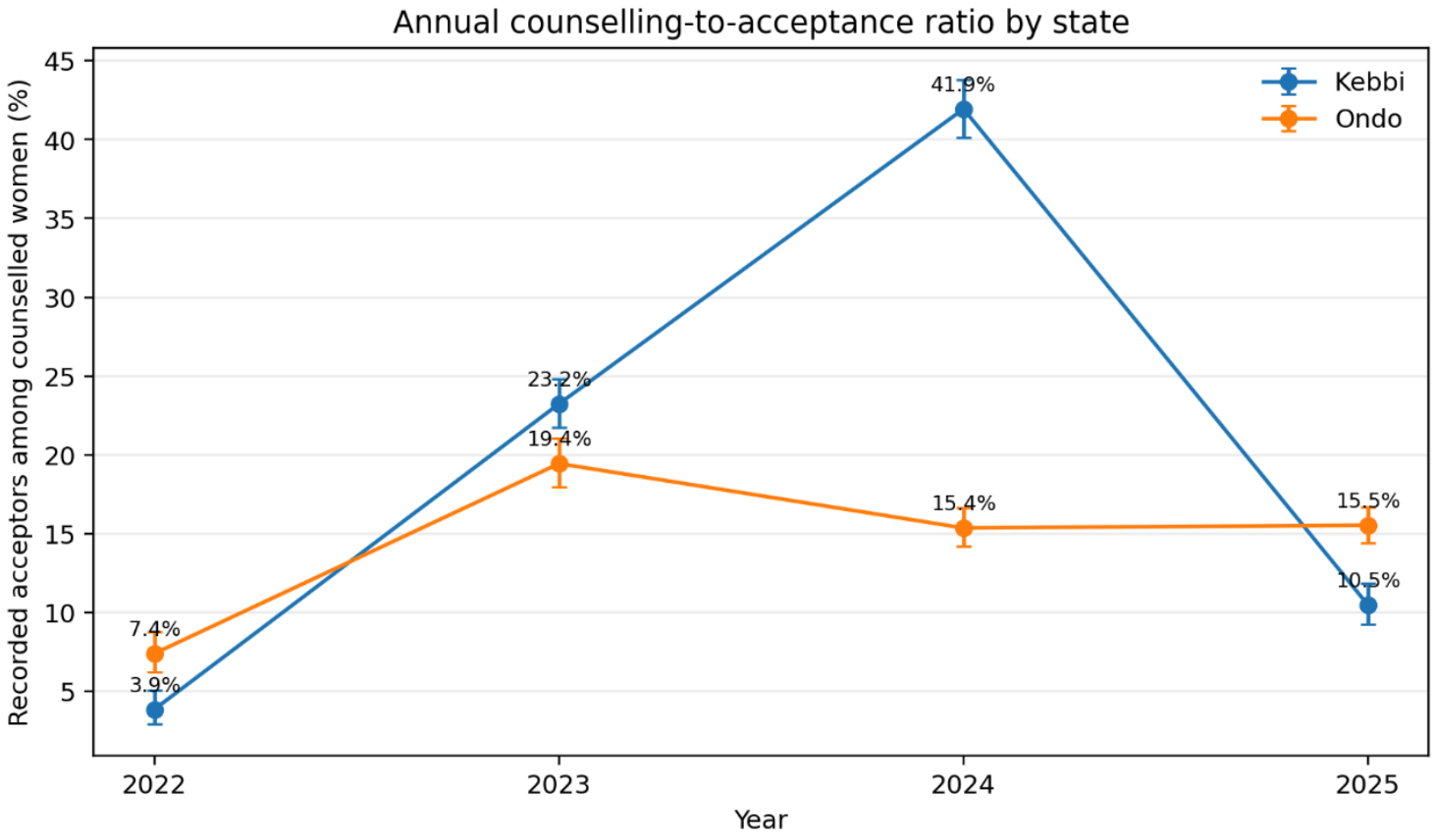


Figure 2

Annual recorded counselling-to-acceptance ratio by state, with Wilson 95% confidence intervals.

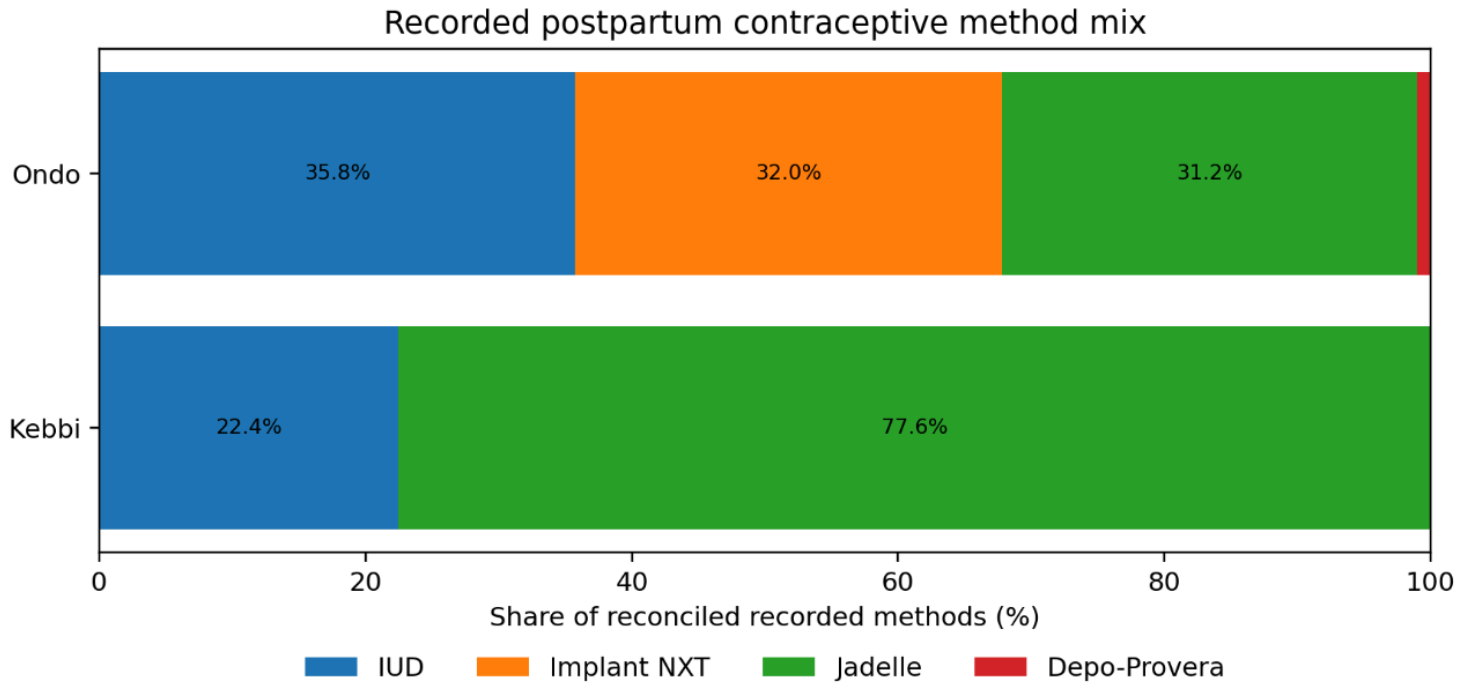


Figure 3

Recorded postpartum contraceptive method mix in reconciled complete facility-months.