Evidence Brief: Impact Assessment of MSI Public Sector Strengthening (PSS) Model in Nigeria

Evidence brief created by the Centre for Research, Evaluation Resources and Development (CRERD) & Pop Council; with research funded by the Children's Investment Fund Foundation (CIFF) and supported by MSI Nigeria and MSI Evidence & Impact teams.

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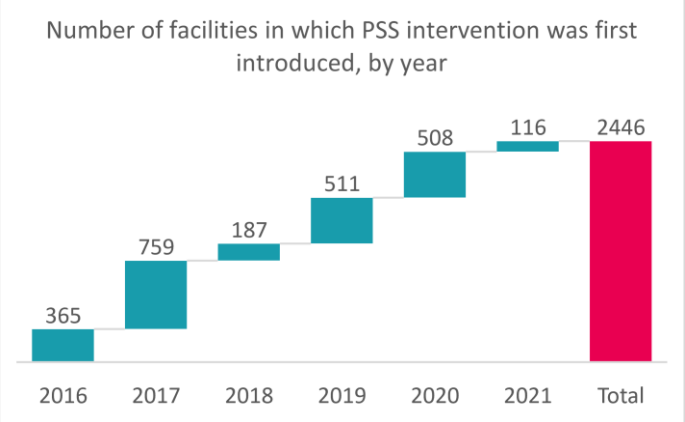
Background and Overview of the MSI PSS Model

Since 2012, MSI Reproductive Choices Nigeria has partnered with the Nigerian government to enhance the country's health system through its Public Sector Strengthening (PSS) model. The program spans 35 states and supports almost 2,500 public sector facilities. Initially, MSI directly managed service delivery points (SDPs), relying on Outreach Teams and State Clinical Training Officers (SCTOs) to ensure high clinical standards. Over time, the model transitioned to a more sustainable approach by training government Master Trainers (MTs) to lead capacity-building and oversight. Quality Assurance Teams (QATs) maintained monitoring of clinical quality and supply management.

Sokoto and Bauchi were the only states that have reached the withdrawal phase, enabling local governments to autonomously sustain and expand reproductive health services. This evidence brief evaluates MSI's impact between 2016 and 2021, assessing stakeholder perspectives and conducting interrupted time series analysis to quantify the change seen. In that period, 2,446 facilities began the PSS intervention, with 71 fully transitioned out by 2022.



The impact assessment used a mixed-method approach, combining quantitative analysis of monthly service delivery data from the national Health Management Information System (HMIS) comparing PSS-supported facilities to a matched-sample of non-PSS supported facilities led by Population Council, with qualitative insights gathered by CRERD from 54 Key Informant Interviews (KIIs) conducted across Nigeria's multiple regions.

Impact on Service Utilization

The MSI PSS model gave rise to substantial increases in service utilization across supported facilities, particularly in family planning services. Nearly all stakeholders interviewed reported that family planning service utilization doubled or tripled following MSI's intervention. This surge in service uptake was attributed to MSI's outreach and mobilization efforts, which were highly effective in raising awareness and improving access to family planning services, particularly in underserved areas. These qualitative experiences were confirmed through the quantitative analysis where it was found that by the end of 2021, PSS-supported facilities were delivering around 35 additional FP clients served per

month, as compared with the beginning of 2016. While non-PSS supported facilities only grew by 4 additional clients.

We analyzed Health Management Information System (HMIS) Nigeria data (2016-2021) to examine associations between the PSS intervention and service delivery (number of clients served) at the facility level. We conducted regression-based trends and event-study analysis, along matched-pair cohort analysis and found that PSS had a highly statistically significant effect on FP Services when compared to a control group of facilities that did not receive the intervention. On average, intervention group facilities served 18-22 additional FP clients per month as compared to similar control group facilities (Figure 1 and 2).

Table 1: FP Service regression results using HMIS data

Additional FP Services delivered in facilities due to PSS, compared to non-PSS		
	Fixed-effects regression estimate	**Propensity score matching estimate**
2017	21.56**	25.02**
2018	21.22**	28.95**
2019	15.24**	19.34**
2020	12.92**	11.68**
2021	17.63**	25.69**
Overall	**17.72****	**22.14****

*Estimates represent additional monthly average number of services delivered at PSS facilities after the intervention, in comparison with pre-intervention baseline and non-PSS facilities. * p<0.05, ** p<0.01.*

Figure 1: Regression-based trends in FP services, all facilities

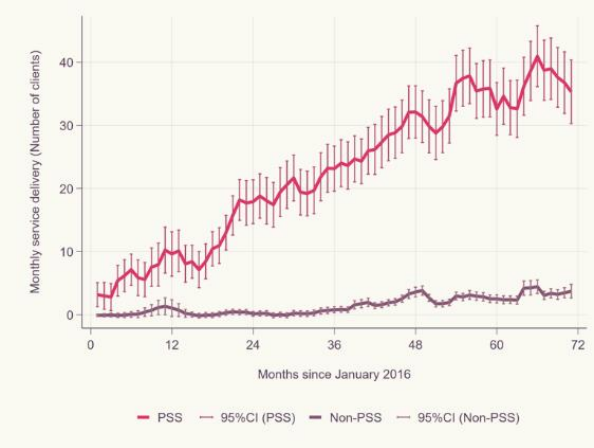
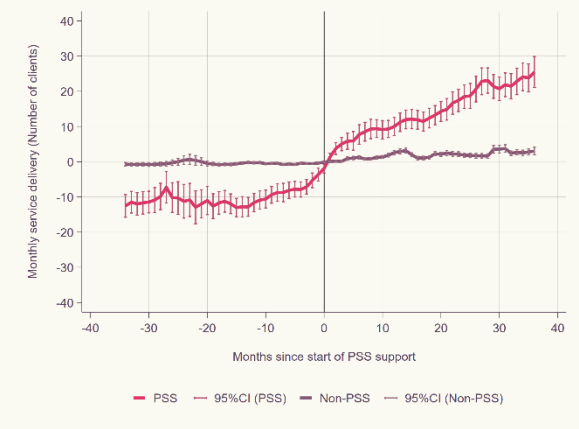


Figure 2:Event study analysis of FP services



Close-to-all stakeholders interviewed also referred to the significant rise in the use of long-acting reversible contraceptives (LARCs) such as IUDs and implants. LARCs became the preferred contraceptive method for many clients across multiple regions, underscoring the demand for long-term family planning solutions.

One director from the Southwest region highlighted the impact of consistent service delivery, stating, *"The increase in client turnout was significant, thanks to MSI's consistent supply of commodities and outreach efforts. We rarely faced stock-outs, which made a huge difference in maintaining service continuity."*

Again, this was verified through the quantitative analysis; where trends analysis of the period saw LARC services provided by PSS-supported sites grow from ~3 per month, to ~26 per month by 2021; vs very little-growth seen in non-PSS supported sites during that period (Figure 3 and 4) and an increase of ~18 LARC services per months 3yrs after first receiving PSS support.

Regression analysis confirmed highly statistically significant results; where, due to PSS, facilities provided between 15-17 LARC services more a month over the period compared to control.

Table 2: LARC services regression results

Additional LARC Services delivered in facilities due to PSS, compared to non-PSS		
	Fixed-effects regression estimate	**Propensity score matching estimate**
2017	17.49**	19.33**
2018	15.74**	19.28**
2019	12.47**	13.71**
2020	12.71**	12.57**
2021	16.13**	19.19**
Overall	**14.9****	**16.82****

*Estimates represent additional monthly average number of services delivered at PSS facilities after the intervention, in comparison with pre-intervention baseline and non-PSS facilities. * p<0.05, ** p<0.01.*

Figure 3: Regression-based trends in LARC services

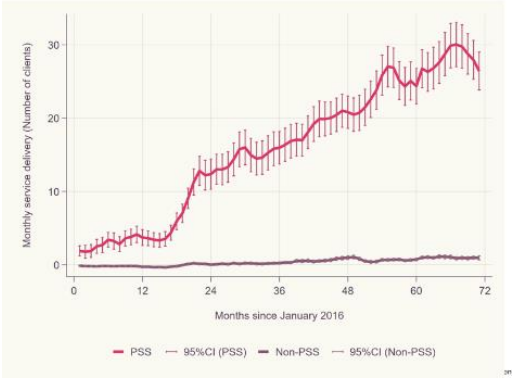
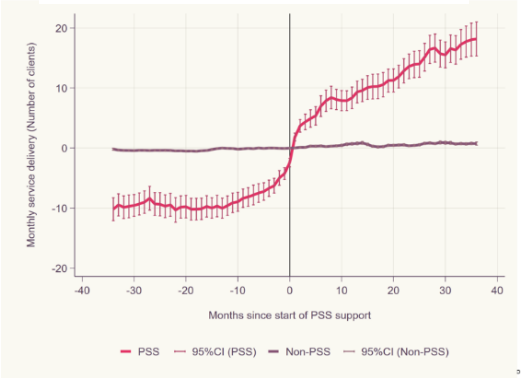


Figure 4: Event study of LARC services



Despite the overall gains in family planning service delivery brought by MSI's interventions, regional disparities emerged, impacting performance across different areas. In the North-East and North-West, about 3 out of 5 respondents noted that challenges with commodity distribution and frequent stock-outs affected service delivery. These issues were compounded by difficult terrain and security concerns, limiting consistent access to contraceptives. In contrast, respondents in the South-South and South-West regions consistently reported effective stock management and a sustained increase in client turnout. This success was attributed to strong collaboration between MSI and state health services, which ensured a smoother supply chain and consistent availability of commodities.

The impact of MSI's efforts on service utilization also varied across different groups of stakeholders. Among Family Planning (FP) providers, nearly all observed a significant rise in client visits and new acceptors, citing MSI's mobilization efforts as a key driver of this increase. Similarly, Directors and Coordinators reported improvements in most cases, but raised concerns about challenges in commodity distribution, particularly in rural areas where maintaining a steady supply remained difficult. Monitoring and Evaluation (M&E) officers, while noting improvements in service utilization, with nearly all reporting positive outcomes, expressed some concerns. Around 2 out of 5 felt that their limited involvement in the M&E processes restricted their ability to directly influence service delivery outcomes. Among partners, most agreed that MSI's interventions led to higher client turnout and new acceptors, though 1 in 5 noted a shift in focus toward funding private sector initiatives, potentially diverting attention from public sector support.

When considering the impact across different stages of MSI support, nearly all participants consistently reported an increase in service utilization. This was particularly evident in the Direct and Indirect phases, where MSI's active role in mobilization, communication, and training had the strongest effect. During the Direct phase, MSI's hands-on involvement in service delivery led to immediate and substantial gains in client turnout. In the Indirect phase, although MSI's direct presence diminished, the positive impact was sustained thanks to the foundational work in capacity-building and support mechanisms put in place earlier.

The variation in service utilization across primary and secondary healthcare facilities was minimal, with similar improvements seen in both types. In most cases, a notable rise in client visits and new acceptors was reported across both primary and secondary facilities. The success of MSI's interventions in raising awareness and improving access to family planning services was evident, regardless of the type of facility, demonstrating the effectiveness and broad applicability of MSI's strategies in various healthcare settings.

Impact on Facility Performance

MSI PSS model significantly enhanced the performance of healthcare facilities, particularly in the areas of contraceptive availability, stock management. Facilities across various regions and types experienced improvements in service efficiency, with notable increases in the availability of long-acting reversible contraceptives (LARCs) and better management of commodity stock-outs.

Across regions, there were disparities in the performance of facilities when it came to stock-out management. In the North-East and North-West, most participants reported ongoing challenges with commodity distribution and stock-outs, particularly in remote or hard-to-reach areas where difficult terrain and insecurity exacerbated supply issues. While these regions experienced improvements in service utilization, the lack of a consistent contraceptive supply often disrupted the continuity of services. By contrast, in the South-South and South-West, nearly everyone reported effective management of stock-outs. In these areas, the consistent supply of commodities was largely attributed to strong coordination between MSI and state health services.

The experience of stock management also varied by stakeholder group. Among Family Planning (FP) providers, nearly all emphasized that MSI was instrumental in preventing stock-outs, ensuring a reliable supply of contraceptives. However, some providers expressed concerns about maintaining this consistency as MSI's involvement decreased during the Withdrawal phase. M&E Officers shared a similar view, with most acknowledging the positive impact of MSI's interventions on stock management, but they expressed additional concerns about the sustainability of these systems once MSI's direct support ended, indicating the need for more robust, long-term strategies to manage supply independently.

Stock-out management varied across the stages of MSI's support, with distinct experiences during the Direct, Indirect, and Withdrawal phases. During the Direct and Indirect phases, nearly all participants noted that stock-out management was effectively handled. MSI's proactive coordination and active oversight ensured that facilities maintained a steady supply of contraceptives, helping to minimize disruptions in service delivery. However, as MSI's involvement lessened in the Withdrawal phase, participants reported growing difficulties in maintaining the same level of consistency, underscoring the need for stronger local capacity to manage supply chains independently.

Similarly, stock management practices were consistent across primary and secondary healthcare facilities, with nearly all from both types of facilities indicating that MSI effectively managed stock-outs. This consistency was particularly crucial in rural and hard-to-reach areas, where maintaining a continuous supply of contraceptives ensured uninterrupted service delivery. Regardless of the facility type, the availability of contraceptives and the reliability of supply chains were key contributors to the overall success of MSI's interventions.

Impact on Quality of Care

The MSI PSS model significantly enhanced the quality of care, particularly in the areas of family planning counselling and adolescent contraceptive uptake. Across regions, stakeholders consistently praised MSI's interventions, although some regional and contextual challenges remained.

MSI's training programs were widely regarded as a major driver of improvements in counselling quality. Nearly all respondents highlighted the positive impact of the training, with providers noting that they were better equipped to assist clients in making informed decisions, particularly around long-acting reversible contraceptives (LARCs). As a result, more clients felt confident choosing the best methods for their needs, leading to fewer method-related complications.

"MSI's training on counselling techniques was a game-changer. Clients are now more confident in choosing the right method for them, particularly LARCs, which have seen a significant uptake." — FP provider, North-Central region

There was also a marked increase in adolescent uptake of LARCs, thanks to MSI's youth-focused outreach efforts. These initiatives, aimed at addressing the specific reproductive health needs of adolescents, resulted in fewer unplanned pregnancies. However, regional challenges persisted, especially in more conservative areas. In the North-Central and North-West, just over half of the stakeholders pointed to cultural sensitivities as a significant barrier to adolescent access to contraceptives. These sensitivities were less of an issue in the South-East and South-West, where respondents noted greater success in engaging adolescents, who were more open to modern family planning methods.

When looking at the variation among different groups of stakeholders, FP providers were particularly positive, with nearly all reporting that MSI's training significantly improved counselling quality and LARC uptake. Providers emphasized the importance of MSI's interventions in expanding access to family planning for adolescents, a traditionally underserved demographic. Directors and Coordinators shared a similar perspective, with most acknowledging the improvements brought by MSI's comprehensive training programs. However, some respondents in this group raised concerns about cultural barriers, which still limited adolescent access in certain conservative areas. Partners, meanwhile, underscored MSI's impact on broadening the range of family planning methods available at facilities, with nearly all noting the expanded options and enhanced service delivery as critical improvements.

Across the stages of MSI support, the Direct and Indirect phases were particularly impactful. Most of participants noted that these phases saw significant improvements in both counselling quality and LARC uptake, particularly among adolescents. MSI's active involvement in training and mobilization during these stages played a critical role in improving service delivery. Furthermore, most of respondents observed that adolescents benefited significantly from these interventions, with better access to family planning services and a reduction in unsafe abortions, reflecting the success of MSI's targeted approach to adolescent reproductive health.

Finally, the improvements in quality of care were consistent across both primary and secondary healthcare facilities. Nearly all participants from both facility types reported that MSI's training substantially enhanced counselling quality, leading to a noticeable increase in LARC uptake and better family planning outcomes, particularly among adolescents. MSI's efforts to engage adolescents through targeted initiatives resulted in most of participants highlighting reduced rates of unwanted pregnancies and increased access to modern family planning methods. The consistency of these

outcomes across both types of facilities underscores the effectiveness of MSI's approach in diverse healthcare settings.

Impact on System Performance

MSI's interventions made significant strides in improving system performance, especially in data management, supportive supervision, and the facilitation of Family Planning (FP) Technical Working Group (TWG) meetings. Stakeholders consistently emphasized how these areas contributed to enhanced service delivery and overall reproductive health outcomes.

A majority of stakeholders highlighted the pivotal role of Supportive Supervision Visits (SSVs) organized by MSI. These visits were key in ensuring that service providers adhered to best practices in reproductive health services. Stakeholders across different groups recognized that regular supervision helped maintain high service standards. In terms of data management, nearly all respondents credited MSI with improving the quality of data collection and reporting. These improvements were largely achieved through the introduction of more effective reporting tools, regular validation of data, and consistent assessments of service delivery indicators.

The coordination of FP TWG meetings was also a major aspect of system strengthening facilitated by MSI. These meetings played an essential role in aligning local family planning efforts with state and national health goals. A director from the South-South region emphasized their importance, stating:

"The FP TWG meetings organized by MSI were instrumental in keeping us aligned with national strategies and ensuring any gaps in service delivery were promptly addressed."

However, the variation in system performance across regions highlighted some challenges. In the FCT and North-Central regions, nearly all participants raised concerns about data fragmentation and the inconsistency of FP TWG meetings, citing financial constraints and limited engagement as barriers to effective coordination. These issues highlighted the need for more support and resources to optimize system performance in these regions. In contrast, the South-South and South-West regions reported stronger improvements in both data management and more frequent FP TWG meetings. In these areas, the meetings were noted to be instrumental in better coordination among stakeholders, leading to improved family planning outcomes and stronger alignment with state health goals.

Stakeholders from different groups also varied in their emphasis on certain aspects of system performance. Among FP providers, nearly all emphasized the critical role of supportive supervision in maintaining service quality. They credited MSI's consistent visits with ensuring adherence to best practices, though 2 out of 10 highlighted the secondary importance of FP TWG meetings compared to direct supervision. Directors and Coordinators, on the other hand, focused more on the challenges of securing funding and maintaining participation in FP TWG meetings, with most recognizing the importance of supportive supervision but 1 out of 4 pointing out these broader system-level concerns. M&E Officers were more focused on the improvements in data management, with most acknowledging that MSI had significantly enhanced the quality of data systems. However, 2 out of 10 M&E Officers noted gaps in recent training, which affected their ability to leverage these improvements for long-term monitoring and evaluation.

The stage of MSI support also influenced system performance. During the Direct and Indirect phases, most of participants highlighted that regular supportive supervision was essential in maintaining service quality. These stages saw more frequent supervision visits, which ensured that best practices were consistently followed, contributing to improved performance across facilities. In terms of FP TWG meetings, nearly all participants noted their importance in enhancing service delivery across all

phases. However, during the Withdrawal phase, reduced MSI involvement led to fewer meetings and a decline in coordination, pointing to the need for stronger local engagement and resources to sustain these efforts independently.

Lastly, the variation in system performance across primary and secondary healthcare facilities was minimal, with nearly all respondents from both facility types emphasizing that supportive supervision was crucial in maintaining high standards of service delivery. These supervision visits ensured that both primary and secondary facilities could address challenges in real time and maintain consistent service quality. Additionally, FP TWG meetings were viewed as vital in coordinating efforts between facility types, helping to identify service gaps and align family planning goals.

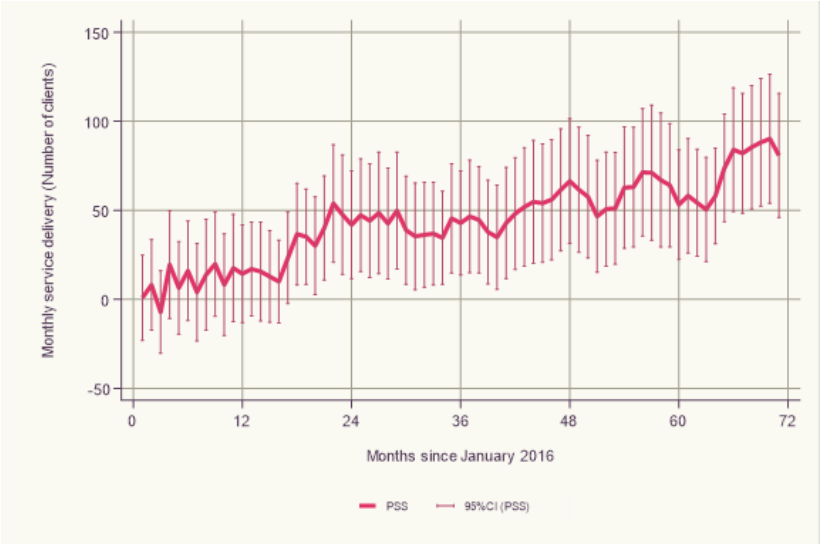
Sustainability of MSI's Interventions

A key strength of the MSI PSS model has been its focus on sustainability, putting in place systems for ensuring that core practices continue even after MSI's direct involvement ends.

Stakeholders interviewed from Bauchi and Sokoto reported that key practices introduced by MSI, such as maintaining sterilization procedures, hygienic insertion practices, and thorough counselling sessions, were still being sustained at their facilities. Most of participants also emphasized the continued importance of LARC services as a cornerstone of MSI's legacy.

However, over half of respondents expressed concerns about maintaining service quality after MSI's withdrawal, particularly in terms of stock management and staff training.

Figure 5: Regression-based trends in FP services in facilities withdrawn from PSS



Analysis of quantitative data show that the impact was sustainable. We used HMIS data for 71 health facilities that fully exited from the PSS program by 2022 and conducted regression-based trends analysis. Figure 3 shows that FP service delivery continued to grow in these facilities even after withdrawal. Similar patterns were also observed for LARC services and FP counselling services.

Conclusions and Recommendations

The MSI PSS model has had a transformative impact on reproductive health services in Nigeria, resulting in increased contraceptive use and improved service quality. Its emphasis on continuous supply chains, comprehensive training, and data-driven decision-making has enabled supported facilities to meet the country's growing demand for family planning services, particularly LARCs.

However, regional disparities persist, particularly in conservative areas where cultural resistance continues to limit access to services. Additionally, ensuring the sustainability of MSI's interventions in

stock management and service delivery will require continued government involvement and capacity-building efforts.

Recommendations:

- **Strengthen Collaboration**: Continued partnerships with local governments and stakeholders will be crucial for maintaining service continuity after MSI's withdrawal.
- **Address Regional Challenges**: Future interventions should focus on addressing cultural norms, particularly in poor and conservative areas, to improve adolescent access to family planning services.
- **Enhance Data Management**: MSI's progress in data collection and reporting should be further strengthened by ongoing investments in training and capacity-building at the facility level.

The MSI PSS model offers a robust framework for improving family planning services in Nigeria, with valuable lessons for future health system strengthening initiatives.