

# THE IVF MARKET IN NIGERIA:

Insights into market size, equipment, consumables, media, and laboratory quality management.





# **CONTENTS**

CONTENTS	2
SUMMARY	3
The IVF Market in Nigeria	∠
IVF CLINICS IN NIGERIA	4
IVF CYCLE PER CLINIC	5
EQUIPMENT, CONSUMABLES AND MEDIA	7
EQUIPMENT SOURCING	7
MAINTENANCE AND REPAIR	7
EQUIPMENT CALIBRATIONS, VALIDATION, VERIFICATION, AND TRACEABILITY	7
CONSUMABLES AND MEDIA	8
LABORATORY QUALITY MANAGEMENT	9
BEYOND CERTIFICATIONS	9
WAY FORWARD	9
STUDY METHODOLOGY	10
DESIGN	10
TARGET POPULATION	10
SURVEY ADMINISTRATION AND INTERVIEWS	10
DATA ANALYSIS	10
RESPONSE RATE	11
LIMITATIONS	11
ACKNOWLEDGEMENT	11
APPENDIX A: LIST OF IVF CLINICS IN NIGERIA	12
ABOUT AAA MEDI-CALIBRATIONS LTD	17
ABOUT QIIN and Cademy Ltd	18



# **SUMMARY**

Cademy Ltd. conducted this study with assistance from AAA Medi-Calibrations Ltd. and the Quality Improvement Institute of Nigeria (QIIN) to determine the size of the IVF market and the necessary training for the latest version of ISO 15189:2022 Standards for Laboratory Quality and Competence. Leveraging our proven experience in securing training sponsorships, such as the ongoing QMS ISO 9001:2015, QIIN aims to develop an impactful program for embryologists and IVF laboratory staff across Nigeria. Thus, the survey was to help tailor a training program that enhances accessibility and quality across the industry.

We employed a mixed-methods approach from April 7 to May 20, 2024, which included a descriptive cross-sectional survey and qualitative interviews. The study targeted about 174 IVF clinics across Nigeria, using both electronic surveys and direct interviews to gather data on IVF practices, ultimately informing competency development and improvement recommendations.

The following were key findings from the study:

- There are over 174 IVF clinics in Nigeria, but less than half are registered to the Association for Fertility and Reproductive Health (AFRH). However, following the categorization of IVF clinics into groups by number of cycle capabilities, an estimated 18,850 IVF cycles were carried out in 2023 with an average ranging between 108 and 160 cycles per clinic.
- There are opportunities for equipment suppliers to support in-house biomedical departments to improve the calibration, validation, verification, and traceability services they provide. They should extend the ISO 15189:2022 training to the biomedical team.
- Consumables and media suppliers could focus on expanding international partnerships, offering competitive pricing and enhanced support services, strengthening relationships, and investing in research and development to better meet the needs and expectations of IVF clinics.
- IVF clinics have a stark lack of ISO 15189:2022 certification, and the number of staff members working in the IVF lab with competencies on this standard is incredibly low. Therefore, there is a pressing need to collaborate and raise the bar so that these facilities can provide services that are not only successful but also globally recognized for their competence and quality.



# THE IVF MARKET IN NIGERIA

### **IVF CLINICS IN NIGERIA**

The IVF market is rapidly growing in Nigeria. This report identified one hundred and seventy four (174) IVF clinics, of which nine brands have more than one branch spread across five of Nigeria's six geopolitical zones. There is no IVF clinic in the North-East Zone of Nigeria (Figure 1).

According to the official list of the Association for Fertility and Reproductive Health (AFRH), there are 72 (45%) registered IVF brands in Nigeria as at the time of this report, distributed across the zones in the following order: The South West has 31 clinics (46% AFRH registration within the zone), followed by North Central with 24 (43%), South-South with 14 (38%), South East with 2 (17%) and North West with 1 (50%).

It is crucial for clinics to register with AFRH, the sole recognized association of fertility practitioners in Nigeria, as this registration grants recognition and visibility among clinics. A growing registration will undoubtedly allow AFRH to improve its clinic membership benefit packages.

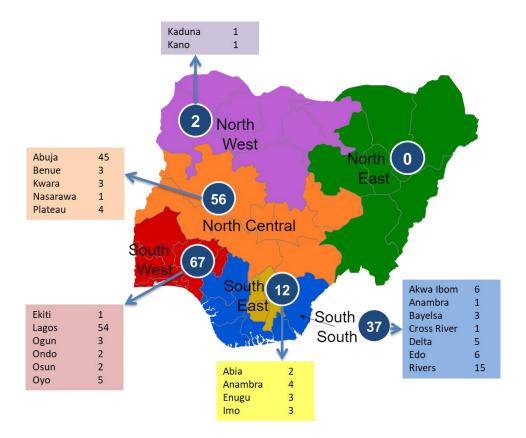


Figure 1: Distribution of IVF clinics in Nigeria across geo-political zones

### IVF CYCLE PER CLINIC

In an IVF clinic, the embryology laboratory is a critical component for achieving a successful IVF cycle. The number of cycles performed annually provides insights into the capabilities of the laboratory as well as the overall market size. However, the number of embryologists and other laboratory staff has been found to show a high correlation with the number of cycles per IVF clinic. On average, one embryologist and a trainee perform over 150 cycles per year. This deduction is based on the analysis of responses, typically for newly established clinics, assuming a monthly enrolment of 3 to 5 patients per month, undergoing an average of 3 cycles per month for 12 months in a year.

Other crucial factors that have influenced patronage include cost per cycle (with generous promotional offers), auxiliary services provided (i.e., whether the IVF clinic is part of a hospital and its referral system), age of the clinic, range of assisted reproductive technologies, and networking.

A straightforward method of estimating the number of IVF cycles performed in 2023 was not feasible at the time of this study due to the time and response rate of clinics. However, it was possible to generate an estimate by categorizing clinics into groups by number of cycles carried out in 2023. This was facilitated by of some of the factors mentioned above and insights derived from both responses to the survey and interviews.





Figure 2 revealed an estimated 18,850 IVF cycles were carried out in 2023 with an average ranging between 108 and 160 cycles per clinic.

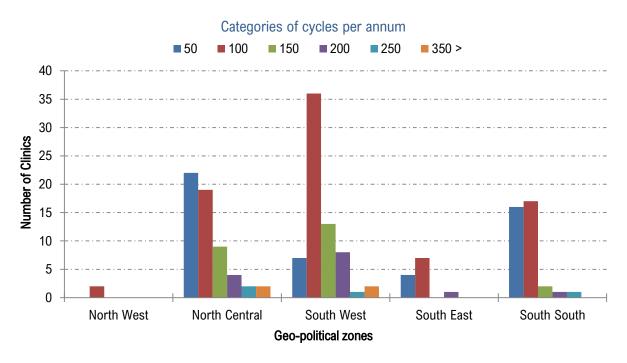


Figure 2: Numbers and categories of IVF cycles performed by geo-political zones

The year 2023 until the time of this report has been fraught with myriad economic travails in Nigeria, with the inflation rate soaring up to 28.92% in December 2023, which many businesses, including IVF clinics, are facing. Hence, there was an increase of about 40% in the cost of IVF cycles and a general decline in patronages, resulting in a 30% decline in the overall number of cycles compared to 2022.

It is important to note that the number of cycles performed in an IVF clinic does not translate to the total number of women undergoing treatment. A cycle encompasses treatment procedures from both fresh and frozen embryo transfers, with or without

preimplantation genetic testing (PGT). It also includes the different types of fertilization, such as IVF (in vitro fertilization) or ICSI (intracytoplasmic sperm injection), and incorporates treatments using patient or donor gametes and embryos, as well as surrogacy.

Clinics face the challenge of exploring innovative strategies for sustainable fiscal planning in the context of patient care. These include operational cost reduction through waste elimination, cost-effective payment plans between clinics and suppliers, and patients, respectively.

# **EQUIPMENT, CONSUMABLES AND MEDIA**

### **EQUIPMENT SOURCING**

Due to foreign exchange issues, delay in supply and customs clearance, IVF clinics primarily sources their equipment from local suppliers, with a very few direct international suppliers. We sought to understand the top 5 IVF equipment suppliers in the Nigerian IVF market, which seems like an open secret. However, we identified the following brands, arranged alphabetically, as potential sources of funding for our sponsored training programs: AAA MEDI-CALIBRATIONS, CP BIOMED, G-SYSTEMS, LABOGEN DIAGNOSTIC, and OAAK BIOMEDICAL.

### MAINTENANCE AND REPAIR

The majority of clinics (38%) rely on contracts with equipment suppliers for maintenance services, while only 10% of clinics manage maintenance and repair exclusively with an inhouse team (Figure 3).

Given the diverse strategies employed by clinics, there is an opportunity to enhance in-house technical capacity within these facilities. This could reduce dependence on highly expensive external services, potentially lowering costs and improving service continuity.

Equipment suppliers should consider offering more tailored maintenance contracts and training programs to strengthen partnerships and service quality.

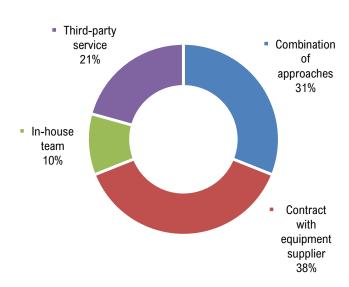


Figure 3: Survey response to how clinics miantain and repair their equipment

# EQUIPMENT CALIBRATIONS, VALIDATION, VERIFICATION, AND TRACEABILITY

The management of equipment calibration, validation, verification, and traceability in IVF clinics in Nigeria varies significantly. 36% of clinics outsource specialized third-party services, highlighting a preference for expert handling outside the clinic's internal capabilities. About 25% of clinics rely on contracts with equipment suppliers, ensuring that equipment maintenance aligns with supplier standards and capabilities. Meanwhile, 21% manage these processes in-house, indicating significant internal expertise and possibly advanced self-management equipment. A smaller percentage (18%) utilizes a combination of methods, reflecting a strategic approach to balancing resources and expertise.

Biomedical departments in facilities with IVF clinics are becoming more grounded, making up the majority of those in-house teams.

Equipment calibration, validation, verification, and traceability protocols are crucial for compliance with ISO 15189:2022. Developing standardized protocols for calibration, validation, verification, and traceability ensures consistency and compliance across various service models, including inhouse, supplier, and third-party. Therefore, clinics would greatly benefit from partnering with equipment suppliers who implement or enhance quality assurance programs that regularly assess the effectiveness of the protocols with the teams, maintaining high standards and making informed decisions about which methods to use. Exploring new technology and offering new services to grow in the future by working with equipment suppliers that provide innovative calibration, validation, verification, and traceability protocols and kits is increasingly becoming a vital part of the healthcare and laboratory landscape.

### **CONSUMABLES AND MEDIA**

The majority (65%) of IVF clinics expressed a preference to procure at least one or more

consumables and media directly from international suppliers and manufacturers.

Referrals between IVF clinic colleagues, friends, professional associates, and networking partners provide information about suitable suppliers based on experience. The European Society of Human Reproduction and Embryology (ESHRE) and the American Society for Reproductive Medicine (ASRM), two prominent international annual meetings, facilitate the sharing and exposition of these experiences.

Consumables and media suppliers could benefit from strategically looking into expanding international partnerships, consider competitive pricing and support services, improve active relationship building, and invest in research and development that provides insights into the needs and expectations of IVF clinics.







# LABORATORY QUALITY MANAGEMENT

According to the study findings, it is clear that the adoption of ISO 15189:2022 certification is significantly lacking among the IVF clinics in Nigeria.

Notably, 59% of the clinics report that neither the laboratory nor any staff members hold ISO 15189:2022 certification. Furthermore, no clinic reported having both the laboratory and staff members certified, and none reported having only the laboratory certified. A small portion (14%) indicated that one or more staff members hold individual certifications and most probably the obsolete version ISO 15189:2012, while 17% of respondents are unsure of their certification status.

The low certification rates among staff highlight a substantial gap in meeting international standards for quality and competence among embryologists and other laboratory staff. However, the stark lack of ISO 15189:2022 certification among the surveyed IVF clinics or laboratory as an organization calls for a concerted effort to elevate standards, ensuring that these facilities can deliver services that are not only effective but also internationally recognized for their quality and competence.

#### **BEYOND CERTIFICATIONS**

It is very crucial to note that adopting the requirements of ISO 15189:2022 goes beyond the formal certification of an IVF clinic or laboratory; it fundamentally enhances the overall quality and reliability of the laboratory services. The primary benefit of embracing these standards lies in the substantial improvements in laboratory accuracy, efficiency, and safety, which directly translate into better patient care and outcomes.

Although, certification validates a laboratory's adherence to high standards, but the real value lies in the day-to-day operations and the resulting trust and confidence from patients and healthcare providers. Therefore, the focus should not merely be on obtaining certification but on the long-term benefits that compliance with ISO 15189:2022 brings to laboratory practices and patient services.

### WAY FORWARD

ISO 15189:2022 is significantly more rigorous and specialized than the generic ISO 9001:2015, particularly for IVF clinics where treatment success heavily relies on laboratory operations.

Nigeria has a number of IVF clinics certified to ISO 9001:2015, but it is urgent to advance by implementing the most recent version of ISO 15189:2022. As a result, QIIN will be collaborating closely with AAA Med-Calibrations Ltd. to make it a nationwide success.



# STUDY METHODOLOGY

#### **DESIGN**

A mixed-methods design that included a descriptive cross-sectional survey and qualitative interviews was used. The administration lasted from April 7 to May 20, 2024.

# TARGET POPULATION

A total of 174 IVF clinics, which included both registered facilities of the Association for Fertility and Reproductive Health (AFRH) and non-registered facilities, made up the target population. The list of registered facilities was collated from the <u>AFRH website</u>, while the list of non-registered IVF facilities was collated from internet searches from notable websites (e.g., <u>Fertility Hub Nigeria</u> and <u>OVU Fertility Global Fertility Network</u>), social media platforms (e.g., Facebook and Instagram), and practicing embryologists.

The target population did not include many non-registered IVF clinics because there was no proof of IVF treatment (excluding only surrogacy, embryo and gamete donations), an existing website, an active social media page, a physical address, or an accessible phone number.

### **SURVEY ADMINISTRATION AND INTERVIEWS**

An online survey questionnaire was electronically administered to target facilities mainly via WhatsApp contacts collated from the above-mentioned facility data sources. Distribution was facilitated through the Clinical Embryologists Association of Nigeria (CEAN) by the President of CEAN and follow-up calls to some embryologists. The cross-sectional survey aimed to gather quantitative data on staff levels, outsourcing practices, ISO certification statuses, and annual IVF cycle volumes across a wide range of facilities. The electronic format was chosen to maximize reach and efficiency.

Unstructured, mainly leading questions, from the survey findings comprised the qualitative interviews conducted to deepen the understanding gained from the survey. These interviews were carried out both in person and via phone calls, targeting key geographical locations renowned for their concentration of IVF services. The interviewees were selected based on their significant roles, experiences, and expertise within the IVF community, providing qualitative insights that supplemented the quantitative survey data.

#### **DATA ANALYSIS**

Data from the surveys and interviews were analyzed to provide a detailed description of the current state of IVF services in Nigeria. Quantitative data were processed using Microsoft Excel to



generate descriptive statistics, while qualitative data from interviews were thematically analyzed to extract pertinent themes and narratives.

#### **RESPONSE RATE**

About 20% (29) of the total target population provided responses to the online survey questionnaire. But follow up calls to additional 20 interviewees across the country provided commendable insights.

# **LIMITATIONS**

AFRH registered 3 more IVF clinics during the study period, potentially expanding the actual total number of registered to clinic to change over time.

Our search and inclusion criteria may have resulted in some omissions of especially small and upcoming IVF Clinics in Nigeria.

Extended duration of the survey administration and interviews could provide deeper insight including a more accurate size of the estimated number of IVF cycles per clinic, which was also influenced by the harsh economic situation in 2023.

#### **ACKNOWLEDGEMENT**

We thank the following for their support and assistance with this study.

- 1. AAA Medi-Calibrations Ltd.
- 2. All the participating clinics
- 3. President of CEAN
- 4. Interviewee embryologists
- President/CEO of QIIN



# APPENDIX A: LIST OF IVF CLINICS IN NIGERIA

S/N	State	Name of Clinic
1.	Abia	Federal Medical Center, Umuahia
2.		M and M Fertility Hospital
3.	Abuja	Alliance Hospital
4.		Aquila Clinic and Fertility
5.		Bepos Hospital & Fertility Centre
6.		Berith Specialist Hospital
7.		Bodycheck International Clinic, Fertility & IVF Center
8.		Brays Hospital
9.		Bridge Clinic
10.		Cardinal Care Hospital and Maternity
11.		Care Women's Clinic
12.		Charitos BO Hospital
13.		Clover Hospital & Fertility Clinic
14.		Deda Hospital
15.		DIFF Medical Center
16.		Excel Specialist Hospital & Fertility Centre
17.		Federal Medical Centre, Abuja
18.		Fertil Aid Hospital Abuja
19.		Fresh Springs Medical Services
20.		Grabbo Fertility Clinic
21.		Guinea Savannah Medical Centre
22.		Hillshore Clinic
23.		Jece Hospital Nig Ltd
24.		Joje Abebe Fertility Center
25.		Kelina Hospital
26.		King's Care Hospital
27.		Lifeanax Fertility Clinic
28.		Lifepoint Fertility Center
29.		Lifeway Medical Centre
30.		Lilyfields Medical Center
31.		Limi Hospital
32.		M and M Fertility Hospital
33.		MediMax Hospital
34.		Mom Fertility Clinic
35.		National Hospital Abuja
36.		Nisa Premier Hospital
37.		Nordica Fertility Centre
38.		Primecare Fertility Clinic Ltd
39.		Procare Hospital
40.		Queens Specialist Hospital



S/N	State	Name of Clinic
41.		Reprocare Clinic & Diagnostics
42.		St Catherines Specialist Hospitals
43.		St Jude's Fertility Clinic
44.		Tabitha Medical Center
45.		Tunicleo Medical And Fertility Center Ltd
46.		Ultimate Specialist Hospital and Fertility Center
47.		Viva Fertility Clinic
48.	Akwa Ibom	Doren Fertility Center
49.		Holified Nulife Fertility Centre
50.		Rainbow Fertility Center
51.		Renewed Fertility Clinic
52.		Sheltered Specialist Hospital
53.	Anambra	Amazing Grace Hospital And Fertility Centre
54.		Gaudium IVF Centre Nigeria
55.		Life International Hospital
56.		Life Specialist Hospital
57.		Nnamdi Azikiwe University Teaching Hospital
58.	Bayelsa	Crest Consultant Hospital And Fertility Centre
59.		Federal Medical Centre, Yenagoa
60.		Flourish Fertility & Endoscopy Clinic
61.	Benue	BSUTH
62.		First Fertility Hospital
63.		Foundation Hospital
64.	Cross River	Amandajarvis Clinic
65.	Delta	Coastal Specialist Clinic
66.		First-Rank Fertility Center
67.		Lily Hospitals
68.		Nordica Fertility Centre
69.		Shepherd Hospital and Fertility Center
70.	Edo	Graceland Medical Centre
71.		Lily Hospitals
72.		Maviscope Hospital And Fertility Centre
73.		St. Augustine Medical Centre & Assisted Reproduction Technology Unit
74.		The Hope Valley Fertility Clinic
75.		University of Benin Teaching Hospital (UBTH)
76.	Ekiti	Maternal-Child Specialists' Clinics
77.	Enugu	Maternal Health Specialist Clinic & Fertility Centre
78.		Mbanefo Enugu Fertility Hospital
79.		Pink Petals Fertility Clinic
80.	Imo	Imo IVF and Fertility Centre
81.		St. Elizabeth Fertility Specialists
82.		Vaden Specialist Clinics & Fertility Centre



S/N	State	Name of Clinic
83.	Kaduna	Nisa Premier Hospital
84.	Kano	Silver Crest Gynae Consultants
85.	Kwara	Olanrewaju Hospital
86.		Springway Clinics and Reproductive Health Centre
87.		University of Ilorin Teaching Hospital (UITH)
88.	Lagos	Abims Fertility and Andrology
89.		Androcare Fertility Centre
90.		ATG IVF Centre & Fertility Laboratories
91.		Bloom Fertility Clinic
92.		Bridge Clinic
93.		Clear View Hospital
94.		Eko Hospital Fertility Centre
95.		Emobileclinic
96.		Fertigold Fertility Clinic
97.		Fertil City Fertility Clinic
98.		Fertility Assyst / Medison Specialist Women's Hospital
99.		Fusion Nest Fertility Centre
100.		George's Memorial Medical Centre
101.		Green-onyx Fertility Centre
102.		Griggs Specialist Hospital
103.		Gynaecology Solution
104.		Havana Specialist Hospital Limited
105.		Healing Spring Hospital
106.		Kingdom Health Hospital and Fertility Centre
107.		Kingswill Specialist Hospital
108.		Lagos University Teaching Hospital
109.		Lennox Hospital
110.		LifeCirque Medicals
111.		Lifelink Fertility Clinic
112.		Medical Art Center
113.		Mercy Stripes Specialist Hospital
114.		Newlife Conceptual Limited
115.		Nordica Fertility Centre (2)
116.		Omega Golden Fertility
117.		Omni Advanced Fertility Center
118.		One Wellness Center
119.		Open Door Hospital
120.		Origene Fertility
121.		Paelon Memorial Hospital
122.		Parkland Specialist Hospital
123.		PeterHoff Specialist Hospital
124.		PF Medical Centre



S/N	State	Name of Clinic
125.		Precious Conceprions
126.		ReGenesis Fertility Specialist Hospital
127.		Roseward Fertility Place
128.		Sameda Clinics
129.		Southend Fertility Clinic
130.		St. Ives Specialist Hospital
131.		The Alpha Assisted Reproductive Klinic (The Ark)
132.		The Hope Valley Fertility Clinic
133.		The Hospital
134.		The Lifeshore Clinic
135.		The Olive Branch Clinic
136.		The Pearls Specialist Medical Centre
137.		The Roding Medical Centre
138.		Trucare Fertility Centre
139.	Nasarawa	Adonai Hospital
140.	Ogun	Federal Medical Centre, Abeokuta
141.		The Hospital
142.		White Clinics & Fertility Centre
143.	Ondo	Goshen-Land Specialists Hospital and Fertility Centre
144.		Paramount Specialist Hospital and Fertility Center.
145.	Osun	Ayomide Women's Health Specialist Hospital & IVF Centre
146.		Balm of Gilead Specialist Hospital
147.	Oyo	Delight Hospital & Fertility Centre
148.		God's Knot Fertility Centre, Ibadan
149.		Iye Hospital Ltd
150.		Likeminds Fetal Hospital
151.		Vine Branch Fertility Center Ibadan
152.	Plateau	Alps Hospital and Diagnostics
153.		Fertile Ground Hospital
154.		Graceville Multi Specialist & IVF Hospital
155.		Jos University Teaching Hospital
156.	Rivers	Bridge Clinic
157.		Bridgestone Hospital
158.		Care Women's Clinic
159.		CORE Fertility Clinic
160.		Greencare Medical Consultants and Fertility Centre
161.		Gynescope Specialist Hospital
162.		Nectar Medical & Fertility Clinic
163.		Nisa Prime Fertility Centre
164.		Novel Hope Fertility & Medical Centre
165.		Princess Medical Centre
166.		Savealife Mission Hospital



S/N	State	Name of Clinic
167.		St Catherines Specialist Hospitals
168.		The Hope Valley Fertility Clinic
169.		Ultimate Fertility Centre
170.		University of Port-Harcourt Teaching Hospital

# Note:

We regret not including any IVF clinics in this list, but if your clinic or any others you know are missing please contact us to include them so we can get in touch when ISO 15189:2022 training begins. Thank you.

Email: contact@cademyltd.com WhatsApp: +234 901 136 1012





#2, Abimbola Close, Off Oweh Street, Fadeyi, Lagos

Mobile: 08169964214, 07061143190.

**E-mail:** aaacaliberationsltd@gmail.com; bola@aaacaliberationsltd.com

# ABOUT AAA MEDI-CALIBRATIONS LTD

AAA Medi-Calibrations Ltd. is a distinguished leader in the biomedical engineering industry, backed by over two decades of expertise in medical laboratory equipment sales and service. Specializing in the establishment of new laboratories across the IVF, diagnostics, and research sectors; the company excels in laboratory equipment procurement, supplies, preventive maintenance, as well as specialized and general laboratory consumables.

Our mission is to provide rapid, comprehensive, and value-added quality solutions that cater to the unique needs of our customers worldwide. By ensuring a consistent supply of high-quality products and services, promoting a robust maintenance and calibration culture, and maintaining zero equipment downtime, we are committed to fostering the advancement of our clients.

Operating with core values of integrity, safety, environmental consciousness, and reliability, AAA Medi-Calibrations Ltd. partners with leading global companies to deliver cutting-edge laboratory solutions. Our commitment extends to exceptional response times, promising a 6-hour turnaround within Nigeria and 24 hours internationally in the event of equipment breakdowns. By offering competitive pricing and maintaining high standards in calibration, installation, and maintenance, we ensure that our clients and partners receive the best possible equipment at the best prices, supporting their endeavor to provide reliable services in a technologically evolving environment.







# ABOUT QIIN and Cademy Ltd

The Quality Improvement Institute of Nigeria (QIIN) is a non-governmental and nonprofit organization dedicated to fostering a culture of quality and continuous improvement across various sectors in Nigeria.

QIIN's commitment is to uphold the quality traditions of the International Organization for Standardization (ISO) and integrate other relevant international and national standards into our certification courses, educational and research programs, information dissemination events, and the development of quality improvement tools.

Cademy Ltd., a certified consultant with the National Register for Conformity Assessment Practitioners (NRCAP) accreditation for ISO 9001:2015 by the Standards Organization of Nigeria (SON), supports QIIN's Quality Management Systems (QMS) training with its extensive installation, implementation, and auditing experiences.

Cademy, a founding corporate partner of QIIN, has prepared many IVF clinics for the prestigious ISO 9001:2015 organizational certification through SON in Nigeria.

Join QIIN today and step into a world of limitless opportunities, networking, and growth, all while transforming the landscape of quality management in Nigeria.





**Tel:** +234 901 136 1012

Email: membership@qiin.org

Website: https://qiin.org

#41 Mainstreet, Suncity Estate, Galadimawa,

Abuja-Nigeria

