Challenges in Sacral Neuromodulation Adoption in the Arab World:

A Comparative Analysis of Availability and Regional Utilization Trends

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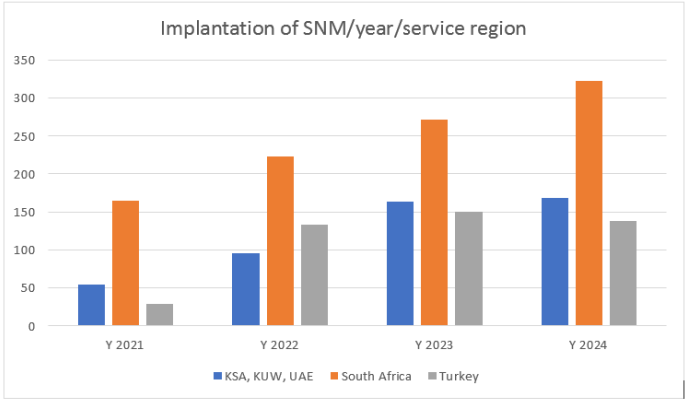
Methods:

leading SNM device suppliers were contacted to provide data on the availability of SNM services between 2021 and 2024 across the Arab world, Sub-Saharan Africa, Eastern Europe, and Turkey. We compared implantation rates adjusted for both population size (based on the World Bank, 2023 data), estimated population >20 years, and OAB prevalence in countries where SNM services are available, according to recent publications.



Implanted SNM devices in Saudi Arabia (KSA), Kuwait (KUW), United Arab Emirates (UAE), South Africa and Turkey between 2021 and 2024.

Results:

SNM implantation data from 2021 to 2024 were obtained from Medtronic, the primary provider of SNM devices in these regions. Although another major supplier, Axonics, was contacted, they reported no active services in the specified areas.

SNM supplier services were available only in 3 of the Gulf countries out of 22 Arab countries.

The growth of SNM services in these countries showed continuous improvement from 2021 to 2024. However, low implantation rates were observed compared to the large estimated population with OAB.

When compared to other service regions, higher implantation rates were found in South Africa, while the implantation rates in the three Arab countries with SNM services were comparable to those in Turkey.

Interpretation of Results

The findings indicate that the availability and utilization of SNM devices in the Arab world remain relatively low compared to other regions, such as South Africa and Turkey.

While there has been growth in the number of SNM implants in the Gulf countries (Saudi Arabia, UAE, and Kuwait) from 2021 to 2024, the rates of implantation remain low compared to the estimated population with OAB.

Conclusion

The results of this review highlight significant regional disparities in the availability and utilization of SNM therapy. While there is promising growth in the Gulf countries, the relatively low implantation rates suggest that there are barriers to widespread adoption of this therapy in the region, including awareness, healthcare infrastructure, and financial constraints. Further research into the factors influencing SNM adoption in these regions is necessary to optimize SNM service delivery across the Arab world and other underserved regions.

Country	Population [a]	Estimated population aged >20 years [a]	Total implants 2021-2024	Reported prevalence of OAB [b]	Estimated OAB population	Implant/ 100,000 patients
UAE	10,483,751	~5.3 million	450	27.4–53.8%	~5.75 million – ~11.3 million	~7.82 – ~3.98
Kuwait	4,853,420	~2.3 million				
KSA	33,264,292	~16.5 million				
Turkey	85,325,965	~42.9 million	481	20.7–38.9%	~8.88 million – ~16.7 million	~5.42 – ~2.88
South Africa	63,212,384	~29.9 million	983	21–27%	~6.28 million – ~8.07 million	~15.66 – ~12.18

[a] Population data as of 2023 according the World Bank. [b] OAB incidence rates were derived from recent regional studies as follows: 27.4–53.8% in Arab countries (Al Edwan et al., 2021; Qudah et al., 2024), 21–27% in Sub-Saharan Africa (Ackah et al., 2022), and 20.7–38.9% in Turkey (Sut et al., 2012; Sarici et al., 2016). UAE: United Arab Emirates, KSA: Kingdom of Saudia Arabia.~ : Estimated number.