

# Assessment of the Knowledge, Availability, and Use of the Essential Medicines List in the 36 States plus FCT in Nigeria

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## ABSTRACT

**Background:** The Essential Medicines List (EML) is an important tool in global health and supports the achievement of the UN Sustainable Development Goals (SDGs). It is a list that contains essential medicines that satisfy a population's priority healthcare needs. These medicines should be readily available in adequate amounts at all times within the healthcare facility and the country at large. This study assessed the knowledge, availability, and use of EML in the 36 States plus FCT in Nigeria.

**Methods:** The evaluation was a cross-sectional online survey that involved the use of Google Forms containing 11 EML-related questions with a mixed method of data collection. A response was expected from one State representative who was either the Directors of Pharmaceutical Services (DPS) or another resource person with extensive knowledge about the State EML in the 36 State Ministries of Health and the FCT who consented to participate in the study. Descriptive statistics was used to analyze the data via Microsoft Excel software 2016, with the results expressed as counts and percentages, and presented in the form of charts and tables.

**Results:** Thirty-five (35) out of 37 representing 95% of respondents are the directors of pharmaceutical services in their States except for two States that provided other resource persons. All 37 (100%) respondents are aware of the document and know about it. Twenty-nine (78.4%) States have domesticated EML and 8 (21.6%) States have never had a domesticated EML. Twelve (41.4%) States of the 29 States with a reviewed EML have reviewed their EML since inception while 17 (58.6%) States have never reviewed the document since its inception. All 29 (78.4%) States with a domesticated EML defer to the policy document for procurement and planning in their States.

**Conclusion:** The EML is an important document for every country's health system. The study successfully assessed the knowledge of the EML in the 36 States plus the FCT in Nigeria. The high level of awareness of the EML translated to knowledge and utilization of the document among the majority of the States in Nigeria.

## 1.0 INTRODUCTION

Essential Medicine is defined by the World Health Organization (WHO) as the medicines that satisfy priority healthcare needs of the population. They are the medicines to which people should have access at all times in sufficient amount<sup>1</sup>.

Therefore, an Essential Medicines List is selected with due regard to disease prevalence, public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness. Since no public sector or health insurance system can afford to supply or reimburse consumers for the purchase of all available medicines in the market, by narrowing the market, the Essential Medicines List guides

countries and states in the procurement and supply of medicines in the public sector. Essential Medicines List also provides a framework for donors, local pharmaceutical manufacturers, and insurance systems that reimburse medicine costs<sup>2</sup>.

The Essential Medicines List (EML) is an important tool in global health and supports the achievement of the UN Sustainable Development Goals (SDGs). The EML should serve as a global model of reference for countries and procurement agencies making decisions about the procurement of medicines. Such decisions, while guided by EML, should also reflect each nation's unique health landscape, taking into account the national disease burden,

health system capacities, and socio-cultural characteristics of the population<sup>3</sup>. For these reasons, the medicines list of individual countries often differs significantly from the EML in the number of molecules and in the focus given to different therapy areas<sup>4</sup>. Historically, the EML has been regarded as a basic minimum standard list designed to help countries in limited resource settings, with limited capacity for medicine selection, or with fragile health systems<sup>5</sup>. However, in recent years with the addition of innovative medicines to the list, the role of the EML is evolving into new areas, including policy, normative guidance, and market shaping<sup>6</sup>. As a result, the fundamental question of the purpose and utility of the EML is becoming more important as WHO now asserts that the EML is also relevant for high- and middle-income countries, particularly since the more recent additions of newer medicines<sup>7,9</sup>.

The objective of WHO's Essential Medicines and Pharmaceutical policy programs is to save lives and improve health by ensuring the quality, efficacy, safety, and rational use of medicines, including traditional medicines. It promotes equitable and sustainable access to medicines, particularly for the poor and disadvantaged<sup>8</sup>.

Nigeria as a country has an Essential Medicines List unique to the healthcare needs of the country. The National Drug Formulary/ Essential Drug List (NDF/EDL) Review Committee, a statutory body under the Federal Ministry of Health was established by Decree 43 of 1989 now Act CAP 252 LFN 2004 to develop and review the National Drug Formulary and the Nigeria Standard Treatment Guidelines (NSTG). Since the publication of the first edition in 1989, the committee has continued to perform these statutory functions and has successfully reviewed the sixth edition which was published in 2016, and an addendum in 2018<sup>10</sup>.

The Federal Ministry of Health launched the 7<sup>th</sup> Edition of the Nigeria Essential Medicines List (NEML) and the 1<sup>st</sup> Edition of the Nigeria Essential Medicines List for Children (NEMLc) in the year 2020. This study became necessary in order to establish a baseline to verify the status of domesticated EMLs by the 36 States plus FCT in Nigeria. Therefore, this study assessed the knowledge, availability, and use of the Essential Medicines List in the 36 States plus FCT in Nigeria.

## 2.0 METHODS

The instrument used in data collection was an online questionnaire containing 11 questions and this was pretested by 15 pharmacists who were not the target participants. The evaluation was a cross-sectional online

survey that involved the use of Google Forms containing 11 EML-related questions with a mixed method of data collection. A response was obtained from one State representative who was either the Director of Pharmaceutical Services (DPS) or another resource person who had extensive knowledge about the State EML in the 36 State Ministries of Health and the FCT. Verbal informed consent was obtained from the respondents who participated in the study. No ethical approval was not sought because it was an online non-invasive study, however, informed consent was obtained from the respondents who participated in the study. The survey took about 3 months to complete from January to March 2022 due to the category of respondents involved in this evaluation and administrative changes in the various States.

## 2.1 DATA ANALYSIS

The data analysis was quantitative. The collected data was exported, sorted, cleaned, and analyzed with descriptive statistics using the Microsoft Excel software 2016 package. The analysed data was presented as counts, and percentages in the form of tables, and charts.

## 3.0 RESULTS

The questionnaire was administered through Google Forms link for 30 respondents, WhatsApp platform for 6 respondents, and telephone call for 1 respondent as all the respondents could not fill the form directly. A total of 37 persons across the 36 States and the FCT responded to the questionnaire, which resulted in a 100% response rate.

Figure 1 below shows that 35 out of the 37 respondents (95%) were Directors of Pharmaceutical Services. Two of the respondents were not full directors - the respondent from Nasarawa State was a Deputy Director of Pharmaceutical Services while the respondent from Imo State was the State Coordinator for the Logistics Management Coordinating Unit (LMCU).

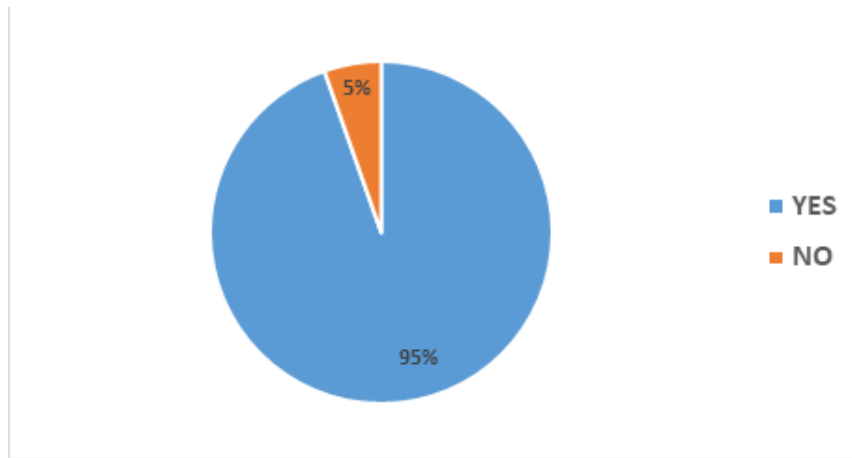


Figure 1: A pie chart showing the category of respondents who participated in the survey

A 100% response was obtained as shown in Figure 2. This indicated that all 37 respondents knew about the EML.

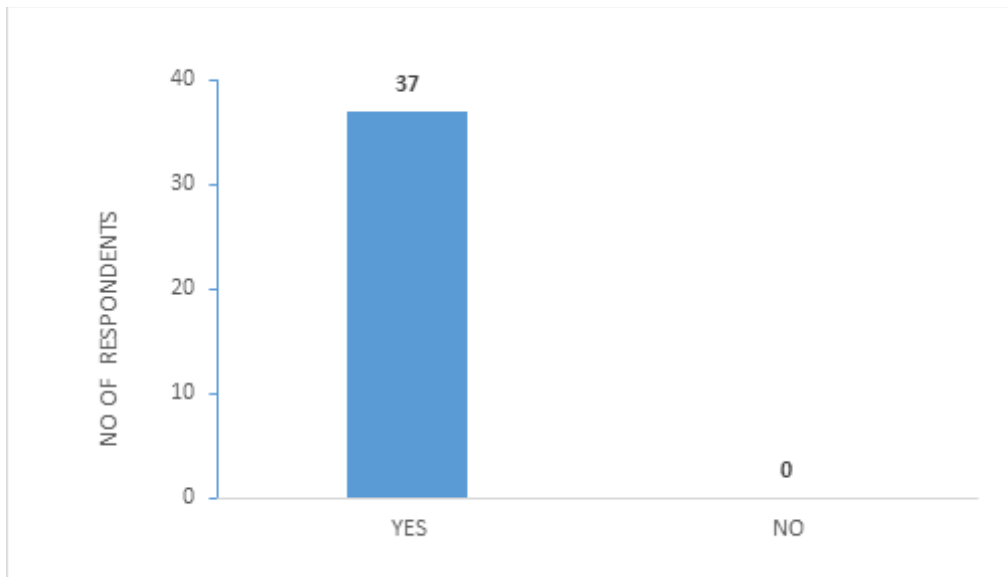


Figure2: A plot showing the number of respondents with knowledge of the EML

Of the 37 responses obtained, 29 (78.4%) States in Nigeria have a domesticated EML, while 8 (21.6%) States have never had a domesticated EML (Figure 3).

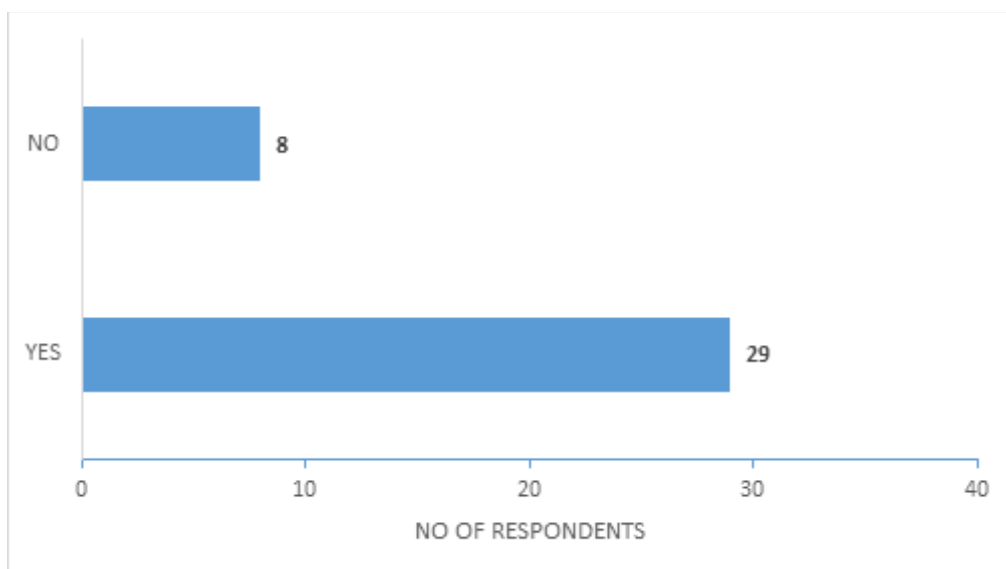


Figure3: A plot showing the number of respondents with or without a domesticated EML

The map chart in Figure 4 shows the 29 states with a domesticated EML and the 8 States without a domesticated EML in the 36 States plus FCT in Nigeria.

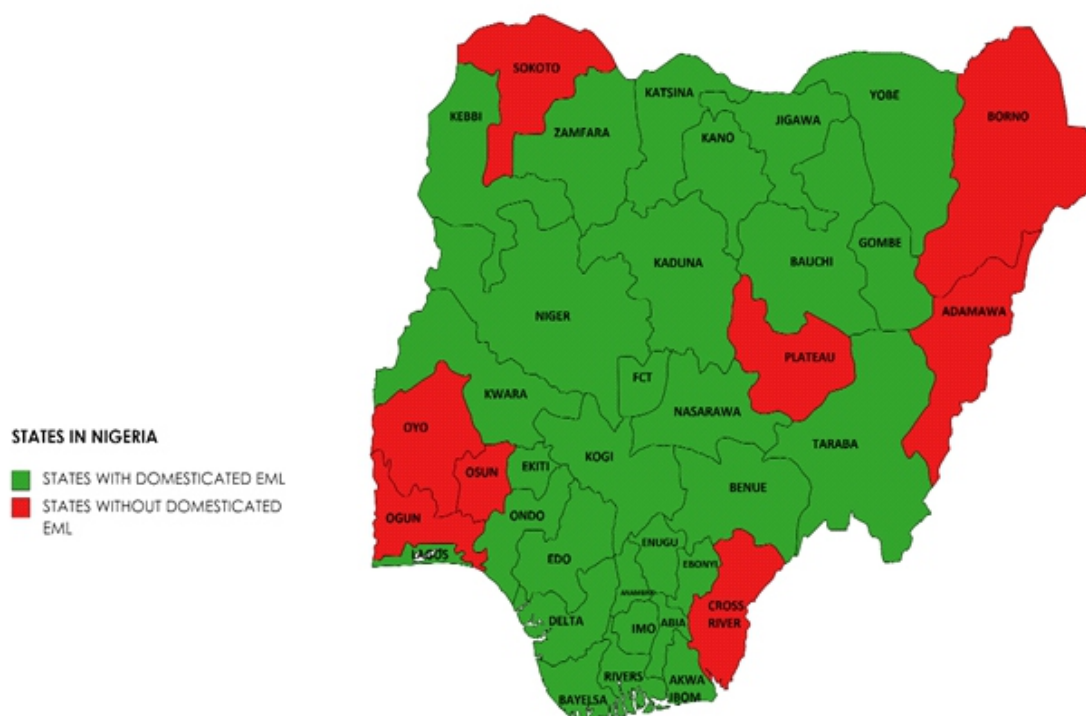


Figure4: A Map representation of the 36 states plus FCT in Nigeria highlighting the status of domesticated EML chart

Figure 5 shows that only 12 (41.4%) States out of the 29 States with a domesticated EML have reviewed their EML since inception. The remaining 17 (58.6%) States have EML which has not been reviewed since the first edition. These states are captured in Table 1 with the year of development.

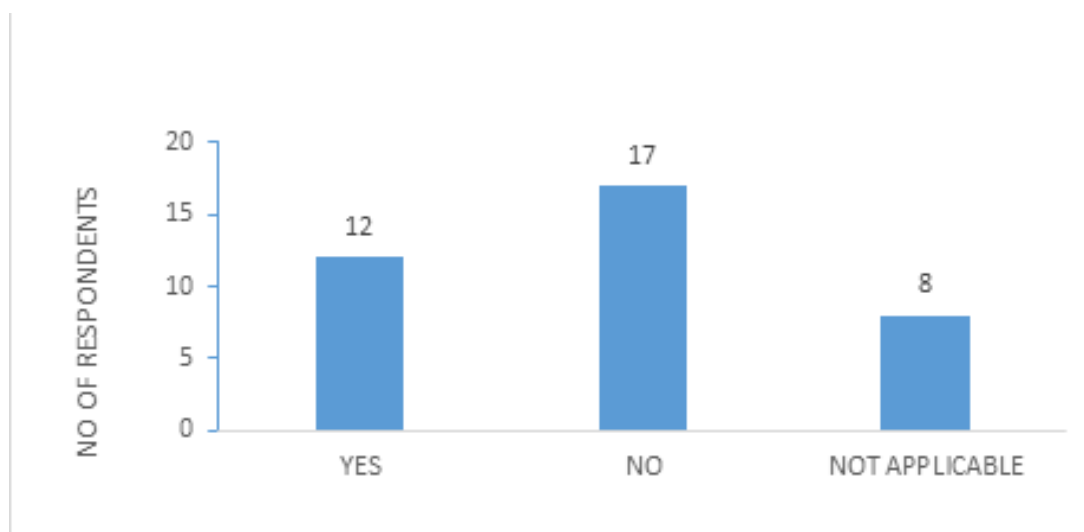


Figure5: A plot showing the status of state EML review since inception

Table 1: A table showing States with EML not reviewed and the year of development

| SN | STATES WITH EML NOT REVIEWED SINCE INCEPTION | YEAR OF DEVELOPMENT |
|----|--|---------------------|
| 1  | Anambra                                      | 2010                |
| 2  | Abia   | 2005                |
| 3  | Bauchi                                       | 2013                |
| 4  | Bayelsa                                      | 2016                |
| 5  | Delta  | 2014                |
| 6  | Ebonyi                                       | 2016                |
| 7  | Edo  | 2017                |
| 8  | Ekiti  | 2006                |
| 9  | FCT  | 2016                |
| 10 | Gombe  | 2014                |
| 11 | Jigawa                                       | 2013                |
| 12 | Kebbi  | 2017                |
| 13 | Kogi   | 2020                |
| 14 | Lagos  | 2012                |
| 15 | Nasarawa                                     | 2014                |
| 16 | Ondo   | 2005                |
| 17 | Zamfara                                      | 2019                |

Table2: A table showing States with reviewed EML with the year of development and last review

| SN | STATES WITH REVIEWED EML SINCE INCEPTION | YEAR OF DEVELOPMENT | YEAR OF LAST REVIEW |
|----|--|---------------------|---------------------|
| 1  | Akwa Ibom                                | 1992                | 2012                |
| 2  | Benue                                    | 2017                | 2021                |
| 3  | Enugu                                    | 2008                | 2012                |
| 4  | Imo                                      | 1989                | 2015                |
| 5  | Kaduna                                   | 2008                | 2021                |
| 6  | Katsina                                  | 2012                | 2016                |
| 7  | Kano                                     | 2013                | 2021                |
| 8  | Kwara                                    | 2015                | 2017                |
| 9  | Niger                                    | 2015                | 2021                |
| 10 | Rivers                                   | 2015                | 2021                |
| 11 | Taraba                                   | 1992                | 1998                |
| 12 | Yobe                                     | 2002                | 2017                |

The plot in Figure 6 showed that all of the 29 (78.4%) States with a domesticated EML defer to the policy document for procurement and/or planning purposes.

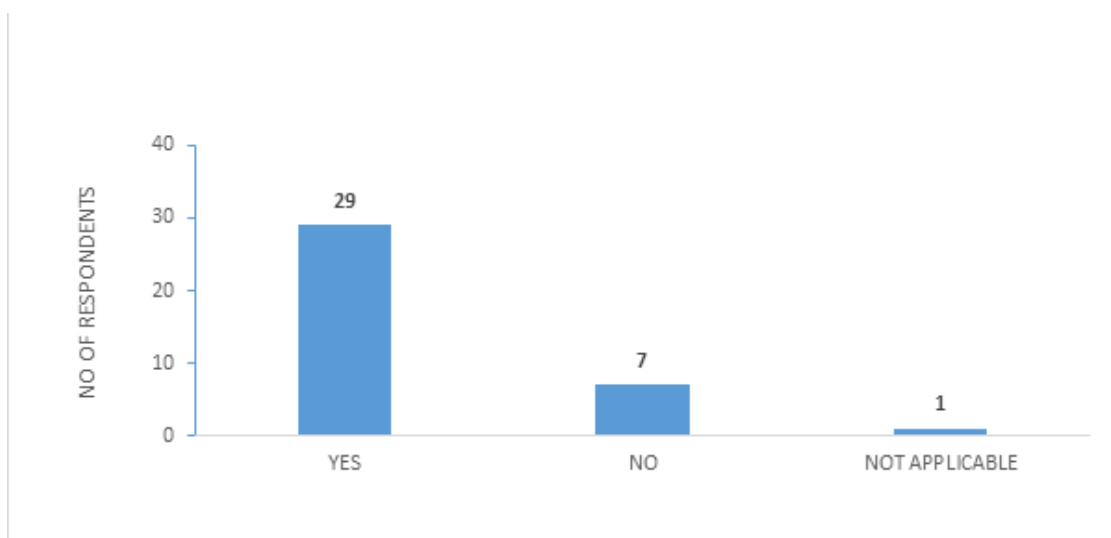


Figure6: A plot showing States that defer to the EML for procurement and/or planning

Some of the States with a reviewed EML reported to have received support from their State government and others from development partners. A number of the States without a review reported that there were no current efforts to review the document for those whose EML is due for a review.

#### 4.0 DISCUSSION

The knowledge assessment from this study of the existence of the EML as a policy document revealed that the custodians of this document who are majorly pharmacists have a high awareness level. The high level of awareness in this study corroborated the few available earlier studies within the country<sup>9,11</sup>.

This is expected as pharmacists are one of the key policymakers in the State Ministry of Health. This is in tandem with the result of a study by Ayinbuowan and Isah where pharmacists compared to other health professionals had a better understanding of the concept of the EML and exhibited a positive attitude in using the document in their daily practice<sup>12</sup>.

This study has helped to identify States with domesticated EML who will need support to review the existing document and those who have never developed one. The development of each EML update, and the WHO narrative around the list, should be framed to encourage constructive dialogue among health system actors, including the pharmaceutical industry, about the purpose and utility of the EML, the compendium of essential medicines, and how access and uptake are appropriately and sustainably expanded<sup>10,13,14</sup>.

The availability of the EML in most of the States in Nigeria according to this study is a good step in the right direction for Nigeria. However, some of the EML in some of the States are due for a review and hence may not reflect current trends and emerging diseases in the EML. Therefore, supporting these States to review and update this document is necessary for effective utilization.

States with newly developed EML are not due for a review at the time the study was conducted. Some States have not been able to review their documents probably due to funding constraints.

In some of the States with a domesticated EML, 12 States out of the 29 States have reviewed their EML at least once after the first edition was developed. While the latest review for some was recent, others were still due for another review, and funding constraints may be the reason why these States were yet to update the document. This can be an area for State government and development partners to support these States in reviewing their EML to contain essential medicines that cater to emerging diseases.

This study indicated that many States in Nigeria utilize the EML as a document for essential medicines procurement. States need to defer to EML to procure medicines that cater to public health diseases in the States, thereby increasing access to essential medicines. Although the majority of the

respondents in this study reported deferring to the policy document for procurement and planning, this is in contrast to another study by Adikwu and Osondu where the results show that medical doctors prescribe drugs without due consideration for the list while pharmacists stock and dispense drugs on a similar basis<sup>14, 15</sup>. Lists of essential medicines also guide the procurement and supply of medicines in the public sector, schemes that reimburse medicine costs, medicine donations, and local medicine production, and are widely used as information and education tools by health professionals<sup>16</sup>.

This study encountered some challenges, some of which included the lackadaisical attitude of some of the respondents in attending to the survey form, and the use of Google Forms as the survey tool restricted the response to one account per State and required respondents to sign in before they could attempt the survey. The consequence was that those without Gmail accounts could not respond to the survey using the Google link. Respondent bias during data collection was another limitation of the study. However, these can be addressed in future studies.

#### 6.0 CONCLUSION

The EML is an important document for every country's health system. The study successfully assessed the knowledge of the EML in the 36 States plus the FCT in Nigeria. The high level of awareness of the EML translated to knowledge and utilization of the document among the majority of the States in Nigeria. The EML is important in the pharmaceutical sector procurement and planning. Thus, all States in Nigeria without an EML should make efforts and where possible supported by the state government and development partners to develop one or review where obsolete.

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