

# **Causes of Elective Surgical Cancellations in a urology Unit of a Tertiary Hospital and the Imperatives of Waiting Time Policy in Nigeria**

Usar, IJ

*Department of Community Health, College of Health Sciences, University of Jos, Nigeria*

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## **ABSTRACT**

**Background:** The provision of timely access to health care for those in need is a key objective of global health systems and an important predictor of how health systems respond to demand. This makes the time people wait to access health care services a top priority on the policy agenda of many countries, especially in climes that offer universal access to health care for their citizens. Nigeria is also striving towards universal health care coverage for its citizens amidst a system with no formalized waiting time regimen. Therefore, excessively long waits at points of services utilization is particularly rife at all levels of the public health care. Several studies have explored waiting times in outpatient clinics and surgical settings, but none have examined the phenomenon using an economic lens. This study fills this gap by exploring surgical cancellation in the urology unit of Jos University Teaching Hospital (JUTH), Nigeria.

**Method:** The study adopted a retrospective descriptive design, undertaken at the Jos University Teaching Hospital (JUTH) between March and June, 2019. Case files of all patients booked for elective urological surgery from January 2014 to December, 2018 were retrieved and information related to patients' socio-demographics, if surgery was performed as planned or cancelled and reasons for cancellation were extracted and analyzed using Statistical Package for Social Sciences (SPSS) version 25.0.

**Results:** A total of 906 cases of elective surgical cases were booked over the period studied. 244 cases were cancelled, giving a cancellation rate of 26.9%. Cancellations were higher among men (92.2%) than in women (9.8%). Supply causes such as health workforce strikes, institutional issues, theatre factors and students' examinations contributed 38.7% (90 cases) to cancellations. Demand oriented causes were dominant factors, accounting for 61.3% (150 cases) of deferrals and include patients being absent; un-affordability, co-morbidities and outright refusal. The median waiting time was 31 days, with a range of 1-1,958 days (3.4years).

**Conclusion:** The study concluded that excessively long waiting time is a public health concern in Nigeria, and recommends urgent government policy initiatives to comprehensively address the menace to strengthen health system performance and improve consumer satisfaction.

**Key words:** excessive waiting time, elective surgery, cancellation, policy, health system strengthening, Nigeria

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## **I. INTRODUCTION**

The provision of timely access to health care for citizens is a key objective of global health systems and an important predictor of a health system's responsiveness to demand.<sup>1,2</sup> This makes the time people wait to access health services top on the policy agenda of many countries, especially climes that offer universal access to health care for their citizens, such as obtains in most of Europe.<sup>3,4</sup> Waiting time is the period of time a patient spends in a health facility for consultation and treatment.<sup>5,6</sup> The phenomenon occurs in all health systems where supply capacity constraints exist and services production lags demand for health care. More typically, waiting times are a policy concern in countries which combine public health insurance with zero or low cost sharing, and less so where health care is funded by private insurance, such as the USA.<sup>7,8,9</sup> Health systems the world over face resource constraint,<sup>10,11</sup> therefore, people needing care at hospitals inevitably must experience a form of waiting: waiting at the outpatient to see a GP or specialist, waiting for admission to undergo surgical procedures (including cancellations of booked cases), or waiting to receive diagnostic tests results. However, excessively long waiting times come with costs to both the system and consumers, which may include deterioration in health, dissatisfaction, anxiety and loss of utility.<sup>7,12,13</sup> In this light therefore, waiting time regimes are designed to guarantee access to care within a maximum time limit, and have been argued to also serve as effective tools to improve equity and efficiency in the management of scarce health system resources.<sup>8,14</sup> Furthermore, in competitively managed health care environments, patients' waiting times play an important role in the ability of health facilities to attract new clients and in retaining past service users.<sup>15</sup> Waiting regimes also provide the

foundation for performance management and a basis for the design of rewards and sanctioning systems.<sup>11,16</sup> Thus, waiting times are considerably significant to public health systems, and efforts are constantly directed towards continually setting progressively shorter waiting time targets. In OECD countries for example, where waiting times regimens are top policy priorities, patients requiring elective surgical care are guaranteed to wait no longer than four months on the average.<sup>12,17,8</sup> Theoretically, the idea of provider responses to waiting time targets is premised on the principal-agent economic model, in the presence of information asymmetry between both actors. The model assumes that the principal or policy maker desires to maximize some unobserved health outcome which may be influenced by an agent's level of effort. Because of the asymmetric information, the principal can only imperfectly observe the agent's efforts towards achieving a set health outcome.<sup>18</sup> Therefore, waiting time target(s) serve to provide an objective measure of the agent's performance. Meeting targeted performance level is rewarded financially or non-financially, while non-performance attracts some penalty. Empirical evidence suggests that hospital professionals do respond positively to waiting time targets,<sup>7,12,19</sup> and it is thus conceptually plausible to think of socially optimal levels of surgical output and demand for elective surgery.

In many African countries however, efforts at waiting time policies are limited and public sector health facilities are commonly under enormous pressure due to large numbers of patients, under-staffing and poor resources. Typically, access to health care is largely supported from out-of-pocket payment, so both financial barriers and health system constraints combine to generate very long waiting times.<sup>20</sup> This has caused patients to sometimes leave clinics without treatment, poor medication compliance, skipped appointments, low morale of health workers and poor health outcomes among health care consumers.<sup>21,22</sup> The Waiting times conundrum in Nigeria is much the same as in any African country and like the rest of the world, Nigeria is striving towards universal health care coverage for all its citizens.<sup>23,24</sup> These efforts are however, hobbled by an intrinsically weak health system,<sup>25,26</sup> with plural implications for health service delivery and in a system with no formalized waiting time regimen, excessively long waits at points of services utilization is particularly rife at all levels of the public health care.<sup>27,28,29,30</sup> Several studies have explored this phenomenon in outpatient clinics and surgical settings,<sup>31,32,33,34,35</sup> but none have examined waiting times using an economic lens. This study purposes to fill this gap by exploring surgical cancellation in the urology unit of Jos University Teaching Hospital (JUTH), Nigeria and propose policy actionable strategies towards ameliorating the impact of long waiting times in the Nigerian public health care sector.

## II. METHODOLOGY

The study adopted a retrospective descriptive study design undertaken at the Jos University Teaching Hospital (JUTH) between March and June, 2019. Case files of all patients who were booked for elective urological surgery in JUTH, from January 2014 to December, 2018 were retrieved from the records department and patient's information related to socio-demographics, if surgery was performed as planned or cancelled and if the latter, the reasons for cancellation were extracted onto a paper based proforma. The information was double checked for completeness and then entered into the research computer and quantitatively analyzed using Statistical Package for Social Sciences (SPSS) version 25.0.

Ethical clearance for the study was obtained from the Jos University Teaching Hospital Ethical Research Committee and information obtained from patients' files was anonymized and handled with due confidentiality.

## III. RESULTS

A total of 906 cases of elective surgical cases were booked over the period studied. 244 cases were cancelled, giving a cancellation rate of 26.9%. 92.2 % and 9.8% of cancellations affected men and women respectively. High rates of postponements were observed among public servants 20.1%, students 17.2%, farmers 16.4% and petit business owners 15.2%, who together accounted for 70% of cancellations. The occupations discovered are portrayed in Table 1.

**Table 1:** Occupation of Surgical Clients Experiencing Cancellations

S/Nos.	Occupation	Frequency (n)	Percentage (%)
1	Civil Servants	49	20.1
2	Students	42	17.2
3	Farmers	40	16.4
4	Petit Trading	37	15.2
5	Retirees	24	9.8
6	Unemployed	18	7.4
7	Others*	34	13.9

TOTAL 244 100

\* Includes members of the armed forces, tailors, technicians, drivers, butchers, carpenters, masons and miners.

A number of factors were identified as responsible for these surgical deferrals of which failure of clients to present for surgery was the commonest reason, accounting for 37.1% of total cancellations. Inability to afford the cost of surgery was second commonest reason for deferring surgery (15.6%), followed by health workforce strikes (9.8%). A full ordering of variables related to elective surgical cancellations are presented in Table 2, below:

**Table 1: Factors causing surgical cancellation at JUTH**

S/Nos.	Cause for Cancellations	Frequency (n)	Percentage (%)
1	Patient Absent	91	37.1
2	Cost unaffordable	38	15.6
3	Health Worker Strike	24	9.8
4	Institutional Issues	19	7.8
5	Co-morbidities	19	7.8
6	Theatre Factors	11	4.5
7	Students Exams	9	3.7
8	Patient Refusal	2	0.8
9	Reason Undocumented*	31	12.7
	TOTAL	244	100

\*No reasons for non-performance of planned surgical procedures were documented in these case files and thus, interpreted as institutional process failures, even though these could mean clients' failures to show up for reasons such as costs, co-morbidities or deaths.

These factors can broadly be classified into demand (patient absent; unaffordable cost; co-morbidities and patient refusal) and supply causes (health worker strikes, institutional issues, theatre factors and students' exams). Demand based factors constituted 61.3% (150 cases) of deferrals, while supply related variables accounted for 38.7% (90 cases) of cancellations, signifying the dominance of demand issues determining surgical postponements in the setting. The median waiting time was 31 days, with a range of 1-1,958 days (approx. 3.4years).

#### IV. DISCUSSION

The cancellation rate at our study site was 26.9% which is much higher relative to the 15.6% reported earlier in the centre by Dakum and colleagues and the 9.1% cancellation rate at the University of Ilorin Teaching Hospital also in Nigeria.<sup>32,35</sup> The wide variation might have resulted from the fact that while our study looked at all cancellations, the Ilorin group studied only cancellations on day of surgery, while Dakum et al., looked at day-case surgery cancellation only. The highest causes of cancellations were attributable to patient factors (61.3%). This is similar to the earlier findings of 61.9% by Dakum and colleagues at the same facility, and Kolawale and Bolaji,<sup>35</sup> who also found that although patient related factors contributed the most to postponements, theirs was only 47.5% of cancellation cases. Whilst the Ilorin study found patient's inability to pay as the most common reason for cancellation of planned surgeries, the Jos group discovered that patients' absence on day of admission for surgery accounted for the most cancellations (57.1%).<sup>32,35</sup> Our findings collaborates the latter study, with the highest cases of deferrals (37.1%) arising from a patient being absent, while financial constraint was the next common patient related determinant of postponement (15.6%). In broad terms, our study has revealed demand based causes to be responsible for 61.3% of surgical case cancellations. This agrees with earlier studies of Ramyil et al.,<sup>36</sup> who reported 62.7% demand driven cancellations in Jos, and Bode and Adeyemi,<sup>37</sup> who found demand related deferrals of 62% among pediatrics surgical bookings in Lagos. In this study and related studies cited, supply based causes of surgical postponement contributed just over a third of cancellations, and related to health workforce industrial strikes institutional factors and process related factors. The preponderance of demand driven factors in the determination of elective surgical cancellation in this study might be due to the mode of health care access in the country, which is largely out-of-pocket.<sup>38</sup> This system of payment clearly poses a significant barrier for health care in poor resource settings like Nigeria.

Surgical cancellations naturally extend the time patients have to wait before having surgeries performed. In this study, the median waiting time was determined to be 31 days, with a range of 1-1,958 days. Currently, no international consensus in relation to what constitutes either optimal or excessive waiting times for elective surgeries exist, but several European countries have recently began setting targets of either three

months or six months for maximum waiting times. However, in some of these countries, mean waiting times for elective surgeries is in excess of six months and maximum waiting times have stretched into years.<sup>3</sup>

A number of policies to tackle elective surgical waiting times can be found in health economics literature, and have been categorized as those acting on the supply of elective surgery, policies affecting the demand for elective surgery and interventions impacting directly on waiting times.<sup>4,8,1</sup>

### **Demand-Side Policies**

The demand for elective surgery in the public health sector may be influenced by available health technologies (which determine the range of conditions that can be treated), the health status of the population and the people's expectations from the health system. Divers financial incentives can also affect the demand for elective surgery in public health care facilities, and may include the level of cost sharing by patients, prices of surgeries in the private sector and the extent of private health insurance coverage available. Demand-side policies are considered when the volume of surgery is adjudged to be optimal, yet waiting times remain unacceptably high, and may include triaging by prioritization of patients by needs, redirecting demand to the private sector from the public and enhanced uptake of private health insurance through government subsidization of private health insurance coverage.

#### ***Prioritization of patients by triaging***

The policy option can assume the form of prioritization guidelines that equitably identifies who should wait, based on objective criterion such as allocating patients into classes and homogeneous groups having similar waiting times. Alternatively, the sorting of cases can be premised on the severity of patients' conditions, expected need, expected benefits, or urgency, determined by decay rate of the disease condition, or time already spent on the waiting list. These criteria have been used to develop less formal prioritization systems as high or low priority and very urgent, urgent or non-urgent disease states.<sup>8,11</sup> More stringent and formalized systems of prioritization can be generated based on an explicit scoring approach, which assigns a score to the need of each patient, such as the nationally consistent clinical assessment strategy adopted by New Zealand or the waiting list project, in Canada.<sup>9</sup>

#### ***Government subsidization of private health insurance***

Government can subsidize private health insurance for its citizens as an incentive for people to buy more private health insurance schemes. By this strategy, there is the potential to shift from public demand for elective surgery through substitution effect to private demand for surgery, and lowering of waiting time.<sup>8</sup>

### **Supply Side Policies**

Supply-side strategies to reduce elective surgical waiting times are deployed when the volume of surgery is considered inadequate for demand. The supply of elective surgery is determined by a combination of public and private surgical capacities and the productivity with which the capacities are put to. Therefore, supply-side policies that have proven effective in dealing with waiting times have been classified broadly into three categories.<sup>4,8,3</sup> These are policy levers that increase the productivity of public hospitals, those increasing surgical capacities in both public and private sectors and policies that work directly on waiting times.

### **Increasing productivity of hospitals**

#### ***Funding extra activity***

Public hospitals in Nigeria are funded through fixed annual budgets. Therefore, government may tackle high waiting times by providing extra-funds to hospitals to facilitate performance of extra activity for a fixed capacity. This measure could raise institutional productivity in terms of numbers of treatments per surgeon or increased hospital beds occupancy rates. When adopted, the approach should aim to provide incentives to boost supply and control surges in demand for surgery by maintaining a high clinical threshold for surgical admissions.<sup>4,17</sup>

#### ***Activity Related Payments (Performance based funding) for public hospitals***

Fixed budgets for organizations provide poor incentives for enhanced organizational productivity, because production managers are mindful of the fact that higher activity leaves total revenues unchanged, and greater ingenuity to raise productivity goes unrewarded. Structuring budgetary allocation around activity levels should stimulate more intensive use of existing hospital capacity to raise productivity. This approach would mean higher revenues following higher activities and consequently, waiting time reduction. England, Denmark and Norway have recorded waiting times reduction with this policy approach.<sup>3,39</sup>

#### ***Reforming contracts of hospital specialists' remuneration***

Nigerian surgeons employed in public sector of the economy are salaried. This payment mechanism in an atmosphere where there are no strict gatekeepers at tertiary hospitals makes doctors comfortable with lowered activity, quieter life with no adverse impact on their salaries. A complementary, but competitive fee-for-service payment of surgeons may improve access to faster operations and shorter queues.<sup>40</sup> Two main approaches have been employed in other climes. The first is to provide rewards for specialists who attain targeted output levels, or in terms of reductions in predetermined waiting times. Surgeons who fail on targets are penalized. The second approach seeks to deal with conflict of interest in publicly paid surgeons by requiring the insertion of exclusivity agreement between the government and specialists. This arrangement limits the extent to which government employed surgeons can run parallel practices (working in publicly and privately funded institutions at the same time), as allowing dual practice by salaried public surgeons may offer perverse incentive for some surgeons to lengthen public queues, while boosting the demand for their private practices.<sup>41,42,43</sup> Mot found that in the Netherlands the replacement of specialists' fee-for-service payments with fixed budget payments reduced on average the admissions rate and increased the waiting times for surgery.<sup>44</sup> Also, systems of paying surgeons is likely to influence their productivity and evidence suggests that payment premised on fee-for-service deliver more surgical procedures than when physicians are salaried.<sup>3</sup>

This approach seeks to improve individual surgeon's efforts and productivity through linkage of a surgeon's remuneration to increased activity or reduction in waiting times.

#### *Raising the use of day-surgery*

Where hospitals have taken steps to encourage day surgery, for a fixed endowment of bed spaces, adoption of less invasive surgeries can increase the volume of surgical treatments undertaken and free up hospital beds and corresponding reduction in waiting times. A number of OECD countries have had remarkable improvements in the waiting times of surgical units, through raising the levels day surgeries.<sup>40,3</sup>

#### **Funding extra capacity in the public sector**

Capacity building can take the form of increasing the number of doctors, or increasing public hospital beds. Capacity improvement in terms of increased numbers of beds and quantity of surgeons has been associated with lower waiting times.<sup>45,46</sup> The construction of additional hospitals can also be adopted as a long term intervention to expand the volume of services to meet demand for elective surgery. Increasing the number of beds and specialists can improve public hospitals capacity can lower waiting times substantially.<sup>45,46</sup>

#### **Policies affecting both demand and supply of elective surgery**

Policies acting directly on waiting times include maximum waiting-times guarantees, financial and non-financial incentives and management of waiting time list.

##### *Maximum waiting time guarantees*

This strategy ensures that patients do not wait beyond a specified period of time before getting operated.<sup>7,8</sup> Guarantees may be unconditional, if they cover all patients or conditioned to cover only patients with higher needs. Waiting time guarantees usually make statements such as a particular percentage of cases must be treated within a given time period.

##### *Financial and non-financial incentives to reduce waiting times*

These policies will aim at rewarding hospitals and surgeons directly, financially or non-financially for achieving reductions in waiting times. The policies contrasts policies which allocate more resources to hospitals with higher waiting times, on the assumption that higher waiting time may indicate higher need. Rewards will lower waiting times through better management and higher efficiency. Financial incentives can be in the form of premiums and bonuses, while non-financial incentives may be enhanced management autonomy.<sup>7,12</sup>

##### *Improving management of waiting list*

This strategy may involve organizational and structural changes and process improvement and aim to eliminating inefficiency in the management of waiting lists, through the introduction of measures such as pre-admission and admission services that serve to optimize the health of patients before admission for surgeries. This helps to avoid surgical cancellations and extension of waiting arising from pre-admission factors. Other waiting time management approaches may include optimization of theatre scheduling, education of patients and their families about hospital procedures and computerization of patients' records. Where applied, these measures have yielded overall efficiency gains.<sup>10,17</sup> One pre-requisite for the development and evaluation of policies is the collection of an adequate database. Investments in improving the quality of administrative database on waiting-times to track data to inform waiting time policy can also be undertaken

Practically, no one policy approach has been adopted in isolation, but a combination of approaches, such as a smooth blend of maximum waiting-time targets, additional activity and changed incentives have proven effective in waiting time reduction in several European countries.<sup>3,8</sup>

## V. CONCLUSION

The absence of formalized waiting time regime for health care services utilization in Nigeria and hence, excessively long waiting for publicly provided elective surgery is a serious public health concern. Demand-side factors account for the highest incidence of surgical cancellations and consequently, waiting times. The Nigerian government must innovate policies to tackle long waiting times, which should particularly target demand, but supply sides policies can also be adopted. However, the biggest gains in reducing waiting times and improving hospitals performances and consumer satisfaction would be a multi-prong approach that blends both demand and supply measures that consistently serve their purpose, rather than fragmented vertical approaches. This approach may potentially strengthen public health system, while also improving consumer satisfaction (in terms of quality and value) and consequentially, sustained health care services utilization.

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## REFERENCES

- [1]. Willcox, S., Seddon, M., Dunn, S., Edwards, R.T., Pearse, J., Tu, J.V. 2007. Measuring and reducing waiting times: a cross-national comparison of strategies. *Health Aff.* **26**(4), 1078–1087.
- [2]. Silva A. A. 2010. Framework for measuring responsiveness. GPE Discussion Paper Series: No. 32. EIP/GPE/EBD. Geneva: World Health Organization.
- [3]. Siciliani, L., Moran, V., Borowitz, M. 2014. Measuring and comparing health care waiting times in OECD countries. *Health Policy* **118**(3), 292–303.
- [4]. Cullis, J.G., Jones, P.R., Propper, C. 2000. Waiting lists and medical treatment: analysis and policies. In: Culyer, A.J., Newhouse, J.P. (eds.) *Handbook of Health Economics Part B*, vol. 1, pp. 1201–1249. Elsevier, Amsterdam.
- [5]. Mackey TA and Cole FL (1997). Patient Waiting Time in Nursing Managed Clinic. *The Int. J. Adv. Nur. Practice.*, 1 p. 1.
- [6]. Finamore S.R. and Turris A. 2009. Shortening the wait: A strategy to reduce waiting times in the emergency department. *Journal of Emergency Nursing*, 35(6), 509–514.
- [7]. Propper, C., Sutton, M., Whitnall, C., Windmeijer, F. 2008. Did 'Targets and Terror' reduce waiting times in England for hospital care? *Contrib. Econ. Anal. Policy* **8**(2), 1863–1863.
- [8]. Hurst J. and Siciliani L. 2003. Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD Countries. *OECD HEALTH WORKING PAPERS*. Organisation for Economic Co-operation and Development
- [9]. Sampalis, J., Boukas, S., Liberman, M., Reid, T. and Dupuis, G. 2001. Impact of waiting time on the quality of life of patients awaiting coronary artery bypass grafting. *CMAJ* 2001;165(4):429-33
- [10]. Culyer, A.J., Cullis, J.G. 1976 Some Economics of hospital waiting lists in the NHS. *J. Soc. Policy* **5**(3), 239–264.
- [11]. Oudhoff, J.P., et al. 2007. The acceptability of waiting times for elective general surgery and the appropriateness of prioritizing patients. *BMC Health Serv. Res.* **7**(32).
- [12]. Propper, C., Sutton, M., Whitnall, C., Windmeijer, F. 2010. Incentives and targets in hospital care: evidence from a natural experiment. *J. Publ. Econ.* **94**(3), 318–335.
- [13]. Sun, J., Lin, Q., Zhao, P., Zhang, Q., Xu, K., Chen, H., Hu, C.J., Stuntz, M., Li, H. and Liu, Y. 2017. Reducing waiting time and raising outpatient satisfaction in a Chinese public tertiary general hospital-an interrupted time series study. *BMC Public Health*, 17:668 DOI 10.1186/s12889-017-4667-z.
- [14]. Gravelle, H., Dusheiko, M. and Sutton, M. 2002. "The demand for elective surgery in a public system: time and money prices in the UK National Health Service", *Journal of Health Economics*, 21, 423-429.
- [15]. Committee on Optimizing Scheduling in Health Care; Institute of Medicine. 2015. Kaplan G, Lopezh MH, McGinnis JM, editors. *Transforming Health Care Scheduling and Access: Getting to Now*. Washington (DC): National Academies Press (US). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK316141/>. (Accessed Dec 30, 2018).
- [16]. Kreutzberg, A. and Jacobs, R. 2020. *The European Journal of Health Economics*. <https://doi.org/10.1007/s10198-020-01165-0>
- [17]. NHS England NICE: 2015. Implementing the early intervention in psychosis access and waiting time standard: guidance NHS England, NICE London, Manchester.

- [18]. Goddard, M., Mannion, R., Smith, P.C. 2000. Enhancing performance in health care: a theoretical perspective on agency and the role of information. *Health Econ.* **9**(2), 95–107.
- [19]. Besley, T.J., Bevan, G., and Burchardi, K.B. 2009. Naming and shaming: the impacts of different regimes on hospital waiting times in England and Wales. Discussion paper, 7306. Centre for Economic Policy Research, London, UK.
- [20]. Pillay DI, Ghazali RJ, Manaf NH, Abdullah AH, Bakar AA, Salikin F, *et al.* 2011. Hospital waiting time: The forgotten premise of healthcare service delivery? *Int J Health Care Qual Assur* 24:506–22.
- [21]. Rauf W, Blitz JJ, Geyser MM, Rauf A. 2008. Quality improvement cycles that reduced waiting times at Tshwane District Hospital Emergency Department. *SA Fam Pract.* 50(6):43.
- [22]. Sastry A., Long K.N.G., de Sa A., Salie H., Topp S., Sanghvi S. and van Niekerk L. 2015. Collaborative action research to reduce persistently long patient wait times in two public clinics in Western Cape, South Africa. [Online] Available at: [www.thelancet.com/lancetgh](http://www.thelancet.com/lancetgh). Accessed 28/04/2020
- [23]. Palmer, G. M. 2014. Inequalities in universal health coverage: evidence from Vietnam. *World Development*, 64 pp. 384-394.
- [24]. World Health Organization. 2011. *The World Health Report 2010: Health system financing: the path to universal coverage*. Geneva: WHO.
- [25]. Federal Ministry of Health, Nigeria. 2011. *Annual Health Sector Report 2010*. Abuja: Federal Ministry of Health.
- [26]. World Health Organization. 2008. Nigeria still searching for the right formula. *Bulletin of the World Health Organization*, 186 (9). Geneva: WHO.
- [27]. Akosu, T.J., Afolaranmi, T., Usar, I.J. and Odunze, P. 2019. “Patients Preferences regarding Outpatient Appointments In A Nigerian Teaching Hospital.” *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 6, pp 65-69.
- [28]. Ogaji DS, Mezie-Okoye MM. 2017. Waiting time and patient satisfaction: Survey of patients seeking care at the general outpatient clinic of the University of Port Harcourt Teaching Hospital. *Port Harcourt Med J.*11:148-55.
- [29]. Ofili AN, Ofowwe CE. 2005. Patients’ assessment of efficiency of services at a teaching hospital in a developing country. *Ann Afr Med.* 4:150-3.
- [30]. Umar I, Oche MO, Umar AS. 2011. Patient waiting time in a tertiary health institution in Northern Nigeria. *J Public Health Epidemiol.* 3:78-82.
- [31]. Rabi MM, Muhammed N. 2008. Rapid assessment of cataract surgical services in Birnin-Kebbi local government area of Kebbi State, Nigeria. *Ophthalmic Epidemiol.* 15:359–65.
- [32]. Dakum NK, Ramyil VM, Misauno MA, Ojo EO, Ogwuche EI, Sani AA. 2006. Reasons for cancellations of urologic day care surgery. *Niger J Surg Res.* 8:30–3.
- [33]. Misauno MA, Ojo EO, Uba AF. 2012. Laparoscopic paediatric surgery: A potential for paradigm shift in developing countries. *Afr J Paediatr Surg.* 9:140–2.
- [34]. Akinyoola AL, Adegbehingbe OO, Ogundele OJ. 2008. Factors influencing the outcome of elective paediatric orthopaedic operations in Ile-Ife, Nigeria. *Tanzan J Health Res.* 10:68–72.
- [35]. Kolawole IK, Bolaji BO. 2002. Surgery and Anaesthesia: Reasons for cancellations of elective surgery in Ilorin. *Niger J Surg Res.* 28–33.
- [36]. Ramyil VM, Dakum NK, Kidmas AT, Opaluwa AS, Songden ZD, Azer T. 2004. Reasons for day case surgery cancellation in Jos. *Nig J Surg*, 10:17.
- [37]. Bode CO, Adeyemi SD. 1996. Reasons for day surgery cancellation in paediatric surgical practice at the Lagos University Teaching Hospital. *Nig J Surg*, 3:41.
- [38]. Biorn, E., T. Hagen, T. Iversen, J. Magnussen, 2002, *The effect of activity-based financing on hospital efficiency*, Working paper 8, Health Economics Research Programme, University of Oslo.
- [39]. Out-of-Pocket Expenditure in Nigeria. 2017. [Online] Available at: <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=NG> Accessed on 3/3/2020.
- [40]. Iversen, T., and H. Luras, (2002), ‘Waiting times as a competitive device: an example from general medical practice’, *International Journal of Health Care Finance and Economics*, 2, 189-204.
- [41]. Rickman, N., A. McGuire, 1999, “Providers’ reimbursement in the health care market”, *Scottish Journal of Political Economy*, 46, 1, 53-71.
- [42]. DeCoster, C., et al., 2000, “Waiting times for surgical procedures”, *Medical Care*, 37, 6, 187-205.
- [43]. Morga, A., and A. Xavier, 2001, “Hospital specialists’ private practice and its impact on the number of
- [44]. Mot, E.S., 2002, “*Paying the medical specialist: the eternal puzzle: experiments in the Netherlands*”, PhD Thesis, Amsterdam.
- [45]. NHS patients treated and on the delay for elective treatment”, Discussion papers in Economics, The University of York, n.2001/01.

- [46]. Martin, S., and P.C. Smith, 1999, "Rationing by waiting lists: an empirical investigation", *Journal of Public Economics*, 71, 141-64.
- [47]. Lindsay, C.M., Feigenbaum, B.: Rationing by waiting lists. *Am. Econ. Rev.* **74**(3), 404–417 (1984).

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