



# Doctor Placement's Policy and Its Implications in Indonesia: Legal Qualitative Study

Absori Absori<sup>1</sup>, Kiara Hanna Quinnilla<sup>2</sup>, Rizka Rizka<sup>2</sup>, Arief Budiono<sup>2</sup>, Natangsa Surbakti<sup>1</sup>

<sup>1</sup>Department of Doctoral Law, Faculty of Law, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia; <sup>2</sup>Department of Law, Faculty of Law, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

## Abstract

**Edited by:** Sasho Stoleski  
**Citation:** Absori A, Quinnilla KH, Rizka R, Budiono A, Surbakti N. Doctor Placement's Policy and Its Implications in Indonesia: Legal Qualitative Study. Open Access Maced J Med Sci. 2022 Feb 01; 10(E):386-391. <https://doi.org/10.3889/oamjms.2022.8692>  
**Keywords:** Doctor distribution; Proportional justice; Health  
**\*Correspondence:** Absori Absori, Department of Doctoral Law, Faculty of Law, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia. E-mail: [ab368@ums.ac.id](mailto:ab368@ums.ac.id)  
**Received:** 17-Aug-2021  
**Revised:** 12-Oct-2021  
**Accepted:** 22-Jan-2022  
**Copyright:** © 2022 Absori Absori, Kiara Hanna Quinnilla, Rizka Rizka, Arief Budiono, Natangsa Surbakti  
**Funding:** This research did not receive any financial support  
**Competing Interests:** The authors have declared that no competing interests exist  
**Open Access:** This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)

**BACKGROUND:** Remote, Underdeveloped Areas, Frontiers, and Islands (RUAFI) in Indonesia have a less equal distribution of doctors compared to other more developed areas, causing a decline in healthcare service quality in RUAFI and the health degree of the overall population.

**AIM:** This research aims to describe the policy and the implication of doctor distribution in Indonesia and to provide a proportional justice-based doctor distribution policy concept.

**METHODS:** This is a mixed qualitative research of juridical-normative and literature review. The laws that regulate the distribution of doctors in Indonesia are the 1945 Constitution, Law No. 36 of 2009, Law No. 26 of 2014, Governmental Decree No. 67 of 2019, Presidential Decree No. 72 of 2012, and the Decree of the Minister of Health No. 16 of 2017.

**RESULTS:** The unequal doctor distribution is mainly caused by the low motivation for recruitment and retention in RUAFI. The affecting factors include disparity of incentives between doctors, low regional government involvement in the healthcare system in RUAFI, and the lack of career development for doctors being placed in RUAFI.

**CONCLUSION:** The concept of proportional justicebased policy proposed is as follows: (a) Intensive proportionality between doctors and other types of health workers, (b) a direct regional government function of control, and (c) providing career and educational prospects.

## Introduction

The social justice paradigm is one of the essences of Pancasila as Indonesia's legal philosophy. Sustainable development is a concrete manifestation of the government in prioritizing social justice. To achieve welfare, the legal products, including those on health, must be in favor of the wider community [1]. Health development should be based on physical and mental health rather than the principle of disease management as envisioned in healthy Indonesia 2010 [2], [3]. According to Law No. 36 of 2009 on Health Article 1, health is defined as a healthy physical, mental, and social condition.

In Indonesia, health development is carried out through the National Health System, where it must provide quality, fair (non-discriminatory), and equitable (well-distributed) health services. There are various data regarding the doctor-population ratio of Indonesia; the ideal ratio of doctors based on the WHO (World Health Organization) is 1 for every 1000 people, yet Indonesia only has a healthcare worker index of 0.62 per 1000 people in 2019 [4], [5]. Other data released by the Ministry of Health of the Republic of Indonesia in 2021 show an average index of 0.24 doctors per 1,000 people [6].

The National Health System faces some other problems, including health inequality. According to the WHO, there are different health statuses or health resource distribution between different population groups that are affected by geography, race or ethnicity, socio-economic status, etc. [7]. Even so, there is a great issue on the disproportion on who can or cannot benefit from good health services. This is because there are two parameters of a good health system, namely, goodness (the highest average rate that may be achieved by a state) and fairness (the smallest difference that occurs between individuals and groups) [8].

The distribution of doctors is more equitable in cities rather than in regencies. Remote, Underdeveloped Areas, Frontiers, and Islands (RUAFI) have a less equal distribution of doctors compared to other areas [4]. This is because many doctors declined to serve in RUAFI because they are not from RUAFI or simply the RUAFI did not offer to them adequate medical facility or financial sources. The absence of doctors in RUAFI causes the decline in health service quality, especially the promotive function, which later impairs the whole health degree of the population [9], [10]; affects other healthcare providers, forcing midwives, nurses, etc., to give medical treatments that are not in accordance with their authorities, causing legal dilemma [11]; and compels people to seek alternative medicine

that is, in most cases, not standardized yet, and may further worsen the clinical condition of the patients themselves [12].

One of the factors that determine the quality of doctor distribution is legal products. Because of that, this research aims to: a) Describe the policy on doctor distribution in Indonesia, b) describe the implication of the policy on doctor distribution in Indonesia, and c) give a concept on the doctor distribution policy based on proportional justice.

## Methods

This research is a mixed qualitative study. The first is using the juridical-normative method that aims to analyze legal principles and written legal resources regarding doctor placement in Indonesia, generally using secondary data, namely, the review of primary legal sources, which are legal policies regulating doctor placement in Indonesia, and secondary legal materials, which are the relevant books and journals to help evaluate policies on the doctor distribution in Indonesia.

The analyses of law are also supported with the literature review to assess the implications of legal policies regarding doctor placement and distribution in Indonesia with the literatures from the following databases: PubMed, JSTOR, DOAJ, and Google Scholar. The keywords used are doctor, distribution, Indonesia, and rural. A total of 7,136 articles were identified. Articles were then selected if met with inclusion criteria: Written in English or Indonesian, published between 2000 and 2022, with their titles and abstracts relevant to this research. After excluding articles that did not meet the inclusion criteria, 26 articles were selected; ten more are excluded after the full-text review. An additional two articles were included after reviewing the references cited from the articles selected prior. Another one article was excluded during the text review. A final total of 18 articles were included in this study to describe the implication of doctor placement policy in Indonesia (Figure 1).

## Results

### **Legal policies on doctor placement**

Healthcare is the right of all nations; Indonesian government strengthens it and ensures its implication with issuing legal products. The main policies of the health sector are the 1945 Constitution Article 34 Clause (3), "The state is responsible for providing proper health and public service facilities," and Law

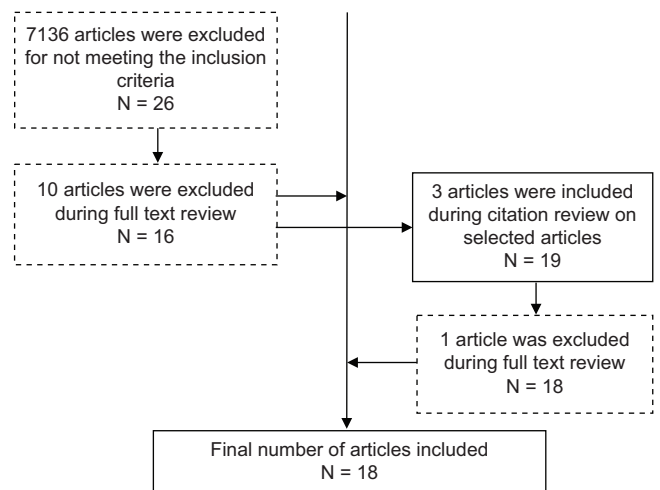


Figure 1: Article selection process for describing the implication of doctor distribution policy in Indonesia

No. 36 of 2009 on Health Article 26 Clause (1), "The regional governments may provide and exert health workers according to the region's needs." As a labor-intensive sector, the quality of the health system in Indonesia is heavily influenced by its human resources, one of which is doctors.

Doctors in Indonesia are classified into two doctor employment statuses: Temporary and government employees (Civil Servant). The temporary doctor employees work for 2–3 years, as stated in Presidential Decree No. 72 of 1991 and Decree of Minister of Health No. 16 of 2017, while the government doctor employees are permanent workers in health facilities. The temporary doctor employees are further classified into two groups: Individual-based doctor placement program (Temporary Employment Program or TEP) and group-based placement program (Healthy Archipelago), all three of them to achieve just distribution of doctors in Indonesia.

Although the government has established accommodative programs to realize the proportional justice doctor distribution, the number of doctors willing to register for the programs is still relatively low [13]. In all of the policies reviewed in this article, one of the issues emerging is the disparity of financial incentives between doctors.

There are two systems of providing basic salary and incentives to health workers, namely, through the Central Government for the temporary doctor employees and regional/local government (decentralization) for the government doctor employees. To increase the number of doctor recruitment in RUAFI, Central Government provides a budget for salaries and incentives for doctors assigned to TEP and Healthy Archipelago that can compete with the income of doctors in big cities. Below is the temporary doctor employee's basic salary based on Decree of Minister of Health No. HK.02.02/Menkes/412/2015 and Decree of Minister of Health No 1307/Menkes/SK/IX/2010 (Table 1).

To further attract doctors to work in RUAFI, the regional government also issued policies regarding temporary doctor employees' incentives. Here are several comparisons of incentives given between temporary and government doctor employees from regional government based on the legal policies mentioned on the table (Table 2).

With the improvement in the amount of TEP and Healthy Archipelago incentives, salary is no longer a problem for doctors' placement in RUAFI. However, this inflicts another consequence, namely, creating a disparity of salary between the temporary and government doctor employees. Here is the basic salary of government doctor employees based on Government Decree No. 15 of 2019 (Table 3).

Based on the table above, there are variations in incentives between regions, which depend on the region's political policies and fiscal capacity. However, it should be noted that temporary doctor employees have two sources of incentives, namely, from the Central Government and those of the regional governments that regulate so, while government doctor employees receive incentives only from the regional government; thus, the income of temporary doctor employees is indeed higher than that of permanent doctors, who work permanently in health facilities.

**Table 1: The amount of monthly basic salary and incentive received by temporary doctor employees assigned for the temporary employment program and healthy archipelago program sourced from the central government**

No	RUAFI classification	Temporary employment program (in USD)		Healthy archipelago program (in USD)	
		Basic salary	Incentive	Basic salary	Incentive
1.	Remote area	197.87	366.08	197.87	215.34
2.	Very remote area	197.87	532.32	197.87	372.83

\*Currency is converted from IDR (Indonesian Rupiah) to USD (United States Dollar) with USD 1 is equal to IDR 14,371.75 (as of February 9, 2022).

The next problem related to the doctor placement policy in Indonesia is the lack of regional government control. Until now, although there have been regulations regarding the standardization of health service facilities, in reality, many health facilities in RUAFI are running without meeting minimum standards [14], [15]. However, it has not been detailed regarding the implementation of local government supervision of the operation of health services in the regions. The lack of regional government control is reflected in low logistics distribution and delays in the

delivery of generic drugs to health facilities in RUAFI, which later will be discussed [15].

The last problem identified regarding doctor placement policies in Indonesia is the less promising career development for doctors working in RUAFI. Based on Presidential Decree No. 37 of 1991 Article 5 Clause (2), "Doctors as Non-Permanent Employees who are placed in RUAFI will be given priority for the appointment of Civil Servants". This is very contrasted with the government doctor employees who have tiered careers, as stated in Presidential Decree No. 72 of 1991 and Decree of Minister of Health No. 16 of 2017, TEP and Health Archipelago doctors can only extend their working period for 1–3 years without any career development opportunities.

### **Doctor placement policy implication**

The low recruitment and retention rate of doctors in RUAFI are affected by salary and incentive problems [16]. Most health workers state that they are unsatisfied with their wages. [11], [17]. To increase the interest of doctors in participating in the health equity program (TEP and Healthy Archipelago), the temporary doctor employees receive more incentives (almost twice as much) than the permanent/government doctor employees [18].

The fact that the responsibility of government doctor employees in health facilities is a lot bigger than temporary doctor employees further widens the salary injustice [17]. With this income gap condition, of course, doctors in Indonesia will be increasingly reluctant to become permanent doctors at RUAFI and prefer to work with short contract periods; all while it is very important to maintain the retention of permanent doctor employees [19], [20]. This is because temporary doctor employees with a very short working period, which is only two to three years, would not have been able to manage health facilities well, so their performance is not as effective as permanent doctors who work sustainably in the same health facility for years [12].

Another factor contributing to low doctor's participation in TEP and Healthy Archipelago is the limited involvement of regional government which inflicts many consequences. There's a shortage of

**Table 2: The amount of monthly incentive received by government doctor employees and temporary doctor employees assigned for the temporary employment program and Healthy Archipelago Program sourced from the regional government**

No	Legal Policy	Region	Incentive for Temporary Doctor (in USD)		Incentive for Government Doctor (in USD)
			Temporary Employment Program	Healthy Archipelago Program	
1.	Decree of Tanggamus Regent No. 38 of 2014	Tanggamus, Lampung Province	232.80 (remote area); 403.06 (very remote area)	232.80 (remote area); 403.06 (very remote area)	347.46
2.	Decree of West Lampung Regent No. 4 of 2016	West Lampung, Lampung Province	173.95	173.95	191.35
3.	Decree of Seruyan Regent No. 22 of 2016	Seruyan, Central Kalimantan Province	208.74	208.74	-
4.	Decree of Central Maluku Regent No. 37 of 2017	Central Maluku, Maluku Province	173.95	278.32	243.53
5.	Decree of West Seram Regent No. 8 of 2020	West Seram, Maluku Province	521.86	521.86	521.86

\*Currency is converted from IDR (Indonesian Rupiah) to USD (United States Dollar) with USD 1 is equal to IDR 14371.75 (as of February 9, 2022).

**Table 3: The amount of monthly basic salary received by government doctor employees sourced from the Central Government**

Government doctor employees class	Length of work (in years)	Range of basic salary (in USD)			
Class I	a	0–26	108.60	-	162.53
	b	3–27	118.60	-	172.07
	c	3–27	123.62	-	179.34
	d	3–27	128.85	-	186.93
Class II	a	0–33	140.71	-	234.74
	b	3–33	153.66	-	244.67
	c	3–33	160.16	-	255.01
Class III	d	3–33	166.94	-	265.80
	a	0–32	179.48	-	294.77
	b	0–32	187.07	-	307.24
	c	0–32	194.99	-	320.24
Class IV	d	0–32	203.23	-	333.78
	a	0–32	211.83	-	347.90
	b	0–32	220.79	-	362.62
	c	0–32	230.13	-	377.96
	d	0–32	239.86	-	393.95
	e	0–32	250.01	-	410.61

\*Currency is converted from IDR (Indonesian Rupiah) to USD (United States Dollar) with USD 1 is equal to IDR 14371,75 (as of February 9, 2022).

supporting facilities at RUAFI's health facilities, one of them being transportation, which should be distributed by regional government since the decentralization era [21], [22]. The latest data of the Ministry of Health showed that 22.44% of four-wheeled vehicles owned by health facilities in Indonesia had minor impairments and 11.13% of them were severely broken. Even in RUAFI like Papua, from 21 of the total regions, 13 of them did not have any health facility vehicles at all [14].

For equal distribution of services to the entire community, especially in remote and border regions, in which the populations are usually scattered in small, far apart groups, health workers must be proactive and provide mobile (moving) health centers with cars or ambulances. In this process, qualified transportation is needed so that people can still get the health services that they are entitled to. The distribution of doctors to areas with extreme geographical conditions does not guarantee increased public access to doctor services unless supported by transportation facilities [12].

The limited involvement of regional government also reflects on the distribution of drugs in Indonesia. Although on the data provided by the Ministry of Health, the number of drug availability in Indonesia has improved over the years, from 75.50% in 2014 (marked as baseline) to 85.99% in 2019, but as for now, four provinces are still under the baseline of 75.50% which are West Papua (70.86%), West Kalimantan (65.37%), East Nusa Tenggara (61.11%), and Southeast Sulawesi (57.02%) [15].

Availability of drugs, although it does not directly influence doctors' recruitment number, affects the retention (length of work or stay) of doctors in RUAFI. Limited availability of drugs hinders doctors to provide the best service possible, which later decreases doctors' motivation [23], [24].

Limited health facilities for doctors, such as transportation and drugs, especially in RUAFI, cause a high workload for healthcare providers [25], [26]. Doctors must be on standby for 24 h, particularly for

handling cases of childbirth and other emergencies that require immediate medical intervention; however, at the same time, doctors are also required to directly do home visits to provide services [12]. This may encourage doctors to move to areas with a lower workload, further lowering the retention of doctors in RUAFI [27].

The last contributing factor for low doctors' interest in practicing in RUAFI is less promising career development for doctors working in RUAFI. For the government doctor employees, working in underdeveloped areas limits the access for them to non-financial incentives such as seminars and training for health workers, which further hinders them from self and professional development [28].

Even so, government doctor employees still have prospects with the tiered career system provided by the government as stated in Government Decree No. 15 of 2019. In contrast with that, the temporary doctor employees have no career prospects at all; based on Presidential Decree No. 37 of 1991 and Decree of Ministry of Health No. 16 of 2017, they can only extend their length of work in RUAFI by one to three years. This is unfortunate because a study led by the Ministry of Health showed that 78.48% of doctors agreed to be placed in RUAFI if they were later promoted to be government doctor employees [29]. Another study including general practitioners aged 22–35 showed that 77.3% were planning on furthering their education as a specialist, with 14.53% of respondents agreeing to be placed in RUAFI if they were to be given scholarship [12], [29].

## Discussion

Based on all of the policies and data collected before, there are three factors affecting the low doctor's motivation of recruitment and retention in RUAFI: Incentive disparity between doctors, the lack of regional government control, and less promising career development for doctors working in RUAFI.

In overcoming the incentive disparity between doctors, a legal policy regarding the classification of doctors in RUAFI is necessary. The classification is based on job status (temporary and permanent doctor employees), along with a detailed description of the workload and responsibilities of each profession; then, the government can establish policies related to the reward system that is fair and proportional to the classification [30].

The distribution policy of doctors in RUAFI must also be followed by the presence of policies related to technical supervision of standards and quality of health service facilities by the regional government, especially transportation, to support the operation of mobile health

centers, and policies related to the standardization of supervision, including the appointment of a person in charge of supervision within the government, determination of the frequency of supervision, facility maintenance funds, etc. [31].

The last one is policies regarding prospective motivation for each of doctor classifications working in RUAFI: Policies related to the career and academic prospects of general practitioners that are structured and implemented, such as giving priorities of civil servant and scholarship acceptance, are to doctors who have participated in the TEP and Healthy Archipelago programs in RUAFI in the form of tiered recommendation letters, which are proportional to the regional status, where the doctor employee is deployed (remote region, very remote region, etc.) and length of service. This recommendation letter can then be used to help general practitioners to register themselves as civil servants. The two policies are mainly aimed at demographics with the highest interest in service according to the convention, for example, young doctors or fresh graduate doctors.

## Conclusion

The laws that regulate doctor placement in Indonesia are deemed adequate and well-written. Unfortunately, there is a lack of equitable doctor distribution; thus, not all areas may enjoy the right to health services. The unequal distribution of doctors in Indonesia is generally caused by the low motivation of recruitments and the low retention of doctor professions in RUAFI. The affecting factors include disparity of incentives between doctors, low regional government involvement in healthcare system in RUAFI, and the lack of career development for doctors being placed in RUAFI.

Some of the concepts of the proportional justice-based policies are as follows: (a) Proportioning incentives by forming an integrative workload-based classification system of health workers, (b) regional governments must have direct control function of the health facilities, especially at RUAFI, and (c) there must be career and education prospects.

## References

- Suhardin Y. The role of law in achieving social welfare. *Pro Justitia*. 2007;25(3):270.
- Tumanggor R. Sociocultural issues in health development. *Masy Budaya*. 2010;12(2):232.
- Pasaribu RM. Solutions in handling social health development issues in Indonesia. *Dunia Ilmu*. 2015;1(2):2.
- Hermawan A. Analysis of the distribution of health workers (doctors, nurses, midwives) in Indonesia in 2013 using the Gini index. *Bul Penelit Sist Kesehat*. 2019;22(3):168.
- World Health Organization. World Health Data Platform. Geneva: World Health Organization Available from: [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-\(per-10-000-population\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-(per-10-000-population)) [Last accessed on 2022 Jan 02].
- Ministry of Health of the Republic of Indonesia. Available from: [http://bppsdmk.kemkes.go.id/info\\_sdmk/info/renbut](http://bppsdmk.kemkes.go.id/info_sdmk/info/renbut) [Last accessed on 2022 Jan 03].
- Arcaya MC, Arcaya AL, Subramanian SV. Inequalities in health: Definitions, concepts, and theories. *Glob Health Action*. 2015;8:27106. <https://doi.org/10.3402/gha.v8.27106> PMID:26112142
- World Health Organization. The World Health Report 2000: Health Systems: Improving Performance. WHO Library Cataloguing in Publication Data. Geneva: World Health Organization; 2000.
- Sarumpaet S, Tobing B, Siagian A. Mother and child health services differences in the urban and remote areas. *Natl Public Health J*. 2012;6(4):147-52.
- Arnindiah N, Safriantini D. Analisis kepuasan pasien rawat inap peserta jaminan kesehatan nasional di rumah sakit Islam siti khadijah Palembang. *J Kesehatan UMS*. 2018;11(2):35-9. <https://journals.ums.ac.id/index.php/jk/article/view/7580>.
- Ola C, Huda K, Putera A. Criminal, civil, and administrative responsibilities of nursing assistants in independent village health services. *Legality*. 2017;25(2):134-46.
- Suharmiati S, Handayani L, Kristiana L. Factors affecting the affordability of health services at health centers in remote border areas in Sambas district. *Health Syst Res Bull*. 2012;15(3):223.
- Yunita I, Saputra M, Handayani Y, Maradona RO, Rusdi F, Achadi A. Analysis of determinants of intern doctor career choices in DKI Jakarta Province. *Indonesia Med Assoc J*. 2020;70(12):246-52.
- Ministry of Health of the Republic of Indonesia. Health Center Basic Data. Jakarta: Ministry of Health of the Republic of Indonesia; 2019.
- Directorate General of Pharmacy and Medical Instrument RI. 2016 Performance Accountability Report Pharmaceutical Services Director. Jakarta: Ministry of Health of Republic of Indonesia; 2017.
- Noya F, Freeman K, Carr S, Thompson S, Clifford R, Playford D. Approaches to facilitate improved recruitment, development, and retention of the rural and remote medical workforce: A scoping review protocol. *Int J Health Pol Manag*. 2021;10(1):22-8. <https://doi.org/10.34172/ijhpm.2020.27> PMID:32610716
- Meliála A, Hort K, Trisnantoro L. Addressing the unequal geographic distribution of specialist doctors in Indonesia: The role of the private sector and effectiveness of current regulations. *Soc Sci Med*. 2013;82:30-4. <https://doi.org/10.1016/j.socscimed.2013.01.029> PMID:23453314
- Putri LP, Russell DJ, O'Sullivan BG, Kippen R. Factors associated with working in remote Indonesia: A national cross-sectional study of early-career doctors. *Front Med*. 2021;8:594695. <https://doi.org/10.3389/fmed.2021.594695> PMID:34055819
- Straume K, Sondena MS, Prydz P. Postgraduate training at the ends of the earth a way to retain physicians? *Rural Remote Health*. 2010;10(2):1356.

- PMid:20572748
20. Asante AD, Martins N, Otim ME, Dewdney J. Retaining doctors in rural Timor-Leste: A critical appraisal of the opportunities and challenges. *Bull World Health Organ.* 2014;92(4):277-82. <https://doi.org/10.2471/BLT.13.123141>  
PMid:24700995
  21. Paramita SA, Yamazaki C, Setiawati EP, Koyama H. Distribution trends of Indonesia's health care resources in the decentralization era. *Int J Health Plan Manag.* 2018;33(2):e586-96. <https://doi.org/10.1002/hpm.2506>  
PMid:29527720
  22. Heywood PF, Hara NP. Human resources for health at the district level in Indonesia: The smoke and mirrors of decentralization. *Hum Resour Health.* 2009;7:6. <https://doi.org/10.1186/1478-4491-7-6>  
PMid:19192269
  23. Ensor T. Overcoming barriers to health service access: Influencing the demand side. *Health Policy Plan.* 2004;19(2):69-79. <https://doi.org/10.1093/heapol/czh009>  
PMid:14982885
  24. Laing R, Hogerzeil H, Ross-Degnan D. Ten recommendations to improve use of medicines in developing countries. *Health Policy Plan.* 2001;16(1):13-20. <https://doi.org/10.1093/heapol/16.1.13>  
PMid:11238425
  25. Dawson A, Nkowane A, Whelan A. Approaches to improving the contribution of the nursing and midwifery workforce to increasing universal access to primary health care for vulnerable populations: A systematic review. *Hum Resour Health.* 2015;13(1):97. <https://doi.org/10.1186/s12960-015-0096-1>  
PMid:26684471
  26. Tampubolon NR, Fatimah WD, Hidayati AU. Barriers to the implementation of palliative care in Indonesia: Systematic review. *J Kesehatan UMS.* 2021;14(1):1-10. <https://journals.ums.ac.id/index.php/jk/article/view/12815>
  27. Dussault G, Franceschini MC. Not enough there, too many here: Understanding geographical imbalances in the distribution of the health workforce. *Hum Resour Health.* 2006;4:12. <https://doi.org/10.1186/1478-4491-4-12>  
PMid:16729892
  28. Putri LP, O'Sullivan BG, Russell DJ, Kippen R. Factors associated with increasing rural doctor supply in Asia-Pacific LMICs: A scoping review. *Hum Resour Health.* 2020;18:93. <https://doi.org/10.1186/s12960-020-00533-4>
  29. Center for Planning and Utilization of Health Human Resources. Study Result of Health Personnel Incentives at Health Centers and Self-Assessment Team of Healthy Archipelago Program. Jakarta: Ministry of Health of the Republic of Indonesia; 2016.
  30. Budiono A, Absori A, Harun H, Nugroho HSW, Dimiyati K. The ideal management of health insurance for Indonesia according constitution. *Calitatea Acces Success.* 2020;21(176):48-50.
  31. Wardiono K, Dimiyati K, Nugroho SS, Nugroho HS, Acob JR, Budiono A. Philosophy, law, and ethics of handling COVID-19 pandemic in Indonesia. *Open Access Macedon J Med Sci.* 2021;9(E):1104-8.