

# SUSTAINABLE MEDICAL INSURANCE: A BIBLIOMETRIC REVIEW

Haitham Nobanee<sup>\*</sup>, Hiba Zaki Shanti<sup>\*\*</sup>, Lina Subhi Abukarsh<sup>\*\*\*</sup>,  
Fatima Youssef Al Hamadi<sup>\*\*\*\*</sup>, Fatma Abdulaziz<sup>\*\*\*\*</sup>,  
Aysha Falah Alqahtani<sup>\*\*\*\*</sup>, Shayma Khalifa AlSubaey<sup>\*\*\*\*</sup>,  
Hamama Abdulla Almansoori<sup>\*\*\*\*</sup>

\* Corresponding author, College of Business, Abu Dhabi University, Abu Dhabi, the UAE; Oxford Centre for Islamic Studies, University of Oxford, Oxford, the UK; Management School, University of Liverpool, Liverpool, the UK

Contact details: College of Business, Abu Dhabi University, Alain Road, 59911 Abu Dhabi, the UAE

\*\* College of Business, Abu Dhabi University, the UAE

\*\*\* College of Business, Abu Dhabi University, Abu Dhabi, the UAE; Imperial College London Diabetes Centre, Abu Dhabi, the UAE

\*\*\*\* College of Business, Abu Dhabi University, Abu Dhabi, the UAE



## Abstract

**How to cite this paper:** Nobanee, H., Shanti, H. Z., Abukarsh, L. S., Al Hamadi, F. Y., Abdulaziz, F., Alqahtani, A. F., AlSubaey, S. K., & Almansoori, H. A. (2021). Sustainable medical insurance: A bibliometric review [Special issue]. *Journal of Governance & Regulation*, 10(4), 343–352.  
<https://doi.org/10.22495/jgrv10i4siart14>

Copyright © 2021 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).  
<https://creativecommons.org/licenses/by/4.0/>

**ISSN Print:** 2220-9352  
**ISSN Online:** 2306-8784

**Received:** 22.06.2021  
**Accepted:** 01.12.2021

**JEL Classification:** G10, G15, G19, G32  
**DOI:** 10.22495/jgrv10i4siart14

Many less fortunate people are struggling to pay for their medical expenses, as well as with the contributions they have to pay for their health insurance. People especially those who are living in lower-income countries end up suffering from both illnesses and debt when they get sick. This paper is a bibliometric review of 638 articles retrieved from the Scopus database on the subject of sustainable medical insurance, during the past 20 years, from 2000 to 2020. Scopus database was selected as it offers access to published research papers in high-quality journals relevant to the topic studied. Three research streams were further identified in this paper: health financing, health insurance, and global health. The bibliometric analyses provide insights in publication output concerning the growth of publication, most influential authors, keywords analysis, most influential sources, most cited documents, and publications output by countries. Our recommendation would be to design and develop pro-poor medical insurance, which will significantly help the less fortunate people, especially from the lower-income countries, which cannot pay it.

**Keywords:** Medical Insurance, Sustainability, Health Insurance, Health Financing, Bibliometric Analysis, VOSviewer, Scopus

**Authors' individual contribution:** Conceptualization — H.N. and H.Z.S.; Methodology — H.N. and H.Z.S.; Investigation — H.N. and H.Z.S.; Writing — Original Draft — L.S.A., F.Y.A.H., F.A., A.F.A., S.K.A., and H.A.A.; Writing — Review & Editing — H.N. and H.Z.S.; Supervision — H.N.

**Declaration of conflicting interests:** The Authors declare that there is no conflict of interest.

## 1. INTRODUCTION

Medical insurance is one of the expenses that many people across the world pay for their medical needs. There are people worldwide who cannot pay for their hospital or medical expenses, especially those who are from lower-income countries. Medical insurance significantly helps the household against the financial burden from out-of-pocket expenses (Spaan et al., 2012). It also serves to enhance the utilization of the service. Various types of medical insurance could be private or public,

however, it has limited coverage of health services that do not cover all the types of illnesses, and the financial risk protection is not fully provided. There is an estimated 15 to 20% out-of-pocket total health expenditure, that was based on the report of the World Health Organization (WHO), constituting about 40% of household net income of necessary support which could significantly cause a financial disaster across the world (Doetinchem, Carrin, & Evans, 2010). When less fortunate people or those who have low incomes, suffer from an illness, the first thing they usually do is to seek a free health

service from the public hospitals or nearby medical centers; however, there are only limited hospitals and centers that provide medical attention for free. This becomes the beginning of a catastrophe. People who require medical attention usually borrow money from relatives, friends, and various financial institutions to support their medical expenses, notwithstanding, some people have left no choice and remain ill, impacting their ability to work, and die.

The history of medical insurance has evolved globally, unlike before, where people, from industrialized countries, in particular, are being medically treated to the primary care physician's offices. Around 150 million people have been facing financial burdens across the world annually due to the out-of-pocket expenses for their medical-related needs (WHO, 2013). The quality of life and the well-being of the citizens are now the factors to determine the health status of the population of a country (Saad Andaleeb, Siddiqui, & Khandakar, 2007). Healthcare management has been one of the top subjects for observation due to the increasing costs and growing issues regarding health and wellness. As a result, various organizations in the healthcare industry have striven to enhance the safety and care quality of the patients. In addition to that, the healthcare services' accessibility and efficiency have been continuously improving to meet the demands of the customers (Goh & Marimuthu, 2016; Ament et al., 2012). Countries around the world have been focusing to develop and provide an effective medical insurance system in the attainment of universal coverage, further, an argument regarding the benefits of various forms of medical insurance is continuing (Asgary, Willis, Taghvaei, & Rafeian, 2004; Oxfam, 2008; ILO, 2008). There are various models of medical insurance such as private health insurance (PHI), community-based health insurance (CBHI), social health insurance (SHI), tax-based system (TBS), and home-grown health financing mechanisms. However, despite these models, it cannot change the fact that extending medical insurances to the less fortunate people is still difficult. The health access of the people who have financial instability remains as their needs have been disregarded in the pro-poor health insurance schemes design (Peters et al., 2008; Wagstaff, 2008; Whitehead, Dahlgren, & Evans, 2001).

Thus, a comprehensive study was conducted using VOSviewer and Scopus for various literature regarding medical insurance, as there is a need to understand what has been published in regards to this topic and pave the way for future researchers when conducting further studies. Hence, the study has further identified its research questions, which are as follows:

*RQ1: What is the growing trend of publications regarding sustainable medical insurance?*

*RQ2: Who are the top journals, authors, organizations, countries published on the topic of sustainable medical insurance?*

*RQ3: What are the most repeated keywords and the major streams of medical insurance?*

We then have exported sustainable medical insurance-related English-language journal articles from Scopus and conducted a bibliometric analysis with the VOSviewer, which resulted in 638 documents.

Therefore, this paper was structured to provide a comprehensive literature review on medical insurance in Section 2, followed by the methodology used to conduct the study in Section 3. Afterward,

the results were demonstrated with clear analysis in Section 4 followed by a discussion of the cluster analysis in Section 5. Section 6 provides future research agenda and finally a conclusion is presented in Section 7.

## 2. LITERATURE REVIEW

According to Akachi and Kruk (2017), providing health care of high quality is a crucial element that countries should work on to achieve the Sustainable Development Goal (SDG) 3: "to guarantee healthy lives and encourage well-being for all at all ages" (p. 465). From the United States National Academy of Medicine's Perspectives, quality is the degree to which healthcare services delivered to people enhance required health effects (Akachi & Kruk, 2017; Baker, 2001). The main duties for quality assessments are to measure the performance of services and to calculate the difference between reality and expectations based on specific criteria and procedures. Though an absence of consensus occurs on the role of quality of care in achieving SDG 3, that is demonstrated in the lack of measures of quality that apply to lower-income situations (Akachi & Kruk, 2017).

Therefore, medical insurance is a way to improve health care quality for all citizens and to achieve sustainability. Health insurance's main function is projected to decrease the financial burden of obtaining health care services by pooling funds and distributing the risk of unexpected health events (Carapinha, Ross-Degnan, Desta, & Wagner, 2011). Health insurance coverage could raise access to care and safeguard families from the unfavorable financial impacts of ill health (Wagner et al., 2011). According to Pan, Tian, Zhou, and Han (2016), health insurance benefits are demonstrated in the income effect and risk pooling effect. The risk pooling effect is vital for relative high-income patients, while the income effect is more essential for relative low-income patients. Various categories of social, national, private, and community-based health insurance plans exist to protect individuals from health care expenses (Carapinha et al., 2011). Therefore, this paper has focused its attention to provide a detailed analysis of medical insurance publications as it is a vital topic that has a great impact on society and will help future researchers in conducting their studies. This research was done using the bibliometric analysis approach.

## 3. METHODOLOGY

In this paper, a content analysis and a bibliometric citation analysis were used. Using Scopus and VOSviewer software, the following tests were conducted using bibliometric citation analysis: 1) citation analysis, 2) co-occurrence analysis, 3) bibliographic coupling (Nobanee, 2020).

### 3.1. Review sources identification

The data repository that was used in this research to extract and search for the documents is the Scopus index. The comprehensive source coverage related to physical science and medicine can be found in Scopus, as compared to the Web of Science (Mongeon & Paul-Hus, 2015). Although the Web of Science generates limited sources related to these

subjects, it was argued that the database provides sources of higher qualities (Hallinger & Kovačević, 2019; Archambault, Campbell, Gingras, & Larivière, 2009) found out that Scopus and Web of Science generate highly correlated citations sources and articles, however, Web of Science has insufficient information regarding the sustainable healthcare management research field. Hence, Scopus was used in this study as it can provide broader coverage (Falagas, Pitsouni, Malietzis, & Pappas, 2007; Zupic & Čater, 2014). Using Scopus, keywords, and filters, we have come up with 638 document results.

### 3.2. Data analysis

This paper seeks to research in the sustainable medical insurance field, which shall be done through the method of science mapping review. The bibliographic data regarding the 638 documents (articles, journals, countries, citations, affiliation, etc.) were exported on the 27th of October 2020 for the upcoming data evaluation. The keywords used to generate the documents are as follow: title (“sustainab\*” and “health insurance”) or (“sustainab\*” and “medical insurance”) or key (“sustainab\*” and “health insurance”) or (“sustainab\*” and “medical insurance”) and limit-to (doctype, “ar”) or limit-to (doctype, “no”) or limit-to (doctype, “re”) or limit-to (doctype, “ed”) or limit-to (doctype, “le”) or limit-to (doctype, “cp”) or limit-to (doctype, “sh”) and limit-to (language, “English”).

Data retrieved from the Scopus database on the subject of sustainable medical insurance showed that publications started from the year 2000 till 2020 and are still growing, Figure 1 demonstrates the trend of the topic. It is seen that in the year 2000, only 2 papers were published, and it continued at nearly the same pace with an average of 7 documents from the year 2000 until the year 2014. However, a sharp increase in the number of publications took place in 2015 with a total number of 68 documents that is around 10 times the number of publications in the previous 14 years. The same level of activity continued until 2017, and then another sharp increase took place in the year 2018 when the number of publications reached 117 papers, which is a huge increase. Therefore, the level of publication is expected to continue growing although a slight decrease took place in 2020. In addition, Figure 2 demonstrates the type of documents published on this topic. The majority of documents published are article documents with a total of 288 papers followed by note documents with a total number of 108. However, in the last place came the short survey document with only 13 documents.

Data evaluation will be further conducted and consists of bibliometric analysis including citation, bibliographic coupling, and keyword co-occurrence analysis (Zupic & Čater, 2014; White & McCain, 1998; Small, 1999). Additionally, aside from the Scopus database, VOSviewer<sup>1</sup> software was also used for bibliometric analysis. Table 1 further discusses the key methodological terms used in this paper.

<sup>1</sup> VOSviewer is a software application for designing maps based on network data and for visualizing and discovering these maps. A map can be generated based on a network that previously exists. VOSviewer is utilized to construct networks of scientific journals, scientific publications, scholars, research organizations, countries, and keywords. Elements in these networks can be linked by co-authorship, citation, co-occurrence, bibliographic coupling, or co-citation connections (van Eck & Waltman, 2014).

Figure 1. Total number of articles published on the topic of sustainable medical insurance

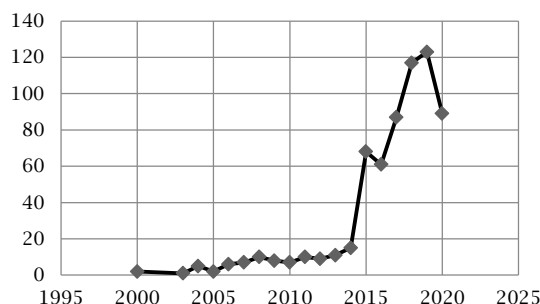


Figure 2. Types of documents published on the topic of sustainable medical insurance

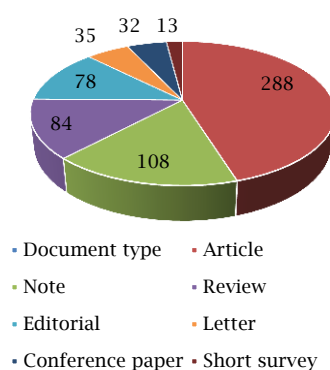


Table 1. Key methodological terms

Key methodological terms	Explanation/Details
Citation analysis	Measuring the relative significance or effect of an article, author, and publication by quantifying the times it was cited.
Co-occurrence analysis	Quantifying the information within the unit of collection.
Bibliographic coupling	Documents that are coupled bibliographically with one or more common documents.

## 4. RESULTS

In this section, the bibliometric analysis results regarding medical insurance shall be reported.

### 4.1. Influential aspects of literature

In the following tables, we shall present the top 10 most influential literature as per country, authors, organizations, and the top 20 most influential articles.

#### 4.1.1. Key journals distribution and network

The journal distribution network was identified using Scopus and VOSviewer software. The top 10 journals were ranked into two groups. The first ranking was based on the highest to lowest number of papers published on the topic, and then the second one was ranked from highest to lowest number of citations as shown in Table 2.

As presented in Table 2, The Lancet was on the top 1 ranking in both sources by documents (99) and source by citation (3371). The Bulletin of the World Health Organization is also on the same rank, (rank 2) in both sources by documents (29) and

source by citation (375). It was identified in the analysis that sustainable medical insurance was overlooked as there is no journal regarding this topic that was present in the top 10 rankings.

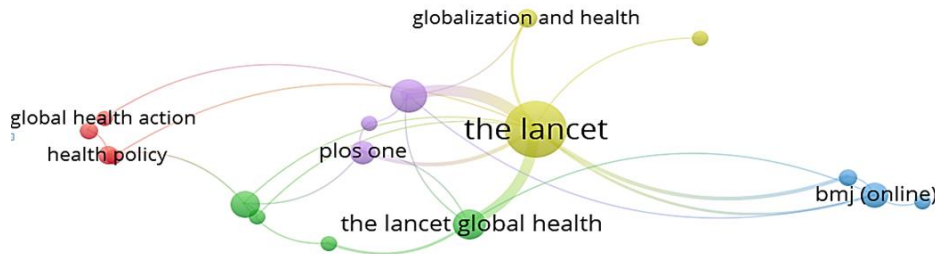
Table 2. Top journals

Rank	Source by documents	Documents	Rank	Source by citations	Citations
1	The Lancet	99	1	The Lancet	3371
2	Bulletin of the World Health Organization	29	2	Bulletin of the World Health Organization	375
3	The Lancet Global Health	24	3	New England Journal of Medicine	247
4	International Journal for Equity in Health	18	4	International Journal for Equity in Health	236
5	BMJ (Online)	15	5	The Lancet Global Health	234
6	PLOS One	13	6	Health Policy	206
7	Globalization and Health	8	7	BMJ (Online)	178
8	Health Policy	8	8	PLOS One	124
9	Social Science and Medicine	8	9	Health Policy and Planning	118
10	Health Policy and Planning	6	10	Social Science and Medicine	84

The key journal distribution is also presented in Figure 3. The ranking was created by sorting the sources by documents and citations, from

highest to lowest. It can be seen that The Lancet is the journal that contributed most to the topic.

Figure 3. Most influential journals generated using VOSviewer



4.1.2. Influential authors, their organization, and countries of origin

Using the Scopus and VOSviewer, the influential authors, their organization, institution affiliations, and countries of origin were identified. We ranked the authors, their organization, and countries of origin. We only presented the top 10 authors ranking, during the last 20 years, which was based on the number of citations, from highest to lowest.

Influential authors

Based on Table 3, the most influential author by documents is Horton R. with 15 documents,

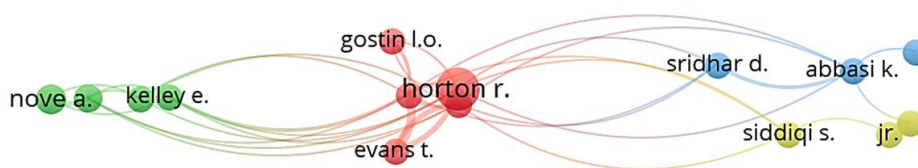
followed by Nove A. with 7 documents, and Campbell J. with 6 documents. On the other hand, the authors with the most citations are Kruk M. E. with 851 citations, followed by Horton R. with 716 citations, and Soucat A. with 678 citations. Using the VOSviewer software, we have generated 2,189 authors; however, we only presented here the 10 most influential authors by documents and citations.

The 10 most influential authors by documents and authors by citations are presented in Figure 4. It was generated using the VOSviewer and Scopus.

Table 3. Influential authors

Rank	Author by documents	Documents	Rank	Author by citations	Citations
1	Horton R.	15	1	Kruk M. E.	851
2	Nove A.	7	2	Horton R.	716
3	Campbell J.	6	3	Soucat A.	678
4	Abbasi K.	5	4	Campbell J.	185
5	Cometto G.	5	5	Van Moore Jr. A.	116
6	Evans T.	5	6	Gostin L. O.	97
7	Gostin L.O.	5	7	Sridhar D.	82
8	Van Moore Jr. A.	5	8	Evans T.	67
9	Kelley E.	5	9	Siddiqi S.	66
10	Kruk M. E.	5	10	Abbasi K.	60

**Figure 4.** Most influential authors generated using VOSviewer



**Influential organization**

As presented in Table 4 and Table 5, the World Health Organization (WHO) in Geneva, Switzerland has the greatest number of documents (13), followed by the London School of Hygiene and Tropical Medicine in London, the United Kingdom with 6 documents. This result represents that the WHO in

Geneva, Switzerland has a strong focus on sustainable medical insurance. However, based on the highest number of citations Public Health Foundation of India came first with a total number of 797 citations revealing strong contributions to the field of study.

**Table 4.** Influential organization based on documents

Rank	Organization by documents	Documents
1	World Health Organization, Geneva, Switzerland	13
2	London School of Hygiene and Tropical Medicine, London, United Kingdom	6
3	Public Health Foundation of India, New Delhi, India	5

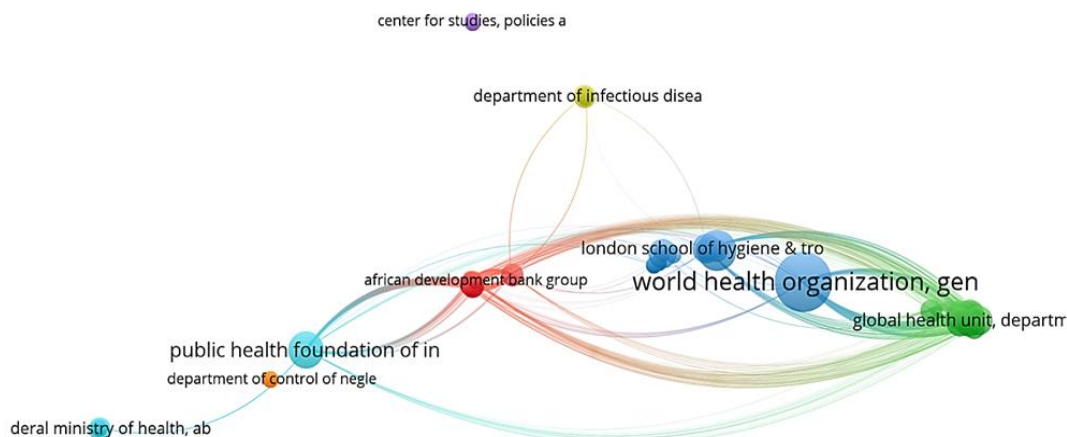
**Table 5.** Influential organization based on citations

Rank	Organization by citations	Citations
1	Public Health Foundation of India, New Delhi, India	797
2	Department of Global Health, University of Washington, Seattle, WA, United States	671
3	African Development Bank Group, Tunis, Tunisia	638

Using Scopus and VOSviewer, we have also generated the most influential organizations. We have selected the minimum number of papers to

be 1 with at least 60 citations. The results have yielded 114 different organizations, which are presented in Figure 5 below.

**Figure 5.** Top organizations



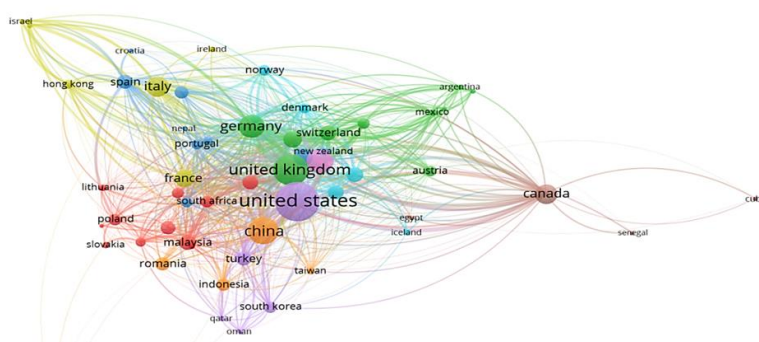
**Influential countries**

The most influential countries by documents and citations were analyzed to gain deeper on where scholarly interest in medical insurance research has been located. The literature regarding medical

insurance was authored in 51 different countries across the world, which means that there is a worldwide interest in this topic as shown in Figure 6 below.



Figure 6. Influential countries



As presented in Table 6, the United States (219) is the topmost influential country by documents, followed by the United Kingdom (145), Switzerland (90), and South Africa (57), which means that these countries have generated the most documents regarding the sustainable medical insurance. In addition to that, the country with the most citations is the United States (3787), followed by

the United Kingdom (2801), Switzerland (2662), and India (1490). These four countries have the most citations in the field of medical insurance. The United States has the highest number of citations in the last 20 years, revealing that the country has explored, and studied most aspects involved in health insurance.

Table 6. Influential countries

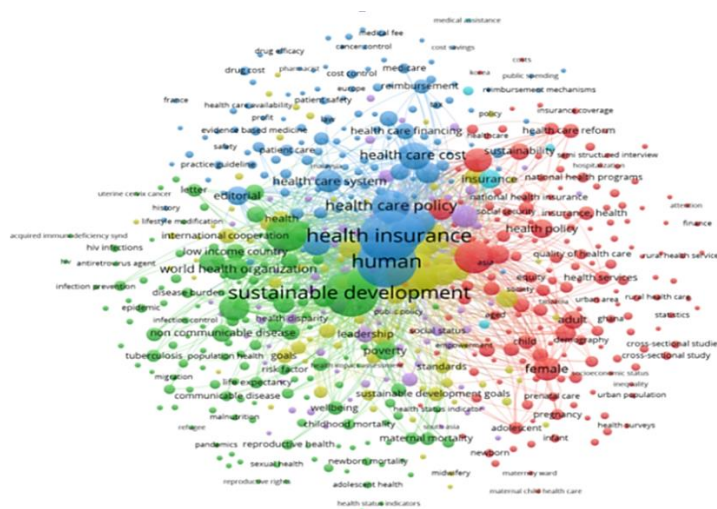
Rank	Country by documents	Documents	Rank	Country by citations	Citations
1	United States	219	1	United States	3787
2	United Kingdom	145	2	United Kingdom	2801
3	Switzerland	90	3	Switzerland	2662
4	South Africa	57	4	India	1490
5	India	50	5	Australia	1382
6	Australia	40	6	China	1347
7	China	29	7	South Africa	920
8	Ghana	28	8	Norway	802
9	Rwanda	12	9	Rwanda	758
10	Norway	9	10	Ghana	542

4.1.3. Key network analysis for research areas identification

With the help of the VOSviewer software, we have conducted a keyword network analysis to explore and research the various scope and administrations of sustainable medical insurance. As presented below, a network was presented based on the repetition of the keyword on sustainable medical insurance. The network shows the key concerns and

main topics in the literature such as health insurance, health care quality, health service, sustainable development, public health, healthcare access, etc. It also presented that the global health, health care costs, and healthcare system barely occur on medical insurance. Researchers may have overlooked the health care cost, which is one of the crucial factors in designing pro-poor medical insurance.

Figure 7. Keyword analysis through bibliographic coupling using VOSviewer



Using Scopus and VOSviewer, we have also generated the top-ranked keywords. The keywords were ranked by their number of occurrences, from

the highest to the lowest. Twenty (20) keywords were selected and presented in Table 7.

**Table 7.** Top keywords with their occurrence

Rank	Keyword	Occurrences	Rank	Keyword	Occurrences
1	Health insurance	555	11	Health care quality	136
2	Human	551	12	Health service	125
3	Sustainable development	457	13	Public health	123
4	Humans	400	14	Economics	120
5	Priority journal	273	15	Health care access	118
6	Article	234	16	Female	116
7	Health care policy	222	17	Government	112
8	Health care delivery	185	18	Health care system	111
9	Health care cost	157	19	World health organization	110
10	Global health	144	20	Organization and management	106

## 5. CLUSTER ANALYSIS

The cluster analysis is a tool used to categorize and group the same observations into several clusters (Sinharay, 2020). The grouping of the observations is based on the values of the various variables. The cluster analysis is the identification of the object's or observations' natural categorization

(Boccard & Rudaz, 2013). In this paper, the cluster analysis for the literature on medical insurance is presented in Table 8. Various journals and articles focusing on the topic of medical insurance were clustered into health financing, maternal health, universal health coverage, health insurance, health workforce, global health, midwifery, and primary healthcare.

**Table 8.** Medical insurance literature (Part 1)

Stream	Authors	Purpose	Findings	Suggestion for future research
Health financing	Zolfani, Dehnavieh, Poursheikhali, Prentkovskis, and Khazaelpour (2020)	Directing the health financing's future events to evaluate the future's general environment of the country's health model in a sustainable way	<ul style="list-style-type: none"> <li>The most effective criterion in the future alternative assessment is the medical service quality.</li> <li>The most applicable alternative is the delivery of sustainable services.</li> <li>Through the delivery of high-quality services, the health system's financial sustainability can be successfully achieved.</li> <li>Establishing and providing sustainable medical services significantly influences the financial sustainability of the health system as well.</li> </ul>	<ul style="list-style-type: none"> <li>How the outsourced peer can be adapted by the possible environmental medical sources of the authorized countries to retain sustainability in a multitude of aspects?</li> </ul>
	Okungu, Chuma, and McIntyre (2017)	Critically evaluate the required finances of contributory and non-contributory structures to support Kenya's Universal health coverage in terms of huge non-formal sector residents	<ul style="list-style-type: none"> <li>There was a sustainable implementation of social health insurance during the first 5 years; however, it becomes less sustainable over time.</li> <li>A funded tax system is cheaper yet more sustainable than an insurance project.</li> </ul>	<ul style="list-style-type: none"> <li>How to enhance revenue collection efficiency in terms of decentralization?</li> <li>How the fiscal space evaluation that focuses on the health sector can, can improve the revenue collection efficiency?</li> <li>Why is it crucial to pay attention to Universal Health Coverage (UHC) on modeling the existing policy of health financing?</li> </ul>
Maternal health	Paulino Vázquez, and Bolívar (2019)	To minimize the maternal risks among the indigenous woman from Mexico, the Plurinational State of Bolivia, Peru, and Guatemala	<ul style="list-style-type: none"> <li>Indigenous people are endangered to the healthcare injustice.</li> <li>It is identified that disaggregation of information by ethnicity would help clear the inequities.</li> </ul>	<ul style="list-style-type: none"> <li>What is the significance of evaluating the indigenous populations' heterogeneity?</li> </ul>
Universal health coverage	Socal, Amon, and Biehl (2020)	Assessing the judicialization drivers, possible community level, as well as their accountability process	<ul style="list-style-type: none"> <li>The Office of the Public Defender's presence is linked with a sevenfold growth in the possibility of a medicine-requesting lawsuit in the municipality.</li> </ul>	<ul style="list-style-type: none"> <li>How do the roles of the Office of the Public Defender and Judicialization influence the achievement of enhanced healthcare and medicine access?</li> </ul>
Health insurance	Ahinkorah (2020)	Assessing the interaction between the socio-demographic features and ecological zone towards influencing the medical insurance of the young girls in Ghana	<ul style="list-style-type: none"> <li>Medical insurance coverage of the teenage girls in Ghana is being hugely influenced by the ecological zone.</li> <li>The education level, age, marital status, and parity are the other factors determined to impact their health insurance coverage.</li> </ul>	<ul style="list-style-type: none"> <li>How the sustainable development goal will be achieved despite the threat of lack of health insurance coverage of the teenage girls in Ghana?</li> </ul>
	Ma, Liu, and Shen (2020)	Assessing the execution of the serious disease insurance schemes in China through public-private partnership	<ul style="list-style-type: none"> <li>The relational aspect is significant in the public-private partnership operation.</li> <li>The trust between the parties, interaction, contract quality, and managerial activities are the factors that affect the performance of the serious disease insurance schemes.</li> </ul>	<ul style="list-style-type: none"> <li>What is the importance of conducting a deeper analysis of information exchange, risk-sharing, and profit-sharing?</li> </ul>

Table 8. Medical insurance literature (Part 2)

Stream	Authors	Purpose	Findings	Suggestion for future research
Health workforce	Szabo et al. (2020)	To discuss the demography aspects of the health worker and determine the influence of the techniques and tools of demography to assess the market of the health labor	<ul style="list-style-type: none"> <li>• There is an increasing global health workers mobility.</li> <li>• Insufficient attention towards the gender issues may affect both entries and exits of the profession.</li> <li>• Lack of health workers represents the waste of a huge resource.</li> </ul>	How can the dynamics of the health worker's demographic be cleared up?
Global health	Hammonds Ooms, Mulumba, and Maleche (2020)	Presenting the advancement of the contribution of UHC2030 to international health governance to the healthcare	<ul style="list-style-type: none"> <li>• The health commitment of Uganda can be advanced with the help of active engagements between the Global Compact and UHC2030.</li> <li>• Maternal death has been continuously growing.</li> <li>• The minimal support regarding the minimum medical care packages for maternity has influenced the growing maternal deaths.</li> </ul>	How the gaps between UHC will be overcome?
	Abrampah et al. (2018)	Addressing the former agendas shortage by clarifications of the crucial role played by the quality improvement in the sustainable objective goals	<ul style="list-style-type: none"> <li>• Quality improvement can revitalize the connection between health systems and health security.</li> <li>• Engagement in various approaches relating to quality improvement can help address the security in the global health.</li> <li>• UHC can be achieved when the health systems have achieved quality improvement.</li> </ul>	How to apply quality enhancements in the fast-growing global health landscape?
Midwifery	Ajuebor et al. (2019)	Evaluating the progress of the implementation of the Global Strategic Directions for Strengthening Nursing and Midwifery (SDNM)	<ul style="list-style-type: none"> <li>• There is a greater level of execution for developing stronger professional association roles, policy reinforcement, and education and regulation improvement for midwifery and nursing development areas.</li> </ul>	How the standardized data elements can help in the enhancement of the midwifery and nursing workforce's future studies?
Primary healthcare	Stenberg et al. (2019)	Present the primary health care investment quantifications and forecast the required resources	<ul style="list-style-type: none"> <li>• Primary health care measures require approximately \$200 to 328 US billion annually.</li> </ul>	What is the significance of the expanded framework and projections for cross-sectional evaluation of the health services packages?

Table 8 represents the literature about medical insurance. The results were generated using the Scopus database and VOSviewer software, which provided us with 8 streams, with 10 journals in total. Through this analysis, we have identified various important journals that discuss different aspects of the medical insurance area (Nobanee, 2021). It provided us with more information about the subject matter, and gave us a crucial topic to conduct a further study within the future. This article provides an evaluation of the literature of works in the area of sustainable medical insurance. The study conducted in this area has been continuously increasing over the years and has contributed to the academic journals, which reflect the importance of medical insurance. With the ongoing issues that various countries, especially those countries with lower income, face regarding the lack of medical insurance, we expect that the government from these countries to develop the type of medical insurance suited for the less fortunate people.

## 6. FUTURE RESEARCH AGENDA

We have applied Bahoo, Alon, and Paltrinieri (2020) four-step method through bibliometrics and content analysis to determine the future research agenda. First, we have created a citation map by reviewing various articles related to medical insurance. From 638 article results, we have generated the top 10 most published articles during the last 20 years,

from 2000 to 2020. Secondly, we examined all the influential articles, authors, countries, and organizations (Nobanee, Alhajjar, Abushairah, & Al Harbi, 2021). Then, to prevent bias results towards top citation, we have examined the outstanding articles. Finally, we have developed research questions by converting the future research agenda, which resulted in the four future research questions as shown in the above table. Our recommendation would be to develop and design a medical insurance that is pro-poor. Moreover, it is also recommended to provide high-quality medical services to establish a financially sustainable health system.

## 7. CONCLUSION

Many people across the world rely on medical insurance to have their medical expenses covered. However, not everyone can pay for their medical insurances, which has become a worldwide problem. Unfortunately, many people, especially in countries with lower incomes, suffer a lot as they are only relying on free health check-up, which does not cover serious illnesses. People who do not have medical insurance, and are financially challenged are only left one option, and that is to borrow money. However, loaning money makes them dig deeper into poverty. As a result, many of them just opted to let it be, and become worse. Thus, the study conducted a bibliometric analysis on the topic to pave the way for future researchers. The results



revealed that the country that contributed most to the topic is the United States in both citations and documents level. In addition, the World Health Organization was ranked first based on the number of documents published, however, Public Health Foundation of India was the first based on citations. Horton R. on the other hand was the first top author by the number of documents published and the second top author based on the citations. Finally, The Lancet journal was the top journal based on the number of citations and documents published in regards to the topic. Different streams were identified and further explained. Our results are

unique and first of their kind as no other bibliometric analysis was conducted on the topic of medical insurance. Therefore, due to the analysis, we strongly recommend designing a medical insurance policy for the less fortunate people, which they do not have to pay for and can be used in any kind of illness. Meanwhile, like all other research papers, we have found a limitation in this study. The study used only the Scopus database as a source for various articles to perform the bibliometric analysis. Thus, to gain further information other databases could have been included to include data not available in Scopus.

## REFERENCES

1. Ahinkorah, B. O. (2020). Ecological zone and health insurance coverage among adolescent girls in Ghana: Analysis of the 2017 maternal health survey. *Journal of Public Health*, 29(4), 745-752. <https://doi.org/10.1007/s10389-019-01187-w>
2. Ajuebor, O., McCarthy, C., Li, Y., Al-Blooshi, S. M., Makhanya, N., & Cometto, G. (2019). Are the global strategic directions for strengthening nursing and midwifery 2016-2020 being implemented in countries? Findings from a cross-sectional analysis. *Human Resources for Health*, 17(1), 54. <https://doi.org/10.1186/s12960-019-0392-2>
3. Akachi, Y., & Kruk, M. E. (2017). Quality of care: Measuring a neglected driver of improved health. *Bulletin of the World Health Organization*, 95(6), 465-472. <https://doi.org/10.2471/BLT.16.180190>
4. Ament, S. M. C., Gillissen, F., Maessen, J. M. C., Dirksen, C. D., van der Weijden, T., & von Meyenfeldt, M. F. (2012). Sustainability of healthcare innovations (SUSHI): Long term effects of two implemented surgical care programmes (protocol). *BMC Health Services Research*, 12(1), 423. <https://doi.org/10.1186/1472-6963-12-423>
5. Archambault, É., Campbell, D., Gingras, Y., & Larivière, V. (2009). Comparing bibliometric statistics obtained from the Web of Science and Scopus. *Journal of the American Society for Information Science and Technology*, 60(7), 1320-1326. <https://doi.org/10.1002/asi.21062>
6. Asgary, A., Willis, K., Taghvaei, A. A., & Rafeian, M. (2004). Estimating rural households' willingness to pay for health insurance. *The European Journal of Health Economics, formerly: HEPAC*, 5(3), 209-215. <https://doi.org/10.1007/s10198-004-0233-6>
7. Bahoo, S., Alon, I., & Paltrinieri, A. (2020). Corruption in international business: A review and research agenda. *International Business Review*, 29(4), 101660. <https://doi.org/10.1016/j.ibusrev.2019.101660>
8. Baker, A. (2001). Crossing the quality chasm: A new health system for the 21st century. *BMJ*, 323(7322), 1192-1192. <https://doi.org/10.1136/bmj.323.7322.1192>
9. Boccard, J., & Rudaz, S. (2013). Mass spectrometry metabolomic data handling for biomarker discovery. In H. J. Issaq, & T. D. Veenstra (Eds.), *Proteomic and metabolomic approaches to biomarker discovery* (pp. 425-445). <https://doi.org/10.1016/B978-0-12-394446-7.00027-3>
10. Carapinha, J. L., Ross-Degnan, D., Desta, A. T., & Wagner, A. K. (2011). Health insurance systems in five Sub-Saharan African countries: Medicine benefits and data for decision making. *Health Policy*, 99(3), 193-202. <https://doi.org/10.1016/j.healthpol.2010.11.009>
11. Doetinchem, O., Carrin, G., & Evans, D. (2010). *Thinking of introducing social health insurance? Ten questions* (World Health Report Background Paper No. 26). Retrieved from [https://www.who.int/healthsystems/topics/financing/healthreport/26\\_10Q.pdf](https://www.who.int/healthsystems/topics/financing/healthreport/26_10Q.pdf)
12. Falagas, M. E., Pitsouni, E. I., Malietzis, G. A., & Pappas, G. (2007). Comparison of PubMed, Scopus, Web of Science, and Google Scholar: Strengths and weaknesses. *The FASEB Journal*, 22(2), 338-342. <https://doi.org/10.1096/fj.07-9492LSF>
13. Goh, C., & Marimuthu, M. (2016). The path towards healthcare sustainability: The role of organisational commitment. *Procedia - Social and Behavioral Sciences*, 224, 587-592. <https://doi.org/10.1016/j.sbspro.2016.05.445>
14. Hallinger, P., & Kovačević, J. (2019). A bibliometric review of research on educational administration: Science mapping the literature, 1960 to 2018. *Review of Educational Research*, 89(3), 335-369. <https://doi.org/10.3102/0034654319830380>
15. Hammonds, R., Ooms, G., Mulumba, M., & Maleche, A. (2019). UHC2030's contributions to global health governance that advance the right to health care: A preliminary assessment. *Health and Human Rights*, 21(2), 235-249. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6927391/>
16. International Labour Organization (ILO). (2008). *Social health protection: An ILO strategy towards universal access to health care*. Retrieved from [https://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---soc\\_sec/documents/publication/wcms\\_secsoc\\_5956.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_secsoc_5956.pdf)
17. Ma, Y., Liu, Z., & Shen, S. (2020). Public-private or master-servant? Examining the implementation of the serious disease insurance scheme in China. *International Journal of Environmental Research and Public Health*, 17(5), 1490. <https://doi.org/10.3390/ijerph17051490>
18. Mongeon, P., & Paul-Hus, A. (2015). The journal coverage of Web of Science and Scopus: A comparative analysis. *Scientometrics*, 106(1), 213-228. <https://doi.org/10.1007/s11192-015-1765-5>
19. Nobanee, H. (2020). Big data in business: A bibliometric analysis of relevant literature. *Big Data*, 8(6), 459-463. <https://doi.org/10.1089/big.2020.29042.edi>
20. Nobanee, H. (2021). A bibliometric review of big data in finance. *Big Data*, 9(2), 73-78. <https://doi.org/10.1089/big.2021.29044.edi>
21. Nobanee, H., Alhajjar, M., Abushairah, G., & Al Harbi, S. (2021). Reputational risk and sustainability: A bibliometric analysis of relevant literature. *Risks*, 9(7), 134. <https://doi.org/10.3390/risks9070134>

22. Okungu, V., Chuma, J., & McIntyre, D. (2017). The cost of free health care for all Kenyans: Assessing the financial sustainability of contributory and non-contributory financing mechanisms. *International Journal for Equity in Health*, 16(1), 39. <https://doi.org/10.1186/s12939-017-0535-9>
23. Oxfam. (2008). *Health insurance in low-income countries: Where is the evidence that it works?* (Oxfam International Joint NGO Briefing Paper). Retrieved from <https://www.oxfam.org/en/research/health-insurance-low-income-countries>
24. Pan, J., Tian, S., Zhou, Q., & Han, W. (2016). Benefit distribution of social health insurance: Evidence from China's urban resident basic medical insurance. *Health Policy and Planning*, 31(7), 853-859. <https://doi.org/10.1093/heapol/czv141>
25. Paulino, N. A., Vázquez, M. S., & Bolúmar, F. (2019). Indigenous language and inequitable maternal health care, Guatemala, Mexico, Peru and the Plurinational State of Bolivia. *Bulletin of the World Health Organization*, 97(1), 59-67. <https://doi.org/10.2471/BLT.18.216184>
26. Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Rahman, H. M. (2008). Poverty and access to health care in developing countries. *Annals of the New York Academy of Sciences*, 1136(1), 161-171. <https://doi.org/10.1196/annals.1425.011>
27. Saad Andaleeb, S., Siddiqui, N., & Khandakar, S. (2007). Doctors' service orientation in public, private, and foreign hospitals. *International Journal of Health Care Quality Assurance*, 20(3), 253-263. <https://doi.org/10.1108/09526860710743381>
28. Sinharay, S. (2020). An overview of statistics in education. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (3<sup>rd</sup> ed., pp. 1-11). <https://doi.org/10.1016/B978-0-08-044894-7.01719-X>
29. Small, H. (1999). Visualizing science by citation mapping. *Journal of the American Society for Information Science*, 50(9), 799-813. [https://doi.org/10.1002/\(SICI\)1097-4571\(1999\)50:9%3C799::AID-ASI9%3E3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-4571(1999)50:9%3C799::AID-ASI9%3E3.0.CO;2-G)
30. Social, M. P., Amon, J. J., & Biehl, J. (2020). Right-to-medicines litigation and universal health coverage: Institutional determinants of the judicialization of health in Brazil. *Health Human Rights*, 22(1), 221-235. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7348422/>
31. Spaan, E., Mathijssen, J., Tromp, N., McBain, F., ten Have, A., & Baltussen, R. (2012). The impact of health insurance in Africa and Asia: A systematic review. *Bulletin of the World Health Organization*, 90(9), 685-692. <https://doi.org/10.2471/BLT.12.102301>
32. Stenberg, K., Hanssen, O., Bertram, M., Brindley, C., Meshreky, A., Barkley, S., & Edejer, T. T.-T. (2019). Guide posts for investment in primary health care and projected resource needs in 67 low-income and middle-income countries: A modelling study. *The Lancet Global Health*, 7(11), 1500-1510. [https://doi.org/10.1016/S2214-109X\(19\)30416-4](https://doi.org/10.1016/S2214-109X(19)30416-4)
33. Szabo, S., Nove, A., Matthews, Z., Bajracharya, A., Dhillon, I., Singh, D. R., ... Campbell, J. (2020). Health workforce demography: A framework to improve understanding of the health workforce and support achievement of the Sustainable Development Goals. *Human Resources for Health*, 18(1), 7. <https://doi.org/10.1186/s12960-020-0445-6>
34. van Eck, N. J., & Waltman, L. (2014). Visualizing bibliometric networks. In Y. Ding, R. Rousseau, & D. Wolfram (Eds.), *Measuring scholarly impact* (pp. 285-320). [https://doi.org/10.1007/978-3-319-10377-8\\_13](https://doi.org/10.1007/978-3-319-10377-8_13)
35. Wagner, A. K., Graves, A. J., Reiss, S. K., LeCates, R., Zhang, F., & Ross-Degnan, D. (2011). Access to care and medicines, burden of health care expenditures, and risk protection: Results from the World Health Survey. *Health Policy*, 100(2-3), 151-158. <https://doi.org/10.1016/j.healthpol.2010.08.004>
36. Wagstaff, J. (2008). Space technology: A new frontier for public health. *Bulletin of the World Health Organization*, 86(2), 87-88. <https://doi.org/10.2471/BLT.08.020208>
37. White, H. D., & McCain, K. W. (1998). Visualizing a discipline: An author co-citation analysis of information science, 1972-1995. *Journal of the American Society for Information Science*, 49(4), 327-355. [https://doi.org/10.1002/\(SICI\)1097-4571\(19980401\)49:4%3C327::AID-ASI4%3E3.0.CO;2-4](https://doi.org/10.1002/(SICI)1097-4571(19980401)49:4%3C327::AID-ASI4%3E3.0.CO;2-4)
38. Whitehead, M., Dahlgren, G., & Evans, T. (2001). Equity and health sector reforms: Can low-income countries escape the medical poverty trap? *The Lancet*, 358(9284), 833-836. [https://doi.org/10.1016/S0140-6736\(01\)05975-X](https://doi.org/10.1016/S0140-6736(01)05975-X)
39. World Health Organization (WHO). (2013). *World health report 2013: Research for universal health coverage*. Retrieved from [https://www.afro.who.int/sites/default/files/2017-06/9789240690837\\_eng.pdf](https://www.afro.who.int/sites/default/files/2017-06/9789240690837_eng.pdf)
40. Zolfani, S. H., Dehnavieh, R., Poursheikhali, A., Prentkovskis, O., & Khazaelpour, P. (2020). Foresight based on MADM-based scenarios' approach: A case about comprehensive sustainable health financing models. *Symmetry*, 12(1), 61. <https://doi.org/10.3390/sym12010061>
41. Zupic, I., & Čater, T. (2014). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429-472. <https://doi.org/10.1177/1094428114562629>