AN ORGANIZATIONAL MODEL FOR INTENTIONS TO ADOPT BLOCKCHAIN-BASED HOSPITAL INFORMATION SYSTEMS IN MALAYSIAN HOSPITALS

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Abstrak

Teknologi blok rantai telah menarik minat pelbagai sektor disebabkan oleh lejar teragih, sifat tak terpusat, dan keselamatan kriptografi. Walaupun ia berpotensi untuk merevolusikan industri penjagaan kesihatan dengan menyediakan sistem yang bersepadu dan selamat untuk rekod kesihatan, penerimagunaan teknologi blok rantai masih terhad, terutamanya di negara membangun seperti Malaysia. Sorotan kajian semasa kurang meneroka kajian empirikal untuk mengkaji faktor-faktor yang berkaitan dengan penerimagunaan teknologi blok rantai dalam sektor penjagaan kesihatan. Oleh yang demikian, kajian ini bertujuan untuk mengenal pasti faktor-faktor yang mempengaruhi niat untuk menerimaguna teknologi blok rantai dalam bidang penjagaan kesihatan di Malaysia. Satu model teori dicadangkan dengan mengintegrasi Model Fit-Viability (FVM), kerangka Technological-Organizational-Environmental (TOE), dan Teori Institusional (INS) bagi mengkaji faktor-faktor ini. Pendekatan kuantitatif telah digunakan, dan data telah dikumpulkan melalui soal selidik dalam talian terhadap 199 pembuat keputusan di hospital-hospital di Malaysia. Data yang terkumpul telah dianalisis menggunakan analisis Partial Least Squares (PLS). Dapatan kajian menunjukkan bahawa kepercayaan, ketelusan maklumat, penyahantaraan, keberkesanan kos, sokongan pengurusan tertinggi, kesediaan organisasi, kesediaan rakan kongsi, sokongan pembekal teknologi, kesesuaian, dan kebolehjayaan mempengaruhi dengan signifikan dan positif terhadapat niat untuk menerimaguna Sistem Maklumat Kesihatan (HIS) berasaskan teknologi blok rantai di hospital-hospital di Malaysia. Namun, tekanan paksaan daripada pihak kerajaan memberi kesan negatif kepada keputusan penerimagunaan. Tambahan pula, kajian ini mendapati jenis pemilikan hospital tidak mengimbangkan hubungan antara faktor-faktor yang dikenal pasti dengan penerimagunaan teknologi blok rantai. Kajian ini memberikan sumbangan mengenai pelbagai faktor yang mempengaruhi penerimagunaan teknologi blok rantai di hospital-hospital awam dan swasta. Model yang dibangunkan menawarkan panduan kepada hospital-hospital, pembekal teknologi blok rantai, pihak kerajaan, dan pembuat dasar untuk merangka strategi yang menggalakkan pelaksanaan dan mendorong penerimagunaan teknologi blok rantai secara meluas dalam organisasi penjagaan kesihatan di Malaysia.

Kata Kunci: Blok Rantai, Penerimagunaan, Sistem Maklumat Hospital, Hospital, Malaysia.

Abstract

Blockchain technology has gained considerable interest in various sectors due to its distributed ledger, decentralized nature, and cryptographic security. Despite its potential to revolutionize the healthcare industry by providing a unified and secure system for health records, blockchain adoption remains limited in developing countries including Malaysia. The current literature lacks comprehensive empirical studies investigating the factors influencing the adoption of blockchain technology in the healthcare sector. Thus, this study aims to identify the factors influencing the intention to adopt blockchain technology in Malaysian healthcare domain. A theoretical model is proposed by integrating the Fit-Viability Model (FVM), Technological-Organizational-Environmental (TOE) framework, and institutional theory (INS) to examine these factors. A quantitative approach was adopted, and data was collected through an online survey of 199 decision-makers in Malaysian hospitals. The collected data were analysed using Partial Least Squares (PLS) analysis. The results indicate that trust, information transparency, disintermediation, cost-effectiveness, top management support, organizational readiness, partner readiness, technology vendor support, fit, and viability significantly and positively influence the intention to adopt blockchain-based Health Information Systems (HIS) in Malaysian hospitals. Conversely, coercive pressure from the government negatively affects the adoption decision. Moreover, the study found that hospital ownership type does not moderate the relationships between the identified factors and blockchain technology adoption. This study provides valuable insights into the various factors that influence blockchain technology adoption in public and private hospitals. The developed model offers guidelines for hospitals, blockchain technology providers, governments, and policymakers to devise strategies that promote implementation and encourage the widespread adoption of blockchain technology in Malaysian healthcare organizations.

Keywords: Blockchain, Adoption, Hospital information system, Hospital, Malaysia.

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List of Abbreviations

AVE	Average Variance Extracted
BCT	Blockchain Technology
R^2	Coefficients of Determination
CMB	Common Method Bias
CB-SEM	Covariance-Based Structural Equation Modelling
DOI	Diffusion of Innovation
f^2	Effect Size
EHR	Electronic Health Record
EMR	Electronic Medical Record
FVM	Fit-Viability Model
HIE	Health Information Exchange
HIT	Health Information Technology
HTMT	Heterotrait-Monotrait Ratio of Correlations
HIS	Hospital Information System
ICT	Information and Communication Technology
IS	Information System
IT	Information Technology
IDT	Innovation Diffusion Theory
MOH	Ministry of Health
PLS	Partial Least Square
PLS-SEM	Partial Least Squares Structural Equation Modelling
PHR	Patient Health Record
Q^2	Predictive Power
RFID	Radio Frequency Identification
SPSS	Statistical Package for the Social Sciences
SEM	Structural Equation Modelling
TAM	Technology Acceptance Model
TOE	Technology-Organization-Environment
TPB	Theory of Planned Behavior
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Blockchain technology (BCT) holds significant potential to revolutionize how data are secured and managed in different sectors, including healthcare (Mamun, 2022). BCT has significantly impacted the healthcare industry, emerging as a major transformative force in this sector (Elangovan et al., 2022). Implementing BCT in healthcare helps resolve many challenges faced in healthcare data management, such as eliminating information silos, increasing efficiency in data transfer between healthcare facilities, data sharing, and data protection (Elvas et al., 2023). Its implementation can eliminate miscommunications among healthcare providers, leading to personalized and rapid diagnosis and care (Tanwar et al., 2020). This thesis examines the implementation of BCT within the healthcare sector, focusing on hospitals. Its primary objective is to identify and analyse the key factors that significantly influence the adoption of BCT among decision-makers in Malaysian hospital settings.

This introductory chapter provides a comprehensive overview of the intended study, beginning with a contextual background, a statement of the research problem, and a set of research questions and objectives. Additionally, the scope and significance of the study are delineated. Subsequently, key terms are defined. Finally, this chapter concludes by outlining the structure of the entire thesis.

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Appendix A

Expert Review Questionnire

1. In your opinion, How important are the following factors to adopting blockchain technology in healthcare organizations (Hospital context)?					
Factors	**Very important**	**Important**	**May be important**	**Not important**	**Not relevant**
Technology Trust					
Information Transparency					
Perceived Disintermediation					
Cost-Effectiveness					
Technology-Fit					
Organizational Readiness					
Top managers support					
Corporate Social Responsibility					
Mimetic pressure - competitor					
Coercive pressure - Government					
Technology Vendor support					
Trading Partner Readiness					
Viability					

2. In your opinion, are there any other important factors that need to be considered when a health organization (hospital) intends to adopt blockchain technology?

◯ Yes ◯ No

If your answer is yes, please specify these factors:

Appendix B

Survey Questionnaire

Survey on Factors Influencing the Intention to Adopt Blockchain Technology-based Healthcare Information System in Malaysian Hospitals

Dear Respected Prof/ Assoc Prof/ Dr/ Mr/ Mrs/ Madam/ Miss/ Ms,

Greetings,

You are kindly requested to participate in a nationwide survey being conducted by Mahmood Abdullah Bazel, a Ph.D candidate under the supervision of Associate Professor Dr. Mazida Ahmad and Dr. Fathey Mohammed from the School of Computing, Universiti Utara Malaysia (UUM). The survey is part of research studying the factors influencing the intention to adopt Blockchain technology-based healthcare information systems in Malaysian hospitals.

Overview of Blockchain Technology

Blockchain is an incredibly promising technique that allows peer-to-peer (P2P) communication in a secure, private, and distributed situation without the need for an authorized intermediary. As a distributed database with the characteristics of decentralization, security, and transparency, blockchain has enabled enormous solutions for traditional healthcare context issues and is perfectly positioned to push the healthcare industry forward. As a decentralized database, blockchain provides a reliable solution to the problems of poor sharing, low effectiveness, and weak security in medical data management. Data can be recorded on the real-time shared blockchain platform, and timestamps are added to ensure the immutability of the data. The tamper resistance of the blockchain ensures the security of medical data. On the licensed blockchain, blockchain members can obtain data information through access operations.

The implementation of blockchain in the healthcare business can develop a unified system for secure and continuously updated health records that can be accessed and retrieved promptly by authorized users. The blockchain protects the privacy of medical data owners while also facilitating the quick and secure exchange of information between patients, doctors, and healthcare providers. Additionally, avoiding miscommunications amongst healthcare providers caring for the same patient can avoid countless errors and result in more rapid diagnosis and care that is personalized to each patient.

By the integration and implementation of a blockchain network as a complementary technology to the existing information systems, a reliable and effective information

management could be provided by a healthcare organization or the national healthcare system.

The results of this study will be beneficial to produce an appropriate model that can facilitate and expedite the successful adoption of Blockchain by Malaysian hospitals. The successful adoption of Blockchain will greatly benefit your hospital and public health in Malaysia. Therefore, I kindly ask for your assistance in this regard, and thank you and your hospital's respondent very much for spending time to complete the questionnaire.

Confidentiality: Detailed results of the survey will be confidential and findings will never be attributed to any individual.

If you have any questions concerning the survey questionnaire, please do not hesitate to contact us.

Yours Sincerely,

Mahmood Abdullah Bazel

Ph.D candidate,
School of Computing,
UUM College of Art and Sciences,
Universiti Utara Malaysia (UUM)
Email: mahmood_abdullah_@ahsgs.uum.edu.my

Also on behalf,

Asso. Prof. Dr. Mazida Ahmad
School of Computing,
UUM College of Art and Sciences,
Universiti Utara Malaysia (UUM)
Email: mazida@uum.edu.my

Dr. Fathey Mohammed
School of Computing,
UUM College of Art and Sciences,
Universiti Utara Malaysia (UUM)
Email: fathey.mohammed@uum.edu.my

SECTION ONE: SOCIO-DEMOGRAPHIC PROFILE

This section contains demographic questions for categorical purposes only. For each of the questions given below, ***Please select the most appropriate option that best describes you***.

Gender:

◯ Male ◯ Female

Age:

◯ 30 or less than 30 years old ◯ 31 – 35 ◯ 36 - 40

◯ 41 – 45 ◯ 46 – 50 ◯ over 50

What is your position in the hospital?

◯ Chief information officer ◯ Chief executives' officer

◯ IT director ◯ Chief medical information officer

◯ Chief technology officer ◯ Senior clinicians

◯ Hospital managers ◯ Head of Departement

◯ Others. Please specify ……..

Years of experience with the current position:

◯ Less than 1 year ◯ 1 – 3 years

◯ 4 – 6 years ◯ 7 – 10 years ◯ Above 10 years

Years of experience in the healthcare industry:

◯ 5 or less than 5 years ◯ 6 – 10 years ◯ 11 – 15 years

◯ 16 – 20 years ◯ more than 20 years

Type of your hospital:

◯ Public hospital (Owned by government) ◯ private hospital

The number of beds in your hospital:

◯ Below than 200 beds ◯ 200 – 400 beds ◯ More than 400 beds

SECTION TWO:

The following statements relate to your perception and judgement towards the factors that may impact the adoption decision of Blockchain-based Healthcare Information System (***blockchain-based HIS***).

Please, indicate to what extent do you agree with the following statements?

(1) STRONGLY DISAGREE (2) DISAGREE (3) NUTERAL

(4) AGREE (5) STORNGLY AGREE

Technology Trust		**1**	**2**	**3**	**4**	**5**
TT1	Blockchain provides a secured environment for healthcare data					
TT2	Blockchain increases trust among related parties.					
TT3	Blockchain reduces the occurrence of disputes among related parties.					
TT4	Blockchain-based HIS will be reliable					
TT5	Blockchain is trustworthy.					
Information Transparency		**1**	**2**	**3**	**4**	**5**
TRA1	Blockchain enables us to have transparent access to information across the network					
TRA2	Blockchain enables us to have a transparent view of any activity in the data					
TRA3	Blockchain enables us to have a transparent flow of the entire data					
TRA4	Blockchain enables the transparency of data across various system participants					
Perceived Disintermediation		**1**	**2**	**3**	**4**	**5**
DIS1	Blockchain enables us to store data without the involvement of any intermediary					
DIS2	Blockchain enables us to access data without the involvement of any intermediary					
DIS3	Blockchain enables us to share data without the involvement of any intermediary.					
DIS4	Blockchain enables us to audit data without the involvement of any intermediary					
Cost-Effectiveness		**1**	**2**	**3**	**4**	**5**
COEF1	Blockchain can reduce our overhead expenses					
COEF2	Blockchain reduces data error rates					
COEF3	Blockchain can help to reduce the medical expenses					
COEF4	Our hospital can avoid unnecessary costs and time by adopting blockchain.					

COEF5	Blockchain saves costs related to time and effort.					
COEF6	Blockchain provides a good value for their costs					
Technology-Fit		**1**	**2**	**3**	**4**	**5**
FIT1	Blockchain-based HIS satisfy our hospital's needs related to healthcare data.					
FIT2	Hospital information system requirements closely align with blockchain services.					
FIT3	Blockchain is a good way to share and exchange information between healthcare organizations.					
FIT4	Blockchain fits well with our processes and work style.					
FIT5	It seems that Blockchain fits with our system requirements.					
Organisational Readiness		**1**	**2**	**3**	**4**	**5**
OR1	Our hospital has the needed resources to support blockchain adoption.					
OR2	Existing technologies in our hospital support Blockchain adoption.					
OR3	Information Technology staff within our hospital have the adequate skills and experience to support blockchain adoption.					
OR4	Our hospital has the financial resources to adopt blockchain.					
Top Management Support		**1**	**2**	**3**	**4**	**5**
TMS1	The top management is aware of the benefits that blockchain can provide to our hospital.					
TMS2	The top management can provide enough resources for blockchain implementation in our hospital					
TMS3	The top management encourages employees to increase their awareness of the advantages that blockchain can bring.					
TMS4	The top management is willing to take the possible risks involved in the adoption of blockchain technology					
TMS5	The top management enthusiastically supports the blockchain adoption					
TMS6	The top management looks at blockchain technology as strategically important					
Corporate Social Responsibility		**1**	**2**	**3**	**4**	**5**
CSR1	Blockchain can help our hospital to meet the required quality of care					
CSR2	Blockchain contributes to promoting the well-being of society and creating a better life					
CSR3	Blockchain will help our hospital target a sustainable growth					
CSR4	Blockchain can help our management to respond to all healthcare stakeholders' needs and wants					
CSR5	Using Blockchain would aid our hospital to increase customer (patients) satisfaction which is highly important for us					
CSR6	Our hospital can be creating shared value for all involved parties through blockchain technology					

Competitive Pressure		**1**	**2**	**3**	**4**	**5**
COM1	Our hospital believes that other hospitals in neighbour countries have recently begun to adopt Blockchain					
COM2	Other hospitals in neighbour countries that adopt blockchain are benefiting greatly					
COM3	We will have a sustainable competitive advantage if we deploy blockchain technology					
COM4	Our hospital thinks blockchain technology adoption influences competition in the industry.					
COM5	Competitive pressures force our hospital to look into Blockchain technology					
Government		**1**	**2**	**3**	**4**	**5**
GOV1	The government actively introduce the incentives for blockchain adoption					
GOV2	The government provides sufficient information infrastructure (laws, guidelines, or policies) for blockchain adoption					
GOV3	Government policies are in favour of the blockchain technology adoption by the healthcare industry					
GOV4	Regulations are sufficient to protect the use of blockchain technology					
GOV5	Our hospital is under pressure from the government to adopt blockchain technology					
Technology Vendor Support		**1**	**2**	**3**	**4**	**5**
TVS1	Incentives provided by the vendors to us for the adoption of blockchain are important					
TVS2	Adequacy of technical support provided by the vendors is important					
TVS3	The appropriate training for the use of blockchain technology provided by the vendors is important.					
TVS4	Having sufficient support from the blockchain provider would encourage us to use blockchain technology.					
Partner Readiness		**1**	**2**	**3**	**4**	**5**
PR1	Hospital adopts blockchain when its partners are also willing to adopt blockchain					
PR2	Hospital adopts blockchain when its partners are technologically ready to adopt blockchain					
PR3	Hospital adopts blockchain when its partners are financially ready to adopt blockchain					
PR4	Hospital adopts blockchain when its partners are ready to share their data over the blockchain network.					
Viability		**1**	**2**	**3**	**4**	**5**
VIB1	Our hospital's capabilities and current resources support blockchain					
VIB2	The hospital can efficiently satisfy HIS needs by adopting blockchain.					
VIB3	Blockchain is viable with our hospital's corporate culture and value system.					
VIB4	Blockchain-based HIS is viable to implement in our hospital.					

Intention to adopt Blockchain		1	2	3	4	5
INT1	Our hospital intends to adopt blockchain-based HIS					
INT2	Our hospital will take steps to adopt blockchain-based HIS in the near future.					
INT3	Our hospital plans to evaluate and adopt blockchain-based HIS.					
INT4	It is recommended to adopt blockchain-based HIS in the hospital					

Thank you very much for your participation in this survey. Your time and opinions are deeply appreciated.

Appendix C

Researchers' Profile in Content Validity Test

University	Areas Of Expertise	Years of experience
Universiti Kebangsaan Malaysia, Malaysia	Information Science and Technology	13 years
The British University in Dubai, UAE	Human-Computer Interaction, Technology Acceptance Educational, Technology, Management	10 years
University of Gloucestershire, UK	Information Systems, Technology Adoption	8 years
Uinversiti Utara Malaysia, Malaysia	Technology Management	13 years
Bandirma Onyedi Eylul University, Türkiye	Information Systems, Cybersecurity, Human-Computer Interaction	14 years

Appendix D

Permission Letter for Research

PUSAT PENGAJIAN PENGKOMPUTERAN
SCHOOL OF COMPUTING
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA

Tel: 604 - 928 5056/5058/5060
Faks (Fax): 604 - 928 5067
Laman Web (Web): www.soc.uum.edu.my

Our Ref. : UUM/CAS/SOC/PEL(905096)
Date : 12 October 2022

TO WHOM IT MAY CONCERN

Dear Sir/ Madam,

As partial fulfilment of the requirement for the Ph.D thesis, our student from School of Computing is conducting a study to investigate the factors that may impact the adoption of blockchain technology in healthcare, particularly in hospitals. Therefore, he is in the process of collecting the data from top/mid-level managers at Malaysian hospitals through an online survey.

The information of the research is as follows:

- **Name of researcher**: Mahmood Abdullah Moqbel Bazel
- **Matric No.**: 905096
- **Supervisors**: Assoc. Prof. Dr. Mazida Ahmad and Dr. Fathey Mohammed Abdualrakeb Mohammed
- **Program**: Ph.D – Information Technology
- **Thesis title**: "Intention to Adopt Blockchain Technology-Based Hospital Information System in Malaysian Hospitals"
- **Target Population**: Public and Private hospitals in Malaysia (The list of public and private hospitals as a sampling frame is attached with this letter)

For this purpose, I would require a supporting and permission from your organization to conduct the study. It will help my student in collecting data from the hospitals.

Thank you so much for your time and positive support.

"WAWASAN KEMAKMURAN BERSAMA 2030"
"SERVICE THE NATION"
"KEDAH SEJAHTERA – NIKMAT UNTUK SEMUA"
"KNOWLEDGE, VIRTUE, SERVICE"

Upholding the principles of trust and integrity,

PROF. TS. DR. AZHAM HUSSAIN
Dean
School of Computing
UUM College of Arts and Sciences

Appendix E

Sampling Frame (List of Hospitals)

- **LIST OF PUBLIC HOSPITALS**

No	Name of Hospital	City	State
1.	Hospital Enche' Besar Hajjah Kalsom, Kluang	Kluang	Johor
2.	Hospital Kota Tinggi	Kota Tinggi	Johor
3.	Hospital Mersing	Mersing	Johor
4.	Hospital Pakar Sultanah Fatimah	Muar	Johor
5.	Hospital Permai	Johor Bahru	Johor
6.	Hospital Pontian	Pontian	Johor
7.	Hospital Segamat	Segamat	Johor
8.	Hospital Sultan Ismail	Johor Bahru	Johor
9.	Hospital Sultanah Aminah	Johor Bahru	Johor
10.	Hospital Sultanah Nora Ismail	Batu Pahat	Johor
11.	Hospital Tangkak	Tangkak	Johor
12.	Hospital Temenggong Seri Maharaja Tun Ibrahim	Kulaijaya	Johor
13.	Hospital Baling	Baling	Kedah
14.	Hospital Jitra	Jitra	Kedah
15.	Hospital Kuala Nerang	Kuala Nerang	Kedah
16.	Hospital Kulim	Kulim	Kedah
17.	Hospital Langkawi	Langkawi	Kedah
18.	Hospital Sik	Sik	Kedah
19.	Hospital Sultan Abdul Halim	Sungai Petani	Kedah
20.	Hospital Sultanah Bahiyah	Alor Setar	Kedah
21.	Hospital Yan	Yan	Kedah
22.	Hospital Gua Musang	Gua Musang	Kelantan
23.	Hospital Jeli	Jeli	Kelantan
24.	Hospital Machang	Machang	Kelantan
25.	Hospital Pasir Mas	Pasir Mas	Kelantan
26.	Hospital Raja Perempuan Zainab II	Kota Bharu	Kelantan
27.	Hospital Sultan Ismail Petra	Kuala Krai	Kelantan
28.	Hospital Tanah Merah	Tanah Merah	Kelantan
29.	Hospital Tengku Anis	Pasir Puteh	Kelantan
30.	Hospital Tumpat	Tumpat	Kelantan
31.	Hospital Alor Gajah	Alor Gajah	Melaka
32.	Hospital Jasin	Jasin	Melaka
33.	Hospital Melaka	Melaka	Melaka
34.	Hospital Jelebu	Jelebu	Negeri Sembilan
35.	Hospital Jempol	Bandar Seri Jempol	Negeri Sembilan
36.	Hospital Port Dickson	Port Dickson	Negeri Sembilan
37.	Hospital Tampin	Tampin	Negeri Sembilan

No	Name of Hospital	City	State
38.	Hospital Tuanku Ampuan Najihah	Kuala Pilah	Negeri Sembilan
39.	Hospital Tuanku Ja'afar Seremban	Seremban	Negeri Sembilan
40.	Hospital Bentong	Bentong	Pahang
41.	Hospital Jengka	Maran	Pahang
42.	Hospital Jerantut	Jerantut	Pahang
43.	Hospital Kuala Lipis	Kuala Lipis	Pahang
44.	Hospital Muadzam Shah	Rompin	Pahang
45.	Hospital Pekan	Pekan	Pahang
46.	Hospital Raub	Raub	Pahang
47.	Hospital Rompin	Rompin	Pahang
48.	Hospital Sultan Hj Ahmad Shah	Temerloh	Pahang
49.	Hospital Sultanah Hajjah Kalsom	Cameron Highlands	Pahang
50.	Hospital Tengku Ampuan Afzan	Kuantan	Pahang
51.	Hospital Bahagia Ulu Kinta	Ulu Kinta	Perak
52.	Hospital Batu Gajah	Batu Gajah	Perak
53.	Hospital Changkat Melintang	Bota	Perak
54.	Hospital Gerik	Grik	Perak
55.	Hospital Kampar	Kampar	Perak
56.	Hospital Kuala Kangsar	Kuala Kangsar	Perak
57.	Hospital Parit Buntar	Parit Buntar	Perak
58.	Hospital Raja Permaisuri Bainun	Ipoh	Perak
59.	Hospital Selama	Selama	Perak
60.	Hospital Seri Manjung	Seri Manjung	Perak
61.	Hospital Slim River	Slim River	Perak
62.	Hospital Sungai Siput	Sungai Siput	Perak
63.	Hospital Taiping	Taiping	Perak
64.	Hospital Tapah	Tapah	Perak
65.	Hospital Teluk Intan	Teluk Intan	Perak
66.	Hospital Tuanku Fauziah	Kangar	Perlis
67.	Hospital Balik Pulau	Balik Pulau	Pulau Pinang
68.	Hospital Bukit Mertajam	Bukit Mertajam	Pulau Pinang
69.	Hospital Kepala Batas	Kepala Batas	Pulau Pinang
70.	Hospital Pulau Pinang	Pulau Pinang	Pulau Pinang
71.	Hospital Seberang Jaya	Perai	Pulau Pinang
72.	Hospital Sungai Bakap	Sungai Jawi	Pulau Pinang
73.	Hospital Beaufort	Beaufort	Sabah
74.	Hospital Beluran	Beluran	Sabah
75.	Hospital Duchess Of Kent	Sandakan	Sabah
76.	Hospital Keningau	Keningau	Sabah
77.	Hospital Kinabatangan	Kinabatangan	Sabah
78.	Hospital Kota Belud	Kota Belud	Sabah
79.	Hospital Kota Marudu	Kota Marudu	Sabah

No	Name of Hospital	City	State
80.	Hospital Kuala Penyu	Kuala Penyu	Sabah
81.	Hospital Kudat	Kudat	Sabah
82.	Hospital Kunak	Kunak	Sabah
83.	Hospital Lahad Datu	Lahad Datu	Sabah
84.	Hospital Mesra Bukit Padang	Kota Kinabalu	Sabah
85.	Hospital Papar	Papar	Sabah
86.	Hospital Pitas	Pitas	Sabah
87.	Hospital Queen Elizabeth	Kota Kinabalu	Sabah
88.	Hospital Queen Elizabeth II	Kota Kinabalu	Sabah
89.	Hospital Ranau	Ranau	Sabah
90.	Hospital Semporna	Semporna	Sabah
91.	Hospital Sipitang	Sipitang	Sabah
92.	Hospital Tambunan	Tambunan	Sabah
93.	Hospital Tawau	Tawau	Sabah
94.	Hospital Tenom	Tenom	Sabah
95.	Hospital Tuaran	Tuaran	Sabah
96.	Hospital Wanita dan Kanak-Kanak Sabah	Kota Kinabalu	Sabah
97.	Hospital Bau	Bau	Sarawak
98.	Hospital Betong	Betong	Sarawak
99.	Hospital Bintulu	Bintulu	Sarawak
100.	Hospital Dalat	Dalat	Sarawak
101.	Hospital Daro	Daro	Sarawak
102.	Hospital Kanowit	Kanowit	Sarawak
103.	Hospital Kapit	Kapit	Sarawak
104.	Hospital Lawas	Lawas	Sarawak
105.	Hospital Limbang	Limbang	Sarawak
106.	Hospital Lundu	Lundu	Sarawak
107.	Hospital Marudi	Marudi	Sarawak
108.	Hospital Miri	Miri	Sarawak
109.	Hospital Mukah	Mukah	Sarawak
110.	Hospital Rajah Charles Brooke Memorial	Kuching	Sarawak
111.	Hospital Saratok	Saratok	Sarawak
112.	Hospital Sarikei	Sarikei	Sarawak
113.	Hospital Sentosa	Kuching	Sarawak
114.	Hospital Serian	Serian	Sarawak
115.	Hospital Sibu	Sibu	Sarawak
116.	Hospital Simunjan	Simunjan	Sarawak
117.	Hospital Sri Aman	Sri Aman	Sarawak
118.	Hospital Umum Kuching	Kuching	Sarawak
119.	Pusat Jantung Sarawak	Samarahan	Sarawak
120.	Hospital Ampang	Ampang	Selangor

No	Name of Hospital	City	State
121.	Hospital Banting	Banting	Selangor
122.	Hospital Kajang	Kajang	Selangor
123.	Hospital Kuala Kubu Bharu	Kuala Kubu Bharu	Selangor
124.	Hospital Orang Asli	Gombak	Selangor
125.	Hospital Selayang	Batu Caves	Selangor
126.	Hospital Serdang	Kajang	Selangor
127.	Hospital Shah Alam	Shah Alam	Selangor
128.	Hospital Sungai Buloh	Sungai Buluh	Selangor
129.	Hospital Tanjung Karang	Tanjung Karang	Selangor
130.	Hospital Tengku Ampuan Jemaah	Sabak Bernam	Selangor
131.	Hospital Tengku Ampuan Rahimah	Klang	Selangor
132.	Pusat Kawalan Kusta Negara	Sungai Buluh	Selangor
133.	Hospital Besut	Besut	Terengganu
134.	Hospital Dungun	Dungun	Terengganu
135.	Hospital Hulu Terengganu	Kuala Berang	Terengganu
136.	Hospital Kemaman	Kemaman	Terengganu
137.	Hospital Setiu	Setiu	Terengganu
138.	Hospital Sultanah Nur Zahirah	Kuala Terengganu	Terengganu
139.	Hospital Kuala Lumpur	Kuala Lumpur	WP Kuala Lumpur
140.	Hospital Rehabilitasi Cheras	Kuala Lumpur	WP Kuala Lumpur
141.	Hospital Tunku Azizah (Wanita Dan Kanak-Kanak)	Kuala Lumpur	WP Kuala Lumpur
142.	Institut Perubatan Respiratori	Kuala Lumpur	WP Kuala Lumpur
143.	Hospital Labuan	Labuan	WP Labuan
144.	Hospital Putrajaya	Putrajaya	WP Putrajaya
145.	Institut Kanser Negara	Putrajaya	WP Putrajaya

Source:
Ministry of Health Malaysia (MOH): https://www.moh.gov.my/ Accessed on 03-08-2022

- **LIST OF PRIVATE HOSPITALS**

NO	NAME OF HOSPITAL	CITY	STATE
1.	Century Medical Centre	Johor Bahru	Johor
2.	Century Specialist Maternity	Johor Bahru	Johor
3.	Columbia Asia Hospital, Nusajaya	Nusajaya	Johor
4.	Hospital Penawar	Pasir Gudang	Johor
5.	Kempas Medical Centre	Johor Bahru	Johor
6.	C.S. Koh and Maternity Home	Skudai	Johor
7.	Klinik Rakyat & Hospital Bersalin	Batu Pahat	Johor

NO	NAME OF HOSPITAL	CITY	STATE
8.	KPJ Johor Specialist Hospital	Johor Bahru	Johor
9.	Medical Specialist Centre	Johor Bahru	Johor
10.	Pantai Hospital Batu Pahat	Batu Pahat	Johor
11.	Pelangi Medical Centre	Johor Bahru	Johor
12.	Kluang Utama Specialist Hospital	Kluang	Johor
13.	Pusat Pakar Perbidanan & Sakitpuan Raja	Muar	Johor
14.	KPJ Puteri Specialist Hospital	Johor Bahru	Johor
15.	Putra Specialist Hospital Batu Pahat	Batu Pahat	Johor
16.	Regency Specialist Hospital	Masai	Johor
17.	T.K. Tan O&G Specialist Clinic	Johor Bahru	Johor
18.	Tey Maternity Specialist & Gynae Centre	Muar	Johor
19.	KPJ Batu Pahat Specialist Hospital	Batu Pahat	Johor
20.	Gleneagles Medini	Iskandar Puteri	Johor
21.	KPJ Bandar Dato' Onn Specialist Hospital	Johor Bahru	Johor
22.	KPJ Bandar Maharani Specialist Hospital	Muar	Johor
23.	KPJ Pasir Gudang Specialist Hospital	Pasir Gudang	Johor
24.	Kedah Medical Centre	Alor Setar	Kedah
25.	Metro Specialist Hospital	Sungai Petani	Kedah
26.	Pantai Hospital Sungai Petani	Sungai Petani	Kedah
27.	Putra Medical Centre	Alor Setar	Kedah
28.	INS Specialist Centre Sdn Bhd	Alor Setar	Kedah
29.	Mahsuri Medical Centre	Jitra	Kedah
30.	Pusat Perubatan An-Nisa'	Kota Bharu	Kelantan
31.	Kota Bharu Medical Centre	Kota Bharu	Kelantan
32.	KPJ Perdana Specialist Hospital	Kota Bharu	Kelantan
33.	AL-iSLAM Specialist Hospital	Kampung Baru	WP Kuala Lumpur
34.	Cardiac Vascular Sentral Kuala Lumpur	KL Sentral	WP Kuala Lumpur
35.	Cengild G.I. Medical Centre	Bangsar	WP Kuala Lumpur
36.	COOP Medical Centre	Jalan Medan Tuanku	WP Kuala Lumpur
37.	Columbia Asia Hospital - Setapak	Jalan Danau Saujana	WP Kuala Lumpur
38.	Damai Service Hospital (HQ)	Jalan Ipoh	WP Kuala Lumpur
39.	Damai Service Hospital (Melawati)	Taman Melawati	WP Kuala Lumpur
40.	Gleneagles Kuala Lumpur	Jalan Ampang	WP Kuala Lumpur
41.	Global Doctors Specialist Centre (Hospital)	Mont Kiara	WP Kuala Lumpur
42.	Hospital PUSRAWI	Jalan Tun Razak	WP Kuala Lumpur

NO	NAME OF HOSPITAL	CITY	STATE
43.	HSC Medical Centre	Jalan Ampang	WP Kuala Lumpur
44.	iHEAL Medical Centre	Lingkaran Syed Putra	WP Kuala Lumpur
45.	Imran ENT Specialist Hospital	Brickfields	WP Kuala Lumpur
46.	Institut Jantung Negara (IJN) - National Heart Institute	Jalan Tun Razak	WP Kuala Lumpur
47.	KPJ Tawakkal Specialist Hospital	Jalan Pahang Barat	WP Kuala Lumpur
48.	KPJ Sentosa KL Specialist Hospital	Jalan Cemur	WP Kuala Lumpur
49.	Lourdes Medical Centre	Jalan Ipoh	WP Kuala Lumpur
50.	Pantai Hospital Ampang	Ampang	WP Kuala Lumpur
51.	Pantai Hospital Cheras	Cheras	WP Kuala Lumpur
52.	Pantai Hospital Kuala Lumpur	Bangsar	WP Kuala Lumpur
53.	Prince Court Medical Centre	Jalan Kia Peng	WP Kuala Lumpur
54.	Quill Orthopaedic Specialist Centre	TTDI	WP Kuala Lumpur
55.	Roopi Medical Centre	Jalan Dato Haji Eusoff	WP Kuala Lumpur
56.	Sentul Medical Centre	Jalan Sentul	WP Kuala Lumpur
57.	Park City Medical Centre	Desa ParkCity	WP Kuala Lumpur
58.	Taman Desa Medical Centre	Taman Desa	WP Kuala Lumpur
59.	Tung Shin Hospital	Jalan Pudu	WP Kuala Lumpur
60.	Twin Towers Medical Centre	KLCC	WP Kuala Lumpur
61.	UKM Specialist Centre (UKMSC)	Cheras	WP Kuala Lumpur
62.	UM Specialist Centre (UMSC)	Lembah Pantai	WP Kuala Lumpur
63.	Mahkota Medical Centre	Jalan Merdeka	Melaka
64.	Pantai Hospital Ayer Keroh	Lebuh Ayer Keroh	Melaka
65.	Putra Specialist Hospital (Melaka)	Jalan Bendahara	Melaka
66.	Columbia Asia Hospital - Seremban	Seremban	Negeri Sembilan
67.	KPJ Seremban Specialist Hospital	Seremban	Negeri Sembilan

NO	NAME OF HOSPITAL	CITY	STATE
68.	Mawar Renal Medical Centre	Seremban	Negeri Sembilan
69.	Nilai Medical Centre	Nilai	Negeri Sembilan
70.	N.S. Chinese Maternity Hospital	Seremban	Negeri Sembilan
71.	Senawang Specialist Hospital	Senawang	Negeri Sembilan
72.	Darul Makmur Medical Centre	Kuantan	Pahang
73.	Kuantan Medical Centre	Kuantan	Pahang
74.	Kuantan Specialist Hospital	Kuantan	Pahang
75.	Apollo Medical Centre	Taiping	Perak
76.	Columbia Asia Hospital -Taiping	Taiping	Perak
77.	Hospital Fatimah	Ipoh	Perak
78.	Kinta Medical Centre	Ipoh	Perak
79.	KPJ Ipoh Specialist Hospital	Ipoh	Perak
80.	Pantai Hospital Ipoh	Ipoh	Perak
81.	Perak Community Specialist Hospital	Ipoh	Perak
82.	Pusat Pakar Rajindar Singh	Teluk Intan	Perak
83.	Taiping Medical Centre	Taiping	Perak
84.	UniKL Rcmp Medical Centre	Ipoh	Perak
85.	Bagan Specialist Centre	Butterworth	Pulau Pinang
86.	Gleneagles Penang	Jalan Pangkor	Pulau Pinang
87.	Hope Children Hospital (Jalan Gottlieb)	Jalan Gottlieb	Pulau Pinang
88.	Hope Children Hospital (Sungai Ara)	Bayan Lepas	Pulau Pinang
89.	Hospital Lam Wah Ee	Jalan Tan Sri Teh Ewe	Pulau Pinang
90.	Island Hospital	Macalister Road	Pulau Pinang
91.	KPJ Penang Specialist Hospital	Bukit Mertajam	Pulau Pinang
92.	Loh Guan Lye Specialists Centre	Macalister Road	Pulau Pinang
93.	Mount Miriam Cancer Hospital	Tanjong Bungah	Pulau Pinang
94.	Pantai Hospital Penang	Bayan Lepas	Pulau Pinang
95.	Peace Medical Centre	Georgetown	Pulau Pinang
96.	Penang Adventist Hospital	Jalan Burma	Pulau Pinang
97.	Tanjung Medical Centre	Burmah Road	Pulau Pinang
98.	Georgetown Specialist Hospital	George Town	Pulau Pinang
99.	Optimax Eye Specialist Hospital (Penang)	George Town	Pulau Pinang
100.	KPJ Damai Specialist Hospital	Kota Kinabalu	Sabah
101.	Rafflesia Medical Centre	Kota Kinabalu	Sabah

NO	NAME OF HOSPITAL	CITY	STATE
102.	Jesselton Medical Centre	Kota Kinabalu	Sabah
103.	Gleneagles Kota Kinabalu	Kota Kinabalu	Sabah
104.	KPJ Sabah Specialist Hospital	Kota Kinabalu	Sabah
105.	Bintulu Medical Centre	Bintulu	Sarawak
106.	Columbia Asia Hospital - Bintulu	Bintulu	Sarawak
107.	Columbia Asia Hospital - Miri	Miri	Sarawak
108.	Kuching Specialist Hospital	Kuching	Sarawak
109.	Miri City Medical Centre	Miri	Sarawak
110.	Normah Medical Specialist Centre	Kuching	Sarawak
111.	Rejang Medical Centre	Sibu	Sarawak
112.	KPJ Sibu Specialist Medical Centre	Sibu	Sarawak
113.	Timberland Medical Centre	Kuching	Sarawak
114.	Borneo Medical Centre	Kuching	Sarawak
115.	Alpha Fertility Centre	Petaling Jaya	Selangor
116.	Alpha Specialist Centre	Petaling Jaya	Selangor
117.	An-Nur Specialist Hospital	Bangi	Selangor
118.	Arunamari Specialist Medical Centre	Klang	Selangor
119.	Assunta Hospital	Petaling Jaya	Selangor
120.	Az-Zahrah Islamic Medical Centre	Bangi	Selangor
121.	Beacon Hospital	Petaling Jaya	Selangor
122.	Centre For Sight (PJ)	Petaling Jaya	Selangor
123.	KPJ Centre For Sight (Rawang)	Rawang	Selangor
124.	Columbia Asia Extended Care Hospital	Shah Alam	Selangor
125.	Columbia Asia Hospital - Bukit Rimau	Shah Alam	Selangor
126.	Columbia Asia Hospital -Cheras	Cheras	Selangor
127.	Columbia Asia Hospital -Puchong	Puchong	Selangor
128.	AVISENA Specialist Hospital	Shah Alam	Selangor
129.	Putra Specialist Hospital Kajang	Kajang	Selangor
130.	JMC Specialist Medical Centre	Klang	Selangor
131.	Kelana Jaya Medical Centre	Petaling Jaya	Selangor
132.	KPJ Ampang Puteri Specialist Hospital	Ampang	Selangor
133.	KPJ Damansara Specialist Hospital	Petaling Jaya	Selangor
134.	KPJ Kajang Specialist Hospital	Kajang	Selangor
135.	KPJ Klang Specialist Hospital	Klang	Selangor
136.	KPJ Selangor Specialist Hospital	Shah Alam	Selangor
137.	Metro Medical Centre	Klang	Selangor
138.	Pantai Hospital Klang	Klang	Selangor
139.	Sentosa Specialist Hospital	Klang	Selangor
140.	Putra Medical Centre	Sungai Buloh	Selangor
141.	QHC Medical Center	Subang Jaya	Selangor
142.	SALAM Shah Alam Specialist Hospital	Shah Alam	Selangor
143.	Sime Darby Medical Centre Subang Jaya	Subang Jaya	Selangor

NO	NAME OF HOSPITAL	CITY	STATE
144.	Ara Damansara Medical Centre	Shah Alam	Selangor
145.	Sri Kota Specialist Medical Centre (SKSMC)	Klang	Selangor
146.	Sunway Medical Centre	Petaling Jaya	Selangor
147.	Thomson Hospital Kota Damansara	Petaling Jaya	Selangor
148.	KPMC Puchong Specialist Center	Puchong	Selangor
149.	SALAM Specialist Hospital Kuala Terengganu	Kuala Terengganu	Terengganu
150.	Kuala Terengganu Specialist Hospital	Kuala Terengganu	Terengganu

Source:
The Association of Private Hospitals Malaysia (APHM): https://hospitals-malaysia.org/member-hospitals/ Accessed on 03-08-2022