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Malaysia Assistant Medical Officers

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General Information:

The Medical Assistant (currently known as Assistant Medical Officers) profession is one of the earliest in Malaysia and has been in existence for more than 230 years. The early days began when two military Medical Assistants named Michael Cgaffe and Henry Warring served in medical affairs and medical administration during Francis Light's reign in Penang in 1786 (Noraini, 2010). The two Medical Assistants, together with a doctor, Dr James Hutton, are the pioneering medical staff in modern medical services in the country.

The Medical Assistants (MA) profession is originally known as Apothecaries. Under the government of British Malaya, Apothecaries is also known as the Sub-Assistant Surgeon or Dresser. But the profession was once widely known by the rural community as 'Dresser'. The profession has undergone a transformation of titles in line with its growing role in the healthcare system namely Hospital Assistants (1963), Medical Assistants (1985) and now Assistant Medical Officers (since March 20, 2007) (Alias, 2016).

The role of Medical Assistants is also growing in line with the development of healthcare services itself. In the past, MAs played an essential role in providing health services to rural and estate communities, but currently, the role has expanded and extended in the area of emergency and pre-hospital care, primary health, and specialized units. Therefore, the numbers are increasing. In 2019, 17,895 Medical Assistants were serving in government and private hospitals and health facilities in the country (Health Facts, 2020).

Entry Criteria:

Diploma Program

The diploma medical assistant program is open to Malaysian and International candidates. For Malaysian candidates, they must pass *Sijil Pelajaran Malaysia* (*SPM*) or its equivalent with a minimum of five credits in the following subjects: Malay language, science, mathematics, English and two credits from any other subjects. For international candidates they need to have a GCE O-Level or equivalent with five credits in the following subjects: two from science or mathematics, three from any other subject and candidates with other relevant qualifications are subject to approval by the Malaysian Medical Assistants Board (MAB). No clinical experience is required to apply.

The program is also open to the candidates who possess certificate in health-related fields recognized and approved by the MAB and they must possess Sijil Pelajaran Malaysia or its equivalent with a minimum of three credits or with other relevant qualifications are subject to approval by the MAB.

Bachelor's degree program:

The Bachelor's degree program is also open to Malaysian and International candidates. For Malaysian candidates, they must possess *Sijil Tinggi Persekolahan Malaysia* pre-university matriculation program equivalent with a minimum grade point average (GPA) in required math and science courses or GCE A-Level program or equivalent qualification with minimum grade qualifications in science and math courses. For those with a diploma in a related field they have a required GPA or for those with a lower GPA in the diploma program, they are required to have a minimum of 36 months of working experience in a related field. Candidates with other relevant qualifications are subject to approval by the MAB. Finally, applicants to the Bachelor's degree program must obtain a minimum score of MUET (Band 2) or IELTS (Band 4) or TOEFL (440) paper-based or equivalent.

International candidates to the Bachelor's degree program must possess GCE A-Level program or equivalent qualification with a minimum grade point average (GPA) in required math and science courses and obtained minimum score of IELTS (Band 4) or TOEFL (440) paper-based or equivalent.

No entrance examination is required for admission. However, students will be interviewed before they are selected to enter training schools, especially training schools organized by the MOH.

Education:

The history of the Medical Assistant training began before the country gained independence. The British government at that time trained Apothecaries or Dressers in government hospitals and estates to assist in the treatment and prevention of infectious diseases, especially malaria. After independence, Dressers were trained with nurses at the Nursing Training School at the Kuala Lumpur Hospital, Penang and Johor Bahru for three years. Those who completed training served in hospitals and health clinics to provide services to the community and serve as substitutes for physicians (Medical Assistants Board, 2007; Human Resources Division, 2012).

Then, the MA training was transformed. From 1965-1970, a program called the Crash Program ran for 3 years, during which all students attended one and a half years of basic training. The next one and half years is dedicated training for Medical Assistants and nurses.

In 1972, the first training school using the Medical Assistant curriculum was opened in Seremban Negeri Sembilan. Then, four other training schools were opened in Ulu Kinta (1993), Alor Setar (1994), Kuching (2007), Kota Kinabalu (2010) and Johor Bharu (2012) that offered a diploma. The training school was then upgraded to the Medical Assistant college in 1993 and training institution (Medical Assistant) in 2017 (Alias, 2016; Training Management Division 2018).

Apart from the training institutions run by the Ministry of Health, there are 12 private colleges offering diploma programs and two universities offering undergraduate programs for Medical Assistants by 2020. The National University of Malaysia (UKM) became the first public university to offer undergraduate programs (Bachelor of Science in Emergency Medicine with honors) for Medical Assistants in the field of emergency medicine. While in 2019, the Open University of Malaysia offers a Bachelor of Medical Science and Health for Medical Assistants (Annual Report Medical Assistant Board, 2019). The number of students produced annually for basic courses / pre-registration program is about 1500 graduates by the MOH colleges and 400 graduates by the private colleges. The educational programs are listed in Appendix I.

There are three levels of Medical Assistant training programs. Options for initial training include the basic/pre-registration program at diploma level earned in three years and a Bachelor's degree earned in four years. Advanced programs (post-basic certificate or advanced diploma) in the specialty area such as emergency medicine, orthopedics, critical care, nephrology, primary health care and many others. Postgraduate training is offered at the master and doctoral level. The program aims to produce Medical Assistants who serve as educators, researchers, policymakers and academicians.

Financing Education:

Government funding is given to students in the training schools organized by the Ministry of Health Malaysia (MOH). Fees are free and students are given a living allowance. The number of students who are trained is according to the needs of the Ministry of Health Malaysia. Students who have completed training will be placed in hospitals and government health facilities.

Students who study at private training programs are expected to self-finance, which may also include applying for a loan from the National Education Fund provided by the government. Students who graduate will work in the private sector.

Accrediting/Regulatory Bodies:

Members of the Accreditation Committee will be selected by the Medical Assistants Board (MAB) and the Malaysian Qualifications Agency (MQA). Two assessors from MAB and a representative from MQA will be involved in the accreditation process. The selected members are those who have extensive experience in the education and training of Medical Assistants and have no interest in the institution evaluated. Institutions must adhere to two main guidelines, namely The Standards and Guidelines for Medical Assistants Program and The Code of Practice for Accreditation Program (COPPA) by the MQA.

Students who graduated from the accredited medical assistant program will be working as medical assistants or assistant medical officers (AMO) in public or private hospitals and other health institutions.

Regulation of the Profession:

The Malaysian Parliament has approved the profession under Act 180, the Medical Assistants (Registration) Act 1977 and the Medical Assistant Regulations (Registration) 1979. The Medical Assistant Board is a body which is responsible for regulating and enforcing Act 180, the Act Medical Assistant (Registration) 1977 and Medical Assistant Regulations (Registration) 1979. Apart from that, Medical Assistants must also adhere to the Code of Ethics of Medical Assistants and Standard Operating Procedures (SOP) when performing their duties.

Collaboration of Ministry of Education, Ministry of Health and Ministry of Human Resources:

The Ministry of Education through public university helps the development of the profession by providing specialized degree programs related to the profession as conducted by the National University of Malaysia (UKM). Meanwhile, the Ministry of Human Resources provides employment opportunities, especially medical assistants who work in hospitals and public health facilities.

Professional Licensure:

The licensing body that issues the certificate of practice for MA is the Medical Assistants Board (MAB). The MAB is the regulatory body of the Medical Assistant Profession based on Act 180 (Medical Assistants Act) approved by the Parliament of Malaysia. To practice as a Medical Assistant, one has to be a citizen of Malaysia and successfully complete all requirements for the diploma or Bachelor's degree in a program recognized by the MAB. Only graduates of accredited programs will be appointed as Medical Assistants in a public and private health facility. The final year examination for the basic program (diploma or degree) conducted by the institutions is Medical Assistants Board-certifying examinations. The examination is monitored closely by the MAB.

The registration process involves completing the registration form. Then, the Medical Assistant Practice Certificate is issued for 1 year.

Currently, only Malaysian citizens who have completed the medical assistant program can register with the Malaysian Medical Assistants Board (MAB) to enable them to work as a medical assistant in Malaysia. However, the Medical Assistant Act is being revised to enable foreign nationals with recognized qualifications to work in Malaysia as medical assistants in future.

Scope of practice:

Medical Assistants are responsible for providing healthcare services to the community in the aspect of curative, prevention, promotion and rehabilitation of healthcare services in Malaysia. They provide curative and emergency treatment services at health centers including Static and Mobile Dispensaries. They also work in the hospital's Emergency Department and Prehospital care and Ambulance Services, which provides early and immediate care and support for all emergency cases and referral cases for further treatment. Also, they work in various specialist departments and other health institutions. The specific scope of practice is described in Appendix II. Medical Assistants can prescribe certain drugs under the Category C and C+ as listed in Appendix III.

Maintaining Role:

Applicants must have a minimum of 40 continuing professional development points to renew the Annual Practice Certificate (APC) from January - September every year. Renewal of APC can be done using the BLESS system (Business Licensing Electronic Support System) which can be accessed at: https://bless2.bless.gov.my/bless2/login.

Continuing Professional Development:

Medical Assistants are encouraged to attend a continuing education program to enhance their knowledge and skills, in whichever medical field they work. To ensure the above is achieved, Medical Assistants are required to produce 40 Continuing Professional Development (CPD) points as a prerequisite to renewing their APC. They also have the opportunity to pursue post-basic or advanced diploma programs in various fields of expertise conducted by the Ministry of Health training institutions or private institutions. The entry requirements of these courses are conformation in service; work in the respective field for at least one year and approval from the head of Department.

Job Opportunities:

There is a high demand for medical assistants in the public as well as private hospitals, medical centers, healthcare institutions, plantation sectors (estate hospitals), petroleum/gas sector (offshore oil rig stations) and sport science units/clinics. Currently there are 25,414 registered medical assistants in Malaysia. 21,373 (84%) are working in the public sector while 4,812 (18%) are working in the private sector (MAB, 2020). It is expected by 2030, approximately another 30,000 medical assistants will be needed to meet the growing health services in Malaysia.

Medical assistants in Malaysia have played a significant role in the national healthcare delivery system. Through intensive training, whether at the basic or advanced level, they can perform their role as knowledgeable, skilled and safe practitioners. In this regard, the profession needs to be introduced internationally so that they can collaborate with other professions such as physician assistants (PAs) in exploring cooperation in the areas of training, services, research and more.

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Appendix I: Education Program for Medical Assistants in Malaysia

Name of	Institutions/ Address	Website	Class	Education
programs	institutions/ Address	Website	size	Finance
Diploma in Medical	Training Institution, Ministry of	http://latihan.moh.gov.my/v5/		
Assistants	Health Malaysia, Sultan Azlan Shah, Ulu Kinta Perak	facebook.com/KSKBSASoffi cial/	150	Ministry of Health
or				
Diploma in Medical and Health Science (Starting 2020)	Training Institution, Ministry of Health Malaysia, Johor Baharu	http://latihan.moh.gov.my/v5/ facebook.com/ILKKMJB/	150	Ministry of Health

Training Institution, Ministry of Health Malaysia, Kota Kinabalu, Sabah	http://latihan.moh.gov.my/v5/facebook.com/kskbcawanganutama/	150	Ministry of Health
Training Institution, Ministry of Health Malaysia, Kuching, Sarawak	http://latihan.moh.gov.my/v5/facebook.com/ilkkmkuchingsarawak/	150	Mininstry of Health
Training Institution (Medical Assistants) Ministry of Health Malaysia, Seremban Negeri Sembilan	http://latihan.moh.gov.my /v5/	100	Ministry of Health
Training Institution (Medical Assistants) Ministry of Health Malaysia, Alor Setar, Kedah	http://latihan.moh.gov.my /v5/ facebook.com/ilkkmaspp/	100	Ministry of Health
Institut Latihan Kesihatan ATM (INSAN)	NA	25	Ministry of Defence
Management and Science University	https://msu.edu.my/	75	Private
PICOMS International University College	https://www.picoms.edu. my/	75	Private
University Kuala Lumpur (UniKL)	https://www.unikl.edu.my/	75	Private
Cyberjaya University	http://cyberjaya.edu.my/	50	Private
MURNI International College	https://murni.edu.my/	50	Private
WIDAD University College	https://www.widad.edu.m y/uc	25	Private
GEOMATIKA International University College	https://www.geomatika.ed u. my/	25	Private
DSH Institute of Technology	https://dit.edu.my/	25	Private

	RAMSAY SIME DARBY Healthcare Collehe	https://www.ramsaysimed arby college.edu.my/	25	Private
	I-System College	http://www.i- systems.edu.my/	25	Private
	Lincoln University College	https://www.lincoln.edu.m	25	Private
Bachelor of Science in Emergency Medicine with honours	National University of Malaysia (UKM)	https://www.ukm.my/fper /ms/halaman-utama/	40	Public University (Ministry of Education)
Bachelor of Medical and Health Science (Hons)	Open University Malaysia	https://www.oum.edu.my/	150	Private

Appendix II: Scope of Practice of Medical Assistants

	Scope of Practice	Non-Specialized MAs	Specialized MAs
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Curative

- · Perform the task of examining and treating patients according to the Standard Operating Procedure (SOP) and Clinical Practice Guideline (CPG).
- · Provide medicines and injections according to the protocol allowed.
- · Monitor treatment progress and reports on matters unusual/side effects.
- · Pay attention to special needs and orientation to the patient.
- Determine the types of food and special needs. Patient's food is kept and should be recorded.
- Ensure that each patient receives intravenous flow need to comply with the regime according to the instructions.
- · Record the balance chart and make observations for identify unusual circumstances.
- · Perform basic and immediate early treatment tasks to restore and maintain main functions in the red zone, yellow and green in the emergency department.
- · Provide treatment to asthma patients following the guidelines.
- · Acquiring, recording and assessing important observations including vital signs and reporting immediately if there are extraordinary circumstances.

- Screen the patient according to case priorities.
- · Carry out comprehensive and complex clinical assessments and interpret the findings of the patient based on Clinical Practice Guideline (CPG)
- Treat emergency cases most effective and safe following the procedures, protocols and compliance with the Act as well as existing rules
- · Provide specialized procedures and treatment to the patient, based on Standard Operating Procedure (SOP).

Promotive Educate patients about their health Conduct activities on the care in relation to their illnesses such as treatment of the diabetes, hypertension, and obesity and communicable diseases (such as so on. diabetes, CVD, Asthma, etc.) Get involved in programs like /contagious diseases (TB, Avian PROSTAR, health camp, national health Flu, SARS etc.). campaigns/states like World Health Day Plan and coordinate training Celebration, World Mental Health Day, and courses needed by the World TB Day, Week without Tobacco and Medical Assistants. others from time to time. Plan, coordinate and conduct Implement health education as and development research needed by the patients and treatment activities to improve the quality according to established standards. of healthcare services Specifies documentation and data collection and take steps to improve services. Attend courses/seminars to increase knowledge and skills in healthcare practice including a recognized field of specialization. Ensure medical devices are in good Perform health status condition and function before and after assessments include inspections, Preventive of health use. early detection Ensures proper treatment is safe, problems, screening tests for secure, and according to the procedure, determining health. the protocol complies with the law as well Conducting an audit of as rules. Medical Assistants practice Adhere to infection control standards techniques and techniques isolation is Implement safety and health practiced in the right way such as regulations and activities jobs Standard Precaution. under the Occupational Safety Medications/injections, following and Health Act Employment (Act instructions and regulations. 514) of 1994. Involve in designing,

formulating

and

healthcare policies,

direction

institution/department.

and

setting

the

guidelines

of

non-

Rehabilitative Implement a patient recovery program for their recovery from physical, mental and social aspects such as:: HIV / AIDS patient counselling, a drug addict. Psychoeducation / Psychotherapy for mental patients. Engage in dietary counselling to patients such as diabetes, hypertension, renal failure and more.	 Provide supportive counselling to the patients, family and community. Engage and coordinate with other professions and organizations to carry out community rehabilitation activities and programs.
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Appendix III Lists of drugs can be prescribed by the Medical Assistants (https://www.pharmacy.gov.my/v2/ms/apps/fukkm)

No	Names
1	Acetylsalicylic Acid 300 mg Soluble Tablet
2	Acriflavine 0.1% Lotion
3	Albendazole 200 mg Tablet
4	Alcohol 70% Solution
5	Ammonium Bicarbonate, Tincture Ipecac, etc Mixture
6	Aqueous Cream
7	Ascorbic Acid Tablet
8	BCG Vaccine Freeze-Dried Injection
9	Benzalkonium Chloride Disinfectant Solution
10	Benzoic Acid Compound Ointment
11	Bisacodyl Suppository / Tablet
12	Boric Acid with Spirit 2% w/v Ear Drops
13	Bromhexine HCl 8 mg Tablet
14	Calamine Cream/Lotion
15	Calcium Lactate 300 mg Tablet
16	Cetrimide 1-2% Lotion.
17	Charcoal, Activated 250 mg Tablet
18	Chloramphenicol 0.5% Eye Drops/Ointment
19	Chloramphenicol 5% w/v Ear Drops

20	Chlorhexidine 1:200 in Alcohol with Emollient (Hand Disinfectant).
21	Chloroquine Phosphate 250 mg Tablet (150 mg Chloroquine base)
22	Chlorpheniramine Maleate 2 mg/5 ml Syrup
23	Chlorpheniramine Maleate 4 mg Tablet
24	Compound Sodium Lactate (Hartmanns Solution)
25	Copper Sulphate Crystal
26	Desogestrel 150 mcg & Ethinylestradiol 30 mcg Tablet
27	Diphenhydramine Hydrochloride 14 mg/5 ml Expectorant
28	Diphtheria and Tetanus Vaccine Injection
29	Diphtheria, Pertussis, Tetanus and Conjugated Haemophilus Type B 10 mcg Vaccine
30	Diphtheria, Pertussis, Tetanus and Hepatitis B Vaccine
31	Emulsificants Ointment
32	Ether Solvent
33	Ethyl Chloride 100ml Spray
34	Ferric Ammonium Citrate 800 mg/10 ml Paediatric Mixture
35	Ferrous Fumarate 200 mg Tablet
26	Folic Acid 5 mg Tablet
37	Fuller's Earth Powder
38	Glycerin
39	Glycerin 25% and Sodium Chloride 15% Enema
40	Glycerin 25% w/w in aqueous cream
41	Glyceryl Trinitrate 0.5 mg Sublingual Tablet
42	Haemophilus Influenza Type B Conjugate Vaccine Injection (Single Dose)
43	Hepatitis B Vaccine Injection
44	Human Papillomavirus (Types 6, 11, 16, 18) Vaccine Injection
45	Hydrocortisone Sodium Succinate 100 mg Injection
46	Hydrogen Peroxide 1.5% Ear Drops
47	Hydrogen Peroxide 20 volume Solution
48	Hyoscine N-Butylbromide 10 mg Tablet
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49	Ichthammol Glycerin 10% Ear Drops
50	Lactulose 3.35 g/5 ml Liquid
51	Levonorgestrel 150 mcg and Ethinyloestradiol 30 mcg Tablet
52	Lignocaine HCl 1% Injection
53	Liquid Paraffin
54	Magnesium Sulphate 45% Paste
55	Magnesium Sulphate 50% Injection
56	Magnesium Trisilicate Mixture
57	Magnesium Trisilicate Tablet
58	Magnesium, Aluminium Hydroxide and Simethicone Suspension
59	Malathion 1 % Shampoo
60	Measles and Rubella Virus Vaccine Live, Attenuated (Freeze-dried) 10 doses/vial
61	Measles Vaccine Injection (10 doses)
62	Measles, Mumps and Rubella (MMR) Vaccine Injection (Single Dose)
63	Mefenamic Acid 250 mg Capsule
64	Mefenamic Acid 250 mg Tablet
65	Menthol 1.6% in Industrial Methylated Spirit Inhalation
66	Methyl Salicylate 25% Ointment
67	Miconazole 2% Cream
68	Multivitamin Syrup
69	Norethisterone 0.35 mg Tablet
70	Nystatin 100,000 units/g Cream
71	Nystatin 100,000 units/g Ointment
72	Olive Oil Ear Drops
73	Oral Rehydration Salt
74	Oxytocin 5 units & Ergometrine Maleate 0.5 mg/ml Injection
75	Paracetamol 120 mg/5 ml Syrup
76	Paracetamol 125 mg Suppository
77	Paracetamol 250 mg/5 ml Syrup

78	Paracetamol 500 mg Tablet
79	Paraffin Mole Alba (White Soft Paraffin)
80	Paraffin Mole Flava
81	Phenol 80% w/w Liquid
82	Phenoxymethyl Penicillin 125 mg Tablet
83	Phenoxymethyl Penicillin 125 mg/5 ml Syrup
84	Phenoxymethyl Penicillin 250 mg Tablet
85	Pneumococcal Polysaccharide and Non-Typeable Haemophilus Influenzae (NTHi) Protein D Conjugate Vaccine (10-valent, adsorbed)
86	Poliomyelitis Oral Live Vaccine (10 Doses)
87	Polycitra Syrup
88	Potassium Chloride 1 g/10 ml Mixture
89	Potassium Citrate 3 g/10 ml and Citric Acid Mixture
90	Potassium Permanganate 1:10,000 Solution
91	Potassium Permanganate 1:20,000 Solution
92	Pre/Post Natal Vitamin & Mineral Capsule
93	Pre/Post Natal Vitamin & Mineral Tablet
94	Pyrantel Pamoate 125 mg Tablet
95	Pyrantel Pamoate 250 mg Tablet
96	Pyridoxine HCl 10 mg Tablet
97	Riboflavine 3 mg Tablet
98	Rubella Virus Vaccine Injection (Single injection)
99	Salicylic Acid 2 - 10% Cream
100	Salicylic Acid 2 - 10% Ointment
101	Salicylic Acid 20% Ointment
102	Salicylic Acid, Starch, Zinc Oxide Paste
103	Sodium Bicarbonate 5% w/v Ear Drops
104	Sodium Bicarbonate and Magnesium Carbonate Compound Mixture
105	Sodium Bicarbonate Mixture (Paediatric)
106	Sodium Chloride 0.9% Eye Drops

107	Sodium Chloride 0.9% Injection
108	Sodium Chloride 0.9% with Dextrose 5% Injection
109	Sodium Dichloroisocyanurate 2.5 g Tablet
110	Sodium Dichloroisocyanurate 5 g Tablet
111	Sodium Hypochlorite Solution
112	Sodium Thiosulphate 10-20% Solution
113	Sulphur 2% & Salicylic Acid 2% Cream
114	Tetanus Toxoid Injection
115	Thiamine Mononitrate 10 mg Tablet
116	Thiamine Mononitrate 3 mg Tablet
117	Thymol Compound Gargle
118	Vitamin A & D (Cod Liver Oil)
119	Vitamin A 50,000 IU Capsule
120	Vitamin B Complex Tablet
121	Vitamin K1 1 mg/ml Injection
122	Water for Injection
123	Zinc Oxide Cream
124	Zinc Oxide Ointment
125	Zinc oxide, benzyl benzoate and balsam peru suppository