

## The Implementation of Medical Assistance Fund System in Ministry of Health Malaysia

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### Abstract

The rapid technological development and the growing use of information communication technology (ICT) in business organizations have become the centre of attention in past few years. This ICT has facilitated the decision-making process of an organization. The use of the latest applications will speed up the process of implementation and monitoring of organizational activities and programs. In this regard, the Medical Assistance Fund (TBP) has been established by the Government to help patients especially B40 groups who cannot afford to seek treatment in Government Hospitals, clinics and Public University Medical Centers. Through the use of the Medical Assistance Fund System (STBP) (Phase 1) on May 2021 in all hospitals throughout Malaysia will speed up the application process and approval to eligible patients. This paper to discuss the policy decision-making process of redeveloping STBP and subsequently the implementation of STBP.

**Keywords:** Medical Assistance Fund System, Strategic Decision Making, Information Technology Communication (ICT)

### 1. INTRODUCTION

The Cabinet of Ministers in 2005 agreed that one (1) Medical Assistance Fund (*Tabung Bantuan Perubatan*) (TBP) be established under Section 10 (4) (a) of the Financial Procedure Act 1957 (revised 1972) to assist the poor and disadvantaged to finance part or all of the cost of treatment, equipment medical and rehabilitation equipment to alleviate the burden borne by them.

## 1.1 Background

TBP is administered by a TBP Trust Fund Committee chaired by the Secretary-General of the Ministry of Health Malaysia (MOH) as the Controlling Officer and a total of 7 members representing several Divisions in this Ministry. This committee plays a role in deciding policies and procedures in relation to the receipt and use of money in TBP for collecting and disbursing such fees and other relevant procedures.

The implementation and expenditure of TBP is based on the Trust Deed, Treasury Instructions, Ministry of Health Guidelines and current financial regulations in force.

### 1.1.1 Trust Deed for the Trust

The Trust Deed for the Trust Group established under Section 10 of the Financial Procedure Act, 1957, the TBP Trust Fund states as follows:

Providing assistance to underprivileged patients in accordance with the conditions set out in the Guidelines for Providing Assistance Under TBP and Guidelines for Assisted Paediatric Heart Surgery Treatment at Narayana Hrudayalaya Institute of Cardiac Sciences, Bangalore, India;  
Investing in Fixed Deposits or investments administered by the Accountant General's Department;

Any other costs of expenses or other payments may be directly attributable to the administration of the Fund in charge;

The Ministry is responsible for monitoring the performance of the allocation that has been approved in terms of financial performance; and Implementation performance should be reported to the Fund Committee periodically to ensure that all planning is in accordance with what has been agreed.

## 2. LITERATURE REVIEW

### 2.1 Strategic decision on using Information Communication Technology (ICT) on the organizations.

Strategic management is a central field for corporate management, precisely as a decision-making process, and research has also been done to explore the impact of ICTs in various sectors.

Technological transition is the pace at which new knowledge is put into physical form and disseminated for use in the market as a result of increased operational efficiency. The Internet has transformed radically how corporate activities are carried out, generating efficiencies and increases in competitiveness for existing businesses and new possibilities for business people (Feldman 2004).

### 2.2 ICT tool for manager

In order for managers to have an active role by using IT in their process of decision making they must have that fundamental knowledge of the Information Technology (IT) tools. The tools and methods that can be used in the process of decision making. There are some IT applications such as:

#### *a. Decision Support System (DSS)*

Applications are systems and subsystems that help managers make decisions based on data that is gathered from a wide range of sources. a database or program which shows sales figures graphically, but the Integrated assets mix working together (Daft, 2010). The framework gathers and analyses the data in a manner that administrators can view so that they can take decisions.

#### *b. Enterprises resource planning (ERP)*

The framework has been described by Brown et al.2012 as a series of interconnected software applications or systems executing basic business functions like general ledger accounting, accounts payable, accounts receivable, preparation of supply needs, order control, inventory reporting and human resources management. The major benefits of an ERP system are in terms of better information for strategic and operational decision making and planning, and greater efficiency, profitability, and growth.

### *c. Customer Relationship Management (CRM)*

CRM is a mechanism for coordinating, automating and synchronizing company operations, primarily sales, but also includes marketing, customer service and technical support tasks. CRM systems deliver the key advantages: consistency and performance, cost savings, support for decisions, business skills, consumer understanding and improved profitability.

### *d. Intranet*

In many organizations, the intranet serves as a valuable communication tool between the organization and its employees and between employees as well as a repository of organizational information (Brown et al. 2012).

## **2.3 Decision making and Problem Solving**

There are a variety of decisions involved and it looks very familiar to decision-making process. Huitt (1992) believes that a similar mechanism is used to take decisions and solve problems. Problem solving decisions has long been recognised as key to the success of organisation (Caruth et al. 2009).

## **2.4 Information and Strategic Decision**

The task of ICTs is to filter and handle critical flows of information, and to provide reliable, scalable support. According to Kumar et al. (2007), every problem scenario decision-making case is validated by current support systems which offers useful insight for future scenarios providing additional awareness and expertise for participants and increasing trust in future action when a correct decision is taken.

## **2.5 ICT and Strategic Decision Making**

The main requirement of effective strategic decision-making is proximity to decision-makers. Yet decision making has been a big obstacle for companies in today's complex, constantly changing environment (Leidner and Elam 1995). ICT was found to improve organizations' decision-making processes by acquiring uncommon information and developing cognitive abilities (Andersen 2001).

### 3. MEDICAL ASSISTANCE FUND

#### 3.1 Objective Medical Assistance Fund / Tabung Bantuan Perubatan (TBP)

Helping less fortunate patients by financing full / partial cost of treatment, medicines and medical equipment.

#### 3.2 Disciplines

There are eight (8) health disciplines listed in TBP covering Cardiology, Orthopaedics, Otorhinolaryngology (ENT), Rehabilitation, Respiratory, Surgery, Ophthalmology and Paediatrics.

In this case TBP has approved some medical assistance as follows:

3.2.1 Financing of implant / prosthesis for surgery such as Total Knee Replacement, Total Hip Replacement, Spinal Fixation System and others;

3.2.1 Supply of medical devices such as Transcatheter Aortic Valve Implantation (TAVI), Drug Eluting Stent, Implantable Cardioverter Defibrillator (ICD), pacemaker and others;

3.2.3 Funding of hearing aids namely Cochlear Implant;

3.2.4 Supply of equipment such as Oxygen Concentrator, Oxygen Cylinder, Home Ventilator, Portable Ventilator, CPAP Machine and BIPAP Machine;

3.2.5 Supply of rehabilitation equipment such as special wheelchairs with specific specifications, Ripple Mattress, Low Profile ROHO Cushion, Jay Cushion, Self-Propelling Shower Commode Chair and prosthetic legs;

3.2.6 Treatment using drugs involving various disciplines not provided in Government Hospitals; and

3.2.7 Other aids such as Colostomy bag, Suburethal Sling / Tape, Home Total Parental Nutrition (TPN), special milk, Portable Suction Pump.

### **3.3 Condition and Qualification**

Conditions that need to be complied with before qualifying patients to receive assistance under TBP are as follows:

3.3.1 Malaysian;

3.3.2 Socio-economic status;

3.3.3 poor or underprivileged categories (priority to the B40 group) certified by the Medical Social Work Officer (PKSP) at the MOH Hospital; and

3.3.4 subject to the Guidelines for Socio-Economic Evaluation of MOH Medical Social Work Services in 2017.

3.3.5 Patients should be referred by Government Hospital, MOH Facility / Public University Medical Centre; and

3.3.6 Not Civil Servants / Government Retirees or family members of civil servants who receive medical benefits under Service Circular No. 21 of 2009, Medical Facility Expenditure Application Rules or amendments issued from time to time.

### **3.4 Allocation**

The Ministry of Finance Malaysia (MOF) has channelled an allocation of RM20 - RM25 million annually to the MOH from 2005 to 2013. However, from 2014, the MOF has increased the total allocation of TBP to RM40 million annually. The total allocation received by TBP from 2005 to 2020 is RM457 million.

### 3.5 Number of patients

In this case since 2005, a total of 64,165 poor and less able patients have benefited from this TBP since its inception. For the year 2020, an allocation of RM36.07 million has been approved until the end of December 2020 to assist a total of 2,951 patients under TBP.

### 3.6 Stakeholders

- a. Ministry of Health of Malaysia
- b. Hospital, Clinic and University Hospital Medical Centers
- c. Underprivilege patient especially B40 groups

## 4. STRATEGIC PLANNING

### 4.1 Ministry of Health Information Communication Technology Strategic Plan (2016-2020)

Strategy 1: Strengthening MOH ICT Applications:

The 4th ICT Application Initiative refers to upgrade the application system. Medical Assistance Fund System / *Sistem Tabung Bantuan Perubatan* (STBP) was completed in 2013. However, with the amendment to the TBP Guidelines in 2019, has influence major changes to the structure and interface of the system. Accordingly, STBP needs to be redeveloped to meet current needs.

### 4.2 Objective

- 4.2.1 Establish a specialized system for processing TBP applications starting from the application stage up to payment to suppliers and storing TBP assistance data as well as facilitating analysis on the data.
- 4.2.3 Reduce the use of documents manually.

#### 4.3 MOH ICT Development Committee / *Jawatankuasa Pembangunan ICT (JP ICT)* MOH 2018

This committee chaired by Secretary-General of MOH has agreed that STBP to be redeveloped.

STBP will improve the efficiency of TBP implementation mechanism at all levels including hospitals / Public University Medical Centers, TBP Secretariat, TBP Technical Secretariat and Committee Members involved.

Procurement method: Internal System Development (Inhouse). No cost involves.

### 5. MEDICAL ASSISTANCE FUND SYSTEM / SISTEM TABUNG BANTUAN PERUBATAN (STBP)

#### 5.1 Practice of TBP

The doctor who treats the patient will tell the type of treatment after getting confirmation of the diagnosis that has been carried out on the patient. For example, in orthopedic cases, patients have been diagnosed with spinal bone problems that require correcting the spinal cord by installing screws to correct the position of the spinal bone.

In this case, the specialist doctor will inform the patient of the form of treatment including the cost of treatment. For example, the cost of treatment for a spinal cord is RM8,500. However, most patients, especially from the B40 group, cannot afford the cost of treatment. Therefore, the doctor will refer the patient to the Department of Medical Social Welfare / *Jabatan Kebajikan Perubatan Sosial* (JKSP) to apply for medical assistance from the Ministry of Health Malaysia.

As the objective of TBP, to help patients who are not able to get treatment assistance, JKSP will act to assess the patient's social background such as household income status and other information related to patients to qualify to apply for TBP.



At the same time the hospital will get a quotation for treatment equipment assistance. All applications will be certified and approved by the Head of Department and the Director of the Hospital. After that, the application will be submitted to the MOH Medical Development Division / *Bahagian Perkembangan Perubatan* (BPP) for evaluation and approval by the Director of BPP, Director General of Health and the Secretary-General of MOH / Deputy Secretary General of MOH. Upon approval, a letter of approval will be issued to the hospital to give permission to undergo surgery or obtain treatment aids to the patient.

There are 2 forms of approval involved, namely elective cases (normal cases) and urgent cases.

#### **5.1.1 Elective case**

The process involved starts from the application at the hospital until the BPP assessment, then the approval of the top management of MOH and treatment assistance to the patient takes 1 month for elective cases.

The approval period is for 6 months. The types of disciplines involved are such as Otorhinolaryngology (ENT), Rehabilitation, Respiratory, Surgery, Ophthalmology and Pediatric.

#### **5.1.2 Urgent case**

For urgent cases involving cardiological surgery such as the installation of a stent on the coronary heart, the approval period is 5 working days.

The approval period is for 1 year. The types of disciplines involved are such as Cardiology and Orthopedics.

### **5.3 Medical Assistance Fund System Application / Sistem Tabung Bantuan Perubatan (STBP)**

#### **5.2.1 Module**

In line with the decision of the MOH ICT Development Committee (JP ICT) and the MOH Medical Assistance Fund Committee (JTBP)

MOH decided that STBP be redeveloped in accordance with the current government provisions and regulations. STBP will involve 5 redevelopment modules.

*a. Application Module*

Specialist Doctors, Medical Social Welfare Department, and eligible patients under TBP will be involved in this module. This module will involve the online application stage in the hospital. Starting from the application from JKSP, get a quotation from the medical equipment vendor, certificate and approval of the Director of the Hospital. This application submitted to BPP for technical assessment. For this module, MOH has run User Acceptance Test (UAT) for STBP on 26 January 2021 to all hospital. Top Management MOH Committee has agreed STBP application module will be implemented in May 2021 to all hospitals and clinics in Malaysia.

*b. Evaluation and Approval Module*

The Medical Development Division / *Bahagian Pembangunan Perubatan* (BPP), Technical Unit will be responsible for this module.

This module involves the medical and socio-economic evaluation of the patient submitted by the hospital. Through the system, evaluation can be accelerated from 14 working days to 7 working days for elective cases and from 5 working days to 2 working days for urgent cases.

This module also involves certification from the Director of BPP, the Director General of Health and approval of the Secretary-General of MOH. With the use of the latest communication technology such as mobile applications such as through WhatsApp applications will be integrated together in STBP. Through the application, after the technical evaluation is completed, all details for certification and approval will be submitted to the Top Management of MOH for approval via WhatsApp so that the approval process can be expedited. The evaluation and approval module will be implemented in August 2021.

*c. Finance Module*

The Finance Division will be responsible for this module. Their responsible is to updates payment status approved:

i. Allocation Module

Based on the MOF 2021 Budget, TBP is allocated RM40 million (USD9.8 million) for medical assistance to poor and underprivileged patients for treatment at Government Hospitals, Clinics and Public University Medical Centers

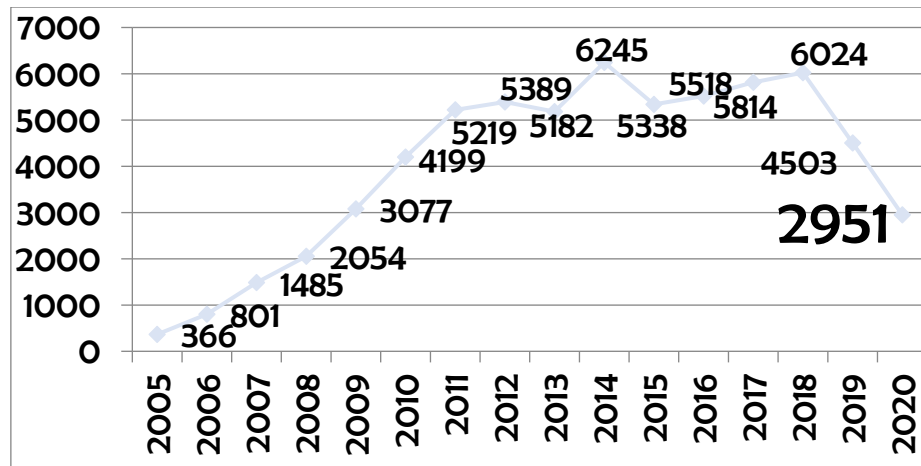
ii. Payment Module

Based on current circulars and financial regulations, if relevant documents such as invoices, treatment confirmation forms and other documents specified in the TBP Guidelines are completed, then payment can be completed within 1 day or no later than 14 days. All payment records will be included in the STPM for monitoring purposes.

iii. Reports Module

The monthly and annual TBP Implementation Report must be reported to the Ministry of Finance (MOF). This report is intended for monitoring the allocation provided. In addition, the report generated through STBP will be presented to the Minister of Health to be presented in the Cabinet Meeting chaired by the YAB Prime Minister of Malaysia. This is important because it shows that the Government through the Ministry of Health cares about the people, especially the lower income group people who receive medical treatment assistance.

As of for year 2019, a total of 6,024 patients has benefited from TBP. But in year 2020, due to COVID-19 pandemics, only 2,951 patients have been approved under TBP. Figure 1 as below show the number of patients benefited under TBP since 2005 – 2020.



**Figure 1: Number of Patients benefited from TBP**

**Source :** Medical Assistance Fund Unit, Ministry of Health Malaysi

#### *d. User Module*

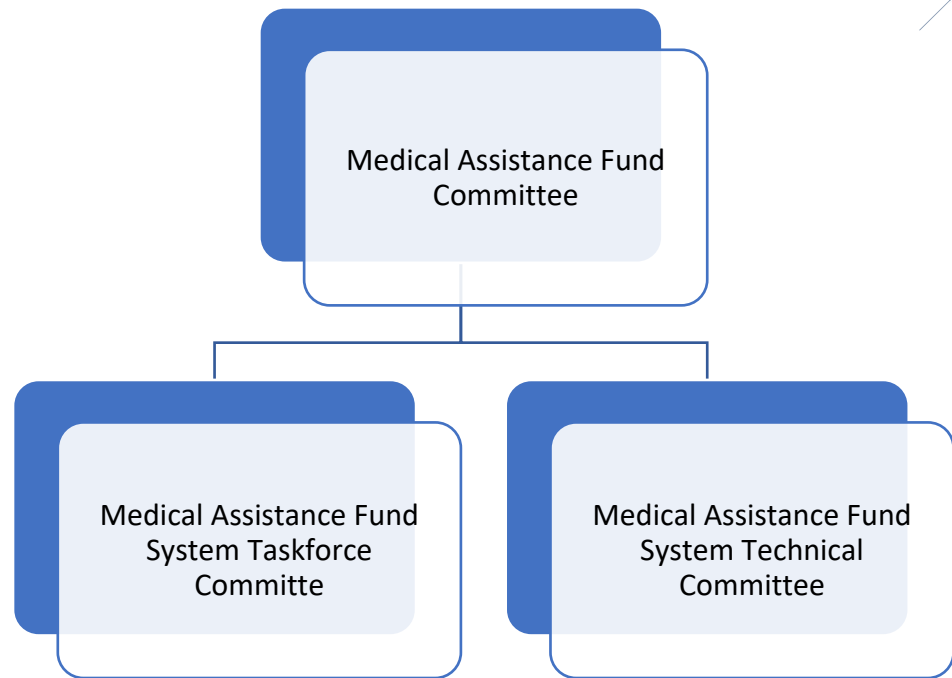
The hospital and JKSP are responsible for updating the profile of patients receiving TBP. This module involves the user profile i.e. patient profile and information management of patients who have received TBP. This is important to identify the appropriate diagnosis and treatment given to other patients in the future.

#### *e. Maintenance Module*

This module involves STBP access control. The Information Development Division, MOH is responsible for this module that consist of STBP maintenance for application, evaluation and approval modules, financial modules, reporting and user profile management.

### **5.2.2 Project Governance**

The MOH Medical Assistance Fund Committee has agreed to forms 2 committees to ensure the implementation and monitoring of STBP according to the set time period. Figure 2 show the committee that governs the STBP project.



**Figure 2 : Project Governance Committee**

i. Medical Assistance Fund System Task Force Committee / *Jawatankuasa Task Force Sistem Tabung Bantuan Perubatan (STBP)*

The committee is chaired by the Deputy Secretary of the Ministry (Finance) and consists of the Under Secretary from the Finance Division, Director of Medical Development Division, Director of Family Health Development Division, Under Secretary of Information Development Division, Under Secretary of Human Resources Division, Head of Professional Medical Social Health Officer / Pegawai Kesihatan Sosial Perubatan (PKSP) and Hospital representative from Kuala Lumpur Hospital (HKL), Hospital Sultanah Bahiyah (HSB), Alor Setar, Hospital Raja Permaisuri Bainun Hospital (HRPB), Ipoh, Serdang Hospital (HS), Hospital Perempuan Zainab II (HPZII), Kota Bahru, Sarawak General Hospital (HUS), Kuching and Queen Elizabeth Hospital (HQE), Kota Kinabalu.

This committee functions to set all strategic policies and decisions regarding STBP. For example, the STBP Standard of Procedure for application modules to be reviewed every 6 months. Apart

from that, this committee is also responsible for all issues or problems of using the system in all hospitals in Malaysia.

ii. Medical Assistance Fund System Technical Committee / *Jawatankuasa Teknikal Sistem Tabung Bantuan Perubatan (STBP)*

This committee is headed by the Under Secretary of the Finance Division and consists of the Technical Unit of BPP, Technology Development Division, MOH and a representative of the Medical Social Health Officer.

This committee is to ensure the implementation of STBP according to the set time period. In addition, all technical issues with STBP are also discussed. For example, the User Acceptance Test (UAT) STBP was decided on 26 and 27 January 2021 for the application module.

Based on UAT, all complaints and improvements will be discussed in this committee. All agreed recommendations will be forwarded to the STBP Task Force Committee and then to the MOH Medical Assistance Fund Committee for consideration and approval.

## 6. ADVANTAGES OF STBP

6.1 Manual implementation of TBP cause the application process and TBP approval is particularly inefficient when involving a large number of patients. This system will can help increase efficiency in processing application TBP assistance. Reduce use and movement physical documents as well as use paper.

6.2 Facilitate the review of the status of application for assistance at the Hospital / Public University Medical Center level or at the TBP Secretariat level. Based on year 2020 data, 3,324 application has been receipted by TBP, consist of RM44.04 million. (USD10.8 million)

6.3 This system too will act as a system data management for TBP and extract information that more precisely and latest. Facilitate monitoring

TBP data, generate more reports / statistics dynamic and economical time.

## 7. CONCLUSION

Communication of problem and decision through ICT application is an important area of research on the impact of ICT on organization. Andersen (2001) conducted a study on the effect of information technology for the purpose of enhancing organisation communication capabilities – both internal and external. The implementation of ICT applications in the organisations for strategic decision making, it is important to examine the actual use of these applications by the strategic decision makers.

In this regard, MOH has identified strategic planning in MOH ICT development. One of the strategies is to redevelop STBP to comply with current government regulations and circulars. In addition, this decision is important to ensure that the STBP used can ensure the efficiency of MOH. At the same time, the redevelopment of STBP will speed up the assistance process to eligible patients, especially the lower income group.

Although the application of STBP is still in the phase 1; Application Module, it is a strategic decision to use ICT in ensuring that all TBP applications from hospitals are implemented fully online on May 2021. Meanwhile the evaluation and approval module implemented in August 2021. This is in line with the vision, mission and objectives of MOH concerned with the health of all citizens. This ensures that all Malaysians receive treatment assistance in a friendly, prompt and caring manner. The redevelopment of STBP supports the electronic government system (e-government) to improve the efficiency of the public service delivery system in Malaysia.

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