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Preventive Action and Control Measures Model of Critical Incident Management for COVID-19 Pandemic in University

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Abstract

Critical incidences in the event of a Coronavirus (Covid-19) outbreak will have a very high impact, severity on the implementation of an institution/ university core teaching and learning mission in many ways as temporary closure of schools, adaptation and modified methods of teaching and learning processes or supplementary activities to differentiate or change to a new practice of new normal. The universities must recognize and realized that if they need to achieve a condition of safety, security, or sustainability for the implementation of the teaching and learning mission, it is possible to continue in the future as well. They must be understood and acted to conform to the so-called system of “Critical Incident Management (CIM)”, seems to be the right solution exactly as the same situation with that the universities are facing today. The main purposes of this article is to present the details of the conceptual framework for the appropriate model and main components that are necessary of CIM, by showing relevance as a preventive action and control measures for Covid-19 in the long-term implementation. The universities must setup guidelines for self-control such as, the appointment and assignment of authorities to the CIM team and person in charge, considering the cause or sources of the incident, assessment and evaluation of the main impact to universities, CIM planning, establishing the appropriate control measures and procedures for incident management, continued peer review with communication, and identification the level of Covid-19 incident management success or indicated as the best effectiveness in the next opportunity, respectively.

Keywords : Novel Pandemic; Covid-19; Critical Incident; New Normal; CIM-Plan; Severity Assessment; Preventive Action; Control Measures and Response; Covid-19 Free Success

JEL Classification Code: I15, I25, I26, L15, L19

1. Introduction¹

At present, the occurrence of many phenomena, actual conditions shown a vital feature as the emergence of critical incidents are inevitably seen widely. And such events affect significantly to the living of the inhabitants of the world both in health, safety concerns in life, business operations or economic conditions and could turn out to be highly

significant impacts in terms of politic turmoil, social conditions and environmental changes in the world, respectively. This incidence has largely been implicated by known as novel pandemic outbreaks, and as reported by WHO (2020) over the past three decades, Avian influenza in 1997, which is found in poultry originating in Hong Kong.

In 2002, a severe respiratory disease known as SARS (Severe Acute Respiratory Syndrome) emerged in the

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Guangdong province of China. And such incidents continue to happen as ongoing result. The transmission of Coronavirus (Covid-19) originating in Wuhan, China in December 2019, and as far as reported to date (October 7, 2021), has spread to all regions of the world, covering 221 countries. The cumulative number of cases of 237.09 million people and the deaths of all levels is greater than that other epidemics, total of 4.84 million people (Worldometer, 2021).

For the consequential impact of this kind of Covid-19 crisis on educational institutions around the world, and covering Thailand, it appears to be a clearly concrete result as well for the occurrence of such viral diseases. It is predominantly caused by a serious respiratory infection condition similar to that of the SARS type, but it is a second order status (also known as SARS-CoV-2). It was a very serious epidemic, which countries around the world must be aware and to be of great importance consideration to resolve or mitigate impacts together in all sectors.

Meanwhile, on March 18, 2020, the United Nations Educational, Scientific and Cultural Organization – the agency for education, responded to this incident by announcing it as a core policy for problem-solving measures or immediate impact only by requiring the school closure, which will be affected the operation of various mission all the educational institutions worldwide in approximately 107 countries, and caused the suspension of teaching for approximately 862 million students or 50% of the global student population (UNESCO, 2020).

For the establishment of such school closure measures aims to stop the spread of Covid-19, most of the evidence is relevant that all come from the experience of solving immediate problems that have been done in the past, especially when the spread of the influenza epidemic including the assignment of social distancing, is an old-fashioned practice. And no evidence or any indication to clearly confirm that these conventional methods provide an optimum result or could be used as an effective control and reducing dynamic transmission of Covid-19 directly, between students or learners living together within the school, etc. As the report of Viner et al. (2020), confirms the factual nature of this matter by a rapid systematic review study from 6 of 616 reports and articles revealed that the only consequence of such school closures Covid-19 infection can be prevented among students at a low rate of about 2-4% of the total number of students. At the same time, the results were lower than the social distancing measures implemented directly within the educational institution.

From this obtained result, it confirms and indicates additional reasons that in the case of the Covid-19 incidence and all established measures to close the relevant educational institutions, especially occurring in China, Hong Kong and spread throughout Asian region such as Japan, Korea, Singapore, etc., all show one fact that closing the status of such educational institutions most of which are consistent or required it to be in accordance with the conditions set forth by the policy makers from above, such as the government, the Ministry of Education, and government agencies directly related to educational institutions. All of them are the ones who setup such measures without being implied to a preventive action or control measures mostly come up, which must appear as a responsibility or self-practice of that independent educational institution, which in the end would not be able to produce maximized results or efficiency in the prevention of repetition incidents from Covid-19 in the future as well.

For the main purposes of this article, needed to present a detailed, broad concept for the model and main components of Critical Incident Management (CIM), showing their relevance in a preventative manner and measures to control Covid-19 in the long-term effect, which must be initiated system by educational institutions or universities autonomy. They are also must be setup as a guidance to control manually and continually focus on the level of success in managing the Covid-19 free-incidence or to be the best effectiveness in the future, respectively.

2. Meaning and appropriate model of CIM for universities

2.1 Definition of CIM for universities

Deakin University (2020) reported clearly and defined a CIM as an Integrated Management System (IMS) at universities or top-level executives, and related teams must take creative action and initiated by identify or indicate all various factors, conditions and circumstances that may occur in the future opportunities and appeared to be as uncertain incident or conditions, which inevitably expresses association with estimated and rated in order to indicate the impact, severity to a degree that may related to the critical level, which can be described as such violence as detailed in Table 1.

Table 1. The severity levels that can be identified or indicated an incidence that is directly related and may occur within the university

No.	Level of severity	Meaning and relevant guidelines
1.	Severity Level 1 (Minor incident)	<ul style="list-style-type: none"> - Incidences with low impact, severity. - Relevant events, issues tend to have low outcomes or has no potential to escalate violence in the future. - Able to correct, reduce the impact level by defining to be a standard procedure of the university.
2.	Severity Level 2 (Moderate incident)	<ul style="list-style-type: none"> - Incidences with moderate impact and severity but require awareness and understanding of the situation. - Related events, issues have the potential to enhance its impact in the future. - Unable to modify or reduce the impact level to a satisfactory condition by establishing a standardized practice to support it directly. - Need various resources to take advantage of the management to reduce the impact level by working together of the CIM team is crucial.
3.	Severity Level 3 (Critical incident)	<ul style="list-style-type: none"> - Incidence with high impact and significant severity or causes as critical. - The related events, issues appear to have long-term ongoing effects, violence or remain forever. - It cannot be controlled or managed by directly establishing by standardized procedures or various measures. - Requires a lot of resources to take advantage of the management to reduce the impact level. It depends mainly on the collaboration of the management, CIM team and related personnel.

Flinders University (2020) added that such assessment or rating of severity appears to be only the first step for the establishment and operation of a CIM system within the university. However, the university must focus on “CIM Best Practices”, in particular emphasized on the “Preventive action and control measures” have been developed to support or respond in each phase of those critical incidents, i.e. rely on preparation or readiness before the incident, determining scope and setup appropriate response measures or command management during the incident occurred period, and covering down to the ability to help, improve, restore effects with various damage levels after the incident has completely ceased, etc.

2.2 Proposed model and main components of the CIM system for universities, and aims for the prevention and control of the spread of Covid-19

The authors have compiled the contents and key points of the CIM system from several sources that directly relate to the university, such as from interim reports of the Centers for Disease Control and Prevention United States (US-CDC), etc., and finally brought the content, factors and important elements come through the process of classification, identification, analysis and synthesis to appear as a “University Decision Frameworks for Free Covid-19” relationship related to the underlying principles mainly focus on the preventive action and the utilization of various control measures to reduce the severity of the Covid-19 epidemic within the university to an acceptable level (Consider the details from the Figure1 included).

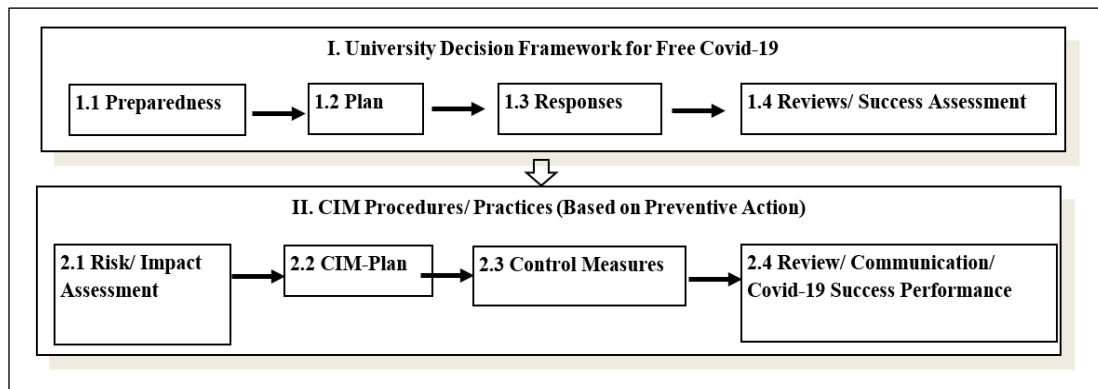


Figure 1. The pattern and main components of the CIM-Model and cover the steps and methods of practices by focus on achieving results or levels of success in managing the Covid-19 epidemic reduction within the university. (US-CDC, 2020)

1) Preparedness for preventive management and control the occurrence of Covid-19 within the university, such as setting up an emergency/ ad hoc team to support the control and order further operations; facilitating and supporting various resources taking advantage and managing finances, budgets to be appropriate and sufficient for the performance of work, etc.

2) Determining and planning for the prevention of Covid-19 is clearly documented or written as a system by specifying to the department, agency, person responsible; determination of procedures and control measures as able to be continued work and take advantage of the various mission operations within the university is the main practice.

3) Defining control measures to respond practices, and such measures must be related to the implementation of the main mission, or support of the university main tasks, and must be carried out according to detailed steps that can lead to optimized efficiency; and finally help to prevent the widespread of Covid-19 or directly reduce the impact risk that will occur to the university at that situation.

4) Review, communication, and success assessment report of performance all the results obtained from the determination of control measures and responses to need to be free from the epidemic of Covid-19, such as the university administration or responsible team must be set-up a regular review, commit to internal and external communication, and evaluation to indicate the level of success of such operations come out to be seen in a concrete way or appear as clear evidence. This is mainly to focus on improving the performance of preventing Covid-19 to be more effective routines or continual development until

reaching to the desired results or goals of the university in the future.

3. Risk assessment and evaluation in relation to Covid-19 incidence for universities

3.1 Consideration on the “risk sources” of Covid-19 that will occur in the university

According to a Teesside University (2020) report, the source of such inherent risk may be considered when within the scope chance of occurrence, and may appear to be a severe impact would be related to factors or important conditions as follows:

1) The university population appears to be at risk associated with travel to do business or tourism, especially obtained directly from the source of transmission of germs that occur in different countries.

2) Defining and lack of the details of policies on occupational health requirements and safety management at the university level that is unclear, vague or leads to practice or perform at relevant tasks with inappropriately, ineffectiveness occurs directly, which is considered to be the authority, duty or decided responsibility of the senior management almost entirely.

3) The campus environment that may appear as a source of spread of Covid-19, such as public utilities and various facilities, spaces, classrooms, office laboratories, a research area and development center, etc.

4) Implementing or carrying out the main missions of the university, such as ensuring that the learning and teaching process is consistent with the details of the courses, setting up the projects, main activities or events came up to directly support teaching within the university, etc.

5) Open system and method of communication and maintaining closed relationships with students and stakeholders directly related to the university, such as parents, guardians, and nearby communities.

3.2 Assessing and evaluating the level of risk or impact in the form of an inquiry and self-assessment checklist to define continued as "Risk profiles" of the occurrence of Covid-19 in the university

However, such practices must be carried out by relying on the responsibility of the top management, working together with the CIM team to assess the level of suitability risks and impacts that may occur in the "4 characteristics (4Ps)" directly related to the mission of the university are:

1. Students, staff, and operators (People: Risk Matrix).

Summary of 19 checklists.

2. Teaching and learning process (Process: Risk Matrix). Summary of 8 checklists.

3. Profits and business results of the university: Risk Matrix. Summary of 16 checklists.

4. Partnership and stakeholders of the university: Risk Matrix. Summary of 17 checklists.

As detailed in Table 2, the total number of checklists is 60 items, therefore the executives/ CIM teams will be able to utilize them, to consider and decide that all condition of the mission of the organization or university itself under the

current situation to be indicated how risky is the occurrence of incidences related to the spread of Covid-19 in a good or bad manner? This is fundamentally on the consideration of the score rating group, by based on the answer in a way that is yes (✓ ☐ Yes), as:

1) A group of 40-60 points indicates that the condition of the mission of that university is a seriously degree of weakness, or there is a very random chance to be affected (negatively) from the incidence of Covid-19, which may manifest itself as degradation or critical impacts directly. However, the university must prepare an action plan to support it, or has set up urgent control measures and want to reduce the level of risk impact to be in an acceptable condition.

2) A group of 20-40 points indicates that although the university has been initiated a plan and covered how to be implemented and measured in response to Covid-19 preparedness in advance and has already appeared to a certain extent. But such defensive operating conditions of the university, are still to be a chance to risk being affected both from threats within and outside the organization respectively. Therefore, the management and related CIM teams must formulate action plans or countermeasures to support them, and finally lead to sustainable business development and continuity plan in the future.

3) A group of 0-20 points indicates that the university has prepared a concrete plan to prevent Covid-19 and has shown good results at an acceptable level. But there are still some issues that must lead to correction and improvement or continuous development. This is to create the most tangible results to reduce the impact severe risk level of Covid-19 and help promote the university to appear in a strong overall administrative condition, or there is a continuous sustainability in the future.

Table 2. Using the self-assessment questionnaire checklist for analysis and assess the level of risk impact (Risk Matrix) that will occur in the university according to the nature of the relationship and related to "Incident sources" 4 characteristics (4 Ps).

No.	Considered checklist	number of checklists	Total score
1	<u>Students, staff and operators (People: Risk Matrix).</u>		
	1.1 Consideration of a safe working environment for teaching and learning operations.	19 <input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Obtained score		Total:/19
2	<u>Teaching and learning process (Process: Risk Matrix).</u>		
	2.1 Main tasks operation – Instruction, activity patterns and techniques implemented.	3 <input type="checkbox"/> Yes <input type="checkbox"/> No	

	2.2 Support tasks operation – Academic services, research and development.	5	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Obtained score				Total:/8
3	<u>Profits and business results of the university: Risk Matrix.</u>				
	3.1 Marketing response and business capability.	4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	3.2 Supplier response and relationship management.	5	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	3.3 Society response.	2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	3.4 Economic environment response.	4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Obtained score				Total:/16
4	<u>Partnership and stakeholders of the university: Risk Matrix.</u>				
	4.1 Political and regulatory environment.	4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	4.2 Measures and state of emergency.	2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	4.3 Public infrastructure – Telecommunications, roads, airports, etc.	2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	4.4 Public utilities – Water, electricity, health, and sanitation, etc.	4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	4.5 Third parties – Competitors and financial providers, etc.	4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Obtained score				Total:/17
	Total score summary	60	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Total:/60

4. CIM-process and related practices for the university's Covid-19 prevention and control

In practice, when organizations/ universities are aware of the strengths/ weaknesses that are susceptible to the face of Covid-19 incidents, then the CIM administrators and teams need to determine the "Guidelines/ Method of practices (Procedures)" or "Control measures" to focus on

quick response that have the main ability to control urgent incidences or to reduce the level of such risk impact to be reduced, regularly. According to a report from the American College Health Association (2020), revealed that the university deserves an initiative to take advantage of control measures in several ways. And it is important to consider 9 types with convenience measures, and aims easily to follow in a good concrete manner (Table 3), as:

Table 3. Shows the control measures that should be practiced within the university for prevention and reduce the risk impact level of the Covid-19 epidemic

No.	Control measures to be considered	Guidelines and related practices	Department/ Unit/ Person responsible
1.	Determination of administrative control and CIM policy management.	<ul style="list-style-type: none"> • Considered to be the responsibility of the top management. • Determine and announce policies, objectives and goals for occupational health and safety of university. • Initiation and preparation of a CIM plan to support concrete works and appear as a documented system for further use. • Set out procedures for preventing Covid- 19for personnel, employees to use within the university. • Determine and rely on communication practices, public relations, training and coaching of Covid- 19 preventive work to internal personnel and outside the organization. 	<ul style="list-style-type: none"> • Top management. • CIM team. • Supervisors, departments, faculties that are directly related.
2.	CIM Board/ Team appointments and assignments authority content.	<ul style="list-style-type: none"> • Considered to be the responsibility of the top management must appoint personnel, CIM team, responsible person by cross functional departments within the university. • Determine, assign policies and authority to operate to go down to the working areas under the basic framework of preventing the spread or reducing the likelihood of Covid- 19directly. 	<ul style="list-style-type: none"> • Top management. • CIM team. • Supervisors, departments, faculties that are directly related.

3.	Identification of business travel outcomes for students, faculties, staff within the university and covers parents traveling from sources of spread of Covid-19.	<ul style="list-style-type: none"> • This is mainly based on the official Covid- 19 epidemic regulations and declarations. • There is a specific way to travel question, and the emergence of symptoms from the effects of Covid- 19 related to students, parents, staff within the university; and • There must be an assessment of the relevant performance. to indicate the level of security or without the spread of Covid- 19coexisting. 	<ul style="list-style-type: none"> • Government agencies, sectors. • CIM team. • Supervisors, departments, faculties that are directly related. • Parents, guardians.
4.	Identification of Covid- 19risk areas and management of campus facilities.	<ul style="list-style-type: none"> • Determine the preparation of a site map configuration and drawing showing the layout, an important mission area, including setting social distancing markers within various operating areas of the university. • Determine the distribution of the main areas entering the university, including establishing procedures for temperature screening and testing for students, parents, external visitors. and covers personnel, staff within the university as well. • Require that all area conditions related to teaching activities, canteen area, corridors, restrooms, and other areas must be kept clean and free from the spread of Covid-.19 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related. • Personnel, operators who are directly involved.
5.	Cleaning for the campus environment and the utilization of Covid- 19disinfectants.	<ul style="list-style-type: none"> • Establish a place, areas related to hand washing station within the university. • Determine cleaning methods for various operating areas on campus and must be prepared as a daily checklist and clearly stated the results of the operation. • Assign workers to clean and must take advantage of disinfectants Covid- 19disease with specified concentration level, optimum frequency of use, and cleaning efficiency as standard. 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related. • Personnel, operators who are directly involved.
6.	Improvements/ Modifications to teaching/ learning activities and related teaching methods on campus.	<ul style="list-style-type: none"> • However, the teaching activities specified in the daily plan for students/ learners must be tailored to the specifics of such practices, for example focusing on personal hygiene and health awareness, social distancing, alternation of teaching activities to suit at each period, etc. • Related teaching and learning activities must focus on reducing the condition of close contact with each other by keeping a distance of at least 2 – 1.5meters between people. • The university determines the teaching methods, to be consistent with the time using distance learning, known as online learning and Work From Home (WFH). • The university also assigns teachers, instructors to prepare teaching materials and aids in the form of a video clip or conference by distributing such teaching materials to the student's family or parents are crucially required. 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related. • Personnel, operators who are directly involved.
7.	Engineering management and utilization of personal protective equipment (PPE)	<ul style="list-style-type: none"> • All types of facilities related to the mission of the university need to be cleaned, including preventive maintenance regularly and continuously, such as air conditioning, ventilation system. • The university also focuses on protecting the personal hygiene of students, workers, by providing personal protective equipment (PPE) is sufficient, and suitable for the benefit of living together. 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related.

8.	Identifying suspected persons, and in the case of being infected with Covid- 19 that appears concrete during the teaching period of the university.	<ul style="list-style-type: none"> • In the case of a student and staff member, it is necessary to indicate the result of Covid- 19 infection or appear as a suspect in the Covid- 19 incident logbook, and to continuously monitor, report and take remedy the problem as in order. • In the case that a covid- 19 infection appears in the university, requires the isolation of the infected person from the premises, thorough cleaning of the areas, and other additional measures to support the operations to be free from the infection of Covid- 19 completely. • Requires the use of the Antigen Rapid Test Kit (ARTK) to self-assess the results of Covid- 19 infections before sending them to government agencies and hospitals. • Set to be prepared the “Vaccination Plan” for personnel comprehensively and thoroughly in each department and relevant sector. 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related. • Personnel, operators who are directly involved.
9.	Understanding and maintaining a good relationship together, by means of clear communication for students, staff, and parents.	<ul style="list-style-type: none"> • Requires the creation as part of the poster session in an easily visible location or can be clearly recognized that is made out in the form of infographic mostly. • Focus on training and coaching of work related to Covid- 19 by providing practitioners with knowledge and understanding of relevant operations and can show good performance in preventing COVID- 19 disease effectively or results that are responded for the university aims. 	<ul style="list-style-type: none"> • CIM team. • Supervisors, departments, faculties that are directly related. • Personnel, operators who are directly involved.

In addition, such covid-19 preventive processes and operations will contribute to progressive success or have experienced a very minimized effect. It must be done through the responsibility of the top management/ CIM team with various departments on campus, must be prepared to come out as an action plan in a way that is called the “Crisis Incident Management Plan (CIM-Plan)”, and has details that should be considered from Table 4 (Curtin University, 2020), for example:

1) It must identify or show a closed relationship related to the control measures or issues, that must be considered within the university is important factor.

2) There must be a consensus effect according to the details of the clearly defined by main policy, procedures, guidance practices or lead to work thoroughly all university, and can be delivered the good results to occur concretely.

3) It must appear as a related document or objective evidence for monitoring, and directly assess the results of operations.

4) The responsible person, department and sector of university must be identified for the performance of such relevant operations.

5) It must be able to identify the practice status for monitoring the progressive, and be able to assess the level

of success of the work in a concrete manner occurring in sequence; and

6) It must be able to refer or indicate a relationship related to the control measures that are set for the university are very good way in practices.

5. Results, benefits and performance success levels that should be obtained from the university's CIM practices

In practical identifying any outcome, benefit or level of success that should be derived from the performance of various characteristics. In order to be consistent with the details that are clearly defined within the CIM program scope, it is undeniable that all show a closed relationship and relevant in such a way that it can be measured, evaluated and interpreted in almost all the quantitative ways, and as far as it is popularly demonstrated, concrete is defined as “Key Performance Indicator (KPIs)” according to various criteria related. The reliance is based on the main objective for the preparation of the CIM program to support the used criteria as a preventive measure or controlling factor and needs to prevent the widespread of Covid-19 called "Covid-19 Free

Indicators", which may eventually affect or causing a severe crisis condition in the end.

For the details of the index's indicative of such characteristics, there has been an extensive study, clearly identified, and mostly through the preparation or presented in the form of an infographic known as the "Covid-19 Performance Dashboard". All these relevant content and various issues can be studied and examined directly from the documented report of West Virginia University (2020).

6. Summary


The emergence of critical incidences in the case of the Covid-19 epidemic would have a very high impact, causing severity on the main teaching and learning missions of universities in many ways, for example: Closing educational institutions, modifying, and improving teaching-learning processes with the various supplementary activities to be different or changing to a new normal pattern of practices, etc.

Table 4. Proposed CIM-plan for preventive action and various control measures taking advantage to reduce the spread of Covid-19 in the university

Title: Preventive and Control Measure Plan			Analysis Team:		Date:		
Considered Measures/ Issues	Policy/ Procedure/ Practices	Related Documents/ Evidence	Responsible Person	Practice Status			Related Control Measures
				Completed	No.	In Progress	
<u>I. Preparedness before starting open university.</u>							
1. Business travel to risk areas for personnel, students and parents.	<div>Business travel of personnel, students and parents from the risk areas of infection with Covid-19.</div> <div>↓</div> <div>Using the university's business travel questionnaire.</div> <div>↓</div> <div>Positive test Covid- 19cases in connection with business travel.</div> <div>↓</div> <div>Record, summary of university business travel performance.</div>	- University CIM policy announcement. - Government announcement of Covid- 19infection sources. - Business travel questionnaire related to COVID- 19 incident. - Investigating the case of Covid- 19at the university. - Record, summary of relevant results.	- Top management. - CIM team. - Supervisors, departments, faculties that are directly related.				Administrative control and CIM policy management. - Business travel identification.
2. Classification, identification of Covid-19 risks area layout within the university, social distancing determination, working performance auditing and review.	<div>Define layout plan showing the working areas.</div> <div>↓</div> <div>Determine social distancing measures, specify marking and labeling of the interior areas of university.</div> <div>↓</div> <div>Monitoring, report on preliminary specified performance.</div>	- Announcement of layout related to the mission of the university. - Announcement, bulletin board in front of the office. -Guidance practices on social distancing, marking, labeling within the teaching-learning areas of the university. -Verbal report, operator observation and	- Top management. - CIM team. - Supervisors, departments, faculties that are directly related.				- Risk areas and facility management. - Modified teaching and learning activity. - Communicative management.

		checked by supervisors, departments, faculties.					
3. Identify cleaning, washing stations for students, staff and covers the preparation of accessories for use in preventing Covid-19.	<div>Establishment of a cleaning, hand washing station for students, staff.</div> <div>↓</div> <div>Preparation, indication of suitability and sufficient for equipment related to cleaning and hand washing.</div>	-Identify, determine by text labels for hand washing station. -How to wash your hands for students and staff (Poster session on board). -Checking in stock inventory with procurement department for related devices.	- Top management. - CIM team. - Supervisors, departments, faculties that are directly related. - Purchasing department.				- Risk areas and facility management. - Modified teaching and learning activity.




Considered Measures/ Issues	Policy/ Procedure/ Practices	Related Documents/ Evidence	Responsible Person	Practice Status			Related Control Measures
				Completed	No.	In Progress	
<u>I. Preparedness before starting open university.</u>							
4.Determine screening points at the main entrance area, including screening temperature check of students and personnel within the university.	<div>Identify Covid-19 risk areas with a layout plan.</div> <div>↓</div> <div>Checking the temperature of students, staff, and external visitors.</div> <div>↓</div> <div>Found a temperature level exceeding 37.5degrees has been operating. to interact responses with the event</div> <div>↓</div> <div>Limiting the number of visitors, parents at the main entrance.</div> <div>↓</div> <div>Record and summarize the results of the temperature measurement.</div>	<div>-Announcement of risk areas indicated according to the layout plan.</div> <div>-Documented procedure of temperature screening and measurement for students and staff.</div> <div>- Record, summary of screening temperature measurement results.</div>	<div>- Top management.</div> <div>- CIM team.</div> <div>- Supervisors, departments, faculties that are directly related.</div> <div>- Personnel, operators who are directly involved.</div>				Administrative control and CIM policy management. - Risk areas and facility management.
5. Cleaning the campus areas related to the implementation of teaching and supporting activities.	<div>Identify areas involved in the impact and risk of contracting Covid-19</div> <div>↓</div> <div>Determine cleaning procedures and guidelines, emphasizing the hard and soft surface areas.</div> <div>↓</div> <div>Selection and optimum use of effective disinfectants.</div>	<div>- Determine an impact assessment and the risks associated with the source of Covid- 19 into various main areas on campus (Prepare an announcement document).</div> <div>- Relying on daily routine checklists in pre-determined</div>	<div>- Top management.</div> <div>- CIM team.</div> <div>- Supervisors, departments, faculties that are directly related.</div>				Administrative control and CIM policy management. - Risk areas and facility management.

	 Summary of results indicating the success level of cleaning and disinfecting operations within the university.	areas within the university. - Identify suitable disinfectants and compare their efficacy to EPA standards. - Specify the standard disinfectant concentration and is suitable for work (described in the announcement above). - Record, summary of relevant results.	- Personnel, operators who are directly involved.				
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Considered Measures/ Issues	Policy/ Procedure/ Practices	Related Documents/ Evidence	Responsible Person	Practice Status			Related Control Measures
				Completed	No.	In Progress	
I. Preparedness before starting open university.							
6 .Modified teaching pattern and activities to be appropriate and consistent with the circumstances that occur at that time.	<div>Setup a daily schedule plan (a document that has been customized for daily teaching and learning details).</div> <div>↓</div> <div>Determine remote, distance and Online learning schedule (Time schedule).</div> <div>↓</div> <div>Determine Video clip, conference, and distribution.</div>	<div>-Announcement and policy document.</div> <div>-Procedures and documents related to teaching and learning activities.</div> <div>- IT media and teaching aids.</div>	<div>- Top management.</div> <div>- CIM team.</div> <div>- Supervisors, departments, faculties that are directly related.</div> <div>- Personnel, operators who are directly involved.</div>				Administrative control and CIM policy management. - Modified teaching and learning activity. - Communicative management.
7. Providing knowledge of Covid- 19related practices for staff, students, and parents.	<div>Covid - 1 9 education for university personnel and workers.</div> <div>↓</div> <div>Covid - 1 9 education for parents and guardians.</div>	<div>- Configure CIM policy to support in the form of command, declaration.</div> <div>- Define individual CIM procedures, guidelines of Covid- 19issues.</div> <div>-Determine methods of training, coaching personnel through internal communication.</div> <div>-Prepare infographic in case of Covid-19.</div>	<div>- Top management.</div> <div>- CIM team.</div> <div>- Supervisors, departments, faculties that are directly related.</div> <div>- Personnel, operators who are directly involved.</div>				Administrative control and CIM policy management. - Communicative management
8 .Internal communication with poster session and	<div>Creating a poster session.</div> <div>↓</div> <div>Creating an infographic presentation.</div>	<div>-Bulletin Board (for communication with students, staff, operators).</div>	<div>- CIM team.</div> <div>- Personnel, operators who are directly</div>				- Communicative management.

infographic presentation.		-Bulletin Board (CIM team)	involved.				
II. While studying periods of university.							
9. Temperature measurement of students, staff, external visitors during the opening period.	<div>Procedure of practice regarding the temperature check of students, staff.</div> <div>↓</div> <div>If the temperature exceeds 37.5 degrees (Response to suspected Covid - 19case).</div> <div>↓</div> <div>Record, summary of temperature measurement results for students, staff, external visitors.</div>	- Guideline documents. - Screening temperature checklist (since entering university). - Procedure of practice responding to suspected cases of Covid- 19for students. - Record, summary of relevant results.	- CIM team. - Supervisors, departments, faculties that are directly related. - Personnel, operators who are directly involved.				- Risk areas and facility management.

Considered Measures/ Issues	Policy/ Procedure/ Practices	Related Documents/ Evidence	Responsible Person	Practice Status			Related Control Measures
				Completed	No.	In Progress	
<u>II. While studying periods of university.</u>							
10 .Taking advantage of personal protective equipment (PPE).	<div>Using PPE supplies: mask, gloves, face shield, etc.</div> <div>↓</div> <div>Procurement of PPE sources that are suitable and sufficient for utilization.</div>	- Related equipment procurement records.	- Supervisors, departments, faculties that are directly related. - Personnel, operators who are directly involved.				- Engineering and PPE management.
11 .Air conditioner and ventilation system maintenance.	<div>Air conditioning maintenance.</div> <div>↓</div> <div>Maintenance record and summary results.</div>	- Record, summary of preventive maintenance and related equipment.	- Supervisors, departments, faculties that are directly related. - External outsourced.				- Engineering and PPE management.
12. Area cleaning, concentration level and frequency of disinfectant use.	<div>Area cleaning procedure for Covid - 19prevention.</div> <div>↓</div> <div>Record, summary results to indicate the success of the performance.</div>	-Procedures and related documents. - Record, summary of relevant results.	- Supervisors, departments, faculties that are directly related. - Personnel, operators who are directly involved.				- Risk areas and facility management. - Cleaning and disinfection management.
13. Canteen and lunch meal service preparation.	<div>Preparation, cleanliness of utensils, equipment for lunch.</div> <div>↓</div> <div>Outsourced food quality inspection and control.</div>	-Equipment, methods of practice (Quality control), checklist documents.	- Personnel, operators who are directly involved.				- Risk areas and facility management.

	 Record, summary of performance lunch meal preparedness.	- Record, summary of relevant results.	- External outsourced.				- Cleaning and disinfection management.
14. Modified teaching pattern and avoided some types of activities.	Avoid and No-extracurricular activities.  Avoid events that are attended by a large number of people.  Avoid activities that have an opportunity to touch each other (No contact activity).	-Announcement, policy document. -Procedures, documents related to teaching and learning activities. - IT media and teaching aids.	- Top management. - CIM team. - Supervisors, departments, faculties that are directly related.				Administrative control and CIM policy management. - Modified teaching and learning activity. - Communicative management.

Considered Measures/ Issues	Policy/ Procedure/ Practices	Related Documents/ Evidence	Responsible Person	Practice Status			Related Control Measures
				Completed	No.	In Progress	
II. While studying periods of university.							
15. Identification of suspected case of Covid-19 in university students, staff.	<div>Response planning of Covid - 19 (for students).</div> <div>↓</div> <div>Response planning of Covid - 19 (for personnel, operators).</div> <div>↓</div> <div>Finding a positive test result (for students and staff).</div> <div>↓</div> <div>Cleaning the entire areas.</div> <div>↓</div> <div>Record, summary results of recovery from Covid-19.</div>	<ul style="list-style-type: none">- If found positive test, must be specified in the Covid-19 incident logbook.- Report to parents, guardians, government officials directly involved.- Prepare self-quarantine to monitor Covid- 19 positive test.- Procedures as documented system and use for the supporting results.- Record, summary of relevant results.	<ul style="list-style-type: none">- Top management.- CIM team.- Supervisors, departments, faculties that are directly related.- Personnel, operators who are directly involved.				<ul style="list-style-type: none">Administrative control and CIM policy management.- Modified teaching and learning activity.- Suspected cases for Covid-19 infection.- Communicative management.
III. At the end and the period after the closure of the university.							
16. Monitoring and CIM performance reporting.	<div>CIM program monitoring and daily performance recording.</div> <div>↓</div> <div>Preparing a monthly report to indicate the positive results of CIM performance (Covid-19 Free report).</div>	<ul style="list-style-type: none">- Announcement, policy document.- Procedure and related documents.- Minute of meeting, monthly CIM summary report.	<ul style="list-style-type: none">- Top management.- CIM team.- Supervisors, departments, faculties that are directly related.				<ul style="list-style-type: none">Administrative control and CIM policy management.- Communicative management.

17. Management review (MR) meetings, CIM teams every ended semester.	<div data-bbox="354 285 610 394">Preparation of a management review report to indicate the level of success of CIM performance. (Covid-19 Free Performance Dashboard)</div> <div data-bbox="451 436 493 470">↓</div> <div data-bbox="354 485 610 604">Ongoing revisions, improvements, developments, and enhancements to the achievement of CIM performance and towards the sustainability of the university (CIM Sustainability Report)</div>	-Announcement, policy document. -Procedure and related documents. - MR - Minute of meeting, CIM semester summary report.	- Top management. - CIM team. - Supervisors, departments, faculties that are directly related.			Administrative control and CIM policy management. - Communicative management.
Summary of % Practice Status				100%		

The university also needs to recognize and realize if safety and security conditions are to be achieved or sustained in the conduct of teaching-learning missions. Therefore, it is possible to continue in the future for understanding in main concept and operates in accordance with the system described in detail within this article called “Crisis Incident Management (CIM Model)” seems to be the right answer or consistent with the current situation the university is confronting.

All details of CIM-related pattern and main components that were drafted and presented, by based on a core principle and conceptually focused on “Preventive action and control measures”. The universities need to establish a formal CIM support system that complies with key steps such as: Identifying, analyzing impacts associated with the source of Covid-19, documenting the CIM program, determination of procedures and control measures that is important and appropriate to help mitigate the spread of Covid-19, including review, communication and identification of the level of success associated with preventive action, or help reduce the widespread of disease (Covid-19 free) in the appearance of evidence that can be measured in a quantitative or lastly indicate the results of that performance as a “Good Covid-19 Free Performance Dashboard”.

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