

**FATWA ANALYSIS BETWEEN NATIONAL AND INTERNATIONAL FATWA INSTITUTIONS ON LOW MOLECULAR WEIGHT HEPARIN (LMWH) AS THROMBOPROPHYLAXIS DURING PREGNANCY FOLLOWING COVID-19 DIAGNOSIS**

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<b>Abstract</b>	<p><i>Blood clotting or Venous Thromboembolism (VTE) during pregnancy following Covid-19 infections can lead to catastrophic event. The hypercoagulable state of pregnancy is increased following Covid-19 inflammatory reaction leading to extensive use of Low Molecular Heparin (LMWH). This paper aims to analyse the methodologies used in imposing fatwa or legal rule (ḥukm) upon LMWH issue due to its porcine origin. Thromboprophylaxis with LMWH is permissible for critical (ḍarūrah) condition in VTE events as commonly agreed by majority Muslim scholars. However, with the increasing maternal mortality and morbidity due to VTE following recent Covid-19 pandemic in Malaysia, a dire need of an emergency buffer to contemplate the description of ḍarūrah and its level of severity. LMWH has been used widely as thromboprophylaxis and treatment among pregnant women especially in Covid-19 related coagulopathy. However, does LMWH allowed only when the women are at risk determined as ḍarūrah as mentioned by Islamic institutions around the world? The sighah term in ḍarūrah as imposed in the fatwa by Islamic institutions at national and international level with regards to the above mentioned based on document review method. This study concludes that prompt action should be taken by Islamic Institutions to respond on the use of thromboprophylaxis with LMWH upon pregnant women with Covid-19 infection by addressing the issue of hiḥf al-naḥf in determining the minimum level ḍarūrah known as tenacious ḥājah (need) and maximum level of ḍarūrah. Thus, signifies the proficiency of Muslim scholars in current contemporary issues.</i></p> <p>Keywords: <i>Venous Thromboembolism, Low Molecular Heparin, Fatwa.</i></p>
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**INTRODUCTION**

Based on what is currently known about the Covid-19 pandemic, its impact is poorly understood upon pregnancy phase (Pettirosso et al., 2020), considering that pregnant women are considered as a high-risk group with potential physiologically coagulopathy (Turan et al., 2020). One of the key answers to attain sustainable maternal healthcare is having an intense support from Islamic fatwa institute specifically in this condition with regards of the porcine based anticoagulant usage prophylactically with prohibited substance (Zizi Azlinda, 2021).

Due to current understanding of Covid-19 diagnosis upon pregnant women, their hypercoagulable state has been an additional concern on top of their immunological status

which are already susceptible to any viral infections including Covid-19 (Chen et al., 2021). While increasing pregnant women had Venous Thromboembolism (VTE) event following Covid-19 sequelae, an enhanced innate support from Islamic institutions at national and international level around the globe are very much required with regards to notorious issue around porcine based anticoagulant such as Low Molecular Weight Heparin (LMWH) used as first line VTE's prophylaxis treatment (Dado et al., 2019).

In this study, we meant to analyze the methodologies from *fiqh* point of view, used at imposing *fatwa* towards LMWH in the virtue of necessary (*darūrah*) and tenacious need (*ḥājah*) (Irwan et al., 2009) specifically for pregnant and puerperium women who are diagnosed with VTE (Nur Zaireena et al., 2018) following Covid-19 infection which impose a tenacious need of thromboprophylaxis usage with LMWH as part of its treatment.

The purpose of this study is to achieve a harmony verdict led by MNFC as an authority Islamic institution in Malaysia while observing *fatwa* from others' Islamic institutions either national or international level which able to solve the current concern in Covid-19 pandemic, yet many societal transformation will takes time and need to be managed delicately to ensure safe and healthy outcome (Muhamad et al., 2018). In particular, the study seeks to scrutinize: *What is the perfect decision or fatwa regarding LMWH issued by Islamic Fiqh Institutions in solving contemporary issues like thromboprophylaxis specifically during pregnancy in Covid-19 pandemic state?*

## LITERATURE REVIEW

Recent data of statistic of Malaysia in 2020 had caught the public's interest when it was reported that obstetric embolism was the highest percentage and principal cause for maternal deaths (18.8%) over other incidents such as maternal mortalities including "childbirth and puerperium (18.2%), postpartum hemorrhage (16.2%), ectopic pregnancy (6.0%) and eclampsia (6.0%)" (Department of Statistis, 2021). It marks an increasing trend with 6.4% from 2019. Global Burden Diseases (GBD) study reported that thromboembolism is a significant contributor to mortalities and morbidities of the world (ISTH Steering Committee for World Thrombosis Day, 2014). VTE is a leading cause of maternal mortalities and morbidities in developed countries worldwide (Greer, 2015) including England (Sultan et al., 2013), Scotland (Kane et al., 2013) and Australia (Australian Institute of Health and Welfare, 2017) which has shown that thrombosis has been the direct cause of maternal death.

Venous Thromboembolism (VTE) has two common presentation includes pulmonary embolism (PE) and deep vein thrombosis (DVT) (Bates et al., 2016). Confidential Enquiry Maternal Death (CEMD) of Malaysia reported in 2009-2014, state that there were 68 deaths caused by obstetric VTE in the period from 2012 to 2014, with 41 deaths (60.3%) due to blood clot embolism and 27 deaths (39.7%) due to amniotic fluid embolism (MOH, 2018).

It is notably that the increasing caesarean section rates is one of the known predisposing risk factors in this research because it could emerge as a risk factor of thrombosis (Karalasingam et al., 2020). Based on data published in 2010, women delivered by caesarean section in Malaysia has gradually increased (Karalasingam, S. D., Jegasothy, R., Jeganathan, R., Zolkepali, A. & Aiman, 2012) while operative delivery have higher risk (Walsh & Malone, 2016) to be indicated as VTE risk itself without excluding other lifestyle factors such as obesity, age above 35 years, smoking and immobility (MOH, 2014).

In addition to that, in the Covid-19 pandemic, some cautious prevention and treatment necessarily needed around pregnancy. Most COVID-19 cases worldwide show indications of human-to-human transmission. Respiratory droplets or secretions, faeces, and fomites are all good sources of this virus (objects). Close contact with an infected person (within 2 metres) or contaminated surfaces are the most common ways for the virus to spread (RCM|Royal college of Midwives and the RCOG|Royal college of Obstetricians & Gynecologists, 2020). In fact, the new coronavirus (SARS-Cov-2) was identified in late 2019 was said to be more contagious compared to Covid-19 itself because it causes severe

respiratory distress syndrome (Vale et al., 2021). The name SARS-Cov-2 chosen due to genetically from coronavirus that responsible as causal agent of Coronavirus Disease 2019 (Ludwig & Zarbock, 2020).

Figure 1 shows the transmission of the SARS-Cov-2's infection permeated through few mechanisms;

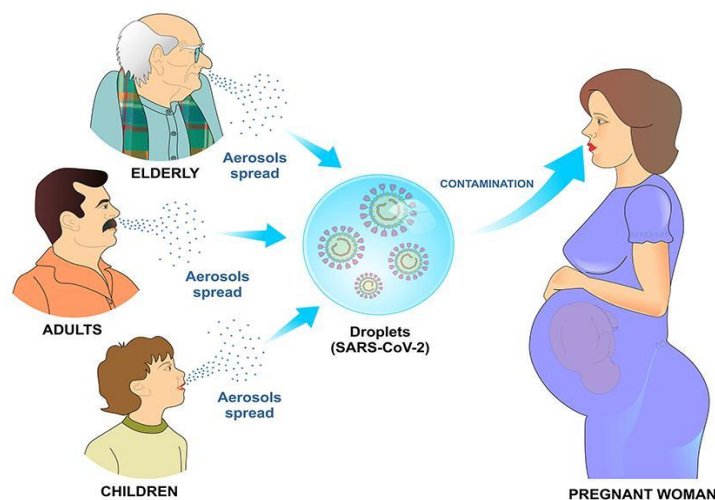


FIGURE 1: The transmission of the SARS-Cov-2's infection including pregnant woman (Vale et al., 2021).

Figure 1 indicates the SARS-Cov-2 can be transmitted through droplets either direct, indirect or close contact with infected people through saliva or respiratory droplets infected persons' cough, talk, sing or sneeze which expelled the aerosol spread (WHO, 2020). Even though the effect of SARS-CoV-2 on pregnant women remains to be determined, however, the last trimester pregnancy known that lung respiratory system normally restricted, cause the pregnant women more susceptible to respiratory pathogen such as Sars-Cov-2 (Vale et al., 2021).

That condition even put pregnant women in risky state if they are VTE's patients as pregnancy is widely recognized as hypercoagulable state (RCM|Royal college of Midwives and the RCOG|Royal college of Obstetricians & Gynecologists, 2020). The coronavirus disease 2019 may predispose pregnant women to VTE, according to emerging body of evidence.

Subsequently, they necessarily require to re-undergo the risk assessment for VTE and recruited with an appropriate prophylaxis (Lou-Mercadé et al., 2020) such as LMWH (RCM|Royal college of Midwives and the RCOG|Royal college of Obstetricians & Gynecologists, 2020).

Meanwhile, in it was reported in Malaysian News Yahoo that, maternal mortality during pregnancy between March and July 2021, a total of 5,636 pregnant women tested positive for Covid-19, with 144 people dying because of the virus up until September 14 (Kenneth Tee, 2021). There are few published cases reporting about thrombotic pregnant women with covid-19 in the third trimester of pregnancy (Vlachodimitropoulou Koumoutsea et al., 2020). Case reports revealed that these pregnant women were assessed upon their coagulopathy risk upon diagnosis of Covid-19 infection, and have received thromboprophylaxis (Servante et al., 2021). A case report series in Turkey reported of pregnant women tend to deteriorate and become critically ill with Covid-19 able to be managed though generally, the illness severely and critically infected accounting for 8% and 1% respectively (Bağlı et al., 2021). In Wuhan and France, there were cases of pregnant women with severe covid-19 did not develop any thrombolytic complications, yet no

mentioned of thromboprophylaxis usage (Yan et al., 2020). Pereira et al.'s study (2020) published cases of pregnant women with Covid-19 infection and develop thrombocytopenia at 25%, yet still had thromboprophylaxis as treatment. Meanwhile, in the UK, their rapid report in Maternal, Newborn and Infant Clinical Outcome Review Programme (Knight et al., 2020) there were two reported thromboembolic events leading to maternal death despite treated with thromboprophylaxis. This situation explains that proper prevention including thromboprophylaxis during Covid-19 pandemic may be indicated towards pregnant women as the findings are similar potential to those in non-pregnant adults (Lazo-langner et al., 2018).

Thromboprophylaxis is the one of preventive treatment in managing the risk of thrombosis following inflammatory response of covid-19 during pregnancy. MOH recommended LMWH as the first line of thromboprophylaxis during pregnancy and puerperium thromboprophylaxis with except those who had hyper allergic history with heparin base (MOH, 2013). In the Clinical Practical Guideline (CPG), MOH stated that pregnant mothers with VTE's and inflammation caused by Covid-19 will put patients at higher-risk of VTE event. Pregnant Covid-19's patients under category 1 and 2 will be counted as 1 point according to VTE Risk assessment score; while pregnant mothers with positive Covid-19 in category 3 or more would require thromboprophylaxis (MOH, 2021).

Recently, LMWH from *fiqh* perspective discussed by Irwan and friends (2019) and thromboprophylaxis with LMWH is suggested for pregnant and puerperium women to prevent VTE with the *qāidah fihiyyah al-ḍarūrah yuzāl* and *al-ḥājah tunazzal manzilah al-ḍarūrah* in the stage of moderate risk (level 3) (Irwan et al., 2009). Recently, PhD dissertation about the usage of LMWH during pregnancy and puerperium from *fiqh* perspective found that LMWH can be permitted when the patients in *ḍarūrah* condition in the fatwa of MNFC could lead to confusion among medical doctors because they may interpret the verdict of *ḍarūrah* to use LMWH only at high-risk mothers only, whereas terminology *ḍarūrah* also comprises tenacious need (*ḥājah*) (Zizi Azlinda, 2021). This can be viewed in online newspaper article by Krisna Kumar (2020) which stated that LMWH is allowed at high-risk mothers, supported with laboratory test evidence of non- traceable porcine components in the LMWH preparations.

Based on those literature, we observe the gap in this situation is the term of *ḍarūrah* in the fatwa is not understandable in *fiqh* terminology. This pandemic situation also subsequently evaluates the usage of LMWH around pregnancy and puerperium as Covid-19's patients are at high risk of developing VTE incident. In fact, *fuqahā'* did not rule out *ijtihād* and *fatwa* without examine the current situation and human interest to attain quality of life.

## CONCEPTUAL FRAMEWORK

The concept of how legal rule (*ḥukm*) or *fatwa* had been imposed from *fiqh* perspective supposedly understood to reveal with perfect fatwa as timely initiative for human problems particularly related with novel issues. This is because, *fiqh* scholars (*fuqahā'*) agreed to the extent that legal reasoning (*ijtihād*) in fatwa built in a situation, culture, and the interest of society at one time, however, they did not rule out the likelihood of a change in *ijtihād* when reasonable factors changed (Hapiz, 2016).

In this study, we conceptualize several elements that necessarily considered prior to the outcome such as *fiqh* methodologies employed which underlying over a fatwa imposed, current factors and merging with experts' review (shown in the Figure 2). It may say that, in previous, *fuqahā'* had imposed to an outcome with certain *fiqh* methodologies in the *ḥukm* of using prohibited medicinal substance in medical treatments. However, time changes and Muslim could stumble upon another complicated factors like Covid-19 pandemic and natural physiological changes in pregnant mothers. By merging with the experts' opinion with said situation, an outcome supposedly may require a review upon the previous fatwa made, particularly during pregnancy where scientifically verified has big possibilities to be postulated as VTE's sufferers.

Figure 2 shows the conceptual framework of how parts in *ijtihad* process merged into an outcome of current *fatwa* should be determined.

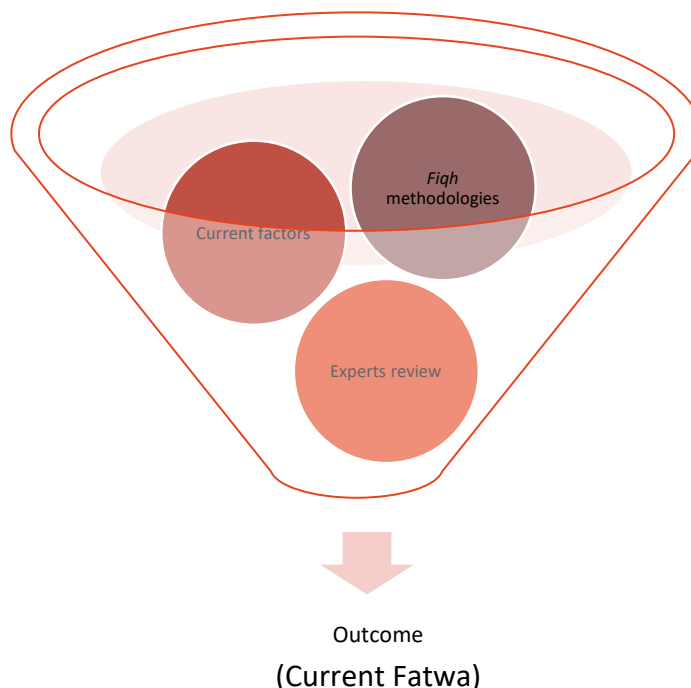


FIGURE 2: The process of *ijtihad* to conceive a final outcome (current fatwa)

## METHODOLOGY

In achieving the objective of this study, we adopted the qualitative methodology (Creswell, 2014) with using interpretative paradigm within the lens of Islamic foundation and relied on *fiqh* normative research system. Shadi (2013) enunciated that “*fiqh* is a comprehensive normative system that contains wide range of topics, almost all aspects of a man's life, from rituals (i.e; body purity, prayer, fasting), to morality (i.e; sinfulness of arrogance or backbiting), and law in various aspects which including marriage, finance, land renting, trade contract among others.” This approach of *fiqh* normative system derived from variation of intellectual resources either classic or contemporary orientation.

The research employed a bounded system; The “what” of the unit of which there are boundaries upon what is going to be studied (Merriam & Tisdell, 2016). Thus, case study is more appropriate. As this research focused on the consumption of porcine base anticoagulant medicine such as LMWH during pregnancy and puerperium from *fiqh* perspective, non-probability sampling specifically purposive sampling or deliberate sampling had been adopted.

Purposeful sampling interpreted as “items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme. In other words, under non-probability sampling the organizers of the inquiry purposely choose the units of the universe for constituting a sample on the basis that the small mass that they select out of a huge one will be typical or representative of the whole” (Kothari, 2004).

## RESULTS

It is notable that Islamic *fiqh* institutes around wide world plays an imperative in responding to contemporary issues related to *hukm*. Below, we forward several Islamic institutions, nationally and internationally which had issued fatwa of LMWH with stating the methodologies from *fiqh* perspective in achieving a final outcome of fatwa. However, none of them disclose the issue of thrombosis, pregnancy related to Covid-19 case yet. Note

that their fatwa regarding thromboprophylaxis upon pregnant women to prevent VTE before Covid-19 declared as pandemic by WHO nowadays.

### 1. Majma' al-Fiqhiyy al-Islāmiyy Li al-Rābitah al- 'Ālamiyy al-Islāmiyy (Kabsh, n.d.)

The majma' held a 16th meeting in Mecca to decide legal rule for LMWH for prevention and treatment of VTE in 19-23/10/1424H or 13-17/12/2003. They decided to declare that LMWH for blood clotting prevention treatment is permissible with *ḍarūrah* justification despite there is halal alternative due to benefits of LMWH that are superior than halal anticoagulant or the halal alternative usage poses side effects to the patients.

Albeit their decision does not deny that LMWH had undergone *istiḥālah tammah*, instead their ultimate justification is *ḍarūrah* situation of VTE disease which eligible to be given concession or *rukhsah* regarding LMWH. The process of *istiḥālah* described in LMWH when the transformation of porcine mucosal into drug liquor substance occurs.

### 2. Majma' al-Fiqhiyy al-Islāmiyy al-Duwaliyy (Majma' al-Fiqhiyy al-Islāmiyy al-Duwaliyy, 2015)

The majma' held a meeting on 22-24/5/2015 in Kuwait (Majma' al-Fiqhiyy al-Islāmiyy al-Duwaliyy, 2015): LMWH which produced from porcine base heparin is prohibited due to not conform with *istiḥālah* principle chemically. However, if LMWH substance modulated from genetic engineering method which manipulating from halal sources only is permissible for Muslim consumption.

Thus, it is clearly notable that the decision made by Majma' al-Fiqhiyy al-Islāmiyy al-Duwaliyy denied that LMWH had undergone the process of *istiḥālah* chemically. The Majma' permits the usage of LMWH under the *ḍarūrah* and *ḥājah* justification in foods and medical areas based on the *qā'idah fiqhiyyah* namely *al-ḍarūrāt tubīḥ al-maḥzurāt*.

### 3. Fatwa by Dr Wahbah al-Zuhayliyy

Personal fatwa from prominent Islamic Fiqh scholar, Dr Wahbah al-Zuhayliyy that LMWH which resulted from conventional heparin or UFH is allowed due to the principle of *istiḥālah tammah* and principle of *ḍarūrah* and *ḥājah* in the food or medical fields. Besides, the law of permissibility of LMWH must go through chemically process that transforms the porcine mucosal intestine thoroughly until the porcine source cannot be detected anymore. If the manufacturing does not fulfil *istiḥālah tammah* chemically and physically, then LMWH cannot be judged as permissible (al-Zuhayliyy, 2015).

### 4. Fatwa of Singapore

MUIS imposed that porcine base heparin had totally undergone the process of *istihlāk* and high concentration which referring to the presence of porcine DNA in heparin is allowed according to the few hadiths of treatment with camel urine, wearing silk cloth for mangy skin treatment and wearing fake nose made out of gold to avoid smelly wound nose.

The MUIS regards low-concentration heparin as LMWH while high-concentration heparin as conventional UFH which produced from porcine either. Thus, MUIS forwarded the argument with *istihlāk* principle wherein the LMWH mixed into halal chemical called liquid sodium and eventually resulting drug substance which transforming the porcine mucosal intestine.

### 5. Dār al-Iftā' Al-Miṣriyyah (Dār al-Iftā' Al-Miṣriyyah, 2014)

They declared that heparin status in Islam is allowed if it had transformed chemically from porcine to another new form due to *istiḥālah* is legal tool of filth purification in shariah. If heparin does not undergo the process of *istiḥālah* completely, then *ḍarūrah* principle permits for Muslim consumption based on Chapter al-An'ām verse 119 and al-Baqarah verse 173. Thus, clearly that the justification which underpin by Dār al-Iftā' al-Miṣriyyah is *istiḥālah* principle if the heparin without enunciated LMWH specifically.

## 6. Negeri Sembilan Fatwa State Council

They do not allow any usage of LMWH because there is halal alternative called Fondaparinux (MAL 20034441A) which said that its potential as similar as LMWH. However, LMWH can be permitted when there is no other alternative is the principle of *ḍarūrah* (MUFTINS, 2019). Clearly said, the principle of *ḍarūrah* will verify the permissibility to use LMWH for VTE management.

## 7. Sarawak Fatwa State Council

They declared that Clexane and Fraxiparine are prohibited due to the presence of halal alternatives which possesses the capability of becoming as effective as LMWH. LMWH is allowed when there is no way out to save lives unless through consuming it. Eventually, *ḍarūrah* principle is applicable for Clexane consumption (Mufti Negeri Sarawak, n.d).

## 8. MNFC

An 87<sup>th</sup> meeting of Committee of Religious Affairs was held on 23<sup>rd</sup> -25<sup>th</sup> of June 2009 discussed on Islamic legal rule on the usage of Clexane and Fraxiparine. Committee decided (JAKIM, 2015):

*Islam prohibited the usage of medicine which made out of unlawful sources to treat a disease except halal source medicine is inaccessible and to prevent harm according to the required rate only until the halal source medicine is found.*

Therefore, as the usage of Clexane and Fraxiparine are necessarily needed (*ḍarūrah*) upon patients to prevent blood clot formulation which could occurs immediately in chronic condition, the committee decided to impose that both types of the medicines are prohibited due to its unlawful sources in the sight of Islam as currently there is an alternative medicine called Arixtra which is lawful source extraction and its effectiveness as similar as Clexane and Fraxiparine.

MNFC argued that Clexane and Fraxiparine are only permitted to consume them under *ḍarūrah* justification regardless *istiḥālah* or *istihlak* principle and *ḥājah* principle.

According to research established by Irwan et al., (2019), they received the data from their interviewees, that some cases engaging LMWH prescription upon pregnant mothers due to VTE risk had created conflict between medical doctors and pharmacists, that occur when pregnant mothers reluctant to consume LMWH once they informed by pharmacists the status of non-halal on prescription by the doctors. Other data balanced the situation when some Muslim medical doctor reluctant to prescribe moderate risk mother of VTE (3 points) during pregnancy and puerperium owing to other halal alternative such as Unfractionated Heparin (UFH) able to prevent the blood clot events, provided the surveillance had been carried on the patient, based on their experience dealing with moderate risk mothers of VTE and the management went well (Zizi Azlinda, 2021). However, data shows that prolonged UFH do not advised for long hospitalization because it may associate with maternal adverse effects, mainly the reduction of bone density and risk for osteoporosis (Hawkins et al, 2005) which is as the other less common side effect of UFH. Besides, approximately 5.5% bleeding complication occurs with intravenous UFH compared to LMWH with range 2% of bleeding. Therefore, a close monitoring should be seriously practiced particularly when the patients is pregnant or post-delivery and in need to use UFH as anticoagulant (Dhakal et al., 2017). Thus, this situation should be forwarded for *fuqahā'* to contemplate particularly when engaging pregnant and puerperium women.

Some Muslim medical doctors such as O&G department of Hospital Sarawak advance maternal mortality ratio Sarawak 2010-2017 indicates that they able to achieve Millennium Development Goal (MDG)'s target set up by WHO to mitigate maternal mortality and morbidity with starting thromboprophylaxis LMWH drug as early as moderate risk, with condition having informed consent from the patients first (Irwan et al., 2019). In addition, another additional concern relating this LMWH issue is we also live in pandemic Covid-19 that need to fight either. So, how do fatwa can be viewed as a solution while not

putting down religion strong-rooted in Muslim society specifically when the product manufactured from filthy substance and recommended by specialists?

## DISCUSSION

While Vlachodimitropoulou Koumoutsea et al., (2020) reported that their study is the first report about pregnancy in thrombosis followed by Covid-19 diagnosis, then we may say that, this is the first study describing that the usage of LMWH during pregnancy following Covid-19 infections from *fiqh* perspective. However, as the hypercoagulable state of pregnancy is increased following Covid-19 inflammatory reaction (Servante et al., 2021) leading to extensive use of LMWH particularly, appropriate dosing regimen of prophylactic LMWH should be discussed (Knight et al., 2020). Observing this recommendation from experts extracted from latest Guidelines on the Management of Covid-19 in Obstetrics and Gynaecology (MOH, 2021) or the UK's Coronavirus (Covid-19) Infection in Pregnancy: Information for healthcare professionals (RCM | Royal college of Midwives and the RCOG|Royal college of Obstetricians & Gynecologists, 2020), we found that a particular *fatwa* on pregnant and puerperium women timely owing to pregnancy itself indicates high prevalence to require prophylactic LMWH because of their physiologically prothrombotic state as stated by Rosenbloom et al., (2019), Mardiana et al., (2016), ACOG, (2018) that pregnancy itself is the potential risk for VTE with 4 - 10 times compared to non-pregnant state while puerperium poses a higher risk than pregnancy state with 15 to 35 fold compared to age-matched non-pregnant women (ACOG, 2018, Bates et al, 2016). Although the event of VTE among pregnant women is considered low in incidence, numerous studies revealed that obstetric VTE seems to be highly associated with maternal mortality around the globe (Duffy & Friedman, n.d., Meng et al, 2014). Currently, in the pandemic of Covid-19, intensive care support particularly pharmacological thrombosis prophylaxis in all Covid - 19 patients admitted to the ICU strictly recommended (Klok et al., 2020).

Table 1.0 shows the decision (fatwa) regarding LMWH in a table imposed by Islamic *fiqh* institutes around wide world (Analyzed by the researchers).

Level	Organization of Fatwa /Individual	Date of Gazetting the Fatwa/Venue	Fatwa	Justification	Reference
International	Majma' al-Fiqhiyy al-Islamiyy li al-Rabitah al-Islamiyy al-Islamiyy	13-17/12/2003 Mecca	Permissible if there is no alternative	✓ <i>Darurah</i>	Kabsh, n.d.
	Majma' al-Fiqhiyy al-Islamiyy al-Duwaliyy	22-24/5/2015	Prohibited	<ul style="list-style-type: none"> <li>• LMWH is unconform to <i>istiḥālah</i> principle.</li> <li>✓ Allowed when <i>darurah</i> and <i>hajah</i> only</li> </ul>	Majma' al-Fiqhiyy al-Islamiyy li al-Rabitah al-Islamiyyah, 2015
	Dr Wahbah al-Zuhayliyy	2015	Permissible	<ul style="list-style-type: none"> <li>✓ <i>Istiḥālah tammah</i></li> <li>✓ <i>Darurah</i></li> <li>✓ <i>Hajah</i></li> </ul>	Al-Zuhayli, 2015



	Fatwa of Singapore (MUIS)	NA	Permissible	<ul style="list-style-type: none"> <li>✓ <i>Istihālah</i>,</li> <li>✓ <i>Istihlak</i></li> <li>✓ <i>Darurah</i></li> <li>✓ <i>Hajah</i></li> <li>✓ <i>Maslahah</i></li> </ul>	MUIS, 2017
	Darul Ifta' Al-Misriyyah Online	NA	Permissible	<ul style="list-style-type: none"> <li>• If fulfill LMWH <i>istihālah</i>'s requirement, LMWH permitted.</li> <li>• If not fulfill <i>istihālah</i>'s requirement, it is allowed under <i>darurah</i> principle</li> </ul>	Dar al-Ifta' al-Misriyyah, 2014
National	Malaysian National Fatwa Council (MCMKI)	23-25/6/2009	Prohibited	<ul style="list-style-type: none"> <li>✓ <i>Istishab</i></li> <li>✓ Allowed when <i>darurah</i> only</li> <li>✓ The existence of halal alternative</li> </ul>	JAKIM, 2015
	Negeri Sembilan Fatwa State Council	NA	Prohibited	<ul style="list-style-type: none"> <li>✓ <i>Istishab</i></li> <li>✓ Allowed when <i>darurah</i> only</li> <li>✓ The existence of halal alternative</li> </ul>	MuftiNS, 2019
	Sarawak Fatwa State Council	2012	Prohibited	<ul style="list-style-type: none"> <li>✓ <i>Istishab</i></li> <li>✓ Allowed when <i>darurah</i> only</li> <li>✓ The existence of halal alternative</li> </ul>	Mufti Negeri Sarawak, n.d.

According to the table, we can see there are two main divisions; national and international of Islamic fatwa of authorities which issued the fatwa decision pertaining to LMWH as thromboprophylaxis. The only similar justification shared by all stipulated Islamic authorities in the Table 1 is *darūrah* as it is necessarily applied in dire condition (Isa, 2016) owing to prevent oneself from harm prescribed by shariah (al-Zuhayliyy, 1985). However, based on this LMWH case, little mentions *hājah* condition plays vital role in allowing unlawful substance like LMWH anticoagulant to prevent VTE around pregnancy and puerperium (Irwan et al., 2009, Zizi Azlinda, 2021).

Meanwhile, we believe even though *fuqahā'* have well understanding about the similar justification of *darūrah* and *hājah* in permitting unlawful substitute to be consumed such as thromboprophylaxis with LMWH however, there is a gap to be questioned when reviewing the above table. It seems to explain that for some Islamic institutions, *hājah* is not recognized as valid indicator in exempting the moderate risk mothers to VTE which equivalent to 3 points while high risk will begin at 4 points (MOH, 2013). Not to mentioned in today's reality with Covid-19 pandemic that, one point will be counted upon Covid-19 fighters during pregnancy assessment of VTE risk (MOH, 2021). In addition to that, Hammad (2004) mentioned in his book that *hājah* from medical perspective is encouraged to be set up as recommended in the virtue of saving human lives, supported by *qā'idah fiqhiyyah* namely *al-hājah tunazzal manzilah al-darūrah*.

Table 1.0 indicates that Islamic institutions which explicitly stated that thromboprophylaxis is permitted during *darūrah* and *hājah* conditions such as Fatwa of Singapore (MUIS), Majma' al-Fiqhiyy al-Islamiyy al-Duwaliyy and personal fatwa by prominent Muslim scholar, Syeikh Dr Wahbah al-Zuhayliyy. The decision clearly includes *hājah* condition, not only *darūrah*, definitely, viewed as more comprehended by layman as it is a public reference in Muslim society. The term of *hājah shar'iyah* from *fiqh* perspective aimed to uplift the human's burden and attain one of the goals of *fiqh taysir* upon Muslim's needs. Meanwhile, *hājah* is understood as expansibility (التوسع) is extracted from verbal noun (مصدر) term with وسع while توسيع is known as antonym to التضييق (Mukhtār al-Siḥḥah Online, n.d.).

The state of *darūrah* is clearly explained can be matched with high risk mother to get VTE following the diagnosis of Covid-19 infection. Nonetheless, how about moderate risk group of mothers towards VTE? They are not classified as high risk which involved in *darūrah* scope, but they also recommended by CPG to be prescribed thromboprophylaxis with LMWH. Which category of *hukm* shall justifies it? To answer that question posed, we thought that the principle *al-hājah tunazzal manzilah al-darūrah* may be considered as the most appropriate of justification for moderate risk group mothers. In another word, the meaning of *hājah* in this moderate risk case judged as minimum line of *darūrah* (Mubarak, 2003; Hapiz, 2016) though it does not directly pronounce legally as *darūrah*. In fact, the *qā'idah fiqhiyyah* namely *al-hājah tunazzal manzilah al-darūrah* is a corollary of the *qā'idah kubrā* namely *al-darār yuzāl* ('Abd al-Salām, n.d.).

The interlink between both *qawā'id* clearly shows that moderate risk group women who are at risk of VTE indeed, treated as *darūrah* condition. Albeit moderate risk is less violent than high risk factor does but still it runs parallel in the scope of necessity which is shall never underestimate the crucial state of moderate risk to perceive thromboprophylaxis. This is based on the urge of prevention is better than cure as well as dependent on a *qā'idah fiqhiyyah* called blocking the evil is prioritized than perceiving the benefit or in Arabic phrase, "*dar u al-mafadah awla min jalbi al-ma'la'ah*" (al-Suyūṭiyy, 1983).

Throughout the Table 1.0, *istiḥālah* also displays Islamic institutions especially at international level such as fatwa from Syeikh Dr Wahbah Al-Zuhayliyy, fatwa of MUIS while Darul Ifta' Misriyyah putting the way of the description of decision based on certain provisions. For instance, if LMWH is unconformity with the principle of *istiḥālah*, then LMWH is allowed with *darūrah* justification, though. However, local Islamic institutions such as MNFC or state fatwa committee as displayed above agree to hold that LMWH is allowed when the patients are in *darūrah* only as the methodology used is *istishab* in imposing the fatwa on LMWH due to the origin of LMWH's manufacture; porcine. This is following that Malaysian is known as Shafi'ite *madhhab's* holder, and at the same time, Shafi'ite *madhhab* recognizes the idea of *istiḥālah* in certain conditions only, whereby they basically put extra cautious when dealing with the products which derivative from unlawful substance especially when the ingredient is graded in Islam as extreme filth (*al-najasah al-mughhallazah*) as a whole regardless specifying only certain porcine's part as filth.

{وَالْمَرَادُ بِالْحَمِّ الْحَنْزِيرِ هُوَ: جُمَّلُهُ الْحَنْزِيرِ، لِأَنَّ لَحْمَهُ قَدْ دَخَلَ فِي عُمُومِ الْمَيْتَةِ}

Meaning: "What is meant by pig meat is: the bulk of pork; Because his flesh has entered into the commonness of the dead" (al-Māwardiyy, 1994).

According to that opinion, local Islamic institutions decided to impose fatwa with regard LMWH either at national or state authorities that prohibited except in *darūrah* situation. However, according to the research Irwan et al., (2019) and Zizi Azlinda (2021), we found another conflict raised due to the description verdict (*sighah*); it is when the O&G medical doctors either Muslim or non-Muslim when they stumble into never ending controversy because the fatwa seen as less-enthusiasm party when dealing with mothers who are at risk of VTE prescribed with LMWH which its usage is preferred as first liner of

anticoagulant during pregnancy and puerperium (MOH, 2013; MOH, 2018), aside from in pandemic environment (RCM | Royal college of Midwives and the RCOG | Royal college of Obstetricians & Gynecologists, 2020; MOH, 2021).

Based on these, we humbly opine that, more particularly, the explicit verdict with regards to the fatwa of LMWH upon pregnant mothers either at local or international level, in fact, in the of pandemic Covid-19 reality which might spread into endemic. Fatwa set a special attribute in Muslim society's vistas on how Muslim religious and legal practice will be adopted (Omer Awass, 2014). We believe that, in conjunction with pandemic alert, current situation is timely to initiate contemporary *ijtihad* with regards to appropriate description in particular upon pregnancy and puerperium states which require LMWH towards risky mothers after assessed with VTE risk assessment provided by MOH. At least, a special clause or note included and written in the fatwa elaborations related to pregnancy and puerperium condition.

### **SYNTHESIS OF *IJTIHĀD* PROCESS TO CONCEIVE AN OUTCOME**

In the case of LMWH upon VTE risk following Covid-19 infection, *ijtihad* process to conceive an outcome of current fatwa would be engaging upon several elements such as current factors, *fiqh* methodologies and experts review (*khibrah*) as following Figure 2.

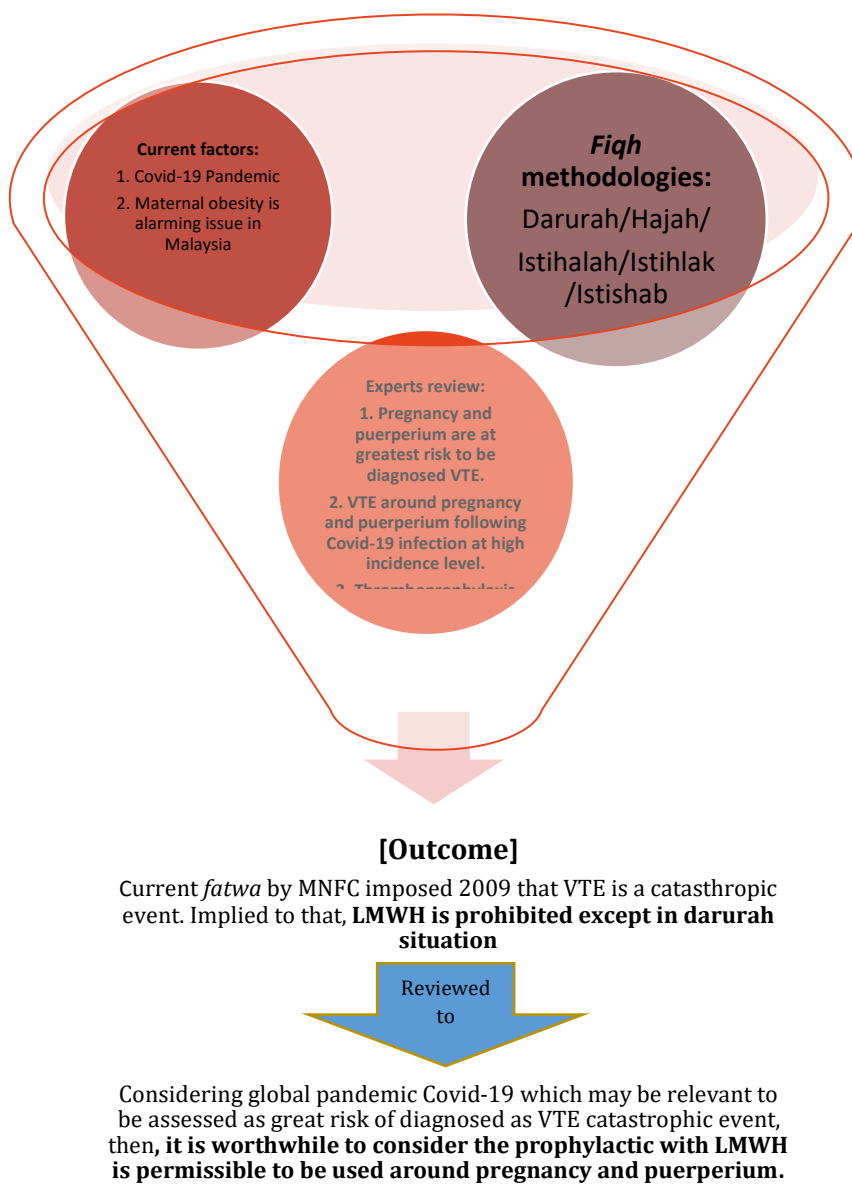


FIGURE 2.0: Synthesis of *Ijtihad* Process to Conceive a Final Outcome in Malaysia National Fatwa Council (MNFC) (Researcher’s analysis)

Basically, fatwa will be imposed after analysing the issue, current factors needed by people and appropriate *fiqh* methodologies prior to issuing the outcome to be a public reference eventually. As we see in the Figure 2.0, current factor plays vital role in affecting the final current fatwa as Muslim’s demand and need changes by time and place. Nowadays, accurate as of 9<sup>th</sup> July 2021, Covid-19 has been reported globally that around 4 million deaths approximately over 185 million cases based on the WHO coronavirus dashboard (Daru et al., 2021). Several reports show that there is no significant difference between hospitalized Covid-19 positive pregnant/PP patients and non-Covid-19 pregnant women in the United States which emphasize that both thrombosis and maternal mortality do not impose a

significant out of inflammatory out of Covid-19 (Behrens, 2020). However, many clinical practical guidelines across Europe and in the United States recommend considering ongoing thromboprophylaxis on case by case, for instance the careful assessment for women with peri-partum and placenta previa must take place (Daru et al., 2021) while RCOG recommend pregnant women with ongoing morbidity should have extended prophylaxis (RCM|Royal college of Midwives and the RCOG|Royal college of Obstetricians & Gynecologists, 2020). Moreover, overweight and obesity during pregnancy are risk factors for both thromboembolism and severe COVID-19, would considering thromboprophylaxis as soon as risk assessment take place (Carbillon et al., 2021). While Malaysia is included in 38.9 million overweight and obese pregnant women globally since maternal obesity is an alarming prevalence issue in obstetric practice (Shahrir et al., 2021).

This study found that, as fatwa can change according to the current factors such as time, society need and place as supported by a *qā'idah fiqhiyyah* namely "It is not denied that rulings change with the change of time" (*lā yunkaru taghayyuru al-ahkām bi taghayyuri al-azmān*) (Saha Salim Miqdash, 2007; Che Omar & Mat Hussin, 2018). Implying to this study case of the usage of LMWH during pregnancy and puerperium, this study's objective is attained if the description of *fatwa* specifically solving the need and time of pregnancy with pandemic Covid-19 issue which spreading rapidly nowadays.

Previously, fatwa of MNFC and other local fatwa state such as Negeri Sembilan in Table 1.0 show that VTE is a catastrophic event, then LMWH is prohibited due to its porcine origin and there is halal alternative to replace LMWH. As we discussed before, Arixtra which known as halal alternative has unstable evidence is unable to be first liner of prophylactic treatment upon pregnant women who are at great risk of VTE to replace LMWH or UFH. As proposed in the outcome of the synthesis of *ijtihad* process to conceive an outcome towards MNFC that it is worthwhile to consider the prophylactic with LMWH is permissible to be used around pregnancy and puerperium as proven in literatures.

## CONCLUSION

Regardless to declare the implication to pharmaceutical area of interest, reviewing fatwa of LMWH with using *darūrah* and *hājah* principle does not intend to make a dispute state toward pharmaceutical *halal* industry in Malaysia. In fact, their acceptance to use LMWH for thromboprophylaxis in Malaysia will expresses their flexibility to the lethal medical condition like VTE nowadays. In fact, reviewing fatwa decision will not halt them to expand their role and slogan to educate Malaysian for *halal* pharmaceutical.

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