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Viva Palestina Malaysia, Islamic Medical Association of  
Malaysia and Federation of Islamic Medical Associations  
in action in the Palestinian Occupied Territories  
*Prof Musa Mohd Nordin*

The Syrian American Medical Society: History, Action,  
Challenges, and Hope  
*Dr Abdel-Rahman Zakieh, Dr Mohammed Basel Allaw,  
Dr M Bassel Atassi*

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## JBIMA Editorial

*Prof. Sharif Kaf Al-Ghazal, Editor in Chief*

### Assalamo Alaikom

We cannot ignore the elephant in the room; the pain of our brothers and sisters in Gaza who have been suffering for years on end cannot be ignored, and contrary to what some may have thought, this crisis stretches back far earlier than 7<sup>th</sup> October 2023. The people of Gaza have been under siege for the past 16 years, and the suffering of the Palestinian people goes back over 75 years. The recent onslaught is a reminder that not only as Muslims, but as human beings, we must do more.

As health care professionals, it is disappointing to see that the international community, as well as the World Health Organisation (WHO) have not taken a harder stance against the aggressor. An inoffensive statement calling for the protection of humanitarian space in Gaza aside, the WHO has done nothing whilst medical professionals have been deliberately targeted. Gaza's health care infrastructure has been decimated whilst the most vulnerable patients and premature babies are left to die. As of 20<sup>th</sup> of December, at least 20,000 have been killed over the past 2 months (at least 8,000 being children) and counting, whilst a population of over 2 million is under siege. These are conservative figures, and when we consider those who are still missing, the number of dead is surely much higher. And according to eyewitness accounts on the ground, white phosphorous has been used too which cannot in any way, be justified. Moreover, burn injuries and shrapnel wounds have been worse than they should be due to secondary infections and a lack of antibiotics. People are facing the life altering consequences of amputations when infections could have been dealt with at a much earlier stage.

It is also distressing to see the world's reaction as a whole to what is happening in Gaza. There seems to be a double standard at play when considering the world's response to the Russian invasion of Ukraine last year. And whilst we rightly condemn Russia's aggression, this doesn't mean we can't consider what is happening around the world too. As Muslims, we stand for human dignity and the sanctity of life. The human dignity of Palestinians has been challenged in recent weeks

however; doctors in Gaza have been placed in impossible situations when triaging patients. Some patients who ordinarily in normal circumstances may have survived and have been treated have been left to die due to a severe lack of resource. Doctors have been facing ethical dilemmas over who to save; an impossible choice. And for those who have a higher chance of survival, the pain they face is excruciating. They are subject to complex operations without anaesthetic due to the lack of resource as a result of the siege.

I am proud that in this edition of JBIMA, we have a number of submissions focusing on the health care situation in Gaza, from both an advocacy and humanitarian standpoint. Some of the articles discussed the Israeli onslaught on Gaza which is happening in real time. We are watching the reactions of its people on social media, and we cannot in any way feign ignorance. At what point does the world say that enough Palestinian blood has been spilled? How many thousands more need to die before openly ask for ceasefire?

At BIMA, we have been involved in vigils and with other organisations to highlight the plight of health workers in Gaza and advocate on their behalf. We have been vociferous in asking our members to lobby at a local level too and email their MPs and ask for an immediate ceasefire.

It is up to us to continue to highlight the plight of the Palestinian people and advocate for their heroes, the healthcare workers who spend hours on end in makeshift theatres only to realise that their own loved ones are those who may need to be operated on.

We ask Allah to ease the affairs of the people of Gaza and grant them justice.

Very best wishes,  
*Wassalamo Alaikom*

*Prof. Sharif Kaf Al-Ghazal*  
*JBIMA, Editor in Chief*

# Contributions of Scholars of the Early Islamic Era to Obstetrics

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## Abstract

Islam encouraged the seeking of knowledge. The art of healing was considered to be the most noble of human undertakings. Acquiring medical manuscripts from previous civilizations and translating them into Arabic proceeded at a great pace. This was followed by the appearance of several great scientists and physicians who studied these writings and produced their own, with the addition of significant original contributions to all branches of science and medicine. In this article, I highlight the most interesting contributions to obstetrics of some of the scholars of that era such as al-Majusi, al-Razi, al-Zahrawi, ibn Sina, al-Baladi and ibn Maimon. Notwithstanding the limitations they encountered, and absent the advanced technology we use now, one must admire their conclusions based on astute clinical observations and devotion to the care of their patients as a moral and religious duty.

## Introduction

The period from the seventh to the fourteenth centuries is considered the golden age of Islamic civilization. Islam stresses the importance of seeking knowledge<sup>1-7</sup> more enthusiastically in the art of healing. This was inspired by the hadith:

*God did not send down any disease  
without also sending down its cure.*<sup>8</sup>

Implied in that hadith is that Muslims are to study diseases and find their cures. This movement started by a determined effort by several scholars and the support of the rulers to acquire all knowledge available

at the time. Translations from Greek, Syriac, Sanskrit, Persian, and Egyptian manuscripts proceeded at a high pace in the 8th and 9th centuries CE. Translations of Hippocrates, Aristotle, and Galen books into Arabic became available. These books covered different aspects of science, but medicine attracted special attention.<sup>9</sup> Muslim physicians studied the medical knowledge that became available. Prominent scholars wrote their own books using this information but when appropriate, corrected prior theories and concepts, and added their own observations based on actual clinical practice and experimentation. Among these prominent physicians are al-Razi (Rhazes, 841-926 CE), al-Zahrawi (Albucasis, 930-1013 CE), Ali ibn Abbas al-Majusi (Haly Abbas, died 994 CE), ibn Sina (Avicenna, 980-1037 CE), al-Baladi (early 11thc.CE) and ibn Maimon



(Maimonides 1135-1208 CE). Many of them wrote several books each. These books were translated into several languages, including Latin, and were used for teaching in European medical schools up to the 17th century.<sup>10-14</sup> The following are their most important books that were used for this article:

- *Al-Hawi fil Tibb (the comprehensive Book in Medicine) (Liber Continens)* by al-Razi<sup>15</sup>
- *Al-Qanoun Fil-Tibb (Laws in Medicine) (Canon)* by Ibn Sina<sup>16</sup>
- *Al-Tasrif Liman 'ajaz 'an al-Ta'leef* (The presentation of medical knowledge for the person who cannot compile it himself), (*Chirurgia*) by al-Zahrawi<sup>17</sup>
- *Tadbir al-Habalawal-atfalwal-sabayawahifzsihhatihim* (Management of Pregnant women, their newborns, and Children, and preservation of their health) by al-Baladi<sup>18</sup>
- *Kamil al-Sina'ah al-Tibbiyyah or al-Kitab al-Maliki* (The Royal Book) by Al-Majusi<sup>19</sup>

European historians in general have ignored the original contributions of Muslims to the renaissance. They called the period between Ancient Greek civilization and the Renaissance "The Dark Ages," ignoring the great civilization Muslims built. Some even spread misinformation about medical practices in Islam. An example related to obstetrics reported in my previous article<sup>20</sup> is a statement made in Young's book "Mohammadanism absolutely forbids it (Cesarean section) and directs that any child so born must be slain forthwith, as it is the offspring of the devil".

This absurd statement unfortunately has been quoted by others despite the fact that there are illustrations showing the use of caesarean section in the Islamic world as early as the eleventh century.<sup>11,20,21</sup>

Only recently have historians started to uncover and report the great scientific contributions of Islamic civilization.<sup>21-4</sup> It is the duty of present-day Muslim scientists and physicians to explore their heritage and bring to light the works of those early prominent physicians.

We presented some examples of the contributions of each of these scholars to obstetrics in a previous paper.<sup>25</sup> Here I present the sum of these contributions.

## Women as Healthcare Providers

Women were actively involved in the practice of medicine, especially labor and delivery. They were called *dayas* (midwives). They mostly worked under the supervision of male physicians, but many were independent. Ibn Zuhr, known in the West as Avenzoar (1094-1161), was one of the most renowned physicians of Ishbiliyyah (Seville, Andalusia).<sup>12</sup> His daughter and granddaughter were the first known female obstetricians.<sup>12</sup> Darwish and Weber reported that many women healers were able to pursue careers in medical institutions with established positions and established salaries both in Egypt and Ottoman society. They report on the presence of illustrations of a woman performing gynecological surgery and another woman extracting a hydrocephalic dead fetus in the thirteenth century. They also reported the presence of large numbers of female physicians in Ottoman Egypt.<sup>26</sup>

## Prenatal care

Ansari pour et al. reported that Ibn Sina stressed the importance of healthy lifestyle of both parents (exercise, nutrition, retention of necessary materials and excretion of body waste, psychological balance) to ensure healthy offspring. Ibn Sina also stressed the importance of climate and fresh air, indicating his holistic approach to health and specifically to care during pregnancy.<sup>27</sup>

However, it was al-Baladi who first dealt with prenatal care as a separate entity. He devoted a book to it.<sup>18</sup> He described morning sickness: "pregnant women usually have stomach upsets, nausea and vomiting." He recommended managing it with the consumption of different food items and with herbals. He discussed craving/pica (*waham*), increased salivation (*sialorrhea*), swelling of the lower limbs, *striae gravidarum* (stretch marks) and breast engorgement, the most common symptoms and signs of pregnancy.

Al-Baladi described treatments to reduce stretch marks. He prescribed the use of specific ointments and soaking a piece of cloth in certain fluids derived from herbs and wrapping it around the legs to reduce the discomfort of the swelling. He also described methods to take care of breast engorgement during lactation.<sup>18</sup>

Al-Baladi stated that slight vaginal bleeding (threatened miscarriage) at irregular times is not a significant problem, but if it occurs frequently, especially at the time of supposed menstruation, "as if she was not pregnant,"

the bleeding is an indication of weakness of the fetus. He prescribed medications to help in this situation.<sup>18</sup>

Ibn Maimon<sup>28</sup> also discussed some aspects of prenatal care. He described craving for food (pica) and theorized it to be due to “bad juices in the folds of the stomach.” He noted that pica subsides at the fourth month because these “bad juices will be spit up by that time through vomiting.”

Al-Baladi<sup>18</sup>, along with al-Razi<sup>15</sup> and ibn Maimon<sup>28</sup>, described shrivelled (retrogressed) breasts as a sign of fetal weakness or impending death. This observation is currently understood to be the result of low levels of prolactin and progesterone, secondary to severe placental insufficiency that can be associated with fetal death.

Al-Baladi<sup>18</sup> gave detailed recommendations for the care of the pregnant woman. Some of these are:

The pregnant woman needs more nutrition but not too much, as this may disturb the stomach and digestion. The increase should be moderate and consist of easily digested food. The increase should be gradual and in successive stages accompanied by an increase in exercise.<sup>18</sup>

Bathing is good as it is pleasurable, helps to reduce the pain, brings comfort and promotes good sleep. It also quietens harmful strong fetal movements. However, the pregnant woman should not spend a long time taking a bath. The bath (room) should be of moderate temperature and should have good ventilation. The water should be sweet, its temperature should be nice, and it should contain perfumes and vapor.<sup>18</sup>

Presumably to avoid getting a common cold, “the pregnant woman should cover her head when there is wind, whether it was too cold or too hot.”

She should avoid jumping, carrying heavy loads, stooping down, loud noises and traumatic events which can cause miscarriage.<sup>18</sup>

The pregnant woman should take extra care during the 8th month to avoid preterm delivery.<sup>18</sup>

It is better to avoid sexual activity in the first 2 months and after the sixth month. At the latter time, the fetus is heavy and cannot be trusted to fall during intercourse because of the excessive movements and the fetus is already ready to get out.<sup>18</sup>

We currently repeat Al-Baladi’s advice regarding sexual activity to pregnant women with recurrent miscarriages or to those who are at risk of preterm delivery.

## Multiple pregnancy

Al-Razi<sup>15</sup> noted “Twins are delivered within a few days of each other at the most. They have been conceived together because as soon as the uterus contains the semen (probably the fertilized egg), it closes. No more semen can enter.” This probably refers to the inhibition of ovulation once fertilization occurs, the result of persistence of the corpus luteum with the secretion of increasing levels of progesterone inhibiting FSH and LH secretion.

Al-Zahrawi<sup>17</sup> identified that twins can be born in 2 different sacs (dichorionic diamniotic) or in one sac (monochorionic monoamniotic). He also observed that twins usually survive, triplets rarely do, and quadruplets or higher or dermultifetal pregnancies are always miscarried.<sup>17</sup> Multiple pregnancies were recognized to be one of the fetal causes of difficult labor in ibn Sina’s classification.<sup>16</sup>

## Fetal Presentation

Al-Razi stated: Fetuses normally present by the head. If it was presenting by the breech it turns into head by the eighth month as the head is the heaviest part of the fetus and will gravitate downwards. ... Fetuses delivered before the eighth month commonly present as breech and they usually die. ... [T]hey are weak and therefore could not turn in head-first position.<sup>15</sup>

It is true that a higher percentage of preterm deliveries are breech deliveries, but the higher death rate is primarily because of prematurity. It is also true that breech delivery is more stressful to the fetal head especially to the less ossified skull of a preterm fetus.

Al-Razi further stated, “If foot or hand presents, it can cause death of the fetus and mother”<sup>15</sup> He was probably referring to transverse/shoulder presentations with prolapsed arm. This malpresentation if uncorrected will lead to obstructed labor, rupture of the uterus and maternal death. He further described the complication of cord around the neck and that it can be a cause for difficult labor and fetal death.<sup>15</sup>

Other scholars<sup>16,18</sup> described some of the fetal malpresentations, but al-Zahrawi can be credited with a

detailed description of all malpresentations and of methods to effect delivery in each case.<sup>17</sup>

## Onset of Labor

Ibn Sina noted that “Initiation of labor occurs when the fetus cannot get enough blood (nutrition) from the placenta.”<sup>16</sup> We now know the placenta ages with the advance of gestation and becomes less efficient in gaseous exchange and transfer of nutrients. That is termed placental insufficiency, and it is, as Ibn Sina postulated, is implicated in theories of labor onset. Ibn Sina continued, “At that time, the fetal organs are completely developed, and it starts to move towards the exit usually starting at the seventh month and it comes out on the ninth. Delivery occurs when the membranes are torn.”<sup>16</sup>

Al-Majusi was the first to describe that uterine contractions are what causes the delivery.<sup>19</sup> Before that, it was thought that contractions are only the indication of onset of labor, but subsequently the fetus swims its way out of the womb and birth canal.<sup>11</sup> Hippocrates likened delivery to the process by which the chicken hatches out of the egg.<sup>29</sup>

Al-Razi noted that “sexual intercourse brings on labor and facilitates delivery.”<sup>15</sup> This observation is now explained by the effect of oxytocin release and deposition of seminal prostaglandins in the vagina. Both are oxytocic agents that initiate and potentiate uterine contractions.

## Management of Labor

Al-Razi noted that “if labor pains are in the pelvic area, labor will usually be easy, but, if the pain is mostly in the lower back, labor will usually be difficult.”<sup>15</sup> It is true that this latter type of pain is associated with the occipito-posterior position of the fetal head and is associated with prolonged labor.

Al-Razi instructed that “midwives should examine the parturient before embarking on the delivery. Specifically, the cervix needs to be checked to see how much it is dilated, to determine what is the presenting part, and to follow the progress of cervical dilation until it is sufficiently dilated. Then they can ask the parturient to push down the fetus.”<sup>15</sup> This is how we manage labor now.

## Causes of Difficult Labor (Dystocia)

Ibn Sina<sup>16</sup> classified causes of difficult labor into maternal, fetal, faults in the uterus or placenta, timing of delivery (preterm and post term), or mistakes by the midwife. This is still a valid classification.

Ibn Sina enumerated maternal causes. “The parturient may be weak, malnourished or diseased, too scared, very young or old, obese, restless, or impatient with the labor pains”. He also listed some causes that indicate his knowledge of the mechanical aspects of laboring and pelvic anatomy. He understood that tumors of the bladder, rectum or colon, urinary retention and impacted hard fecal matter all can cause obstructed labor.

Ibn Sina listed these fetal causes “female gender, big size, big head, being too small (light) such that it cannot forcibly “fall down”, anomaly such as double head, malpresentation, more than one fetus. Also, a dead fetus cannot help in the process”. The latter seems to indicate that he was still convinced with Hippocrates’s thesis that the fetus pushes itself out of the birth canal.<sup>29</sup> All these causes, except female gender, are accurate.

Ibn Sina’s uterine causes included small size (probably referring to a contracted pelvis), improperly healed cervical ulcers, or tears, and “hemorrhoids” of the uterus. He did not define what the latter is. Could he be referring to what we now call placental abruption, where the edge of the placenta separates from the uterine wall causing vaginal bleeding associated with pain? This could be intermittent and repeated, somewhat similar to the symptoms of hemorrhoids.

Ibn Sina<sup>16</sup> mentioned among placental causes of difficult labor “thick placenta” without identifying what it is. Could he be referring to placenta previa? In this condition the placenta is located in the lower uterine segment and an examining finger will feel “tissue” between itself and the fetal presenting part. He also included “dry uterus” as another placental cause. He is referring to oligohydramnios probably caused by premature rupture of the membranes. He ascribed the difficulty to the fact that “the birth canal is not slippery.”<sup>16</sup>

Ibn Sina considered preterm delivery as a cause of difficult labor. He discussed the outcome of preterm delivery: “Fetuses delivered before the seventh month are too weak to survive. ... Fetuses delivered at the eighth month are more prone to die than those delivered at the seventh month, especially female fetuses.”<sup>16</sup> This belief

was stated by Hippocrates<sup>29</sup> and shared by many subsequent scholars such as al-Baladi.<sup>18</sup> They explained this by the fact that delivery is aided by fetal movements, like a chicken emerging from an egg,<sup>29</sup> and, “beginning at the 7<sup>th</sup> month, the fetus tries to get out and, if “strong” enough, will be born and survive. Those who are born at the eighth month must have been too weak to be delivered and hence the lower chance of survival. If they remain in utero till the ninth month they will ‘recover’ and become stronger and will survive when born.” While we know this is untrue and, in fact, the chance of survival of a preterm newborn increases the longer the pregnancy progresses, it is interesting to note that this mistaken belief still lingers in uneducated lay people until our time.

Ibn Sina<sup>16</sup> specified “faults by the midwife” as a cause of difficult labor. This is very true. For example, improper application of the forceps, by the obstetrician, to the fetal head will result in a failed forceps delivery and both fetal and maternal complications.

## Management of Difficult Labor

Al-Razi<sup>15</sup> gave different prescriptions of medicinal herbs with their respective dosages and recommended special kinds of food to “facilitate” labor and delivery. He described different maternal positions to facilitate the delivery of the fetus in certain malpresentations. In difficult vertex delivery, he would have the parturient in the lithotomy position and then insert a catheter in the uterus and infuse certain fluids. If the fetus were still alive, he used fluids with lubricant effects. If the fetus was dead, he used spicy fluids.<sup>15</sup>

Ibn Sina described the management of difficult labor in vertex presentations.<sup>16</sup> He possibly was the first to use an instrument to be applied to the head of a live fetus and then to pull it out (a precursor of the obstetric forceps). They<sup>30</sup> considered ibn Sina a putative inventor of the obstetric forceps. He stated that “ibn Sina in the Canon gave the following directions to the midwives for delivery of the impacted fetal head: Apply a sling (fillet) around the child’s head and endeavour to extract it. If this fails, the forceps are to be applied and the child extracted by them. If this cannot be accomplished, the child is to be extracted by incision (of its head) as in the case of a dead fetus.” He continued, “[I]f the head bone is big, open it up so the inside liquid flows out.” He was probably describing hydrocephalus and craniotomy.

The proposition that ibn Sina was the inventor of the forceps has been corroborated by Dunn<sup>31</sup> who reported a

quote by Smellie “with regard to the fillet and forceps, they have been alleged to be late inventions; yet we find Avicenna recommending the use of both. The forceps recommended by Avicenna is plainly intended to save the fetus; for he says, if it cannot be extracted by this instrument, the head must be opened, and the same method used which he described in his chapter on the delivery of dead fetuses.”<sup>31</sup>

Ibn Sina<sup>16</sup> also described how to deliver a fetus that is coming by *janb* (side) that is transverse presentation. He described the procedure: “first by manipulation (internal podalic version), if unsuccessful, by use of *kalaaliib* (hooks) and, if unsuccessful, by dividing it in pieces (evisceration) as in the delivery of a dead fetus.”

Al-Razi described the procedure of internal podalic version in the management of transverse lie.<sup>15</sup> Other scholars discussed the management of some of the fetal malpresentations, but it is al-Zahrawi who described in detail, in chapters 75-78 of his book, all types of malpresentations and described manoeuvres to affect delivery under each of these circumstances, such as replacing the hand, internal podalic version, etc.<sup>17</sup>

Al -Zahrawi<sup>17</sup> then stated, “If these manoeuvres are unsuccessful, one would resort to changing the position of the parturient, shaking her, placing her in a special seat, Valsalva manoeuvre.” Also, he recommended a whole host of herbs. He would recommend mixing mucilage of fenugreek, oil of fumary, and gum and pounding them in a mortar and then anointing the woman’s perineum and making her sit down in warm water reaching to the ribs. Then he would make a suppository of murrh and introduce it in the vagina and after an hour make the woman stand. It would be interesting to investigate the composition of these materials and determine if they have any oxytocic effects.

If all fails, al-Zahrawi<sup>17</sup> will resort to the use of surgical procedures such as cutting the clavicle (clivotomy), using scissors in cases of shoulder dystocia, craniotomy using a spike shaped scalpel (perforator) or crushing the head using a *mishdakh* (cephalotribe), or evisceration using hooks and scissors when the fetus cannot be delivered otherwise or is already dead.

These instruments were among about 200 instruments illustrated in his book (Figure 1).<sup>17</sup> Most of these instruments were of his own design. In the book were illustrations of the *midfaa* (thruster, craniotomy scissors, cranioclast) (Figure 2), *mishdakh* (crusher, cephalotribe) (Figure 3), *miqass* (scissors) (Figure 4), *sinnarah* (fishing



rod), hook(crotchet), *mibdaa'* (scalpel) and *kalaalib* (claws).<sup>17</sup> These instruments probably formed the basis of the design for modern obstetric instruments.

It is noteworthy that there is no illustration of obstetric forceps in al-Tasrif. While this may be an omission, it could mean that al-Zahrawi was unaware or did not use an instrument to extract a live fetus. This is noteworthy based on our knowledge that ibn Sina, who was almost a contemporary of al-Zahrawi, described the use of obstetric forceps for the delivery of impacted fetal head.<sup>30,31</sup>

### Management of Obstructed Labor

Al-Zahrawi described in detail the management of the different cases of obstructed labor.<sup>17</sup> His detailed description signifies his experience and clinical acumen:

If the fetal head is large, and it is tightly squeezed in exit, or if there is a collection of fluid in the head (hydrocephalus), you should introduce between your fingers a spike shaped scalpel, a *midfaa'* (perforator) and split the head to let the water out or you should smash it with the instrument called *mishdakh* (crusher, cephalotribe), then you should draw out the bones with forceps. If the head comes out and the fetus is held up at the collar bones (shoulder dystocia), an incision should be made (cliedotomy). If the thorax is impacted, perforate it to let out the humidity in it (hydrothorax), the thorax will then shrink. But if it does not, then you cut off pieces in any manner possible (evisceration). If the lower belly is swollen or dropsical (ascites) then you should make an opening to draw out all the fluid.

If the fetus presents by the feet, then the extraction will be easy, and it will be a simple matter to guide it to the maternal opening. If it is stuck about the thorax or abdomen, then pull on it with a cloth around your hand and cut an opening in the abdomen or thorax to allow the contents to flow out (evisceration).

If the fetus presents laterally (transverse) and it is possible to reposition it (podalic version) apply the manoeuvres for a living fetus, but if this is not possible then the fetus should be cut away piecemeal, then extracted.

If the vagina is closed on account of an abscess, operative procedures should not be done. In these cases, use infusions of grease and humid herbs. The woman should sit in a bath of softening and moisturizing waters.<sup>17</sup>

### Extraction of a Dead Fetus

Ibn Sina<sup>16</sup> discussed the management of the fetus that there is no hope of being born alive, "labor lasting for more than 4 days the fetus must be dead". He advised quick delivery, otherwise "the dead fetus will rot (swell) and its extraction will become more difficult." He would use ointments and grab the fetus manipulating it to be extracted. If unsuccessful, he advised attaching hooks and cutting the fetus into pieces (evisceration).<sup>16</sup>

Al-Zahrawi<sup>17</sup> described the operation to extract a dead fetus. His detailed methodical description shows his thoroughness and the effectiveness of his instructions to the midwife:

You first examine the woman to see if she is healthy or has a disease that may threaten her life. Put the patient in the lithotomy position and hold her down firmly. Then anoint your hand with oil sand, mucilage of mallow sand fenugreek with linseed and moisten the vaginal opening. Gently introduce your hand into the passages and locate the most suitable part of the fetus to fix hooks into according to its presentation. If it is the head, attach the hook to the neck, mouth or beneath the chin, or if you can, reach to beneath the ribs (probably in oblique or transverse lies). If the feet are presenting, fix the hook to the pelvic region. Hold the hook in the right hand and put the curved part between the fingers of the left hand and introduce the hook gently and fix the hook as above. Then opposite it, let her (the midwife) fix another or a third hook so as to give even traction. Then she should pull evenly not just in a straight line but with the fetus moved from side to side so that its exit may be eased. From time to time the tension must be relaxed, and if any part of it be held up, the midwife must oil some of her fingers to introduce them to one side to manipulate the retained part. And if only a part of the fetus comes away, she should shift the hooks to other parts a little higher up and so on until the whole of the fetus comes out.<sup>17</sup>



## Delivery of the Placenta

All these early scholars noted the need for complete expulsion of placenta after delivery of the fetus and discussed how to effect that. Al-Zahrawi specifically stated "It is necessary that not a scrap of the afterbirth be left behind in the womb,"<sup>17</sup> a statement to which we today completely ascribe. These scholars usually start by letting the woman sneeze while closing her mouth and nose (Valsalva maneuver). Then they will use vapors of certain herbs introduced in the uterus while the woman is sitting. If this fails, they will resort to its manual removal. Al-Zahrawi stressed the importance of separating the placenta from the uterine wall gently and then pulling it from side to side, avoiding violent pulling that can result in rupture of the uterus or *inqlab al rahim* (uterine inversion), a serious complication that may lead to maternal death.<sup>17</sup>

A very thoughtful description that we follow now to avoid these two very serious complications; rupture or inversion of the uterus.

Al-Zahrawi realized that sometimes removal fails. We now call this adherent placenta or placenta accreta. He was probably the first to describe this condition.<sup>17</sup> In this circumstance, he injects tetrapharmacon ointment in the uterus that will soften and dissolve or cause "putrefaction" of the placenta in a few days. That will loosen it, and it will come out.<sup>17</sup>

## Extra- uterine/Abdominal Pregnancy

Al-Zahrawi described a case of abdominal pregnancy. The extra-uterine sac turned into an abscess which started drainage with extrusion of the bones of the dead fetus. With proper treatment (evacuation and dressing) the woman survived in good health for a long time. His description of the case demonstrated his clinical acumen:<sup>17</sup>

Now I myself once saw a woman who had become pregnant, and the foetus had then died *in utero*; then again, she conceived and the second foetus also died; and after a long while she got a swelling in the umbilicus which grew and eventually it opened and began to produce pus. I was called in to attend to her, and I treated her for a long while, but the wound did not heal up. So, I applied to it certain very strongly drawing ointments, and then a bone came away from the place; then a few days passed, and another bone came out; and I was mightily astonished at this,

seeing that the abdomen is a place where there are no bones. I formed the opinion that these were bones from a dead foetus. So, I investigated the place and got out many bones belonging to the head of the foetus. I continued this procedure and got a great number of bones out of her, continued the evacuation and dressing till it healed and the woman being in the best of health.<sup>17</sup>

## Fetal and Infant Deformity

Ibn Sina<sup>16</sup> discussed the causes of fetal and infant deformity. He had the insight that some are caused by inherent (genetic) factors. He stated that "some of these agents (that cause the deformity) come into play from the beginning because of a defect in the formative power of the sperm. "Other determinants of deformity "come into force later in life — namely in parturition, during the act of traversing the maternal passages. Others operate after birth (tight binders and wrappings). Others operate in infancy, before the limbs are hard enough to enable the infant to walk".

## Conclusion

I would like to conclude by quoting Spink and Lewis<sup>17</sup>

Attention is specially drawn to the gynecological and obstetrical instruments used by the "Arabian" doctors. It is shown that in this branch at least, the "Arabians" were by no means wholly dependent upon the classical writers. ... [T]hey altered and improved, out of recognition, the ideas they received from classical sources.

Spink and Lewis continued:

The speculum, the forceps, the lever and the crotchet mark in a special way the original Arab genius. It is also shown that the Arabs had developed a clear practical idea of what is normal, of what varieties of abnormality were to be met with, and by no means least, of prognosis, in obstetrical practice.

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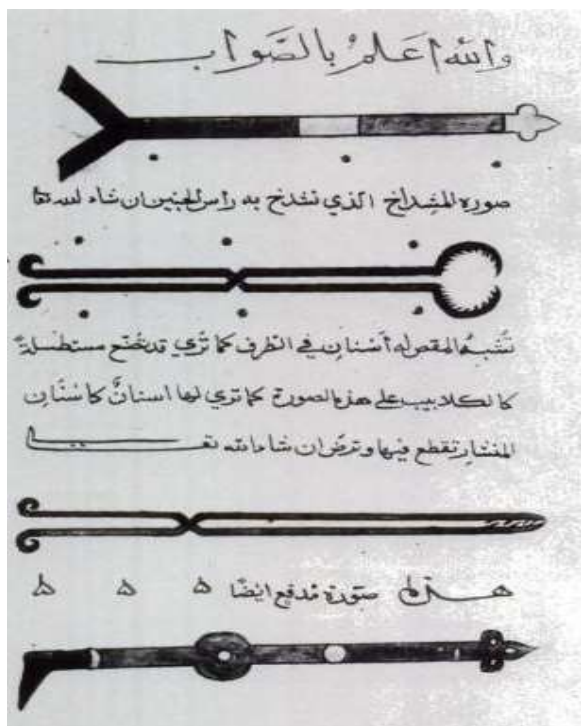


Figure 1. Some of the instruments illustrated in al-Zahrawi's book *Al-Tasrif*. It is interesting to note that al-Zahrawi's descriptions of the instruments include references to Allah. "Allah knows best" and "If Allah wills". This demonstrates the importance of Islamic faith in his understanding and practice of medicine.

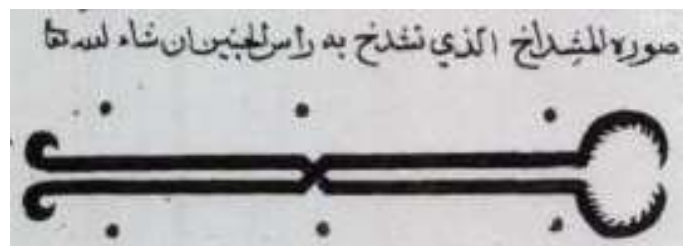


Figure 3. The Mishdach (crusher, cephalotribe) used to crush the fetal head when it is impacted in the birth canal.

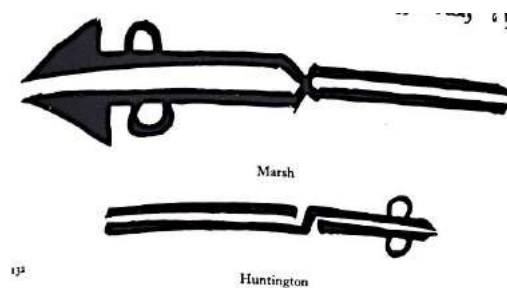


Figure 4. Miqass (scissors) are used in cliedotomy in case of shoulder dystocia and in evisceration in case of dead fetuses.



Figure 2. The Midfaa' (thruster or perforator) used in draining fluid from fetal head (hydrocephaly), thorax (hydrothorax) or belly (ascites).

# Comparison of Sexual Health Advices in the First Turkish Bahname of Ottoman Era with Current Scientific Literature

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## Abstract

The bahnames, an essential part of the Islamic medical corpus, generally address sexuality, sexual behavior, sexual dysfunctions, and protective, supportive and therapeutic applications in this field.

Our study investigated the oldest known Turkish bahname, translated by Musa b. Mes'ud during 15th century, in comparison with the current literature. Sexual health advices and treatment modalities in this bahname were evaluated and interpreted within the framework of current knowledge of sexology, urology, and andrology.

Although the work mostly mentions supportive and therapeutic practices in sexual health, it also provides advices on sexuality and sexual life. The author recommends many foods and compounds or specific drugs and ointments to enhance sexual stamina and avoid erectile dysfunction. In addition, he also tries to find solutions to some other sexual health problems related to men and women. These issues are generally evaluated in the context of health; a religious perspective is also provided when needed.

In comparison, a lot of the author's recommendations on sexual health and herbal or animal drugs are consistent with the current literature. Nevertheless, some information and suggestions mentioned in the bahname are entirely irrational and unscientific.

This study is an original investigation of the first translated bahname into Turkish. There is no other study examining the bahnames with this method. Thus, we believe that our work will be a significant contribution to the literature of Turkish-Islamic medical history.

## Introduction

In the Islamic medical literature, works dealing with sexual health issues are called “bahname”. The word bahname is a combination of the Arabic word “bah”, which means “sexual desire, lust, libido”, and the Persian word “name”, meaning “book”.<sup>1</sup>

The Turkish Encyclopedia of Islam (TEI) defines bahname as “a type of book containing information about

all kinds of sexual issues, including especially the treatment of sexual disorders”.

The bahnames, an essential part of the Islamic medical corpus, generally address sexuality, sexual behavior, sexual dysfunctions, and protective, supportive, and therapeutic applications in this field. Additionally, such



books may include social issues such as sexual life, family institution, marriage and pregnancy, measures to facilitate or prevent conception, problems during pregnancy, medical information about newborn children, and even child-rearing and upbringing.<sup>1</sup>

Many physicians wrote such works in different periods of Islamic and Ottoman medical history. Ali Haydar Bayat identified 45 different bahnames across all periods of Islamic civilization, including 21 in Arabic, 6 in Persian, and 14 in Turkish.<sup>2</sup> Ilter Uzel also listed 51 works in Arabic, Persian, and Turkish.<sup>3,4</sup> Jabir ibn Hayyan, Jabril ibn Bukhtishu, al-Kindi, Hunayn ibn Ishaq, Qusta ibn Luqa, al-Razi, Ibn Sina, Ibn Maymun, Ibn al-Bitriq, and Shayzari were among the most prominent Islamic scholars who wrote bahnames. According to the TEI, the oldest bahname in Turkish is a translation of the Bahname-i Padişahi with a dedication to the Sarukhanid Ya'qub b. Dawla in the fourteenth century. Additionally, the first known Turkish bahname in the Ottoman Empire is the translation by Musa b. Mes'ud with the same title as the original Persian version of Bahname-i Padişahi.<sup>4</sup>

Among the Bahnames in Ottoman era, especially those presented to the Sultanes are decorated with colorful miniatures, while those written for the public include no pictures or figures. The Bahname-i Padişahi translated by Murat b. Mesud is one of the first examples of the Ottoman era. Unlike most of the bahnames, it does not contain pictures and figures. One of the most famous samples which include figures was Cemaleddin Revnaki's book called Kitâbü's-Safâ ve's-surûr. Bahnames included more figures and became more pornographic after the 19th century.<sup>1,5</sup>

This study investigated the first translated bahname in the Ottoman Empire and concepts such as sexuality, sexual life, sexual desire/function disorders, and the protective, supportive, therapeutic applications in this work were compared to the current literature.

## Material and Methods

In this study, we submit the transcription of an original text in the Ottoman medical history and its comparative evaluation with the current literature.

The chapter and folio numbers mentioned in our study for the bahname that translated by Musa b. Mes'ud refers to the copy registered in the Library of Istanbul University Istanbul Faculty of Medicine under call number 3778, one of five known manuscripts of this manuscript (Fig. 1-2).

First, the original manuscript of the translation was transcribed in Latin. The final version of the transcribed text was analyzed in the results. In discussion, findings were examined and interpreted within the framework of current knowledge of sexology, urology, and andrology.

## Results and Discussion

According to the index quoted by Uzel with reference to Sehşivaroglu, Musa b. Mes'ud's bahname translation consists of seventeen chapters.<sup>3,6</sup> Table-1 shows the index of the bahname.

The topics of bahname can be grouped into two categories:

1. Issues related to sexuality and sexual life
2. Protective, supportive and therapeutic applications for the protection of sexual life.

It is assumed that this work was written in the thirteenth century and translated into Turkish in the fifteenth century. Although bahname was compiled about eight hundred years ago, we see that many of the foods and drugs or practices in bahname are still valid today. However, some of the recommendations put forward in the bahname according to the medical theories, belief values, and observational findings of the period contradict today's scientific knowledge and data. Suggestions and preparations of drugs and food reported above will be discussed in the following section in comparison with the current medical literature.

First, unlike the general acceptance of the period, there is no taboo concerning the ways of sexual intercourse in bahname. It is also stated that it is religiously permissible and lawful for husband and wife to have sexual intercourse as they wish. Similar to bahname current literature confirms that it is beneficial and sometimes necessary for the sexual happiness of husband and wife to excite and satisfy each other and to perform a sexual activity in every position as they wish.<sup>7</sup>

Although there is no prohibition on the forms of sexual intercourse in the bahname, it is claimed that some positions are harmful for various reasons in the fourteenth chapter.

There is a remarkable example: it consists of intercourse of the man lying on his back and a woman positioned on top of him. Damages claimed to occur in this position include diseases due to the discharge of female sexual secretions onto the penis and the genital area of the man,

bladder pain and injury, liver swelling, and the spread of these complaints to other organs. All these justifications are factually inaccurate and cannot be confirmed by current information and data. On the contrary, the type of intercourse described in which the woman takes a riding position is recommended, especially to treat dysfunctions such as premature ejaculation.<sup>7</sup> Finally, sexology and sexual psychiatry experts maintain that any position desired and enjoyed by a healthy couple can be practiced, and there is no position that is harmful to health.<sup>8-9</sup>

Although it is permissible from a religious perspective, the author stated that it is not considered appropriate for a man to look at his wife's genitals during sex. It is claimed that the boy born as a result of this sexual intercourse will be lacking eyes. Additionally, it is claimed that if a woman stimulates a man's genital with her mouth and then intercourse happens, the boy to be born will be weak and weary. We can easily say that these are nothing more than expressions of superstition and nonsense.

The author criticizes the attitude that too much sexual intercourse is harmful; moreover, he accuses those holding this view of being ignorant. Current literature leaves the spouses wholly free and does not set any limits in terms of sexual frequency. In addition, false ideas such as the suggestion that too much sexual intercourse will harm male health or that every man has the capacity for a certain limited number of ejaculations throughout his life are no longer accepted.<sup>7</sup> Besides, the author states that there are six pleasures for people; five of them are the senses of sight, hearing, taste, smell, and touch, and the sixth one is sexual intercourse. He points out that all senses and flavors are coming together in sexual intercourse. From this observation, it can be concluded that all five sense organs should be used in intercourse, and the current literature also confirms this.

The author does not limit or prohibit sexual intercourse timing; however, the work suggests the spring and the daytime compared to other times. Current literature confirmed that the level of androgen hormones, which provide libido and increase sexual activity, rises in spring and during the day in the diurnal rhythm of the male.<sup>10</sup> Additionally, current literature revealed that testosterone levels, sexual activity, and the number of ejaculations decrease in winter.<sup>11</sup>

The author claimed that children born due to sexual intercourse on certain days would be good-natured and healthy; by contrast, he claimed that they would be sickly and ill-natured on certain other days. The interpretations

in this chapter are based on the theory of the four senses of humor or astrological knowledge and beliefs in those times. Based on the current literature, we can say that the statements in this chapter are completely baseless superstitions.

On folio-18a, the author recommends abandoning some habits to protect male sexual health. It is claimed that certain behaviors, such as delaying urination after sexual intercourse despite feeling the need, running constantly and walking too much, sweating profusely in the bathhouse, or staying awake at night too long, when becoming repetitive practices and habits weaken the male genitalia. Another behavior that the author recommends avoiding is exaggerated horse riding. An activity today that could be compared to horse riding is the use of bicycles. Indeed, modern urology shows that prolonged cycling can adversely affect erectile function. Just like riding a horse, cycling is a chronically traumatizing factor for the perineum. In a meta-analysis investigating the relation between cycling and erectile dysfunction, Gan et al. stated a positive correlation between cycling and erectile dysfunction.<sup>12</sup> The argument that horse riding for long periods of time would reduce erection due to chronic trauma caused during that time can only be confirmed by careful observation and from a perspective based on experience.

The work points out that if a man has sexual intercourse on a day when he is overworked and tired, the heart will work hard (possibly referring to tachycardia). Therefore, the author doesn't recommend having sexual intercourse during such periods. Although this statement cannot be considered completely correct with current knowledge, modern urology has shown that there is a close relationship between sexual activity and heart rhythm and blood pressure. Sexual activity was found to be equivalent to climbing a 2-storey ladder in 10 seconds in terms of exercise load and the cardiovascular system's capacity. In this case, although the heart rate remains below 130 beats and systolic blood pressure is below 170 mmHg, the workload required during sexual activity increases in the presence of old age, obesity, cardiovascular disease, and excessive food and alcohol consumption.<sup>13</sup> Similar to the literature, sexual activity was determined in the *bahname* as an action that strains the capacity for expending energy and the risk of being tired and developing weakness during coitus.

Many simple or compound drug formulations and foods for preserving sexual health, increasing sexual power and the semen amount, and treatment of erectile dysfunction are recommended in the *bahname*. Vegetables such as

carrots, chickpeas, broad beans, onions, ginger, parsnips, long pepper, milk, dates, mustard, and leeks; foods containing animal and vegetable protein (red or white meat varieties, eggs, milk, legumes, etc.), and dried fruits such as pine nuts, hazelnuts, peanuts, almonds, coconut, and pastes containing saffron, ginger, galangal, and long pepper to obtain such benefits are recommended in several chapters. It is possible to find studies in the current literature confirming the bahname about almost all of the foodstuffs listed in bahname. Current scientific information on a few of these will be presented here:

Carrot (*Daucus carota*), mentioned in different chapters, was proven to be positively contributing to sexual functioning by increasing the level of sex hormones in men and women and to be beneficial for all parameters of female sexual functions such as desire, arousal, orgasm, and satisfaction<sup>14</sup>, to increase testosterone levels in men, trigger sperm production, and increase the reserve of sperm cells in the tail of the epididymis.<sup>15</sup>

It has been revealed that saffron (*Crocus sativus*) improves erection quality in men<sup>16-17</sup> and also positively affects sperm morphology and motility.<sup>18</sup>

Ginger (*Zingiber officinale*) has an aphrodisiac effect by increasing the blood flow to the testicles, sperm count and motility, testicular volume, and serum testosterone levels.<sup>17</sup> Additionally, Stein et al. reported that Ginger (*Zingiber officinale*) significantly improves erection quality and sexual satisfaction in middle-aged and older men.<sup>19</sup>

Similarly, Galangal (*Galanga officinalis*) increases the percentage of normal sperm, vitality, motility, and testosterone levels;<sup>20</sup> administered orally, according to the current literature, it significantly increases the total motile sperm count.<sup>21</sup>

Two separate experimental studies conducted with clove (*Syzygium aromaticum*) revealed that sexual activity was significantly and sustainably increased in male rats receiving clove. Furthermore, it positively affected sexual behaviors in male mice.<sup>22,23</sup> Thus, certain current studies support observations found in the bahname in terms of medicaments.

The plant is known as *Papaver somniferum* in Latin, sometimes called opium in the bahname and sometimes poppy, causes the smooth muscles of the corpus cavernosum to relax and triggers a strong erection due to papaverine.<sup>24</sup> As a breakthrough development in modern urology and andrology, achieving an erection by

injecting papaverine into the spongy tissue of the penis has been in clinical practice since the 1980s.<sup>25</sup> The papaverine injection not only induces an erection but also leads to a longer than usual duration.<sup>26</sup> Papaverine was also beneficial in topical application to the penis and the genital area.<sup>27</sup> Moreover, papaverine injection is also featured in leading publications in urology/andrology in current reviews regarding the treatment of erectile dysfunction.<sup>28,29</sup> In addition to these selected examples from the bahname, we can say as a general assessment that the positive effect of almost all of the herbal or animal extracts and preparations proposed is in line with current scientific data.

The author recommended various administration methods for the different plant, animal, and organic extracts and mixtures. Furthermore, these cures were in different forms such as solid food, oral paste, beverage, cream, and ointment to be applied to the soles of the feet or genitals, suppositories, enemas, and sublingual pills. Especially, the sublingual application is quite remarkable, considered from the current scientific knowledge. In an age when the physiological absorption and action mechanisms were not yet scientifically known, proposing this method based on the absorption of drugs under the tongue to create an effect on the target organ was possible only as a result of the experiment, observation, and inference.

Chapter-7 explains the topical applications that work by a transdermal mechanism of action with ointments, creams, pomades, and plasters used to strengthen erection. Since the 1990s, positive results obtained by applying a topical gel containing the active substance to the penis and the genital area in human patients and animal experiments. These substances include papaverine<sup>27</sup> and prostaglandin-E1.<sup>30</sup> Current literature found that topical application of both agents increases the penile blood flow significantly, and potent erections are achieved after topical application. Various reviews indicate that oral therapy is a promising method for groups of patients who cannot be treated by intra-cavernous injection due to drug interactions or non-responsiveness, needle fear.<sup>31,32</sup>

Another remarkable drug administration method recommended to support erection is the application of a preparation in the form of suppositories to be inserted through the urethra. Since the 1990s, preparations containing prostaglandin-E1 have been administered through the urinary tract with this method, which is seen as an ideal and practical treatment of erectile dysfunction today, known under the name of MUSE.<sup>33,34</sup> Although its effectiveness is not as great as intra-cavernous application, its ease of use and non-invasiveness make

this a preferred method.<sup>35</sup> Another preparation containing prostaglandin-E1, which is also found in the current literature, is administered by dripping it into the urethral orifice recommended these topical preparations applying to the penis, groin area, and testicles.<sup>33</sup> Similarly, topical gels are applied to the penis, perineum, and testicles in modern transdermal erection therapy.<sup>27</sup>

Chapters-16 and 17 include a recipe intended to make the vagina warm, soft, and even as tight as that of a virgin girl, administration of the liquid prepared from some drugs was suggested either in the form of a bath to sit in or by inserting a woolen tampon soaked in the liquid into the vagina. Current medical knowledge and scientific literature do not include any pharmaceutical or herbal drugs having such an effect.

Similarly, the seventeenth chapter says that some drugs soaked up by wool and then inserted into the vagina will ensure pregnancy immediately. Such a practice is not found in modern science. In addition, the author claimed that if a man applies tar or sesame oil on his penis before sexual intercourse, the woman will not conceive, or even if she becomes pregnant, she will have a miscarriage. There is no corresponding information in the current literature.

The bahname also described the artificial penis used by women to masturbate, which is known as zıbık in the Middle East and dildo in Western languages. Similarly, modern sexology suggests the dildo using for therapeutic purposes. Another version of a dildo that increases pleasure through vibration is a vibrator subjecting many scientific studies. Herbenick et al. reported that sex devices such as vibrators and dildos are frequently recommended to patients; another article stated that vibrators are an important option in the hands of clinicians to increase sexual function and respond to certain sexual problems.<sup>36,37</sup>

Among the therapies used in treating sexual dysfunction, especially female orgasm and arousal disorder, it is reported in today's scientific literature that erotic devices, including dildos and similar items, contribute positively to the solution of these issues.<sup>38</sup>

In case the erect penis did not soften again, the author recommended washing with cold water. Similar to bahname, the first step in priapism treatment is the application of cold compresses, and in some cases, this simple intervention can achieve the desired softening.<sup>39,40</sup> Pryor et al. also suggest cold compresses or a cold shower as the first aid method that can be applied by the

patient himself or by auxiliary health personnel.<sup>41</sup> Interestingly, a similar method was proposed in the bahname six centuries ago.

## Conclusion

We investigated the fifteenth-century translation by Musa b. Mes'ud of the Bahname-i Padişahi, which is the oldest known Turkish example of a bahname. We discussed the preventive, supportive, and therapeutic practices associated with sexuality, sexual life, and sexual health issues mentioned in the bahname and analyzed the suggested treatments and recommendations from a period of about seven centuries in the light of the current literature.

The author synthesized empirical information with experiences from the past in the bahname while dealing with sexual life and sexual health issues. These issues are generally evaluated in the context of health; a religious perspective is also provided when needed. In particular, the author's recommendations on sexual health and herbal or animal drugs are consistent with the current literature.

The work must have been written as a result of careful observation and profound experience. In addition, we can say that the author went beyond the generally accepted beliefs he lived in, especially on issues of sexual life. Nevertheless, some of the information and suggestions included in the book are entirely irrational and unscientific in the light of the current literature.

Finally, this study is an original and novel investigation of the bahnames, which have not attracted the attention they deserve in today's academic studies, although they are an essential part of the Turkish-Islamic culture. We revealed all critical information in the bahname and compared it with Turkish and international sources in the current literature on urology, pharmacology, andrology, and sexology. There is no other study examining the bahnames with this method. Thus, we believe that our work will be a significant contribution to the research literature.

## Acknowledgement

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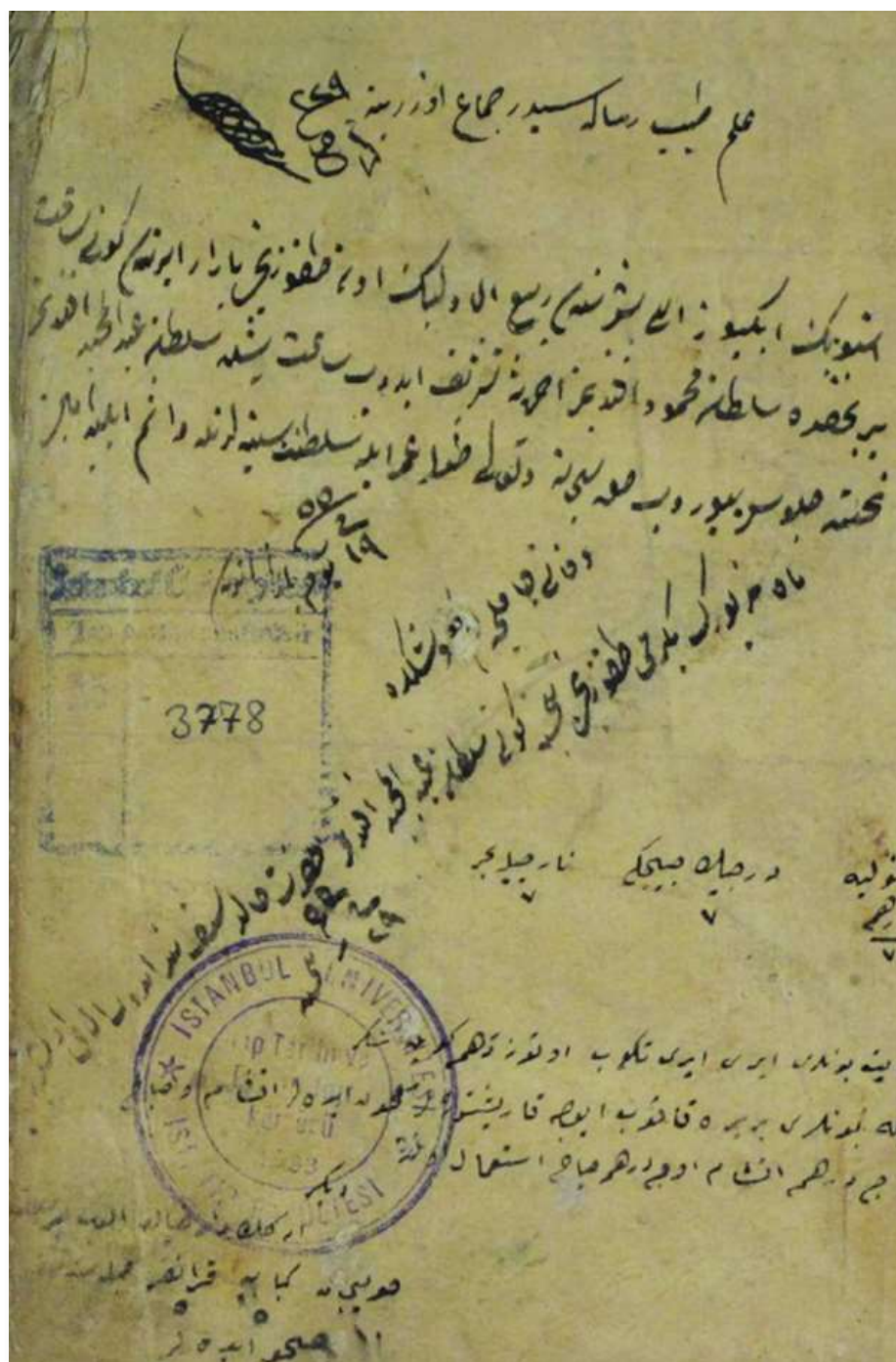
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| Chapters   | Title                                       |
|------------|---|
| Chapter-1  | Body Temperaments and their Symptoms        |
| Chapter-2  | Foods Strengthening Sexual Intercourse      |
| Chapter-3  | Simple Foods                                |
| Chapter-4  | Compound Foods                              |
| Chapter-5  | Drinks                                      |
| Chapter-6  | Pastes                                      |
| Chapter-7  | Ointments                                   |
| Chapter-8  | Pills                                       |
| Chapter-9  | Girdles and Belts                           |
| Chapter-10 | Drugs Applied to the Soles of the Feet      |
| Chapter-11 | Drugs Enhancing Sexual Appetite             |
| Chapter-12 | Enemas for Strengthening Sexual Intercourse |
| Chapter-13 | Powders                                     |
| Chapter-14 | Sex Positions                               |
| Chapter-15 | Penis-Enlarging Drugs                       |
| Chapter-16 | Drugs Making the Vulva Tight and Soft       |
| Chapter-17 | Contraceptive Drugs                         |

*Table-1: The index of Bahname quoted by Uzel with reference to Sehsuvaroglu*



**Figure 1:** Cover image of the copy registered at the Library of Istanbul University, Istanbul Faculty of Medicine under call number 3778.

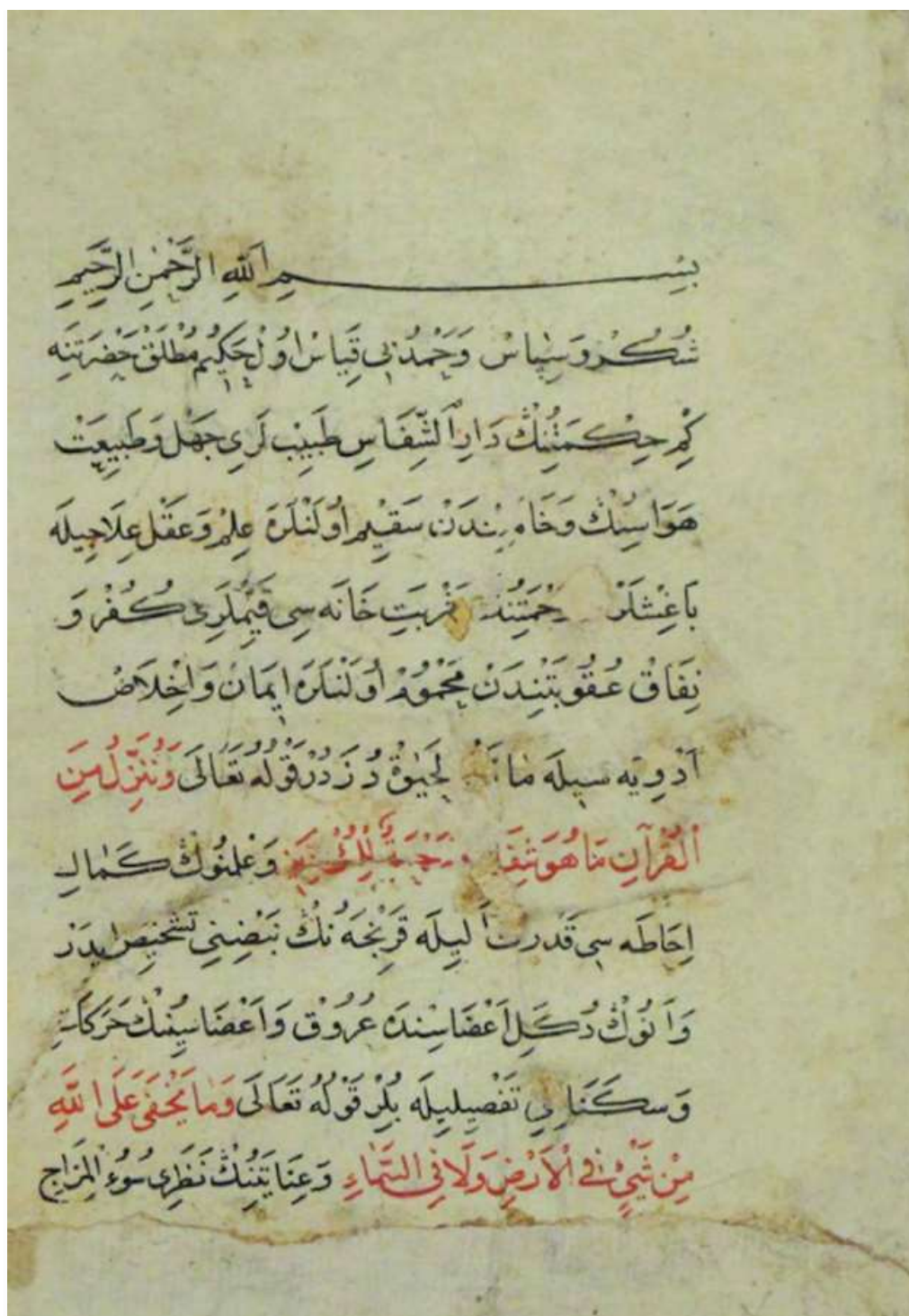


Figure 2: Example page from the manuscript that is investigated in our study.



## Future of Hijama research and Lessons from Acupuncture.

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Back in February this year a group of interested consultants who have experience in Hijama (Modified Wet Cupping) have been discussing further research in Hijama to be presented in an international conference about Hijama in Bosnia this year. I had some broad lines to think about, but before we go into details we need to remember how can we extrapolate lessons from acupuncture research development. I have chosen acupuncture being almost the closest complimentary medically partially invasive in its nature.

It is almost certain that acupuncture has been known and used in the West since the seventeenth century, but the first recorded use of acupuncture was by Dr. Berlioz at the Paris medical School in 1810. He treated a young woman suffering from abdominal pain. The Paris Medical Society described this as a somewhat reckless form of treatment, but Dr. Berlioz continued to use acupuncture, and claimed a great deal of success with it. In 1977 Dr. Melzack, who has been awarded the Nobel prize for his work in the field of pain, correlated trigger points (Certain points in the muscles) with acupuncture points, and found that most of the trigger points were already well known as acupuncture points. (1)

Many people know of Henry Kissinger's secret trip from Pakistan to Beijing in 1971 setting the stage for President Nixon's visit to China in 1972. Few people, however, remember the first U.S. reporter invited by Chinese government to tour China at the very same time. To cut the story short that reporter (James Reston [1909-1995], a columnist and editor of The New York Times) had appendectomy there, in China, and was treated for postoperative nausea and abdominal discomfort with acupuncture (A/P). His article in New York times about this was the beginning of A/P invasion to USA. One-week income from one single acupuncture practitioner's practice was worth the price of a house at that time!! (2)

One of the clear signs indicating acupuncture acceptance by the Western medical community is the increasing allocations of research funds at National Centre for Complementary and Alternative Medicine (NCCAM) at

National Institutes of Health (NIH) in the USA. Such funding now accounts for about half of the research funds for Chinese medicine, which in turn accounts for approximately a quarter of the total funds earmarked (114 million dollars in 2005) for complementary and alternative medicine.

A 1973 study, using volunteer medical students, looked into acupuncture's analgesic effect on experimentally induced pain and suggests that humoral factors may mediate acupuncture-induced analgesia. In a study of the possible role of the cerebrospinal fluid transmission of pain suppression effects of acupuncture, cerebrospinal fluid from acupuncture-treated rabbits was infused into recipient rabbits. The analgesic effect was observed in the recipient rabbits, suggesting that acupuncture-induced analgesia may be mediated by substances released in the cerebrospinal fluid. (3)

The development of neuroimaging tools, such as positron emission tomography (PET) and functional magnetic resonance imaging (fMRI), make non-invasive studies of acupuncture's effects on human brain activity possible. Studies using PET have shown that thalamic asymmetry present among patients suffering from chronic pain was reduced after the patients underwent acupuncture treatment. Other studies, using fMRI, have pointed to relationships between particular acupoints and visual-cortex activation. These powerful new tools open the possibility to new scientific studies of this ancient therapy. (3)

So, to extrapolate from that we perhaps need to look at:

1. Animal model
2. Imaging tools: PET and fMRI as above.
3. Blood parameters:
4. Microscopic cellular level

1. Animal models: we have now established practice of acupuncture on horses so lessons can be learned from there. A/P has been used in horses for musculoskeletal problems: muscle soreness, back



pain, neck pain, osteoarthritis, degenerative joint disease, obscure lameness, laminitis. Comparison with Hijama can be established

2. Imaging tools: Functional MRI (fMRI) is another impressive tool that has shown widespread activities in the brain of fibromyalgia patients compared to normal individuals. So, we can compare images before and after Hijama.
3. Blood parameters: bradykinins. Substance P, Nitric oxide locally, Potassium, Nerve growth factors, endorphins/ enkephalins are amongst many chemicals that needs a physiologist researcher not a clinician to detect and monitor.
4. Microscopic cellular level: fibrous tissues, local receptors, micro electric activities etc are all targets for research.

The starting point I think is to find an institution with such facilities and a team leader in that institution who will write the research protocol etc. I totally agree that generous funding will encourage reputable institutions to take this on board as I have shown with the American figures earlier.

I have focused on this article on pain study as it is my speciality but the same can be done for many other

conditions the Hijama can offer solutions. I have not explored the big subject of how to conduct research in complementary medicine from sampling, statistics to how to avoid bias etc and I shall address this in another talk perhaps in the next conference God willing.

*This presentation was given in the third International Hijama conference in Sarajevo (Bosnia) on the 27<sup>th</sup> of May 2023.*

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# Reflections on Gaza: From clinical practice to humanitarian response

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**Keywords:** *Gaza, Relief, DWW, Humanitarian*

As an emergency physician, I'm often reliant on checklists, guidelines, protocols and tools to support my clinical decision making. I recognise that I work in a system which requires coordination of care, collaboration with colleagues across disciplines, and an appreciation of patient-related risks and vulnerabilities, as well as associated factors and co-morbidities that all impact my clinical approach and decision making to bring about the best outcomes for my patients. Such tools and systems become even more critical when our health systems are under increased demand or a major incident occurs (such as a bus crash with multiple casualties brought into the emergency dept). It goes without saying that in mature health systems, staff are trained, accredited and up to date, adhere to ethical practice principles and standards, and work accountably for patient benefit. Where there are concerns around patient safety, it becomes our moral duty to speak up to raise attention to the issues we witness.

Healthcare delivery has historically played a significant role in highlighting issues of public concern, whether communicable diseases and outbreaks, or the harms of addiction or lifestyle choice on populations, amongst others. Indeed there has been an increasing focus on the impact of 'health inequalities' on the health of communities and by extension individuals, where it is recognised that wider determinants such as poverty, education or ethnicity may unfairly result in a greater burden of disease.

While many of us working in clinical practice may recognise the above description of the ecosystem in which we function as clinicians, I wished to further

explore these perspectives through a humanitarian lens. While our clinical practice is centred on the relationship to our patients, and governed by ethical principles and codes of conduct, humanitarianism is focussed on securing and protecting access to human rights, such as the right to life, liberty and security, shelter, food and health. As such there is a natural alignment with healthcare provision and the noble integrity enshrined in the profession.

However, perhaps what is not always as well understood or appreciated by clinicians is the professional discipline of humanitarian practice, and the complex environment in which humanitarian response functions. This is also distinguished from (but has relevant alignment with) global health and development. While many clinicians are driven by the desire to act when witnessing a crisis such as an earthquake, or the needs of those harmed and displaced by conflict, it is critical to recognise the range of ethical principles, standards and approaches that enable any response to meet the intended 'humanitarian' aims. These systems and process have been the subject of development, research and advancement over the years, and represent a spectrum of practice and a professional discipline in its own right.

Familiarity with (particularly during times of conflict) the Universal Declaration of Human Rights, the Geneva Conventions and the Red Cross Code of Conduct, with the core principles of humanity, impartiality, neutrality, and independence, along with voluntary service, unity and universality, form the foundations of ethical humanitarian practice.

Following the 1994 Genocide in Rwanda, the catastrophic failings of the international response resulted in the development of the Sphere Standards which represents a charter of minimum standards in humanitarian action. This now forms a key framework against which to benchmark response activities, and in doing so challenges organisations to focus on key aspects which are recognised to be at risk during a crisis. When considering the health section of the standards there are, for example, actions outlined for mental health, palliative care, and sexual and reproductive health, which are areas that are often neglected by organisations who respond impulsively and are unfamiliar with guidance. Well intentioned action can therefore risks harming certain vulnerable groups and communities by neglecting their essential health rights.

A further key development in the humanitarian sector was the establishment of the 'Cluster' approach which came about following the immense challenges and learning from the response to the Indonesian earthquake and subsequent Tsunami of 2004 which impacted swathes of the South Asian coast. The cluster approach emphasises the need for structured coordination amongst agencies and organisations responding to a disaster, and supports improved allocation and distribution of resources, as well as strengthening responsiveness to identified key priorities through reporting and surveillance systems. Again, if organisations are not part of the cluster system, the risk of duplication of work and mal distribution of already scarce resources is increased, and again impacts the core focus on securing the essential rights of populations.

One of the most relevant pieces of guidance for us as clinicians was that of Emergency Medical Teams (EMT), and the so-called 'Blue Book' published by the World Health Organisation following the chaotic international medical response to the Haiti Earthquake of 2010. With multiple teams deploying to the devastated area where the skills, capacities and resources did not meet the needs of the impacted population, the medical volunteer response more than likely caused harm in a range of ways from working beyond scopes of practice, duplicating work, adding further burden to overstretched services and infrastructure while draining and competing for existing limited resources. The EMT technical guidance and classification outlines the different types of medical teams which can be deployed and emphasises the need for prior training specific for humanitarian disaster response, as well as a certification process once standards have been achieved. As such, there is recognition of the need to prioritise sustainable investment (in terms of both

finance as well as personnel) into EMT development and deployment, which is again usually neglected by novice start-up or generic charitable organisations. The impacts of this can be far reaching in terms of significant harm to communities due to inappropriate medical practice as well as risk to volunteers who are unprepared for the tasks required of them, as well as the security and health risks they may be exposed to and unprepared for.

While the above elements of the codes of conduct, the Sphere guidance, Cluster approach, and classification of emergency medical teams represent key areas of core humanitarian practice, this is by no means comprehensive when considering the range of challenges we face when trying to deliver humanitarian action. Challenges such as the transition and handover of activities, especially in low-middle income settings where development of healthcare delivery requires further continuous investment. Other challenges such as climate change or political instability can further complicate or obstruct response and development plans. One of the most significant challenges of contemporary relevance is that of war and conflict. We have seen increasing attacks on healthcare, civilians and civilian structures in recent conflicts, whether in Syria, Yemen, Afghanistan, Myanmar, Sudan or the Occupied Palestinian Territories. Such flagrant violations of the principles of international humanitarian law and the Geneva Conventions makes the delivery of effective humanitarian assistance impossible. While the international community has developed governance systems, policies and tools to prevent and protect against such violations, it is clear from what we witness currently is that international norms and conventions which allow for sanctions, military intervention to support peace keeping, as well as prosecution for crimes against humanity, are all under threat of failure due to the geo-political environment in which conflict occurs.

Where does this then leave us as health workers who feel morally driven to act in the face of such injustice? Firstly is a re-examination of our spiritual selves. Without truly understanding our relationship with our Creator, and our total reliance on Him, we will struggle to persevere with the effort required to meet the needs of serving to address the multi-sector injustices (of lack of access to basic human rights) borne out through poverty, politics and people. Intimately linked is reflecting on intention. It is only through understanding what is motivating us to act, and then seeking to perform such acts with diligence and excellence will we recognise the need to advance our understanding and skills of the professional discipline of humanitarian health practice, as well as further Islamic

perspectives on charity and good deeds to meet the needs of contemporary practice and contexts.

Despite the chaos and complexity of the current humanitarian response to the atrocities in Gaza, and the seeming futility of trying to apply the aforementioned principles of humanitarian practice, just in the same way that we do not discard the ethics, tools and guidances in our clinical professional practice, we must aspire to adhere to the approaches which have been developed as a consequence of much suffering and injustice, and to ignore the learning from these events will no doubt risk additional harm to those we aspire to serve.

It is inevitable that there will be new learning that will emerge given the current political and humanitarian failures, but they do not negate past policies. If anything, only by challenging ourselves to adopt and adapt the approaches will we be better placed to address the complex needs of this emergency. It also should prompt us to review our efforts and effectiveness. If we are unable to respond as smaller groups and organisations due to the inability to reflect and adapt in alignment to core humanitarian principles (in recognising that not all agencies will be able to fully adopt some of the guidance comprehensively), should we expending our efforts in other ways? The King's Fund outlines a simple framework to tackle health inequalities, which I feel aligns appropriately for our current humanitarian context and is described as three strategies of Awareness, Action and Advocacy. While many of us are focused on 'action' despite not having or meeting the relevant humanitarian practice competencies, perhaps we should focus our energies more significantly on advocacy to ensure humanitarian health access and protection of health in the broadest sense, as well as gather evidence and data so as to be able to credibly raise awareness of the injustices of the conflict and apartheid nature of the occupation in Palestine (which means additionally focusing on the West Bank, as well as the experiences of Palestinian refugee communities in regional countries).

It is perhaps through these means we can transition our thinking beyond just traditional response to a crisis, but towards a civil rights movement to bring about the necessary political change as which occurred in apartheid South Africa, Colonial India or 1960s USA.

While I have stayed away from a deeper theological examination of humanitarian action, it is no doubt a noble endeavour to alleviate the injustice of lack of access to basic human rights. I hope that by sharing my perspectives having worked and volunteered in the

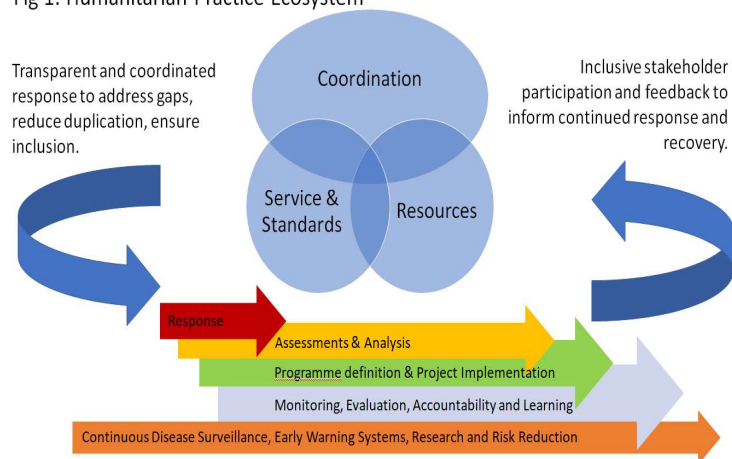
humanitarian and global health development sector for more than 20 years, I have shed some light and a challenge to us all of the need to engage with humanitarian and global health competencies as disciplines in their own right if we are sincere in our intentions and efforts to make a meaningful impact to the communities and peoples we profess we wish to help.

These efforts not only relate to planning our personal and professional development in the sector, but additionally how we create and develop the education, research and improvement systems necessary for us to operate with faith, patience and excellence.

## About the Author:

Dr Najeeb Rahman is an Emergency Medicine Consultant working in the UK and additionally a trustee of the charity Doctors Worldwide. He has volunteered and worked in a range of international settings during both disaster response as well as health development. He was a recipient of the RCEM William Rutherford International Award 2017, and has qualifications in humanitarian assistance, public health and is currently reading for a masters in global healthcare leadership.

Fig 1: Humanitarian Practice Ecosystem



## Further Learning Resources :

Universal Declaration of Human Rights

<https://www.un.org/en/about-us/universal-declaration-of-human-rights>



#### The Geneva Conventions

<https://www.icrc.org/en/war-and-law/treaties-customary-law/geneva-conventions>

#### Refugee and Migrant Health Competencies

<https://www.who.int/publications-detail-redirect/9789240030626>

#### Code of Conduct

<https://www.ifrc.org/our-promise/do-good/code-conduct-movement-ngos>

#### King's Fund: Tackling Poverty

<https://www.kingsfund.org.uk/sites/default/files/2021-03/nhss-role-tackling-poverty.pdf>

#### The Sphere Standards

<https://spherestandards.org/handbook/>

#### Overview of the Cluster Approach

<https://emergency.unhcr.org/coordination-and-communication/cluster-system/cluster-approach#:~:text=The%20IASC%20recommends%20that%20country,should%20co%2Dlead%20the%20cluster>

#### Health Cluster

<https://healthcluster.who.int/resources>

#### Emergency Medical Teams

<https://www.who.int/emergencies/partners/emergency-medical-teams>

#### Humanitarian Competencies

<https://www.uk-med.org/wp-content/uploads/2021/01/UK-Med-Competencies-Framework-Core-Competencies.pdf>

#### Global Health Competencies

<https://www.cugh.org/online-tools/competencies-toolkit/>

## The collapse of Gaza's Health Care system

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Gaza's health care system has collapsed. But how and why in the 21st century can a region the size of a quarter of London, that serves a population of 2.3million people just no longer be able to serve its population?

The crippling siege on Gaza over the last 17 years has decimated the health care system, in turn, negatively impacting the health of the population. During that period, Gaza's health care was reliant on international support, however, since October 7th, the health service in Gaza has been faced with the unimaginable, and how do you begin to write about that? How is it possible in the 21st century to witness the a health care system collapse in real time?

The whole of Gaza's health care system has collapsed due to the pressures placed upon them. Clinical staff have been working endlessly without breaks, themselves exhausted from the conflict, grieving for loved ones, and traumatised from the sheer number of horrific injuries and bodies that are filling up the hospitals. Stories abound of clinical staff who are operating and end up seeing their loved ones in the operating theatre. All that is complicated by the blockade enforced on Gaza, with no basic resources coming in. To put things into perspective, on average, Gaza used to receive 500 trucks in aid daily. The recent humanitarian 6-day pause allowed minimal supplies (100-200 trucks/day) to a warzone, of which included food, water and tents. Any medicines that did enter were like a drop in the ocean, and so the suffering of Gaza was allowed to continue. In a time of war, more resources are needed, not less, but the scarcity of supplies has left the population of Gaza staring into the abyss.

Under international humanitarian law, health facilities, medical staff, ambulances and patients, are meant to be protected from attacks. They are sanctuaries, and targeting these facilities can be considered a war crime. These are the laws written to protect humanity. But in Gaza it seems, international law does not apply. Health

care facilities have been attacked and destroyed; between the 7th October and the 5th December, there was a total of 212 attacks on healthcare, which led to the death of 565 people, 732 injured people, whilst 35 ambulances have been destroyed (1).

With cases of patients and medical staff being forced to evacuate leaving premature babies, intensive care patients and those not able to move with no one to care for them. In one hospital, 5 premature babies were left to die alone, and their bodies were discovered many days later having decomposed. Gaza's 2 paediatric hospitals are non-functional, as are the only dedicated cancer and psychiatric hospitals. People who need specialist care are not receiving it.

On the 5thDecember, the WHO announced 51 of the 72 (71%) primary health care providers were no longer functioning, with the remaining only partially operational. In addition, 24 of the 36 hospitals (67%) are damaged, and 19 (52%) are not operational at all (2). The remaining hospitals are nothing more than first aid centres and morgues. It is also important to note that Al-Shifa Medical complex is the largest health provider in Gaza which used to provide 40-50% of all surgical procedures in Gaza. Now, Al-Shifa is trying to function as a first aid centre, but even that is difficult due to the restrictions placed upon it and lack of staff.

Patients with chronic diseases no longer have the most basic medicines. Asthmatic patients have died due to not having inhalers, diabetic patients no longer have insulin, cancer patients no longer have chemotherapy and palliative end of life patients are in crippling pain due to not having painkillers. These patients are essentially facing delayed death, painful death sentences.

They can see death coming, they know they can't access the care and medicine they need but they face excruciating pain knowing there is nothing that can be done. Their suffering is indescribable.

There are 50,000 pregnant women, with approximately 180 births per day. The rate of premature births has rocketed due to the trauma of the current war, C-sections are being carried out without anaesthetic and simple complications are being managed through undertaking hysterectomies. Mothers and babies are discharged almost immediately. They have no shelter, food, warmth or sanitation. Diseases are now emerging within the population due to the living conditions, with skin diseases, respiratory infections (54,866 cases) and diarrhoea being the most rife. Diarrhoea amongst children under 5 years has increased from 2000 per month prior to the war, to just under 34,000 cases reported cases, with many unreported (3).

The current situation has led to a major public health disaster in Gaza. There is no electricity, clean drinking water, no functioning sewage system, and no rubbish collection. In addition, due to the extent of bombing and limited facilities, many decomposed bodies remain under the rubble. People are crammed into makeshift living quarters. Hepatitis A has already started spreading with no treatment or a way of controlling the spread; whilst the risk of diseases such as TB, cholera, and other communicable diseases will rise in a matter of no time, creating a secondary health crisis which will lead to thousands more dying in avoidable deaths.

Furthermore, there is the additional suffering of the conflict. Over 46,000 (75% children and women) innocent people have been injured. Hospitals are not able to deal with such numbers. Patients are lying on dirty floors, and if they are lucky may have a blood stained mattress. Amputations are being carried out on the floor in unsterile environments with no anaesthetic. The fact that amputations are even being resorted to due to the lateness of dealing with treatable that have subsequently become infected and have been left is heart-breaking. There have been over 900 children with amputations, and countless adults.

At this moment in time, no matter how small and insignificant an injury is, it can be life threatening due to the high risk of infection. Patients, in many cases, are fully awake, with patients dying as a result of the shock. Tom Potokar from the International Red Crescent describes hospitals as having the stench of rotting flesh, with maggots creeping out of the wounds. But what can be done? With the lack of sanitation and simple medication, a simple cut can become life threatening. During this period, Gaza has not only had the aggression of bombs, but also white phosphorus, which causes severe burns. There have been cases of patients with

over 90% burns. However, there are no staff and supplies to provide patients with the care they need. There are no pain killers to help ease the pain of burns, and patients are left in agonising pain.

In the words of Prof. Ghassan Abu Sitta, “wars don’t end when the bombs stop”. Where do you begin with the rehabilitation of the children that have been amputated, some of whom have had multiple limb amputations. As for the mental health impact and trauma caused by the lived experience, I’m not sure if and how that can be tackled. The Palestinian people are resilient; after all they have been dealing with occupation for over 70 years. But there are limits, and it will take gargantuan effort from the international community to help the Palestinian people rebuild their lives.

WHO Director General Tedros Adhanom Ghebreyesus said “the World cannot stand silent whilst hospitals, which should be safe havens, are transformed into scenes of death, devastation and despair”. We, as Doctors must continue to defend what we swore to do, to protect human life and do everything we can to call for a ceasefire now to prevent further tragedy.

I end this with the hope that the 21st century sees all human life is valued and respected, and that international law can truly be upheld to ensure the sanctity of humanity.

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## Viva Palestina Malaysia, Islamic Medical Association of Malaysia and Federation of Islamic Medical Associations in action in the Palestinian Occupied Territories

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In the aftermath of the Gaza massacre on 27 Dec 2008, Malaysian individuals and NGOs united to champion the Palestinian cause. Viva Palestina Malaysia represents a coalition that cuts across racial, religious and political lines. It reflects the humanitarian nature of the crisis in Palestine, which must be shouldered by all responsible citizens of the world.

Our vision is to ‘*effectuate a just, equitable, prompt and sustainable resolution to the conflict in Palestine.*’

VPM works closely with the Malaysian government’s ministries and agencies, local and international NGOs, and have participated in a number of humanitarian convoys to Gaza.

Our closest and most frequent collaboration has been with the Islamic Medical Association of Malaysia (IMAM) and the Federation of Islamic Medical Associations (FIMA)

And with the generosity of fellow Malaysians and supporters globally, VPM has transferred much needed funds and aid for various projects in Palestine and it’s diaspora. In the recent incursion by Israel on Gaza, VPM has been on the ground serving the needs of the Internally Displaced Palestinians (IDP). The infographic summarize some of our early initiatives to alleviate the sufferings of the IDP.

In cooperation with the government of Malaysia through #OpsIhsan, 3 consignments of relief and humanitarian

materials have been flown to El-Arish, Egypt and into Gaza. With IMAM and FIMA, our doctors are on standby to enter Gaza to provide professional healthcare and relieve the exhausted healthcare professionals in Gaza. In partnership with al-Khidmat Foundation, Pakistan, IMA North America and Gifts of the Givers, South Africa, preparations are underway for the establishment of a field hospital to assist with the management of casualties of the war. War is always complicated with outbreaks of infectious diseases. As it is, Gaza under siege since 2007, has very poor access to safe and clean drinking water, and hygienic sanitary facilities.

The wanton destruction of basic facilities (e.g. the bombing of water desalination plants built by our FIMA Safe Water project) would exacerbate water borne disease transmissions e.g. acute gastroenteritis caused by viruses, and bacteria such as cholera and typhoid. The contaminated air made worse by bombings and ashes from the collapsing buildings, would increase the risk of air borne infections namely pneumonias, tuberculosis and whooping cough.

And with the coming winter months, their homes destroyed and with poor access to warm clothings, blankets and mattresses, winter bugs namely influenza, respiratory syncytial virus (bronchiolitis), adenoviruses would be killer diseases, especially among the very young and old in the poorly ventilated and crowded shelters.



Together, our public health priorities would be:

1. To ensure the ceasefire remains permanent, to empower decent rehabilitation of the healthcare infrastructure and services in Gaza.
2. To ensure adequate and continuous supply of life saving medicines, critical care monitors and devices, array of pharmaceutical supplies, surgical devices and consumables.
3. To allow access of healthcare professionals and allied health staff to relieve the exhausted Gazan doctors, nurses and other allied health workers.
4. To ensure the more severe cases of injuries and burns be transported to the nearest intensive care facilities for best healthcare treatment and outcomes.
5. To provide the internally displaced Palestinians access to clean water and food to prevent starvation and malnutrition which would further compromise their defense against infections
6. Targeted vaccination programs to prevent the spread of vaccine preventable diseases or it's re-emergence eg polio, TB, pertussis
7. To provide access to fuel to operate the water desalination plants, shelter heating systems, ambulances to transfer patients and power generators for hospital functioning.
8. Invest in programs and initiatives aimed at addressing the psychological trauma and long-term effects of violence on children who have witnessed or experienced conflict-related distress.

All international norms of warfare were violated in the present incursion of Gaza. Hospitals were targeted, healthcare professionals and patients were killed, and babies in ICU were left to die.

In excess of 70% of the Gaza infrastructure were either destroyed or brutalised. It is a tall order to restore the healthcare facilities to near normal. To begin with, the Ministry of Health (MOH) services was much compromised by the siege on Gaza since 2007. So the current invasion is an acute on chronic insult to the Gaza, MOH services. The global community spearheaded by the WHO needs to address comprehensively the acute on chronic health crisis in Gaza. An immediate, comprehensive and accurate assessment of the severity of

the destruction and damages to the healthcare services would point the direction as to the priorities in the rehabilitation of the healthcare infrastructure and services. We've done our little bits to mitigate some of the healthcare issues and address mild-moderate health concerns of the internally displaced Palestinians (IDP).

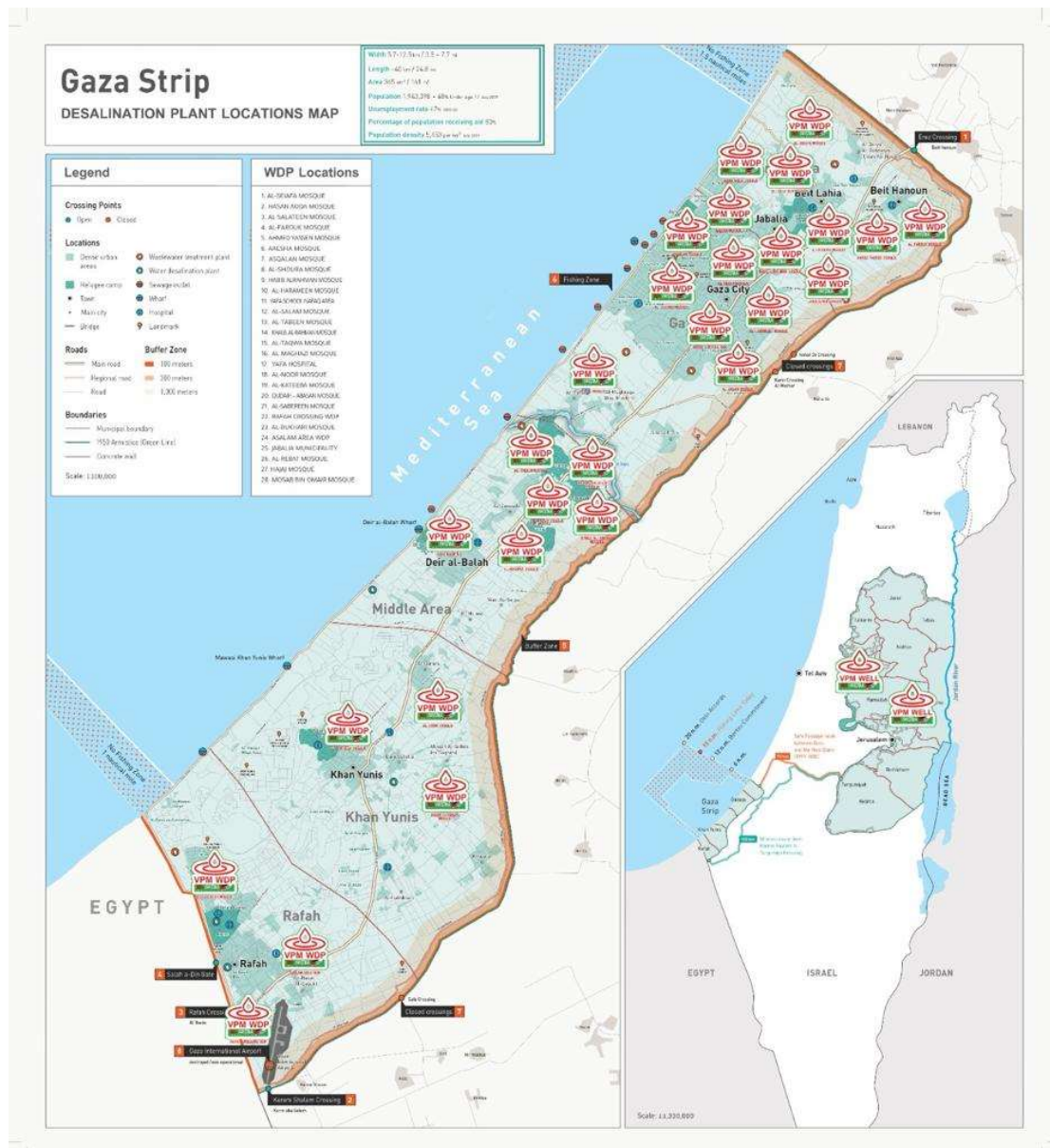
Directly or indirectly, many of our endeavours have been towards restoring and protecting the health of the IDP in Gaza. These included:

1. Mobile medical clinics for our IDP. Apart from treating and caring for their health concerns, it helps to decongest the overwhelmed hospitals which can focus on the more sicker cases.
2. Providing fuel to power the generators in the government and charity hospitals and to the ambulances to transfer the sick patients.
3. Providing medical and surgical supplies to the government and charity hospitals.
4. And to the families, we provided basic essentials such as first aid kits, hygiene kits, baby kits and baby milk products.
5. Ensure adequate nutrition with the provision of food baskets, hot meals, food vouchers and vegetable baskets and a continuous supply of safe and clean water.
6. And in preparation or the coming winter, we sourced warm clothes, blankets and mattresses for the IDPs.

From 7 October-28 Nov 2023, WHO has documented 427 attacks on healthcare in the Occupied Palestinian Territory. The attacks have resulted in 566 fatalities and 758 injuries within the healthcare facilities.

Even during warfare, health facilities are universally designated as safe zones for healthcare professionals and patients and safe haven for refugees seeking shelter. The WHO stated unequivocally that health facilities, HCP and civilians must be protected under all circumstances. We stand in solidarity with the people of Palestine and their families during these challenging times. We hope and pray for a peaceful resolution to the war, where people of all races, religions and political persuasions can live in an environment free from fear, violence, and trauma. We implore the international community to act swiftly to protect the lives, wellbeing and welfare of all people in the Occupied Palestinian Territory.

## Appendices



Locations of Water Desalination Plants built by VPM (FIMA Safe Water) in Gaza and the West Bank, Palestine.



## VPM EMERGENCY AID #PRAY4PALESTINE CAMPAIGN

*(UPDATED AS OF 24 NOV 2023).*

### FUNDS RAISED:

# RM 3,750,289.91

### FUNDS DISBURSED/ALLOCATED: RM 2,850,844.60

|  |  |  |  |   |
|--|--|--|--|---|
| <br><b>FUEL FOR 20<br/>AMBULANCES</b> | <br><b>2866 FOOD<br/>BASKETS</b>                  | <br><b>MEDICAL<br/>SUPPLIES</b>                       | <br><b>HOTMEAL<br/>PACKS FOR<br/>63,400 PEOPLE</b> | <br><b>CASH<br/>ASSISTANCES<br/>FOR 816 FAMILIES</b> |
| <br><b>20 MOBILE<br/>CLINICS</b>      | <br><b>FOOD<br/>VOUCHERS FOR<br/>800 FAMILIES</b> | <br><b>500 FIRST AID<br/>KITS</b>                     | <br><b>500 HYGIENE<br/>KITS</b>                    | <br><b>450 BABY<br/>KITS</b>                         |
| <br><b>300 VEGETABLE<br/>BASKETS</b>  | <br><b>5000 CANS<br/>BABY FORMULA</b>             | <br><b>CLOTHES<br/>VOUCHERS FOR<br/>250 FAMILIES</b> |  |   |

## THANK YOU FOR YOUR GENEROUS DONATIONS!

*Funds collected and disbursed by VPM to Gaza, Palestine from the onset of the Israeli incursion on 7 October 2023 until 24 Nov 2023.*





*Vegetables bought from the farmers in South Gaza, which were packaged for distribution to Internally Displaced Palestinian families*



*Hot Meals prepared for the IDP in South Gaza shelters by VPM workers*





*Safe and clean water were distributed to the IDP families in South Gaza.*



*Mobile Clinics were organized in South Gaza to address the health needs of the sick and injured*



*Warm clothings were provided to the poor IDP families in South Gaza.*

# The Syrian American Medical Society: History, Action, Challenges, and Hope

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**Keywords:** Syria, Syrian American Medical Society, SAMS, Medical Relief, Earthquake, Refugees

## Introduction

The Syrian conflict, ongoing since 2011, has left millions of Syrians displaced and in dire need of humanitarian aid.<sup>1</sup> As the nation endures ongoing violence and displacement, and as the suffering of its people intensifies, several organizations have stepped in to lend a helping hand. Among them is the Syrian American Medical Society (SAMS), which, standing as a shining example of compassion and resilience, continues to provide medical relief to affected communities in Syria and its neighbouring countries. This article delves into the history, relief efforts, and challenges faced by SAMS, and in so doing, reveals the impact of its tireless work.

## The Syrian American Medical Society- Action

SAMS was founded in 1998 by Syrian American medical professionals as a United States-based, non-profit, and educational organization. Since its inception, SAMS has been dedicated to providing quality, evidence-based medical education to a wide variety of trainees, along with a platform for Syrian and American physicians to share medical expertise. In the wake of the Syrian crisis,

SAMS expanded its purview and became a leading medical and humanitarian organization that provides crucial medical relief to Syrians and others in need, both within Syria and beyond.<sup>2,3</sup> Driven by a dedication to healthcare, human rights, education, and medical ethics, SAMS has been at the forefront of humanitarian efforts, serving countless people and striving for a better future for Syria. The work was gradually expanded and capacity building was extended from few staff in one location in US into 6 regional offices in 5 countries including Syria, Lebanon, Turkey, Jordan, Iraq, one headquarters office in US and hundreds of full time staffers

SAMS has been unwavering in its commitment to providing medical aid within Syria, despite the numerous challenges and risks involved. They have established, supported, and equipped various medical facilities, including clinics, mobile units, field hospitals, cancer centers, cardiac catheterization laboratories, women and birth centers, referral surgical hospitals, stroke units, and more.<sup>3,4,5,7</sup> Moreover, SAMS has trained a significant number of physicians, nurses, and other healthcare professionals to provide life-saving medical care for

patients with war-related injuries, in addition to acute and chronic diseases.<sup>2,8</sup>

Many Syrians have been severely traumatized by the unforgiving war, leaving them not only with physical but also emotional and psychological scars. SAMS places special emphasis on mental health and psychosocial support, focusing on children, women, and survivors of violence.<sup>7</sup> SAMS has developed community-based psychosocial programs, particularly in Jordan and Turkey, that address the needs of these vulnerable populations by providing counseling, group therapy, and a safe space to process traumatic experiences.<sup>7</sup>

SAMS recognizes that rebuilding a shattered Syria is a long-term, multi-pronged endeavor, and that at its core, education is needed. Pursuant to this effort, SAMS sponsors academic scholarships for Syrian medical students and graduates. Moreover, it established medical residency and fellowship programs in areas of Syria with otherwise limited resources and minimal educational opportunities. In line with the spirit of scholarship, SAMS actively participates in research studies that document and elucidate the humanitarian impacts of the conflict.

## Challenges Faced

Undoubtedly, SAMS faces numerous challenges in its effort to provide medical relief to Syria and its surrounding countries. A few of the primary challenges encountered include the following: security concerns, lack of access, and financial constraints.

Many medical facilities supported by SAMS have been deliberately targeted by airstrikes, shelling, and vandalism.<sup>1</sup> In many cases, they have been rendered completely inoperable. These calculated attacks pose a significant threat to the safety of staff and patients, and many SAMS-affiliated providers have lost their lives in the line of duty.<sup>1</sup> These attacks have far-reaching consequences, as they contribute to the further decimation of healthcare infrastructure, making it exceedingly arduous to provide adequate medical care to those most in need. Due to this unfortunate reality, in many areas of Northwest Syria, SAMS has spearheaded efforts to build underground medical facilities, fortified from aerial assaults. However, undertaking such efforts is not without cost, as more time, energy, and money is inevitably expended.

The immense scale of the Syrian catastrophe demands tremendous financial resources. To meet these colossal needs, SAMS relies on a combination of individual

donations, along with grants from US- and European-based agencies. However, with each passing year, the number of refugees and internally displaced people grow, and along with it, their medical and humanitarian needs. SAMS continues to expand its services as a response, but more financial support is required if that response is to be sustained.

## The Earthquake Response:

On February 6, 2023, in the midst of winter, Southern Turkey and Northern Syria experienced a series of cataclysmic earthquakes that resulted in widespread damage to civilian infrastructure (including a few of SAMS' own medical facilities) and new displacement of thousands, creating humanitarian needs on an unprecedented scale. For the roughly 4.5 million people in Northwest Syria, close to the earthquake's epicenter, the impact was particularly calamitous, since they had already endured more than 11 years of devastating trauma and conflict. With a strong foothold in the region, SAMS quickly positioned itself to make an impact on the ground. In Syria, SAMS' facilities received thousands of trauma victims and performed urgently needed surgeries to treat a wide array of crush injuries. SAMS swiftly mobilized its resources and worked in coordination with local and international partners to deliver immediate and lifesaving assistance in the form of trauma supplies, medical consumables, medications, equipment, support for medical teams, and repair for damaged facilities. Moreover, SAMS established mobile clinics to provide emergency healthcare services in the affected areas.

SAMS also provided a platform for physicians from around the world to share their expertise, both in person and virtually. SAMS organized several emergency medical missions to the affected regions where groups of physicians from the US traveled overseas to directly serve those impacted by the earthquakes. Our generous volunteer physicians donated their time and skills to provide medical, surgical, orthopedic, anesthetic, obstetric, and pediatric care, among others. In addition, SAMS' generous medical and non-medical volunteers demonstrated and maintained cultural sensitivity during this difficult time. By providing care to match the unique needs of the affected communities, SAMS established a strong sense of rapport with both the refugee communities and the local populations. This allows SAMS to provide much-needed support to more families and provide more effective medical care to more patients. Now a few months removed from the earthquakes,



SAMS continues providing survivors with extensive follow-up general and subspecialty medical care, physical rehabilitation, and mental health services.

In addition to the direct physical harm the earthquakes caused to the victims, it was paramount for SAMS to address the impact this had on the infrastructure and refugees who did not have a home to return to. An aerial view of the destroyed neighborhoods in Southern Turkey and Northern Syria showed apocalyptic scenes of destroyed buildings and rubble leading to a desperate scramble to find survivors shortly after the quakes. In addition to leading search and rescue operations, SAMS worked with other NGOs to provide temporary shelter to those who lost their homes. SAMS also supported the rehabilitation and reconstruction of damaged infrastructure in the region.

## Conclusion

The efficiency of SAMS' relief efforts can be attributed to its well-established presence in the region. This allowed SAMS to respond expediently and coordinate with local partners. By working closely with other NGOs, local authorities, and international organizations, SAMS was able to amplify its impact, maximize efficiency, and create a more comprehensive and sustainable response. Although SAMS faced challenges, SAMS' response illustrates the importance of preparedness and the need for a robust network of partners to ensure effective and efficient medical intervention in times of crisis. SAMS' approach to relief efforts was to not only address immediate medical needs but also long-term rehabilitation and social-emotional support, which is a crucial component of recovery for the affected communities. While recognizing the many seen and unforeseen challenges, SAMS will continue to work collaboratively with its generous volunteers, fellow NGOs, local populations, and private and public donors to help provide medical and humanitarian care to patients and their families.

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## The David Nott Foundation Training Surgeons in Palestine

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**Keywords:** *Relief, DNF, Gaza, Training Surgeons,*

Conflict has devastating effects on countries, in particular those with low resources and stretched health systems. It weakens and further stretches medical systems, often rendering them extremely vulnerable. Conflict causes loss of life, the destruction of homes and infrastructure, and displacement of its population, in addition to medical and mental health challenges (1,2,3). In countries where resources are scarce and access to medical equipment and training is limited, doctors are left to face the most challenging of circumstances, ill-equipped and unsupported.

Since the establishment of the David Nott Foundation (DNF) in 2015 by Professor David Nott and Elly Nott, the DNF has consistently worked to empower, train and up skill doctors in conflict zones and natural disaster areas to enable them to save lives and elevate the suffering of war victims (4). The DNF focuses on supporting medical professionals, specifically surgeons and anaesthetists, to make the right choices for their patients in challenged contexts.

Professor Nott has extensive knowledge and expertise in managing war injuries, accumulated from more than 30 years' experience in conflict zones and natural disasters. This wealth of knowledge forms the basis of the DNF's bespoke Hostile Environment Surgical Training (HEST) course. The course is designed to improve the emergency trauma surgery skills of local surgeons and doctors and better equip them for the incredibly challenging circumstances they face on a daily basis. Professor Nott previously set up and led the teaching of the Surgical Training for the Austere Environment (STAE) course at the Royal College of Surgeons.

Alongside the extensive experience of Professor David Nott, the DNF has a faculty of highly-experienced

surgeons that deliver the training programme around the world. Each member of this group of respected surgeons has shown extraordinary dedication to the field of humanitarian medicine through their work in conflict and natural disaster zones. By sharing their expertise with local doctors, they are able to help improve surgical outcomes.

Since its birth, the DNF has trained more than 1,500 doctors and run over 50 missions to regions including Syria, West bank, Gaza, Yemen, Iraq, Lebanon, Libya, Kenya, Cameroon and Ukraine. The DNF prides itself on its one of a kind training materials and surgical models, making the course truly unique in its nature. All surgical cases that feature in the modules are cases the DNF team have operated on in the field during missions.

The teaching models are specifically made for the DNF, making the course world-leading and unrivalled. One example is the use of Heston, a life-sized human replica crafted from silicon. Heston's intricate design ensure that his skin, bones and organs feel and look authentic.

This anatomical accuracy provides surgeons with a realistic look at what they may expect during real field operations and difficult procedures in austere environments.

The DNF is a UK registered charity with long term links with Palestinian doctors. This was initially formed through missions that Professor Nott led (along with the DNF team) to Gaza in 2014 and 2018, in addition to missions to the West bank in 2017 and 2022. We have trained over 100 Palestinian surgeons over this period.

The foundation also prides itself on a scholarship scheme, such that surgeons are sponsored to come to the

UK and attend DNF training courses, including Training of the Trainer, helping to establish a group of Palestinian surgeons who on their return can up skill others.

With the unfolding of the recent war in Gaza, including the vast number of casualties and the collapse of the health system, the foundation has further stepped up its response. According to on-the-ground partners, medical professionals are stretched to their limits and hospitals are overwhelmed. The DNF established an online emergency surgical consultation group with local Palestinian DNF faculty and their colleagues, in addition to senior surgeons from the DNF team offering advice on urgent cases whenever possible.

In addition, we have translated all of our training materials and videos into Arabic and made these available to doctors and surgeons there, to assist them in managing trauma and war injuries.

Furthermore, we are collaborating with other medical organisations, such as PalMed, who have a number of medical and surgical volunteers registered to support the medical aid to Gaza and West Bank when permission is granted. In a collaboration between the DNF and PalMed, during a remarkable four-day HEST course, surgeons and anaesthetists from the UK, Germany, Sweden, Norway and Qatar gathered in Bolton, UK, to learn how to treat trauma injuries in the Gaza Strip. This course not only marked a significant step towards preparing medical professionals for future missions in Palestine, but also reflected a shared commitment to saving lives in conflict zones.

The DNF trained 42 surgeons and anaesthetists, equipping them with the knowledge and skills needed to deal with war injuries. A second training course is being planned for the near future.

In addition, the DNF's senior surgeons are on standby to be deployed to the region to assist in the medical relief and treat injured war victim when permission to enter is granted. There is unfortunate certainty in the enduring occurrence of conflict and natural disaster. With this in mind, the DNF is committed to continuing to train and support doctors in conflict zones such as Palestine for as long as they are needed.

We believe in a world where safe, skilled surgical care is available to all – and that will remain our guiding light.

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*Figures 1 & 2 Hostile Environment Surgical Training Course Equipments*



## Noor Al-Uyonwajame' Al-Funoon (The Light of the Eyes and the Collector of Arts)

(By Salah Al Din Al-Kahhal Al-Hamwy (Circa 969AH = 1296CE)

Edited by: M. Zafer Wafai, MD. and Prof. M. Rawwas Kalaji, Ph.D.

Published by: King Faisal Center for Research and Islamic Studies, Riyadh, KSA. 1987 (Fig.1))

Reviewed by: Prof. M. Zafer Wafai, MD FACS, FRCS and Ms. Serene Wafai, MS. Edu.



Figure 1 Front page of the Book

We, the medical historians, are indebted to the late Lucien Le Clerk (1) for his discovery of this invaluable book and for bringing it to the attention of the medical historian community based on the only manuscript known of the time in the national library (Bibliothèque Nationale) in Paris # 1042 Suppl. Arabe.

W. Pertsch (2) described another copy at the Ducal Library of Gothe # 1994.

J. Hirschberg wrote extensively about this book in his famous encyclopedia (Die Arabischen Augenärzte) (3) translated recently by the late Prof. Frederick C. Blodi into English (The History of Ophthalmology). In addition, Hirschberg, J. Lippert and E. Mittwoch, wrote a book about the Arabian Ophthalmology in which they reviewed this book along with two other books written by the famous Occulists Ammar Ibn Ali Al-Mawsily and Khalifeh Ibn Abi Al-Mahasen Al-Halabi (4).

Two more manuscripts exist of this book:

The first is in the Alexandria National Library # 1098. The second was discovered by M. Z. Wafai, MD. and was not mentioned by any historian before, in Hamediyah Library # 1038 in Istanbul, Turkey.

Unfortunately, both copies were incomplete and missing pages and even whole chapters, sometimes.



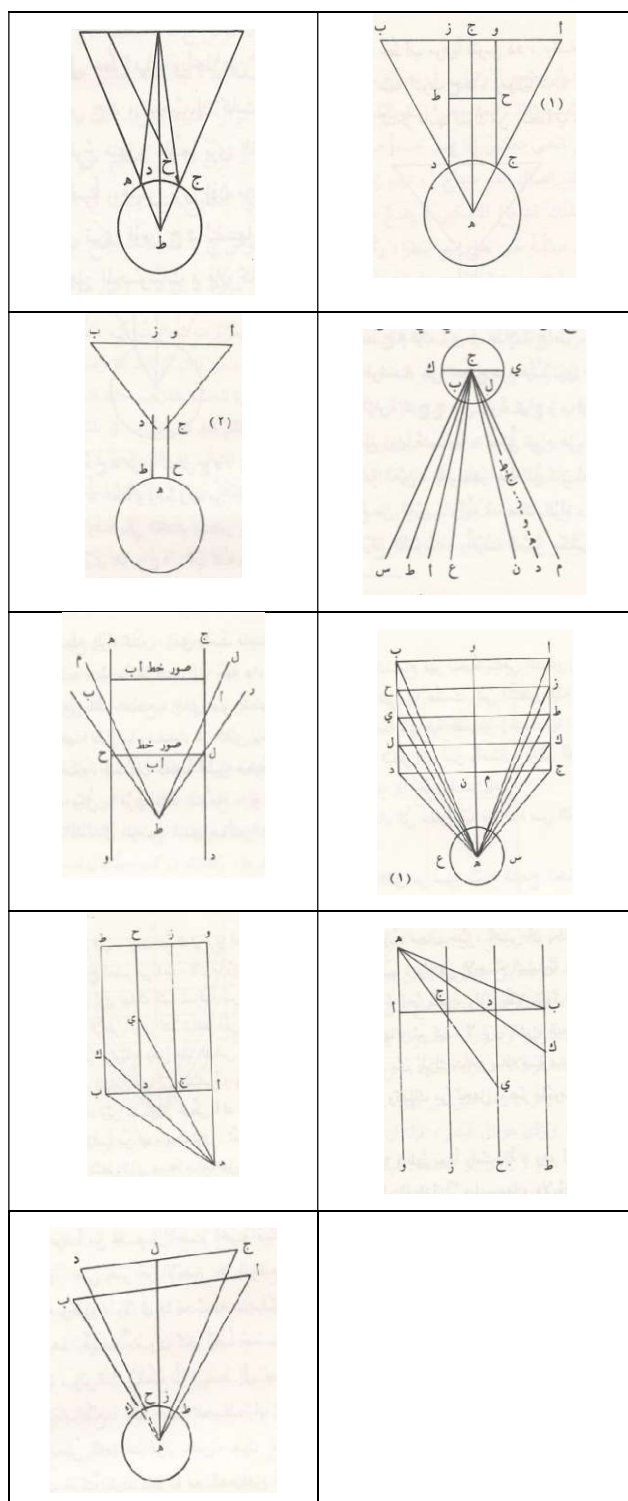


Figure 2

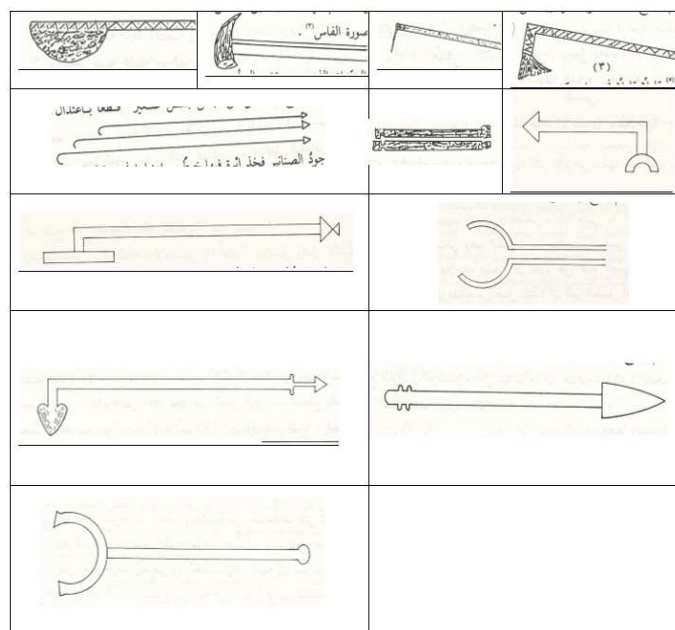


Figure 3

As mentioned above, the editors of the book (Wafai and Kalaaji) chose the Paris copy as the mother copy because it is the oldest (written in 1126AH=1714 CE), and complete (contains all the ten chapters, or maqalahs) as well as the introduction and all the geometrical figures to explain the theory of vision in the second maqalah, (Fig. 2) some of which were taken from the book of optics by Euklid, and the eighteen surgical instruments scattered throughout the chapters on surgery, (Fig. 3), and the outstanding and the first colored drawing of a cross section of the eye (Fig. 4) (5) .



Figure 4

This manuscript consists of 178 folios (353 pages), each page contains 27 lines, with 13-15 words in each line.

The other three manuscripts were incomplete and lack all the illustrations mentioned above. For example:

Gotha # 1994: Consists of 154 folio or 300 pages, 21 lines in each page, the pictures and the figures, in addition to several pages and occasionally full chapters are missing.

Alexandria # 1098: consists of 230 folio or 460 pages, 17 lines in each page, written by two different calligraphers, and all the figures and drawings are missing.

Istanbul (Hamedia) #138 which was discovered and mentioned for the first time by M. Zafer Wafai, MD is a copy of the Paris manuscript.

In the introduction of the book, Salah al-Din referenced most of the Arabian oculists prior to his time who were experts in the field of ophthalmology (diagnosis and medical and/or surgical management) in addition to fifteen prominent Grecian oculists. In this chapter he exhibited an outstanding humanitarian spirit and fear of Almighty God. He emphasized the doctor's behavior and how it should be characterized by perfection and noble spirit and mercy.

Salah Al- Din stressed the importance of behavior and dignity by stating:

- One must have purity, chastity, and the fear of God.
- One must keep the secrets which are confined to him/her.
- One must have goodness and faith.
- One must work hard in the study of science and avoid the useless and vain lust of the body.
- One must follow the scholars and to dedicate oneself to the sick and the needy.
- One must think of their treatment and how to find ways and means to restore their health, and if it is possible one can support the poor with their own money and do it with pleasure.
- One's aim should not be to hoard treasures, but to collect only fees.
- Never prescribe lethal medications or an ointment which could harm or damage the vision.

(God the exalted may support you and me as He pleases.)

After this lengthy introductory chapter stressing the importance of fearing the Almighty God and seeking his mercy, guidance and eternal reward in the life after, Salah Al-Din goes to the first chapter (maqalah) dealing with the anatomy of the eye in a very systematic, eloquent and comprehensive way, and follows the same system in the remaining nine chapters. We should stress what was mentioned earlier, that this first chapter contains the very first colored drawing of a cross section of the globe.

In the second book (maqalah), Salah Al-Din dared to present geometrically his theory of vision. In this chapter he divides the scholars who dealt with this topic into three groups: the first are the mathematicians who claim that the visual ray originates in the eye. The second group claims that the vision occurs with the help of the air around us. The third group is the naturalists who claim that vision is due to perception.

He then goes on to explain the mirage phenomenon, and the straight object being seen bent in the water, etc.

Each of the following five chapters covers a specific part of the eye in the same systematic and elegant way, starting with different kinds of eye diseases, diseases of the eyelids, diseases of the canthi, conjunctiva, and the cornea.

The eighth book deals with diseases of the iris, the pupil, and extensively with diseases of the lens (cataract). He describes the different sizes and the eight different causes of the cataract and the eleven different colors that it may have.

He emphasizes the importance of the papillary reaction to light prior to performing the procedure to ensure favorable results. Then he spares no time or effort in describing in great detail the surgery itself, the surgeon, and his/her assistant regarding their clothing and courteous behavior with the patient, positioning the patient to ensure adequate light for the surgeon, and finally recommending a soft or liquid diet for the patient post operatively. At the end of this chapter, Salah Al-Din describes the couching of the cataract using the hollow couching needle invented and used by Ammar Ibn Ali Al-Mousily in his book The Chosen of the Eye Diseases and their Management.(6) .

In the ninth book (maqalah), Salah Al-Din discusses the

occult diseases of the eye which are not apparent to the examiner such as the diseases of the Retina, choroid, and the optic nerve, and discusses their causes and types of treatment if possible.

In the tenth book (maqalah), he lists an excellent and very extensive collection of simple medications and a few combined medications useful to treat eye diseases.

In brief, Salah Al-Din should be considered one of the few geniuses in the field of ophthalmology and a pioneer in describing the eye diseases and their management.

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## The raging war on Gaza: The killing of innocents

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Dear Editor,

The onslaught on the innocent people of Gaza and the decimation of its infrastructure by Israel is incomprehensible and truly beyond all imagination. We've not seen destruction and the loss of innocent lives in such a short time in which children and women are the main target. The world is reaching a point of no return where deliberate disregard for international law and human rights scars our shared consciousness, and is making it an unsafe place to live in.

When a child in Gaza was asked about his dreams as to what he wishes to be when he grows up, he answered "Uncle, children of Palestine do not have dreams as children in Gaza are killed before they are allowed to grow up". This is the lost childhood and hope of children in occupied Palestine. This is vividly exposed by the ongoing war in Gaza in which innocent children are specifically targeted and killed. It also exposes the 75 years of harsh and brutal occupation, oppression, displacement, aggression and extermination of the Palestinian people and their culture.

A record of what every 16-year-old Palestinian in Gaza has already been through in their short life from losing parents, to surviving death is accurately described as a lost childhood from which the world is turning a blind eye.

Israel has continued its attacks across the Gaza Strip, including hospitals. In every hour in Gaza, 15 people are killed - 6 are children, 35 people are injured, 12 buildings are destroyed and 42 bombs are dropped (in the first six days of the war according to the Israeli army). The prohibited white phosphorus was also used. Here are the latest casualty figures as of 18<sup>th</sup> December 2023, at least 19,453 Killed, including at least 7,729 children and 5,153 women. More than 52,286 injured, thousands of whom

are critically injured, including at least 8,663 children and 6,327 women and more than 8,000 missing.

Almost all of Gaza's population are now displaced from their homes. Families forced to flee multiple times and are staying in overcrowded and unhygienic shelters or sleeping on the streets as winter worsens. Israel's indiscriminate bombardment and siege for almost 17 years is making it impossible to sustain human life in Gaza. People are living in constant fear of death and there is no safe place in Gaza.

During this war, Israel has arrested dozens of doctors, and their whereabouts remain unknown. The head of the main hospital (Al-Shifa hospital) in Gaza City Muhammad Abu Salmia has been under Israeli arrest since November 22nd and many other senior doctors have continued to be held by the Israeli military without charges and no one knows their whereabouts.

Palestine red crescent Society announced earlier in the ongoing conflict that operations of their ambulances in Northern Gaza and other places have stopped due to the lack of fuel, hospital closures and it is now impossible to evacuate wounded people in many areas in Gaza. These patients are essentially left to die. There is insufficient hospital space to treat even a fraction of these patients in massively cramped facilities. United Nations shelters have been overcrowded and have become havens to spread infectious diseases including hepatitis A, meningitis, lice skin infections, scabies and multiple diarrhoeal illnesses. Today, if Gazan people are not killed by the indiscriminate bombardment, they will be most likely die from lack of food, clean water, electricity, drugs and health care, a slow and painful death.

Devastation across Gaza is another dimension of this brutal and unjust war on Gaza, according to the latest



data from the UN's Office for the Coordination of Humanitarian Affairs (OCHA), the World Health Organization (WHO) and the Palestinian government, and as of December 13, Israeli attacks have damaged at least over half of Gaza's homes - 305,000 residential units have been destroyed or damaged, 339 educational facilities damaged, 26 out of 35 hospitals not functioning, 197 places of worship damaged and 102 ambulances damaged. Frontier ambulance Convoy and Red Cross Ambulance convoys were bombed. The remaining hospitals are only partially functional but they are operating at more than double their capacity with critical shortages of basic supplies and fuel, these facilities are also providing shelter to thousands of internally displaced people.

The number of injured people who have faced amputation has soared. There were also reports that major surgical procedures including amputations and caesarean sections were performed without anaesthesia or painkillers. The only mental health hospital, eye hospital, dialysis unit and cancer hospital in Gaza were all bombed.

The two medical schools in Gaza, the Islamic University of Gaza and Al-Alazar University Medical School, have both been demolished, an ominous development for the future of healthcare and medical education in the area.

The plight of the Palestinian people has exposed colonialism and the western myths and hypocrisies of human rights, international laws, the United Nation, justice and equality. Palestinian truth, faith, bravery and resilience have exposed the ongoing manipulation, weaknesses, cowardness, racism, greed and injustice in the world. Hope for Palestine has brought unity and hope to the world. There must be a ceasefire immediately and a recognition that whatever happens justice will eventually prevail. A ceasefire will stop further deliberate and preventable suffering and killing of innocents.

# The Healthcare Situation in Gaza; a Catastrophe the World is Witnessing

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Dear Editor

Since the commencement of the war in Gaza on 07/10/23, health care facilities and professionals have been deliberately targeted by the IDF.

As of 02/12/23, the IDF has ruthlessly claimed the lives of 264 health care professionals in Gaza, among them 47 doctors of various specialties, 22 dentists, 24 medical/dental students, 4 medical scientists, 84 nurses, 22 paramedics, 10 physiotherapists, 30 pharmacists, 14 lab technicians, and 7 optometrists.

Furthermore, Israel targeted a total of 135 health care facilities, leaving 21 hospitals and 37 health care centres totally un-operational including Al-Shifa Hospital Complex (the largest health care facility in Gaza). Since at least 2008, Israeli propaganda has circulated assertions suggesting that militants hide or launch attacks from hospitals in Gaza and use patients as human shields. However, Israel's military has failed to present credible evidence supporting these claims, and independent investigators have found them to be baseless. Individuals with extensive experience working in Gaza hospitals, are inconsistent with these allegations, they have not encountered militants operating within hospitals or restricting access to specific hospital areas. The Israeli army has been found to disseminate falsehoods to justify its actions, as exemplified by the case of the murder of Palestinian American journalist Shireen Abu Akleh, where Israel was repeatedly caught lying about its responsibility. The international community continues to give Israel the benefit of the doubt however, and often

quoted lines of "Israel having the right to defend itself" even though it targets hospitals are extremely troubling.

Patients and internal refugees find themselves trapped inside the hospitals, with the Israeli war machine attacking them from all sides, their plight disregarding international laws and human rights agreements. Here we remember the haunting memory of the Al Ahli Arabi hospital massacre on 17/10/23, where over 500 patients, staff, and refugees were killed by the Israeli army, and leaving thousands more injured in mere seconds. Hospitals in Gaza are no longer places of sanctuary; the IDF has seen to that.

Moreover, health care facilities now grapple with a scarcity of essential supplies such as sedatives, antibiotics, and dressing. Surgeries are conducted without anaesthesia on hospital floors, exposing children, women, and the elderly to shockingly inhospitable conditions devoid of basic resources. The healthcare staff, toiling without respite for 60 consecutive days, face a dire shortage of manpower, leaving them without a chance to reunite with their families or ensure their own safety.

Some colleagues have left under bombardment, heading south to serve in other hospitals, while others make the even tougher decision to stay, to face a tragic end alongside their patients in a very sad image that should be remembered forever, representing the ultimate sacrifice of the health care heroes in Gaza and the essence of the medical message through history. These

men and women are putting their patients first, at great risk to themselves.

Simultaneously, 40 healthcare professionals, including the general director of Al-Shifa Medical Complex, Dr. Muhammed Abu Selmia, have been kidnapped by the IDF. Dr Selmia, refused to abandon his post and leave patients, including neonates in incubators, to perish. Despite the pleas of international humanitarian organizations to safeguard hospitals and their workers in Gaza, these professionals were unlawfully abducted, violating human rights agreements, and constituting clear war crimes. Since their abduction, all contact has been lost with the 40 hostages, as Israel remains unyielding in providing any information about their fate. They could be alive or dead.

Dr. Munir Albursh, the spokesman for the Ministry of Health in Gaza, captured a harrowing image from Kamal Odwan Hospital on 05/12/23. Describing the scene as catastrophic, with no electricity due to a fuel shortage, thousands of injured individuals and martyrs lay strewn across the emergency department, reminiscent of a horror movie. Medical teams find themselves powerless, surrounded by snipers who indiscriminately target anyone entering or leaving the hospital. With over 10 thousand refugees seeking shelter in the hospital, attempts to evacuate are met with airstrikes, perpetrating yet another massacre and war crime against innocent civilians, patients, and healthcare professionals and facilities.

The situation in Gaza is apocalyptic; the health care system is falling apart whilst the world looks on. More than 2.3 million people have been left with no access to health care facilities or services, including more than 50,000 pregnant women, acute and chronic patients and war injured civilians who face a dark fate of further infection and complications. Meanwhile, the world looks on.

## Gaza War - Perspective from the West Bank

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Dear Editor,

The situation has changed here after the 7th October, and amongst the most significant changes has been to the healthcare system in the West Bank, especially in Jerusalem. The main hospitals that have been affected in Jerusalem are Maqasid Hospital, the French Hospital and Matla Hospital (Augusta Victoria which is run by UNRWA). These hospitals have patients referred to them from both the West Bank and Gaza.

After the 7th October war, and the subsequent siege of cities in the West Bank and the increase in military checkpoints, these referrals have become extremely difficult and patients with chronic illnesses are not being treated. Security clearance is needed for Palestinians to pass these checkpoints and they are no longer being given.

In addition to this, the roads are more dangerous due to the recent violent events in the West Bank (especially Jenin, Nablus and Tol Karam). Hospitals in Jerusalem are under more pressure at the moment due to the increased numbers of wounded too. A number of hospitals and healthcare centres, and even ambulances have been recently targeted.

A field hospital in Nablus established by Jordan to take the pressure off has been struggling to treat its patients. The numbers who are arriving with acute trauma are at risk of overflowing the hospital though many patients still can't be seen due to the difficulty of even reaching it due to the number of military checkpoints that make the journey needlessly long and fraught with risk.

The international community must unanimously condemn the actions of Israel and isolate it from the body of nations. The Arab and Muslim world should play a leading role in this effort and advocate on behalf of the Palestinian people. FIMA has a role to play here in coordinating efforts between Muslim medical associations for lobbying efforts and aid delivery. And whilst the situation in the West Bank is not as dire of that of Gaza, the people there are suffering and Israel share the blame here too. Beyond the war, the spread of communicable diseases is a huge concern in the medium to long term. Tens of thousands of Palestinians rely on these hospitals; we cannot afford to let them down.