Moses Maimonides (1138-1204), known under his Arab name as Abū ‘Imrān Mūsā ibn ‘Ubayd Allāh ibn Maymūn and under his Jewish name as Moshe ben Maimon, was not only one of the greatest Jewish philosophers and experts in Jewish law (Halakhah)², but an eminent physician and the author of a varied corpus of medical works as well³. Next to ten works featuring in the current bio-bibliographical literature, Maimonides is the author of the K. Qawānīn al-juz’ al-‘amālī min ṣinā’a al-ṭibb (Treatise on Rules Regarding the Practical Part of the Medical Art) (hence called: Therapeutics), which is extant in a unique MS BN de Madrid DCI (formerly Escorial 888), fols. 109a-123a. Steinschneider identified the text in this manuscript as another copy of the treatise On Asthma and considered the title to be fictitious⁴. Upon inspection, however, it is clear that the Therapeutics is an independent authentic work composed by Maimonides and that it fits the mold of Maimonides’ medical writings. It is written in the format of fuṣūl, or short, self-standing paragraphs that Maimonides wrote down from time to time, only later to organize them into a series of monographs and one large book, his Medical Aphorisms. As Maimonides tells us in the introduction to that book, this was the custom of medical writers; indeed, the most detailed account of the “fuṣūl” (aphorisms) as a literary genre is found in the introductory essay to Maimonides’ Medical Aphorisms. In the course of years of the study and practice of medicine, Maimonides filled his notebooks with hundreds of fuṣūl, which formed the raw material for his medical writings. This method of composition allowed Maimonides, who was pressed for time and suffering from ill health, to avail himself of the same faṣl in more than one writing⁵. Some sixteen fuṣūl found

---

¹ This article is a slightly modified version of the introduction to our forthcoming edition of the Treatise on Rules Regarding the Practical Part of the Medical Art, in “The Medical Works of Moses Maimonides”, published by Brigham Young University Press.


³ For his medical works see ibid. pp. XVII-XVIII.


⁵ Indeed, Maimonides is likely to have followed the same practice in the composition of his Guide of the Perplexed; see Y.T. Langermann, “Fuṣūl Mūsā: Maimonides Method of Composition”, Maimonidean Studies 5 (2008): 325-344.
in the present essay were included, with somewhat different wording, in other Maimonidean texts, mainly his Medical Aphorisms (see table at the end of this introduction). However, there is a basic difference between some ḥusūl in this work and those found in the Aphorisms. Some ḥusūl in this work are a kind of an itemized account, consisting of numbered lists of medical issues far more comprehensive than those in the Aphorisms. Thus, one gets the impression that they are the result of a life of learning and practising.

In a brief introductory paragraph Maimonides reveals a few more details about our treatise. It was written for the same patient for whom Maimonides wrote his monograph On Asthma and was meant to be part of that tract. Ill health prevented Maimonides from completing it at the time. Maimonides did eventually finish it, producing the text that we publish here. We know that it is a finished product because it closes with an admonition to pay close attention to the advice given in this treatise, some other interesting pieces of advice, and a reference to (yet another?) unknown Maimonidean medical writing:

86. One should set one’s mind on all the things discussed in this treatise, compare them with one another, and then act accordingly. Beware of fear and of not being generous in [any matter, whether] small or large, and do not be excessive in something that the contemporary physicians consider to be needless. Do not treat evil diseases [so that] you will not be called a “physician of evil”. Do not deviate from the course pursued by the physicians [in general], and do not try a medicine that has not been tried before [and found to be] safe. Do not treat evil diseases [so that] you will not be called a “physician of evil”. Do not deviate from the course pursued by the physicians [in general], and do not try a medicine that has not been tried before [and found to be] safe. I have mentioned all the precautions one should take in this regard in the treatise On purgatives. This is what I intended [to write], praise be to God.

From the literary point of view, the passage just cited is clearly an ending. In fact, the thirteenth and final section of On Asthma contains some general rules for the preservation of health, over and beyond the specific advice that Maimonides offered to his asthmatic patient; this may be some vestige of Maimonides’ original plan, which would have been that On Asthma should end with a comprehensive treatment of medical care. Unfortunately we do not know the name of the person for whom On Asthma was written, beyond the fairly obvious fact that he was an important individual. We are also uninformed about the date of its composition. Hence we remain in the dark concerning the date and patron of the Therapeutics. However, it is very safe to say that the Therapeutics was written very near the end of Maimonides’ life. Maimonides did not begin to write on medicine until he was well advanced in years; and the completion of this monograph had to wait for some, unspecified time, after he finished On Asthma.

The unique copy of our treatise is, as stated above, extant in MS DCI of the Biblioteca Nacional de Madrid. The codex was dubbed “Medicina Castellana” by Guíllén Robles, who gave a fairly detailed account of its contents6. One

---

hundred and twenty years have passed since the publication of his catalogue and, as far as we know, no one has studied the codex since. The present study is limited to Maimonides’ text. It is written in Arabic letters and in a Maghrebi hand and was completed at the beginning of October 1424. The ink has faded and the writing is difficult, in some places next to impossible, to decipher. The reader encounters not a few of the grammatical oversights that are not uncommon in texts of this sort, but also a few more serious textual problems. We have been as judicious as possible in suggesting emendations to the text, but in some cases it was necessary to emend in order to make the text coherent; and in a very few instances, we have no satisfactory solution to offer.

Medicine had traditionally been divided into two distinct sub-disciplines, the theoretical and the practical. Maimonides’ *Therapeutics* clearly belongs to the latter. However, the precise definition of this category was a matter of some discussion and controversy. Ibn Sīnā was very assertive in his proclamation that the practical part of medicine was no less a science than the theoretical part; it too deserved to be called *‘ilm*. According to Ibn Sīnā, the practical part develops the general, scientific rules that guide practice; it is not simply a list of practical instructions. He knows quite well that in defining the practical side in this manner, he is breaking ranks with many, perhaps, most of the physicians of his day. In particular, it seems that Ibn Sīnā is targeting Ḥunayn ibn Ishāq, whose very influential *Mudkhal* (*Introduction*, what the Greeks would have called *Eisagoge*) opens with the proclamation that there are two parts to medicine, *naẓar*, science, and *‘amal*. A simplistic understanding of this classification has taken hold, which Ibn Sīnā rejects outright⁷. He clarifies his own position in the very first chapter of his monumental *Qānūn*. His remarks will be very useful for us in assessing Maimonides’ treatise, so we will cite them in extenso:

You ought not to hold the opinion that their intention [in dividing medicine into these two divisions] was that one of the divisions of medicine studies science, while the other division comprises directions for practice (*al-mubāshara li-l-‘amal*), which is what many investigators are led to believe [literally: where the fantasy of many investigators leads them] concerning this topic. Instead, it is your duty to know that the intention here is something else, namely, that each of the two divisions is nothing other than a science (*‘ilm*). However, one of them concerns the science of the principles of medicine, and the other, the science of the how it is to be applied (*kayfiyyat mubāsharatihi*). Further, the first section is characterized in particular by the name ‘science’ or by the name ‘investigation’ (*naẓar*; may also be translated ‘speculation’), while the other is characterized in particular by

---

⁷ It would be interesting to see what, if anything, Ibn Sīnā has to say in his gloss on this passage. Unfortunately his commentary to the *Mudkhal* has never been studied, though many copies exist; see Georges Anawati, *Essai de bibliographie avicenienne*, Cairo 1950 (n. 144). In fact, the *Mudkhal* itself has been sorely neglected; the copy consulted is MS Vatican 348, one of several copies of the Arabic in Hebrew letters.
the name ‘practice’ (‘amal). ‘Investigation’ refers to that whose study yields [correct] belief alone, without concern to clarify how this may be applied. Examples of this are the statement, made in medicine, that there are three types of fever, and that there are nine temperaments. ‘Practice’ does not refer to actual practice, nor to the application of bodily movements. Instead, it is the part of medical science whose study yields a notion (ray’) that links to the clarification of how to practice. For example, it is stated in medicine with regard to hot tumors (awrām ḥāra), that, at their inception, the treatment ought to impede them, cool them, and bring them into the open. After that, the impediments [impeding drugs] should be mixed with softeners. Then, after the limit has been reached, until they begin to shrink, the solvent softeners should be reduced; but this [course of treatment] should be given in the case of tumors that are caused by materials that have been expelled by primary organs. Studying this yields a notion [suggestion], which clarifies how the practice should be executed.

Maimonides identified himself strongly with the western (Maghrebi/Andalusian) tradition in medicine, and, as such, he would not have been beholden to Ibn Sīnā9. He does not directly address the definition of the practical part of medicine in the treatise that we publish here. However, inspection of the fuṣūl that make up the treatise shows that, by and large, he agrees with Ibn Sīnā’s approach. Some of the fuṣūl, especially at the beginning of this collection, give precisely the type of general rules that Ibn Sīnā spoke of. A good example is faṣl 18:

18. One should evaluate the cause [of the ailment], the ailment [itself], and its symptoms [i.e. side effects], as each one stands in relation to the others; then one should pay attention to that which causes the strongest disturbance [of the body] and weakens its strength most of all. If you come across something that annuls all these things together or that annuls that which is most severe and is beneficial to the other things, you should rely on it. But if you do not come across something like that, you [should turn] to that which is most important without neglecting the other [things]. If the cause of the fever is alarming [i.e. very dangerous], one should take care to root it out, even if this increases the heat of the fever. And sometimes the fever itself is so high and severe that one should hasten to extinguish it and cool it off, even if this worsens the cause. And in some cases the fever is accompanied by severe symptoms [side effects], such as

---

a collapse of the strength, excessive diarrhea, and fainting, and one should quickly pay attention to the symptom [first] so that it disappears and then start treating the fever.

Maimonides here advises the physician to assess the relative urgency of three factors: the cause of the disease, which, in the case of fevers, was taken to be superfluous material that the body had not expelled; the ailment, i.e., the fever, that is, just how hot the body is; and symptoms or side effects. Ideally, the physician would employ a remedy or treatment that addresses all three. However, in general this will not be the case; moreover, for a given patient, one of the three factors may pose an immediate threat and demand a solution, even if the solution exacerbates one of the other two. This would imply, for example, that if the patient is extremely weak, he should take some food. This contradicts the opinion, generally held at the time, and in fact endorsed by Maimonides in his own *Aphorisms* (10.68) that feverish individuals should not eat under any circumstances, since food is the main source of material superfluities that fuel the fever. The implication of *faṣl* 18 is in fact stated clearly at the end of *faṣl* 20, another example of practical medicine that matches the definition of Ibn Sīnā:

20. The issue of food [to be given to someone ill] has six aspects: (1) one of these is the strength [of the patient]. If it is sound, then he can tolerate waiting and a lightening [of his diet]; and the opposite [holds true, i.e., if his strength is weak, then he must be given food right away, and his diet should not be lightened]; (2) the length of the disease: If the disease lasts for a long time, the strength should be maintained by means of food; (3) the disease: [The quality of the food] should be opposite to [that of] the disease: For instance, in the case of fever caused by the putrefaction of thick, viscous humor, the food should thin out the thickness of the humor; (4) the time: [The food] should be administered at the usual time both during health and when the attack abates; (5) the digestive organs: When either the stomach or the liver is affected by a tumor and food is administered before a [fever] attack, it is detrimental for the patient, especially when the body is overfilled. When one of [these organs] is weak because of a bad temperament or because of the influx of humor, but it is not affected by a tumor, food is appropriate in that [situation], even during a [fever] attack, especially when the body is lacking overfilling [i.e., it is not congested]; (6) the magnitude of overfilling: When the body is overfilled one should take less food, but when it is deficient one should take more food, even during a fever attack.

We are left to wonder what this tells us about the development of Maimonides’ thinking on the subject. Which text represents his latest thinking on the topic? The issue is not raised in the last of the twenty-five sections of Maimonides’ *Aphorisms*, which contains his critique of Galen; but that last section was not edited (from Maimonides’ notebooks, where these *fuṣūl* were recorded
over the years) by Maimonides himself, but rather done posthumously by someone else\(^\text{10}\). What would Maimonides have done in his medical practice? Again, we do not know. However, another chapter from our text does preserve a very interesting and hitherto unknown remark by Maimonides about his own practice.

In chapter thirty-three, Maimonides introduces his own observation, which essentially nullifies the rule given in textbooks. Galen had advised feverish patients to visit the bathhouse, and his opinion was repeated by “all physicians”. Maimonides questions this practice—not directly contradicting Galen, but rather claiming that in his day, no one knows any longer about the effect of the bath upon fevers. The upshot is that Maimonides has thus in effect thrown out Galen’s rule, and advises instead treating fevers by diet or bleeding. This same chapter displays as well some advice concerning specific food substances. As such, it may possibly not be wholly in line with Ibn Sīnā’s guidelines for practical medicine —guidelines that Maimonides never explicitly accepted, as we recall. Here is the passage:

33. When a fever occurs, one should examine it. If it is an ephemeral fever, the patient should enter the bathhouse when the fever abates, [according to] the opinion of all physicians. But I caution them against taking him to the bathhouse because we know little about this nowadays. And if there may be some one who knows about the nature of fevers and about the effect of [going to the bathhouse], we do not know about it, [even] if we look into it; let alone that we should know the effect. If [the patient suffers from] blood fever [syncophous fever], one should hasten to bleed him. If the fever [originates from] yellow bile, the humor from which it originates should be evacuated by means of ingredients that have the property to cleanse and evacuate without heating, such as tamarind (Tamarindus indica), pears, pomegranate juice, oxymel, barley groats, and spinach. If the fever is chronic, one should either give the patient in the beginning ingredients that refine the coarseness of the humor [that causes that fever] and thin its viscosity and help its concoction, or give him in the end, when the humor is concocted, ingredients that evacuate it. If [the patient suffers from] hectic fever, one should take care to cool and moisten [his body] and to revive his vigor.

Most of the advice given in this treatise is found in one form or another in the medical literature of the day, if not in Maimonides’ own writings. His procedure for treating serious abdominal wounds in which the intestines have become dislodged, however, has not to the best of our knowledge been described in published studies of medieval texts. Different instructions for procedure, known as gastrorrhaphy, literally «suturing the abdomen», are given by Celsus and Galen, among others. Maimonides describes it in this way:

80. If the omentum or intestines protrude, raise the patient by his hands and feet, in hot air, and in a manner such that the abdomen is drawn upwards and becomes clearly visible, while the organ does not become cold. Then the patient should be shaken softly and be put to sleep gently in this position on a flat bed raised at its extremities. Once the patient has been put to sleep [...] one should make efforts to return it (i.e. omentum or intestine) inside [the body]. Then one should draw the edges of the wound together and cut it(?) (operate upon it?) carefully. If the patient needs to defecate, give him a clyster with [ingredients] that expel the feces, and alleviate the pain with astringent black wine or the like.

81. If one needs [to] suture [the wound], one should bring together both margins of the wound and stitch them, then fasten the thread with a double knot and cut it off. Then skip over a small [part?] of the wound, join the two margins and stitch them like the first. Continue to operate in this manner until you reach the end of the wound. The threads should consist of [material] that does not decay quickly.

These paragraphs raise many interesting issues, which we can touch upon only very briefly. First, with regard to the prescribed treatment: Raising the hips, shaking the patient gently so that the intestinal coils return to their original position, and the use of sedatives or anaesthesia, are recorded by Celsus and others. The ancient authorities disagree, however, on the method for suturing, and here Maimonides’ advice differs from them all. Celsus recommends two close rows of stitches; Galen instructs suturing the peritoneum to the abdominal wall, or--this is the preferred method--stitching the peritoneum to the peritoneum and the abdominal wall to the abdominal wall. Maimonides does not specify which structures are to be sutured, but (if we understand him properly), he advises a series of single stitches, each secured with a double knot, after which the thread is cut; the ancient authorities all describe continuous stitching. In fact, we find a set of instructions in Maimonides’ epitome of Galen’s *Art of the Cure*, which we cite here in the translation of Uriel Barzel:

If the intestine remains inflated and projecting, we must cut the inner skin (peritoneum) to the extent necessitated by the intestine. You must take care that the intestines will not rest on top of that part of the intestine that was projecting and will not press on it. If you concentrate on that you will know that if the wound is on the right side you should order the patient to turn on his left, and if he is on the left side you should order him to turn on his right. Thus you must always aim to have the wounded side above the other one. You must also cover the entire area of the wound with a “barrier” from the outside, to join its parts, and then to expose it gradually upon sewing it until the entire

---

wound is sewed well, in the same manner as it is done by some doctors who bring together each part to its naturally corresponding part, joining the edge of the inner skin to the other one, and the edge of the soft part to its other edge. This is a better method than the common stitch in which all four edges, those of the soft part and those of the inner skin, are joined by one stitch.  

We must recall that the epitomes exhibit the exact words of Galen; our treatise, by contrast, records Maimonides’ own views. Of course, Maimonides cites the exact words of Galen in their Arabic versions, which, in some cases, differs significantly from the Greek. It would be interesting, perhaps as part of a study on Maimonides’ views on surgery, to compare the Greek with the Arabic translations of the relevant passages, and to bring into the discussion passages from other medieval physicians; such an undertaking lies beyond the purview of the present undertaking.

Finally, just why did Maimonides choose to include this sort of procedure in this treatise? As it seems to us, abdominal wounds such as those described in the paragraphs in question are most likely to be incurred in battle. Maimonides certainly saw his share of bloodshed, beginning with the rampages of the Almohads that forced him, then a mere teenager, to flee from Andalusia. Nonetheless, our treatise was written towards the end of his life, for a patron who was almost certainly connected to the Ayyubids, if not a member of that ruling dynasty. Legend has Maimonides putting his medical knowledge to use in the wars against the Crusaders, and indeed he praises al-Qāḍī al-Fāḍil, the power behind Saladin, for scourging the infidels. Perhaps, then, the particular rules for practical medicine found in the paragraphs cited above were written for those who treated battlefield casualties.

---

14 Indeed, Maimonides' relationship with al-Qāḍī al-Fāḍil is a very interesting topic that deserves a study of its own; it should prove valuable not just for the biographies of these two important individuals, but also for the relationships between Jews and Muslims in general, the internal governance of the two communities, and issues of public health. For Maimonides’ appraisal of the accomplishments of al-Qāḍī al-Fāḍil, see the dedicatory introduction to On Poisons (On Poisons and the Protection against Lethal Drugs. A New Parallel Arabic-English Translation by Gerrit Bos with Critical Editions of medieval Hebrew translations and Latin translations by by Gerrit Bos & Michael R. McVaugh. Provo, 2009), pp. 1-7. Tzvi Langermann lectured on the relationship of Maimonides and the Qāḍī at symposium in honor of Professor Joel L. Kraemer held several years ago at the University of Chicago, and he hopes to publish his findings.