Abstract
Epidemic cholera devastated the population of Malta for the first time in the summer of 1837 affected almost 9,000 people and killing half of them. In the medical literature of the time there was a heated debate about its causation and transmission. Many Maltese doctors believed it was contagious while others such as Giuseppe Maria Stilon and Tommaso Chetcuti along with the British Services doctors deemed it was contracted from miasma in the air. The fear of contagion prevented a number of Maltese physicians from attending to the sick, however all the cholera hospitals in Malta and Gozo were run by Maltese doctors. In the beginning of the epidemic the Governor through the official Malta Government Gazette called for the doctors' help, offered payment, appealed to their honour and finally threatened them. He also wrote to the Commonwealth Secretary complaining that he was not getting enough response from Maltese doctors and that he had asked the Governor of Gibraltar to send doctors to Malta. The arguments about the contribution of the Maltese doctors during this epidemic spilled over into the newly born free press in Malta. John Stoddart, the Chief Justice at the time and Sarah Austin the wife of John Austin, one of the British commissioners who were reporting on the state of the island observed the lack of enthusiasm shown by many Maltese doctors during the epidemic although they both praised those Maltese doctors who were exemplary. However Maltese doctors although frightened, performed their duty towards their patients and at least two of them paid with their life.

Introduction
Epidemic cholera reached Europe for the first time at the beginning of the nineteenth century. After devastating countries all over Europe, it reached Malta in June 1837 finding a poor and destitute population that was too fragile to withstand its onslaught. It attacked the old and weak inmates of the Ospizio and then spread to every corner of the archipelago. The Government, belatedly appointed Committees of Health to deal with the consequences of the epidemic and cholera hospitals were opened in the cities and villages, directives issued and health workers and priests mobilized. The malady wreaked havoc for 3 months attacking 8785 and killing 4252 from a population of just over 120,000.1 This had significant effect on the native population of Malta (Figure 1).2 Out of a military population (including dependents) of 3214 persons there were 313 (9.7%) cases of cholera with 71 deaths (mortality rate of 22.7%). In the civil population of Malta (103344), there were 7672 cases (7.4%) with 3784 deaths (mortality rate of 49.3%) and in Gozo (16,534) there were 818 cases (4.9%) with 368 deaths (45%).3 The epidemic was also causing economic hardship because businesses such as the cotton industry closed shop and the Governor and the Bishop set up a fund to relieve the poor who were hit most by economic stagnation.4 During most of the nineteenth century, through three cholera epidemics in Malta and before the discovery of the bacterium by Koch in 1884, argument raged over the mode of transmission of cholera. The medical profession was torn between those who believed that the disease was infectious and contracted from the environment and the few who believed it was contagious with the passage of the disease from one person to another. Arguments and copious persuasive evidence in favour of one hypothesis or the other pervaded the pages of nineteenth century medical literature.

By the spring of 1837, many Maltese physicians were aware of the epidemic that over the previous eight years had been ravaging one
European country after another. They were expecting its devastating arrival on our shores with trepidation even though there was official denial that it would ever find its way to Malta. Many physicians still had vivid horrifying memories of the 1813 visitation of the plague and the deaths including some of their own it left in its wake. The conflicting theories reaching Maltese doctors led to confusion and doubts about the transmission of this disease. Although the official medical line was that cholera was not contagious but occurs because of a miasma or infectious air in the environment, doubt lingered in many doctors’ minds and uncertainty instilled fear. In a letter by the then Chief Justice of Malta Dr John Stoddart LLD to Dr Seth Watson DM, the translator to Dr Giuseppe Maria Stilon’s book “The Cholera in Malta in 1837” wrote, ‘It was scarcely possible to obtain medical assistance to the sufferers. With one or two exceptions (amongst whom there was Dr Arpa) the native Maltese physicians conceiving that cholera was a kind of plague, and communicable by contact, absolutely refused to approach a cholera patient’.

Dr Stoddart however stated that he must not be understood ‘to impute to the medical gentleman of Malta, on all occasions, either physical or moral cowardice because there have been times when they have exhibited calmness and courage in the last extremity of danger’. Dr Stoddart then describes the courage shown by a Maltese police physician during the 1813 plague: ‘This worthy man contracted plague in the discharge of his duty which disease was fatal.’ An English surgeon, an acquaintance of Dr Stoddart, was present by his deathbed and to him the suffering physician said, ‘with utmost coolness and resignation, “you see these black spots on my arm; they warn me of the near approach of death: in two hours, I shall be no more”’. Dr Stoddart wrote that the Maltese doctors’ during the 1837 cholera ‘backwardness arose less from timidity than from ignorance’. He puts their lack of knowledge squarely on the Government of the island who ‘years and even months previously’ should have employed ‘the proper means to enlighten them on the nature of the disease, which

**Figure 1**: Native population from 1830 to 1843 showing the dip due to the cholera epidemic of 1837
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was so manifestly approaching’ so that they would have undoubtedly ‘been as ready as Dr Stilon to combat the malady, when it first appeared.’

The Medical Knowledge about Cholera at the Time

During this time, the germ theory of disease was shrugged upon. First proposed by Geralomo Fracastoro (1478-1553) in 1546 and further explained by Marcus von Plenciz (1705-1786) in 1762, the germ theory only became an acceptable notion in the 1850s. Before then, Galen’s miasma theory still dominated medical literature. As everywhere else in 1837 Malta, the physicians had divided opinions about the mode of transmission of cholera and the question of whether it was contagious or not was hotly debated. The non-contagionists were led by physicians from Britain, Germany and France and these doctors maintained that cholera was not communicable by contact with infected patients and their clothing (not even bed linen contaminated by their faeces). Therefore, they believed that its progression could not be controlled by quarantine and restrictive measures. They believed that the cholera epidemic came about when the susceptible person got the disease from air poisoned by miasma and emanations. On the other hand, the Italian medical intelligentsia was an advocate of the contagionist school where it was believed that cholera was spread by contact between the infected and the non-infected persons and their fomites. The Maltese medical profession of the time was largely influenced by Italian medical literature and by direct contact with Italian Universities and Italian physicians so it comes as no surprise that the theory of contagion took root in Malta and had an effect on the behaviour of Maltese doctors. The English doctors stationed and working in Malta were brought up with the non-contagionist theory in which they believed very strongly. Chetcuti writes ‘i medici Inglesi, Clarke, Liddell, Sankey ecc. cercavano con esempio e colle persuasioni di toglier il timor del contagion, persuasi, come son quasi tutti l’Inglesi, della non contagiosità del choléra’. (The English medical doctors, Clarke, Liddell, Sankey etc. tried to remove the fear of contagion by example and by persuasion because like almost all the English were sure that cholera was not contagious). Most of the English doctors were military doctors and therefore trained to face life-threatening situations. This put the English doctors in a better mind frame psychologically to deal with the terrible calamity that was affecting our islands. The Maltese doctors who were in the thick of it and left us written accounts of the epidemic such as: Dr Giuseppe Maria Stilon, Dr L. Gravagna, and Dr Tommaso Chetcuti were convinced in the non-contagionist concept of transmission. This may help explain at least in part their fearlessness and the very active part they took in fighting the horrible disease. Dr Giuseppe Maria Stilon was of Italian origin but he had a doctorate from the University of Malta and had been practicing in Malta for 10 years. He was in private practice in Malta when the cholera epidemic reached Malta. In the context of this thesis he was in the same position as Maltese doctors. Dr Stilon scolded the contagionists for their verdict on how cholera had reached the inmates of the Ospizio and called their story ‘a Shameless Fabrication.’ He added that in his experience, when the cholera patients were admitted into a temporary hospital which had been established in a normal school, they were ‘treated with the most intimate familiarity, and yet out of sixty individuals, who were employed in the service of that establishment, only six were attacked, four of whom were persons notoriously addicted to the excess use of spirituous liquors’. It cannot be contagious he reiterated because ‘attendants gathered together clothes of the cholera patients and laying them in a place covered with cloth reposed or slept on them when not on duty’. The medico-chirurgical assistants bled patients regularly and if the blood was hard to come, Stilon would bleed the other arm. In addition to this, he performed Caesarean sections on dead patients as necessary and assisted cholaenic women in miscarriages without getting the disease. He recalled that during a post-mortem, when his assistant was helping him in ‘laying open the smaller intestines, which were found full of a whitish pulpy matter, wounded one of his fingers, and yet there followed neither to him nor to any of us the least symptom of contagious cholera.’

In his booklet ‘Nel Raguaglio sul Colera Morbus col modo di preservarsi’ Dr L Gravagna stated that ‘cholera comes from miasma that infects the person and through the air in the atmosphere.’ However, he adds that ‘the miasmic principle does not explain the activity on the organism without finding a predisposition to it’. He added that fear, the terror that one might get cholera, dirt, misery
and intemperance are important predisposing factors for the malady. Gravagna advised that the houses should be kept clean and any rotting matter that can cause foetid air should be removed. He advised the capo di famiglia to remove manure from cellars and courtyards and wash them well. 12

Stilon divided the predisposition factors for cholera into physiological and pathological causes. Writing about the physiological cause he maintained that:

‘among the different temperaments natural to the human body, the bilious is that which most predisposes to cholera. In fact, the greater part of the choleraic patients, who were admitted to hospital, were of that temperament; however, several were received who were of the scrophulous habit, and these were generally found the most difficult to cure. Vehement, and ill-regulated passions of the mind, such as terror, rage, anger, and that alarming fear, which often seizes persons at the first appearance of this terrible malady, are moral agents, which easily dispose the individual to be affected by it”. 13

He added that work that entails excessive exercise also predisposes to cholera because this tends to debilitate the body. This is attested to, by the large number of patients ‘who belong to the class of the indigent, or those employed in very laborious occupations’. 14 The main pathological predisposing factors for cholera according to Stilon are:

‘all acute or chemical inflammations of the mucous membrane lining the stomach and intestines – the presence of worms in the intestines – the effect produced by drastic purges, or by acids organic or inorganic, used in such a quantity as to keep up a continual irritation in the prima via, hypochondriasis, or any of those particular modifications of the gastro enteric visera, which often remain after hepatitis, or chronic pulmonary disease.’

Dr Tommaso Chetcuti stated that the miasma coleroso (choleric miasma) waited for the high temperatures of 72°F, 74°F and 78°F on 8, 9 and 10 June 1837 respectively and a protracted hot wind from the south to hit old inmates of the Ospizio in Floriana, Malta.

Fear, Duty and the Polemic

Dr Constantino Giorgio Schinas also mentioned the reaction of doctors to the epidemic. Dr Schinas, a Greek doctor, studied at Pisa University, Italy, came to Malta in 1832, became Professor of Medicine in 1833 15 and published the first ever Maltese medical journal called L’Ape Melitense – Giornale di Medicina in the last quarter of 1838. It was published in Italian and contained translations of works from English, French and German. Dr Schinas wrote a monograph about the 1837 cholera epidemic in Malta divided in three parts and published it in the first 3 consecutive numbers of the Ape Melitense. 16 He gives a sincere and apologetic account in his periodical of his initial fear of the disease. He also reflects on the psychological conflict of the doctor who is called upon and expected to fight a dangerous foe when he is scared stiff for his own safety and in the full knowledge of his helplessness against a relentless enemy that might strike him down. Schinas confesses with pathos in the Ape:

‘Doctors have certainly not been privileged by nature with the exemption of fear […] When the occasion for fear is real even the bravest man will feel afraid and nobody will deny that cholera is such an occasion […] If the physician believes in contagion he fears contact with others; and if he does not believe in contagion he is afraid of the air and noxious foods […] I cannot deny that I was afraid a little too much at the beginning […] but I must confess that the physician is in duty bound, in similar circumstances, to tender his aid and shows himself courageous; because although he believes himself to be weak, he is held to be omnipotent by the people; and when the people miss his help they get discouraged, and when they see him frightened they despair’. 17

Sarah Austin (born Taylor, 1793-1867), the wife of the commissioner John Austin was very critical of the behaviour of many Maltese doctors. She stated that when the old, sick people were transferred from the Floriana Ospizio to Ricasoli at the dawn of the cholera epidemic of 1837, on the 13 and 14 June, a doctor did not examine them for four days. At Ricasoli ‘two doctors stood at the doors and ordered medicine and the viaticum,’ 18 wrote Austin. This version of events does strike one as being too simplistic as other documents have shown that the rate of the incidence of cholera in Fort Ricasoli soon after the mostly sick Ospizio inmates were ferried there was alarming and the medical staff could not cope with the increasing number of afflicted cases. The doctors were disheartened and
fearful and when two doctors contracted the disease themselves and had to leave the fort to be nursed at home, matters took an even worse turn.\textsuperscript{19} There was an argument raging into the following year (1838) on whether the English or Maltese doctors cared more for cholera patients and Sarah Austin who was an eyewitness possibly took the English doctors’ side. Of course, one might conclude that her opinion was biased given her nationality; however, one can hardly dismiss her account as a fabrication considering that throughout her writing she always defended the Maltese and spent a considerable amount of time interceding with the English authorities on their behalf. In a letter to Mr Victor Cousin, she wrote

‘the Maltese are very docile, sharp and intelligent. How much there is to say about this little half-Arab nation – corrupted and degraded to the last degree by the worst government in the world, that of the Order; neglected and despised by the English, ignorant, superstitious, and devoured by every kind of prejudice! They must not be left in such a condition’.\textsuperscript{20}

The editorial of the 10\textsuperscript{th} issue of Harlequin stated that

‘the conduct of the English medical men in quel giorno di esperimento was so exemplary, that the prayer of every person apprehensive of an attack of cholera was that he might have the good fortune of having an English attendant - while the dark and unchronicled deeds of Ricasoli, which had been confided to their own medical men remain to the present hour deeply impressed in the recollection of every honest Maltese, as a stain upon the native faculty amply calculated to justify the withdrawal of public confidence.\textsuperscript{21}

This was rebutted by Onesto Maltese in the Mediterraneo where an insulted Maltese man denied the accusations and sarcastically asked if ‘quel giorno di esperimento’ was 9 June when the English doctors misdiagnosed two cases of cholera at the Ospizio as not being such and persisted with their mistaken diagnosis for days despite the insistence by Maltese doctors that the patients were indeed suffering from cholera.\textsuperscript{22} He argues that only one or two English doctors operated in Valletta and that they had only seen a few patients and were not trusted by the Maltese. Furthermore, the local population knew that the native doctors behaved properly in Ricasoli. The correspondent of the Mediterraneo reiterated that there was no stain on the Maltese profession with regards to the way doctors behaved during the epidemic, if anything, Maltese doctors did their very best to help their fellow human beings better than in other countries afflicted by this disease. All the cholera hospitals in Malta and Gozo were served by Maltese doctors ‘con zelo, decoro e carità’ and the Government had so much confidence in Maltese doctors that they were appointed to oversee the management of these hospitals.

The Government was harping on that cholera was not contagious but doctors and the higher classes did not seem to be buying this as their actions betrayed them:

‘Four physicians were particularly mentioned as having done everything in their power to increase the alarm. With an ignorant presumption (never having seen the disease) only equalled by their abject cowardice, they confidently affirmed that it was contagious, and would not suffer anybody to touch them or even to touch any object they were to receive’\textsuperscript{23}

These accusations brought to light by an indignant Austin are in line with the answer The Curer of Phrenitis gave to Onesto Maltese over two editions of the Harlequin.\textsuperscript{24,25} He suggested that help for the cholera patients was not easily forthcoming because the Government had to issue a call for physicians on 20 June 1837 to ‘aid in mitigating the unavoidable evils of the impending disease’ promising payment and appealing to their honour. The letter continued that the Government had to flex its muscle and on 21 June 1837 threatened doctors by saying that if anyone had circulated the opinion that the epidemic was of a contagious nature and they persevered in such conduct, they would be ‘disqualified for public situations.’\textsuperscript{26} At the same time, ‘one of the offenders’ was turned out of his chair at the University. Austin had no doubt that this indignation was ‘perfectly well founded and the punishment merited’.\textsuperscript{27} The governor issued further invitations on 22 June\textsuperscript{28} and 4 July\textsuperscript{29} to the medical profession, which led The Curator of Phrenitis to come to the conclusion that not all Maltese doctors had been forthcoming in their help for cholera patients. Austin echoes this in her essay and writes that even though the Government reassured the physicians that the disease was not contagious as evidenced by the medical authorities of Gibraltar (Figure 2) and Paris (Figure 3), ‘medical men either
refused to attend, or, if they did attend, would not approach the patient.’  

‘An invitation to the medical students and other members of the profession to visit the hospitals fell on deaf ears. The Harlequin writer however contended that he was: ‘far from intending to cast discredit upon the faculty of Malta; many of whom, under the unpropitious circumstances, as regards instruction, and information, in which they have so long found themselves placed, have arrived among their fellow citizens, at a grade of eminence which hardly anyone could have expected’.  

Sarah Austin accused one physician of ‘turning his fears to better account in the first days of panic. He made 200 scudi by selling little packets of some specific against cholera; he pushed them across the counter or table with a stick and made the people throw their money into vinegar.’ Austin concluded by writing the damning line: ‘What is very certain is, that these physicians would do nothing for anybody.’  

Austin wrote her article almost 30 years after the events and although she was present during the epidemic and stated she wrote from notes she had taken during the time, she would have most probably aided her memory from literature written at the time and her point of view is in fact that of the government of the time and her compatriots.  

After the government call on 20 June 1838, the naval and military doctors responded unhesitatingly to the government’s call for help but it seems that the Maltese doctors were less than enthusiastic.  

**Figure 2**: Notification in the Malta Government Gazette (28 June 1837) by G. Ward, Secretary to the Central Committee for the Supervision of Cases of Cholera dated 20 June 1837 stating that the evidence provided from the Gibraltar cholera epidemic shows that cholera is not contagious.
Figure 3: Contribution issued by the Central Committee for the Supervision of Cases of Cholera in the Malta Government Gazette (21 June 1837) quotes the Commission of the Royal Academy of Medicine in stating that isolation is not recommended for cholera patients because the disease is not contagious.

Figure 4: Obituary of doctors dying from cholera during the 1837 cholera. (a) Lorenzo Grillet and (b) Cleardo Naudi.

a.

b.
In his dispatch of 2 July 1837 to Lord Glenelg, Secretary of State for the Colonies, Governor Bouverie stated that on the 20 June 1837 he:

‘invited all Medical Men to come forward and lend their professional assistance; this invitation was responded to at once, by every English medical man in the island, even by some who had retired from practice; but I regret to add that the Maltese practitioners showed no such alacrity in the cause of humanity, and they evinced, on the contrary, great backwardness, at the commencement, in offering their assistance; occasioned by a belief generally prevalent among them that the disease was of a highly contagious nature.’ 33

The Governor continued in this same dispatch: ‘Finding that this dangerous doctrine of contagion was sedulously inculcated by some; perhaps who conscientiously believed it to be true and by others whose motives were less excusable’, he issued another minute the following day.

The Governor continued in this report to Lord Glenelg that ‘this measure followed by the commendable example set by the English medical men who fearlessly put themselves at once in contact with the dying and the dead, has had a most salutary effect, in allaying the general panic which from that moment began gradually to subside.’ 33

He also suggested to the Secretary of State to the Colonies that:

‘Fearful that the malady may increase, in which case paucity of medical aid to be depended upon in this island, might lead to effects the most disastrous, it is my intention to solicit by the present packet, the assistance of some medical men from Gibraltar if it can be obtained. The admiral has kindly consented to detach from the squadron two or three professional Gentleman whose service will be of the greatest utility’. 34

The Governor of Gibraltar, Sir Alexander Woodford obliged and immediately dispatched five medical men to help with the care of the cholera sufferers in Malta. 35

The Governor concluded this 2 July 1837 dispatch by ‘bearing testimony to the unwearied exertions of Dr Clarke, Assistant Inspector of Hospitals and Dr Liddell, Physician to the Naval Hospital, for whose valuable advice and assistance beyond the sphere of their respective official duties.’ 36

However, a number of Maltese doctors did look after patients with cholera and a few died during the exercise of their duty (Figure 4). The district police physicians in Malta and Gozo were Maltese (and Gozitan) and most of them looked after the afflicted with responsibility. The agreement of the doctors in Gozo to do their full duty was unanimous. 37

Dr Tommaso Chetcuti looked after many cholera patients in the Rabat and Imdina area. He gave a very balanced and credible account of the behaviour of the doctors during this horrendous epidemic. 38

‘It is true that the first few cholera cases at the Ospizio that occurred on 9 June were correctly diagnosed by Drs Axisa, Gravagna and Portelli and incorrectly diagnosed as being another non well-defined illness by Drs Clark and Lawson and this is attested by a letter by Dr Axisa himself.’ 39

There were 700 old and frail people taken by boat from the Ospizio to Ricasoli accompanied by two Maltese doctors, Dr Giuseppe de Salvo (who had been looking after them at the Ospizio) and Dr Antonio Grech: ‘How much intrepidity and courage can one expect from these two young doctors without expertise about this terrible disease and the two chaplains who were locked up with all these sick persons facing this horrible disaster?’ Chetcuti asked. The English doctors Clarke, Liddell and Stankey tried by example and persuasion to convince the others that the disease is not contagious but by the 17 June, 133 cases had occurred, three-fifths of who were dead and two-thirds were dying.

Dr Gavino Portelli offered his services voluntarily and the physicians Michele Portelli, Luigi Pisani and Gaetano Mifsud joined him at Ricasoli to help with this mammoth task. The doors of the fort were locked to maintain order and they would not allow other doctors including Clark and Liddell to go in to treat the sick. The dead lay unburied, the place was not adapted to take the sick and the nurses and some doctors contracted cholera. The other doctors and the chaplains out of fear and in the throes of disease were offering very little help to the sick. On 21 June, Dr Gavino Portelli and Dr Giuseppe di Salvo had to leave the fort, sick from cholera, to be nursed at home. Mr Carlo Satariano who was in charge of the fort and Dr Gaetano Micallef also contracted cholera but they remained in the fort: ‘One can imagine how devastated and disheartened the doctors and other carers were and how the cholera patients including Satariano and Dr Micallef were left to languish in desolation without any comfort except for the administration of water.
and some calomel powder'. Dr Sankey visited the cholera patients at the fort and tried to reassure Mr Satariano that he had gastric flu and not cholera. He did this to boost his morale. On the same evening, the administration of the fort passed on to Dr Anthony Speranza who reorganized the hospital, engaged more medical and nursing staff and persuaded the convicts to inter the 45 death corpses that had been left unburied. Governor Henry Frederick Bouverie visited Fort Ricasoli Hospital on Sunday 25 June and was satisfied with the medical and religious arrangements for inmates. By this time, two hundred and seventy-five inmates had succumbed to the disease.

There were many doctors who had the courage to overcome fear even though they might have had doubts about the nature of cholera’s transmission and who did their duty towards their patients and their fellow Maltese and most of them will remain forever unsung heroes who may even be damaged by the behaviour of others who did not find the moral and physical strength to put themselves forward to fight the horrible disease. A few doctors did however receive praise for their valour and dedication to their patients. John Stoddart the Attorney General at the time of the affliction wrote that Dr Stilon who was appointed head of the newly established cholera hospital in Valletta was ‘skilful, and above all so energetic, zealous and persevering’ He added that Stilon was a good man who was ‘engaged in great work’. At the time of cholera in Sliema there were about 450 inhabitants including 30 poor families employed in agriculture. A Dr Arpa was engaged and he was given a house in the village where he had a supply of ‘medicines and utensils’. On the door was fixed a night bell and lamp shining on a board with an inscription saying, ‘Advice and Medicine gratis (free) at all hours for the cholera’. Dr Arpa would also walk through the village morning and evening, enquiring into the state of health of every family and if any premonitory symptoms appear he would apply the proper remedy. Every morning, Dr Arpa would also supervise the ‘distribution of bread to the poor families with a proportionate quantity of any kind of food they were accustomed to eat, taking care it was digestible, wholesome and sufficient’. Sarah Austin mentions a Maltese physician Dr D. who was nearly worked to death during the epidemic. He became so ill during this time that he had to be supported at the bedside while he prescribed. Some English doctors were also praised for their dedication to the patients; in his dispatch to Lord Glenelg, the Governor wrote that he was very grateful for the support of the British Naval Department and then commended Drs Clark and Liddell for their help beyond their call of duty.

**Conclusion**

The mostly convinced non-contagionist doctors felt safe treating the cholera patients because they could not get the disease by contact with their patients, their fluids or their fomites and even if there was the poisonous miasma in the air, they were resistant to it because they did not exist in abject poverty and filth. They were strong and healthy with no debility and were not fearful or anxious, did not drink alcohol in excess and did not live a debased existence. The doctors who believed in the possibility of disease contagion were frightened but many of them performed their duties towards their patients. The fear of health care professionals of acquiring disease from their patients is still a very important issue in the management of patients with contagious diseases especially those carrying a bad prognosis such as ebola.

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