Messages No. 144 – Dossier: Probing Surgery

Question time on surgery

The purpose of this questionnaire is to show the various tendencies that coexist at MSF in the realm of surgery. We've divided it into four topic areas: our interventions, the organization and its resources, the quality of our practice, and ethics. Five surgeons and one physician were kind enough to participate:
- Jean-Paul Dixmeras, French surgeon, consultant, and vice president of the MSF France Board of Directors
- Pierre Gielis, Belgian surgeon and consultant for MSF Belgium, and Nathalie Civet, Belgian physician and surgery/anaesthesia coordinator for MSF Belgium
- Ibrahima Konate, Senegalese surgeon and MSF volunteer since 2005
- Stefan Krieger, German surgeon and president of MSF Germany
- Khaled Menapal, Afghan surgeon and volunteer since 1992

On our interventions

- In surgery, which contexts best represent humanitarian action to you?

Khaled Menapal: The surgery that represents humanitarian action is, first and foremost, war surgery, where teams work directly with the victims. To that I would add contexts where, for reasons of safety or military-humanitarian confusion, we can't get access to the victims, because, despite our absence, we can still support existing structures to keep them operational (e.g., Chechnya, Iraq). Lastly, contexts in which local resources are not able to cover the need for emergency surgery—including obstetrical emergencies—also represent humanitarian action to me.

Pierre Gielis and Nathalie Civet: Crisis contexts, regions where there is no access to care, or no unfettered access to care, especially in unstable settings.

Stefan Krieger: For me, it is war and post-war contexts, and contexts of precariousness and chronic conflict.

Jean-Paul Dixmeras: Our actions, surgical or otherwise, are defined by the Charter: "Médecins Sans Frontières provides assistance to populations in distress, to victims of natural or man-made disasters and to victims of armed conflict…." Our current surgical missions fit this framework, and can be classified -according to the project- as follows: general surgical missions in isolated areas or at a general hospital (in a conflict situation or not), missions in response to natural disasters, trauma centres, and post-conflict reconstruction programs. The charter goes on to say that MSF members "undertake to respect their professional code of ethics." From that, it follows that the proper response to what constitutes humanitarian action in surgery has more to do with the level of expertise—appropriate to operational requirements—than with the context.

Ibrahima Konate: The contexts that best fit humanitarian action are war situations, and also situations where the need for emergency medical services is not being met.

- Should surgery within MSF be limited to "basic" procedures oriented to life-saving and emergencies? Is there a place for elective or high tech surgery programs (reconstructive surgery, for example, like in Chechnya and Jordan)?

Khaled Menapal: Why not do high tech surgery when the context permits, and when it meets a need on the ground? We shouldn't pit this kind of surgery against elective surgery, because in my experience in war or emergency situations, there were times when we were lucky enough not to have war wounded to treat—which makes it possible to do elective or planned surgery. I have also seen the coordination team, which didn't want to do non-war-related surgery, wrongly interpreting what is meant by emergency surgery. I did it anyway, because the most important thing to me was to help the greatest number of patients (war wounded or not), as long as the surgical team (anaesthetist, operating room nurse) agreed.

Pierre Gielis and Nathalie Civet: In its surgical and other projects, MSF always needs to remember that our action is only temporary, and that when we leave we shouldn't leave behind a programme that local management cannot ensure continuity of. Elective surgery exists, but it should be limited in how high tech it is. It should deal with physical disability, or a threat to physical integrity. We have a duty to train, and we have to start training and making sure that minimum standards for surgery (general hygiene, sterilization and transfusion, adequate number and training of staff, and high quality post-operative care) are applied before introducing more advanced technology. We won't be able to integrate advanced technology in a quality way until the basics are acquired. Reconstructive surgery (obstetrical fistulas, the after-effects of burns and polio, hand surgery, face surgery, etc.) can exist in parallel with regular surgical activity, but it must be selective and perfectly organized, with prior training and definition of a context-appropriate strategy.

Stefan Krieger: Of course these activities have a place! Reconstructive surgery in a war or post-war situation, burn and osteomyelitis surgery, and even hand surgery (war/post-war) are activities that absolutely have a role to play at MSF.

Jean-Paul Dixmeras: In appearance, at least, life-saving and emergency surgery seem obvious in and of themselves. But that seems like a simplistic view to me, unsatisfying and inadequate. On one hand, because we can't always get access to emergencies (I'm thinking, for example, of the problems currently posed by Iraq and Afghanistan, and also of the access difficulty during certain natural disasters); on the other, because you can't consider the done just because survival is assured. Unquestionably, as far as is technically and materially possible, we should try to repair/do more. Compared with some programs, like nutrition and AIDS, surgery has the "advantage" of giving definitive results. Let's take advantage of that! A patient who we get walking won't go back to being bedridden, someone disfigured will never again be a horror to himself or his family.
No, surgery at MSF should not be limited to basic procedures. High tech surgery has its place, as long as we respect our professional ethics.

Ibrahima Konate: Yes, I think there's a lot of room in the humanitarian context for elective surgery. Life-saving certainly had its moments of glory in the beginning, but in the past 20 years there have been a lot of advances in surgery. Nowadays, it's unjustified not to try to do more. Warfare methods are mobilizing more resources and technology; it is only natural that humanitarian medicine modernizes in order to obtain more satisfactory results.

- Are there surgical specialties that you think are being neglected by MSF, or in which you would like to see MSF get involved? What are they, and why?

Khaled Menapal: MSF's determination to do more about vesicovaginal fistulas seems to me a very important effort. We have to do more, develop greater expertise, and set up regional centres to serve as referral centres for the missions and patients in the regions we're involved in.
It is, however, less a matter of neglecting specialties in our missions than of lacking basic instruments and facilities. I've been in situations where we couldn't do transfusions, or X-rays—sometimes, there wasn't even an autoclave. I've also had to work with an operating table that didn't let you change the patient's position. There are minimum standards that needs to be met performing surgery.
But given that the MSF's essential specialty is war surgery, the problem is that we're not at the heart of the contexts where the U.S. military and its allies are intervening. It seems to me that MSF needs to do more to remedy this inaccessibility to war victims.

Pierre Gielis and Nathalie Civet: For years, some people in the Belgian section have been trying to promote surgery for obstetrical fistulas. We know the physical, social, and psychological handicap, the number of cases, the lack of interest—on the part of the families, cultures and local beliefs—in these women, who are rejected and abandoned. This same idea might apply to other pathologies and physical handicaps: harelip, the after-effects of burns and polio. But we must not underestimate the fact that pathologies like these imply multidisciplinary care.

Stefan Krieger: Trauma surgery is neglected, we are too quick to accept limitations. As far as fistula surgery is concerned, we need to do more and better, especially in the realm of training.

Jean-Paul Dixmeras: Rome wasn't built in a day! MSF has had to use its capacity for innovation in many areas. Surgery is no exception. Each surgical specialty presents specific problems that need to be defined, then resolved. Treatment of vesicovaginal fistulas is a good example: the "clientele" is there, but practitioners are few and far between, and the results are uncertain or incomplete. We also need to look into the problem of burn victims and their sequelae, and possibly into urology and cataract surgery. And the list goes on.

Ibrahima Konate: Orthopaedic surgery is very much neglected. It should be more sophisticated, but the surgical indications need to be defined. In missions based in large hospitals, such as Bouaké, we can do osteosynthesis in trauma surgery, at least. We just have to improve the environment. We all know that there's a clear benefit, especially for the generally young patients. On the other hand, sophisticated surgery like arthroplasty does not yet have a place.

The organization and its resources

- Do the decisions to open and close surgical programs meet well-defined operational criteria? Are these decisions sufficiently planned and coordinated?

Khaled Menapal: In my opinion, the most problematic decisions concern project closures, because even when the conditions and the context are moving in the right direction, as soon as

MSF leaves a surgical program, it stops functioning properly. Plus, an MSF-supported hospital very quickly becomes a referral facility, while the authorities aren't always capable of keeping hospital facilities at a functional level after we leave. Still, we have to keep in mind that we can't stay on a project forever. So it's up to us to do a better job of laying the groundwork for an acceptable departure.

Pierre Gielis and Nathalie Civet: No, primarily because of poor general definition of operational objectives and analysis of program context. And it follows that there's the same weakness when it comes to defining a surgical program.

Stefan Krieger: No, we need clearer criteria that are accepted by all the operational centres, because there isn't enough coordination.

Jean-Paul Dixmeras: Decisions on opening and closing are the province of the operations department. These decisions are based on an analysis of the humanitarian context and the needs set out by the teams in the field. It isn't a mechanical process. It's difficult, and sometimes imperfect, but it has to be thought through quickly, especially since there's little time during emergencies. A more complex decision tree would lead to a lack of responsiveness that would compromise our efficacy.

Ibrahima Konate: Certainly, there's work to be done at this level. For a practitioner, the decision to close a mission is never easy to accept. For ongoing missions in which I have participated, the programs that were set up always seemed justified to me.

- Does the increasing specialization of surgeons impede deployment of surgical activities in our contexts of intervention?

Khaled Menapal: Certainly, as a result of the hyper-specialization phenomenon, we don't have surgeons who can treat a wide range of pathologies. Moreover, we run into these same types of problems when we work with basic equipment, without the sophisticated instruments available in Europe or the West. The ICRC representative brought this up at the December 9 Surgery Day in Paris. In another vein, we also see fewer and fewer young surgeons in our missions—as the high average age of Surgery Day participants attests. So we're faced with two problems: hyper-specialized surgeons and a younger generation that's not very involved in humanitarianism. We have to be aware of this, and figure out solutions for the future.

Pierre Gielis and Nathalie Civet: It might be, for several reasons. Briefly, hyper-specialization requires sophisticated technology that is unfeasible in the contexts where the Belgian section works. Young surgeons, who no longer acquire general surgical knowledge or—especially—experience, might be bothered by this "poor man's" surgery. They're on their own when it comes to establishing the diagnosis, and usually aren't able to confirm it by the additional high tech tests done in economically rich countries.

Stefan Krieger: I think, rather, that we should consider creating a surgical training centre at MSF. This would allow us to standardize and improve some of our practices.

Jean-Paul Dixmeras: No, the growing specialization of surgeons is not an impediment to the deployment of surgical activities in our contexts of intervention, on the contrary! The qualities and knowledge demanded of a surgeon practicing in a general surgery centre in a remote area are not the same as those demanded of a surgeon practicing in a reconstructive surgery centre.

The more surgical missions there are, the more varied the needs. The bigger the "address book," the greater the possibility of offering each person an appropriate posting.

Ibrahima Konate: Personally, I think that hyper-specialization might, on the contrary, result in better care, and justify, in the long term, actions in the field. However, we have to clearly define the treatment policy for our patients beforehand—that is, try to provide solutions that are ethically and scientifically optimal and economically acceptable. Moreover, failing to take the qualifications of future surgeons into account will create a problem in meeting our missions' long term needs. On-going training might be a very good way to provide the knowledge needed for better practice in the field.

- A propos of the notion of "the hands of a surgeon," would you say that surgical practice is the exclusive domain of licensed surgeons? In this sense, should we train general practitioners to do surgeries?

Khaled Menapal: I have reservations about this issue, because there are still dangers when complications arise.

Pierre Gielis and Nathalie Civet: In our section, we have trained physicians in emergency and basic surgery—especially gynaecological and obstetrical. We also train surgeons and obstetrician/gynaecologists in vaginal fistula repair. It depends on the context and the local needs of the places where you work, the professional potential of the local doctors, and their quality and motivation. By doing so you have a greater chance of ensuring a certain continuity when the mission ends. In many African countries, particularly the DRC and English-speaking East African countries, the generalists receive basic training in elementary surgery, and especially in obstetrics and gynaecology (Tropical Doctor). The problem is assessing their actual competence, and ensuring high quality training (in terms of time and learning objectives) and follow-up.

Stefan Krieger: Expatriate surgeons should be licensed, but we should also train generalists locally in essential techniques (caesarean section, laparotomy, external fixation, etc.).

Jean-Paul Dixmeras: Reducing surgery to the surgical procedure is a simplistic view. Surgical activity requires a team and equipment. What can a surgeon on his or her own do? What are the limits of a practitioner trained in one procedure? Isn't there a false sense of security and the risk of rising to the level of one's incompetence? Surgery requires a long period of guidance and daily practice. In a medical desert, the surgeon problem isn't the only one. There's access to care, as well. We don't necessarily have the ability to provide it, and it's not our job to replace government facilities. Let's leave it to the Health ministers to manage their own policy!

Ibrahima Konate: For taking over, initiating the generalist is, in principle, a good thing. It's necessary, however, to clearly define the limits and set up on-going training programme.

- In your opinion, should responsibility for the patient's medical (post-op) care fall to the surgeon or the anaesthetist?

Khaled Menapal: I cannot give the whole responsibility to either one, it's a team effort, but in my opinion the surgeon has ultimate responsibility for all stages of the patient's care. Because if there are complications or negligence during his stay, it's the surgeon who will be

held responsible by the patient and his family or loved ones. If things go well, the whole team gets credit, but if things go badly, the surgeon can't push the blame onto the anaesthetist or the post-op nurse, the patient's family will hold him responsible. I'm talking about war surgery and emergency contexts, not European or Western contexts.

Pierre Gielis and Nathalie Civet: Our teams have to act like a team, so peri-operative responsibility belongs to both, the surgeon and the anaesthetist.

Stefan Krieger: In my opinion, both are always responsible.

Jean-Paul Dixmeras: Who is responsible vis-à-vis the patient? It's an old story. It used to be that the surgeon worked alone, and was in charge of both the patient's operation and his "sleep." The question didn't come up. Anaesthesia and Intensive Care have fortunately become a separate specialty, and the anaesthesiologist and the surgeon have both shared and individual responsibilities. As for post-operative care, again you have to separate intensive care from surgical post-op care, putting each back in its proper place. However, don't forget that in France, at least, all medical acts must be performed under a physician's supervision, otherwise it is considered illegally practicing medicine: So in this area you have to distinguish between doctors and non-doctors. But, as I said, this applies in France. What about other places?

Ibrahima Konate: It's the business of the whole team, mainly the surgeon and the anaesthetist.

The quality of our practice

- Do you believe that there's a real desire at MSF to systematically assess the quality of our activities?

Khaled Menapal: It's not systematic, because we have no control system and we have trouble collecting data in our programs. If we're not capable of creating a standard surgical activity report and recording cases, how can we do an assessment of our activities? We need to take serious and clear measures to attain this objective (Insha'allah!). As for basic instruments, the sterilization system, X-rays, lab testing, transfusion capability and even incineration, we need to set a minimum acceptable standard.

Pierre Gielis and Nathalie Civet: It's not sufficient.

Stefan Krieger: I'm not sure such a desire exists. At least in surgery, we need a quality control system for our work. Because there are too many cases where each person does what they think best, and where people just do anything.

Jean-Paul Dixmeras: There is a real desire to systematically assess the quality of our activities. The effort to set up a coding system and regular transmission of data is proof of that. It's a first step, or more modestly, an approach. The coding system, which has the merit of existing, allows an assessment of the work without emphasis on the conditions in which it was performed. What is the current length of a hospital stay for appendicular peritonitis at the Bouaké hospital? We can't answer that question. We don't have Western facilities, and we

have to “make up” our statistics as the conditions of our practice vary. You can’t compare. The solution lies in the medical record.

Ibrahima Konate: The desire exists, but it is very limited. A lot of information is not being used.

- The medical record and the recording of medical data (the operative report, etc.) are relatively neglected. What do you think of that assertion?

Khaled Menapal: I completely agree with it.

Pierre Gielis and Nathalie Civet: It’s a reality.

Stefan Krieger: It’s completely fair, and it is, above all, an unacceptable admission. As surgeons, we need to improve this aspect of our work. We need reliable data to better care for our patients.

Jean-Paul Dixmeras: We now have what we need to set up individual electronic records. Each mission has the equipment and means of communication. We had to design the software; that’s been done, and we’re beginning to try it out in the field. Adjustments will certainly have to be made. But once we get past the implementation problems, this project will allow not only extremely precise and individual data collection, but an accurate definition of the surgical mission, the qualifications we’re looking for, the needs, and the changes. The medical record is fundamental to the evolution of surgery in our organization.

Ibrahima Konate: It’s exactly right, and the result is a considerable loss of information.

- The use of osteosynthesis (internal fixators) to treat fractures is a controversial practice. Can we use this technique under certain circumstances, or do you think we should ban it outright?

Khaled Menapal: First of all, in war contexts, the insertion of internal fixators is contraindicated, because all war wounds are by definition contaminated. But external fixation can be used when you’re not talking about war surgery, but rather about complications, mal-unions, non-unions, or elective surgery. However, by following the basic principles in general surgery and war surgery, you can usually avoid these mal-unions and non-unions, and thus internal *[sic]* fixators. If, in spite of everything, you opt for osteosynthesis, you have got to make sure you have the best possible sterilization of the operating room and the equipment, and the possibility of X-ray monitoring. Because osteosynthesis-related infection has more serious consequences for the patient than does an inadequate reduction.

Pierre Gielis and Nathalie Civet: Our experience and our observations leave no choice—it should be banned.

Stefan Krieger: It can be used when circumstances permit. But we should always have the necessary technical and hygiene level, assessed by an independent specialist, moreover, who isn’t from MSF!

Jean-Paul Dixmeras: Osteosynthesis for the treatment of fractures is controversial. I’ve been around long enough to remember the Somali experience with external fixators. Let’s reframe

the problem… Are we sure we have competent surgeons ? Suitable premises? Impeccable sterilization? Qualified staff? Diagnostic equipment (X-rays, lab)? Effective physical therapy? and so on. If Western criteria required for this kind of surgery are met, and the indications respected, why couldn't it be performed? Of course, meeting those criteria is probably not so easy.

Ibrahima Konate: I think that we can do it in certain contexts, as long as we give it the necessary practical and economic resources.

- Are you satisfied with the surgical kits, in their present form, for responding to emergencies?

Khaled Menapal: I learned to do surgery in a poor country, with basic equipment, and when MSF came to the Jamhuriat hospital, where I was practicing as a young surgeon, the availability of instruments and consumables was an enormous help. If we have complete kits, I'm satisfied. But I've been in situations where the drill had no chuck for attaching the drilling system. I've also been in situations where I discovered we had no autoclave. And I've seen gowns sterilized using a Poupinel. We have to avoid situations like those!

Pierre Gielis and Nathalie Civet: Redevelopment of the kits is underway, and should allow better adaptation to the various contexts of intervention.

Stefan Krieger: Right now, I find the surgical kits available in the field satisfactory. I will, however, take this opportunity to encourage the teams to assess their contents regularly.

Jean-Paul Dixmeras: We currently have three kits (the 25-operation kit, the 300-operation kit, and the 3-month hospital kit). These three kits correspond, roughly speaking, to a single scenario: an existing hospital with an infrastructure and a basic team, lacking instruments, sterilization and consumables. Our different contexts of intervention don't always fit this scenario—the infrastructure doesn't exist or is no longer functional, basic equipment is lacking, etc. Besides, the 25-operation kit is small, the equipment is available in limited quantities; on the other hand, the 300-operation kit is often too big. As for the hospital kit, it's basically a 300-operation kit plus dispensary equipment. So a modular approach—ending in a complete 200-bed hospital with an operating theatre—seems more appropriate to me.

Ibrahima Konate: On the whole, yes, but there are improvements to be made and protocols to be established.

- Should an integrated physical therapy and rehabilitation centre in our surgical missions become the standard ?

Khaled Menapal: First we should improve and standardize the equipment at our current missions. Only afterward should we think about that step. Don't forget that in war contexts, for security reasons, we can't increase the size of the staff, and physical therapy and rehabilitation professionals are often hard to find locally. So while it seems to me to be a good goal to set, I doubt that we can reach it in the near future. And if we go in that direction, we can use the ICRC's experience in that area.

Pierre Gielis and Nathalie Civet: For that, we would advocate the standard; but we'd have to tailor the level of physical therapy to the project.

Stefan Krieger: In every case!

Jean-Paul Dixmeras: There's the surgical activity, and then there's its environment. Just as a surgeon isn't functional without a team, surgery by itself is inconceivable. The surgical environment requires resources. Physical therapy is only one of these. Yesterday, the presence of anaesthetist became essential. Today, we can no longer neglect pain management, radiology, lab testing, and psychological support. As far as physical therapy and rehabilitation are concerned, it goes without saying that the need will differ depending on the type of surgical mission. But who would dare design a trauma centre without physical therapy and rehabilitation?

Ibrahima Konate: That would be a good thing.

Ethics

- Does our obligation to use all available technical and diagnostic means measure up to our ambitions? In other words, don't we sometimes tend to use high costs as an excuse to perpetuate "the cult of precarity?"

Khaled Menapal: You have to consider the existing standards in the country where you work; while things can always be improved, it's not realistic to think that you can apply Western standards in these contexts. And anyway, this is a general problem that goes beyond just surgery.

Pierre Gielis and Nathalie Civet: The quality of our practice should be the key word. The precarious conditions in which the Belgian section works don't allow much ambition. For example, we don't work at St. Joseph's hospital in Port-au-Prince, but in Choscal, where conditions are different, and we can refer patients that we can't treat to St. Joseph's. The surgeries are different at each institution, and so a complementarity is created. The surgical possibilities in a war zone or a disrupted and precarious region aren't the same as in a politically stable region. But that doesn't mean that we should be stingy with the means; we should ensure that the medical care is of high quality.
In addition, the real obstacle to introducing advanced technology for us is knowledge of the prerequisites for surgery: not just hygiene and sterilization, but also the size and training of the nursing staff, which can then ensure high quality post-operative care.
What good is the most advanced surgery, if the post-operative stage is a terrible failure? We have an obligation at this level, too, and we already have problems ensuring this essential prerequisite in the contexts where we work.

Stefan Krieger: We have to adapt our standards in surgery, as we do in tropical medicine. We treat HIV-infected patients with modern drugs, don't we? Then why do things differently in surgery?

Jean-Paul Dixmeras: The question might be, "What is reasonable?" Currently, the average costs of our surgeries is extremely low, less than US$200 per operation. The Amman project [reconstructive surgery program for wounded Iraqis – ed.], which combines advanced surgery with access problems, will have an average cost somewhere between US$1,200 and US$1,500 per operation, far below Western rates. We have technical obligations: radiology, lab testing, ultrasound… Without losing sight of our duty to account to our donors, our means

must be equal to our ambitions. Because an antiquated practice is not acceptable. And while experience shows that the average cost of an operation is inversely proportional to the number of cases treated, it would be wrong to use this criterion as the basis for closing a mission with low surgical activity.

Ibrahima Konate: This observation is true, and very frustrating for the practitioner.

- It is said that patient consent is not routinely respected. How do you respond to that?

Khaled Menapal: There are differences in terms of culture, religion and practices to which we must adapt. We need to understand the logic behind these practices, and then find a sort of compromise between the patient's consent and the logic of how we propose to treat him. But to avoid problems, we still have to convince the patient and his family that what we're doing for him is right and appropriate. Personally, I haven't seen any cases where the patient's wishes weren't respected. It is essential for me, especially in war contexts, to communicate well and gain the trust of the patient and his family.

Pierre Gielis and Nathalie Civet: It is our obligation to inform the patient and get his consent, as well as that of his family. In our experience in the field, the patient and his family have always been asked for consent, unless the patient is unconscious and his family is not there.

Stefan Krieger: I think that can happen, but it shouldn't. Sometimes we think we know better than our patients. It's a "surgical colonialism" reflex, which is not acceptable. We need an MSF consent form, accepted by all the operational centres, at all our projects.

Jean-Paul Dixmeras: Who would benefit from patient consent not being routinely respected? No one. On the other hand, it's not always easy—aside from technical terms and translation problems—to make sure that the patient has a good understanding. Written permission to operate should always be obtained, and should include—according to the ethnocultural or religious tradition—the endorsement of the person involved and/or his guardian, in the broadest sense, collected in the presence of a member of the local staff, in the form of a signature or fingerprint. Urgency should not trump this rule. Permission to operate does not replace talking to the patient. But it can constitute a document in case of medico-legal actions, where financial interest might play a role.

Ibrahima Konate: It all depends on the actors in the field. In my experience, we always try to convince.

- Don't we put patients at great risk when the minimum technical and organization level required for elective, functional surgery is the same as that for emergency surgery?

Khaled Menapal: If we can practice emergency surgery under minimum, basic conditions, I don't see that there's any additional risk in performing elective surgery, as long as we have acceptable conditions in terms of sterilization, staff, post-op care, a basic kit, anaesthesia equipment, etc. And as long as we're convinced that we're not taking unnecessary risks, and that we're respecting professional ethics.

Pierre Gielis and Nathalie Civet: Quality must be mandatory for both emergency and elective surgery. If we're not sure we can successfully perform an elective procedure, we

should not do it. The patient getting elective surgery can live without the operation, and wait for better circumstances or to be referred to a more sophisticated facility. If it's urgent, and referral isn't possible, if surgery is the only way to save a life, the patient should be prepared as well as possible under the circumstances, and the operation should be attempted, despite the risk. Informing the patient and his family is mandatory.

Stefan Krieger: We shouldn't perform planned surgeries if we don't have the necessary level in terms of either personnel or technology. It's the same for emergency surgery.

Jean-Paul Dixmeras: I am astonished at the way the question is formulated. It is in the context of emergencies that you run into the most difficult patients, whose treatment requires the most equipment and expertise. Treating emergencies doesn't mean it's alright to accept "breakage," justified by the fact that if you don't do anything, the patient will die anyway. Taking on emergencies implies an obligation of means. It's this same obligation of means that allows the practice of elective surgery.

Ibrahima Konate: It's clear that each situation must be managed in an appropriate way, in order to get the best results.