When You Operate on Friends and Relatives: Results of a Survey among Surgeons

Jurgen Knuth^a Dirk Rolf Bulian^b Jörg Ansorg^c Peter Büchler^a

^aDepartment of General, Visceral, Vascular and Thoracic Surgery, Hospital of Kempten, Kempten,

^bDepartment of Abdominal, Vascular and Transplant Surgery, Witten/Herdecke University, Medical Center Cologne-Merheim, Cologne, and ^cProfessional Board of German Surgeons (BDC), Berlin, Germany

Keywords

General surgery · Next of kin · Survey · Ethics · Conflict

Abstract

Objective: We designed a questionnaire to collect data on surgeons' views and experiences of operating on friends or relatives. **Subjects and Methods:** A link to a 38-item online survey was sent to all 16,849 members of the Professional Board of German Surgeons (Bund Deutscher Chirurgen, BDC) several times. Standard interview software was used. The questionnaire collected a wide variety of information concerning how surgeons have experienced, think about, and deal with the situation when they operate on friends or relatives. **Results:** Of the 16,849 BDC members notified of the survey, 1,643 completed the questionnaires (9.8%). Of these, 1,275 (77.6%) had previously performed surgery on friends or relatives. Overall, the surgeons willingly accepted doing so without experiencing any difficulties. However, the surgeons frequently used different techniques when operating on friends and relatives (123 [10%] when self-assessed compared to 527 [35%] when observed by others). Out of the whole sample, 506 (30.8%) would appreciate having a guideline or ethical code and 370 (41.2%) of those who have not yet operated on friends and relatives would like to have such

an ethical code. **Conclusion:** Most of the surgeons who responded accepted the task of operating on friends or relatives. Performing surgery on friends or relatives was a complex matter because objectivity was not guaranteed. Negative implications on personal relationships were rare. We recommend that this matter should be well considered and discussed with the patient and an ethical guideline or code should be created.

© 2017 S. Karger AG, Basel

Introduction

Surgeons are likely to encounter situations during their careers in which close friends or relatives need the kind of operation that they perform. Though some surgeons might welcome the opportunity to perform such an operation, others might doubt their ability to maintain the necessary objectivity and emotional calm to do the surgery, especially if the procedure entails major or complicated surgery. Colleagues sometimes criticize a surgeon who operates on friends or relatives, and performing such an operation raises ethical questions. Will the surgeon treat the patient the same as any other patient? Is doing so simply business as usual? What happens if com-

plications arise? A 1991 [1] survey found that 9% of physicians had performed elective surgery on relatives. Thus, the fact that surgeons operate on friends or relatives seems to be fairly common; however, research on this topic from Europe does not exist.

Only a recently did an article in *Deutsches Ärzteblatt*, the official journal of the German Medical Association, address the subject of physicians treating friends and relatives, but it did not focus on surgery [2]. A query sent to the Central Ethics Committee (Zentrale Ethikkommission) of the German Medical Association (Bundesärztekammer) revealed that no national ethical guidelines have been developed concerning this matter. In the USA, the American Medical Association (AMA) provides a code of ethics that is tailored for the practicing physician, which includes the treatment of relatives [3]. The primary concerns raised in that code are “professional objectivity may be compromised” and that “the physician’s personal feelings may unduly influence professional medical judgment” [3]. Furthermore, physicians “may fail to probe sensitive areas when taking the medical history or may fail to perform intimate parts of the physical examination. Similarly, patients may feel uncomfortable disclosing sensitive information” [3]. As these issues are a matter of concern when physicians and patients have close personal relationships, we designed a questionnaire to acquire basic data on practicing surgeons’ views and approaches on operating friends and relatives.

Subjects and Methods

A questionnaire was developed to obtain information about surgeons’ views and experiences related to operating on friends or relatives, including whether the surgeon had ever performed an operation on a friend or relative, and if they had the nature of (a) the relationship, (b) the operation (minor, major, or intermediate), (c) its outcome, (d) the reason for performing the operation, (e) their attitudes about performing the operation, and (f) other people’s attitudes about performing an operation on a friend or relative. Surgeons who had the opportunity to operate on a friend or relative but did not do the surgery were asked about their attitudes, the reason why they did not perform the operation, and under what circumstances they might do so. Some questions had multiple choice answers, some required dichotomous answers (yes or no), and 2 were open answers. The questionnaire also collected data on demographics and hospital characteristics.

A Web-based tool (SurveyMonkey®, London, UK) was used to generate the questionnaire and made it available online. The survey was freely accessible without any restrictions on the homepage of the Professional Board of German Surgeons (Bund Deutscher Chirurgen, BDC) from June 5, 2014 to February 1, of 2015. Regular email-newsletters that were released during that period to members of the BDC included a link to the survey. Although the

survey was only advertised to members of the BDC, access to the survey questionnaire was not limited to the 16,849 members of the BDC.

Statistical Analysis

A Fisher exact test was used to analyze 2×2 contingency tables, and a χ^2 test was used to analyze larger contingency tables. A p value <0.05 was considered statistically significant. IBM SPSS Statistics 22 was used for data processing and statistical analysis.

Results

Of the 16,849 BDC members invited to take the survey, 1,643 (9.8%) completed the questionnaire. Of the 1,643 respondents, 1,355 (82.5%) were male and 288 (17.5%) were female. Not all questions were answered by all participants, which explains different absolute numbers for different questions.

The age distribution (in years) of the respondents was as follows: $<30 = 20$ (1.3%); $30-35 = 68$ (4.2%); $36-40 = 140$ (8.7%); $41-45 = 202$ (12.6%); $46-50 = 343$ (21.4%); $51-55 = 374$ (23.3%); $56-60 = 258$ (16.1%); and $>60 = 198$ (12.4%). The surgical specialties of the most common to the least common were as follows: general = 691 (43.6%); visceral = 627 (39.6%); trauma and orthopedics = 622 (39.2%); vascular = 205 (12.9%); thoracic = 83 (5.2%); pediatric = 57 (3.6%); plastic and aesthetic = 48 (3.0%); and cardiac = 17 (1.1%). The current positions of the sample, from most frequent to least frequent, were: senior physician = 638 (40.5%); chief physician = 391 (24.8%); private practice = 291 (17.9%); specialist = 159 (10.1%); and resident = 97 (6.2%). Of the respondents, 1,247 (77.6%) said they had operated on a friend or relative, and of these, 477 (39.7%) reported that they had second thoughts about performing the surgery before they did it. The patients were most likely to be the surgeon’s father or mother ($n = 319$; 25.9%), followed by a spouse or partner ($n = 224$; 18.2%), a friend ($n = 211$; 17.1%), a son or daughter who was a child ($n = 197$; 16.0%), a distant relative ($n = 158$; 12.8%), a brother or sister ($n = 76$; 6.2%), or a son or daughter who was an adult ($n = 47$; 3.8%).

Of the 361 respondents who had never operated on a friend or relative, 190 (58.6%) said they had never been in that situation. The most frequent other responses were: it did not feel right ($n = 43$; 13.3%), somebody else could perform the procedure better ($n = 35$; 10.8%), and the patient-doctor relationship does not work that way or objectivity is missing ($n = 54$; 16.7%). A few survey participants said a person close to them objected ($n = 1$; 0.3%) or others objected ($n = 1$; 0.3%).

Table 1. Results for future preference of operating on friends and relatives including the reasons for the choice (multiple answers were allowed)

<i>Future preference of operating on friends and relatives</i>			
1,240 (79.4%) said they would operate on a friend or relative in the future if the opportunity arises		322 (20.6%) said they would <i>not</i> operate on a friend or relative in the future if the opportunity arises	
<i>Reasons for the respective choice (multiple answers were possible)</i>			
I would perform the operation if the friend or relative asked me to	622 (50.8%)	I do not feel good about it	199 (62.6%)
I would do it only if no other surgeon was available	211 (17.2%)	The patient-doctor relationship does not work that way or objectivity is missing	172 (54.1%)
I have had good experiences in this situation	282 (23.0%)	I have had bad experiences in this situation	8 (2.5%)
Others have had good experiences in this situation	36 (2.9%)	Others have had bad experiences in this situation	17 (5.3%)
Because I want to have full control over the procedure	246 (20.1%)	Others would object	1 (0.3%)
Because I have mastered the procedure the best	374 (30.6%)		

Table 2. Response to dichotomous questions about a past or future operation on a friend or relative (yes/no)

	Yes	No
<i>Questions answered by those who previously operated on friends or relatives</i>		
Was it an elective procedure?	917 (74.6%)	312 (25.4%)
Were there any complications?	67 (5.8%)	1,175 (95.2%)
Was treatment continued when a complication occurred?	68 (94.4%)	4 (5.6%)
Were you satisfied with the operation?	1,158 (95.8%)	51 (4.2%)
Was the patient satisfied with the operation?	1,178 (97.8%)	27 (2.2%)
Did you order presurgical tests other than the usual ones?	34 (2.9%)	1,156 (97.1%)
Did you perform surgical procedures in another way than usual?	20 (1.7%)	1186 (98.3%)
<i>Questions answered by the whole sample</i>		
Would you advise colleagues against operating on friends or relatives?	761 (58.4%)	543 (41.6%)
Have you ever thought about the subject "operating on friends or relatives"?	1,192 (79.2%)	313 (20.8%)
Would you like to have ethical support or guidelines about operating on friends or relatives?	462 (30.8%)	1,040 (69.2%)

Among all the survey participants, 1,240 (79.4%) said they would operate on a friend or relative in the future if the opportunity arises. The majority ($n = 622$; 50.8%) said they would perform the operation if the friend or relative asked them to, whereas 211 (17.2%) said they would do it only if no other surgeon was available. Other answers included (multiple answers were allowed): "because I have mastered the procedure the best" ($n = 374$; 30.6%), "because I want to have full control over the procedure" ($n = 246$; 20.1%), "because I have had good experiences in this situation" ($n = 282$; 23.0%), and "because others have had good experiences in this situation" ($n = 36$; 2.9%). Respondents who said they would not operate on a friend or relative in the future ($n = 322$; 20.6%) gave the following reasons for not doing so (multiple answers were allowed): "I do not feel good about it" ($n = 199$; 62.6%), "the patient-doctor relationship does not work that way or objectivity

is missing" ($n = 172$; 54.1%), "because others have had bad experiences in this situation" ($n = 17$; 5.3%), "I have had bad experiences in this situation" ($n = 8$; 2.5%), and "others would object" ($n = 1$; 0.3%). These results can be seen in Table 1. Regarding the question if they would want a friend or relative to operate on them, 932 (61.7%) answered yes, 290 (19.2%) answered no, and 288 (19.1%) answered that they did not know.

The dichotomous questions related to surgeries on friends and relatives are presented in Table 2. Roughly three quarters were elective surgeries ($n = 917$; 74.6%), which did not have many complications ($n = 1,175$; 94.6%), and the vast majority of surgeons ($n = 1,158$; 95.8%) and patients ($n = 1,178$; 97.8%) were satisfied with them. Most surgeons ($n = 1,192$; 79.2%) had thought about the matter, but many ($n = 1,040$; 69.2%) did not think ethical support or guidelines were needed. The ma-

Table 3. Relationship between respondents' current position and whether they would manage their own care differently from the care they recommend to patients

	Would you sometimes manage your own care differently? ^a	
	yes	no
What is your current position?		
Resident	40 (58.0%)	29 (42.0%)
Specialist	81 (54.7%)	67 (45.3%)
Senior physician	261 (43.1%)	345 (56.9%)
Chief physician	99 (26.6%)	273 (73.4%)
Private practice	69 (24.6%)	211 (75.4%)

χ^2 : $p < 0.001$. ^a Are there conditions that you would manage differently for yourself compared to what you regularly recommend to your patients? See Appendix 1 for examples.

jority ($n = 761$; 58.4%) would advise colleagues against performing surgery on friends or relatives. Minor surgery was performed in 776 (62.8%) cases, whereas 403 (32.6%) were intermediate procedures; only 57 (4.6%) were considered to be major surgery. The minor procedures included excision of skin lesions, inguinal hernias, and arthroscopies; the intermediate magnitude procedures included carotid surgery, hip replacement, and colon resection; and the major procedures included extended hemihepatectomy, aortic valve replacement, and redo-thoracotomy for esophageal atresia.

The reasons respondents gave for doing the operation were that a person close to them asked them to do it ($n = 645$; 54.0%), they wanted to have full control over the procedure ($n = 250$; 20.9%), they were the best person to do the procedure ($n = 230$; 19.3%), and no other surgeon was available ($n = 69$; 5.8%). The following are a selection of free-text answers for this item: “the chief of the department wanted it,” “the family expected it,” “if my expertise is not good enough for my family, then it is not good enough for anybody,” “my children have the right to be treated by the best surgeon,” “I had to find out if I could do it,” and “I gave in to massive pressure.” However, 1,077 (89.9%) reported that their decision that the surgery itself was indicated was based on their usual criteria, compared to 116 (9.7%) with stricter and 7 (0.6%) with less strict criteria.

Most respondents were senior physicians when they performed the operation ($n = 512$; 42.7%), 236 (19.7%) were chief physicians, 221 (18.4%) were specialists, and 82 (6.9%) were residents. The remaining 148 (12.3%) were in private practice. When asked if anyone had tried

to stop them from performing the operation, 1,095 (91.0%) said nobody did and 96 (8.0%) said their colleagues or coworkers did. Another 12 (1.0%) said a person close to them or the patient did. The vast majority of surgeons said they did not receive any criticism for performing the operation ($n = 1,139$; 94.6%), whereas 35 (2.9%) said they were criticized by colleagues or coworkers, 19 (1.6%) said they were criticized by the patient, and 11 (0.9%) said they were criticized by other friends or family.

Nearly a fifth ($n = 238$; 19.9%) of the surgeons said they were more nervous than usual during the operation and 715 (59.9%) said they felt no different than usual; 124 (10.4%) said they were more accurate and 117 (9.8%) said they were slower than usual. Most thought their relationship with the friend or relative who was the patient stayed the same after the operation ($n = 1,096$; 90.7%), some thought it became better ($n = 106$; 8.8%), and 7 (0.6%) thought it became worse. The participants were asked 3 questions regarding their colleagues' behaviors when they operate on friends and colleagues. First, how do they decide if surgery is indicated for a friend or relative? The answers were: usual criteria ($n = 381$; 25.4%), stricter criteria ($n = 487$; 32.4%), less strict criteria ($n = 40$; 2.7%), and do not know ($n = 595$; 39.6%). Second, do colleagues order tests, other than the usual ones, before operating on friends or relatives? The responses were: yes ($n = 291$; 19.4%), no ($n = 454$; 30.3%), and do not know ($n = 754$; 50.3%). The third question asked whether colleagues perform surgical procedures on friends or relatives other than the usual way (examples were given). Half of the respondents said they did not know ($n = 760$; 50.8%), yes ($n = 194$; 13.0%), and no ($n = 543$; 36.3%). Subgroup analyses were performed on several of the questionnaire items. The percentages of survey respondents who said they would manage their own care differently from their recommendations to the patients, in relation to their current position, are shown in Table 3. Residents were the most likely to say yes, followed by specialists and senior physicians. Notably, chief physicians and surgeons in private practice were more likely to say no.

The percent of respondents who would operate on friends or relatives in relation to their responses on survey questions are shown in Table 4. The respondents were significantly more likely to say they would operate on a friend or relative in the future if they had already done so, if the previous surgery had greater magnitude, or they had already performed an operation on a friend or relative that did not have complications. They were significantly more likely to advise a colleague to operate on a friend or relative if they had done so themselves. Finally, the results

Table 4. Relationship between willingness to operate on a friend or relative in the future and several key variables

	Would you operate on a friend or relative in the future?		<i>p</i> value
	yes	no	
Previously operated on a friend or relative ^a			<0.001 ^f
Yes	1,083 (89.4%)	128 (10.6%)	
No	157 (44.7%)	194 (55.3%)	
Magnitude of previous operation ^b			0.014 ^g
Minor	625 (87.0%)	93 (13.0%)	
Intermediate	327 (92.4%)	27 (7.6%)	
Major	51 (94.4%)	3 (5.6%)	
Nature of the previous operation ^c			0.29 ^f
Elective procedure	808 (89.8%)	92 (10.2%)	
Emergency procedure	269 (87.6%)	38 (12.4%)	
The operation had complications ^d			<0.01 ^f
Yes	47 (74.6%)	16 (25.4%)	
No	1,038 (90.0%)	115 (10.0%)	
Advice you would give colleagues ^e			< 0.001 ^f
Advise against operation	473 (62.2%)	288 (37.8%)	
Advise to proceed with operation	537 (98.9%)	6 (1.1%)	

^a Have you ever operated on friends or relatives? ^b Was the operation that you have done on friends or relatives minor/intermediate/major? ^c Was the operation that you have done on friends or relatives an elective procedure/emergency procedure? ^d Were there any complications from the operation that you performed on a friend or relative? ^e If a colleague had the opportunity to operate on friends or relatives, would you advise against the operation/advise to proceed with the operation? ^f *p* value for Fisher's exact test. ^g *p* value for χ^2 .

Table 5. Relationship between having operated on a friend or relative and the desire to have ethical guidelines for operating on friends or relatives

	Would you like to have ethical guidelines? ^a	
	yes	no
Previously operated on a friend or relative		
Yes	328 (27.9%)	849 (72.1%)
No	134 (41.2%)	191 (58.5%)

Fisher exact test, *p* < 0.001. ^a Would you like to have ethical support or guidelines in case you could or had to operate on friends or relatives?

presented in Table 5 indicate that surgeons who had previously performed operations on friends or relatives were significantly less likely to think that there should be guidelines about doing so.

Discussion

Many surgeons have previously operated on friends and relatives. According to this survey, in those cases, objectivity is not guaranteed and emotional involvement be-

comes evident. The course of action before, during, and after the operation frequently has a different quality of emotional involvement when the patient is a friend or relative. A lack of objectivity is of most concern when treating friends or relatives, as pointed out in the AMA code [3]. Yet, 77.6% of surgeons in the sample had previously performed surgery on friends or relatives, while a guideline like the AMA code does not exist for this sample. Surgery was performed on a friend or relative because no other surgeon was available in only 5.8% of cases. Thus, an alternative surgeon was usually available even

for the 25.4% that were emergency procedures. The 9.7% of surgeons who declined the task in accordance with the arguments stated in the literature [1, 3–5] mostly did so because another surgeon might perform the procedure better or their fear of lacking objectivity. An American survey found 22% of physicians were uncomfortable treating family members [1]. In contrast, our survey found 40% to have second thoughts before the operation, but 96% to be satisfied with the surgery and the postoperative course. This might be due to the actual surgery being a routinely mastered task and also to the rest of the team that is not emotionally involved. However, discomfort of not only the surgeon but also the patient might not be articulated, leading to the situations outlined by the AMA code [3]. La Puma et al. [1] found that one-third of respondents had observed other physicians treating family inappropriately, which is in accordance with our findings of 35% that were observed by others to indicate surgery differently and 13% that deviated from what they regularly recommended to patients when operating on friends or relatives. These numbers decline to 10 and 1.7%, respectively, when self-assessed. Do these surgeons consider the treatment that they regularly recommend to be less than the best? Additionally, in some situations, a provocative one-third of the surgeons would not want what they regularly recommend to their patients to be applied to themselves. When laparoscopy was introduced to colorectal surgery 20 years ago, Wexner et al. [6] found whereas “75 percent of surgeons would gladly use the laparoscope to treat their patients, only 6 percent would have the same technology applied to themselves.” Do surgeons not always consider the standard procedure to be the best option? Table 3 shows a significant difference in how surgeons in different positions would decide to have surgery for themselves. The most likely explanation for that difference is that an experienced surgeon has seen the downside of nonstandard therapies during his/her career, while a less experienced surgeon might not yet trust the standard proceedings. Notably, some surgeons asserted to see no difference between friends or relatives and other patients. However, around 40% said they were more nervous, slower, or more accurate during the procedure. One of the comments regarding differences about operating on friends and relatives proposed a solution: “In order to ensure my own objectivity during the procedure, I chose an experienced colleague who I trust as my assistant. We previously agreed that he had veto power.” This approach, which is also proposed by Jones et al. [7], could facilitate objectivity while still providing personal care. Coworkers tried to keep the surgeon from proceeding in 8% of the

cases, which possibly points to a lack of objectivity. However, even if the surgeon thoroughly examines the patient, properly decides that surgery is indicated, and performs the operation correctly, another surgeon of equal expertise might be at hand. Kouchoukas et al. [5] discussed whether surgeons should refer patients to other surgeons who achieve better results: “honest and uncompromising appraisal of our own capabilities are critical requirements for making correct judgments about our own competence.” This rings even more true when treating one’s own friends or relatives, whose best possible treatment might be treatment by someone else. However, surgeons in our sample gave a variety of reasons for performing an operation on a friend or relative, ranging from pressure by the boss or the family to being the best surgeon to do it.

About 20% did the operation because they considered themselves the best surgeon at hand. Obviously, these surgeons think highly of themselves. Oberheu et al. [4] said that the “education of the surgeon should [...] include basic competencies [...] psychologic development and a level of esteem for oneself and one’s abilities.” Therefore, one must be convinced of being able to do a good job in order to be a good surgeon. Most likely, this also triggers considering one’s own skills as appropriate for friends and family. Hence, almost all the surgeons were satisfied with the surgery and its result. Even more stated that the patient was satisfied. Obviously, asking a surgeon whether the patient was satisfied with the surgery lacks objectivity. Accordingly, Slavin et al. [8] found “a high level of patient satisfaction anomalous for any patient-surgeon sample, suggesting that surgeons who operate on family members hold confident opinions of their surgical skills and results.”

Consistent with published data [9], complications were reported to be around 5%. Most surgeons who encountered complications continued treatment, which is part of a surgeon’s everyday life. However, a complication with a friend or relative might become a complication in their personal relationship. Despite complications, in our sample the surgeon’s relationship with the friend or relative became worse for only 0.6% of the surgeons. A surgeon’s care for a patient to whom he/she is attached will be very intense, possibly resulting in an improved relationship, just as the opposite could occur in the case of complications. This might be the most worrisome finding. A risk of 0.6% might look like a small proportion, but the consequences might be grave. One must thoroughly consider a 0.6% risk of losing a good friend or unhinge one’s relationship with a family member or friend.

According to Table 4, most surgeons seemed to have had good experiences with operating on friends or relatives. Expectedly, a complication during a previous procedure on friends or family was a significant factor keeping surgeons from operating on friends or family again (Table 4). However, twice as many as those that reported complications would not operate on friends or relatives again. This worrisome finding again points to factors like personal discomfort despite an uncomplicated course.

Operations of greater magnitude made surgeons significantly more likely to operate on friends and family again (Table 4). An operation of a greater magnitude may not only create a longer-lasting medical relationship, but also an intense interpersonal bond, which might strengthen the personal relationship in a way that a minor procedure never would. We can also observe this effect with ordinary patients. As a result, the surgeon's self-confidence will grow and encourage him to handle a similar situation again. According to Table 4, even when surgeons had less of a choice and less time to consider and discuss the situation, as in an emergency, there was no negative effect on deciding about similar cases in the future.

Why would surgeons advise others against doing what they would do themselves (Table 4)? Surgeons hold a high opinion of themselves, as discussed above. People rating themselves as better than the rest, although they are not, is common and known as the Dunning-Kruger effect [10].

Similarly, many surgeons are willing to operate on friends or relatives in the future, but are not willing to have friends or relatives operate on them. This could be held as a strong argument against operating on friends and family.

Most of the survey participants who did not want to operate on friends or relatives in the future would not feel comfortable doing it or would see it as compromising the patient-doctor relationship. This is also the primary concern of the AMA: "tensions [...] in a physician's professional relationship with a family member [...] may be carried over into the family member's personal relationship with the physician" [3].

Most surgeons might not think about operating on friends or relatives until the opportunity arises. Significantly fewer surgeons in the sample would like to have ethical support when operating on friends or relatives if they have done so before compared to surgeons who have not done so (Table 5). Thus, some seem to have had a smooth and untroubled course, whereas others seem uncomfortable with the matter, whether this is despite or because of their experiences.

Is it acceptable to provide surgical care to friends or relatives? Those who have already operated on friends or relatives probably do not make much ado about the matter. "If we should be concerned about a surgeon operating on a family member, should we not be similarly concerned about an automobile mechanic putting brakes on the family car?" [4]. The fundamental difference is that surgery is performed on the family member himself [7]. A review of the literature finds hardly any arguments in favor of operating on friends and family, like experiencing "more gratification from those operations than from any surgical procedure" [4]. Similarly, the only result in favor of operating on friends and family found in this survey is that the relationship with the friend or relative who was the patient became better in 8.8%. This suggests that one should at least be reluctant about operating on friends or relatives. A book on surgical ethics [11] suggests the following: "Would I be prepared to lose my friendship with this person [...]?" If the answer is no, then the friend should be referred to another." Furthermore, the surgeon must also consider the following questions: "Will I be able to honestly disclose the risks of the surgery when obtaining informed consent [3]?" and "Do I not wrongfully make assumptions about what the friend or relative wants or fears in the course of treatment?" When the surgeon continues, he should ask himself, whether he can act as usual, possibly despite intimate details. And can the patient? Definitely, expectations from both parties should be expressed prior to therapy.

This last aspect of this issue is maximized when it comes to one's own minor children. A child might not express discomfort and simply act according to the expectations of a doctor who is its parent, without expressing his or her own feelings. Studies of physicians who treated their own children as patients found they provided substandard care [12–14]. In the 16.0% of the cases in which the surgeon operated on his own minor child, the person who signed the informed consent for that minor child must have been, apart from the spouse, the surgeon himself. Someone equally skilled would likely be available, especially for an elective procedure.

Here, a new aspect arises: operative treatment of colleagues or their friends and family. This was not part of this survey, but raises similar concerns, as discussed by Moreno [11]. Also, once consulted, the surgeon in question will always be somewhat responsible, even when referring the friend or relative to another physician. For example, clinical errors, which are more frequent than they should be [15], are not within the influence of the referring surgeon, but they will leave a bitter aftertaste about his/her

referral. Declining an operation is difficult for either party, which makes a code of ethics helpful in that the surgeon would have the opportunity to refer to an official statement, facilitating the refusal to operate [2]. Such a code could also give the patient an opportunity to decline.

Further studies are needed to examine this subject. Details need to be investigated, such as whether patients are disappointed when a surgeon close to them declines to operate himself, how exactly a code of ethics is expressed and by whom, and why a regular treatment mode is frequently not adhered to.

The limitations of the survey included not using a random, representative sample of all German surgeons, but only members of the BDC. Plus, it biased responses among surgeons who had previously operated on friends or relatives.

Conclusion

In our sample, there was a high probability for the professional services of any surgeon to be called upon by a friend or relative who is in need of an operation that the

surgeon is capable of performing. A medically normal situation is influenced by the particular situation of an intimate bond between the surgeon and that patient, which influences the whole treatment process, possibly resulting in unusual decisions and forms of treatment with a negative impact on both the treatment and the interpersonal relationship.

Therefore, when taking on the task of operating on a friend or family member, one should be aware that an objective and professional approach, without emotional involvement, by the surgeon and an honest and unself-conscious presentation by the patient are not guaranteed. Standards of care should be adhered to. A thorough discussion of the expectations and fears of both parties is mandatory since a bad outcome might damage their emotional well-being as well as their future relationship.

Referral to a colleague should be considered. Ethical guidelines should be developed.

Acknowledgment

The authors would like to thank Ronny Dittmar for assisting with the data processing and handling of the survey tool.

Appendix 1

English translation of the original German questionnaire. Square brackets indicate skipping questions. Multiple answers were possible for items 3, 29, and 30.

1.	Your gender? male/female
2.	Your age? <30, 30–35, 36–40, 41–45, 46–50, 51–55, 56–60, and >60
3.	What is your surgical specialty? general/vascular/cardiac/pediatric/trauma and orthopedics/plastic and aesthetic/thoracic/visceral
4.	What is your current position? resident/specialist/senior physician/chief physician/private practice
5.	What type of hospital do you work at? standard care level/mid-level/referral center/university hospital/private practice
6.	What is your hospital operator? state/municipal/nonprofit (e.g., church)/insurance companies (e.g., trade association)/private
7.	What is the size of your hospital in beds? <200, 200–400, 401–600, 601–800, 801–1,000, >1,000
8.	What is the size of your department in beds? <20, 20–40, 41–60, 61–80, >80
9.	Have you ever operated on friends or relatives? yes (continue at 10)/no [continue at 27]
10.	Was the operation: minor (e.g., inguinal hernia, appendectomy, fractured radius)/intermediate (e.g., sigmoid resection, hip endoprosthesis)/major (e.g., Whipple procedure, pneumonectomy, coronary bypass)? + possibility of free-text answer
11.	Was the operation an elective procedure/emergency procedure?
12.	Was the friend or relative your spouse or partner/son or daughter (child)/son or daughter (adult)/father or mother/brother or sister/distant relative)/friend?
13.	Were there any complications? yes [continue at 14]/no [continue at 15]
14.	If yes, did you continue the treatment? yes/no
15.	Were you satisfied with the surgery and the postoperative course? yes/no

16.	Was the friend or relative satisfied with the surgery and the postoperative course? yes/no
17.	Did you operate on the friend or relative because no other surgeon was available/you mastered the procedure best/you want to have full control over the procedure/the person close to you had asked you to do so? + possibility for free-text answer
18.	Before the procedure, did you have any second thoughts that you do not normally have? yes/no
19.	Did anybody try to keep you from performing the surgery? the friend or relative her-/himself /other people, that are close to me/colleagues or coworkers/nobody
20.	During the procedure, were you any different from normally? more nervous/more accurate/slower/no, as usual
21.	When you performed the operation, were you: a resident/specialist/senior physician/chief physician/in private practice?
22.	How did you decide surgery was indicated for the friend or relative? the usual criteria/more strict criteria/less strict criteria
23.	Before operating on the friend or relative, did you order any tests other than the usual ones? yes/no
24.	Did you perform surgery on the friend or relative other than the usual way (e.g., inguinal hernia repair without instead of with a mesh, partial thyroidectomy instead of total thyroidectomy, fractured radius with cast instead of internal fixation, femoral head-preserving procedure instead of endoprosthesis)? yes/no
25.	Was there any criticism regarding the operation? from the friend or relative who was the patient/from other people close to you/from colleagues or coworkers/there was no criticism
26.	After the treatment, how did your relationship to the friend or relative change? better/equal/worse [continue at 28]
27.	If you have already had the opportunity to operate on friends or relatives, but you did not do so, was that because you have never been in that situation/it did not feel right/somebody else could perform the procedure better/the patient-doctor relationship does not work that way or objectivity is missing/the person close to you objected/others objected
28.	If you had the opportunity, would you operate on friends or relatives in the future? yes [continue at 29]/no [continue at 30]
29.	Yes, I would operate on friends or relatives in the future (multiple answers possible) only if no other surgeon is available/only if the friend or relative has asked me to do so/because I mastered the procedure best/because I want to have full control over the procedure/because I have had good experiences with this matter/because others have had good experiences with this matter [continue at 31]
30.	No, I would not operate on friends or relatives in the future because (multiple answers are possible) I do not feel good about it/the patient-doctor relationship does not work that way or objectivity is missing/others would object/I have had bad experiences with this matter/because others have had bad experiences with this matter
31.	In case a colleague had the opportunity to operate on friends or relatives, would you advise against doing the operation/advise to proceed with the operation?
32.	How do colleagues decide if surgery is indicated when operating on friends or relatives? the usual criteria/more strict criteria/less strict criteria/I do not know
33.	Before operating on friends or relatives, do colleagues order tests other than the usual ones? yes/no/I do not know
34.	Do colleagues perform surgical procedures on friends or relatives other than the usual way (e.g., inguinal hernia repair without instead of with a mesh, partial thyroidectomy instead of total thyroidectomy, fractured radius with cast instead of internal fixation, femoral head-preserving procedure instead of endoprosthesis)? yes/no/I do not know
35.	Are there conditions that you would manage differently for yourself compared to what you regularly recommend to your patients (e.g., inguinal hernia repair without instead of with a mesh, thyroidectomy instead of watchful waiting, fractured radius with cast instead of internal fixation, femoral head-preserving procedure instead of endoprosthesis)? yes/no
36.	Would you let friends or relatives operate on you? yes/no/I do not know
37.	Have you already given attention to the subject "operating on friends or relatives"? yes/no
38.	Would you like to have ethical support or guidelines in case you could or had to operate on friends or relatives? yes/no

References

- 1 La Puma J, Stocking CB, La Voie D, et al: When physicians treat members of their own families. Practices in a community hospital. *N Engl J Med* 1991;325:1290–1294.
- 2 Maio G, Gerst T: Interview: ein professioneller Arzt darf nicht aus der Sorge heraus helfen. *Dtsch Arztebl* 2015;112:A-770/B-650/C-630.
- 3 American Medical Association: Code of Medical Ethics. Chapter 1: Opinions on Patient-Physician Relationships. <https://www.ama-assn.org/about-us/code-medical-ethics> (accessed February 22, 2017).
- 4 Oberheu K, Jones JW, Sade RM: A surgeon operates on his son: wisdom or hubris? *Ann Thorac Surg* 2007;84:723–728.
- 5 Kouchoukas NT, Cohn LH, Sade RM: Are surgeons ethically obligated to refer patients to other surgeons who achieve better results? *Ann Thorac Surg* 2004;77:757–760.
- 6 Wexner SD, Cohen SM, Ulrich A, et al: Laparoscopic colorectal surgery—are we being honest with our patients? *Dis Colon Rectum* 1995;38:723–727.
- 7 Jones JW, McCullough LB, Richman BW: The ethics of operating on a family member. *J Vasc Surg* 2005;42:1033–1035.
- 8 Slavin SA, Slavin SA, Goldwyn RM: A family operation: plastic surgeons who perform aesthetic surgery on spouses or other family members. *Plast Reconstr Surg* 2010;125:1018–1023.
- 9 Zegers M, Bruijne MC, Keizer B, et al: The incidence, root-causes, and outcomes of adverse events in surgical units: implication for potential prevention strategies. *Patient Saf Surg* 2011;5:13–23.
- 10 Kruger J, Dunning D: Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *J Pers Soc Psychol* 1999;77:1121–1134.
- 11 Moreno J, Lucente F: Patients who are family members, friends, colleagues, family members of colleagues; in McCullough L, Jones J, Brody B (eds): *Surgical Ethics*. New York, Oxford University Press, 1998, p 15.
- 12 Levin ES: The “doctor game” revisited: doctor's treatment of their own children. *Int J Psychoanal Psychother* 1984–1985;10:505–524.
- 13 McSherry J: Long-distance meddling: do MDs really know what's best for their children? *CMAJ* 1988;139:420–422.
- 14 Gold KJ, Goldman EB, Kamil LH, et al: No appointment necessary? Ethical challenges in treating friends and family. *N Engl J Med* 2014;371:1254–1258.
- 15 Oyeboode F: Clinical errors and medical negligence. *Med Princ Pract* 2013;22:323–333.