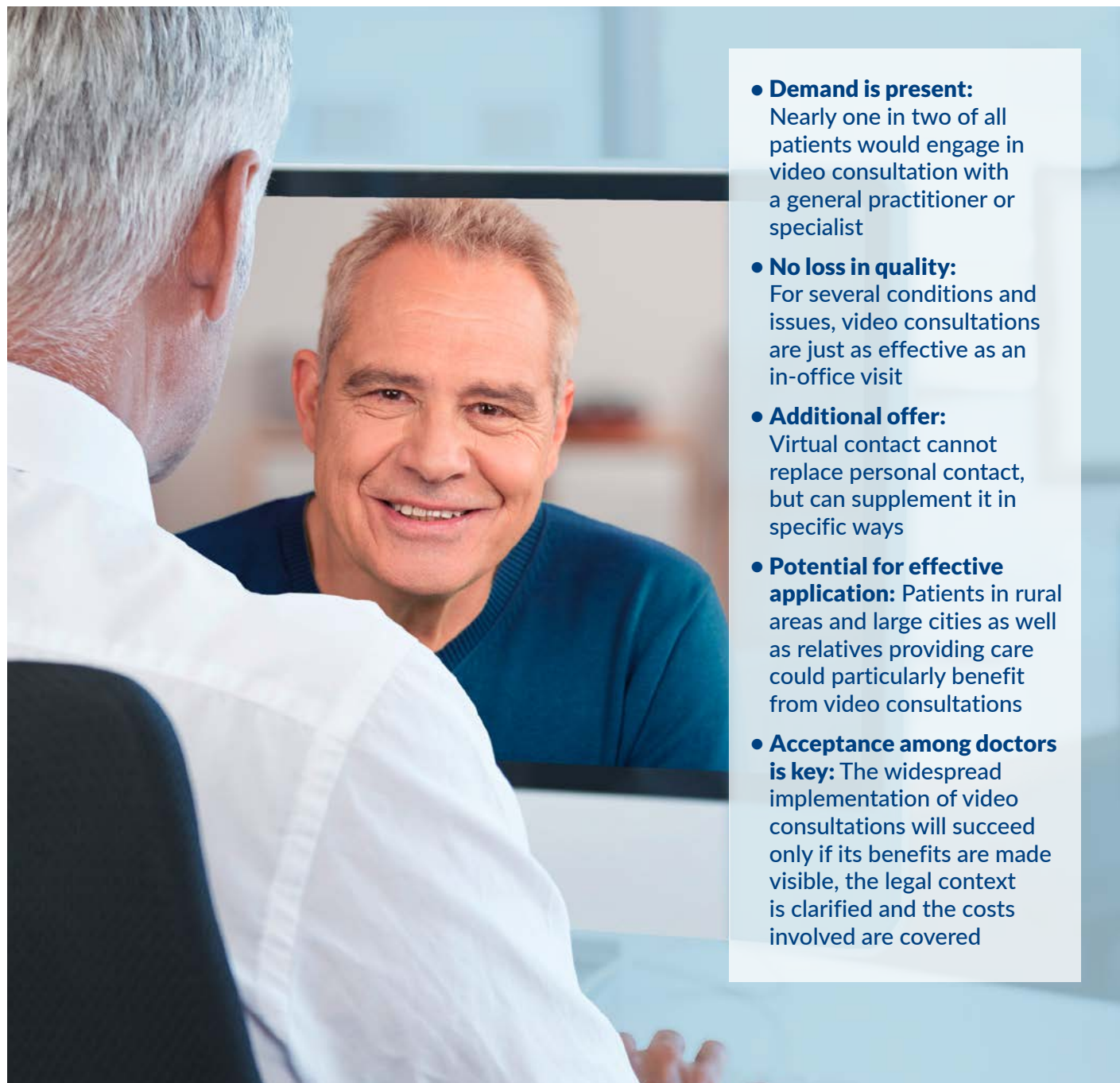


SPOTLIGHT HEALTHCARE 11 | 2015

Data, analysis, perspectives

Video Consultations

An effective tool for outpatient care –
Acceptance among doctors is key to leveraging usage



- **Demand is present:** Nearly one in two of all patients would engage in video consultation with a general practitioner or specialist
- **No loss in quality:** For several conditions and issues, video consultations are just as effective as an in-office visit
- **Additional offer:** Virtual contact cannot replace personal contact, but can supplement it in specific ways
- **Potential for effective application:** Patients in rural areas and large cities as well as relatives providing care could particularly benefit from video consultations
- **Acceptance among doctors is key:** The widespread implementation of video consultations will succeed only if its benefits are made visible, the legal context is clarified and the costs involved are covered

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In the United States, Australia and Scandinavia, it is already a common practice to consult your doctor via video. Internet companies such as Netscape and Google have financed start-ups such as »Doctor On Demand« and several large private healthinsurance organizations are assuming the costs for their insured customers.

In Germany too, a number of initiatives by doctors and companies today facilitate online video consultations with general practitioners and specialists. Among these are start-ups such as Arztkonsultation.de, Patientus and DrEd, the latter of which is a Web-based service headquartered in London that has long offered »online treatment services« for patients in Germany – thus bypassing the German prohibition of remote treatment (see box on page 4).

However, few doctors as yet allow patients to contact them using video connections; indeed, on most platforms, the number of participating physicians remains only in the double digits. The Techniker Krankenkasse (TK), the first German health insurance company to offer services in this area, has been testing the Patientus platform since September of 2015. TK members can use this to get in touch with practicing dermatologists by video. However, to use the service, they must have previously consulted the doctors personally.

Should health insurance companies include video consultations in their list of covered services, and should general practitioners and specialists offer them? What opportunities does this practice offer for outpatient care, and what are its limits?

»Video consultations will gain in importance as society grows increasingly media savvy. The medical community cannot ignore this development.«

Dr. Franz-Joseph Bartmann, Chairman of the German Medical Association's Telematics Committee

And what would it take to establish video consultations on a widespread basis? In order to address these questions, the Bertelsmann Stiftung surveyed experts and the general public, and evaluated more than 80 primarily international sources.¹ The results show that video consultation represents a useful additional communication channel in many situations and for many occasions. Demand for such services is clearly evident among the broader population. However, acceptance among physicians is still lacking.

Nearly one in two of patients would engage in video consultation with a general practitioner or specialist

Patients in Germany are quite interested in video contact with their doctors. The results of the representative survey show that 45 percent would at least occasionally use a video consultation to speak with their general practitioner or specialist, with 4 percent saying they would use it as often as possible, 12 percent saying they would use it frequently, and 29 percent saying they would use it rather infrequently. Thirty-seven percent said they would almost never use the service, and nearly one in five respondents were undecided. Evidently, many respondents lacked a concrete conception of what video contact with their doctor would entail, as the service is as yet quite rare in Germany. Nevertheless, the fact that nearly one-half of patients are already fundamentally prepared to engage in a video consultation shows that there are enough early adopters to justify the widespread introduction of the service in Germany. Patients would primarily use video consultations to avoid long waiting times for a doctor's appointment, to reach their doctor outside of usual office hours, and to avoid exposure to infections or contagions from other patients in a practice's waiting room.

Varying conditions of access in different population groups are an important consideration with respect to not only market issues but also social

¹ The literature analysis and survey of experts was carried out by the Berlin-based research institute medpirica.

inclusion. For example, the younger the respondent, the greater is the corresponding level of interest in video-based consultation. Eighteen- to 29-year-olds are statistically 10 times more likely to be among the interested group than are 70- to 79-year-olds. Gender, education levels and socioeconomic status also play a role. Men are on the Internet more often than women, as are respondents who have graduated from secondary school with a degree qualifying them for university-level study as compared to respondents with lower-level secondary degrees. A similar relationship holds between highly paid and relatively low-wage earners.

In many cases, online medical visits are as good as personal consultations

Some international studies ^① have already shown that video consultations are medically equivalent to personal doctor visits for many occasions. This is particularly true for contacts having to do with psychological, dermatological or geriatric-medicine matters, as studies from Denmark and New Zealand indicate. There is also evidence that repeated video consultations can contribute to better achieving therapeutic goals jointly agreed upon by the doctor and patient.

From the perspective of the experts surveyed, video consultations are particularly well suited for follow-up questions, the provision of advice, the presentation of test results, and for obtaining second opinions. Moreover, they are an instrument for

Willingness to use video consultations within the general population

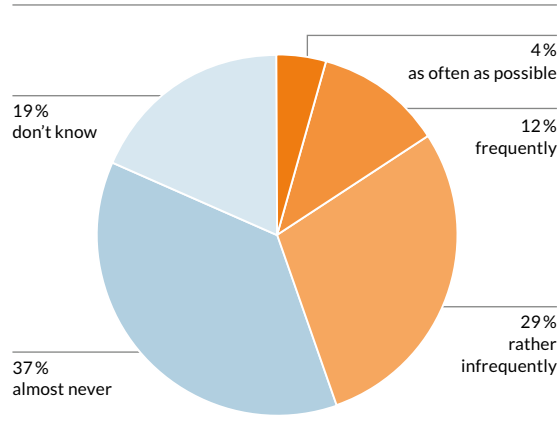


Figure 1 | n=1,156
Source: Bertelsmann Stiftung, 2015 | BertelsmannStiftung

long-term support of chronically ill patients. In some cases, non-physician members of the doctor's staff could be employed here; such staffers already today offer telephone-based support for patients with depression or chronic wounds. A video connection would enable additional information to be delivered to them. In addition, experts said video consultation could fulfill a »pre-filtering function« establishing whether a personal appointment is necessary.

It is difficult to make general statements regarding the suitability of specific medical specialties for the offer of video consultations. While it seems clear that surgical specialties are comparatively

Sources / Methodology

For this spotlight, 81 predominantly international sources were evaluated, and six experts were interviewed on the sociocultural, economic and health-policy contexts and effects of video consultation. The evaluation and interviews were largely carried out by medpirica, a Berlin-based research institute. The findings on patients' views are based on a representative opinion survey in which 1,598 men and women between the ages of 18 and 79 took part, with the survey period lasting from June to July 2015.

The sources cited ^{①-②} and additional information on the literature review, as well as further findings from the opinion survey, can be found and downloaded at www.der-digitale-patient.de

Suitable medical fields for video consultation, according to the public

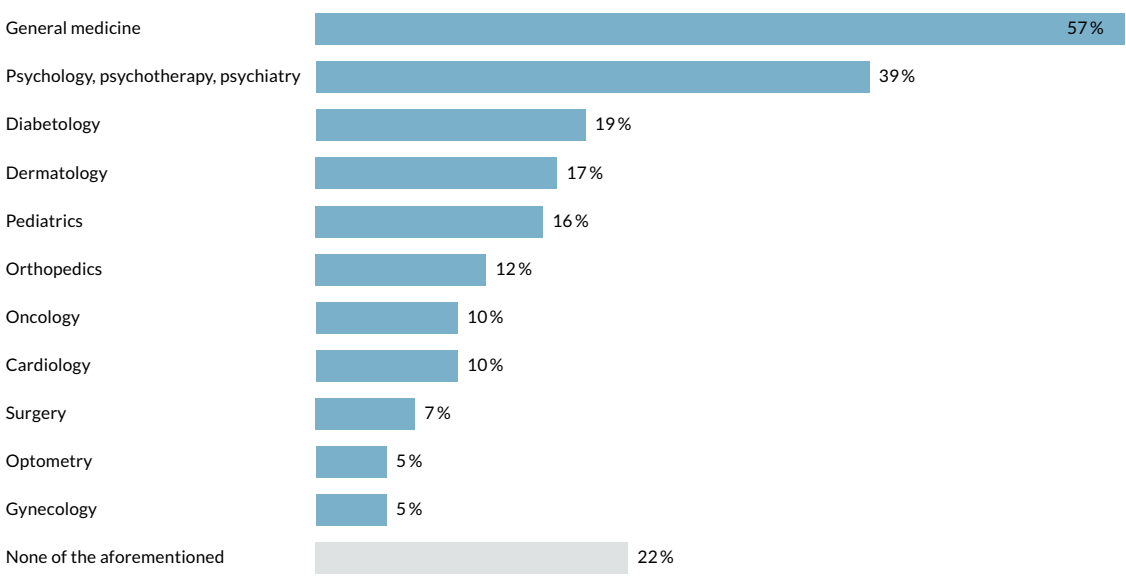


Figure 2 | n=622 | Source: Bertelsmann Stiftung 2015 | BertelsmannStiftung

less suited to this medium, more than half of the surveyed patients said they would speak online with their general practitioner, and more than a third said they would also use video consultations to communicate with psychologists, psychotherapists and psychiatrists. In the case of dermatological advice, which experts said was particularly suited for this kind of service, only one-sixth of patients said they could currently imagine engaging in video-based consultation.

It is not yet clear whether video consultations will simply substitute for existing physician contacts, or whether the additional offer will lead to an expansion of services. In this regard, more research is needed with an eye to possible health economics implications.

Remote treatment ban

According to the provisions of the German Medical Association's Model Professional Code (MBO), physicians in Germany are forbidden to treat or counsel patients solely on the basis of print or communications media. The German Medical Assembly relaxed this ban in 2011 in the area of telemedicine. Since that time, Section 7 Paragraph 4 has stated more expansively that »it must also be ensured that physicians treat patients directly in the case of telemedicine procedures.« This enables additional doctors the patient does not personally know to be brought in for video consultations, as well as the possibility of video consultations with existing patients.

The term »remote treatment« stems from the law on treatment of sexually transmitted diseases from 1927, and is also retained in the identically named, still-valid successor law from 1953, which forbids treatment of sexually transmitted diseases »on any basis other than a personal examination.« The term is also found in the 1965 Health Services and Products Advertising Act. In Section 9, this law states that »Advertising for the diagnosis or treatment of diseases, ailments, bodily injury or disease symptoms which is not based on personal observation of the person or animal to be treated (distance treatment) is inadmissible.«

A number of international studies⁵³ indicate that doctors who offer video consultations handle the services in a consciously responsible fashion. They incur liability for medical malpractice to the same degree as is the case for direct personal treatment. Companies that offer medical advice through Internet-based video consultation operate in a gray area, as they simply offer doctors a platform, without themselves holding liability for malpractice. They do not fall under the medical professional code's remote-treatment ban, but theoretically do fall under the remote-treatment advertising ban. This is because the medicinal-products advertising law applies not only to doctors, but also to »facilities that serve the health of humans or animals.«

»Video consultations should not serve as a substitute for personal contact, but rather as a means of optimizing healthcare provision. Personal contact is an essential element of medical care. One should not replace it without need.«

Dr. Bernhard Gibis, gynecologist and head of the Department for Health Service Delivery and Guarantee of the National Association of Statutory Health Insurance Physicians

Virtual contact cannot replace personal contact, but can supplement it in specific ways

Video consultations cannot and should not wholly replace personal physician contact. All surveyed experts agreed on this point. For legal, ethical and practical reasons, they said, a personal examination by at least one doctor must take place before a video consultation. In addition, the experts noted that it is important that the physician has a comprehensive view of the patient, rather than simply hearing his or her voice, and seeing his or her face or a single body part. Moreover, the experts said, there is a significant risk that the doctor may miss something in the online setting. For these reasons, they said, the existing remote-treatment ban in Germany should not be abolished, but should instead be adapted and clarified.

The patients see this in much same way – they too have no desire to give up direct contact altogether. For an initial diagnosis for a serious disease, virtually all would always seek a personal consultation with the doctor. The same is true of any occasion on which a physical examination is necessary. However, a clear demand to make certain contacts »virtual« is evident, particularly when dealing with the provision of advice or counseling, or when there is some question as to whether a more extensive visit to the practice office is necessary. In this regard, the telephone is today used far more often than video, presumably because it is a far more familiar communications channel.

About half of the surveyed patients indicated they would happily discuss lab results, X-rays and other findings with the doctor over the telephone. However, those who had previously used a medical hotline operated by their health insurance company for the purposes of telephone-based consultation were typically also more open to the idea of

Means of contact and reasons for treatment – patient interest

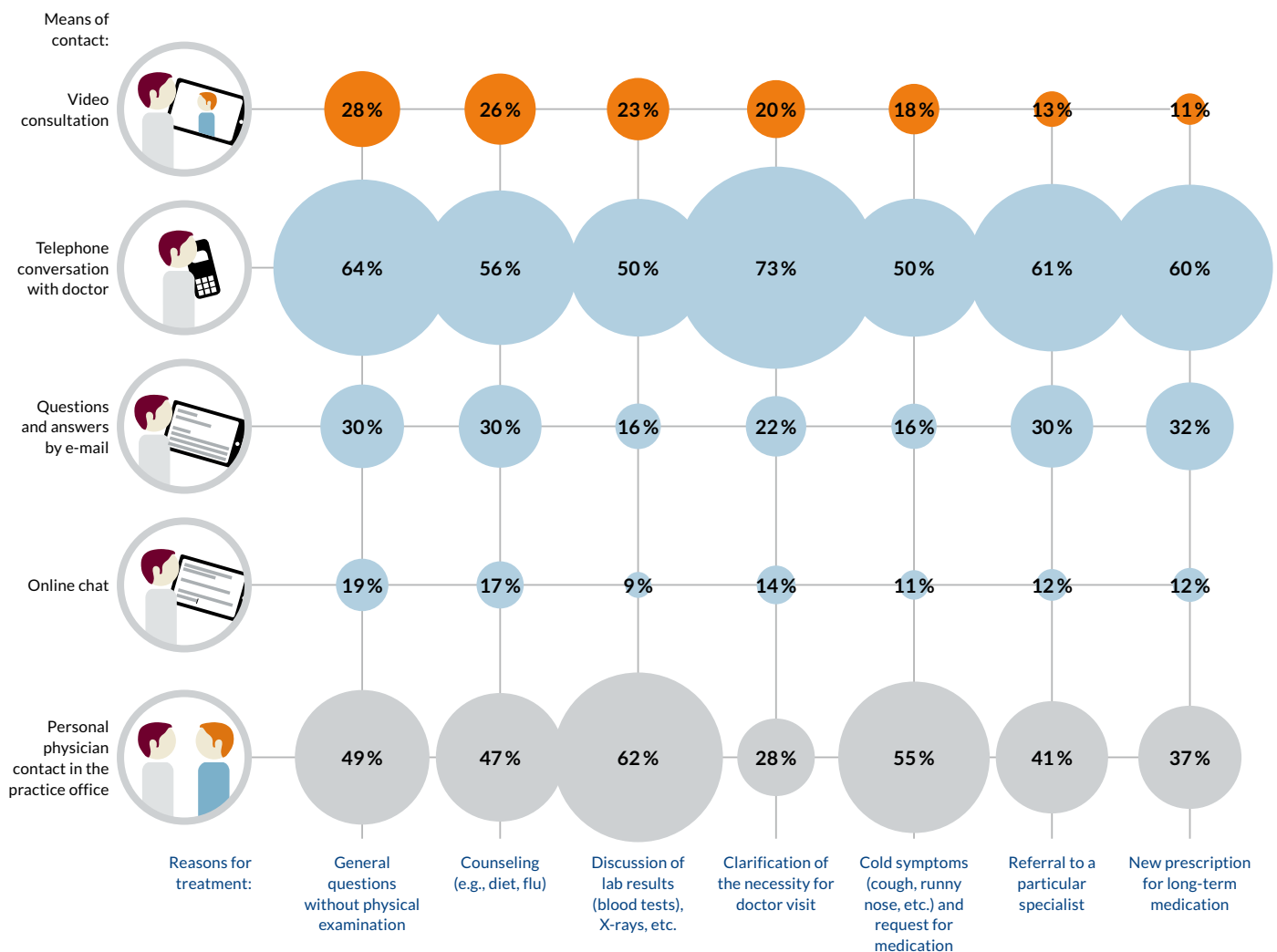


Figure 3 | n= 1,464 – 1,553, multiple responses possible | Sample of reasons for treatment deemed suitable for a video consultation
Source: Bertelsmann Stiftung 2015

video consultation. In addition, studies [6](#) [7](#) have confirmed that patients who take part several times in online consultations rate this opportunity much more positively after the second instance. However, it is also clear that people do not want to be subject to additional costs for this service. A total of 84 percent said they were not willing to pay for a video consultation with a general practitioner or specialist.

Patients in rural areas and in large cities, as well as relatives providing care, could particularly benefit from video consultations

The concrete benefits provided by video consultations will be dependent on the areas in which they are used. In principle – based on the evaluated lit-

erature and from the experts' point of view – three particularly significant areas can be inferred for the German system, including use in underserved rural areas and in large cities, and for the support of family members providing care.

In rural areas, video consultations can help close existing gaps in care. They save patients from making trips to doctors' offices, can replace house calls and make it easy to consult specialists who are locally unavailable. In addition, a three-way video consultation between the patient, a general practitioner, and a specialist or another service provider is also conceivable. Additionally, doctors could delegate house calls to care assistants, and use the video technology to join in to provide advice.

In the generally well-supplied large cities, demand for video consultation stems from other



avoid long waiting times for a doctor's appointment	physician cannot conduct physical examination
able to contact a doctor, even during non-office hours (weekends, holidays)	no personal contact with physician
avoid exposure to contagions and infections in waiting rooms	could change the nature of relationship with physician

Pros and cons of video consultations, from the patient perspective. Reasons cited were agreed with most strongly (rather important to very important).

concerns. Many young and well-educated people as well as employees with small children and tight schedules live here and are furthermore accustomed to using the Internet as a communications medium. Doctors who offer video consultation might in this respect be able to gain a competitive market advantage.

Finally, video consultations offer family caregivers, who often need psychological as well as technical assistance, a way to provide support. International studies ² show that video consultations have a positive influence on home and hospice care, and can help family members make the right decisions jointly with doctors and nursing staff.

Video consultations are not a new mode of treatment

Despite its innovative character, video consultation is not a new treatment method; indeed, in principle, video consultation is a process innovation rather than a new treatment method per se. It can be seen as an extension of telephone-based consultation. In this regard, the telephone will continue to be the communications channel of choice on certain occasions – and may even be used more often, from the patient's point of view. However, video has the distinct advantage of providing a video image and the ability to see each other, which is particularly important during counseling sessions or in explaining test results with documents.

Because of the similarity of the two technologies, physicians can invoice statutory and private health insurance providers for video consultations in the same way they today handle telephone-based consultations. However, because video consultations are not explicitly mentioned in the official fee

schedules (EMB and GOÄ), there remains great uncertainty among doctors with regard to the potential billing opportunities. In addition, costs for the acquisition and operation of the necessary infrastructure, such as fees for the use of platforms, may well be higher than for the telephone. Consequently, these costs may not be fully covered by the receipts associated with telephone-based consultation.

Three years ago, the head associations for doctors and health insurance companies were called upon in the SHI Care Structures Act to agree on appropriate fees for telemedicine procedures. However, negotiations have thus far led only to a framework agreement. This simply states the principles according to which assessment standards can be defined. Video consultations are not mentioned explicitly in this document.

Despite the positive evaluation given to video consultations in international studies, it will naturally be useful to conduct research focusing on the video projects that have been launched in Germany. This should entail a concrete demonstration of the benefit in the national context, as well as an examination of the challenges and problems that arise in practice from implementation. For example, it will be interesting to explore how the conduct of doctor-patient interactions will have to be further developed in order to enable relationships of trust with patients to be established over the video channel as well. In addition, undesirable developments may emerge. For example, in a U.S. study ³, it was recently noted that doctors in video consultations have more often indiscriminately prescribed broad-spectrum antibiotics than have their counterparts in practice-based settings.

Doctors are wary

The technical requirements for video consultations – computers and fast Internet connections – are in place in Germany, although not everywhere to the same degree. Video telephony through services

»Many patient contacts, through correct selection by the attending dermatologist, could be handled in the form of a video consultation without any damage done to quality.«

Dr. Klaus Strömer, President of the Professional Society of German Dermatologists

45% of patients would use a video consultation to communicate with their GP or a specialist

»The assumption is that you already know the patient well. Video consultations cannot replace an initial diagnosis or the process of taking a patient's medical history.«

Dr. Ludger Iske, practice-based internist in Eutin, uses video consultation in his practice

50% of GP contacts could take place online, according to U.S. consulting firm Deloitte

such as Skype or FaceTime is already widely used both in private and professional life. Utilization in the medical sector is lagging, although nearly all doctors make use of electronic health records – and thus have a computer – and many practices also communicate with their patients via email – and thus also have Internet access. In a recent study⁸, nearly two-thirds of doctors opposed videoconferencing with patients, while just 3.5 percent said they already used this channel.

Surveys⁴ have repeatedly shown that practice-based doctors are typically rather conservative, and are rarely early adopters – the less so, the older they are. However, according to the experts surveyed, the primary reason for doctors' reluctance to use video technology is that the benefits with regard to the organization of their practice and patient care are not clear to them, as these already function well without video technology. In addition, the experts say, the lack of specific remuneration standards associated with video consultation plays a role here, as do legal concerns due to the remote treatment ban. The legal restrictions are thus clearly overestimated. As further obstacles to the introduction of video consultations, the experts note fears that the doctor-patient relationship could be impoverished, that patient trust could be lost, or that the process could become a social-class-specific avenue of care due to patients' varying degree of media literacy. In addition, they said, video could lead to an intensification of the doctor-patient relationship that spills into private life. Doctors do not want suddenly to be friends with their patients on Facebook, or to be contacted

Technical requirements in place for video consultations

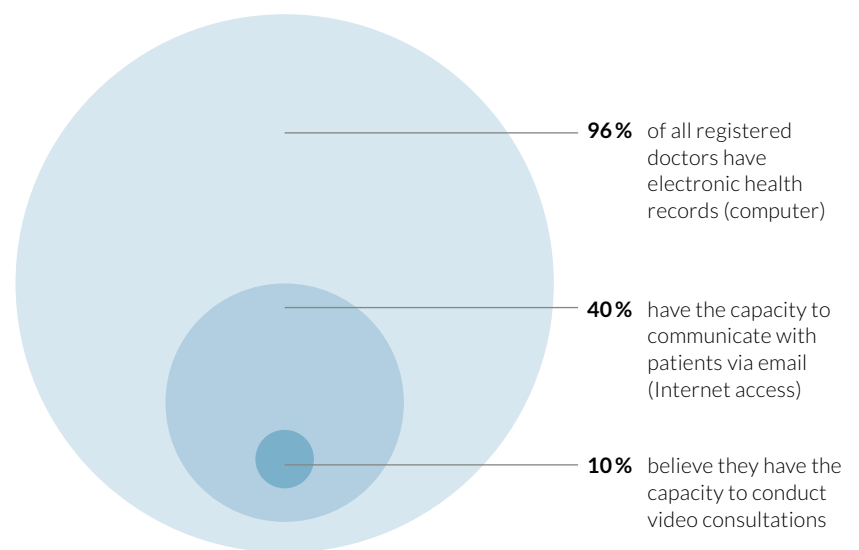


Figure 4 | Source: Survey on behalf of the European Commission (Codagnone & Lupiañez-Villanueva 2013)

| BertelsmannStiftung

via smartphone while they're having an evening at the theater. This potential alone elicits more trepidation than euphoria. Doctors particularly want to retain control over the time, place and duration of conversations with patients, and therefore remain quite wary of new communications channels such as video consultation or email. In this regard, pure sensitivity is not the only issue. However, early experiences with the technology show that the time management and practice organization adjustments needed to adapt to video consultations are not necessarily complicated.

Recommended actions

Improve acceptance among doctors

Acceptance among doctors seems to be the most relevant limiting factor in establishing broad usage of video consultations. In other words, improving acceptance among practitioners is the key to fostering the spread of video consultations. The advantages inherent to new channels of communication must be made more clear to doctors. Achieving this involves the following measures:

Promote scenarios with concrete application

- Scenarios involving the concrete application of video consultations must be driven forward in order to achieve broad implementation. Medical indications, target groups and business models are key factors in determining success. Regional flagship projects are to be avoided. The state of technology in Germany allows for the simultaneous introduction of their usage across the country, which would save costs.

Practical health services research

- Health services research accompanying projects must be based in practical application if problems are to be identified early on and scenarios improved upon. Health-economic implications, the risk of over- or undersupply in provision and class-specific issues of access related to patient media competency must be considered.

Guidance is necessary

- Doctors need guidance in integrating video consultations into their daily operations. Focusing on the benefits this practice holds for doctors is important here.

Clarify the legal context

- Legislators and/or the German Medical Association should specify clear rules for video consultations. Whereas the remote treatment ban does not prevent the effective use of video consultations, their use in practice could be defined more clearly.

Investment costs must be covered

- A new billing code should be established for telemedicine services that cover doctors' operational costs. A single billing code would send physicians an important political signal. In the meantime, billing calculations for video consultations should be clearly defined and communicated.

Develop apprenticeship and in-service training

- New communication technologies such as video consultations should be integrated into physicians' (continuing) education and training.

SPOTLIGHT HEALTHCARE is an initiative of the »Improving Healthcare – Informing Patients« program at the Bertelsmann Stiftung. Published several times a year, SPOTLIGHT HEALTHCARE addresses topical issues in healthcare. The Bertelsmann Stiftung is committed to promoting a healthcare system relevant to public needs. Through its projects, the Stiftung aims to ensure the provision of needs-based and sustainable high-quality healthcare in which patients are empowered by access to readily understandable information.

This edition of SPOTLIGHT emerged from the Bertelsmann Stiftung's »Digital Patient« project which explores the opportunities and risks of digitization in healthcare. Through analysis and debate, the Digital Patient project promotes the effective use of technology in healthcare and targets greater social inclusion for patients through digital media developments.

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