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Overuse of medical services

Unnecessary medical services can be harmful to patients

- **Patients put at risk:** Many people receive services that are unnecessary. Follow-up treatments and complications could be harmful to them
- **Expectation of treatment:** 56 percent of the German public believes that any treatment is better than waiting. Many actions are prompted by fear
- **Systemic factors as drivers:** An oversupply of poorly distributed capacities, poorly structured remuneration incentives and the pursuit of profit are driving the overuse of services
- **Physicians under pressure:** Questionable patient wishes, a lack of time and economic pressures influence treatment recommendations
- **“Less is more”:** Choosing Wisely can help to reduce service overuse

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Too many or incorrectly used medications, questionable individual healthcare services (IGeL; this refers to services not covered by the German statutory healthcare system), non-treatment-relevant diagnostic procedures, unnecessary operations, risky therapies and life-extending measures at any price: Such overuse of medical services has been found in numerous studies. These have shown that patients are receiving medical services that are unnecessary or even harmful to them, in Germany as well as elsewhere. As a consequence, overdiagnosis transforms healthy people into sick, while patients are rendered uncertain and put at risk by the overuse of medical services. Overuse ties up resources that are then unavailable for essential services, and violates the core medical principle of "Primum non nocere" – that is, of first doing no harm.

Germany spends 11.2 percent of its GDP on healthcare, more than any other country in the European Union. Annual per capita healthcare expenditures amount to €3,996 – 43 percent more than the EU average. In addition, Germany has the highest density of hospital beds. However, the average life expectancy for Germans is 80.7 years. That is only 18th place across the European Union. For EU Health Commissioner and former heart surgeon Vytenis Andriukaitis, it is clear: "Germany suffers from an overuse of medical services." Resources should be used more efficiently, specifically where they will help patients more effectively.

Between commercialization and patient welfare

The German healthcare system's structures and institutional framework are seen as primary drivers of medical-service overuse: Each of the (too) many small hospitals in the country pursues its own commercial goals, without any reference to a nationally determined, need- and quality-oriented hospital plan. In their everyday work, clinicians face pressure to reconcile corporate objectives and patient welfare. In the outpatient sector, individual income and revenue goals influence self-employed and salaried physicians as they make their medical decisions. However, service overuse cannot be explained solely through the commercialization of the healthcare sector.

The Bertelsmann Stiftung has launched an examination of the phenomenon, aimed at clarifying the area's complex set of interrelated factors. Several questions serve as the focus of the inquiry:

- What areas show clear evidence of overuse?
- How do patients and physicians perceive the issue?
- What are the drivers and causes of medical-service overuse?
- What countermeasures can be taken?

Early in 2019, the Bertelsmann Stiftung commissioned the IGES Institute, a Berlin-based research firm, to conduct a literature analysis on the subject. In parallel, the Cologne-based Rheingold Institute, a market-research firm, was asked to carry out in-depth qualitative interviews with 24 patients and 15 physicians. In addition, Kantar carried out a representative population survey in September 2019 (for details on methodology, see box on p. 7). This Spotlight Health report summarizes the most important findings and conclusions from these inquiries.

How is the overuse of medical services defined?

The German Advisory Council on the Assessment of Developments in the Healthcare System (SVR) defines the overuse of medical services as treatment that goes beyond the coverage of needs. This refers to medical services that a patient does not need or want, or which entail a possibility of harm that outweighs the possible benefits. In its most recent report (2018), the SVR concludes that medical services are still frequently overused or incorrectly used in Germany, and that significant management deficits persist.

Selected examples of frequently performed services

Ultrasound examination of ovaries for purposes of early cancer screening (IGeL)	Imaging in cases of non-specific back pain	Prescription of proton pump inhibitors (PPI) that inhibit acid production in the stomach	Thyroid surgery	Implantation of defibrillators	End-of-life care
About one out of every 13 women older than 35 pays privately for an ultrasound examination of her ovaries for the purposes of cancer screening. This resulted in an estimated **2.1 million examinations** in 2018.	Overall about 6 million imaging procedures per year. Even by very conservative calculations, about **49,000 patients** annually are given diagnoses that are too early or entirely unnecessary due to the imaging procedure.	A total of 3.8 billion daily doses were prescribed in 2016. Of these, up to **70 percent** were in cases without a clear diagnosis. The quantity of regulations has doubled in the last 10 years.	Around 70,000 interventions in 2017. The frequency of operations in Germany is more than five times higher than the corresponding value in the Netherlands from 2007. **Regional differences** in the frequency of surgeries per 100,000 residents in Germany are strikingly large.	Around 27,000 interventions in 2017. For **11 percent of patients** and **41 percent of hospitals,** 2017 was conspicuous according to external qualitycontrol reviews, particularly on the indicator of "guideline-conformant treatment recommendations."	An estimated **50 percent** of intensive-care medical measures implemented can be deemed excessive. In the last seven days of life, 8.5 percent of patients are resuscitated, 15.2 percent are operated on, and 12 percent undergo dialysis.
Ultrasound examinations of the ovaries as an IGeL are not guideline-compliant. They increase the danger of false-positive diagnoses, as well as of unnecessary and risky follow-up surgeries.	Imaging procedures do not improve therapy decisions or treatment success for non-specific back pain. In addition, conservative therapy is often not conducted beforehand. Too early or unnecessary imaging increases the risk of operations with limited or questionable benefits.	The use of PPIs is associated with a wide range of possible harms, which are of great importance given the high rate of prescription. Self-medication in particular poses great risks, as PPIs create their own symptoms after they have been taken for several weeks.	Endocrinologists regard many surgeries as avoidable. Diagnostic possibilities for the preoperative risk stratification of thyroid nodes are not exhausted.	Many interventions would be avoidable through better diagnosis, care recommendations and drug-based treatment.	The extension of life is often the key focus, rather than the improvement of quality of life. Early palliative care can reduce the risks of excess diagnostic activity and excess therapeutic procedures at life's end.

Table 1 | Source: IGES, authors

Mismatch between surgery statistics and the number of necessary interventions

A myriad of both conjectures and clues can be found regarding the overuse of medical services in Germany. In its present analysis, the IGES Institute investigated a number of statements regarding such overuse, and has identified medical areas that exemplify the broad spectrum of unnecessary service provision (see Table 1). With regard to inpatient care, the survey sought to identify diagnostic clusters and resulting treatment courses in which, according to experts, there was a mismatch between operation statistics and the number of genuinely necessary interventions. Thyroid surgeries offer one such example. In only about 10 percent of all interventions are signs of malignant changes actually evident. Unnecessary screenings and insufficiently in-depth diagnostic practices are seen as causes contributing to these sometimes premature operations.

IGeL: Insufficient evidence and a non-transparent market

The majority of the so-called individual health-care services (IGeL) has little or no evidence to provide clear benefits, or may even be highly questionable. As a consequence they are not covered by the German statutory health-insurance system. However, there are many signs that they are being used too often. About 15 million such services are carried out each year in Germany, for which patients pay a total of around €1 billion, out-of-pocket. However, a number of consumer-protection organizations, as well as the IGeL

Monitor, a monitoring function provided by the German National Association of Statutory Health Insurance Funds' medical services division, complain that there is insufficient evidence regarding their benefits. Moreover, these consumer groups also note a lack of transparency, and cite the aggressive marketing of such services by physicians and other medical staff.

For example, the use of ultrasound technology to examine women's ovaries as an early cancer-screening technique is the second most common IGeL service, performed more than 2 million times per year. The problem is that for women with no risk, there is a significant danger that the examination will produce falsepositive diagnostic results, which can create a serious psychological burden. As a result, unnecessary and risky interventions are increasingly being carried out. To date, only about 10 percent of the women undergoing such operations actually have ovarian cancer. Among 90 percent, the suspicion is not confirmed.

> "I have quite often pushed doctors to agree that I needed an MRI, CAT scan or blood work." Patient

Overuse of medical services has many causes

A number of factors influence how the instances of overuse described in Table 1, and others like them, can occur (see Figure 1): While the institutional healthcare-system conditions already noted play a significant role, appropriate care also depends on the form in which medical knowledge is transposed into everyday life. Deeply rooted dogmas such as "more is better" contribute to the overuse of services, as does the increasing desire for control found in various realms of society. Finally, patient expectations and the physician's personal behavior can also play a role in determining which services are undertaken.

Citizens show little sensitivity to overuse

About half of the citizens participating in our representative survey agreed that medically unnecessary services are (very) often carried

Factors influencing the overuse of medical services

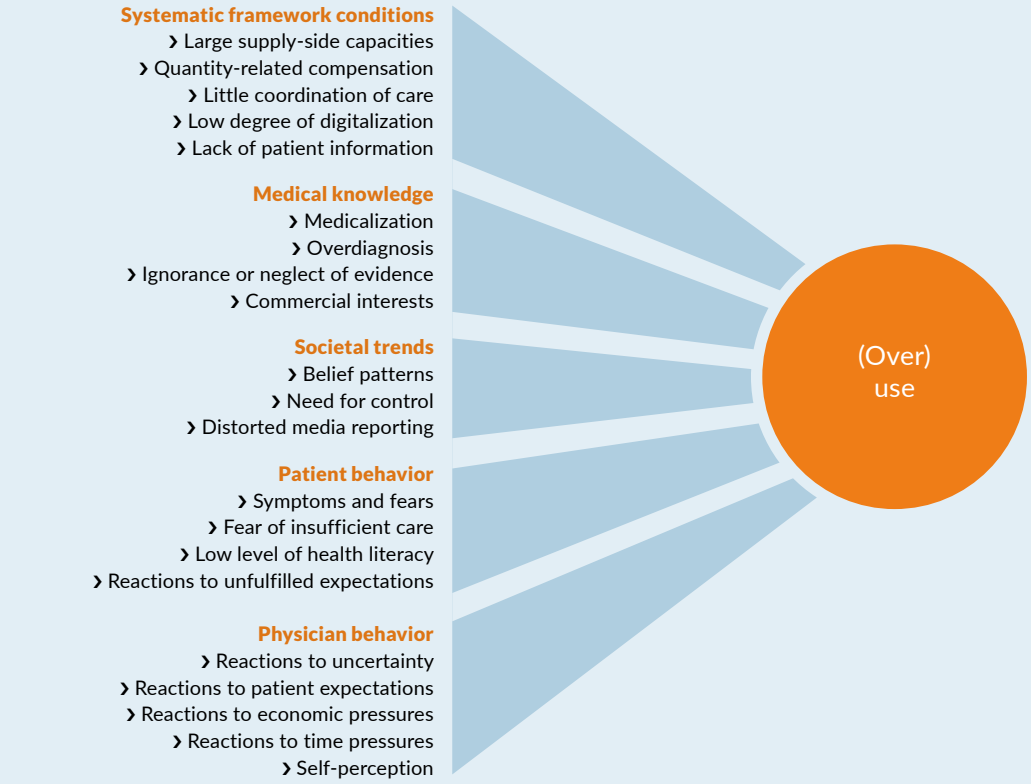

Figure 1 | Source: Authors

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Overuse of medical services from the public's point of view
What do you think: In Germany, how often are services carried out that are medically unnecessary, or excessive from the perspective of health?

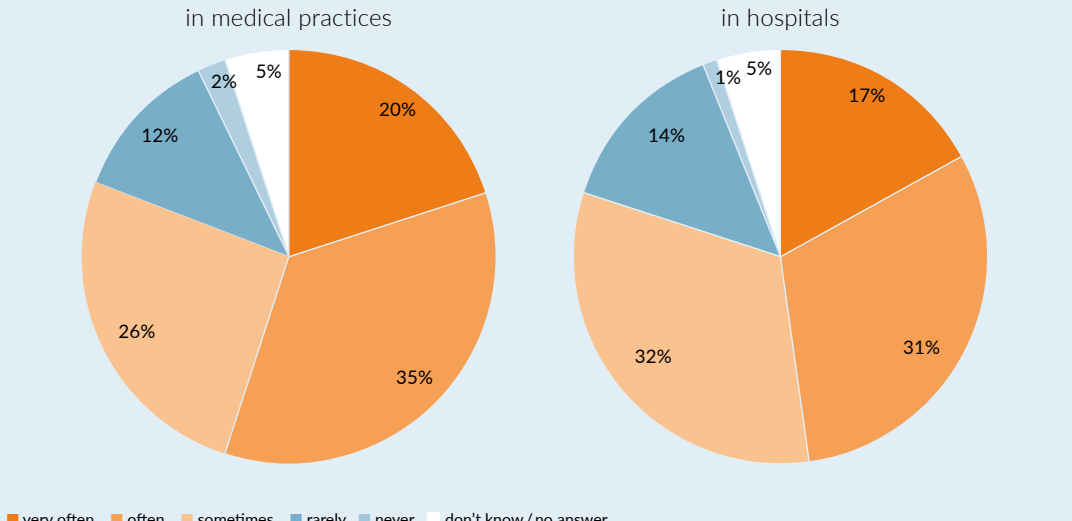

Figure 2 | Source: Kantar, September 2019, n = 1,004

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out in medical practices and clinics (see Figure 2). However, the in-depth interviews indicate that many patients have little sense that they may themselves have received unnecessary medical services. They are more likely to demand a significant quantity of services, and largely regard these as both important and necessary. Especially with regard to diagnostic procedures, there is a lack of awareness of the possible risks associated with false-positive diagnostic results or unnecessary follow-up treatments. Only when it comes to surgeries or similarly invasive therapies do patients become more critical, somewhat more vigorously questioning the necessity of the recommended measures.

The analysis of the psychological in-depth interviews revealed a number of factors that influence patients' awareness of possible overuse, and thus also their (often unknowing) demand for such care.

- Fears: The greater the fear of a particular disease or medical condition, the greater the desire for additional examinations or precautionary measures – and the more limited the patient's awareness that the desired services may not be necessary.
- Impatience / desire for control: In an era of digital transformationn and self-tracking, uncertainty is difficult for patients to accept. The urge to act and the desire for diagnostic procedures and treatment are great, and are communicated to the physician.
- Physician behavior / supply of medical and technological services: If a doctor offers a particular measure that is widely available and wellknown, its perceived importance rises. Similarly, the likelihood that the patient will question its appropriateness decreases.
- Insurance status / media reporting: The patient's insurance status (e.g., statutory system or privately insured) and media reports on related issues are additional factors that may influence a patient's awareness of medical-service overuse, or contribute to the desire for potentially unnecessary services.

> "I'm scared there's a time bomb ticking inside me, and I don't even realize it." Patient

> "I'm happy to pay for special tests in order to rule something out." Patient

Waiting is hard to bear

According to the interviews, patients primarily want attention, care and active assistance from their physicians, while additionally wanting to be taken seriously. Respondents indicated that when a physician refrains from taking any medical

83% of the population thinks that medically unnecessary services are being carried out because physicians and hospitals are paid well for them.

56% of the population thinks that too many medical services are carried out that do not benefit patients.

63% of physicians think that unnecessary actions are taken due to patient pressure, while only 53% of the population at large shares this opinion.

Source:
Physicians – DGIM survey, Oct. 2015, n = 4,818
Population – Kantar, Sept. 2019, n = 1,004

> "I've never gone home without a prescription in hand. That gives me a good feeling, of having been taken seriously." Patient

> **"I actually often advise patients to simply wait a bit and drink a cup of tea. Some of them look at me like I'm crazy."** Physician

measures or spends little time on explanations, they feel superficially handled and poorly treated.

In the interviews, physicians and patients agreed that active treatment was often better than waiting – which they equated with doing nothing. They indicated that an active treatment could reduce feelings of guilt, and even serve as moral justification; in such a case, they would at least have tried everything. The fear of a further deterioration, which could occur even with a medically correct period of waiting and observation, had greater emotional weight. In accordance with this stance, the patients surveyed cited numerous examples of serious consequences and even deaths due to diagnoses or therapeutic interventions that had come "too late."

The opinion that any therapy is better than waiting and doing nothing is supported by the results of the population survey. Here, 56 percent of respondents agreed with this statement.

Physicians under pressure

Among the physicians surveyed, opinions and experiences with the overuse of medical services differed. Some physicians react defensively or with annoyance when the topic is openly raised. This can be seen as an indication of the pressure under which physicians often act in the course of their everyday work.

As previously noted, dogmas such as "acting is better than doing nothing" contribute to medical-service overuse. The interviews with physicians help identify a number of additional such drivers. For example, patient expectations – sometimes uncertain and implicit, sometimes entirely concrete – are significant in this regard. Physicians are aware of these expectations. Some try to convince their patients that a particular treatment is not necessary in their case. Others give in to patient wishes, sometimes due to time pressures; explaining that a measure has minimal or no benefits, and may even pose the risk of harm, often requires more time than simply carrying it out.

In some cases, physicians accede to specific patient demands for unnecessary services in order to avoid conflicts or negative ratings on physician-evaluation portals.

Some of the physicians interviewed also consciously carry out or order medically unnecessary services for some patients. In such cases, they are

> **"In my job, mistakes are punished immediately. It's better to do one too many diagnostic procedures than to do too few."** Physician

> **"When someone is afraid that their coronary arteries might be narrowed, I put in a cardiac catheter. Then we both feel safer."** Physician

instead trying to meet the patient's desire for attention and care.

The physicians surveyed also justify the overuse of medical services as a kind of self-protective strategy, allowing them to avoid both feelings of guilt and potential legal consequences.

Financial pressures and their own economic interests also prompt physicians to offer patients unnecessary treatments. Some additionally regard bundled payments and budgetary limitations as a lack of appreciation for their medical merit, and as a constraint on their autonomy as physicians. This resentment leads to counter-reactions, some of which result in medical-service overuse.

> **"I have a maximum of 15 minutes per patient. Once there, I'm already calculating, am I going to try to talk him out of the antibiotic he wants, or just give it to him? If there is any hope of insight, I do try."** Physician

> **"In our team, we go through the numbers every month, and talk about how we can improve revenues, carry out more IGeL, or get more private patients."** Physician

> **"It might as well be tattooed on my forehead, that I need to treat all patients equally. I want to keep being able to look at myself in the mirror. But I don't know how much longer I can keep this up."** Physician

By contrast, the self-image as a helper or healer prevents some of those surveyed, especially general practitioners, from providing unnecessary services. They see themselves as loyal advocates for their patients' interests.

Linked strategies against overuse

How can the overuse of medical services be avoided or at least reduced? Because the causes and factors of influence are multifaceted and complex, a diverse set of countermeasures is also needed. In both the political sphere and the healthcare system itself, numerous measures have already been discussed and evaluated, in particular the reduction of overcapacity in the inpatient sector, along with a more rigorous focus on care quality. The Advisory Council on the Assessment of Developments in the Health Care Sector (Sachverständigenrat Gesundheit) has long recommended the implementation of more determined, needs-based management practices, as well as a modification of remuneration structures. Quality rather than the quantity of services should be rewarded, this body has argued. Similarly, patient welfare must be the primary objective of healthcare. In addition to the anti-overuse measures presented on page 8, the physician-led Choosing Wisely initiative represents another quite promising approach.

Making clear reference to the medical profession's underlying code of ethics, Choosing Wisely questions prevailing dogmas and patterns of behavior on the part of doctors and physicians. The campaign was created a few years ago by physicians from the United States and Canada. The approach has since spread internationally, for example in Australia, Italy, the Netherlands and Germany. At the core of the Choosing Wisely ("klug entscheiden" in German) model are lists, developed by professional medical societies, identifying services that should be examined critically and even omitted, if appropriate for the patient's welfare. The aim now is to develop intelligent explanatory campaigns for patients, as well as implementation measures suitable for daily use in clinics and medical practices. The overall objective is to keep patients from receiving services that are of little or no benefit – or which may even harm them.

Methodology

The analysis of the problem of medical-services overuse in Germany is based on three components.

1. Literature analysis: The IGES Institute investigated evidence and examples of the overuse of medical services in Germany in six medical fields.
2. In-depth interviews: In the summer of 2019, the Rheingold Institute interviewed 24 patients and 15 physicians on how they perceived and had experienced the overuse of medical services, using a two-hour individual-interview format. All quotes in this Spotlight Health report come from these interviews.
3. Telephone-based survey: Kantar interviewed a total of 1,004 people, all above 18 years old, using a computer-assisted telephone interviewing (CATI) tool. The sample is representative of the population for the period between 4 and 10 September 2019.

The studies "Überversorgung – eine Spurensuche" (Overuse of medical services – A search for evidence) and "Erfahrungen mit Überversorgung" (Experiences with overuse of medical services) are available in German only and can be downloaded free of charge at www.patient-mit-wirkung.de.

Recommended actions

Focus on needs-oriented care – promote a "less can be more" attitude

Side effects and late complications, additional costs and time pressures, overburdened and demoralized staffers: The overuse of medical services harms patients and society. In order to use healthcare staff and resources only where they can benefit patients the most, decisive action at different levels will be needed on the part of many actors. Choosing Wisely measures may be helpful in this regard.

Optimize planning and compensation structures

❯ Healthcare provision should be needs-oriented, and should be planned and organized on a cross-sectoral basis. This includes hospital planning, the number and distribution of physicians, the management of patient treatment courses, and the planning for large equipment investments and new examination and treatment methods. In addition, compensation for services must more closely reflect their quality, and especially the quality of diagnosis and treatment recommendations.

Communicate the evidence more clearly

❯ The benefits and risks associated with medical services must be made more transparent. This will require more systematic and sometimes mandatory information and decision-making aids, which must be readily available to physicians and patients.

Accept ethical responsibility

❯ Physicians have a responsibility to discuss the benefits and risks associated with relevant treatment options with their patients. In doing so, they should transparently present their own conflicts of interest.

Refrain from unnecessary services

❯ Medical practices and clinics should develop strategies for de-implementing services that have been shown to have few benefits and too many risks for patients. Second-opinion procedures able to provide more confidence in treatment recommendations should be expanded.

Raise public awareness

❯ Patients must be made more aware of the potential harm and risks associated with examinations and treatments. They need to realize that it can be better, and mean just as much from a care perspective, if no medical procedures are carried out at all.

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Further information at
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