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Research project III:
Population ageing and efforts to guarantee universal social welfare and medical provision in (Eastern) Germany

NB: due to mobility restrictions resulting from the Covid-19 pandemic, this research only focuses on Germany (and not also on Italy)

Research summary:

How can Germany secure adequate medical care for all?

I. The current state of medical care provision in Germany: an undersupply of GPs, especially in rural areas

„Waiting for hours at the family doctor, kilometre-long journeys to the heart specialist, several months waiting for an appointment with a specialist – for many patients in Germany, this has long been part of everyday medical life".[1]

This is how, in July 2022, one of the biggest and most renowned German newspapers, *Die Welt*, describes the condition many Germans face regarding medical services. While this situation is not necessarily true for all – most of Germany's popular, wealthy urban (and rural!) areas have no glaring lack of doctors –, the situation could be true for people residing in Germany's less well-off, rural areas, many of them in eastern Germany. Due to strict regulations, high levels of administrative paperwork, and comparatively low pay, it is especially the general practitioners (GPs/*Hausarzt*) who Germany will be short of – or is already, in some areas.

According to the Robert Bosch Stiftung, Germany will be lacking as many as 11,000 GPs by 2035. As a result, nearly 40 percent of all districts (*Landkreis*), most of them located in rural or socially disadvantaged areas, will be threatened or affected by the undersupply of GPs.[2] However, the undersupply of medical doctors (both GPs and specialists) is not only a problem of the future: the term *Ärztemangel* (shortage of medical doctors) was coined and started to be applied to the German context already twenty years ago, in 2002. After an oversupply of doctors in the late 1980s and 90s, the German government drastically reduced the number of accreditations for private medical clinics, among others, and only allowed doctors to open new clinics when an existing one could be replaced. One result is that the age of GPs has increased significantly so that already by 2013, nearly two third of outpatient physicians in Germany were over 50 years old (see Chart I).[3] As they are retiring, it is often hard to find successors who are willing to take over the private clinic (*Hausarztpraxis*) – many of them in rural areas – and to go through the mountains of bureaucratic paperwork just to find themselves overwhelmed with the number of patients later.

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[1] Original quote (in German): *„Stundenlanges Warten beim Hausarzt, kilometerlange Fahrten zum Herzspezialisten, mehrere Monate Wartezeit für einen Termin beim Facharzt – für viele Patienten in Deutschland gehört das seit Langem zum medizinischen Alltag."* *Weisser, Oskar (2022).* „Die wahren Ursachen fuer den Aerztemangel in Deutschland". *Die Welt*, 31 July 2022. Retrieved from https://www.welt.de/wirtschaft/plus240084823/Lauterbachs-Kampf-Die-wahren-Ursachen-des-Aerztemangels-in-Deutschland.html

[2] Robert Bosch Stiftung (ed.) (2021). *Gesundheitszentren fuer Deutschland. Wie ein Neustart in der Primaerversorgung gelingen kann*. Berlin: 2021. Retrieved from: https://www.bosch-stiftung.de/sites/default/files/publications/pdf/2021-05/Studie_Primaerversorgung_Gesundheitszentren-fuer-Deutschland.pdf

[3] Bertelsmann Stiftung (2015). „Ärztedichte Neue Bedarfsplanung geht am Bedarf vorbei". *Spotlight Gesundheit 03/2015*. Retrieved from: https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/Spotlight_Gesundheit_Thema_Aerztedichte_03-2015.pdf

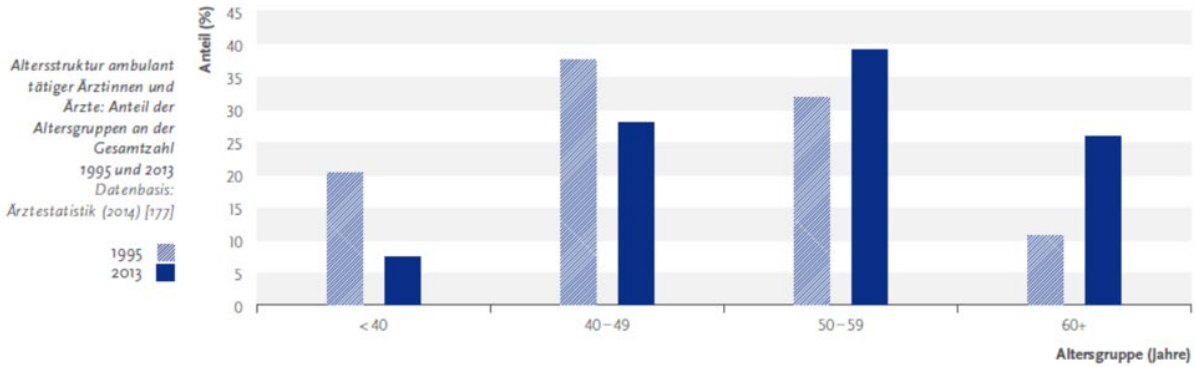

Chart I: Age structure of outpatient physicians. Bertelsmann Foundation (2015).

Thus, already in 2012, 44 percent of *Medizinische Versorgungszentren* (*MVZ*, independent service providers in which several outpatient doctors work together cooperatively) describe that they are facing difficulties due to the lack of medical doctors. For MVZ in rural areas, their share was a whopping 57%.[4] The *MLP Gesundheitsreport 2022* shows that not only the MVZs, but also the general public is feeling the lack of doctors: as many as 47% of the interviewees from regions and cities with under 100,000 inhabitants discern a lack of doctors.[5] This marks a dramatic increase, up from 32% in 2019. Especially Germans residing in the eastern federal states – both rural and urban dwellers – feel a lack of doctors. Over half of them (53%) expressed this view in 2022 (2019: 38%).[6] Among the registered doctors in private practice, the result is even grimmer: 52% of them see a lack of medical doctors in their own region (up from 41% in 2019). In the structurally weak regions (many of them rural areas in the eastern parts of Germany), over three quarters (76%) of doctors testify a lack of doctors.

This undersupply of medical practitioners obviously increases the burden on practicing doctors, especially GPs. Nearly three quarters of registered GPs in districts with under 100,000 inhabitants already report higher workloads as they have to care for more patients.[7] The *Institut für Arbeitsmarkt- und Berufsforschung* (IAB) explains this by the fact that already today, Germany is short of over 15,000 doctors.[8] And the problem is about to aggravate dramatically, as about 30,000 GPs alone are expected to leave (and potentially close) their private clinics (*Hausarztpraxis*) by 2035 for age reasons, which will most likely increase the undersupply of doctors, especially GPs in rural areas.[9]

II. Why is there an undersupply of doctors (especially registered GPs) in rural areas?

To some extent, the roots of this problem can be traced back to the 90s, when, as previously discussed, the relatively high number of (unemployed) doctors led to a higher regulation of private clinics and the admission freeze (*Zulassungsstopp*) for registered doctors in the 1990s. This means that doctors can only open a new clinic if another one closes. Since the attractiveness of rural regions, especially in structurally weak areas such as in the eastern parts

[4] Kassenärztliche Bundesvereinigung (ed.) (2012). *MVZ-Survey 2011. Medizinische Versorgungszentren in ländlichen Regionen.* KBV: Berlin.
[5] MLP Finanzberatung SE (2022). *MLP Gesundheitsreport*. Retrieved from: https://mlp-se.de/redaktion/mlp-se-de/gesundheitsreport-microsite/2022/report/mlp-gesundheitsreport-2022.pdf
[6] Ibid.
[7] Ibid.
[8] Infothek Gesundheit (2022). *Aerztemangel in Deutschland: Woran liegt dies und was kommt in den naechsten Jahren auf uns zu?* Retrieved from: https://infothek-gesundheit.de/aerztemangel-in-deutschland-woran-liegt-dies-und-was-kommt-in-den-naechsten-jahren-auf-uns-zu/
[9] DUZ (2022). *Der Aerztemangel ist vorprogrammiert*. 18 February 2022. Retrieved from: https://www.duz.de/beitrag/!/id/1287/der-aerztemangel-ist-vorprogrammiert

of Germany, is mostly below that of bigger towns or wealthier rural areas, few young doctors hope to relocate to the countryside to open their own clinic.

Yet it is not only the countryside itself, but also the profession of being a registered GP with own clinic that has lost attractivity. While the majority of young doctors or medical students do not rule out becoming a registered GP per se – the *Berufsmonitoring Medizienstudierende 2018 Studie*, a survey investigating medical students' career plans in Germany –, has shown that over half of all medical students can imagine running their own family practice –, the inflexible working conditions and the impossibility to work part-time are factors why many young medics instead seek employment as salaried employees in hospitals or clinics.[10]

Further factors against becoming a registered GP seem to the enormous paperwork and time-consuming administrative and organisational work, long working hours, relatively low pay, a high ratio if patients per doctor, and the high (initial) costs associated with opening – and running – your own family practice. Many young doctors do not want to (or cannot provide) 100% commitment, as often required if they have their own clinic, but prefer more flexible working conditions (in addition to less financial investment and risk).
The main three reasons why owning and running their own registered GPs office has become increasingly unattractive over the past two decades are the following:

1) An increase in time-consuming administrative and organisational work
2) Lower revenues and declining pay due to governmental spending cuts in the medical sector
3) An increasing interest among young generations in part-time work and more flexible working conditions, which are often hard to combine with running a family practice.

Another reason for the decline in young doctors hoping to become a registered GP with own practice is that nowadays around two thirds of medical students are women.[11] Women not only tend to be less interested in entrepreneurship (including running their own medical practice business) as they are often more risk averse, but they are also aware that running their own clinic and having a family could be hard to realise. As a result, many female doctors prefer salaried employment over having their own registered GP practice.

In addition, having thousands of doctors who move to other countries in search for higher wages and better working conditions (e.g. to Switzerland, Norway or the US) as well as having 12% of medical doctors working in non-curative jobs furthermore aggravates the shortage of medical doctors in Germany.

III. Policies to increase the supply of GPs in rural areas

German politicians have started to realise that the current system has to be changed in order to guarantee sufficient medical provision in the German countryside. As a result, several new models were implemented by the government, but also by the counties, private enterprises, and universities.

Already in 2017, the German government introduced the *Masterplan Medizinstudium 2020* (master plan medical studies 2020), which should strengthen the focus on general

[10] KBV (2019). *Berufsmentoring Medizienstudierende 2018*. Berlin. Retrieved from: https://www.kbv.de/media/sp/Berufsmonitoring_Medizinstudierende_2018.pdf
[11] Statista (2022). *Studierende im Fach Humanmedizin in Deutschland nach Geschlecht bis 2021/2022.* Retrieved from: https://de.statista.com/statistik/daten/studie/200758/umfrage/entwicklung-der-anzahl-der-medizinstudenten/#:~:text=Im%20Wintersemester%202021%2F2022%20waren,waren%20rund%20zwei%20Drittel%20weiblich.

medicine (instead of going into too much specialisation early on).[12] The new policies made general medicine a compulsory subject for the state examination in medicine (*Staatsexamen*). This comes as addition to the new regulation from 2013 that requires all medical students to undergo compulsory clinical traineeship in general medicine.

A further policy that explicitly targets the supply of GPs in rural areas with a current or prospective lack of medical practitioners is the *Landarztquote* – a quota for medical students who commit to working as GP in undersupplied rural areas for at least 10 years. This policy allows the German states to set aside up to 10% of the state's spots for medical degrees and to offer them to students who commit to working as GPs in rural areas with an (existing or forecasted) undersupply of GPs. This preferential treatment is expected to ease the burden on the existing countryside GPs. As the policy was only introduced in 2019/2020 and in a few states, it is unclear whether the medical students abide to their commitment. However, very harsh penalties (up to 250,000 Euro in some federal states) for non-fulfillment of the contract make it likely that these efforts will indeed increase the number of young GPs moving to the countryside to work there. With most of the states having already introduced the quota, and hundreds of spots in medicine going to students who commit to becoming a GP in rural areas with a (looming) undersupply of medical doctors every year, it is very likely that the situation regarding medical care in rural areas will improve within the next 10-15 years.

Another policy to stem the undersupply of GPs in socially disadvantaged areas is the introduction of so-called *Gesundheitskioske* (health kiosk), an idea health Minister Prof. Karl Lauterbach presented in August 2022. The idea behind the planned introduction of around 1,000 health kiosks in Germany is that "even in structurally weak areas, everyone should have the opportunity to be advised quickly and competently on health issues and to receive unbureaucratic help. Counselling, referral, and preventive measures are examples of the gaps in the system that should thus be closed in disadvantaged regions."[13] The kiosks are not only supposed to help people get doctor's appointments (or for physiotherapy), but their staff is also available for explaining medical reports, among others – things many GPs in rural or socially disadvantaged areas do not have the time for anymore. While these health kiosks cannot replace the GPs, they can help citizens in areas with no GP in their proximity to get medical support, counseling, and referral to doctors.

But it is not only the German government that took action. Several regions themselves have introduced policies to increase their attractiveness for GPs. One is the town of Rothenburg/Oberlausitz. Located right at the border to Poland, in rural Saxonia, it is (with Görlitz) Germany's easternmost city. Due to its remote location, the sleepy town of just over 5,000 inhabitants, like most areas in Saxony, suffered from a lack of doctors for years. As a result, the town Rothenburg, the country Görlitz, registered GPs and the Martinshof Diakoniewerk Rothenburg, which supports the supply of medical care in the structurally weak Landkreis Görlitz, joined forces and introduced the *Rothenburger Modell*, a special model which allows GPs to work for only 4 days a week in a family clinic at full pay. The 5th day is reserved for their medical research, in collaboration with the university hospital Dresden. This allows (young) doctors to work at full pay (in fact, their salary is above the regular pay scale), treating rural patients and getting practical experience, while at the same time conducting research for their doctorate. The model, which introduced nearly 15 years ago, has achieved

[12] Bundesministerium fuer Bildung und Forschung (2017). *Masterplan Medizinstudium 2020*. 31 March 2017. Retrieved from: https://www.bmbf.de/bmbf/shareddocs/kurzmeldungen/de/masterplan-medizinstudium-2020.html

[13] Bundesministerium fuer Gesundheit (2022). *Regierung plant Gesundheitskioske deutschlandweit.* 31 August 2022. Retrieved from: https://www.bundesgesundheitsministerium.de/presse/pressemitteilungen/regierung-plant-gesundheitskioske-deutschlandweit-lauterbach-praesentiert-eckpunkte-fuer-gesetzesinitiative.html

certain success, as it attracted young doctors to rural Saxony. However, most of the doctors only stay for 3-4 years, and leave after they have finished their PhD. Yet, the Rothenburger Modell was awarded with the *Innovationspreis Deutschland – Land der Ideen* (Innovation Award Germany) in 2010, praising their innovative approach to securing medical care in a disadvantaged rural area.[14]

A further initiative that stems from the concerted efforts of different actors is the *Medibus* programme, which was initiated by the association of statutory health insurance providers Hessen (*Kassenärztlichen Vereinigung* (KV) Hessen) and DB Regio, a subsidiary of German Railways (DB). Attempting to ease the lack of doctors in some rural areas of the state of Hessen, KV Hessen and DB regio started to offer healthcare in a mobile GP practice – a bus called *Medibus*. Since mid-2018, this 'clinic on wheels' serves six small villages where there are no or not sufficient GPs. This way, especially the less mobile older population has simple access to healthcare without the need to drive somewhere else. With a length of 12.7 meters, the Medibus offers a consulting room, a treatment room, a waiting area and a laboratory A GP and 1-2 medical assistants consult and treat the patients who come to the bus at certain fixed times – usually several times per week. While space is restricted, the bus offers an impressive amount of medical support as it is equipped with most instruments that patients usually find in a regular GP practice – and more. According to the operators, "the diagnostic capabilities of the bus meet high standards."[15] "In addition to the rapid laboratory test device for heart attack, heart failure, pulmonary embolism and leg vein thrombosis, […] there is also a lung function measuring device and an ultrasound device".[16] Due to the success of the Medibus – tens of thousands of patients have received treatment over the past years –, the pilot project has been extended. While it was initially planned to run only for two years, it's now in its fifth year, supporting people of all ages in North Hessen and taking away some of the heavy workload of the few remaining registered GPs in the area. According to the operators, "in particular, chronically ill, elderly and less mobile patients can be better cared for through a comprehensive range of medical services on site".[17] This shows that innovative projects like the Medibus can be an important tool in supporting the provision of medical services in the countryside and could potentially even make working as a GP there more attractive.

IV. Is Germany suffering from a lack of doctors? A critical analysis in lieu of a summary

While the aforementioned data and surveys gave the impression that Germany suffers from a lack of doctors, it is not that simple. Looking at the number of practicing medical doctors per 1,000 inhabitants, Germany is, with 4.5 doctors per 1,000 people, ranked No. 4 among all OECD countries in terms of the density of GPs and medical specialists in the country.[18]

[14] Deutschland, Land der Ideen (2009). *Rothenburger Modell.* Retrieved from https://land-der-ideen.de/projekt/rothenburger-modell-2160
[15] KV Hessen (n.d.). *Medibus: die mobile Hausarztpraxis.* Retrieved from https://www.kvhessen.de/medibus/
[16] KV Innovations Scout (n.d.). *Medibus.* Retrieved from: https://kv-innovationsscout.de/projekt/medibus
[17] Ibid.
[18] OECD data (2022). *Doctors*. Retrieved from: https://data.oecd.org/healthres/doctors.htm

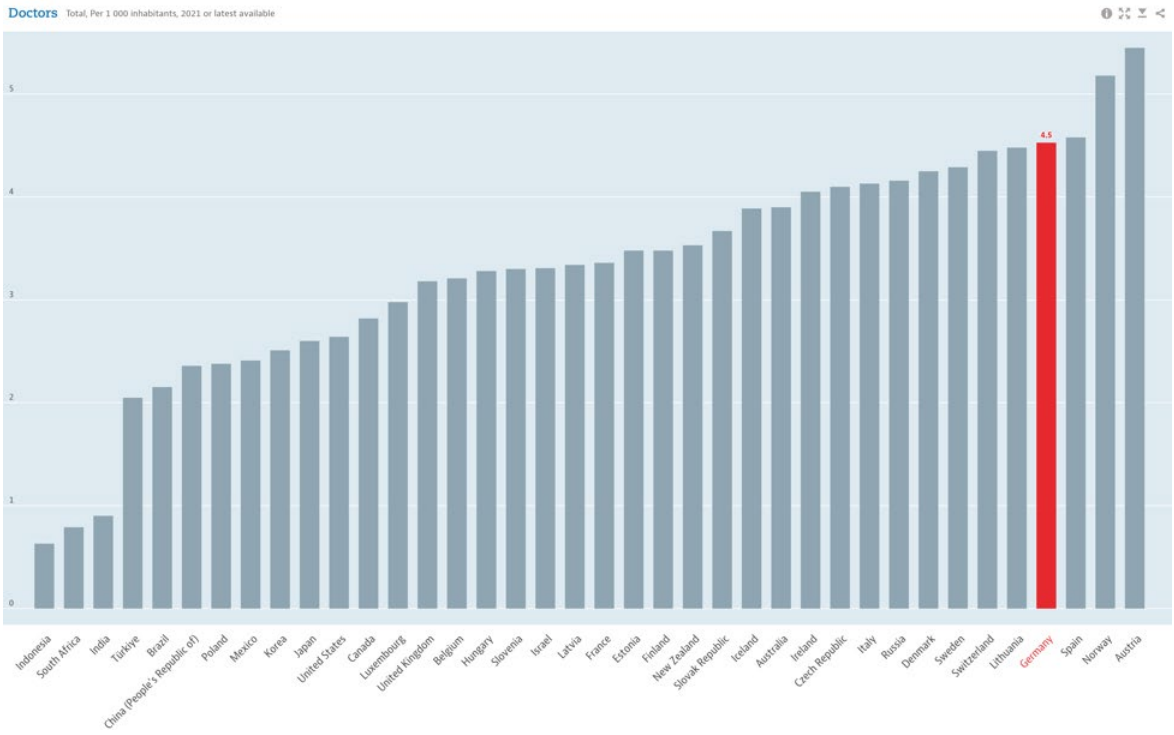

Chart II: doctors per 1,000 inhabitants. OECD (2022).

This shows that the real problem is not a general lack of doctors, but an imbalanced regional supply of them and a shortage of registered GPs. As many (young) doctors prefer to work in urban areas, often as salaried medical employees, many remote and/or socially disadvantaged rural areas lack sufficient healthcare providers. Especially less well-off countryside regions in eastern Germany have significant problems supplying easy-access medical care to their people. With tens of thousands of registered GPs retiring in rural areas over the next 10-15 years, the problem is likely to be aggravated, despite the many efforts by the German government and health insurance providers to counteract this development.

Data by the Bertelsmann Foundation (2015) impressively highlights the imbalanced supply of doctors between rural and urban areas. Looking at the ratio of medical specialists to population in cities and in countryside regions, the study revealed dramatic imbalances. For all eight medical specialists analysed, the provision in urban areas is at least 50% higher compared to rural areas. For neurologists, the difference is a whopping 127%: while in big cities, there was one neurologist for 13,7545 in 2012, it was only one for 31,183 people in rural areas.[19] In other words, statistically, neurologists in rural areas had around 2.3x more people to care for than their colleagues in the cities.

[19] Bertelsmann Foundation (2015).

Verhältniszahlen bei Fachärzten (Stadt versus Land) gemäß Bedarfsplanungsrichtlinie

Arztgruppe	Großstadt *	Ländlicher Raum*	Abweichung
Augenärzte	1:13.399	1:20.664	+54 %
Frauenärzte	1:3.733	1:6.042	+62 %
HNO-Ärzte	1:17.675	1:31.768	+80 %
Kinderärzte	1:2.405	1:3.859	+60 %
Nervenärzte	1:13.745	1:31.183	+127 %
Orthopäden	1:14.101	1:23.813	+69 %
Psychotherapeuten	1:3.079	1:5.953	+93 %
Urologen	1:28.476	1:47.189	+66 %

* Verhältnis Arzt:Einwohner, absolut

Tabelle 1 | Quelle: Eigene Darstellung | BertelsmannStiftung

Chart III: Ratio of medical specialists to population. Urban vs. rural areas. Bertelsmann Foundation (2015).

Similar trends can be also seen for registered GPs. Data from 2014 by the Bertelsmann Foundation shows that most areas in eastern Germany have a significantly lower (red) or lower (pink) density of registered GPs than needed (see Chart IV). Similar tendencies are also visible in the rural areas in north-western Germany, especially in places where the population is less well-off. What is interesting though is that all rural areas suffer from an undersupply of registered GPs: two of the wealthiest German states, Baden Wuerttemberg und Bayern, which are also two of the most rural states, have an *over*supply of GPs. Nearly all districts in these two states have a higher (light blue) or significantly higher (navy) ratio of GPs than what the German government considers necessary. This shows that an undersupply of doctors – whether registered GPs or specialists – is not per se a problem or rural area. Instead of having a general rural/urban area divide, the medical system in Germany suffers from a divide between the less well-off and the wealthier areas. While the (often wealthy) rural areas in southern Germany are attractive to medical professionals, many socially disadvantaged rural (and urban) areas in eastern Germany (and, to a lesser extent, in north-western Germany) lack an adequate supply of doctors.

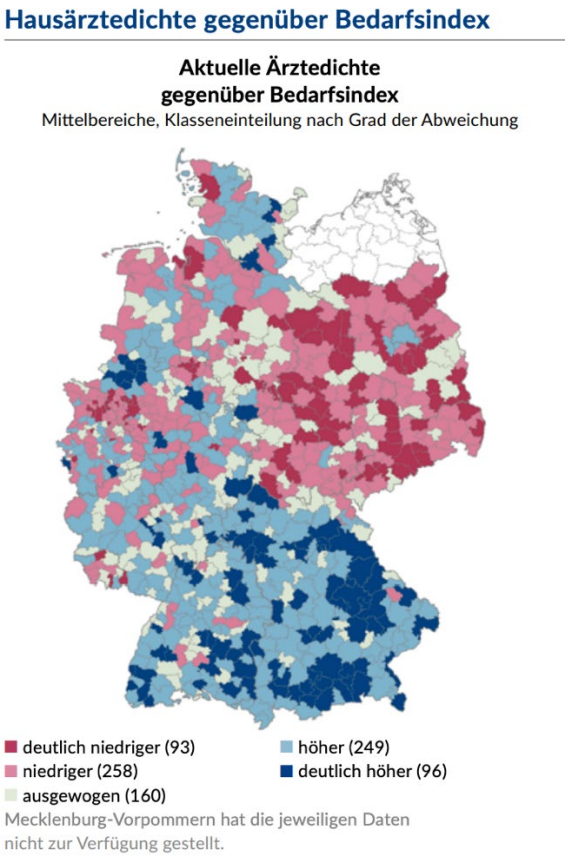

Chart IV: Density of registered GPs. Bertelsmann Foundation (2015).

For the future, it is necessary to address these imbalances between the socially disadvantaged areas and the more well-off regions. Several attempts have been made to attract medical doctors (both GPs and specialists) not only to rural areas, but especially to socially disadvantaged areas and rural regions that already lack doctors. Several policies, like the *Masterplan Medizinstudium 2020* and the introduction of a *Landarztquote*, seem promising as they address the current imbalances. Yet, it will take the German government several more years to find out whether the efforts have been fruitful. In conclusion, it can be said that the first steps have been taken, but that there needs to be more innovation to guarantee adequate medical care in all areas of Germany, whether rural or urban.