Some thoughts on the corona crisis in Germany

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The comparatively low number of fatalities from Covid-19 in Germany has been a surprise to many, given the large number of confirmed infections. Of the 31554 who have been confirmed as having tested as positive, 149 have died to date.There has been some speculation about the reasons for this result, which, to be fair, is no more than a snapshot of the current trajectory. Lothar Wieler, the head of the Robert Koch Institute (RKI), Germany's Institute of the Control and Prevention of Infectious Disease, is adamant that the number of death from the virus is accurate and not a result of underreporting. It is expected that the number of deaths will continue to rise dramatically over the coming days and months. Much will depend on any preventative measures to take effect, and the extent of the additional demand on treatment capacity. Yet there is some hope that the extensive capacity available in the German health care system will be able to buffer the impact of Covid-19.

The stereotype associated with Germany is the efficiency of its inhabitants and industries. The same stereotype is not typically applied to describe its health care system. There are several reasons for this. Health system governance is decentralized to the point of fragmentation, with responsibilities for organizing care split between the federal government, state governments and municipalities. In addition, many governance decisions are taken by representatives of payers and providers (within the self-governing Bismarckian system), which also limits the scope for action of government. On top of that, both the funding and provision part of the system are purposefully pluralistic, with 100 statutory insurance funds in place, to name just one aspect.

In the case of the Covid-19 response, the 16 *Länder* (federal states) are responsible for public health decisions, leading to some states closing schools and kindergartens earlier than others (they are now all closed). While the federal minister for health, Jens Spahn, could plead with states to take action, he was not in the position to force them. In response to the Covid-19 crisis the federal government has launched an emergency funding program for hospitals. This has slightly changed through the latest federal decisions on an emergency program with Boni payments for each bed made available for the intensive care and artificial respiration.

Another long-standing efficiency debate is about hospital care. Germany has a large number of hospital beds, by almost any standards. The *Länder* are responsible for planning and controlling hospital capacity, although many of them have used their authority to reduce capacity in the hospital sector only reluctantly. Total bed capacity stands at nearly 500 per 1000 residents. As a consequence, Germans stay in hospital longer than most of their fellow Europeans, with average hospital stays being 8.0 days, compared to 4.5 in Switzerland, 3.2 in Italy and 2.5 in the UK (OECD, 2020).

Despite efforts to reduce hospital capacity (typically hugely unpopular with citizens), there are still more than 1900 hospitals, of which about a third are in public, in private and in not for profit ownership respectively. The 34 large university teaching hospitals, which run the largest intensive care units, are almost all state owned. Many other public hospitals are small by international standards (under 100 beds) and often struggle to keep abreast of technological innovations and to attract sufficient numbers of qualified professionals.

Claims of hospital underfunding are persistent, but funding levels have increased for several years mirroring substantial economic growth (Germany was less affected by the global financial crisis in

2008). Underfunding, where it exists, is nowhere near the experience of austerity shared by some of its European neighbours, although structural issues, such as those outlined above, persist. While the Länder are expected to maintain hospital infrastructure, hospitals make their own investment and purchasing decisions and thus have incentives to invest in bed capacity and technical equipment. This has resulted in substantial technical capacity. There are 28,000 intensive care beds routinely available and this number is expected to double over the coming weeks to increase capacity for Covid-19 patients. As in other countries, most hospitals are expected to postpone elective surgery to free up additional hospital beds. This will mean that many patients, particularly those with chronic diseases, will have to wait for their planned surgery, but it will certainly reduce pressure on stretched resources.

Another challenge is data reporting, also resulting from a system build around distributed governance. Doctors are required to report any positive Covid-19 testing result to the local health authority in their area (of which there are 400). These electronically transmit these data to the RKI at least once a day, but it is acknowledged that it may take them 2-3 days to report their data in full. This, in addition to staff shortages reported especially over the weekend, has led to delays in data reporting, which makes it difficult for the national institute to provide a precise daily account of the progression of the virus. While this may not be optimal it is a huge improvement from the 2 to 3 weeks it took to alert the RKI to the outbreak of pathogenic e-coli in 2011 that claimed 53 lives in Northern Germany.

Germany has substantial capacity for diagnostic testing and has been able to increase capacity at speed. The Association of Accredited Laboratories (ALM) reports that its member organisations (mostly privately owned labs and policlinics) have analysed over 260,000 SARS-CoV-2 PCR samples in the week following 16 March and over 400.000 since the beginning of March.The association estimates that is its member are currently able to analyse 58.000 tests per day. The Society for Virology lists 54 laboratories offering SARS-CoV-2 PCR tests, of which 22 are in private ownership and 28 are labs in university hospitals, in addition to 4 run by public health authorities. The Berlin based Charité, the largest teaching hospital in Europe, runs 600-700 PCR tests per day. While labs are unevenly distributed between regions, with only few of them based in the Eastern part of Germany, the capacity for testing is substantial.

Testing for the coronavirus is free at the point of use under both statutory and private health insurance. Until now, German policy-makers have tried to encourage doctors to only test those who meet certain criteria, i.e. show symptoms of Covid-19 with a demonstrable risk of infection. This was to keep the ‘worried well’ from clogging up the testing supply chain. However, new guidelines published by the RKI on 25 March encourage a more lenient approach, by offering tests to everyone with symptoms, irrespective of severity, as long as there is sufficient testing capacity. The advice notes that medical personnel and vulnerable patients should be given priority if capacity reaches its limit, but the move suggests this is not a prime concern to date. People are discouraged to pay privately for testing, although in principle, if capacity is available, they are allowed to do so.

Despite the increased number in confirmed infections, efforts are still being made to track those who have been in contact with the infected person. To boost the capacity of overstretched local health authorities, the RKI has announced to recruit an additional 500 people as ‘scouts’ for contact tracing, principle aimed at recruiting students.

Doctors in ambulatory care have reported difficulty in purchasing personal protection equipment (PPE). The federal ministry of health has centrally procured PPE and is assisted in its distribution by the 17 regional associations of office-based physicians.

There is growing concern about the economic impact of the outbreak, with some predicting a decrease of GDP by 10-20 % in the years to come. We need measures to cope with the fact that the

Government is halting large parts of the economy for weeks and potentially months. Although measures are not as strict as in some other countries, with no curfew imposed, people are encouraged to stay at home and to avoid any contact when they go outside. Gatherings are banned and exchanges limited to two people only unless they are members of the same household. German politicians are keen to emphasize that no curfew is exposed but a “ban on contacts’.

At the same time the federal Government this week announced a bundle of measures to protect the economy and reduce financial hardship on citizens. The Federal Government will spend Euro 156 bn as of now. This includes access to generous loans, credit assistance to companies and the provision of short-time work subsidies, which mean that companies can keep their workforce while offering shorter work hours at full pay. There are separate provisions for freelancers, artists and the self-employed. Whether this will be enough to prevent a substantial economic downturn remains to be seen. Additional emergency provisions are made in many places and differ between the Länder.

Possibly the biggest challenge will be the lack of available nursing staff. Shortage of nursing personnel has been a long-standing concern in Germany, leading to various attempts to improve the work conditions for nurses and to hold hospitals to account for maintaining sufficient nursing capacity. Controversially, but not unlike other high income countries, the German government has actively engaged in attracting nursing staff from other, often poorer, countries to Germany to fill the gaps. Some hospitals had some hopes to attract nurses returning from the UK following the Brexit referendum, but this has not happened in large enough numbers to make a material difference.

However, there is now widespread acknowledgement that this will not be sufficient to cover the need for nursing during the Covid-19 crisis, especially in critical care nursing. Especially ICUs will need to find more qualified staff to care for the severely ill, which is perhaps the more limiting factor to expanding capacity. The government has called on retired nurses and doctors to return into service and there are other regional initiatives to recruit medical students and retired individuals in different working areas.