HUMAN RESOURCES FOR HEALTH DURING COVID-19: CREATING SURGE CAPACITY AND RETHINKING SKILL MIX

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Summary: European Union Member States have acted to rapidly scale-up, re-purpose and re-train their workforces during COVID-19 to meet a substantial rise in demand for care. We outline the varied strategies countries have taken to create surge capacity during the pandemic, broadly grouped as initiatives to: 1) increase numbers and re-deploy staff to areas of greatest need; and 2) re-skill and re-purpose the workforce to ensure sufficient skill mix. Learning from actions taken during the pandemic, and a wide-range of supporting initiatives and funding from the European Union, will help Member States build a more resilient workforce for the future.

Keywords: Human Resources for Health, Health Workforce, Surge Capacity, Skill Mix, COVID-19

Introduction

The ability to increase the surge capacity and flexibility of the health workforce has been fundamental to delivering an effective COVID-19 response in all European Union (EU) Member States. Surge planning has been needed to meet a dramatic rise in demand for care from COVID-19 patients in acute and emergency settings, to deliver test, trace and isolate services and mass vaccination programmes, all while maintaining other essential health care services.

Expanding and maintaining workforce capacity has been complicated by high rates of infection and burnout in professionals that have been at the forefront of the fight against the pandemic. In addition, countries entered the pandemic with differing workforce numbers and profiles. Notably, some Member States had certain skills shortages in areas that have been key during the current pandemic, such as intensive care unit (ICU) doctors and nurses and public health workers, along with a maldistribution of health workers in rural and other underserved areas.

Another challenge has been that health care workers have experienced evolving skills profiles in their jobs due to quick technological progress, yet education and training systems have not always provided opportunities to keep up with these changes.
These underlying shortages and skills disparities have been exposed by COVID-19, with many countries having to take a wide-range of actions to ensure availability of sufficient numbers of health workers to respond to the demands of the pandemic. In this article, we provide an overview of the measures taken to create and maintain surge capacity in EU Member States during COVID-19. The article provides an update to a previous study that reviewed strategies to create surge capacity during the first wave. It should be noted that although surge capacity may be thought of as simply increasing numbers and re-deploying to areas of greatest need, it also involves actions to re-skill health workers, including by using digital technologies.

**Scaling-up and maintaining workforce capacity**

All EU Member States have taken action to create surge capacity by scaling-up capacity in the existing workforce, or mobilising and recruiting additional health workers and volunteers (see Table 1).

The most common strategies for scaling-up capacity in the existing workforce have been: asking health professionals to work extra hours, including moving from part-time to full-time work or allowing extra overtime, modifying work schedules (e.g. Croatia); suspending ongoing or scheduled external rotations for residents in training (e.g. Spain, Romania); suspending exemptions after night shifts or on-call activities (e.g. Poland, Spain); and cancelling leaves of absence or foreign-travel (e.g. Czech Republic, Greece, Luxembourg, Spain). Minimum staffing requirements have also been suspended in some countries; Germany, for example, passed legislation to suspend acute care staffing ratios for nurses, to allow more flexibility on nurse placements in hospitals. While largely effective at creating additional capacity, these measures have the distinct disadvantage of increasing burnout among the existing health workforce.

Bringing in new workers has generally necessitated training and supervision, which risks creating an additional burden for existing staff. Moreover, these initiatives have had significant governance implications in terms of requiring new contracts to be drawn up, changing or introducing legislation around malpractice compensation, modifying laws on pension contributions and amending registration procedures to fast-track new hires. It is interesting to note, however, that Belgium, Denmark and France had established “medical care reserves” prior to the pandemic, which provided a pool of inactive workers that could be deployed to help support the COVID-19 response with fewer administrative hurdles (in France, for example, 3,673 professionals from the inactivated workforce were mobilised). The re-deployment of health workers to health facilities or regions with greater demand has also been a core component of creating surge capacity. This has generally seen health workers re-deployed to work in different settings, such as in hospitals instead of the community or rotating between different facilities (e.g.

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**Table 1: Approaches used in EU countries to increase health workforce numbers during COVID-19**

<table>
<thead>
<tr>
<th>Scaling-up capacity among the existing health workforce</th>
<th>Mobilising and recruiting additional health workers and volunteers</th>
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</thead>
<tbody>
<tr>
<td>• Asking staff to work extra hours</td>
<td>• Increasing recruitment quotas</td>
</tr>
<tr>
<td>• Changing contracts from part-time to full-time</td>
<td>• Recruiting (final year) medical and nursing students</td>
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<tr>
<td>• Changing staffing requirements</td>
<td>• Bringing inactive or retired health professionals back to the workforce</td>
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<tr>
<td>• Changing night shift working patterns</td>
<td>• Recruiting new health professionals</td>
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<tr>
<td>• Cancelling leave</td>
<td>• Bringing foreign-trained health professionals into the workforce</td>
</tr>
<tr>
<td>• Changing registration requirements</td>
<td>• Requesting assistance from other countries or international organisations</td>
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<td></td>
<td>• Recruiting volunteers for nonmedical or basic medical tasks</td>
</tr>
<tr>
<td></td>
<td>• Using military personnel to supplement the civilian workforce</td>
</tr>
</tbody>
</table>

Source: [1][2]

Health workers have also been brought in from outside the existing public health workforce. This has most frequently been achieved by allowing medical and nursing students near graduation to work as graduated professionals. In other cases, emergency legislation has been implemented to facilitate exceptional hiring procedures to bring in addition workers (e.g. Portugal, Spain). Other approaches used less frequently include bringing retired or otherwise inactive health professionals back into the workforce, to engage foreign-trained professionals (sometimes accelerating the diploma recognition procedures), using volunteers for certain tasks such as manning public health helplines or trained volunteers for vaccination. Some countries have also put in place contracts for re-deployed private sector staff to work in public sector hospitals (e.g. Cyprus, Ireland, Malta) or to include private hospitals as part of the public network. In France, staff members of the statutory health insurance fund have been utilised to support contact tracing (see Box 1).
Digital tools to monitor supply and demand at local, regional and national level have proved crucial for surge planning (see the article by Williams et al. in this issue on digital health). The World Health Organization has played a key role in this area by developing software to help countries understand health workforce surge requirements (see Box 2).

### Implementing flexible approaches to using the workforce: re-skilling and re-purposing

Surge did not just involve increasing staff numbers, but also required efforts to re-skill and re-purpose the health workforce. Given the specific needs of COVID-19 this often involved training doctors, nurses and other health professionals specialised in different disciplines to work in emergency departments, hospital wards and intensive care. Health workers redeployed in ICUs and infectious diseases or respiratory medicine wards have generally received additional training, such as in use of personal protective equipment (PPE) or in the management of patients with acute respiratory failure. Health care workers have also taken on new tasks in areas such as testing, contact tracing and monitoring of COVID-19 patients (see Box 3). In other care areas such as primary care, there was a shift towards remote working and a greater use of technology including electronic health records and e-Prescriptions.

In some countries, legislation was implemented to shift the division of tasks between professions. For example, the COVID-19 Act adopted in March 2020 in Germany allowed nurses and emergency paramedics to take on some tasks previously only undertaken by doctors. In France meanwhile, community pharmacists were allowed to renew prescriptions for certain chronic conditions. Task shifting has also been seen in efforts to support testing, contact tracing and vaccination campaigns. Notably, a number of countries have newly authorised different types of health workers to perform vaccinations, including dentists (Ireland), doctors’ assistants (Germany, Netherlands), medical students (Austria, Belgium), paramedics (Austria) and pharmacists (Portugal). Non-health

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**Box 1: Human resources dedicated to contact tracing in France**

In September 2020, the French national-level statutory health insurance fund (CNAM) decided to participate in the contact tracing process by assigning some of its staff to support local Contact Tracing Platforms (PFCTs) staff. From late October to early November 2020, more than 12,000 full-time equivalent (FTE) contact tracers were mobilised (at the height of the second wave). Since the end of January 2021 to summer 2021, 10,000 FTE contact tracers have supported contact tracing efforts, including 5,800 fixed-term contract staff.

Initially, only permanent staff members at the local level of the statutory health insurance (101 local agencies – called “Cpam”), including administrative staff and health care advisors working for the local medical services of the statutory health insurance, were called upon. Fixed-term contract staff (i.e. students) were later hired to strengthen the service.

Training of teams is administered by the local PFCTs, using national tools and materials, over a three-day period (one day of training and two days of situational exercises). Calls are carried out using scripts drawn up by CNAM on the basis of the tracing doctrine defined by the health authorities.

**Box 2: WHO digital tool to support Human Resource for Health (HRH) planning for surge capacity**

Shortly after the appearance of the first COVID-19 cases in the WHO region, the WHO Regional Office for Europe recognised that some Member States would require support in understanding the health workforce surge requirements during the pandemic. Working with contributors from WHO and collaborators in Portugal and the UK, a pair of complimentary tools were developed from scratch and launched in April 2021 following piloting to be either used individually or in concert.

The underpinning approach was to develop tools based on readily available software that were adaptable by Member States for local circumstances and could use epidemiological data locally available or available for other sources (e.g. Imperial College London). For example, the “Adaptt Surge Planning Support Tool” allowed policymakers and planners to estimate the number of health workers required in hospitals (wards and ICUs) to respond to increasing COVID-19 workload. The health workforce requirements could be modelled based on the COVID-19 epidemiological situation in the countries. The nature of the tools allowed Member States to consider multiple staffing scenarios reflecting the need to consider skills and role shifting in the workforce in response to a shifting landscape of staff availability.

Croatia, Estonia, Lithuania, Malta, the Netherlands, Portugal, Romania, Sweden).

Some countries also moved health workers to regions or cities with greater care needs (e.g. Italy, Spain). For example, in France, from the beginning of the crisis in March 2020 until 10 December 2021, 9,138 health professionals provided assistance in overseas territories. There has also been an element of cross-country collaboration to facilitate the movement of health professionals to countries with greater need. For example, the EU Civil Protection Mechanisms enabled physicians from Norway and nurses from Romania to be deployed to Italy during the first wave. Meanwhile, patients from France, Italy and the Netherlands at the start of the pandemic were transferred to Austria, Germany, Luxembourg and Switzerland for treatment to avoid ICUs running out of capacity.
Box 3: New roles of pharmacists and nurses have emerged during the pandemic in France

**Pharmacists**

In France, legislation was enacted in 2020 during the state of health emergency that permits pharmacists to take on new tasks, including: distributing and billing masks; dispensing pulse oximeters, drugs for medicated abortions and some drugs provided that the patients have a prescription bearing the mention “off-label drug prescription in the context of Covid-19.” Pharmacists are also allowed to perform antibody tests, rapid antigen tests, to dispense self-tests to identified professionals (employees providing home services, private employers employees, family carers working with older people or disabled) and self-tests to asymptomatic people over 3 years old. These critical provisions have been renewed under the same conditions until 31 July 2022.

Since 5 March 2021, pharmacists, through a further decree, have also been allowed to prescribe and administrate COVID-19 vaccines; vaccination can, however, only be carried out by pharmacists who are already authorised to administer vaccines. Voluntary pharmacies are also authorised to reconstitute COVID-19 vaccines and dispense them in individual, pre-filled syringes to health professionals who are authorised to prescribe and vaccinate, such as physicians, midwives, nurses and dental surgeons. In addition, pharmacists are allowed to perform samplings in the context of PCR tests.

**Nurses**

Additional healthcare services have been developed by the statutory health insurance to support and monitor positive patients in the community. Since 21 January 2021, health care support has systematically been offered to positive patients. It consists of a visit fully paid for by health insurance. Mobilisation of volunteer nurses is organised by each region, through a networking platform for a quick response (24 or 48 hours). The main objectives of this nurse home care visit are: to explain and give a reminder of the isolation guidance and protective safety measures; to identify situations of vulnerability and any material needs, such as administrative tasks, home help, meals, dropping off groceries or medicines, access to electronic communications, counselling, and so on; to report back to the patient’s general practitioner; and to offer testing for others in the household.

personnel have also been brought in to support non-clinical components of testing (e.g. Malta), tracing (e.g. Czech Republic) and vaccination programmes (e.g. Belgium, Ireland). The use of non-health personnel in these areas has helped free up health care to work on other priority interventions.

Skill mix changes have required training for health workers to develop new competencies and to adapt to new ways of working, which has been delivered online and in person. In France, the training program “REPERE COVID” has been developed with five different pathways for health care workers by the DGOS (French Ministry of Solidarity and Health) and the Conference of Deans of Faculty of Medicines, the National Federation of Nurses in ICU and scientific societies. More than 1,500 health care workers have registered on the REPERE COVID platform. The EU has played an important role in this area, with funding made available under the Emergency Support Instrument supporting training of over 17,000 health professionals in intensive care skills (see Box 4). With respect to vaccines, training has been accompanied by the publication of clinical guidance and protocols in some countries and adjustments to payment mechanisms to compensate health workers. Implementing skill mix changes has also required support and close working with professional associations that have traditionally opposed changes either due to anxieties over care quality and safety, or concerns over their members’ status and incomes. In addition, legislation has been needed to clarify or extend medical indemnification.

**Strong European collaboration can help Member States build a resilient workforce for the future**

This article has shown that a variety of strategies are available to create surge capacity during times of crisis. These range from measures to expand and maintain capacity in the existing workforce, bringing in new or inactive workers, re-deploying to areas with greater need and introducing skill mix changes to make the best available use of available health workers to meet the specific needs of the pandemic. However, in many cases, creating surge capacity was only achieved by asking health workers to work long hours in highly pressurised environments, to take on new tasks and adopt new ways of remote working. These demands risk health workers experiencing burnout and requires support measures to be put into place to enable the health workforce to recover and re-purpose (see next article for more on this issue).

The pandemic has also highlighted major issues in the health workforce in Europe, in particular the shortages of health and social care workers and imbalances in skill mix. Going forward, maintaining or even increasing workforce capacity is a challenge which calls for solid policy solutions. Strategic investment, improved workforce planning and increasing caps or even increasing workforce capacity in skill mix. Going forward, maintaining or even increasing workforce capacity is a challenge which calls for solid policy solutions. Strategic investment, improved workforce planning and increasing caps on medical and nursing students in many countries will all be important to ensure a sustained rise in workforce numbers and to help match skills with changing demands. Additionally, increasing workforce numbers in many Member States will be reliant on improving salaries, working conditions and career pathways to retain and attract health workers.

The European Commission is also providing support to policymakers in this area. The on-going health workforce projects cluster supported under the 3rd Health programme aims at improving staff retention policies and addressing challenges of medical deserts. A new Joint Action, which will be launched in 2022,
Box 4: EU training programme on intensive care medicine during COVID-19

In 2020, the EU established an intensive care medicine training programme alongside the European Society of Intensive Care Medicine (ESICM). The COVID-19 Skills PrepAration Course (C19_SPACE) was a free, two-part training aimed at doctors and nurses in the EU and UK that work in hospitals, but not in intensive care.

The training was available in all EU languages and included online events, videos and podcasts, as well as training sessions run by local intensive care experts. It covered the fundamentals of intensive care, including the admission of a critically ill patient, respiratory support, sepsis and infections, alongside information on how ICUs have operated during COVID-19.

Over 17,000 doctors and nurses across the 24 EU countries and UK enrolled in the course by May 2021 and 12,086 were certified. The programme had 2,060 active trainers (doctors and nurses) and 717 were actively involved. The training has supported hospitals in re-deploying staff during COVID-19 and will also help strengthen the workforce to tackle future health emergencies.

Source: 1

Aims to improve tools and capacities for workforce forecasting and planning. Lessons learnt from the pandemic will feed into this work as long-term planning of human resources in health care needs to consider crisis-preparedness. Meanwhile, the European Commission’s ‘Pact for Skills’ initiative, launched in 2020, aims at improving skills of Europeans to mitigate socio-economic impact of the pandemic. It covers various sectors, with a forthcoming Pact for Skills partnership in the health area focusing on skills of health workers, in particular actions to improve digital skills and other skills needed to support the transformation of health systems. The European funds and programmes also provide opportunities for training of health care professionals. For example, the Recovery and Resilience Facility will intervene in some Member States to upgrade skills of health workers and/or to improve education systems. The Digital Europe programme also provides an opportunity for initiatives to design specialised master and education programmes in various areas, including health care. More opportunities could be exploited by Member States within the European Social Fund Plus (ESF+), which is the main European training instrument.

Better forecasting and planning will be fundamental to help build a more resilient workforce, but can only be achieved with better data that captures distribution and skills of health workers, as well as inactive workers that may be able to join a pandemic response. Insufficient monitoring of the health workforce not only has implications for efforts to adapt and scale-up capacity during times of crisis, but is detrimental for workforce planning generally. The forthcoming Joint Action on workforce planning and forecasting under the EU4Health programme will mobilise efforts to improve data, planning tools and capacities. WHO is also supporting countries in this area by conducting assessments of the National HRH information systems, developing National Plans for the improvement of HRH information systems and strengthening of HRH data governance.

Health system recovery after COVID-19 will be dependent on the workforce. It is therefore important for policymakers to learn from the experiences of the pandemic and to take action now to scale-up numbers and ensure the right mix of skills are in place to make effective use of technology and meet changing population health needs. This can help build a more resilient workforce that will be better placed to respond to any future shocks and can help deliver more patient-centred and higher quality care.

References
