1 Assessment and recommendations

Introduction

The global pandemic has intensified the challenges of delivering public services across and within OECD countries. Whether seen through a prism of shortages of equipped and staffed hospitals treating disproportionately high numbers of vulnerable people or the difficulties faced by children accessing online learning when schools are closed, COVID-19 has put renewed focus on the importance of addressing longstanding challenges that OECD governments face in delivering critical services, especially in rural communities.

The challenges are even larger in remote rural regions with low population densities. With fewer people spread over a wider area, economies of scale are difficult to achieve. The physical infrastructure needed to provide good quality education and health services can be more complex and expensive in these areas and attracting highly skilled people poses an additional challenge.

Beyond the immediate crisis, the pressure to drive efficiencies in public spending is expected to last long after the virus has subsided. Public spending has risen in response to the pandemic and fuel recovery, while revenues have fallen, both for national and subnational governments. Looking ahead, a period of fiscal consolidation is likely, reinforcing the importance of efficient use of resources, especially in those regions and subnational governments that have been hit harder, for example, those with high dependencies on tourism.

Furthermore, acute ageing trends in many rural places and, in some cases, a shrinking population will require sustainable policy responses. OECD rural regions are at the forefront of this trend; their populations are older and ageing faster than other regions. Evidence for some OECD countries including Australia and the United States shows that rural residents also tend to have less healthy lifestyles and, in turn, higher incidences of chronic disease, raising pressure on rural health services. In addition, low fertility rates and a dwindling number of pupils are driving down school sizes below viable levels in many rural areas.

Taken together, the challenges of distance, demographic change and fiscal belt-tightening require effective policy responses to deliver services in rural communities. To maintain quality services in rural regions and close gaps further exposed by the pandemic, governments must develop innovative responses tailored to the specificities of rural places and the long-term challenges they face. These responses should identify economies of scale and scope, including synergies across administrative and policy silos and levels of government.

While many countries already have long-term strategies in place for education and health services, this report examines the nuances specific to their delivery in rural regions, offering recommendations on how to better adapt provision to the rural realities of today and the emerging realities of tomorrow. It complements this analysis with an examination of digital connectivity issues in rural regions, recognising the significant scope for digital delivery of services to mitigate challenges related to distance. Finally, the report looks at governance issues, including fiscal issues, through which the delivery of these critical services is administered and paid for.

Assessment

Education

Quality, accessible educational services in rural regions are key to addressing local skills gaps both in the short and long terms. In the short term, good schools are a factor in the attractiveness of a community, one that can help retain and attract young families, including service professionals and supporting "brain circulation" over brain drain. Over the longer term, high-quality education ensures today's children are ready for the opportunities of tomorrow, while life-long learning helps workers in displaced sectors retrain for the jobs that are available in rural regions.

Though equal access to education exists in the laws and constitutions of several OECD countries, issues relating to scale can impede access in rural areas. Rural schools are facing, or will soon face, declining student numbers, bringing consequently smaller schools and class sizes. While small size can bring opportunities, such as a greater teacher focus for each student, many of these schools are isolated from the wider educational community and are operating under capacity. Smaller schools may also offer a more limited educational curriculum, for example with fewer subjects for students to choose from at the secondary level and fewer specialised teachers. A more limited educational offering is a factor contributing to rural students having lower prospects of continuing education and, consequently, poorer career prospects.

Many principals and teachers need to adopt multiple roles when working in smaller rural schools. Principals in rural schools are often required to engage in direct teaching responsibilities in addition to their leadership role and teachers often have to provide classes to different age groups. In addition to performing multiple roles, more limited collaboration and peer support can weigh down on educational quality, professional learning and staff satisfaction.

Although rural schools typically suffer from a lack of resources, they often benefit from stronger community engagement. Research has shown that rural schools benefit from a larger share of parents participating in extracurricular, voluntary and fundraising activities. One motivation for this increased involvement is the heightened role that schools play in rural life, with the school often playing a central role, at the heart of the community, in social cohesion.

The forced shift to online learning in response to the pandemic has further highlighted inequities faced by rural communities in accessing digital services. Rural areas are less likely to have access to affordable, high-quality broadband connectivity and less likely to have the devices and skills needed to make use of it. For some children this meant being unable to continue lessons during lockdown periods, widening pre-existing inequalities with peers in better-serviced regions.

Health care

Rural dwellers are on average older, have shorter life spans, display worse health outcomes and demand more complex healthcare needs. Rural dwellers in many OECD countries are also more likely to live in poverty and experience unemployment and disruption to their careers, exacerbating challenges related to less healthy lifestyles and, in turn, higher incidence of chronic disease.

Rural areas face higher challenges in recruiting and retaining professionals in the health care system. Lower salaries, unappealing professional prospects, concerns about prestige and urban-centric medical education all make finding qualified staff particularly problematic for rural hospitals, which is likely to create skills mismatches. For example, emergency departments in rural hospitals in the United States are less likely to be staffed by emergency room doctors and more likely to be staffed by family doctors.

Cost reduction strategies following the 2008 financial crisis disproportionally affected the quality of and access to medical professionals and facilities in rural regions. Hospital bed rates have decreased in all

types of rural regions since the 2008 global financial crisis at an average rate of -0.7% per year, while they increased slightly in metropolitan regions. The decrease was largest in rural regions far from large cities (between -1.5% and -2% per year). The gap in access to physicians between metropolitan and rural regions has been persistent since the crisis, especially in countries with significant territorial differences in access. The combination of reduced capacities, higher workloads and saturation of hospitals in several regions during the COVID-19 pandemic, has severely tested the ability of medical services to cope.

The provision of health care has a strong place-based dimension necessitating a balance between costs, quality and access all driven by density and distance. A low volume of patients and long distances between them means that, in order to stay accessible, healthcare facilities in rural areas tend to be small and scattered. Concentrating service provision in larger facilities in more densely populated places may raise the efficiency of the health care system but it also implies longer travel distances. At the same time, the higher quality of some specialised medical services provided at a larger scale can make a difference between life and death. Because of these trade-offs, the loss in accessibility for rural dwellers should be weighed against the quality and efficiency gains of increased scale.

Digital connectivity

Newer technologies and upgrades for broadband provision are more common in urban areas. Broadband technologies are continually improving, with network operators facing a never-ending investment cycle. Given the penalty of distance that exists in low-density areas, new technologies tend to be deployed first in more densely populated urban areas, where the upfront investment costs are more easily recouped. The latest fixed and mobile broadband technologies, like fibre optical cabling and 5G mobile technology, are currently being rolled out in OECD countries but these networks are more common in urban areas, while previous generation, slower, technologies remain dominant in low-density areas.

In 2016, just 56% of rural households had access to fixed broadband with a minimum speed of 30 Mbps, in comparison to over 85% of households in urban and other areas. Commonly used technologies in low-density areas have limitations that reduce the quality of the connection and, in turn, may impact on the ability and scope of services to be delivered. Geostationary satellites are often used in the most remote areas but their altitude in orbit brings a transmission delay (latency) that can create challenges for applications that depend on real-time transmission (such as wearable health care monitoring devices). In addition, both satellite and mobile network subscribers commonly face monthly usage caps, while digital subscriber lines (DSL), the most common technology in low-density regions, usually provide asymmetric connections, i.e. the download speed is much faster than the upload speed. In service delivery applications, for example, a two-way video consultation between a doctor and patient, limited upload speed might mean low-quality video and service provision.

OECD governments have deployed a variety of approaches to increase the availability and quality of broadband in low-density areas. This has included regulatory changes that enhance the efficiency of the market, as well as state support for network development through subsidy programmes. In many cases, local co-operatives and municipally-owned broadband networks have been developed. Each approach involves some trade-offs in terms of the level of public investment required, the timeline, the state’s risk exposure and the ownership structure of the networks developed. In some cases, broadband subsidies have flowed to dominant incumbents and have supported only incremental upgrades to existing networks. While these subsidies provide quick fixes for pressing needs, they may not address the underlying market failures that gave rise to the need for subsidies in the first place. Several of the OECD’s best-connected low-density areas have achieved successful outcomes through small-scale efforts at the local level and other innovative approaches, such as public-private partnerships, are showing promise at both the local and national scales.

Governance

The provision of health and education services has become increasingly decentralised. In recent decades, there has been a discernible trend towards decentralisation across many OECD countries with subnational governments playing an increasingly critical role in the delivery of many essential public services. This has affected how public services are delivered across different territories. While some view this as the "hollowing out" of the state, others describe it as public management efficiency and necessary reform. Debates about public services are thus fundamentally linked to debates about the role of the government.

Where public services have been decentralised, upper-level governments (national or regional depending on whether it is a unitary or federal state) generally continue to play a role in defining, monitoring and assessing the quality of public services. They are also concerned with addressing equity – this may include equity of access to public services for different populations (e.g. those that are deemed marginalised and at-risk) and equity of access and quality across different territories, where redistributive fiscal policies can play an important role.

Recommendations

Increase the place sensitivity of service delivery: While education and health care policy have never been spatially blind in placing schools, medical centres and hospitals within reasonable reach of populations, there remains scope to finetune these policies. This goes beyond catchment areas and driving radii, for example, and should increasingly consider the economic and social well-being of each community, their demographics, access to digital infrastructure and digital skills.

Tackle demographic challenges through innovation: While some governments are working to address demographic challenges by attracting newcomers to rural communities, for example through special incentives and targeted immigration programmes, for most rural communities the trend of population ageing and decline is likely here to stay. That means new approaches must be found to deliver quality services in a fiscally sustainable way over the long term. These approaches may include co-location, collaboration and co-production efforts across departments and levels of government to increase efficiency and leverage on the latest digital technologies to expand access.

Education

Take a flexible approach when considering class sizes and regulatory matters to benefit rural education: Minimum class sizes and funding rules that penalise small facilities can be counterproductive to schools in rural regions and it is necessary to introduce more flexibility in such cases. Governments can instead incentivise rural schools to actively participate in school network restructuring and to deploy innovative approaches to increase the scale of rural schools, such as multi-grade classrooms, to ensure adequate quality of education is maintained. Greater flexibility is also needed to permit rural schools to leverage the advantages of their close-knit communities, by providing flexibility in health and safety regulations that permit parents to volunteer as canteen staff or as cleaners for example. Policy should empower principals, teachers and local leaders to permit them to make use of the specific assets their community offers.

Place the attraction, retention and empowerment of teachers at the heart of rural service reform: Policies should focus on the development and support of educational professionals in rural communities, especially those that can make the most of local opportunities. Investments should be made in their training to ensure they have the digital skills necessary to facilitate online learning for students and to provide them with the competencies to manage multi-grade classrooms and other new learning environments. Monetary incentives can encourage teachers to take positions in rural and remote communities. Governments can incentivise the geographical mobility for teachers so that the option of teaching in rural schools is attractive

for the career development of young teachers. Exchange programmes between teachers from urban and rural areas can provide rural teachers with a broader professional network, access to peer groups to support their development and help bridge urban-rural cultural divides.

Increase scale through the development of school clusters: School clusters, i.e. structures in which schools formally co-operate under a single leadership to allocate resources more flexibly and efficiently, can help maintain service provision in places that might otherwise be vulnerable to school closure. They can involve both horizontal (i.e. integrating schools with a similar educational offer) and vertical integration (i.e. integrating schools at different levels of education) and may be arranged with a lead or core school with satellite schools in other locations, or might simply mean the creation of schools split across different sites with a single management and budget.

Prepare rural schools for the future by redesigning approaches to education provision: For example, through service co-location, integrating schools with other public services, such as day care centres and kindergartens, to create a community hub, or by adding complementary services such as dormitories so that children from distant communities can attend all or part of the time, whilst also leveraging on digital distance learning.

Expand digital education through a comprehensive approach tailored to specific places: This approach should consider the availability and quality of digital infrastructure in target communities, student access to digital devices and digital literacy among teachers, students and parents. It should also include teachers in the design of the tools used.

Health care

Reinforce primary and integrated care provision in rural areas: Primary care is generally the first point of contact for the majority of patients' needs. Providing regular, person-focused and preventative care, is the best way to deal with the higher levels of multi-morbidity and long-term chronic care in older populations, especially in rural communities. Integrated care, which aims to more comprehensively look after the needs of vulnerable populations, for example by co-ordinating between primary care physicians and social care providers, is an additional tool that can help prevent unnecessary hospital admissions, thereby efficiently improving outcomes. Innovative approaches such as mobile clinic and testing facilities that make scheduled visits to rural and remote communities can help address gaps in the accessibility of these services to relatively immobile populations, including the elderly. Importantly, rural areas need to anticipate and address medical workforce gaps, for instance by expanding the roles of nurses and pharmacists and offering relocation packages that go beyond financial incentives to emphasise career prospects and furthering of skills.

Provide incentives for the establishment of multi-disciplinary health centres: Many OECD countries are reorganising primary care around multi-disciplinary teams. These teams include not only general medical practitioners but also often include family physicians, registered and advanced nurses, community pharmacists, psychologists, nutritionists, health counsellors and non-clinical support staff. This mix of expertise includes access to social services and is particularly important to patients dealing with multi-morbidity. Common elements of these multi-disciplinary teams are the focus on patient engagement in decision-making and the common use of sophisticated IT systems for risk stratification. The approach can deliver significant performance improvements, including economies of scale through shared inputs, such as equipment and human resources, and they can also lower rates of emergency department arrivals and hospitalisations for patients with chronic conditions.

Expand the use of telemedicine to improve the sustainability of rural health care provision: Telemedicine can be used to provide virtual consultations between doctors and patients, which may be useful for specific use cases such as follow-up appointments or mental health consultations but are clearly less useful in cases that benefit from a physical examination. However, other emerging forms of

telemedicine, such as the real-time monitoring of patients' health information through wearable devices may improve prevention and the quality and sustainability of health care as a result. These services are particularly useful for rural residents who may otherwise have limited access to mental health professionals or other specialties and may encounter significant travel costs to attend their nearest primary care clinic for regular monitoring.

Digital connectivity

Empower communities to solve local connectivity challenges: While national governments play an important role, for example in developing the competitive market place and ensuring territorial equity, some successful and complementary examples of broadband connectivity in low-density regions have come from the local level. Local governments are often highly motivated to connect their communities and can help simplify and lower the cost of the process through their oversight of planning permission, construction permits and other regulatory instruments necessary, for example, to dig trenches for fibre. In many OECD regions, locally-led initiatives have both lowered the cost of building networks and helped to achieve higher uptake of service once it is built. Non-profit co-operatives and mutual organisations also have a role to play and national governments can support these efforts by helping reduce regulatory barriers towards small-scale market entry and by offering funding support in ways that encourage local control.

Align financial support with the development of long-term solutions: A subsidy initiative that supports historical incumbents to upgrade existing networks but which does not address the underlying market failures that gave rise to the need for the subsidy in the first place may mean that further rounds of subsidy are needed to help communities keep pace with future improvements in technology. Alternative approaches that foster the development of new networks and the entry of new players to compete with the historical incumbents can lead to a more sustainable market-based solution. Broadband voucher schemes accessible to community-led broadband efforts are one such approach. Another alternative is a public-private partnership model, whereby public funding is combined with private investment to improve connectivity while also fundamentally changing the marketplace in a way that delivers long-term improvements in broadband provision and balancing the risks borne by taxpayers, with the potential to share in future revenue streams. These models have been applied successfully at both the national and local levels in OECD countries.

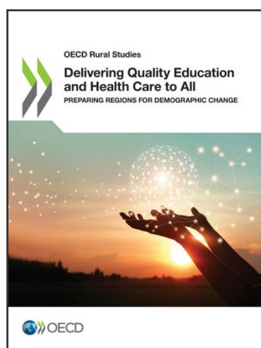
Governance

Align financial resources with devolved responsibilities: If the central government delegates or devolves education and healthcare responsibilities to subnational governments, the central government should also ensure that such mandates are financed. One of the most frequent challenges of decentralisation is the misalignment between responsibilities allocated to subnational governments and the actual resources available to them. Access to finances should be consistent with the costs associated with delivering the services and these costs should be calculated in a way that reflects the local conditions. Failure to account for these issues could result in an increase in the delivery efficiency of health and education services coming at the expense of higher territorial disparities in health and education outcomes.

Ensure fiscal transfer systems reflect both the local tax bases and delivery costs: A well-designed transfer system ensures that subnational governments can provide a comparable level of public services at comparable tax rates in all subnational units. The incentive to generate efficiencies in local administration is strengthened if a considerable share of local public services is financed with local taxes. However, many local governments in rural areas have small and shrinking tax bases and the delivery costs associated with health and education services in these areas are higher due to the distances involved and the greater service needs that exist in these areas. Transfer systems should especially support local governments with low own-source revenue potential while also taking into account the higher costs that rural areas face.

Maximise efficiency by exploring innovative structures to deliver health and education services across subnational boundaries: While the delivery of education and health services is commonly devolved, the most convenient access may be provided across administrative boundaries. For example, the closest hospital to rural residents living near a region border may be in their neighbouring region. In these cases, achieving economies of scale and consistent delivery of services may require co-operation across administrative boundaries. A variety of arrangements can be used to facilitate access in these cases:

- Central governments can use earmarked transfers to subnational governments to encourage extended service delivery that takes into account non-resident users. For example, if a patient or student from a neighbouring jurisdiction benefits from health and education services paid by a jurisdiction's taxpayers.
- The government may, alternatively, facilitate municipal mergers. Such mergers can increase the scale of provision by augmenting the size of local service areas and reducing fragmentation. They can however be problematic if they create economies of scale for some services but diseconomies of scale in others.
- A third option is to facilitate interjurisdictional co-operation agreements. These can be a more flexible alternative because they enable economies of scale where it is most beneficial and can be selectively applied to the areas of service where they will be most useful.



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